L1/L2 GPS Antennas

For Satellite, Airborne, Ground, and Marine Applications

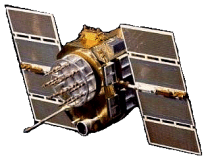
ANTCOM

ISO 9001:2008/FAA Approved Facility

ANTCOM CORPORATION . 367 Van Ness Way, #602 . Torrance, CA 90501 . Tel: (310) 782-1076 . Fax: (310) 782-1086 . E-mail: antennas@antcom.com . http://www.antcom.com

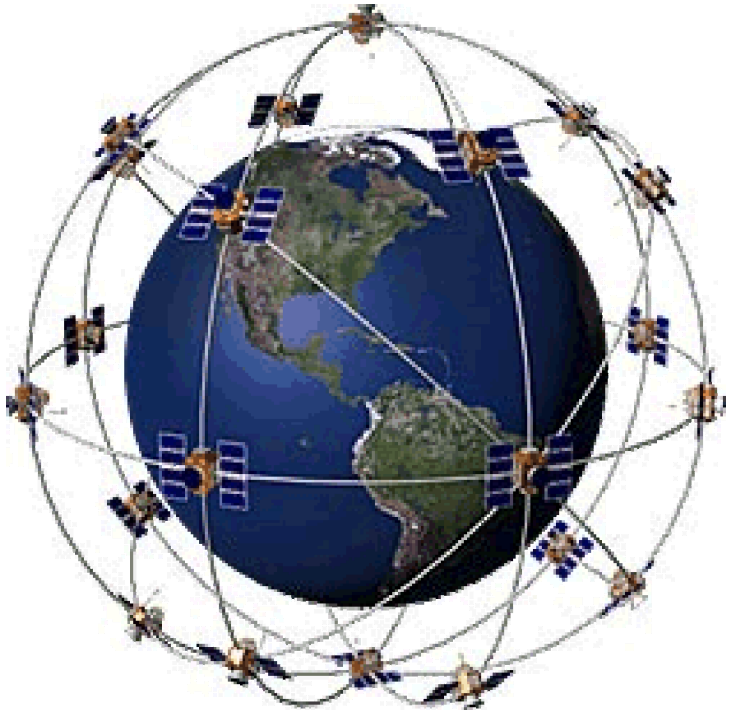


GPS CONSTELLATIONS



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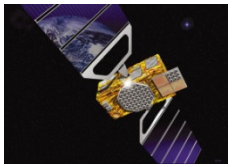


- 24 satellites (six orbital planes inclined at 55°)
- Altitude: 20,200km altitude
- Radius: 26,560 km
- Orbital period: 11h 58m (4km/s)
- 6 to 10 satellites always in view

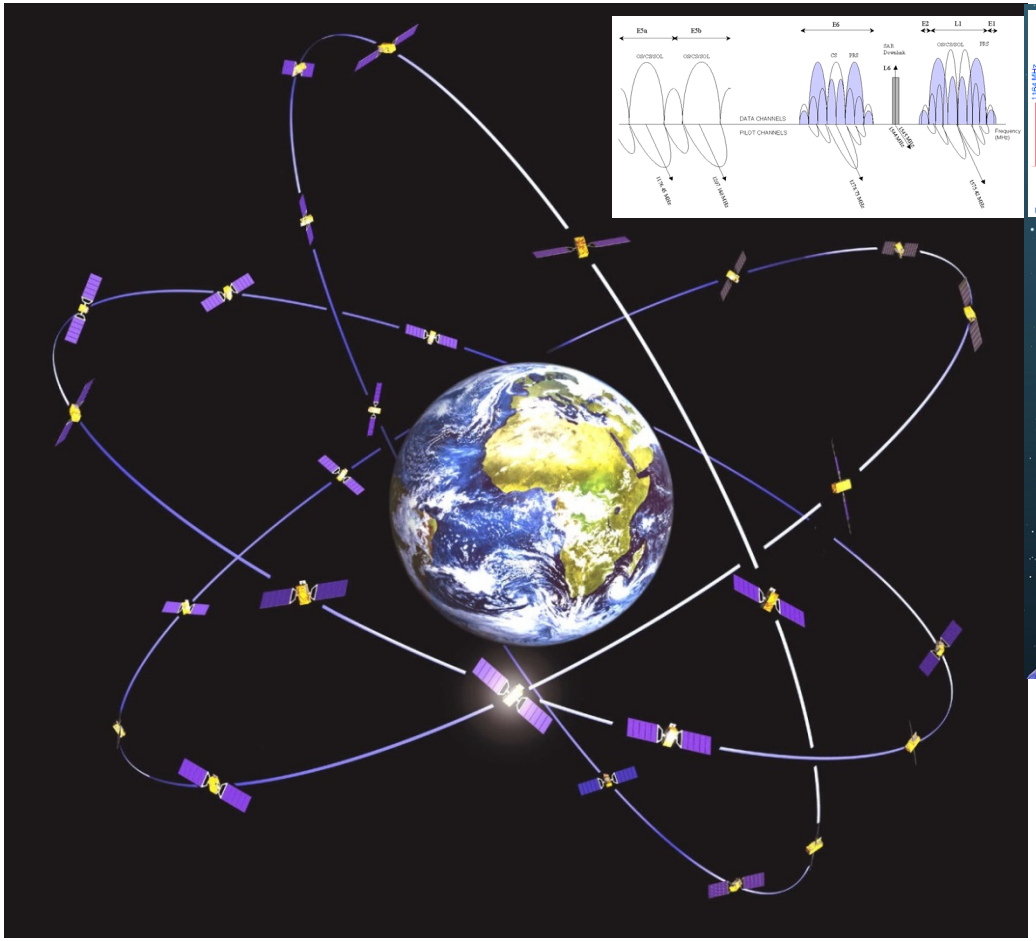
Frequency (Rx only):
L1: (1575.42 ±15) MHz
L2: (1227.60 ±12) MHz
E5: (1191.79 ±15) MHz
E5a/L5: (1176.45 ± 12) MHz, E5b: (1207.14 ± 12) MHz
Galileo L6/L-Band (OmniStar): (1542.50 ±17.5) MHz
Galileo E6: (1278.75 ± 12) MHz
L1 Glonass: (1609 ± 7) MHz
L2 Glonass: (1252.5 ± 7.5) MHz
Polarization: Right Hand Circularly Polarized (RHCP)

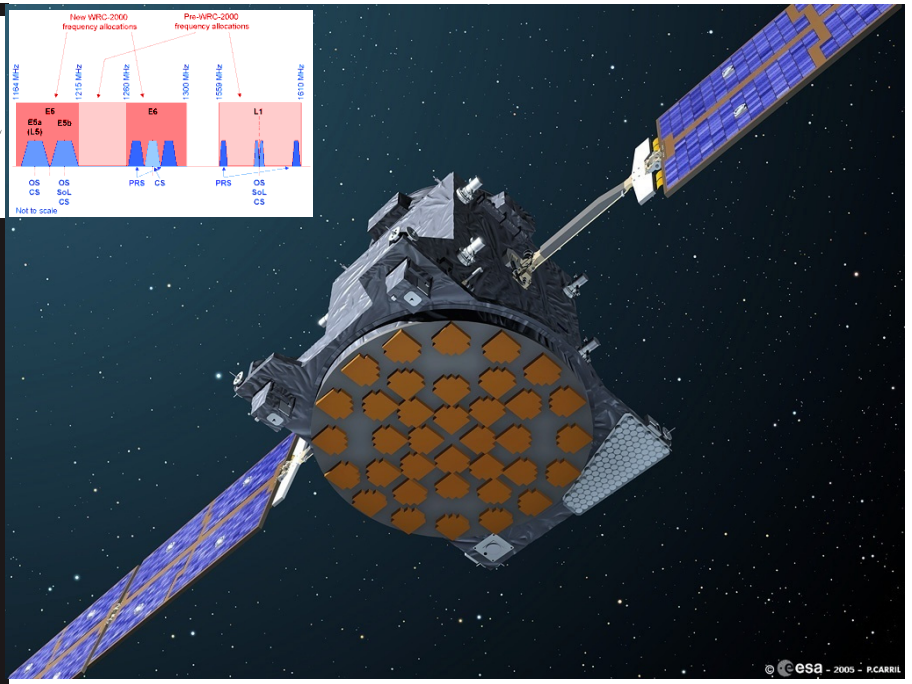
GPS Orbit Altitude: 12,551 miles (20,200 Km)

Galileo CONSTELLATIONS



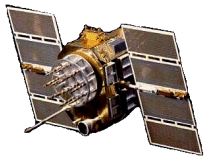
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Frequency (Rx only):
L1: (1575.42 ± 17.5) MHz
L6: (1545.42 ± 5) MHz
E5: (1191.80 ± 15) MHz,
E5a/L5: (1176.45 ± 12) MHz, E5b: (1207.14 ± 12) MH
E6: (1278.75 ± 12) MHz
Polarization: Right Hand Circularly Polarized (RHCl

Galileo, Europe's own global satellite navigation system
30 satellites (27 operational + 3 active spares), (24 for GPS)
Medium Earth Orbit (MEO) at an altitude of 23,222 km (20,200Km for GPS)
Ten satellites will occupy each of three orbital planes inclined at an angle of 56° to the equator.
The satellites will be spread evenly around each plane and will take about 14 hours to orbit the Earth.
One satellite in each plane will be a spare; on stand-by should any operational satellite fail.



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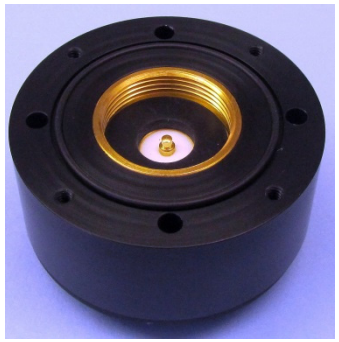
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	B	REVISED COLOR #34088 PER NGC	04/08/13	S.H

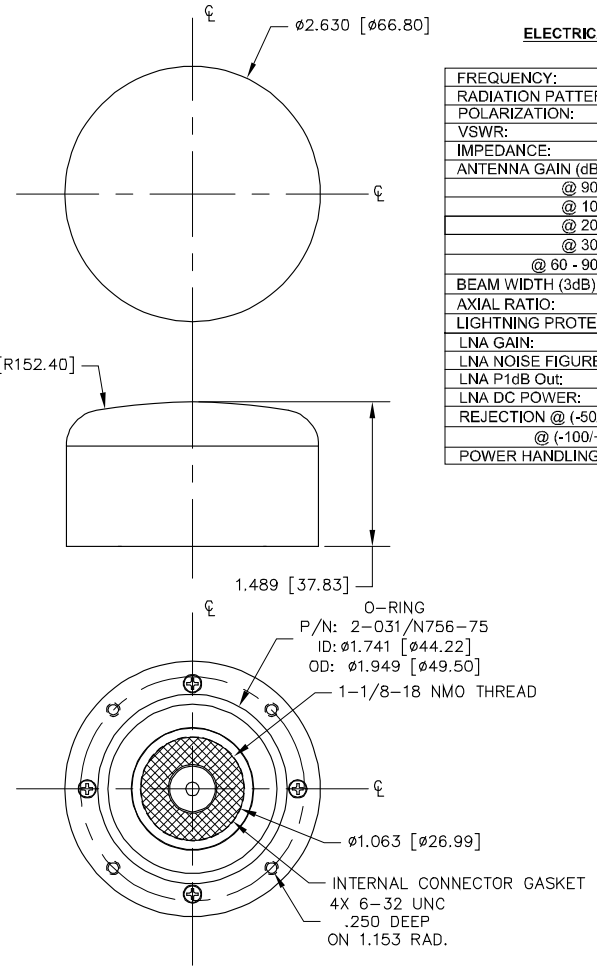
SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 5.0	+ 4.7	+ 3.1	+ 0.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.1	- 1.8	- 1.9	- 5.8	- 3.8	- 3.5
@ 20 ° Elevation:	- 0.6	- 0.3	+ 0.6	- 4.3	- 2.0	- 0.8
@ 30 ° Elevation:	+ 0.9	+ 1.4	+ 1.7	- 3.4	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 4.0	> 3.9	> 2.4	> - 0.9	> 2.7	> 2.2
BEAM WIDTH (3dB):	103 Deg.	114 Deg.	143 Deg.	94 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					







MECHANICAL:

SIZE:	DIAMETER: 2.63 in. [66.8 mm] HEIGHT: 1.49 in. [37.81 mm]
WEIGHT:	12 oz. (341 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541F Class 1A
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	TNC FEMALE BULKHEAD CONNECTOR (OPTION: SMA, BNC, N, N Bulkhead, MCX, MMCX)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
	70,000 ft.
VIBRATION:	> 30 G's
	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	L1L2: 1215 MHz	A: WITH LNA
1.9: 1.9" SQ.	G3: L1 GLONASS/L-BAND	AL: WITH LNA/LIMITER
2: 2.6" DIA.	G5: L1L2 GLONASS/L-BAND/L5	P: WITHOUT LNA
3: 3.5" DIA.	G8: GNSS	
4: MINI ARINC	G8S: GNSS/S-BAND	

P/N: 2G1215P-XNMO-4

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	NMO: NEW MOTOROLA MOUNT	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG. N No Mag.	S: SMA; P: PINS	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
/: CABLE LENGTH (IN)	M: MCX; MM: MMCX	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	N: N; NB: N-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
	T: TNC; TB: TNC-Bulkhead	-5: TAN #33446 PER FED-STD-595B

QUANTITY REQD		DESCRIPTION	PART NO	FINISH	ITEM NO
					2
1	1	O-RING	2-031/N756-75, ITEM 550	–	1
-2	-1		PARTS LIST		

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ±.030, .XXX ±.020, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005. MACHINED SURFACES 125. DO NOT SCALE DRAWING

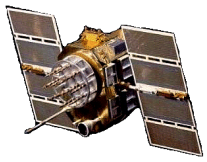
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ORIGINALLY DESIGNED	S. HUYNH	01-05-29
UPDATED	S. HUYNH	June-19-14
UPDATE DRAWN	P. TRAN	June-19-14
APPROVED	S. HUYNH	June-19-14

ANTCOM CORP. TORRANCE CALIFORNIA

2in Square
L1/L2 GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 2G1215P-XNMO-4 | REV –

SCALE 1/1 | SHEET 1 OF 1



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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING			DC GROUNDING		
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE: LENGTH: 2.080 in.[52.78 mm], WIDTH: 2.080 in. [52.78 mm]
HEIGHT: 0.690 in. [17.53 mm], 0.58" [14.73](Optional for Passive)

WEIGHT: 2.88 oz. (82 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE, COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR : SMA FEMALE
(OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

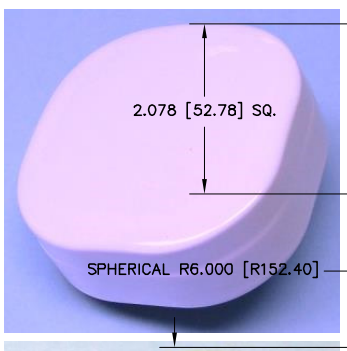
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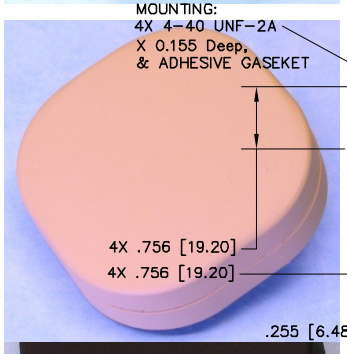
TEMPERATURE : -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE : 70,000 ft.
VIBRATION : > 30 G's
LEAKAGE : HERMETICALLY SEAL

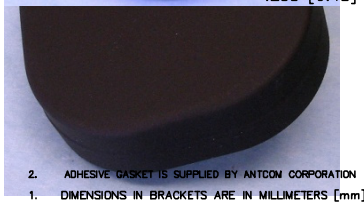
FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-[illegible]5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810[illegible]D SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100







SIZE :	FREQ. BAND :	LNA :
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (0.58" THICK)
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 1G1215A-XS-1

CABLE'S LENGTH :	CONNECTOR :	COLOR :
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN.)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

QUANTITY REQD	-2	-1	DESCRIPTION	PART NO	SPECIFICATION / MATERIAL	FINISH	ITEM NO
1			ADHESIVE GASKET	12345G-3M-1G			3
1							2
1							1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .015, .XXX ± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DATS ON A CONCEN 6 OF .005
MACHINED SURFACES 125

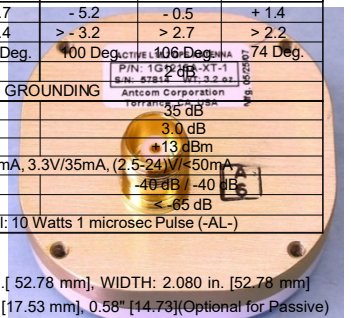
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ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

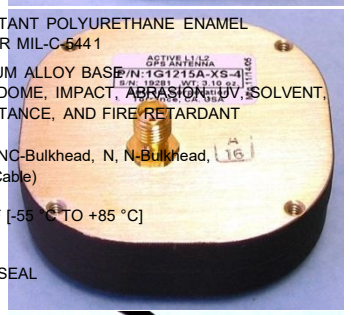
DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE
GPS ANTENNA

SIZE D | CAGE CODE 3CVE1 | DRAWING NO 1G1215X-XX-X | REV -
SCALE 1/1 | SHEET 1 OF 1



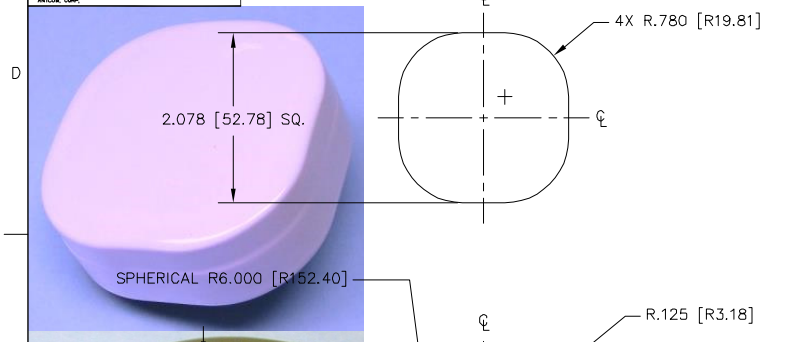


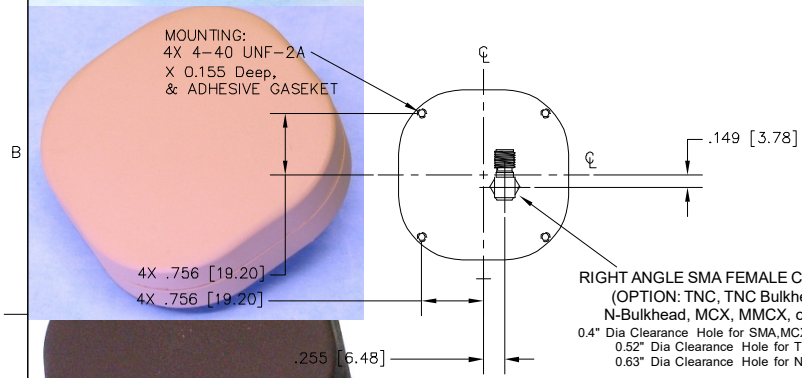


NMO Connector Option is Now Available for Some Antennas

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SPECIFICATIONS

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VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse, 1% DC					

MECHANICAL:

SIZE: LENGTH: 2.080 in.[52.78 mm], WIDTH: 2.080 in. [52.78 mm]
HEIGHT: 0.690 in. [17.53 mm], 0.58" [14.73](Optional for Passive)

WEIGHT: 2.88 oz. (82 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: RIGHT ANGLE SMA FEMALE
(OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

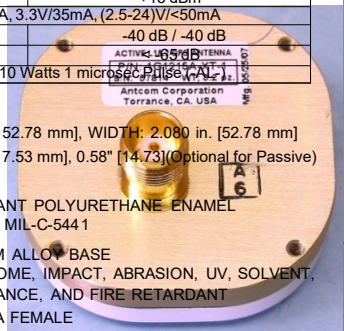
ENVIRONMENTAL:

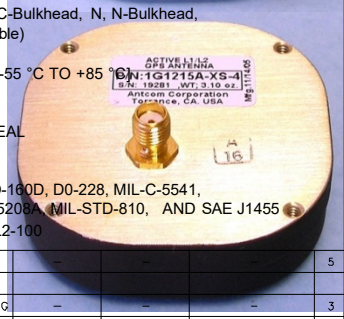
TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100





ITEM NO	QUANTITY REQD	PART NO	DESCRIPTION	SPECIFICATION	MATERIAL	FINISH
5				–	–	–
3	1	12345G-3M-1G	ADHESIVE GASKET	–	–	–
2	1			–		
1	1			–	–	–

PARTS LIST

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (0.58" THICK)
4: MINI ARINC		

P/N: 1G1215A-XRS-4

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN.)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX ±.015 .XXX ±.005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .020 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED M. BOAS 01-05-29
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

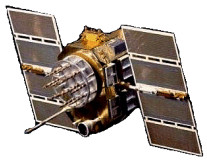
ANTCOM CORP. TORRANCE, CALIFORNIA
OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE GPS ANTENNA
SIZE D | CAGE NO 3CVE1 | DRAWING NO 1G1215A-XRS-X | REV A
SCALE 1/1 SHEET 1 OF 1

ZONE	REV	DESCRIPTION	DATE	APPROVED

NMO Connector Option is Now Available for Some Antennas

L1/L2 GPS Antennas, P/N: 1G1215P-XRS-4-ACM

2.0” Square, Right Angle SMA, Back Mount Configurations



ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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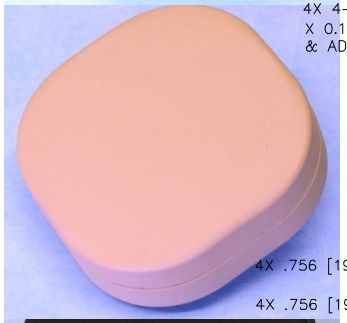
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REVISIONS

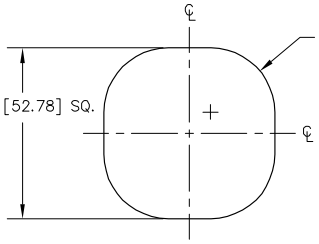
ZONE	REV	DESCRIPTION	DATE	APPROVED

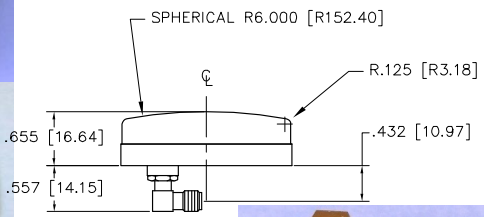


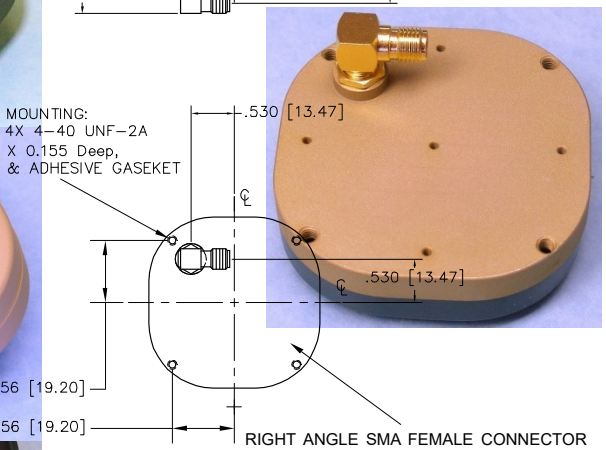












RIGHT ANGLE SMA FEMALE CONNECTOR
(OPTION: TNC, TNC Bulkhead, N,
N-Bulkhead , MCX, MMCX, or Cable)

SPECIFICATIONS

ELECTRICAL:

FREQUENCY :	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	24" Dia. Tube, 2 ft Long	Free Space	24" Dia. Tube, 2 ft Long
@ 90 ° (ZENITH):	+ 4.5	+ 4.2	- 2.5	+ 4.6
@ 10 ° Elevation:	- 1.5	- 3.0	- 4.3	- 2.1
@ 20 ° Elevation:	0.0	0.9	- 3.0	- 0.9
@ 30 ° Elevation:	+1.1	+1.1	- 1.5	+ 0.4
@ 60 - 90 ° Elevation :	> 3.0	> 2.8	> 1.7	> 3.1
BEAM WIDTH (3dB):	112 Deg.	120 Deg.	104 Deg.	102 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING			

LNA OPTION

LNA GAIN:	33 dB	35 dB
LNA NOISE FIGURE:	3.0 dB	3.0 dB
LNA P1dB Out:	+13 dBm	+13 dBm
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA	
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB	-40 dB / -40 dB
@ (-100/+100) MHz	< -65 dB	< -65 dB
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)	

MECHANICAL:

SIZE:	LENGTH: 2.080 in.[52.78 mm], WIDTH: 2.080 in. [52.78 mm] HEIGHT: 0.655 in. [16.64 mm]
WEIGHT:	2.88 oz. (82 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	RIGHT ANGLE SMA FEMALE (OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100

QUANTITY REQD	-2	-1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
					–	–	–	5
1			ADHESIVE GASKET	12345G-3M-1G	–	–	–	3
1					–			2
1					–	–	–	1

PARTS LIST

SIZE:	FREQ.BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER(0.58" THICK)
4: MINI ARINC		

P/N: 1G1215P-XRS-4-ACM

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG_N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead d	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED M. BOAS DEC-03-04
ENGINEER
APPROVED S. HUYNH DEC-03-04
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

OUTLINE DRAWING
L1/L2 GPS ANTENNA
for MALT, ACM & OTHERS

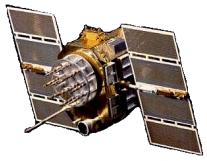
SIZE D | CAGE NO 3CVE1 | DRAWING NO 1G1215P-XRS-4-ACM | REV –
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS Antennas, P/N: 1G1215A-XSC-3 Rev C

Paint with Olive Drab Green #34088 per Fed-Std-595B

2" Square, Back Mount, Bottom Center Connector Configuration



Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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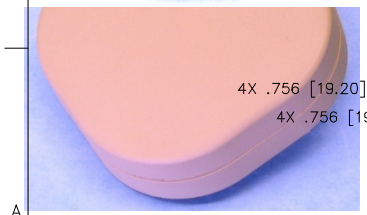
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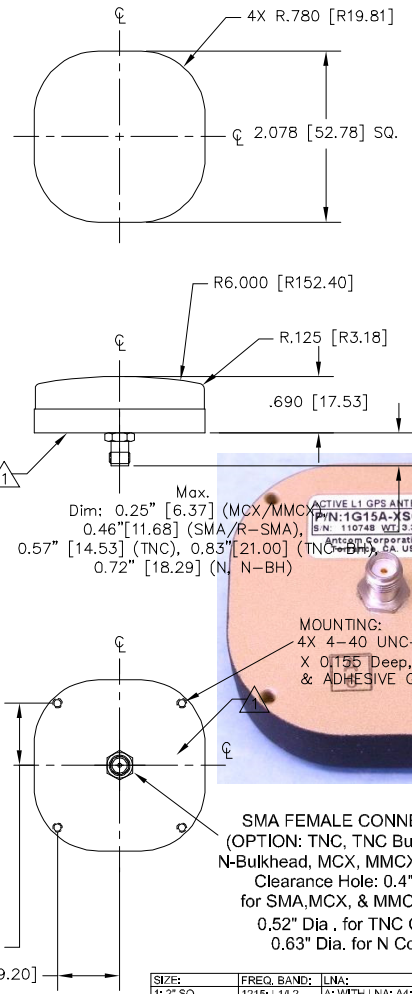
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	B	REVISED COLOR #34088 PER NGC	04/08/13	S.H











SPECIFICATIONS

ELECTRICAL:

	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
FREQUENCY:						
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	LENGTH: 2.080 in.[52.78 mm], WIDTH: 2.080 in. [52.78 mm] HEIGHT: 0.690 in. [17.53 mm], 0.58" [14.73](Optional for Passive)
WEIGHT:	3.1 oz. (87.9 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441, With Radome matching color
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD	-2	-1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
PARTS LIST								
1								3
1								2
1			ADHESIVE GASKET	12345G-3M-1G	-	-	-	1

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (0.58" THICK)
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	RSC: R-SMA; SC: SMA	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG. N: NO MAG.	MC: MCX; MMC: MMCX; PC: PINS	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	NC, NBC: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34088 PER FED-STD-595B
R: RIGHT ANGLE CON.	TC, TBC: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: TAN #: FS 23446 or 33446, FED-STD-595

1. 032 BRUSH FINISH ON SURFACE INDICATED
2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

P/N: 1G1215A-XSC-3

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .030, .XXX± .020, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005. MACHINED SURFACES 125/. DO NOT SCALE DRAWING.

ORIGINALLY DRAWN: S. HUYNH Apr11-08-13
ORIGINALLY DESIGNED: S. HUYNH Apr11-08-13
UPDATED: S. HUYNH Aug-01-16
UPDATE DRAWN: P. TRAN Aug-01-16
APPROVED: S. HUYNH Aug-01-16

ANTCOM CORP. TORRANCE CALIFORNIA

Center Connector
2in Square Active
L1/L2 GPS ANTENNA

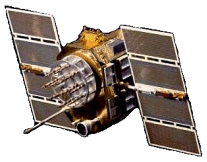
SIZE D | CAGE NO 3CVE1 | SHAPING NO 1G1215A-XXC-X | REV C
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS Antennas for Deep Sea Applications

P/N: 1G1215A-XSC-2-UU

Other Frequencies and Connector Options are Available. *Depth Rate = 10 Km (14,555 PSI)*

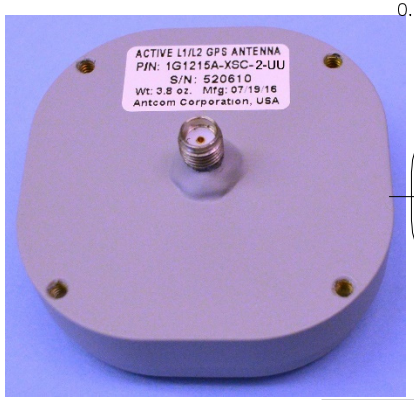


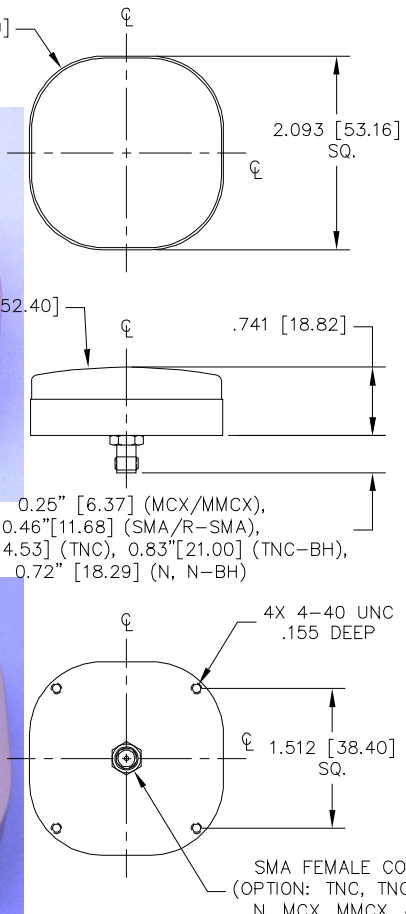
ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	B	POTTING FOR UNDERWATER	07/19/16	S.H
	C	4-40 UNF to UNC	Sep/13/16	S.H

REVISIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	LENGTH: 2.093 in.[53.16 mm], WIDTH: 2.093 in.[53.16 mm] HEIGHT: 0.741 in. [18.82 mm]
WEIGHT:	3.8 oz. (107.7 g)
FINISH:	TEFLON COATED
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (0.58" THICK)
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 1G1215A-XSC-2-UU

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	RSC: R-SMA; SC: SMA	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	MC: MCX; MMC: MMCX; PC: PINS	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	NC, NBC: N, N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	TC, TBC: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: DESERT TAN #33446 PER FED-STD-595B
		-UU: TEFLON COATED

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
2	1					
1	1	–	–	–	–	–
PARTS LIST						

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES: FRACTIONS ± 1/64, DECIMALS .XXX ±.030, .XXXX ±.020, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø .005. MACHINED SURFACES 125. DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Apr11-08-13
ORIGINALLY DESIGNED	S. HUYNH	Apr11-08-13
UPDATED	S. HUYNH	July-19-16
UPDATE DRAWN	P. TRAN	July-19-16
APPROVED	S. HUYNH	July-19-16

ANTCOM CORP. TORRANCE CALIFORNIA

Center Connector
2in Square Active
L1/L2 GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	1G1215A-XXC-X-UU	C

SCALE 1/1 SHEET 1 OF 1

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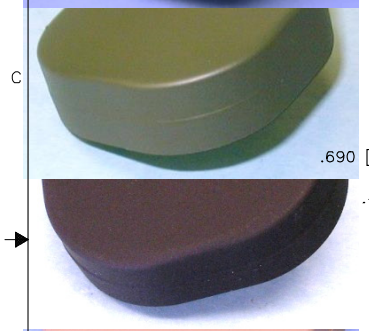
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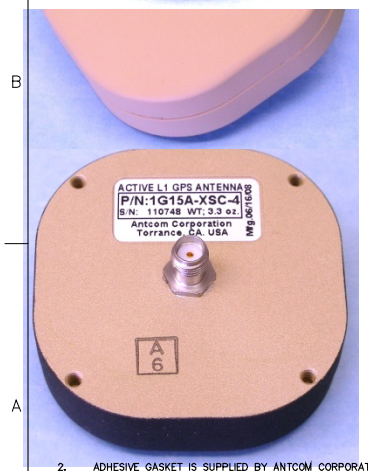
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	–	–	–	S.H

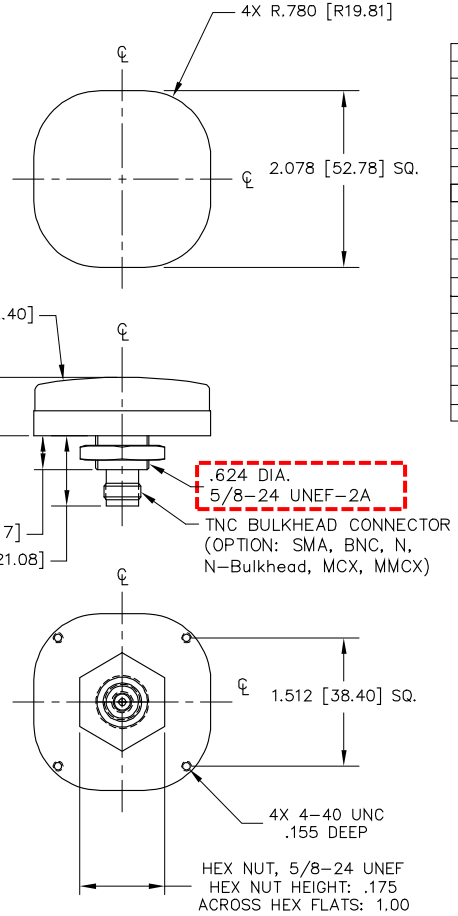
ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					









MECHANICAL:

SIZE:	LENGTH: 2.080 in.[52.78 mm], WIDTH: 2.080 in. [52.78 mm] HEIGHT: 0.690 in. [17.53 mm], 0.58" [14.73](Optional for Passive)
WEIGHT:	4.06 oz. (115.1 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541, With Radome matching color
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	TNB BULKHEAD FEMALE (OPTION: SMA, TNC, N, N-Bulkhead, MCX, MMCX, or BNC)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

NMO Connector Option is Now Available for Some Antennas

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.8: 1.8" SQ.	16: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (0.58" THICK)
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
	PARTS LIST				
1	–	–	–	–	3
1	–	–	–	–	2
1	ADHESIVE GASKET	12345G–3M–1G (Item 544a)	–	–	1

P/N: 1G1215A-XTNB-3

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	RSC: R-SMA; SC: SMA	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	MC; MCX; MMC; MMCX; PC: PINS	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	NC, NBC; N, N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
	TC, TBC; TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
	TNB: TNC-Bulkhead with N Connector Thread on Bulkhead	-5: DESERT TAN #33446 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .030, .XXX ± .020, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005. MACHINED SURFACES 125. DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Mar–19–09
ORIGINALLY DESIGNED	S. HUYNH	Mar–19–09
UPDATED	S. HUYNH	Aug–12–13
UPDATE DRAWN	P. TRAN	Aug–12–13
APPROVED	S. HUYNH	Aug–12–13

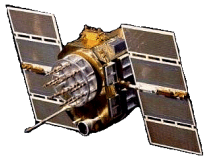
ANTCOM CORP. TORRANCE CALIFORNIA

Center Connector, 2in Square Active L1/L2 GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	1G1215A–XTNB–X	–

SCALE 1/1 SHEET 1 OF 1

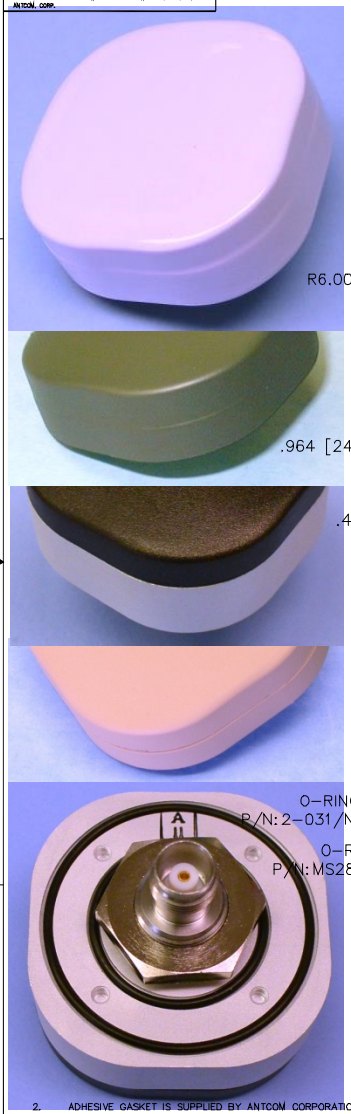
Active L1/L2 GPS Antennas, P/N: 1G1215A-XTNB-3-DO (Double O-Ring)
P/N: 1G1215A-XTNB-3-DO-PSW (Double O-Ring & with Painted Side Wall on Base)
2" Square, Back Mount, Bottom Center Connector Configuration

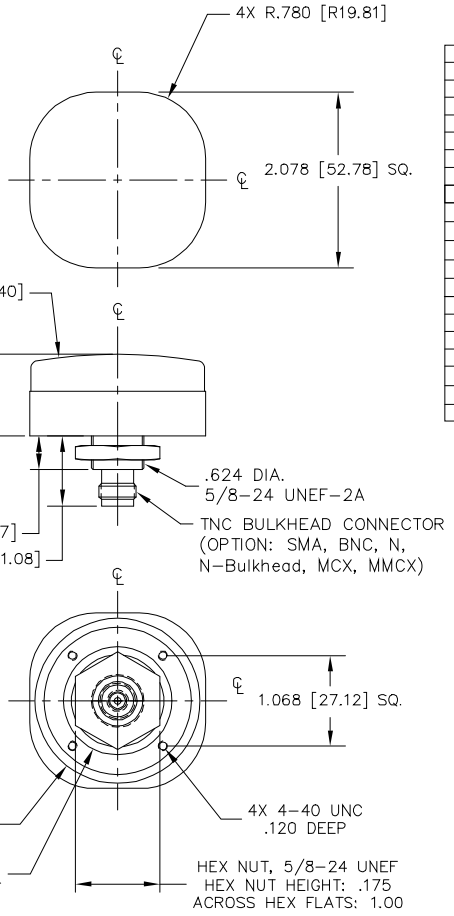


ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	HEIGHT	05/23/16	S.H

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	LENGTH: 2.080 in.[52.78 mm], WIDTH: 2.080 in. [52.78 mm] HEIGHT: 0.964 in. [24.49 mm], 0.84" [21.23] (Optional for Passive)
WEIGHT:	5.5 oz. Max. (155.9 g. Max.)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441, With Radome matching color
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	TNB BULKHEAD FEMALE (OPTION: SMA, TNC, N, N-Bulkhead, MCX, MMCX, or BNC)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (0.58" THICK)
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 1G1215A-XTNB-3-DO

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	RSC: R-SMA; SC: SMA	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	MC: MCX; MMC: MMCX; PC: PINS	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	NC: NBC: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34088 PER FED-STD-595B
	TC: TBC: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
	TNB: TNC-B, Uhead with N Connector Thread on Bulkhead	-5: TAN #: FS 23446 or 33446, FED-STD-595

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH
3	1	O-RING	MS28775-024 (Item 553)	-	-
2	1	O-RING	2-031/N756-75 (Item 550)	-	-
1	1	ADHESIVE GASKET	12345G-3M-1G (Item 544a)	-	-

PARTS LIST

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XXX ±.005, .XXXX ±.0020, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .007 .005
MACHINED SURFACES 125

ORIGINALLY DRAWN	S. HUYNH	Mar-19-09
ORIGINALLY DESIGNED	S. HUYNH	Mar-19-09
UPDATED	S. HUYNH	May-24-16
UPDATE DRAWN	P. TRAN	May-24-16
APPROVED	S. HUYNH	May-24-16

DO NOT SCALE DRAWING

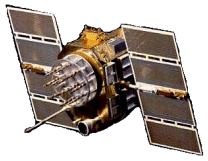
ANTCOM CORP. TORRANCE CALIFORNIA

Center Connector, 2in Square Active L1/L2 GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	1G1215A-XTNB-X-DO	A

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas



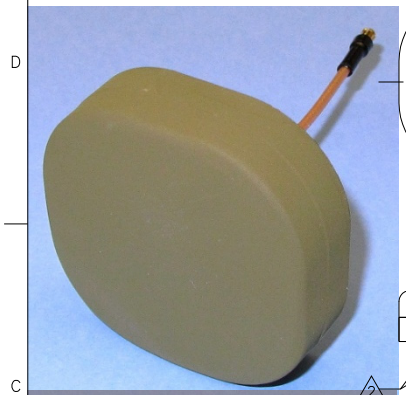
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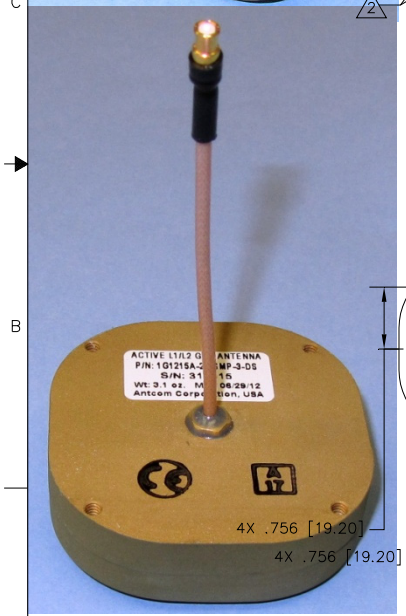
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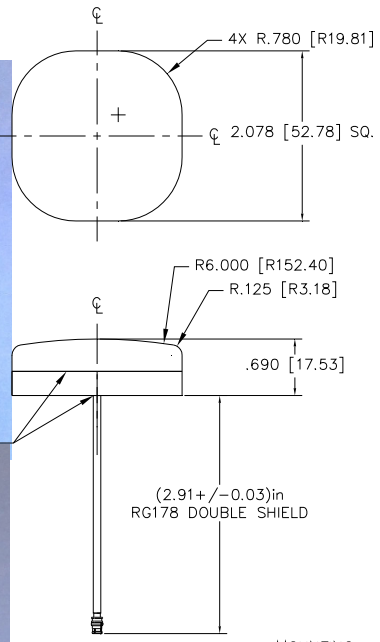
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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	ADDED NOTE FOR ABLEBOND ADHESIVE AND DOUBLE SHIELD CABLE	06/05/12	S.H
	B	REVISED COLOR #34088 PER NGC	04/10/13	S.H







SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	LENGTH: 2.080 in.[52.78 mm], WIDTH: 2.080 in. [52.78 mm] HEIGHT: 0.690 in. [17.53 mm], 0.58" [14.73](Optional for Passive)
WEIGHT:	3.0 oz. (85 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441, With Radome matching color
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMP FEMALE (OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

△1 032 BRUSH FINISH ON SURFACE INDICATED
△2 APPLY ADHESIVE ABLEBOND 724-14C OR EQUIVALENT TO FORM HERMATIC SEAL BETWEEN BASEPLATE AND RADOME AND AROUND COAX CONNECTOR; ADHESIVE SHALL BE FLUSH W/ EXTERNAL SURFACES
3. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
4 DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
NOTES: UNLESS OTHERWISE SPECIFIED:

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (0.58" THICK)
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 1G1215A-XSMP-3-DS

CABLE'S LENGTH:	CONNECTOR (Female for SMP Only):	COLOR:
X: NO CABLE	SMP: SMP Female; SC: SMA	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	MC: MCX; MMC: MMCX; PC: PINS	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	NC, NBC: N, N-Bulkhead; RSC: R-SMA	-3: OLIVE DRAB GREEN #34088 PER FED-STD-595B
R: RIGHT ANGLE CON.	TC, TBC: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: TAN #: FS 23446 or 33446, FED-STD-595

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
3	1			-	-	-
2	1			-	-	-
1	1	ADHESIVE GASKET	12345G-3M-1G	-	-	-
	-2 -1	PARTS LIST				

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .030, .XXX± .020, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON ℄ Ø.005 M
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	May-29-01
ORIGINALLY DESIGNED	S. HUYNH	May-29-01
UPDATE DRAWN	PHIL TRAN	June-05-12
APPROVED	S. HUYNH	June-05-12
CAD FILE NO		

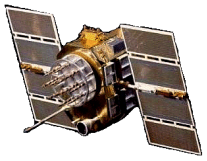
ANTCOM CORP. TORRANCE CALIFORNIA

Center Connector, 2in Square Active L1/L2 GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	1G1215A-XSMP-X-DS	B

SCALE 1/1 SHEET 1 OF 1

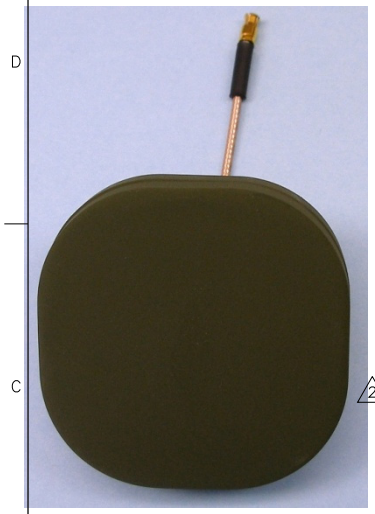
NMO Connector Option is Now Available for Some Antennas

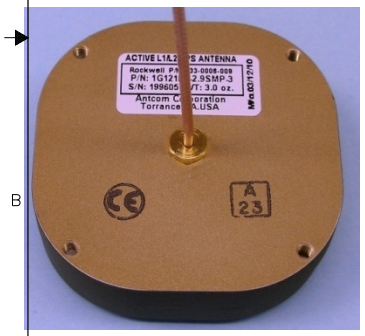


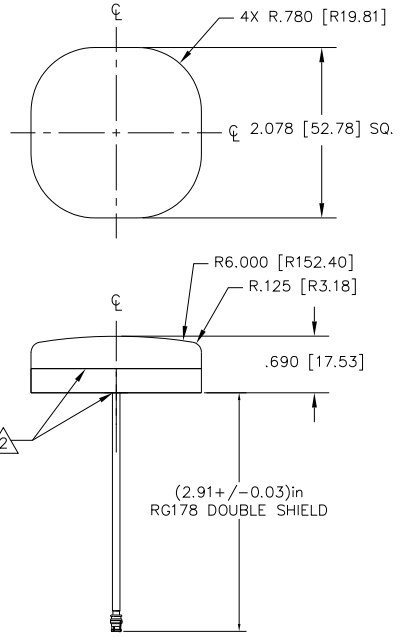
ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE: LENGTH: 2.080 in.[52.78 mm], WIDTH: 2.080 in. [52.78 mm]
HEIGHT: 0.690 in. [17.53 mm], 0.58" [14.73](Optional for Passive)

WEIGHT: 3.0 oz. (85 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441, With Radome matching color

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: SMP FEMALE
(OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	ADDED NOTE FOR ABLEBOND ADHESIVE AND DOUBLE SHIELD CABLE	06-05-12	S.H.

1. 032 BRUSH FINISH ON SURFACE INDICATED
2. APPLY ADHESIVE ABLEBOND 724-14C OR EQUIVALENT TO FORM HERMATIC SEAL BETWEEN BASEPLATE AND RADOME AND AROUND COAX CONNECTOR: ADHESIVE SHALL BE FLUSH W/ EXTERNAL SURFACES
3. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
4. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (0.58" THICK)
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	RSC: R-SMA; SC: SMA; SMP: SMP	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	MC: MCX; MMC: MMCX; PC: PINS	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	NC, NBC: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	TC, TBC: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: TAN #: FS 23446 or 33446, FED-STD-595

P/N: 1G1215A-XSMP-3-DS

QUANTITY REQD	ITEM NO.	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
1	3					
1	2					
1	1	ADHESIVE GASKET	12345G-3M-1G	-	-	-
-2	-1	PARTS LIST				

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .030, .XXX ± .020, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø .005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

ORIGINALLY DRAWN	S. HUYNH	May-29-01
ORIGINALLY DESIGNED	S. HUYNH	May-29-01
UPDATED	S. HUYNH	Aug-07-13
UPDATE DRAWN	P. TRAN	Aug-07-13
APPROVED	S. HUYNH	Aug-07-13

ANTCOM CORP. TORRANCE CALIFORNIA

Center Connector, 2in Square Active L1/L2 GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	1G1215A-XSMP-3-DS	A

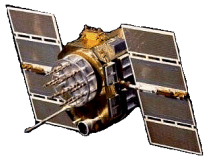
SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS Antennas, P/N: 1G1215A-2.9SMP-3 Rev A

Paint with Olive Drab Green #34094 per Fed-Std-595B

2" Square, Back Mount, Bottom Center Connector Configuration

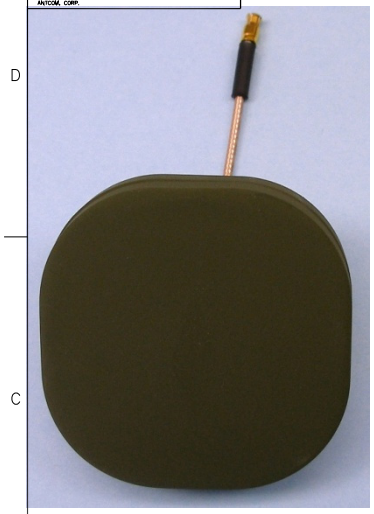


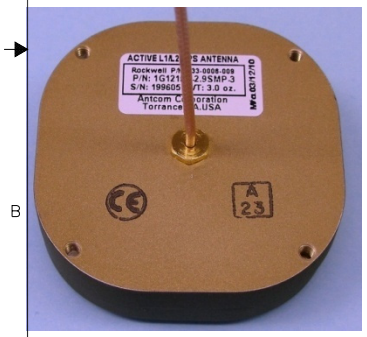
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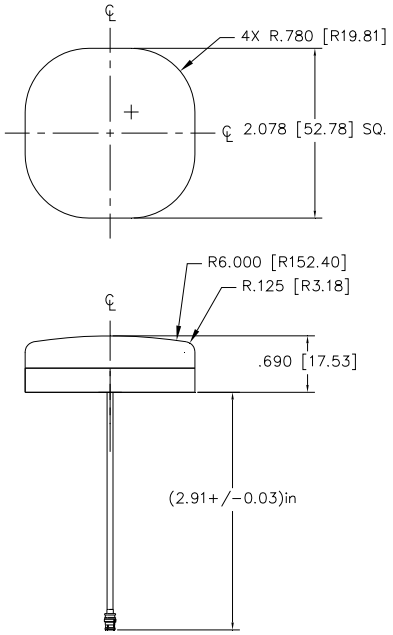
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE: LENGTH: 2.080 in.[52.78 mm], WIDTH: 2.080 in. [52.78 mm]
HEIGHT: 0.690 in. [17.53 mm], 0.58" [14.73](Optional for Passive)

WEIGHT: 3.0 oz. (85 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441, With Radome matching color

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: SMP MALE
(OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

REVISIONS						
ZONE	REV	DESCRIPTION	DATE	REQUESTED	REVISED	APPROVED
	A	RELEASE	06-05-12	K.L	P.T	K.L

QUANTITY REQD	-1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
				-	-	-	5
1		ADHESIVE GASKET	12345G-3M-1G	-	-	-	3
1				-			2
1				-	-	-	1

PARTS LIST

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (0.58" THICK)
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 1G1215A-XSC-3

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	RSC: R-SMA; SC: SMA	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	MC: MCX; MMC: MMCX; PC: PINS	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	NC, NBC: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	TC, TBC: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: TAN #: FS 23446 or 33446, FED-STD-595

1. .032 BRUSH FINISH ON SURFACE INDICATED
2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
3. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .030, .XXX ± .020, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN: S. HUYNH May-29-01
ORIGINALLY DESIGNED: S. HUYNH May-29-01
UPDATE DRAWN: PHIL TRAN June-14-12
APPROVED: S. HUYNH June-14-12
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

Center Connector, 2in Square Active L1/L2 GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1G1215A-XXC-X | REV A
SCALE 1/1 | SHEET 1 OF 1

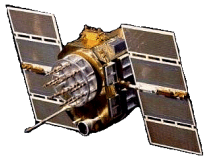
ORIGINAL DOCUMENT WHEN STAMP IS RED

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS Antennas, P/N: P/N: 1G1215A-2.9SMP-3

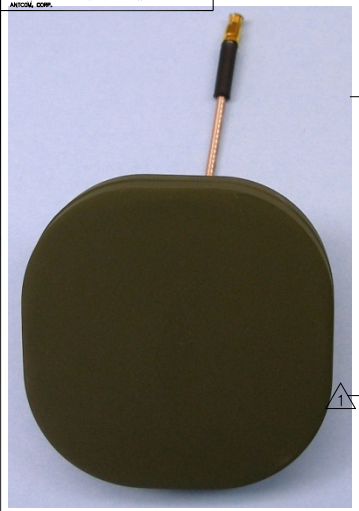
Paint with Olive Drab Green #34031 per Fed-Std-595B

2" Square, Back Mount, Bottom Center Connector Configuration

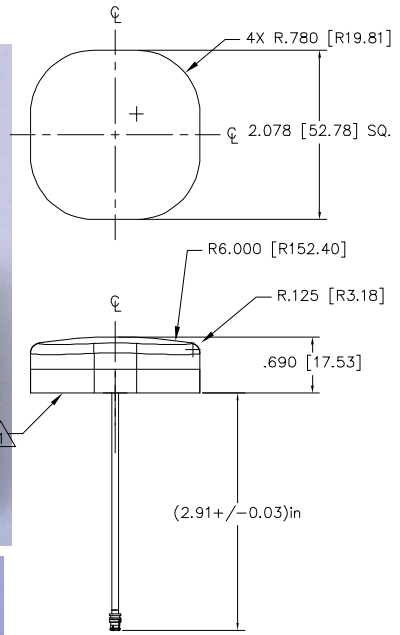


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SPECIFICATIONS

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FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	LENGTH: 2.080 in.[52.78 mm], WIDTH: 2.080 in. [52.78 mm] HEIGHT: 0.690 in. [17.53 mm], 0.58" [14.73](Optional for Passive)
WEIGHT:	3.0 oz. (85 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441, With Radome matching color
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMP MALE (OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD	ITEM NO	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
				–	–	–	5
1		ADHESIVE GASKET	12345G-3M-1G	–	–	–	3
1				–			2
1				–	–	–	1
		PARTS LIST					

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (0.58" THICK)
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .030 .XXX± .015 ANGLES ± 1°

1. 032 BRUSH FINISH ON SURFACE INDICATED
2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

P/N: 1G1215A-XSC-3

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	RSC: R-SMA; SC: SMA	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
M: MAG, N: NO MAG.	MC: MCX; MMC: MMCX; PC: PINS	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
#: CABLE LENGTH (IN)	NC, NBC: N, N-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
R: RIGHT ANGLE CON.	TC, TBC: TNC, TNC-Bulkhead	-5: TAN #: FS 23446 or 33446, FED-STD-595

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64 DECIMALS .XX± .030 .XXX± .020 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ .004 .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING
DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

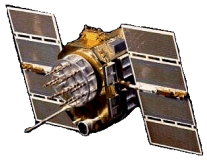
ANTCOM CORP. TORRANCE, CALIFORNIA

Center Connector, 2in Square Active L1/L2 GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1G1215A-XXC-X | REV A
SCALE 1/1 | SHEET 1 OF 1

ZONE	REV	DESCRIPTION	DATE	APPROVED

NMO Connector Option is Now Available for Some Antennas



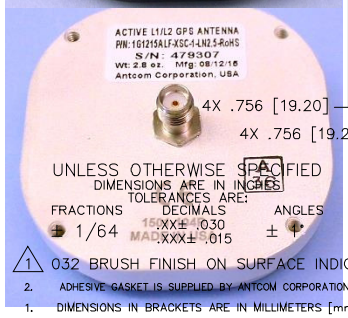
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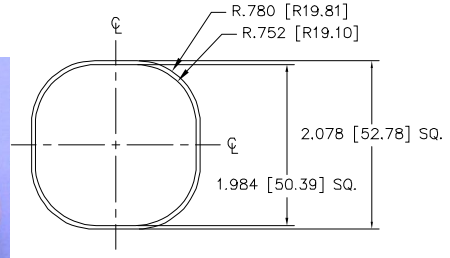
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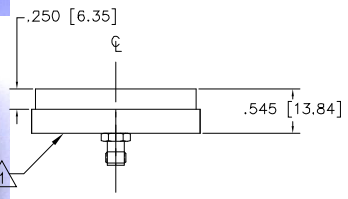


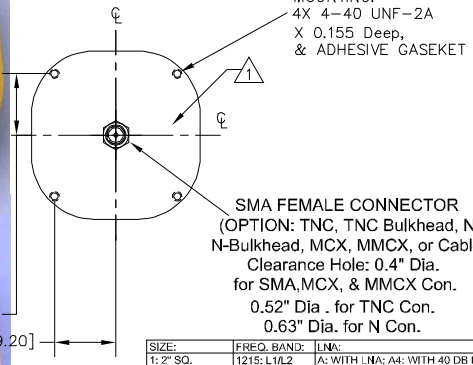












SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB (-A2- for 20 dB)			33 dB (-A2- for 20 dB)		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE: LENGTH: 2.080 in.[52.78 mm], WIDTH: 2.080 in. [52.78 mm]
HEIGHT: 0.545 in. [13.84 mm]

WEIGHT: 3.0 oz. (85 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441, With Radome matching color

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: SMA FEMALE MALE
(OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD	-1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
				-	-	-	5
1		ADHESIVE GASKET	12345G-3M-1G	-	-	-	3
1				-			2
1				-	-	-	1

PARTS LIST

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (0.58" THICK)
4: MINI ARINC		A2F: WITH 20 DB LNA, with REJECTION FILTERS/ FLAT RADOME

P/N: 1G1215A2F-XSC-X

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	RSC: R-SMA; SC: SMA	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	MC: MCX; MMC: MMCX; PC: PINS	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	NC, NBC: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	TC, TBC: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: TAN #: FS 23446 or 33446, FED-STD-595; -X: No Paint

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .030 .XXX± .015 ANGLES ± 1°

1. 032 BRUSH FINISH ON SURFACE INDICATED
2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .030 .XXX± .020 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ .2M .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Aug-19-10
CAD FILE NO

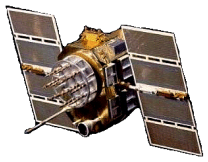
ANTCOM CORP. TORRANCE CALIFORNIA

Center Connector,
2in Square Active
L1/L2 GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1G1215A2F-XSC-X | REV
SCALE 1/1 | SHEET 1 OF 1

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

NMO Connector Option is Now Available for Some Antennas

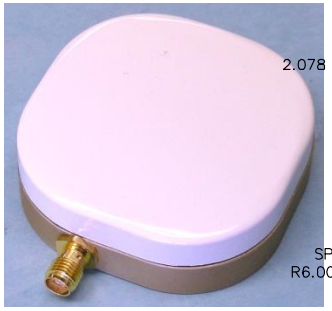


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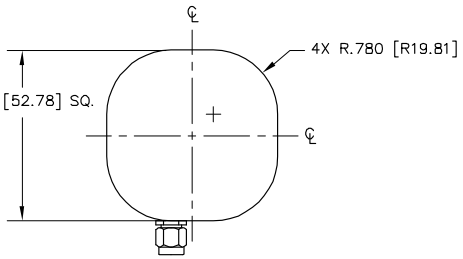
REVISIONS

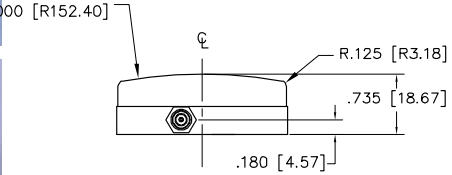
ZONE	REV	DESCRIPTION	DATE	APPROVED

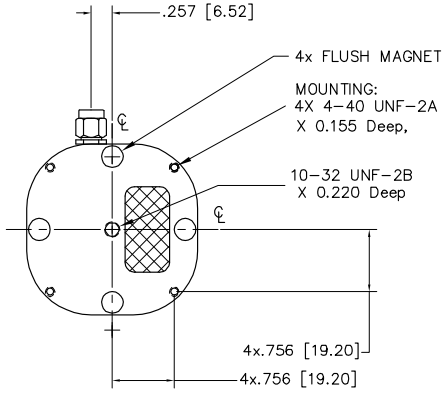












SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNAGAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA,3V/29mA,3.3V/35mA,(2.5-24)V/<50mA					
REJECTION@ (-50/+50)MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100)MHz	< -65 dB			< -65 dB		
POWER HANDLING	Passive:100 W, Active: 1 W, Limiter: +50 dB in Max, +30 dB out Min					

MECHANICAL:

SIZE:	LENGTH: 2.080 in.[52.78 mm], WIDTH: 2.080 in. [52.78 mm] HEIGHT: 0.735 in. [18.67 mm], 0.58" [14.73](Optional for Passive)
WEIGHT:	2.88 oz. (82 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA MALE (OPTION: SMA-F, TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

				–	–	–	5	
1		ADHESIVE GASKET	12345G-3M-1G	–	–	–	3	
1				–			2	
1				–	–	–	1	
–2	–1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO	
QUANTITY REQD		PARTS LIST						

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4 WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and WITH LIMITER
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 1G1215A-MNSM-1

CABLE'S LENGTH	CONNECTOR	COLOR
MN: FLUSH MAGNET	SM: SMA-M;S: SMA; RS: R-SMA;	-1: GLOSS WHITE #17925 PER FED-STD-595B
N: NO MAG.	M: MCX; MM: MMCX; P: PINS	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	N, NB: N, N-Bulkhea d	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø .005. MACHINED SURFACES 125. DO NOT SCALE DRAWING

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH 01-05-29 | CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

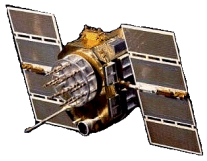
2in SQ. FLUSH MAGNETIC MOUNT, SIDE CONNECTOR L1/L2 GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1G1215A-MNSM-X | REV –

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active or Passive L1/L2 GPS Antennas, P/N: 1G1215A-36*MN*RSMB-4
P/N: 1G1215A-18*N*RS-4 (without magnet and with 18in Right Angle SMA on the side)
2.0" Square, Flush Magnetic/Back Mount Side Connector Configuration



Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	HEIGHT	04/18/16	S.H.

SPECIFICATIONS

ELECTRICAL:

	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
FREQUENCY:						
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	Passive: 100 W, Active: 1 W, Limiter: +50 dB in Max, +30 dB out Min					







MECHANICAL:

SIZE:	LENGTH: 2.080 in.[52.78 mm], WIDTH: 2.080 in. [52.78 mm] HEIGHT: 0.755 in. [19.17 mm], 0.58" [14.73](Optional for Passive)
WEIGHT:	2.88 oz. (82 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	36In LMR100 RIght Angle SMB Male (OPTION: SMA-F, TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

ITEM NO	QUANTITY REQD	-1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
			PARTS LIST				
5					–	–	–
3	1		ADHESIVE GASKET	12345G-3M-1G	–	–	–
2	1				–	–	–
1	1				–	–	–

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and WITH LIMITER
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 1G1215A-36MNRSMB-4 ← Color

CABLE'S LENGTH:	CONNECTOR:	COLOR:
MN: FLUSH MAGNET	SM: SMA-M/S: SMA; RS: R-SMA;	-1: GLOSS WHITE #17925 PER FED-STD-595B
N: NO MAG.	M: MCX; MM: MMCX; P: PINS	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	RSMB: SMB-RM, N, NB: N, N-Bulkhead;	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CONN.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XXX ±.010, .XXXX ±.005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø .25" .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	01-05-29
ORIGINALLY DESIGNED	S. HUYNH	01-05-29
UPDATED BY	S. HUYNH	April-18-16
DRAWN BY	P. TRAN	April-18-16
APPROVED	S. HUYNH	April-18-16

ANTCOM CORP. TORRANCE CALIFORNIA

2in SQ. FLUSH MAGNETIC MOUNT, SIDE CABLE L1/L2 GPS ANTENNA

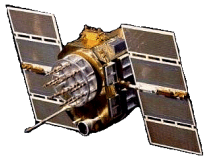
SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	1G1215A-36MNRSMB-4	A

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS Antennas, P/N: P/N: 1GD1215A-XS-X

2" Square, Top Mount, Bottom Center Connector Configuration

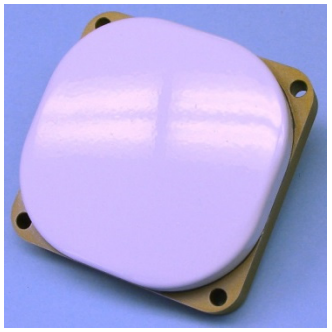


ISO 9001:2008/FAA Approved Facility

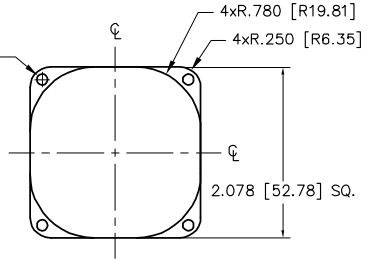
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

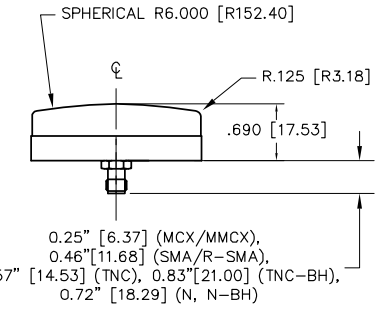
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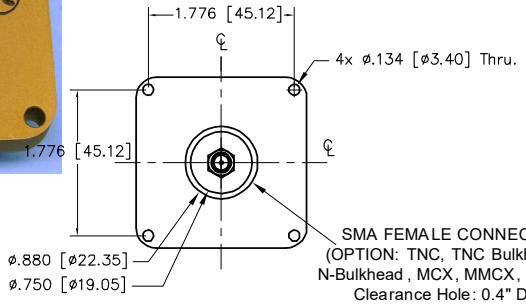
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SPECIFICATIONS

ELECTRICAL:

	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
FREQUENCY:						
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNAGAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA,3V/29mA,3.3V/35mA,(2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING	Passive: 100 W, Active: 1 W, Limiter: +50 dB in Max, +30 dB out Min					

MECHANICAL:

SIZE:	LENGTH: 2.080 in.[52.78 mm], WIDTH: 2.080 in. [52.78 mm] HEIGHT: 0.690 in. [17.53 mm], 0.58" [14.73](Optional for Passive)
WEIGHT:	2.88 oz. (82 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

				–	–	–		5
1		ADHESIVE GASKET	12345G–3M–1G	–	–	–		3
1				–				2
1				–	–	–		1
–2	–1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH		ITEM NO
QUANTITY REQD		PARTS LIST						

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4 WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and WITH LIMITER
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 1GD1215A-XS-1

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG. N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ ⌀.005. MACHINED SURFACES 125. DO NOT SCALE DRAWING

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH Aug-25-09 | CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE
GPS ANTENNA

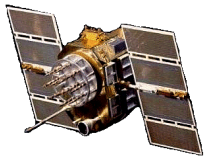
SIZE D | CAGE NO 3CVE1 | DRAWING NO 1GD1215X–XX–X | REV –

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active or Passive L1/L2 GPS Antennas, P/N: 21G1215X-XX-X

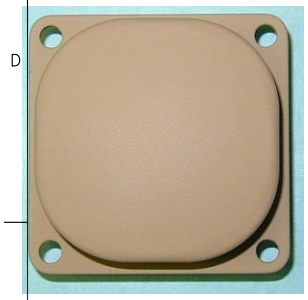
2.3" Square, Front Mount Configurations

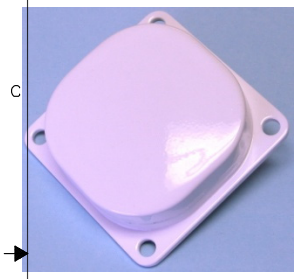


ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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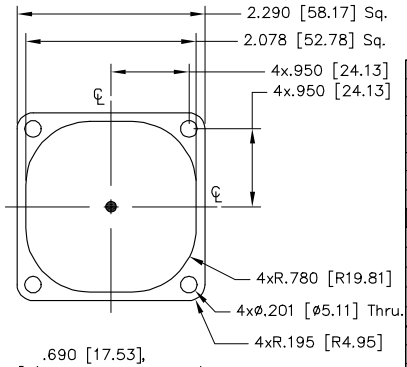
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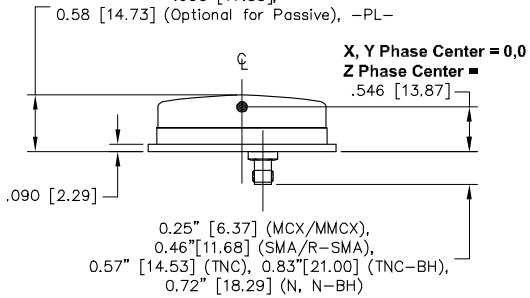


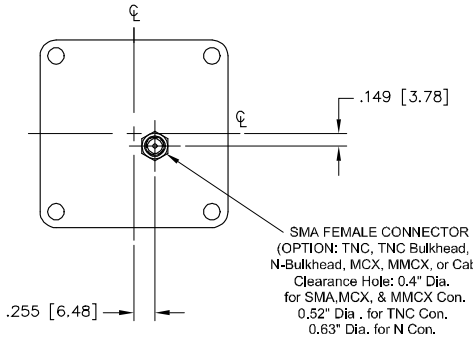












SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	LENGTH: 2.290 In.[58.17 mm], WIDTH: 2.290 In. [58.17 mm] HEIGHT: 0.690 in. [17.53 mm], 0.58" [14.73](Optional for Passive)
WEIGHT:	2.9 oz. (82 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (0.58" THICK)
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 21G1215A-XS-5

CABLE'S LENGTH:	CONNECTOR:
X: NO CABLE	S: SMA; P: PINS
M: MAG, N: NO MAG.	M: MCX; MM: MMCX
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead

COLOR:
-1: GLOSS WHITE #17925 PER FED-STD-595B
-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
-5: DESERT SAND

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
5				–	–	–
3	1	ADHESIVE GASKET	12345G–3M–1G	–	–	–
2	1			–	–	–
1	1			–	–	–
PARTS LIST	–2	–1				

NOTES: UNLESS OTHERWISE SPECIFIED:
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2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION

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ORIGINALLY DRAWN	S. HUYNH	01–05–29
ORIGINALLY DESIGNED	S. HUYNH	01–05–29
UPDATED	S. HUYNH	June–05–14
UPDATE DRAWN	P. TRAN	June–05–14
APPROVED	S. HUYNH	June–05–14

ANTCOM CORP. TORRANCE CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE GPS ANTENNA

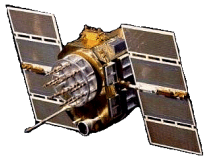
SIZE D | CAGE NO 3CVE1 | DRAWING NO 21G1215X–XX–X | REV –

SCALE 1/1 | SHEET 1 OF 1

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

NMO Connector Option is Now Available for Some Antennas



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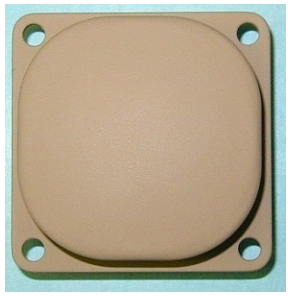
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SPECIFICATIONS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

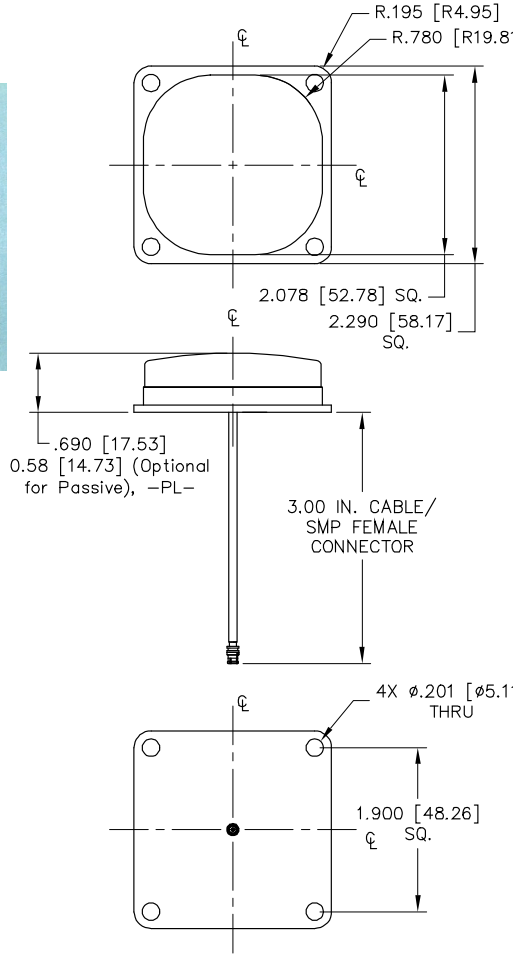
ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
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POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					









MECHANICAL:

SIZE:	LENGTH: 2.290 In.[58.17 mm] X 2.290 In. [58.17 mm] HEIGHT: 0.690 in. [17.53 mm], 0.58" [14.73](Optional for Passive)
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CONNECTOR:	3 IN. CABLE/ SMP FEMALE (OPTION: SMA, TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

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SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		A2: WITH 20 DB LNA WITHOUT REJECTION FILTER
3: 3.5" DIA.		A4: WITH 40 DB LNA WITHOUT REJECTION FILTER
4: MINI ARINC		P: WITHOUT LNA

P/N: 21G1215A-3SMP-3-DS

CABLE'S LENGTH:	CONNECTOR:	COLOR:
#: CABLE LENGTH (IN)	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
X: NO CABLE	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
M: MAG, N: NO MAG.	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: TAN #33446 PER FED-STD-595B

QUANTITY REQD	ITEM NO	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
	1					2
1	1	ADHESIVE GASKET, Item 544A	12345G-3M-1G	–	–	1
–2	–1	PARTS LIST				

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005 @ 12X
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	May-29-01
ORIGINALLY DESIGNED	S. HUYNH	May-29-01
UPDATED	S. HUYNH	Mar-17-14
UPDATE DRAWN	P. TRAN	Mar-17-14
APPROVED	S. HUYNH	Mar-17-14

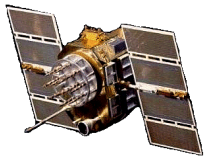
ANTCOM CORP. TORRANCE, CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	21G1215A-3SMP-3-DS	–

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

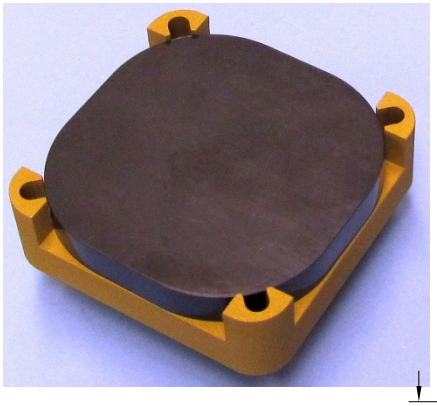


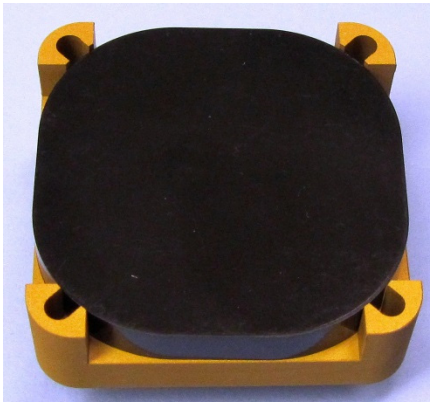
ANTCOM CORPORATION . 367 Van Ness Way, #602 . Torrance, CA 90501 . Tel: (310) 782-1076 . Fax: (310) 782-1086 . E-mail: antennas@antcom.com . http://www.antcom.com

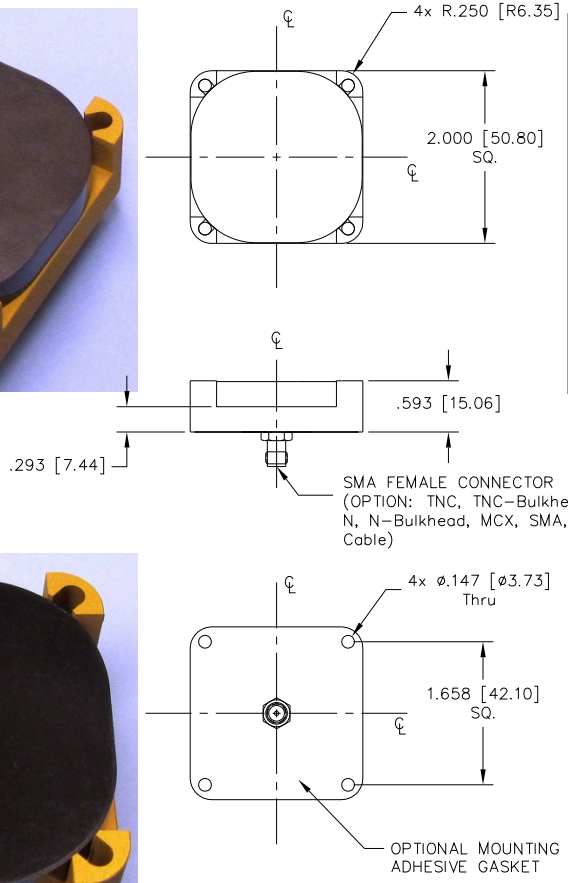
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SPECIFICATIONS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED







ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB (Option A), 20 dB (Option A2)					
LNA NOISE FIGURE:	3.0 dB (Option A), 2 dB (Option A2)					
LNA P1dB Out:	+13 dBm					
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	LENGTH = 2.00 in.[50.80 mm], WIDTH = 2.00 in. [50.80 mm] HEIGHT= 0.593in. [15.06mm]
WEIGHT:	2.7 oz. (76.5 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE CONNECTOR (OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, SMA, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH 33 dB Gain LNA
1.9: 1.9" SQ.	15: L1 ONLY	A2: WITH 20 dB Gain LNA WITHOUT REJECTION FILTERS
2: 2.6" DIA.		A2F: WITH 20 dB Gain LNA WITH REJECTION FILTERS
3: 3.5" DIA.		A4: WITH 40 dB Gain LNA WITHOUT REJECTION FILTERS
4: MINI ARINC		P: WITHOUT LNA

P/N: 1.9G-1215A2F-XSC-1-R

								2
	1	ADHESIVE GASKET	12345G-3M-1G	–	–	–		1
–2	–1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH		ITEM NO
QUANTITY REQD		PARTS LIST						

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS:R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125

DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Feb-19-04
ORIGINALLY DESIGNED	S. HUYNH	Feb-19-04
UPDATED	S. HUYNH	Sep-04-13
UPDATE DRAWN	P. TRAN	Sep-04-13
APPROVED	S. HUYNH	Sep-04-13

ANTCOM CORP. TORRANCE CALIFORNIA

L1/L2 PASSIVE OR ACTIVE GPS ANTENNA

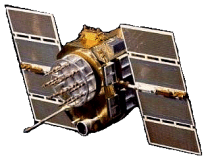
SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	1.9G-1215A2F-XSC-1-R	C

SCALE 1/1 SHEET 1 OF 1

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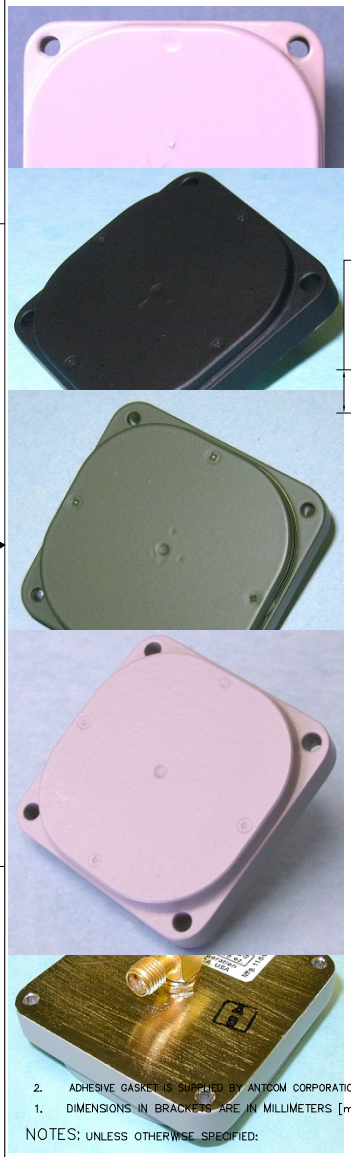
NMO Connector Option is Now Available for Some Antennas

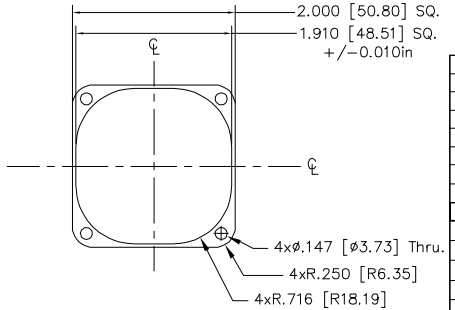
Active or Passive L1/L2 GPS Antennas
P/N: 1.9G1215X-XRSC-3
2.0" Square, Right Angle SMA, Flat Mount Configurations

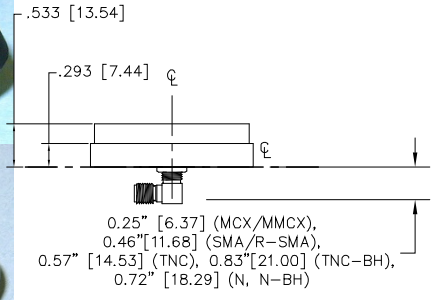


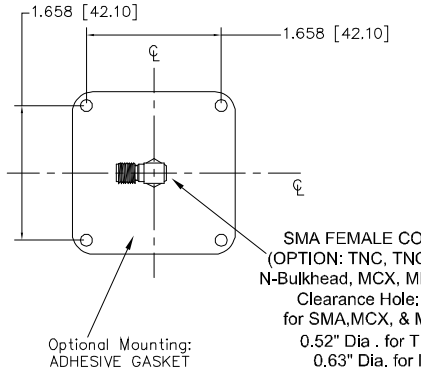
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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB (Option A), 20 dB (Option A2)					
LNA NOISE FIGURE:	3.0 dB (Option A), 2 dB (Option A2)					
LNA P1dB Out:	+13 dBm					
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE: LENGTH = 2.00 in.[50.80 mm], WIDTH = 2.00 in. [50.80 mm]
HEIGHT= 0.533in. [13.54mm]

WEIGHT: 2.6 oz. (74 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: RIGHT ANGLE SMA FEMALE CONNECTOR
(OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, SMA, or Cable)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
5				-	-	-
3	1	ADHESIVE GASKET	12345G-3M-1G	-	-	-
2	1			-		
1	1			-	-	-

PARTS LIST

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH 33 dB Gain LNA
1.9: 1.9" SQ.	15: L1 ONLY	A2: WITH 20 dB Gain LNA WITHOUT REJECTION FILTERS
2: 2.6" DIA.		A4: WITH 40 dB Gain LNA WITHOUT REJECTION FILTERS
3: 3.5" DIA.		P: WITHOUT LNA
4: MINI ARINC		

P/N: 1.9G1215A-XRSC-3

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
NOTES: UNLESS OTHERWISE SPECIFIED:

ZONE	REV	DESCRIPTION	DATE	APPROVED
	D	Top X/Y & Thickness Correction	April-30-16	S.H

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DATS ON A COMMON ø .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING
DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Feb-19-04
CAD FILE NO

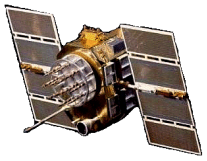
ANTCOM CORP. TORRANCE CALIFORNIA

L1/L2 PASSIVE OR ACTIVE GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.9G1215A-XRSC-3 | REV D
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active or Passive L1/L2 GPS Antennas, P/N: 1.9G1215X-XSC-3
P/N: 1.9G1215X-XSC-3
P/N: 1.9G1215A-XTC-3-BP
2.0" Square, Flat Mount Configurations



ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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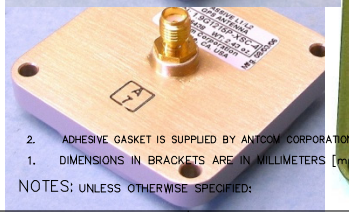
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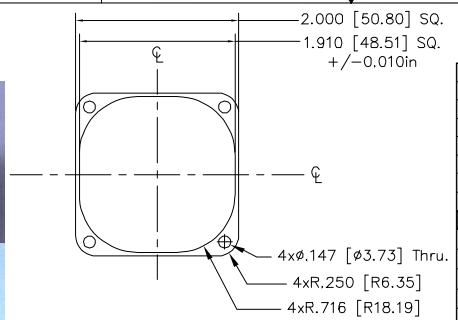


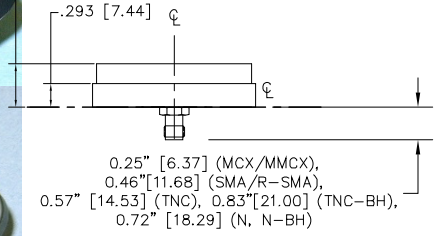


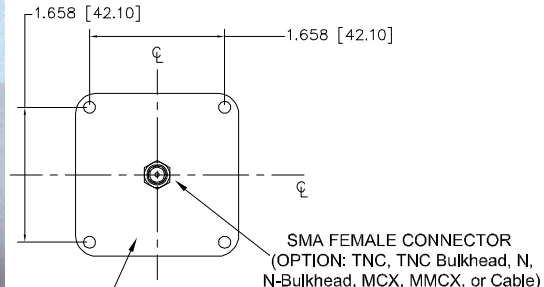




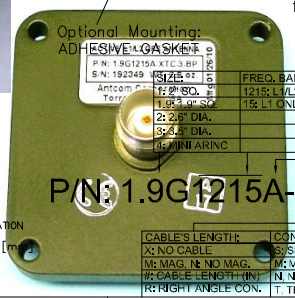








SMA FEMALE CONNECTOR
(OPTION: TNC, TNC Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)
Clearance Hole: 0.4" Dia.
for SMA,MCX, & MMCX Con.
0.52" Dia . for TNC Con.
0.63" Dia. for N Con.



SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB (Option A), 20 dB (Option A2)					
LNA NOISE FIGURE:	3.0 dB (Option A), 2 dB (Option A2)					
LNA P1dB Out:	+13 dBm					
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE: LENGTH = 2.00 in.[50.80 mm], WIDTH = 2.00 in. [50.80 mm]
HEIGHT= 0.533in. [13.54mm]

WEIGHT: 2.6 oz. (74 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: SMA FEMALE CONNECTOR
(OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, SMA, or Cable)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD	-1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
PARTS LIST							
-2				-	-	-	5
1		ADHESIVE GASKET	12345G-3M-1G	-	-	-	3
1				-			2
1				-	-	-	1

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH 33 dB Gain LNA
1.9" SQ.	15: L1 ONLY	A2: WITH 20 dB Gain LNA WITHOUT REJECTION FILTERS
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		A4: WITH 40 dB Gain LNA WITHOUT REJECTION FILTERS
4: MINI ARINC		

P/N: 1.9G1215A-XSC-3

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS:R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DATS ON A COMMON Ø .005. MACHINED SURFACES 125. DO NOT SCALE DRAWING

DRAWN S. HUYNH Feb-19-04
CHECKED S. HUYNH Feb-19-04
UPDATED S. HUYNH April-30-16
APPROVED S. HUYNH Feb-19-04
CAD FILE NO S. HUYNH Feb-19-04

ANTCOM CORP. TORRANCE, CALIFORNIA

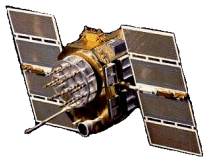
L1/L2 PASSIVE OR ACTIVE GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.9G1215A-XSC-3 | REV D
SCALE 1/1 | SHEET 1 OF 1

ZONE	REV	DESCRIPTION	DATE	APPROVED
	D	Top X/Y, Thickness Correction	April-30-16	S.H

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS Antennas, P/N: 1.9G1215A-5SMC-2-OSR
2.0" Square, Flat Mount Configurations



ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBIc):	Free Space	3 In G.P.	4 ft G.P.	Free Space	3 In G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB (Option A), 20 dB (Option A2)					
LNA NOISE FIGURE:	3.0 dB (Option A), 2 dB (Option A2)					
LNA P1dB Out:	+13 dBm					
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE: LENGTH = 2.00 in.[50.80 mm], WIDTH = 2.00 in. [50.80 mm]
HEIGHT= 0.533in. [13.54mm]

WEIGHT: 2.6 oz. (74 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: 5 IN. CABLE SMC PLUG
(OPTION: SMA, SSMA, SSMC, SMB, SSMB, ACMR, SMP, SSMP)

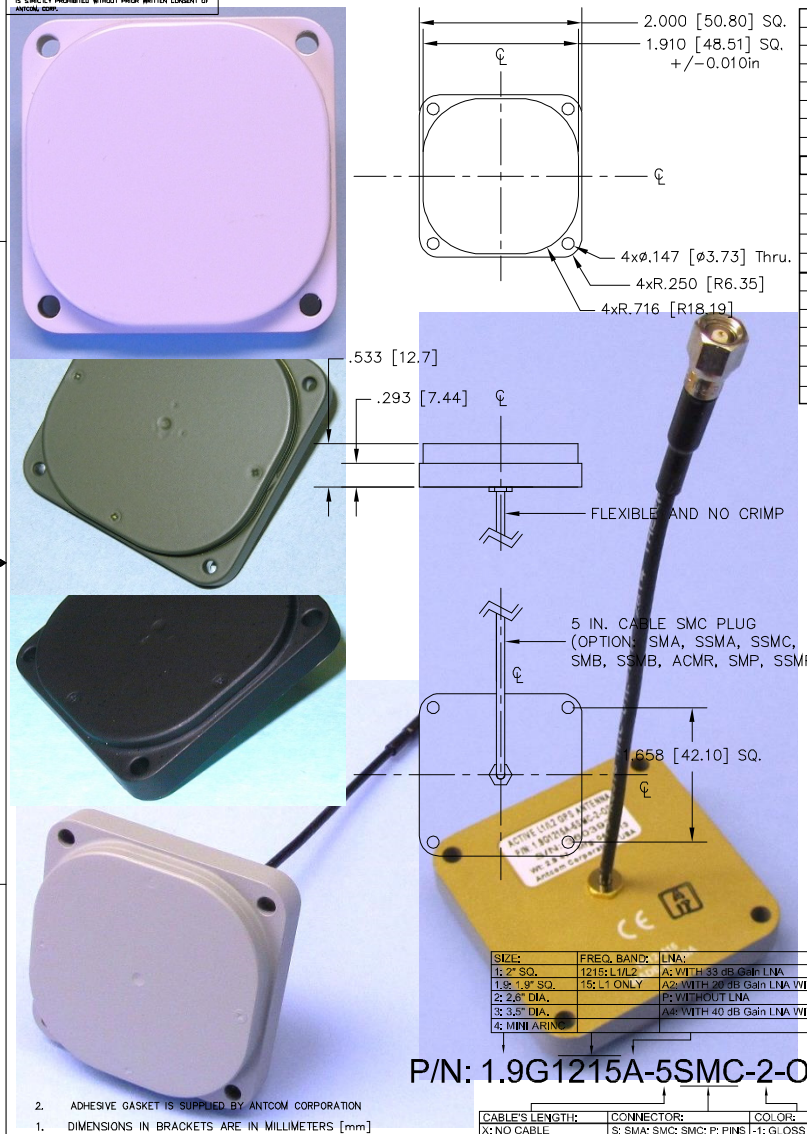
ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100



SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH 33 dB Gain LNA
1.9: 1.9" SQ.	15: L1 ONLY	A2: WITH 20 dB Gain LNA WITHOUT REJECTION FILTERS
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		A4: WITH 40 dB Gain LNA WITHOUT REJECTION FILTERS
4: MINI ARINC		

P/N: 1.9G1215A-5SMC-2-OSR

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; SMC; SMC; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM; MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB; N, N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB; TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	D	Thickness, Top X/Y Correction	April-30-16	S.H

ITEM NO	QUANTITY REQD	PART NO	DESCRIPTION	SPECIFICATION	MATERIAL	FINISH
5				-	-	-
3	1	12345G-3M-1G	ADHESIVE GASKET	-	-	-
2	1			-		
1	1			-	-	-

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DATS ON A COMMON Ø .005
MACHINED SURFACES 125

DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Feb-19-04
ORIGINALLY DESIGNED	S. HUYNH	Feb-19-04
UPDATED	S. HUYNH	April-30-16
UPDATE DRAWN	P. TRAN	Mar-13-13
APPROVED	S. HUYNH	Mar-13-13

ANTCOM CORP. TORRANCE CALIFORNIA

L1/L2 ACTIVE GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.9G1215A-5SMC-2-OSR | REV D

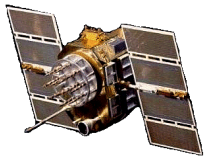
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS Antennas

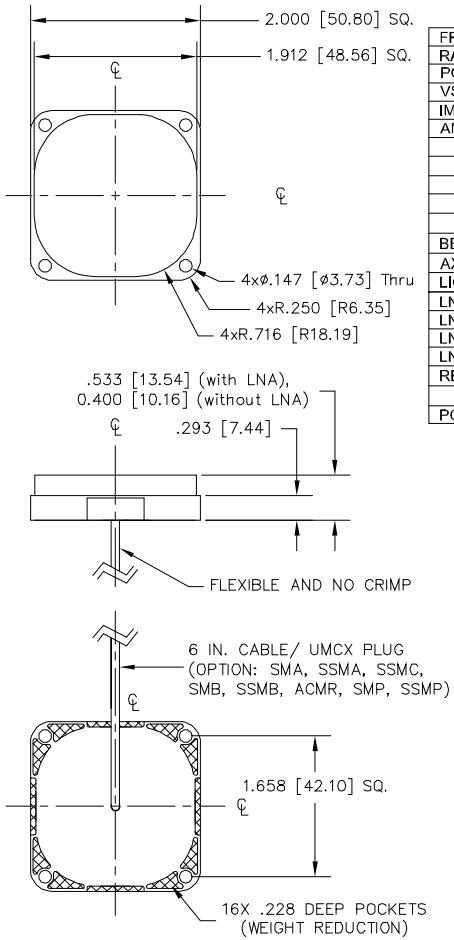
P/N: 1.9G1215A-6UMCX-5-OSR-LW2.5 Rev B (UMCX Connector)

2.0” Square, Flat Mount Configurations



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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB (Option A), 20 dB (Option A2)					
LNA NOISE FIGURE:	3.0 dB (Option A), 2 dB (Option A2)					
LNA P1dB Out:	+13 dBm					
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE: LENGTH = 2.00 in.[50.80 mm], WIDTH = 2.00 in. [50.80 mm]
HEIGHT= 0.533in. [13.54mm], 0.40 in. [10.16 mm] (without LNA)

WEIGHT: 2.5 oz. (70.9 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: 6 IN. CABLE/ UMCX PLUG
(OPTION: SMA, SSMA, SSMC, SMB, SSMB, SMP, SSMP)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH 33 dB Gain LNA
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH 33 dB Gain LNA WITH LIMITER
2: 2.6" DIA.		A2: WITH 20 dB Gain LNA WITHOUT REJECTION FILTERS
3: 3.5" DIA.		A4: WITH 40 dB Gain LNA WITHOUT REJECTION FILTERS
4: MINI ARINC		P: WITHOUT LNA

P/N: 1.9G1215AL-6UMCX-5-OSR-LW2.5

1								3
1								2
1		ADHESIVE GASKET	12345G-3M-1G	–	–	–		1
–2	–1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH		ITEM NO
QUANTITY REQD		PARTS LIST						

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	UMCX: UMCX	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	S: SMA; SMC; SMC; P: PINS	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	M: MCX; MM; MMCX	-3: CAMO GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, N: N	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-6: DESERT TAN #33446 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ZONE	REV	DESCRIPTION	DATE	APPROVED
	B	WEIGHT CORRECTION	May/13/15	S.H

ORIGINALLY DRAWN	S. HUYNH	Feb-19-04
ORIGINALLY DESIGNED	S. HUYNH	Feb-19-04
UPDATED	S. HUYNH	Mar-13-13
UPDATE DRAWN	P. TRAN	Mar-13-13
APPROVED	S. HUYNH	Mar-13-13

ANTCOM CORP. TORRANCE CALIFORNIA

L1/L2 ACTIVE GPS ANTENNA

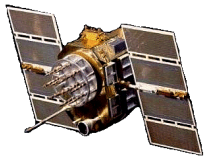
SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.9G1215AL-6UMCX-5-OSR-LW2.5 | REV B
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Passive L1/L2 GPS Antennas, 1.9G1215P-XSO-2 Rev E

1.9G1215PF-3RMMO-2 Rev E (With Filter and 3in Right Angle MMCX Cable, Thickness =0.5in)

2.0" Square, Flat Mount Configurations

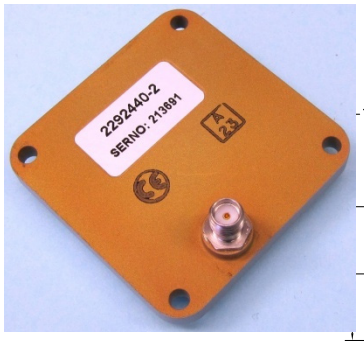


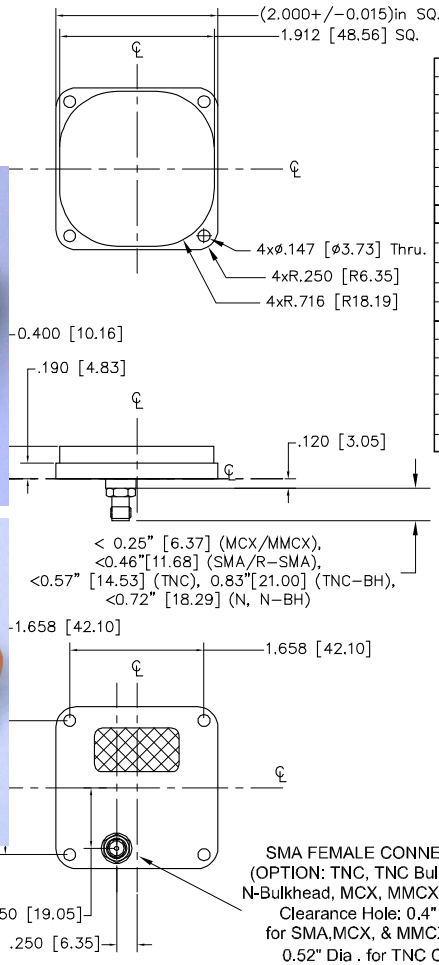
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.7:1			< 1.7:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN (OPTIONAL):	33 dB (Option A), 20 dB (Option A2)					
LNA NOISE FIGURE:	3.0 dB (Option A), 2 dB (Option A2)					
LNA P1dB Out:	+13 dBm					
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					

MECHANICAL:

SIZE:	LENGTH = 2.000 in, WIDTH = 2.000 in HEIGHT = 0.400in
WEIGHT:	2.1 oz. (62 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541F Type I Class 1A or 3
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE CONNECTOR (OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, SMA, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH 33 dB Gain LNA
1.9: 1.9" SQ.	15: L1 ONLY	A2: WITH 20 dB Gain LNA WITHOUT REJECTION FILTERS
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		A4: WITH 40 dB Gain LNA WITHOUT REJECTION FILTERS
4: MINI ARINC		

P/N: 1.9G1215P-XSO-2

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS:R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG. N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

ZONE	REV	DESCRIPTION	DATE	APPROVED
D		2.004in to (2.006+/-0.015)in	May-10-10	S.H
E		Delete Note 2 for Gasket	Aug-08-12	S.H

ITEM NO	QUANTITY REQD	PART NO	DESCRIPTION	SPECIFICATION	MATERIAL	FINISH
5				-	-	-
3	1			-	-	-
2	1			-		
1	1			-	-	-

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XXX ±.010, .XXXX ±.005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON ℄ .2X.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH June-30-09
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

L1/L2 PASSIVE OR ACTIVE GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.9G1215P-XSO-2 | REV E

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Passive L1/L2 GPS Antennas
P/N: 1.9G1215P-XSO-2 Rev D (For FS 36375 Gray)
2.0" Square, Flat Mount Configurations

ISO 9001:2008/FAA Approved Facility

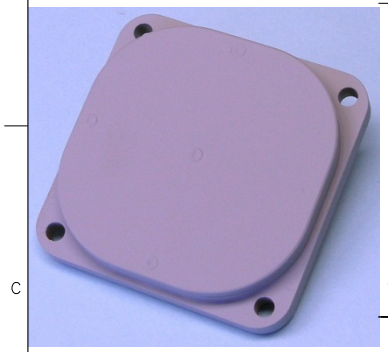
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

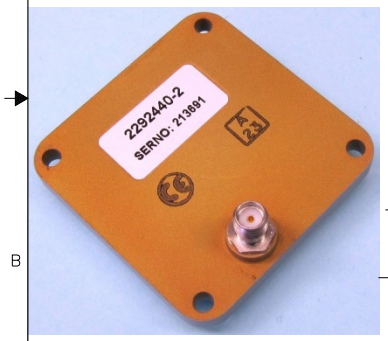
ANTCOM CORPORATION . 367 Van Ness Way, #602 . Torrance, CA 90501 . Tel: (310) 782-1076 . Fax: (310) 782-1086 . E-mail: antennas@antcom.com . http://www.antcom.com

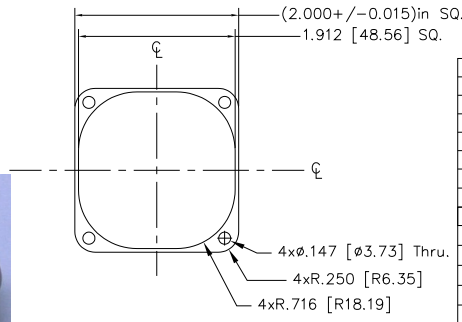
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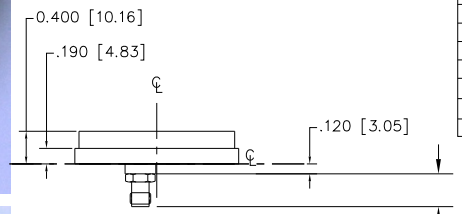
REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	D	2.004in to (2.006+/-0.015)in	May-10-10	S.H

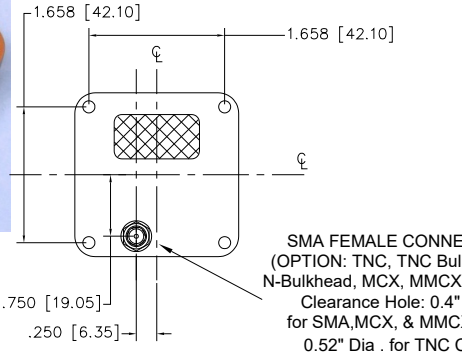








< 0.25" [6.37] (MCX/MMCX),
<0.46"[11.68] (SMA/R-SMA),
<0.57" [14.53] (TNC), 0.83"[21.00] (TNC-BH),
<0.72" [18.29] (N, N-BH)



SMA FEMALE CONNECTOR
(OPTION: TNC, TNC Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)
Clearance Hole: 0.4" Dia.
for SMA,MCX, & MMCX Con.
0.52" Dia . for TNC Con.
0.63" Dia. for N Con.

SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.7:1			< 1.7:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN (OPTIONAL):	33 dB (Option A), 20 dB (Option A2)					
LNA NOISE FIGURE:	3.0 dB (Option A), 2 dB (Option A2)					
LNA P1dB Out:	+13 dBm					
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					

MECHANICAL:

SIZE: LENGTH = 2.000 in, WIDTH = 2.000 in
HEIGHT = 0.400in

WEIGHT: 2.1 oz. (62 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5541F Type I Class 1A or 3

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: SMA FEMALE CONNECTOR
(OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, SMA, or Cable)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH 33 dB Gain LNA
1.9: 1.9" SQ.	15: L1 ONLY	A2: WITH 20 dB Gain LNA WITHOUT REJECTION FILTERS
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		A4: WITH 40 dB Gain LNA WITHOUT REJECTION FILTERS
4: MINI ARINC		

QUANTITY REQD	-1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
1							3
1							2
1							1

PARTS LIST

P/N: 1.9G1215P-XSO-2

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS:R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36375 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	June-30-09
ORIGINALLY DESIGNED	S. HUYNH	June-30-09
UPDATED	S. HUYNH	Oct-30-13
UPDATE DRAWN	P. TRAN	Oct-30-13
APPROVED	S. HUYNH	Oct-30-13

ANTCOM CORP. TORRANCE, CALIFORNIA

L1/L2 PASSIVE OR ACTIVE GPS ANTENNA

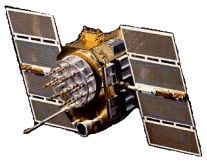
SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	1.9G1215P-XSO-2	D

SCALE 1/1 SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STAMP IS RED

NMO Connector Option is Now Available for Some Antennas

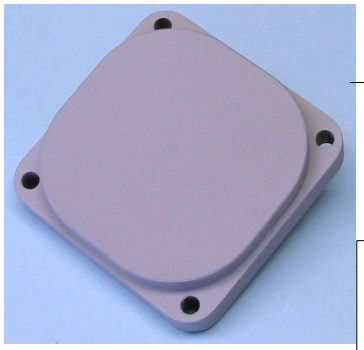
Active L1/L2 GPS Antennas, 1.9G1215A-XSO-2
2.0" Square, Flat Mount Configurations

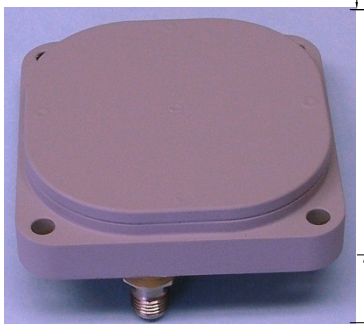


Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

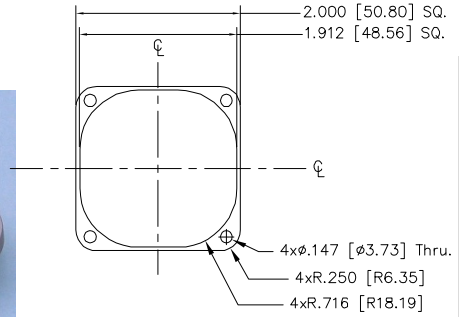
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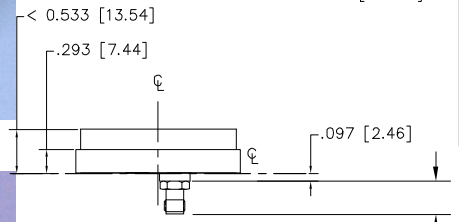
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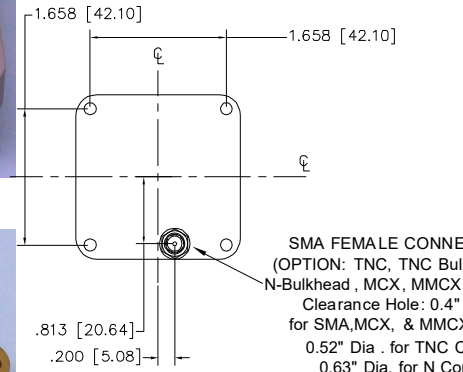








< 0.25" [6.37] (MCX/MMCX),
0.46"[11.68] (SMA/R-SMA),
0.57" [14.53] (TNC), 0.83"[21.00] (TNC-BH),
0.72" [18.29] (N, N-BH)



SMA FEMALE CONNECTOR
(OPTION: TNC, TNC Bulkhead, N,
N-Bulkhead , MCX, MMCX, or Cable)
Clearance Hole: 0.4" Dia.
for SMA,MCX, & MMCX Con.
0.52" Dia . for TNC Con.
0.63" Dia. for N Con.

SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNAGAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN (OPTIONAL):	33 dB (Option A), 20 dB (Option A2)					
LNA NOISE FIGURE:	3.0 dB (Option A), 2 dB (Option A2)					
LNA P1dB Out:	+13 dBm					
LNA DC POWER:	2.5V/20mA,3V/29mA,3.3V/35mA,(2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	LENGTH = 2.00 in.[50.80 mm], WIDTH = 2.00 in. [50.80 mm] HEIGHT= < 0.533in. [13.54mm]
WEIGHT:	2.4 oz. (68 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE CONNECTOR (OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, SMA, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ.BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH 33 dB Gain LNA
1.9: 1.9" SQ.	15: L1 ONLY	A2: WITH 20 dB Gain LNA WITHOUT REJECTION FILTERS
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		A4: WITH 40 dB Gain LNA WITHOUT REJECTION FILTERS
4: MINI ARINC		

P/N: 1.9G1215P-XSO-2

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; RS:R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG. N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTER LESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTER LESS BLACK #37038 PER FED-STD-595B

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
5				-	-	-
3	1			-	-	-
2	1			-		
1	1			-	-	-

PARTS LIST

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH May-07-09
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

L1/L2 PASSIVE OR ACTIVE GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.9G1215P-XSO-2 | REV
SCALE 1/1 | SHEET 1 OF 1

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

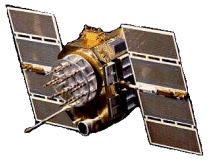
NOTES: UNLESS OTHERWISE SPECIFIED:

NMO Connector Option is Now Available for Some Antennas

L1/L2 GPS Antennas, P/N: 1.9G1215X-18RS-X-2

2.0" Square, Flat Mount Configuration with 18in Right Angle SMA (Generic Drawing below)

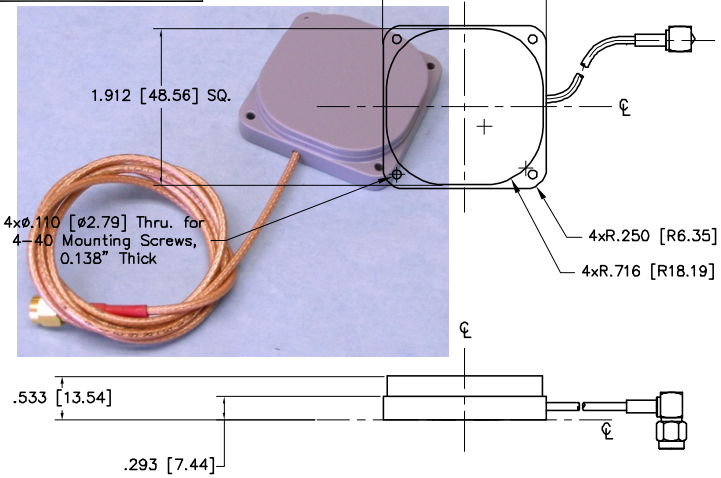
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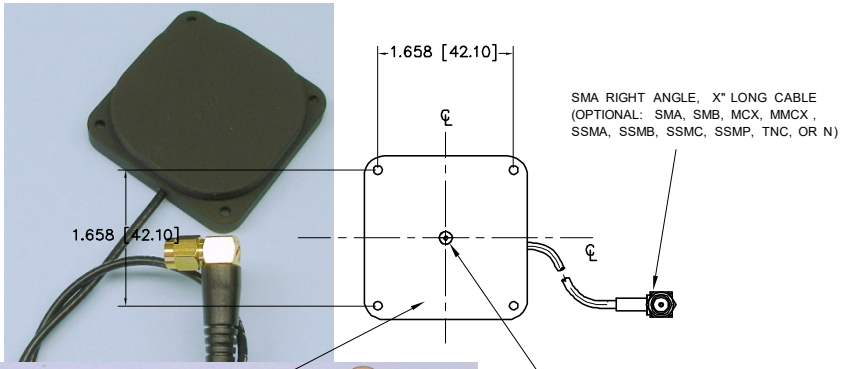


ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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P/N: 1.9G1215A-18RS-3-2

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION

SIZE :	FREQ. BAND :	LNA :
1: 2" SQ.	1215: L1/L2	A: WITH 33 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A2: WITH 20 dB LNA
2: 2.6" DIA.		A4: WITH 40 dB LNA
3: 3.5" DIA.		P: WITHOUT LNA
4: MINI ARINC		

CABLE'S LENGTH :	CONNECTOR :	COLOR :
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX, SMB	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN.)	SSMA, SSMB, SSMC, SSMP	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	LENGTH = 2.00 in.[50.80 mm], WIDTH = 2.00 in. [50.58 mm] HEIGHT= 0.533in. [13.54mm]
WEIGHT:	2.88 oz. (82 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR :	SMA RIGHT ANGLE MALE WITH 18" CABLE (OPTION: SMB, SMC, SSMA, SSMA, SSMC, SSMP MCX, MMCX, TNC, OR N)

ENVIRONMENTAL:

TEMPERATURE :	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE :	70,000 ft.
VIBRATION :	> 30 G's
LEAKAGE :	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

QTY	-1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
				–	–	–	5
1		ADHESIVE GASKET	12345G-3M-1G	–	–	–	3
1				–			2
1				–	–	–	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .015 .XXX ± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DATA ON A COMMON ϕ OF .003
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED M. BOAS 01-05-29
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

2" SQ. ACTIVE OR PASSIVE L1/L2 GPS ANTENNA WITH CABLE

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.9G1215X-18RS-X-2 | REV –
SCALE 1/1 | SHEET 1 OF 1

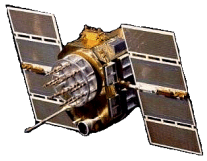
NMO Connector Option is Now Available for Some Antennas

L1/L2 GPS Antennas, P/N: 1.9G1215A-5C50-2-2-AAI

2.0" Square, Flat Mount Configurations

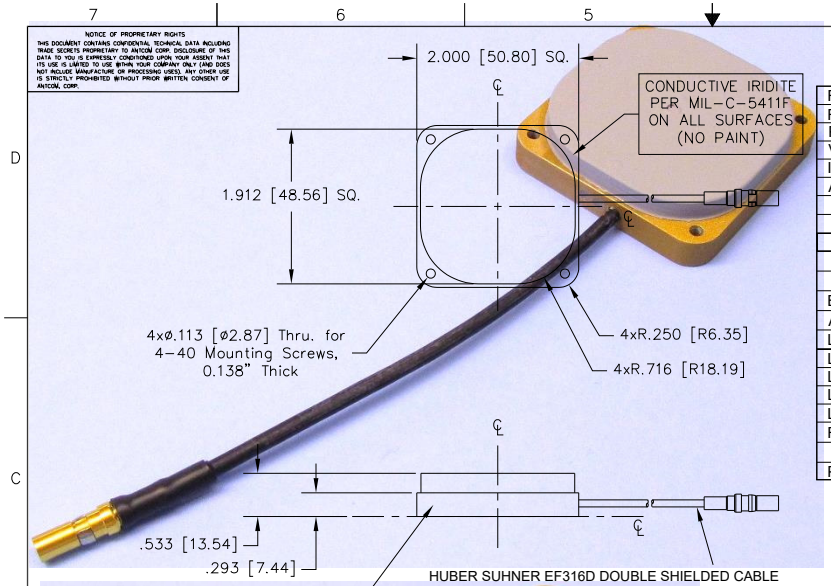
With Huber Suhner 11_1023-C50-2-2/111_NE Connector and Huber Suhner Double Shielded EF316D Cable

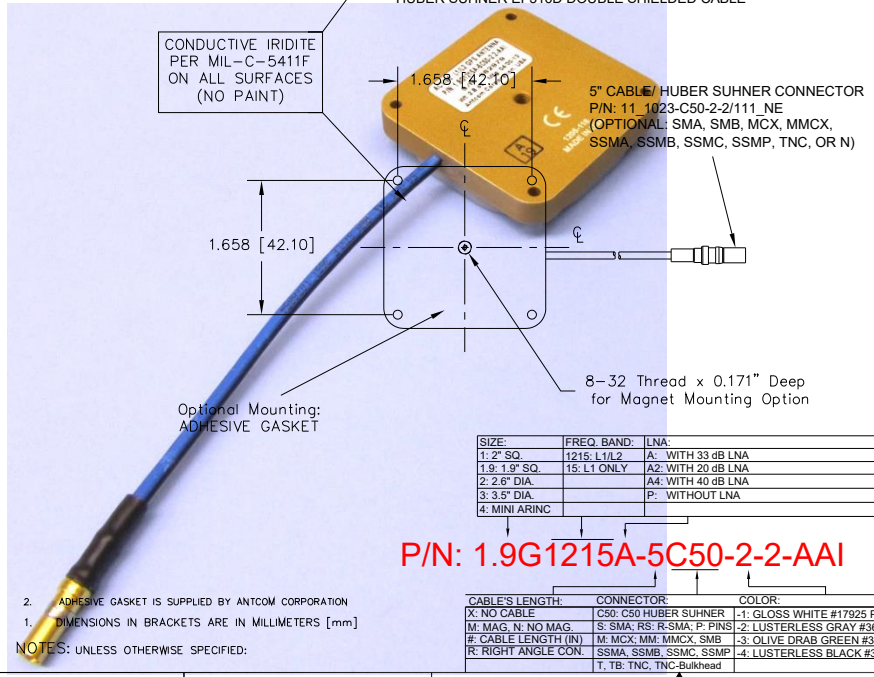
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf



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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	LENGTH = 2.00 in.[50.80 mm], WIDTH = 2.00 in. [50.58 mm] HEIGHT= 0.533in. [13.54mm]
WEIGHT:	2.88 oz. (82 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	5" CABLE/HUBER SUHNER 11_1023-C50-2-3/111_NE (OPTION: SMB, SMC, SSMA, SSMA, SSMC, SSMP MCX, MMCX, TNC, OR N)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH 33 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A2: WITH 20 dB LNA
2: 2.6" DIA.		A4: WITH 40 dB LNA
3: 3.5" DIA.		P: WITHOUT LNA
4: MINI ARINC		

P/N: 1.9G1215A-5C50-2-2-AAI

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	C50: C50 HUBER SUHNER	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	S: SMA; RS: R-SMA; P: PINS	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	M: MCX; MM: MMCX, SMB	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	SSMA, SSMB, SSMC, SSMP	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
	T, TB: TNC, TNC-Bulkhead	

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
NOTES: UNLESS OTHERWISE SPECIFIED:

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

QUANTITY REQD	-2	-1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
1			ADHESIVE GASKET	12345G-3M-1G	-	-	-	3
1					-			2
1					-	-	-	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DATS ON A COMMON 6 .005
MACHINED SURFACES 125

ORIGINALLY DRAWN	S. HUYNH	Jan-29-05
ORIGINALLY DESIGNED	S. HUYNH	Jan-29-05
UPDATED	S. HUYNH	Feb-05-13
UPDATE DRAWN	P. TRAN	Feb-05-13
APPROVED	S. HUYNH	Feb-05-13

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA

2" SQ. ACTIVE L1/L2 GPS ANTENNA WITH CABLE

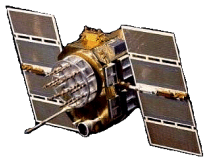
SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.9G1215A-5C50-2-2-AAI | REV —

SCALE 1/1 | SHEET 1 OF 1

ORIGINAL DOCUMENT (WITH STAMP IS RED)

NMO Connector Option is Now Available for Some Antennas

L1/L2 GPS Antennas, P/N: 1.9G1215A-8MM-4-2
2.0" Square, Flat Mount Configuration
with 8in Straight MMCX Black

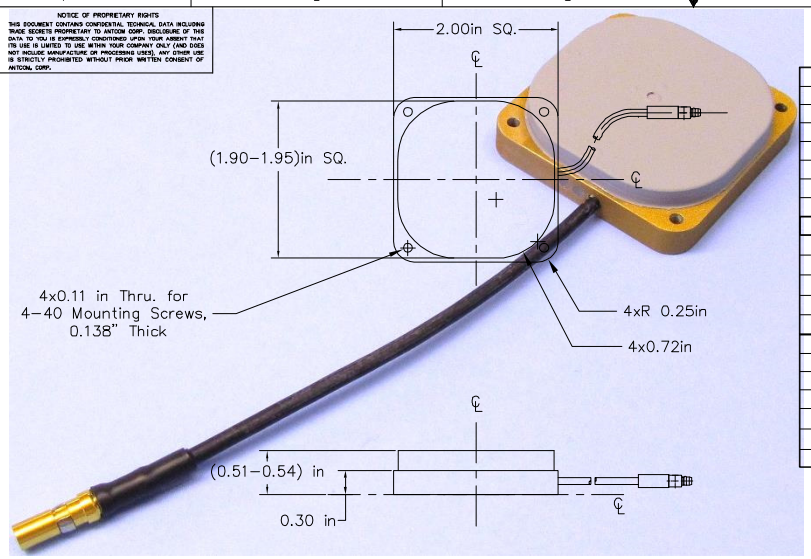


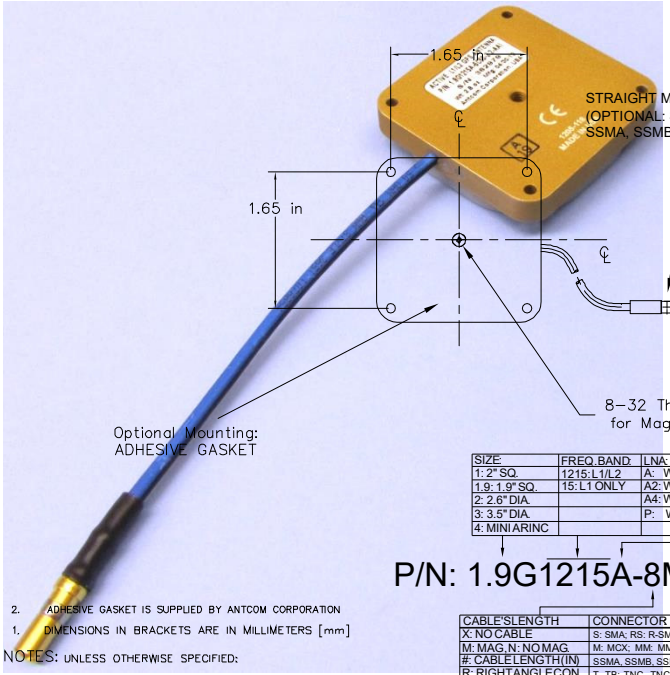
ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
FREQUENCY:						
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNAGAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA,3V/29mA,3.3V/35mA,(2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	LENGTH = 2.00 in, WIDTH = 2.00 in. HEIGHT= (0.51 - 0.53) in
WEIGHT:	2.88 oz. (82 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	STRAIGHT MMCX MALE, 8" LONG CABLE (OPTION: SMB, SMC, SSMA, SSMA, SSMC, SSMP MCX, MMCX, TNC, OR N)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

ITEM NO	FINISH	MATERIAL	SPECIFICATION	PART NO	DESCRIPTION	-1	-2	QUANTITY REQD
5	–	–	–					
3	–	–	–	12345G-3M-1G	ADHESIVE GASKET		1	1
2	–	–	–				1	1
1	–	–	–					1

PARTS LIST

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH 33 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A2: WITH 20 dB LNA
2: 2.6" DIA.		A4: WITH 40 dB LNA
3: 3.5" DIA.		P: WITHOUT LNA
4: MINI ARINC		

P/N: 1.9G1215A-8MM-4-2

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG. N: NO MAG.	M: MCX; MM: MMCX, SMB	-2: LUSTER LESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SSMA, SSMB, SSMC, SSMP	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTER LESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .015, .XXX ± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ ⌀.005 M. MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED M. BOAS 01-05-29
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

2" SQ. ACTIVE OR ACTIVE L1/L2 GPS ANTENNA WITH CABLE

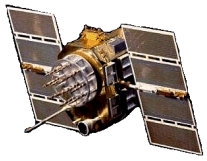
SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.9G1215X-8MM-4-2 | REV D
SCALE 1/1 | SHEET 1 OF 1

ZONE	REV	DESCRIPTION	DATE	APPROVED

NMO Connector Option is Now Available for Some Antennas

Active or Passive L1/L2 GPS Antennas, P/N: 1.9G1215X-18RS-X-3

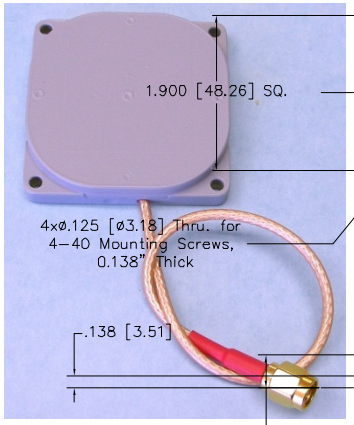
1.9” Square, Flat Mount with Cable Configurations

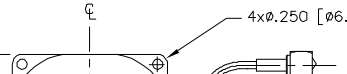


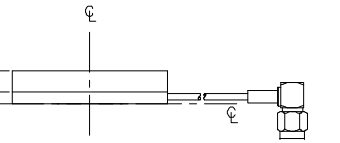
ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

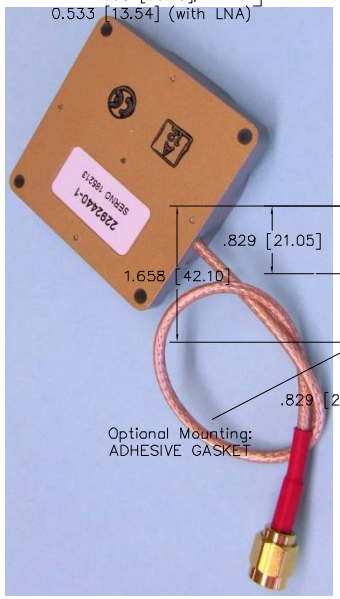
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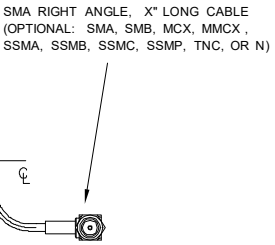
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SPECIFICATIONS

ELECTRICAL:

	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
FREQUENCY:						
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	20 dB	20 dB
LNA NOISE FIGURE:	1.9 dB	1.8 dB
LNA P1dB Out:	+13 dBm	+13 dBm
LNA DC POWER:	2.5V/10mA, 3V/10mA, 3.3V/12mA, (2.5-24)V/<20mA	
POWER HANDLING:	1 Watt CW, MORE WITH LIMITTER OPTION	

MECHANICAL:

SIZE: LENGTH = 1.90 in.[48.26 mm], WIDTH = 1.90 in. [48.26 mm]
HEIGHT: 0.400 in. [10.16 mm]

WEIGHT: 2.88 oz. (82 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR : SMA RIGHT ANGLE MALE WITH 18" CABLE
(OPTION: SMB, SMC, SSMA, SSMA, SSMC, SSMP MCX, MMCX, TNC, OR N)

ENVIRONMENTAL:

TEMPERATURE : -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE : 70,000 ft.
VIBRATION : > 30 G's
LEAKAGE : HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
5				–	–	–
3	1	ADHESIVE GASKET	12345G-3M-1C	–	–	–
2	1			–		
1	1			–	–	–

PARTS LIST

SIZE :	FREQ. BAND :	LNA :
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA, A2L: A2 WITH LIMITTER
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA, A4L: A4 WITH LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA WITH LIMITER
4: MINI ARINC		

P/N: 1.9G1215A2-18RS-X-3

CABLE'S LENGTH :	CONNECTOR :	COLOR :
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX, SMB	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN.)	SSMA, SSMB, SSMC, SSMP	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .030 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .004 .000
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Feb-18-04
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

1.9” SQ. ACTIVE OR PASSIVE L1/L2 GPS ANTENNA WITH CABLE

SIZE D | DWG NO 3CVE1 | DRAWING NO 1.9G1215X-18RS-X-3 | REV –
SCALE 1/1 | SHEET 1 OF 1

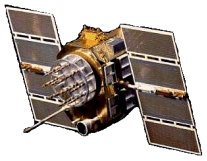
ZONE	REV	DESCRIPTION	DATE	APPROVED

REVISIONS

NMO Connector Option is Now Available for Some Antennas

L1/L2 GPS Antenna, P/N: 1.9G1215P-7.38S-2-3 Rev C

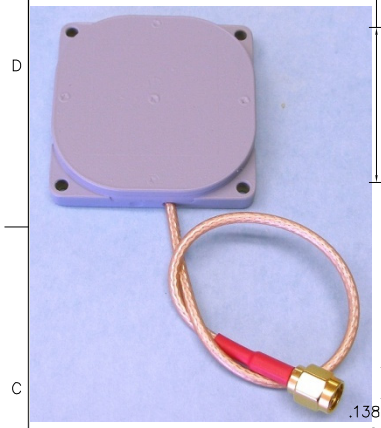
2.0" Square, Flat Mount Configuration with 7.375 in Straight SMA, Gray

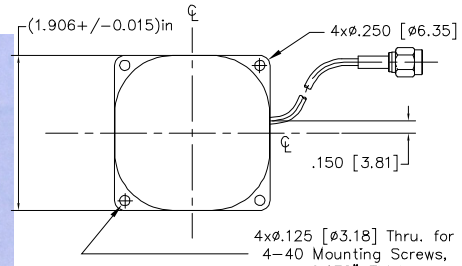


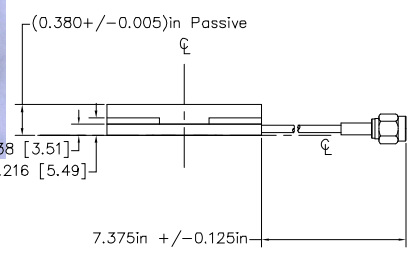
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

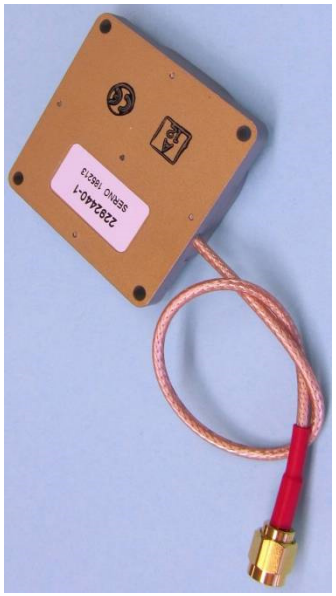
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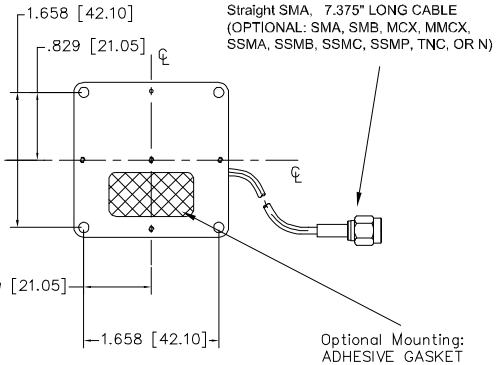
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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.7:1			< 1.7:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	20 dB	20 dB
LNA NOISE FIGURE:	1.9 dB	1.8 dB
LNA P1dB Out:	+13 dBm	+13 dBm
LNA DC POWER:	2.5V/10mA, 3V/10mA, 3.3V/12mA, (2.5-24)V/<20mA	
POWER HANDLING:	1 Watt CW, MORE WITH LIMITTER OPTION	

MECHANICAL:

SIZE:	LENGTH = 1.911 in.[48.54 mm], WIDTH = 1.911 in. [48.54 mm] HEIGHT: 0.380 in. [9.65 mm]
WEIGHT:	2.11 oz. (61 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541F Type I Class 1A or 3
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	STRAIGHT SMA WITH 7.375" CABLE (OPTION: SMB, SMC, SSMA, SSMA, SSMC, SSMP MCX, MMCX, TNC, OR N)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	B	1.906in to 1.911 in	FEb-24-10	S.H
	C	(1.906+/-0.015)in	May-10-10	S.H

QUANTITY REQD	-2	-1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
					-	-	-	5
1			ADHESIVE GASKET	12345G-3M-1G	-	-	-	3
1					-			2
1					-	-	-	1

PARTS LIST

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA, A2L: A2 WITH LIMITTER
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA, A4L: A4 WITH LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA WITH LIMITER
4: MINI ARINC		

P/N: 1.9G1215P-7.38S-2-3

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX, SMB	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SSMA, SSMB, SSMC, SSMP	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .010 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Feb-19-04
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

1.9" SQ. PASSIVE L1/L2 GPS ANTENNA WITH CABLE

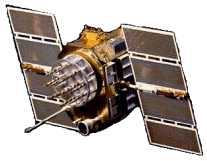
SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.9G1215P-7.38S-2-3 | REV C

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

L1/L2 GPS Antenna, P/N: 1.9G1215P-6SSMC-2-1.89

1.9" Square, 1.89in Conformal Radius, Flat Front/Back Mount with 6in SSMC-Male Back Cable Configurations



ISO 9001:2008/FAA Approved Facility

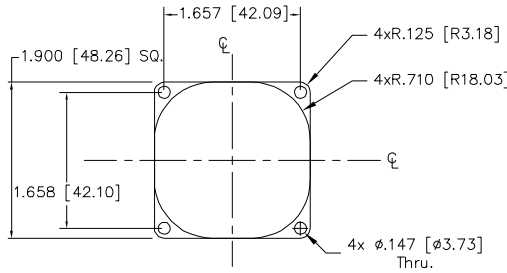
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

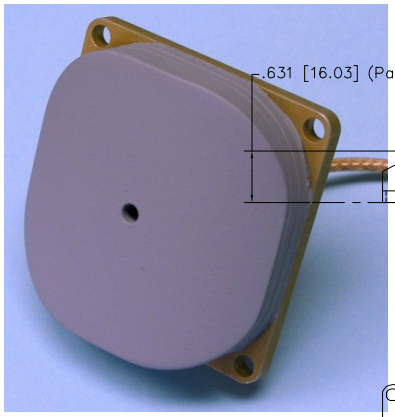
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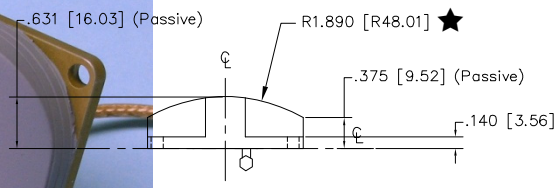
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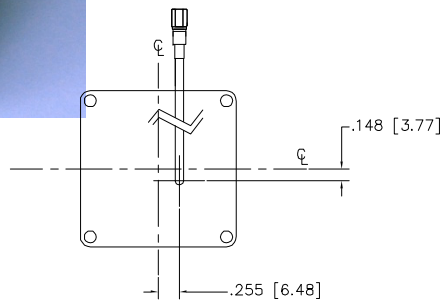
REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED









SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNAGAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	20 dB	20 dB
LNA NOISE FIGURE:	1.9 dB	1.8 dB
LNA P1dB Out:	+13 dBm	+13 dBm
LNA DC POWER:	2.5V/10mA,3V/10mA,3.3V/12mA,(2.5-24)V/<20mA	
POWER HANDLING	1 Watt CW, MORE WITH LIMITTER OPTION	

MECHANICAL:

SIZE: 1.900in [48.26mm] Square
HEIGHT: 0.631 in. [16.03 mm]

WEIGHT: 3.8 oz. (107g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: 6in SSMC MALE CABLE
(OPTION: SMB, SMC, SSMA, SSMA, SSMC, SSMP MCX, MMCX, TNC, OR N)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD	ITEM NO	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
	5			–	–	–
1	3			–	–	–
1	2			–	–	–
1	1			–	–	–

PARTS LIST

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA WITH LIMITER
4: MINI ARINC		

P/N: 1.9G1215P-6SSMC-2-1.89

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX, SMB	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SSMA, SSMB, SSMC, SSMP	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

★

CONFORMAL RADIUS OPTION:	
-3:	3.000" RADIUS (SDBII)
-3.5N:	3.500" RADIUS (NETFIRE,GMLRS,NLOS)
-4P:	4.000" RADIUS (PAVEWAY)
-6M:	6.000" RADIUS (MAVERICK)
-7.5EM:	7.500" RADIUS (EGBU,MALD)
-14A:	1400" RADIUS (ACM)
-X:	X" RADIUS (0: Flat, No Radius)
-F:	FLAT (WITHOUT RADOME)

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Feb-19-04
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

Low Profile 1.9" SQ. Conformal L1/L2 GPS ANTENNA

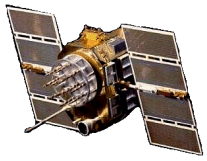
SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.9G1215P-6SSMC-2-1.89 | REV A

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

L1/L2 GPS Antenna, P/N: 1.9G1215P-6.5RSSMC-2-2.33

1.9" Square, 2.33in Conformal Radius, Flat Front/Back Mount with 6.5in R-SSMC-Male Back Cable Configurations

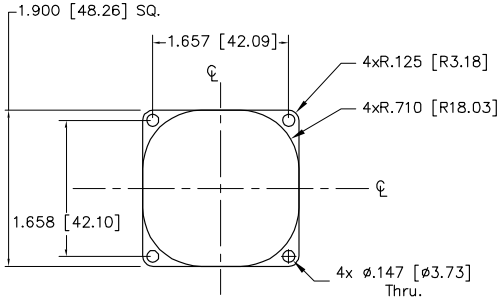


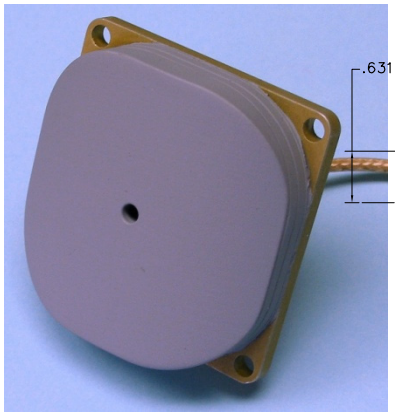
ISO 9001:2008/FAA Approved Facility

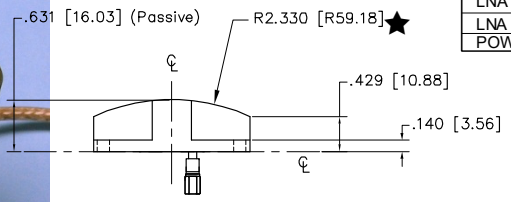
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

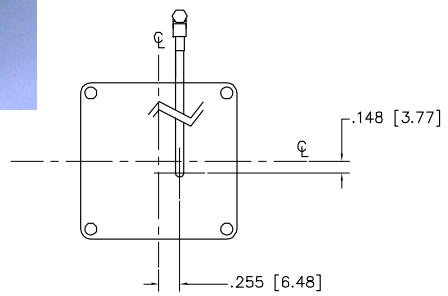
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ANTENNAGAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
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BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	20 dB	20 dB
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LNA P1dB Out:	+13 dBm	+13 dBm
LNA DC POWER:	2.5V/10mA,3V/10mA,3.3V/12mA,(2.5-24)V/<20mA	
POWER HANDLING	1 Watt CW, MORE WITH LIMITTER OPTION	

MECHANICAL:

SIZE: 1.900in [48.26mm] Square
HEIGHT: 0.631 in. [16.03 mm]

WEIGHT: 3.8 oz. (107g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: 6.5in RIGHT ANGLE SSMC MALE CABLE
(OPTION: SMB, SMC, SSMA, SSMA, SSMC, SSMP MCX, MMCX, TNC, OR N)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

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DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD	-1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
				-	-	-	5
1				-	-	-	3
1				-			2
1				-	-	-	1

PARTS LIST

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA WITH LIMITER
4: MINI ARINC		

P/N: 1.9G1215P-6.5RSSMC-2-2.33

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-4P:	4.000" RADIUS (PAVEWAY)
-6M:	6.000" RADIUS (MAVERICK)
-7.5EM:	7.500" RADIUS (EGBU, MALD)
-14A:	1400" RADIUS (ACM)
-X:	X" RADIUS (0: Flat, No Radius)
-F:	FLAT (WITHOUT RADOME)

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø ⌀.006. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Feb-19-04
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

Low Profile 1.9" SQ. Conformal L1/L2 GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.9G1215P-6.5RSSMC-2-2.33 | REV A

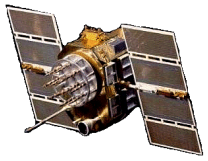
SCALE 1/1 | SHEET 1 OF 1

ZONE	REV	DESCRIPTION	DATE	APPROVED

REVISIONS

NMO Connector Option is Now Available for Some Antennas

L1/L2 GPS Antenna, P/N: 1.9G1215P-6.5RSMP-2-2.33
1.9" Square, 2.33in Conformal Radius, Flat Front/Back Mount with 6.5in R-SMP-Male Back Cable Configurations

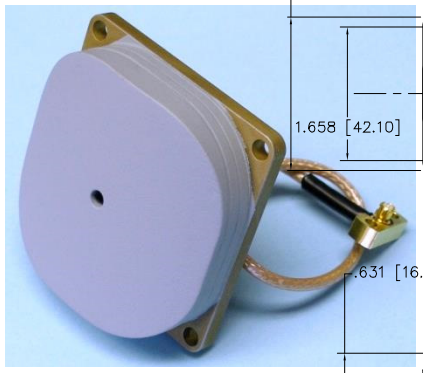


ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	20 dB	20 dB
LNA NOISE FIGURE:	1.9 dB	1.8 dB
LNA P1dB Out:	+13 dBm	+13 dBm
LNA DC POWER:	2.5V/10mA, 3V/10mA, 3.3V/12mA, (2.5-24)V/<20mA	
POWER HANDLING:	1 Watt CW, MORE WITH LIMITTER OPTION	

MECHANICAL:

SIZE: 1.900in [48.26mm] Square
HEIGHT: 0.631 in. [16.03 mm]

WEIGHT: 3.8 oz. (107g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: 6.5in RIGHT ANGLE SMP MALE CABLE
(OPTION: SMB, SMC, SSMA, SSMA, SSMB, SSMC, SSMP MCX, MMCX, TNC, OR N)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

				–	–	–	5
1				–	–	–	3
1				–			2
1				–	–	–	1
–2	–1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
QUANTITY REQD			PARTS LIST				

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA WITH LIMITER
4: MINI ARINC		

P/N: 1.9G1215P-6.5RSMP-2-2.33

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX, SMB	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SSMA, SSMB, SSMC, SMP	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

CONFORMAL RADIUS OPTION:	
-3:	3.000" RADIUS (SDBII)
-3.5N:	3.500" RADIUS (NETFIRE, GMLRS, NLOS)
-4P:	4.000" RADIUS (PAVEWAY)
-6M:	6.000" RADIUS (MAVERICK)
-7.5EM:	7.500" RADIUS (EGBU, MALD)
-14A:	14.00" RADIUS (ACM)
-X:	X" RADIUS (0: Flat, No Radius)
-F:	FLAT (WITHOUT RADOME)

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XXX ±.005 .XX ±.025 ANGLES ± 1°
TOLERANCE P/N PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Feb-19-04
CAD FILE NO

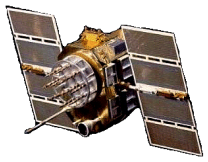
ANTCOM CORP. TORRANCE CALIFORNIA
Low Profile 1.9" SQ. Conformal L1/L2 GPS ANTENNA
SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.9G1215P-6.5RSMP-2-2.33 | REV A
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Passive L1/L2 GPS Antenna

P/N: 2.1CG1215P-XRMM-2-2.25

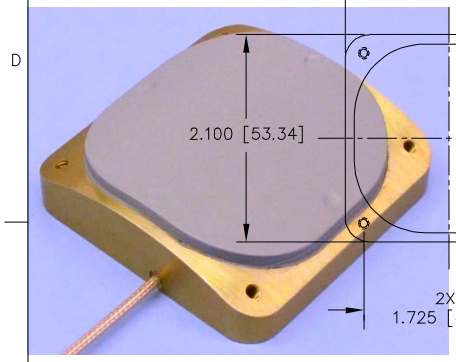
Other Frequencies, Connectors and Colors are Available

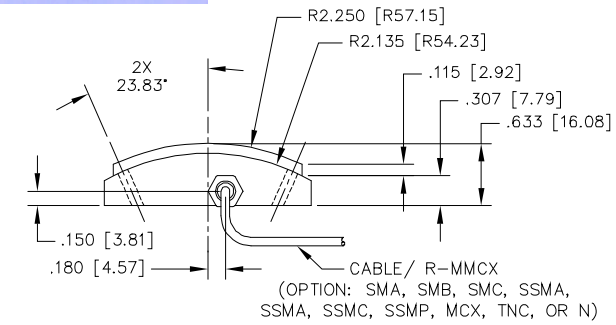


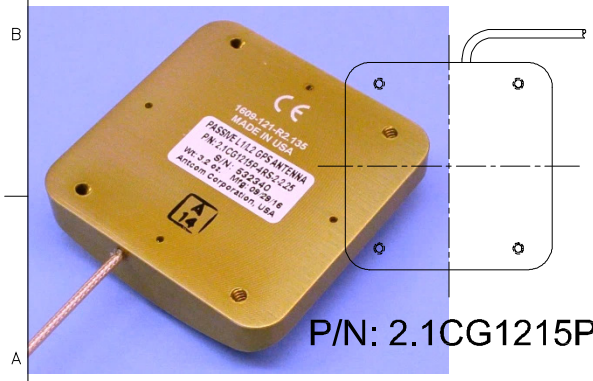
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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P/N: 2.1CG1215P-XRMM-2-2.25

SPECIFICATIONS

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	20 dB	20 dB
LNA NOISE FIGURE:	1.9 dB	1.8 dB
LNA P1dB Out:	+13 dBm	+13 dBm
LNA DC POWER:	2.5V/10mA, 3V/10mA, 3.3V/12mA, (2.5-24)V/<20mA	
POWER HANDLING:	1 Watt CW, MORE WITH LIMITTER OPTION	

MECHANICAL:

SIZE: LENGTH = 2.10in. [53.34 mm], WIDTH = 2.10in. [53.34 mm]
HEIGHT: 0.633 in. [16.08 mm]

WEIGHT: 2.88 oz. (82 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441F

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: CABLE / R-MMCX
(OPTION: SMA, SMB, SMC, SSMA, SSMA, SSMC, SSMP MCX, MMCX, TNC, OR N)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

FREQ. BAND:	LNA:	CONNECTOR:	COLOR:
1215: L1/L2	A: WITH 33 dB LNA	S: SMA, T: TNC	-1: GLOSS WHITE #17925 PER FED-STD-595B
15: L1 ONLY	A2: WITH 20 dB LNA	RS: R-SMA, T: TNC	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	A4: WITH 40 dB LNA	MM: MMCX, SMB, SMC, SSMA	-3: CAMO GREEN #34094 PER FED-STD-595B
	P: PASSIVE (WITHOUT LNA)	SSMB, SSMC, SMP; SSMP	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
			-5: DESERT TAN #33446 PER FED-STD-595B

QUANTITY REQD	-2	-1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
PARTS LIST								
1					–			2
1					–	–	–	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE: FRACTIONS ±1/64 DECIMALS .XX±.015 .XXX±.005 ANGLES ±1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
DRILLED HOLES ±.005
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø ±.005
MACHINED SURFACES 125/
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Dec-17-14
ORIGINALLY DESIGNED	S. HUYNH	Dec-17-14
UPDATED	S. HUYNH	July-27-16
UPDATE DRAWN	P. TRAN	July-27-16
APPROVED	S. HUYNH	July-27-16

ANTCOM CORP. TORRANCE CALIFORNIA

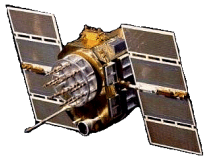
L1/L2 GPS
ANTENNA WITH CABLE

SIZE D | CAGE NO. 3CVE1 | DRAWING NO. 2.1CG1215P-XRMM-2-2.25 | REV –
SCALE 1/1 | SHEET 1 OF 1

Active L1/L2 GPS Antenna With External Antenna Passed Through

P/N: 2.1CG1215A-XSSGF4-2-2.25-ICS

Other Frequencies, Connectors and Color Options are Available

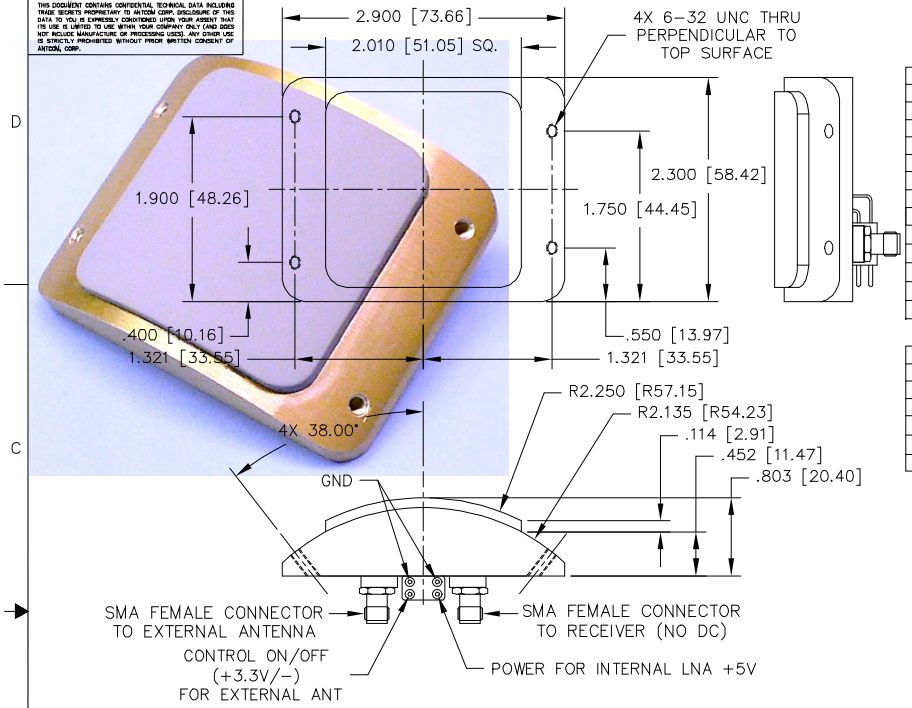


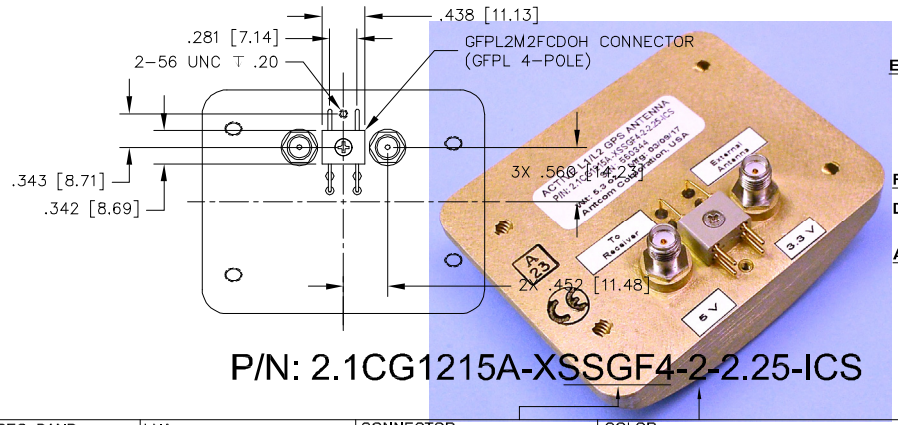
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Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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P/N: 2.1CG1215A-XSSGF4-2-2.25-ICS

FREQ. BAND:	LNA:	CONNECTOR:	COLOR:
1215: L1/L2	A: WITH 33 dB LNA	GF4: GFPL2M2FCDOH	-1: GLOSS WHITE #17925 PER FED-STD-595B
15: L1 ONLY	A2: WITH 20 dB LNA	S: SMA, T: TNC	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	A4: WITH 40 dB LNA	RS: R-SMA, T: TNC	-3: CAMO GREEN #34094 PER FED-STD-595B
	P: PASSIVE (WITHOUT LNA)	MM: MMCX, SMB, SMC, SSMA	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		SSMB, SSMC, SMP: SSMP	-5: DESERT TAN #33446 PER FED-STD-595B

SPECIFICATIONS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	CONTROL INPUT/OUTPUT	11/18/16	S.H

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	33 dB	35 dB
LNA NOISE FIGURE:	3.0 dB	3.0 dB
LNA P1dB Out:	+13 dBm	+13 dBm
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA	
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB	-40 dB / -40 dB
@ (-100/+100) MHz	< -65 dB	< -65 dB
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)	

MECHANICAL:

SIZE:	LENGTH = 2.90in. [73.66 mm], WIDTH = 2.30in. [58.42 mm] HEIGHT: 0.803 in. [20.40 mm]
WEIGHT:	3.95 oz. (112 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE & GFPL2M2FCDOH CONNECTOR (OPTION: SMB, SMC, SSMA, SSMA, SSMC, SSMP MCX, MMCX, TNC, OR N)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
PARTS LIST						
2			–			2
1			–	–	–	1
–2	–1					

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ±1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø ARE .005 MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	July-27-16
ORIGINALLY DESIGNED	S. HUYNH	July-27-16
UPDATED	S. HUYNH	Oct-26-16
UPDATE DRAWN	P. TRAN	Oct-26-16
APPROVED	S. HUYNH	Oct-26-16

ANTCOM CORP. TORRANCE, CALIFORNIA

L1/L2 GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
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SCALE 1/1 SHEET 1 OF 1

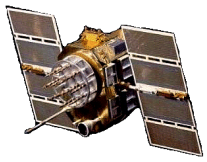
Active or Passive L1/L2 GPS Antenna

P/N: 2.1CG1215P-1.9RMM-2-1.72-RG178 (1.9in Right Angle MMCX/RG178 Cable)

Other Frequencies, Connectors and Colors are Available

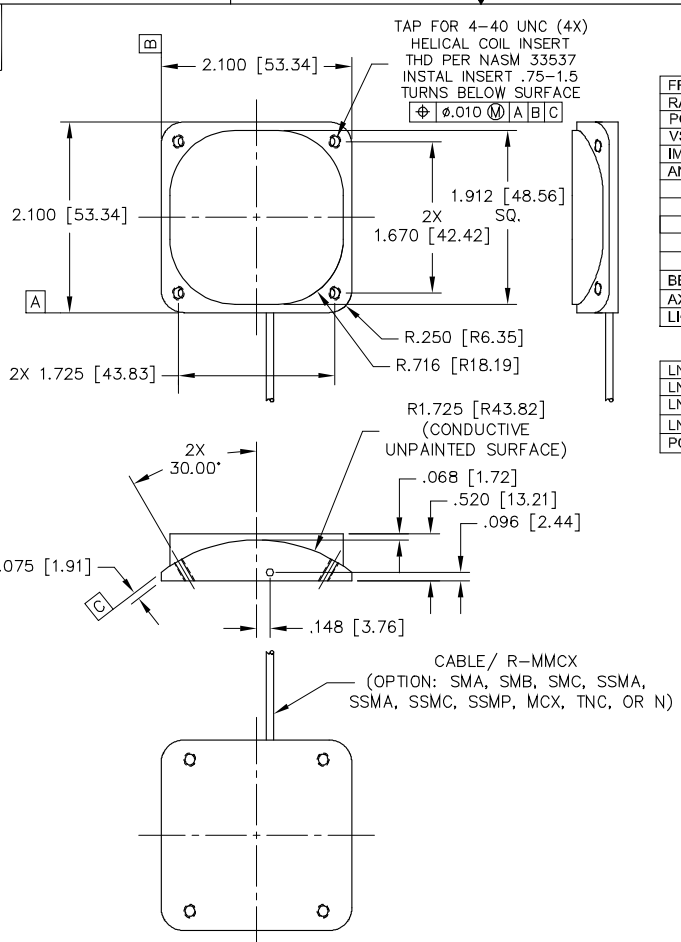
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SPECIFICATIONS

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	20 dB	20 dB
LNA NOISE FIGURE:	1.9 dB	1.8 dB
LNA P1dB Out:	+13 dBm	+13 dBm
LNA DC POWER:	2.5V/10mA, 3V/10mA, 3.3V/12mA, (2.5-24)V/<20mA	
POWER HANDLING:	1 Watt CW, MORE WITH LIMITTER OPTION	

MECHANICAL:

SIZE: LENGTH = 2.10in. [53.34 mm], WIDTH = 2.10in. [53.34 mm]
HEIGHT: 0.520 in. [13.21 mm]

WEIGHT: 2.88 oz. (82 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: CABLE / R-MMCX
(OPTION: SMA, SMB, SMC, SSMA, SSMA, SSMC, SSMP
MCX, MMCX, TNC, OR N)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:	CONFORMAL RADIUS:
1: 2" SQ.	1215: L1/L2	A: WITH 33 dB LNA	X.XX: X.XX in.
1.9: 1.9" SQ.	15: L1 ONLY	A2: WITH 20 dB LNA	
2: 2.6" DIA.		A4: WITH 40 dB LNA	
3: 3.5" DIA.		P: PASSIVE (WITHOUT LNA)	
4: MINI ARINC			

P/N: 2.1CG1215P-1.9RMM-2-1.72-RG178

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA T: TNC	-1: GLOSS WHITE #17925 PER FED-STD-595B
#: CABLE LENGTH (IN)	RS: R-SMA, T: TNC	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	RMM: R-MMCX	-2R: GRAY #36375 PER FED-STD-595B
	MM: MMCX, SMB, SMC, SSMA, SSMB,	-3: CAMO GREEN #34094 PER FED-STD-595B
	SSMC, SMP: SSMP, HFL	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: TAN #33446 PER FED-STD-595B

ITEM NO	PART NO	DESCRIPTION	SPECIFICATION	MATERIAL	FINISH	QUANTITY REQD
2	–					1
1	–			–	–	–

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES (EXCEPT AS NOTED)
FRACTIONS ±1/64 DECIMALS .XX ±.01 .XXX ±.005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125/
DO NOT SCALE DRAWING

ORIGINALLY DRAWN S. HUYNH Feb-19-04
ORIGINALLY DESIGNED S. HUYNH Feb-19-04
UPDATED S. HUYNH Dec-17-14
UPDATE DRAWN P. TRAN Dec-17-14
APPROVED S. HUYNH Dec-17-14

ANTCOM CORP. TORRANCE CALIFORNIA

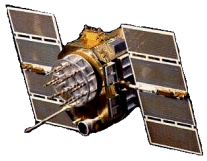
L1/L2 GPS
ANTENNA WITH CABLE

SIZE D | CAGE NO 3CVE1 | DRAWING NO 2.1CG1215P-1.9RMM-2-1.72-RG178 | REV –
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active or Passive L1/L2 GPS Antennas, P/N: 1.9G1215X-18RS-X-3

1.9" Square, Flat Mount with Cable Configurations

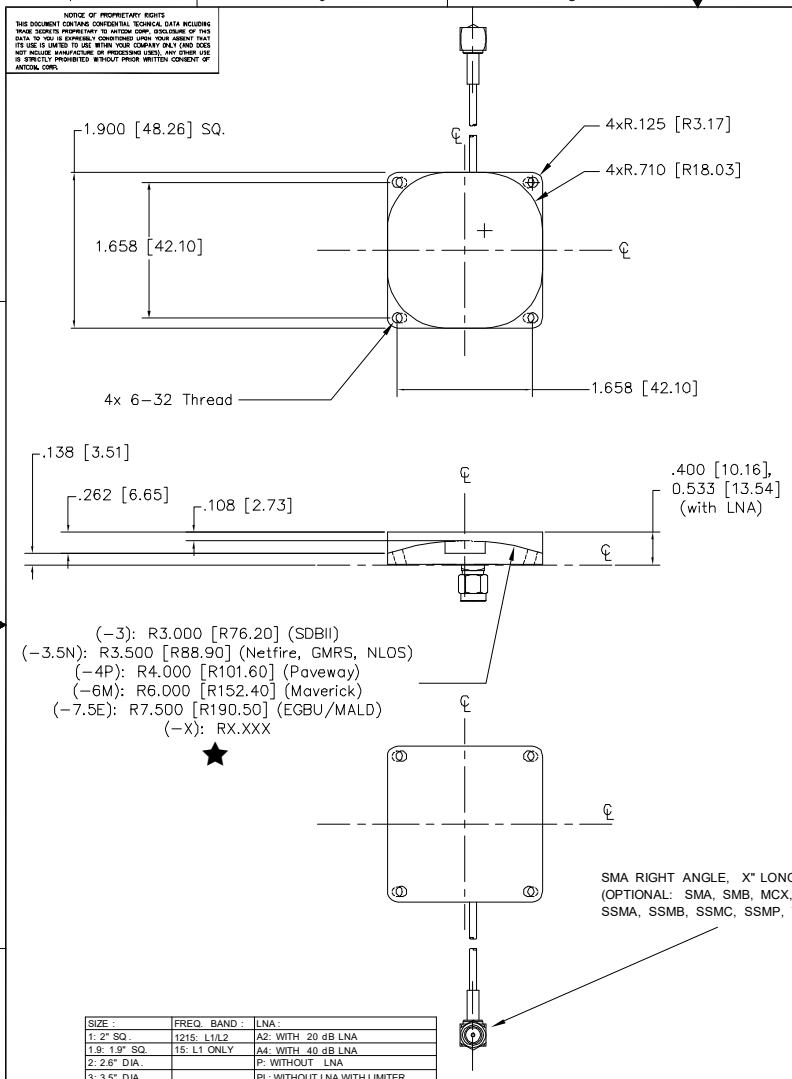


ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	20 dB	20 dB
LNA NOISE FIGURE:	1.9 dB	1.8 dB
LNA P1dB Out:	+13 dBm	+13 dBm
LNA DC POWER:	2.5V/10mA, 3V/10mA, 3.3V/12mA, (2.5-24)V/<20mA	
POWER HANDLING:	1 Watt CW, MORE WITH LIMITTER OPTION	

MECHANICAL:

SIZE: LENGTH = 1.90 in.[48.26 mm], WIDTH = 1.90 in. [48.26 mm]
HEIGHT: 0.400 in. [10.16 mm]

WEIGHT: 2.88 oz. (82 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR : SMA RIGHT ANGLE MALE WITH 18" CABLE
(OPTION: SMB, SMC, SSMA, SSMA, SSMC, SSMP MCX, MMCX, TNC, OR N)

ENVIRONMENTAL:

TEMPERATURE : -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE : 70,000 ft.
VIBRATION : > 30 G's
LEAKAGE : HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

				–	–	–	5
1				–	–	–	3
1				–			2
1				–	–	–	1
-2	-1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
QUANTITY REQD		PARTS LIST					

SIZE :	FREQ. BAND :	LNA :
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA WITH LIMITER
4: MINI ARINC		

P/N: 1.9G1215P-18RS-X-3-X

CABLE'S LENGTH :	CONNECTOR :	COLOR :
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG .	M: MCX; MM: MMCX. SMB	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SSMA, SSMB, SSMC, SSMP	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

CONFORMAL RADIUS OPTION:	
-3:	3.000" RADIUS (SDBII)
-3.5N:	3.500" RADIUS (NETFIRE, GMLRS, NLOS)
-4P:	4.000" RADIUS (PAVEWAY)
-6M:	6.000" RADIUS (MAVERICK)
-7.5EM:	7.500" RADIUS (EGBU, MALD)
-14A:	14 .00" RADIUS (ACM)
-X:	X" RADIUS (0: Flat, No Radius)
-F:	FLAT (WITHOUT RADOME)

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø .004. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH Feb-19-04 | CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

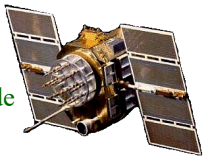
Low Profile 1.9" SQ. L1/L2 GPS ANTENNA WITH CABLE

SIZE D | DWG NO 3CVE1 | DRAWING NO 1.9G1215P-18RS-X-3-X | REV –

SCALE 1/1 | SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STAMP IS RED

NMO Connector Option is Now Available for Some Antennas

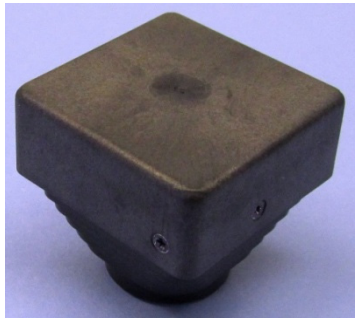


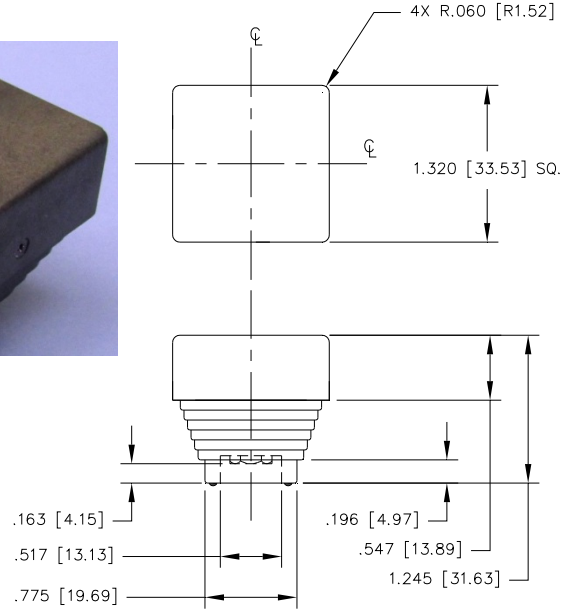
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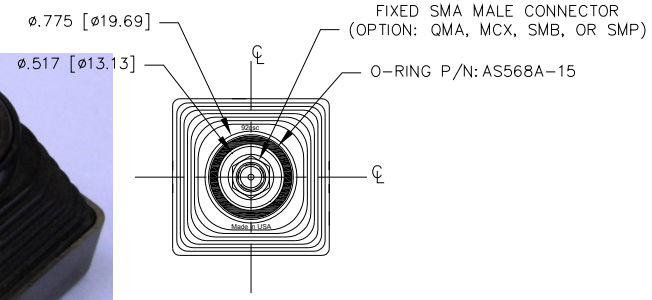
REVISIONS

ZONE	REV	DESCRIPTION	DATE	REVISED	APPROVED
	–	–	–		









SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2 GPS/GLANASS	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 GPS/GLONASS	A4: WITH 43 dB LNA
2: 2.6" DIA.	B3B1	P: WITHOUT LNA
3: 3.5" DIA.	B3L1	
4: MINI ARINC	L1RxIN	

P/N: 1.3G1215A2-XSM-X-FC

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	SM: SMA Male; QF: QMA Female	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG. N: NO MAG.	M: MCX Male	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SMPM: SMP MALE; SMPF: SMP FEMALE	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	SMBP: SMB Plug	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: TAN #33446 PER FED-STD-595B

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

SPECIFICATIONS

ELECTRICAL:

	L1 GPS: 1575.42 ± 15.0 MHz		L2 GPS: 1227.60 ± 12 MHz	
FREQUENCY:	L1 GLONASS: 1598 - 1609 MHz		L2 GLONASS: 1242 - 1252 MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP			
VSWR:	< 2.0:1		< 2.0:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	Free Space	3 in G.P.
@ 90 ° (ZENITH):	+ 0.4	+ 3.2	- 2.2	+ 0.0
@ 10 ° Elevation:	- 4.6	- 4.1	- 10.6	- 4.4
@ 15 ° Elevation:	- 4.5	- 3.8	- 8.5	- 3.5
@ 20 ° Elevation:	- 4.5	- 3.5	- 6.3	- 2.5
@ 30 ° Elevation:	- 3.3	- 1.8	- 4.0	- 1.7
@ 40 ° Elevation:	- 2.5	- 0.6	- 3.3	- 1.6
@ 50 ° Elevation:	- 2.0	+ 0.5	- 3.3	- 1.5
@ 60 ° Elevation:	- 1.5	+ 1.5	- 3.3	- 0.9
@ 70 ° Elevation:	- 0.7	+ 2.4	- 3.2	- 0.4
@ 80 ° Elevation:	+ 0.1	+ 3.0	- 3.2	- 0.1
BEAM WIDTH (3dB):	100 Deg.	80 Deg.	100 Deg.	140 Deg.
AXIAL RATIO:	1.0 dB		3.0 dB	
LIGHTNING PROTECTION:	DC GROUNDING			

LNA OPTION:

LNA GAIN: 24.0 dB (Option: 43 dB)
LNA NOISE FIGURE: 1.8 dB
LNA P 1dB Out: +10 dB
VOLTAGE/CURRENT: (+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE: 1.320 in.[33.53 mm] SQ.
HEIGHT: 1.245 in. [31.63 mm]
WEIGHT: 1.82 oz. (51.6 g)
FINISH: BASE: HARD BLACK ANODIZE PER MIL-A-8625F, TYPE III, CLASS 2
RADOME: SKYDROL RESISTANT POLYURETHANE ENAMEL PER FED-STD-595B
MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR: FIXED SMA MALE
(OPTION: QMA, MCX, SMB, OR SMP)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: ~ 20K G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD	ITEM NO	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
1	1	O-RING	AS568A-15	–	–	–
–2	–1	PARTS LIST				

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125

ORIGINALLY DRAWN S. HUYNH Mar-11-05
ORIGINALLY DESIGNED S. HUYNH Mar-11-05
UPDATED S. Huynh Dec-03-12
UPDATE DRAWN P. Tron Dec-03-12
APPROVED S. HUYNH Dec-03-12

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA

GPS/Satcom ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.3G1215A2-XSM-X-FC | REV –
SCALE 1/1 | SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STAMP IS RED

NMO Connector Option is Now Available for Some Antennas

L1/L2 GPS Antenna, P/N: 1.3G1215A-XNX-3 Rev. C

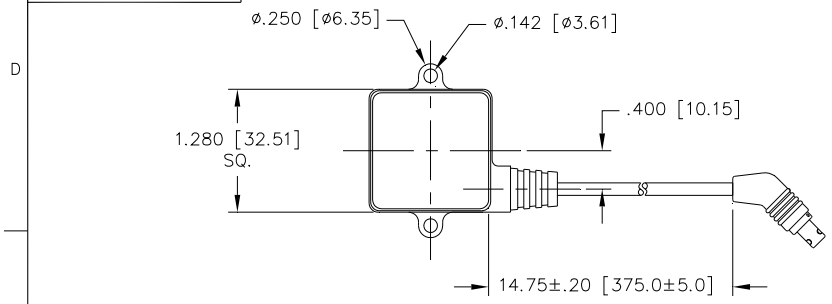
1.28” Square x .78” Height, Grommet Side Cable/Connector Configurations

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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	ADDED CUSTOMER'S CONNECTOR	05/29/12	S.H.
	B	REVISED CABLE TOLERANCE AND VSWR	09/20/12	S.H.
	C	REVISED CABLE LENGTH PER AUCON	09/25/12	S.H.



SPECIFICATIONS

ELECTRICAL:

	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz	
FREQUENCY:				
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP			
VSWR:	< 2.0:1		< 2.0:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	Free Space	3 in G.P.
@ 90 ° (ZENITH):	- 0.8	+ 3.8	-3.7	+ 2.7
@ 10 ° Elevation:	- 9.3	- 4.3	- 9.9	- 6.3
@ 20 ° Elevation:	- 6.8	- 2.2	- 9.2	- 4.2
@ 30 ° Elevation:	- 5.2	- 0.7	- 7.8	- 2.4
@ 60 - 90 ° Elevation:	> - 2.1	> 2.5	> - 4.7	> 1.3
BEAM WIDTH (3dB):	100 Deg.	120 Deg.	100 Deg.	90 Deg.
AXIAL RATIO:	2.5 dB		3	
LIGHTNING PROTECTION:	DC GROUNDING			

LNA OPTION:

LNA GAIN:	24.0 dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	1.280 in.[32.51 mm] SQ. HEIGHT: 0.784 in. [13.89 mm]
WEIGHT:	1.7 oz. (48.2 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	ODU-AMC 15.7" CABLE RIGHT ANGLE MALE CONNECTOR

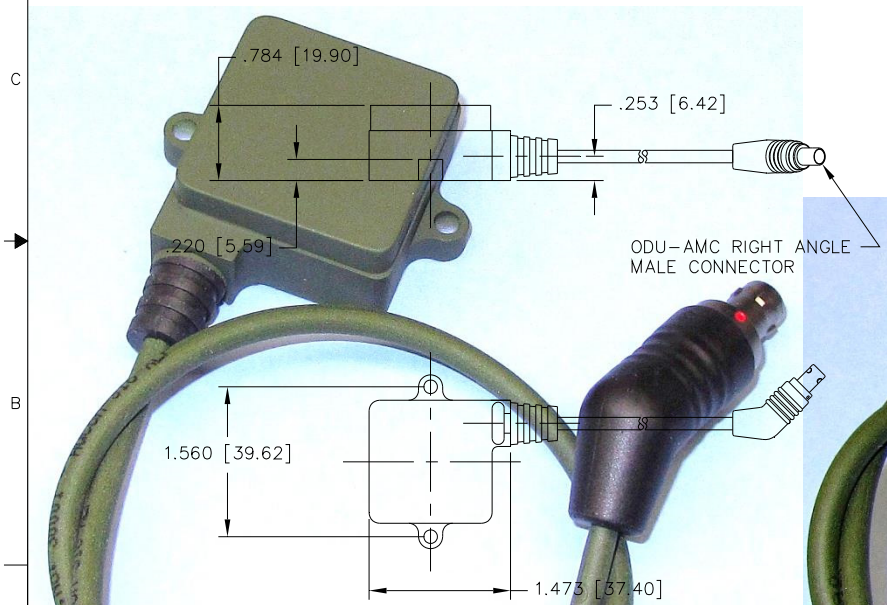
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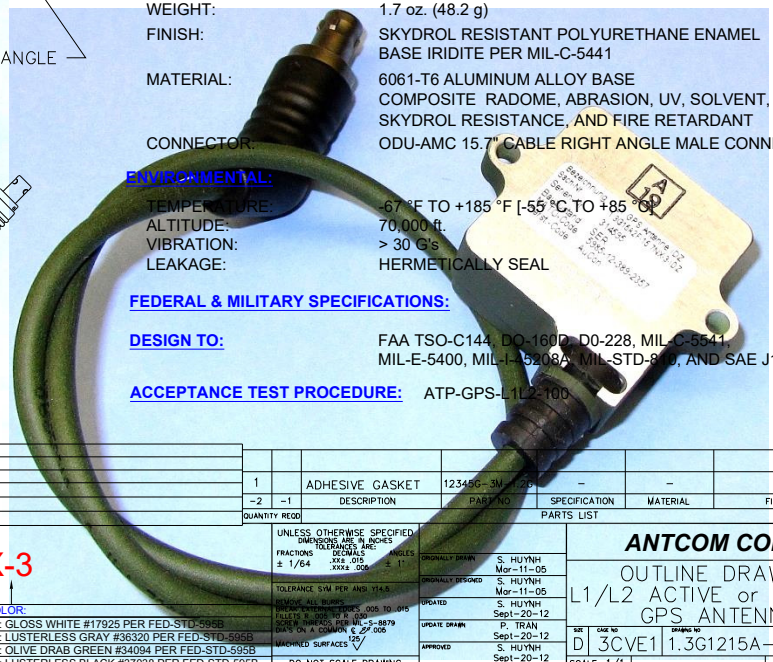
TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100





SIZE:	FREQ BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	P: WITHOUT LNA
2: 2.6" DIA.		
3: 3.5" DIA.		
4: MINI ARINC		

P/N: 1.3G1215A-15.7NX-3

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS; M: MCX;	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	MM: MMCX, SMB; SSMA, SSMB, SSMC,	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
##: CABLE LENGTH (IN)	SSMP, T, TB: TNC, TNC-Bulkhead	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	L-RM: Right Angle Male Lemo	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
1	ADHESIVE GASKET	123456-3M-.78	–	–	–	1
-2	-1	PARTS LIST				

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS AND SHARP EDGES
BREAK ALL EDGES .005 TO .015
FILLETS R .005 TO .015
SURF FINISH PER MIL-S-8879
DIM'S ON A COMMON S.F. .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Mar-11-05
ORIGINALLY DESIGNED	S. HUYNH	Mar-11-05
UPDATED	S. HUYNH	Sept-20-12
UPDATE DRAWN	P. TRAN	Sept-20-12
APPROVED	S. HUYNH	Sept-20-12

ANTCOM CORP. TORRANCE CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE
GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	1.3G1215A-XNX-X	C

SCALE 1/1 SHEET 1 OF 1

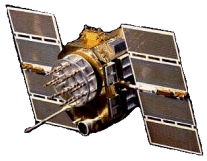
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

NMO Connector Option is Now Available for Some Antennas

L1/L2 GPS Antenna, P/N: 1.3G1215A-XNX-3

1.28” Square x .78” Height, Grommet Side Cable/Connector Configurations

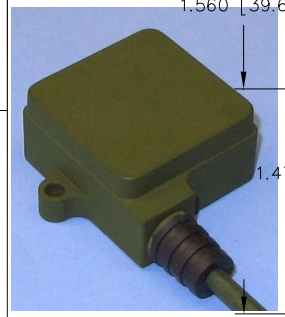


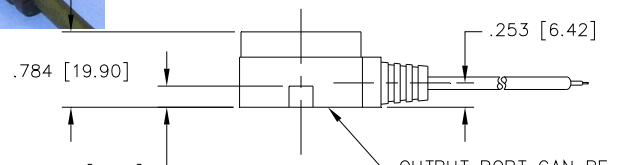
ISO 9001:2008/FAA Approved Facility

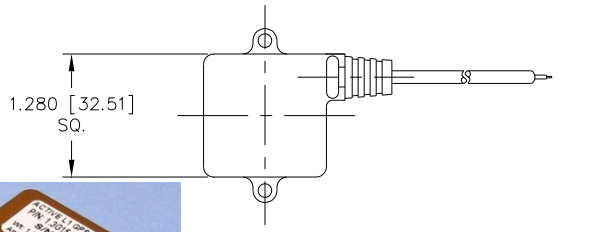
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP			
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	Free Space	3 in G.P.
@ 90 ° (ZENITH):	- 0.8	+ 3.8	-3.7	+ 2.7
@ 10 ° Elevation:	- 9.3	- 4.3	- 9.9	- 6.3
@ 20 ° Elevation:	- 6.8	- 2.2	- 9.2	- 4.2
@ 30 ° Elevation:	- 5.2	- 0.7	- 7.8	- 2.4
@ 60 - 90 ° Elevation:	> - 2.1	> 2.5	> - 4.7	> 1.3
BEAM WIDTH (3dB):	100 Deg.	120 Deg.	100 Deg.	90 Deg.
AXIAL RATIO:	2.5 dB		3	
LIGHTNING PROTECTION:	DC GROUNDING			

LNA OPTION:

LNA GAIN:	24.0 dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	1.280 in.[32.51 mm] SQ. HEIGHT: 0.784 in. [13.89 mm]
WEIGHT:	1.7 oz. (48.2 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	15.7" Cable (Option: PIN, MMCX, MCX, SMA, R-SMA, SMB, SSMA, SSMB, SSMC, or SSMP)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
3	1	ADHESIVE GASKET	12345G-3M-1.2G	-	-	-
2	1			-		
1	1			-	-	-
	-2	-1	PARTS LIST			

SIZE:	FREQ. BAND:	LNA:
1: 2” SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9” SQ.	15: L1 ONLY	P: WITHOUT LNA
2: 2.6” DIA.		
3: 3.5” DIA.		
4: MINI ARINC		

P/N: 1.3G1215A-XNX-3

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS; M: MCX;	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	MM: MMCX, SMB; SSMA, SSMB, SSMC,	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SSMP, T, TB: TNC, TNC-Bulkhead	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	L-RM: Right Angle Male Lemo	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Mar-11-05
ORIGINALLY DESIGNED	S. HUYNH	Mar-11-05
UPDATED	Ken Lee	May-14-12
UPDATE DRAWN	Phil Tron	May-14-12
APPROVED	S. HUYNH	May-14-12

ANTCOM CORP. TORRANCE CALIFORNIA

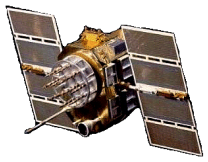
OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	1.3G1215A-XNX-X	-

SCALE 1/1 SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STAMP IS RED

NMO Connector Option is Now Available for Some Antennas



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REVISIONS

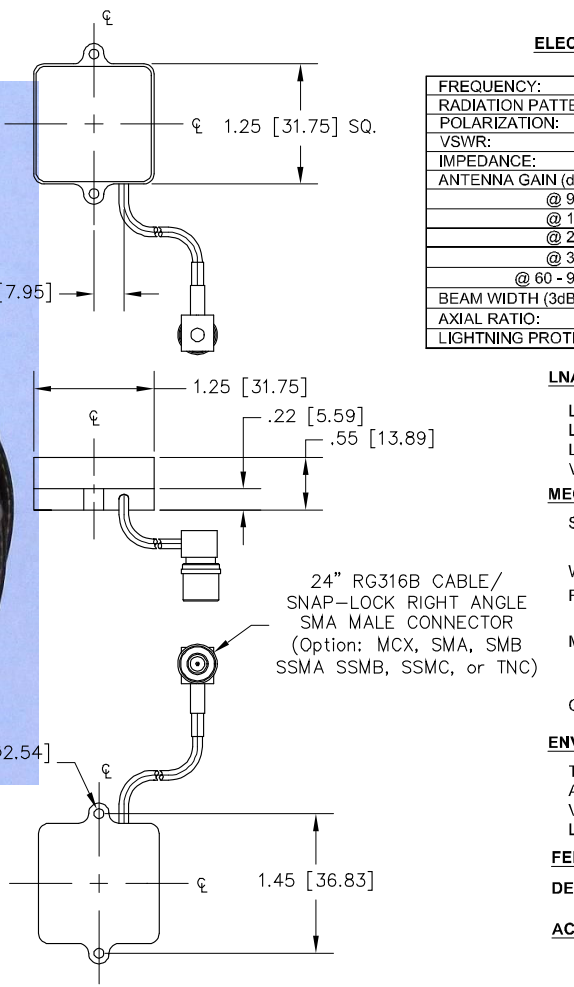
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A2	CORRECTION TO <30mA	July-05-16	S.H

SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL				
POLARIZATION:	RHCP				
VSWR:	< 1.5:1			< 1.5:1	
IMPEDANCE:	50 ohms			50 ohms	
ANTENNA GAIN (dBic):	Free Space	3 in G.P.		Free Space	3 in G.P.
@ 90 ° (ZENITH):	- 0.8	+ 3.8		-3.7	+ 2.7
@ 10 ° Elevation:	- 9.3	- 4.3		- 9.9	- 6.3
@ 20 ° Elevation:	- 6.8	- 2.2		- 9.2	- 4.2
@ 30 ° Elevation:	- 5.2	- 0.7		- 7.8	- 2.4
@ 60 - 90 ° Elevation:	> - 2.1	> 2.5		> - 4.7	> 1.3
BEAM WIDTH (3dB):	100 Deg.	120 Deg.		100 Deg.	90 Deg.
AXIAL RATIO:	2.5 dB			3	
LIGHTNING PROTECTION:	DC GROUNDING				





LNA OPTION:

LNA GAIN:	24.0 dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / <30 mA

MECHANICAL:

SIZE:	1.250 in.[31.75 mm] SQ. HEIGHT: 0.547 in. [13.89 mm]
WEIGHT:	1.1 oz. (31.2 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	24" RG316B CABLE/ SNAP-LOCK RIGHT ANGLE M-SMA (OPTION: MCX, SMA, SMB, SSMA, SSMB, SSMC, OR TNC)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		
4: MINI ARINC		

P/N: 1.2G1215P-XNSLRS-4

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS; M: MCX;	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	MM: MMCX, SMB; SSMA, SSMB, SSMC,	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SSMP, T, TB: TNC, TNC-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	L-RM: Right Angle Male Lemo	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: DESERT TAN #33446 PER FED-STD-595B

QUANTITY REQD	ITEM NO	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
1							3
1							2
1		ADHESIVE GASKET	12345G-3M-1.2G	–	–	–	1
-2	-1	PARTS LIST					

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .015, .XXX ± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ⌀ .29 .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Mar-11-05
ORIGINALLY DESIGNED	S. HUYNH	Mar-11-05
UPDATED BY	S. HUYNH	July-05-16
DRAWN BY	P. TRAN	July-05-16
APPROVED	S. HUYNH	July-05-16

ANTCOM CORP. TORRANCE CALIFORNIA

OUTLINE DRAWING
L1/L2 GPS/Glonass ANTENNA

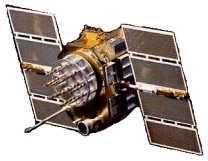
SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	1.2G1215P-XNSLRS-4	A

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS Antenna, P/N: 1.2G1215A4-12NRMM-4 Rev B

(Improved Gain) 1.2" Square, Flat Mount Configuration with 12in Right Angle MMCX Male Cable



ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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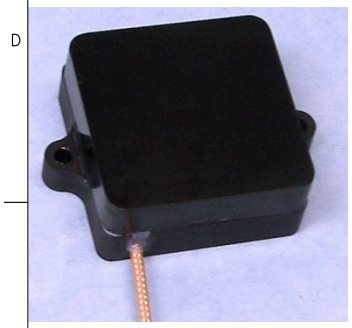
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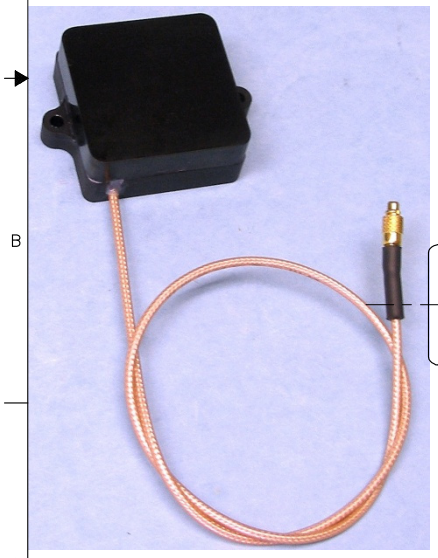
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	3dB More in Gain	Sep-21-06	S.H
	B	Cable Location	Nov-01-07	S.H
	B2	Correction to <30mA	July-05-16	S.H

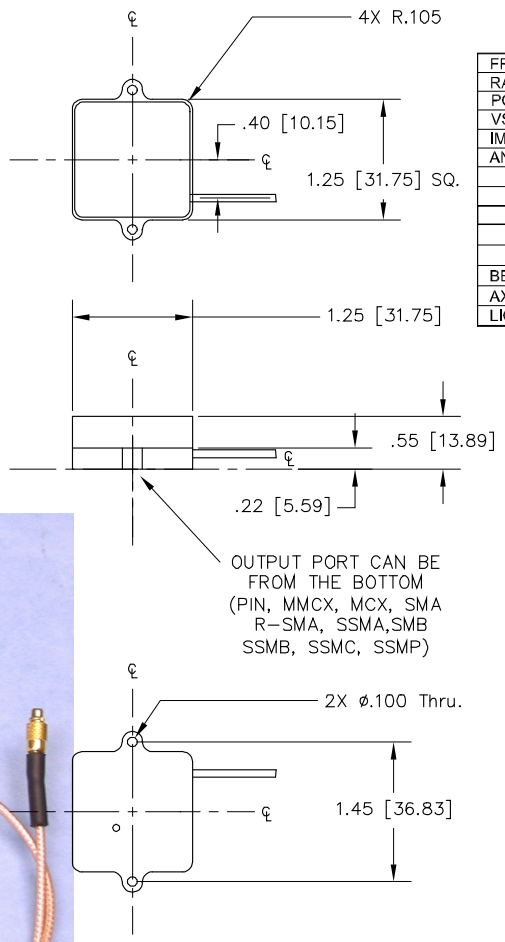
SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.		Free Space	3 in G.P.	
@ 90 ° (ZENITH):	- 0.8	+ 3.8		-3.7	+ 2.7	
@ 10 ° Elevation:	- 9.3	- 4.3		- 9.9	- 6.3	
@ 20 ° Elevation:	- 6.8	- 2.2		- 9.2	- 4.2	
@ 30 ° Elevation:	- 5.2	- 0.7		- 7.8	- 2.4	
@ 60 - 90 ° Elevation:	> - 2.1	> 2.5		> - 4.7	> 1.3	
BEAM WIDTH (3dB):	100 Deg.	120 Deg.		100 Deg.	90 Deg.	
AXIAL RATIO:	2.5 dB			3		
LIGHTNING PROTECTION:	DC GROUNDING					







LNA OPTION:

LNA GAIN:	24.0 dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / <30 mA

MECHANICAL:

SIZE:	1.250 in.[31.75 mm] SQ. HEIGHT: 0.547 in. [13.89 mm]
WEIGHT:	1.1 oz. (31.2 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	4.5" LONG FLEXIBLE CABLE with RIGHT ANGLE MMCX (OPTION: MCX, SMA, SMB, SSMA, SSMB, SSMC, OR TNC)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO:	FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455
ACCEPTANCE TEST PROCEDURE:	ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		
4: MINI ARINC		

P/N: 1.2G1215A2-XNMM-4

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS; M: MCX;	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	MM: MMCX, SMB; SSMA, SSMB, SSMC,	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SSMP, T, TB: TNC, TNC-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	L-RM: Right Angle Male Lemo	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: DESERT TAN #33446 PER FED-STD-595B

QUANTITY REQD		DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
1							3
1							2
1		ADHESIVE GASKET	12345G-3M-1.2G	–	–	–	1
-2	-1	PARTS LIST					

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .01, .XXX ± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON ℄ .29 .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Mar-11-05
ORIGINALLY DESIGNED	S. HUYNH	Mar-11-05
UPDATED BY	S. HUYNH	July-05-16
DRAWN BY	P. TRAN	July-05-16
APPROVED	S. HUYNH	July-05-16

ANTCOM CORP. TORRANCE CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE
GPS ANTENNA

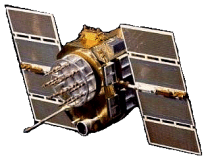
SIZE	CAGE NO	DRAWING NO	REV
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SCALE 1/1 SHEET 1 OF 1

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

NMO Connector Option is Now Available for Some Antennas



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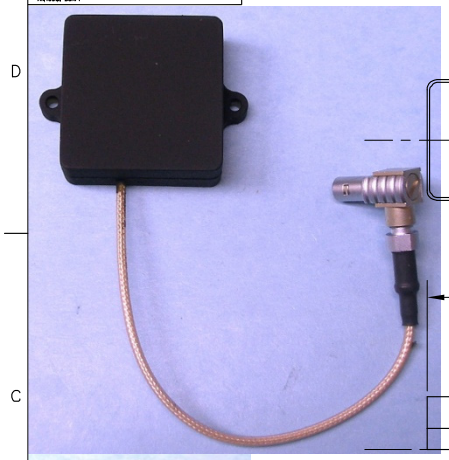
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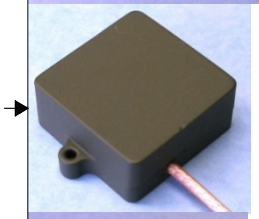
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	3dB More in Gain	Sep-21-06	S.H
	A2	Correction to <30mA	July-05-16	S.H

SPECIFICATIONS

ELECTRICAL:

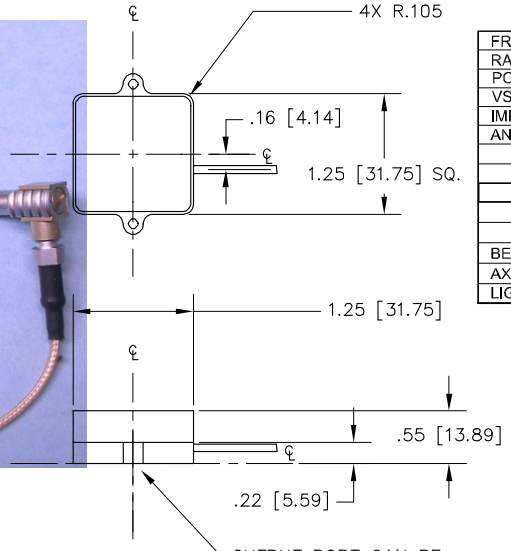
FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL				
POLARIZATION:	RHCP				
VSWR:	< 1.5:1			< 1.5:1	
IMPEDANCE:	50 ohms			50 ohms	
ANTENNA GAIN (dBic):	Free Space	3 in G.P.		Free Space	3 in G.P.
@ 90 ° (ZENITH):	- 0.8	+ 3.8		-3.7	+ 2.7
@ 10 ° Elevation:	- 9.3	- 4.3		- 9.9	- 6.3
@ 20 ° Elevation:	- 6.8	- 2.2		- 9.2	- 4.2
@ 30 ° Elevation:	- 5.2	- 0.7		- 7.8	- 2.4
@ 60 - 90 ° Elevation:	> - 2.1	> 2.5		> - 4.7	> 1.3
BEAM WIDTH (3dB):	100 Deg.	120 Deg.		100 Deg.	90 Deg.
AXIAL RATIO:	2.5 dB			3	
LIGHTNING PROTECTION:	DC GROUNDING				

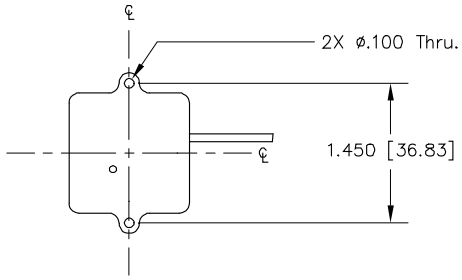












LNA OPTION:

LNA GAIN:	24.0 dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / <30 mA

MECHANICAL:

SIZE:	1.250 in.[31.75 mm] SQ. HEIGHT: 0.547 in. [13.89 mm]
WEIGHT:	1.1 oz. (31.2 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	4.5" LONG FLEXIBLE CABLE with RIGHT ANGLE MMCX (OPTION: MCX, SMA, SMB, SSMA, SSMB, SSMC, OR TNC)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

NMO Connector Option is Now Available for Some Antennas

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		
4: MINI ARINC		

P/N: 1.2G1215A2-XNMM-4

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS; M: MCX;	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	MM: MMCX, SMB; SSMA, SSMB, SSMC,	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SSMP, T, TB: TNC, TNC-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	L-RM: Right Angle Male Lemo	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: DESERT TAN #33446 PER FED-STD-595B

QUANTITY REQD	ITEM NO	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
1							3
1							2
1		ADHESIVE GASKET	12345G-3M-1.2G	–	–	–	1
–2	–1	PARTS LIST					

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .015, .XXX ± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ⌀ .25 .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Mar-11-05
ORIGINALLY DESIGNED	S. HUYNH	Mar-11-05
UPDATED BY	S. HUYNH	July-05-16
DRAWN BY	P. TRAN	July-05-16
APPROVED	S. HUYNH	July-05-16

ANTCOM CORP. TORRANCE CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE
GPS ANTENNA

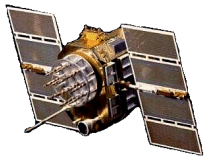
SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	1.2G1215X-XNX-X	A2

SCALE 1/1 SHEET 1 OF 1

CC: 3CVE1, NAICS: 334511, S.Huynh, 23-Mar-17

Dual Linear (V/H) L1/L2 GPS Antenna, P/N: 1.2G1215P2L-8NSSF-4

1.2" Square, Flat Mount Configuration



ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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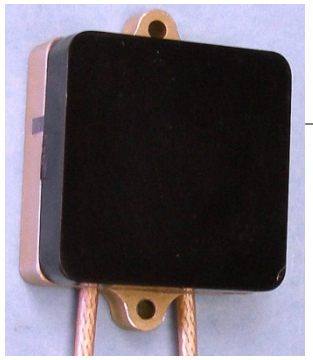
REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	3dB More In Gain	Sep-21-06	S.H

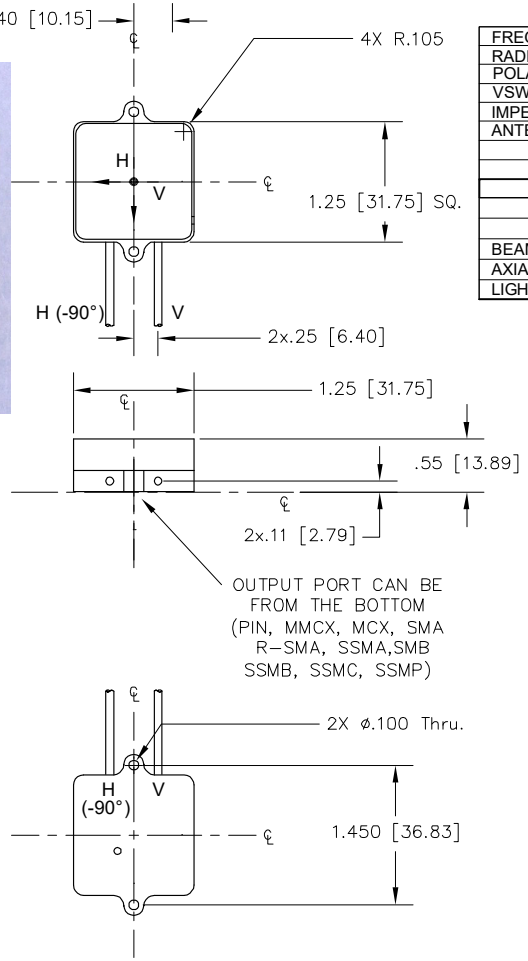
SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	DUAL LINEAR (V/H)					
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.		Free Space	3 in G.P.	
@ 90 ° (ZENITH):	- 0.8	+ 3.8		-3.7	+ 2.7	
@ 10 ° Elevation:	- 9.3	- 4.3		- 9.9	- 6.3	
@ 20 ° Elevation:	- 6.8	- 2.2		- 9.2	- 4.2	
@ 30 ° Elevation:	- 5.2	- 0.7		- 7.8	- 2.4	
@ 60 - 90 ° Elevation	> - 2.1	> 2.5		> - 4.7	> 1.3	
BEAM WIDTH (3dB):	100 Deg.	120 Deg.		100 Deg.	90 Deg.	
AXIAL RATIO:						
LIGHTNING PROTECTION:	DC GROUNDING					







LNA OPTION:

LNA GAIN:	24.0 dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	1.250 in.[31.75 mm] SQ. HEIGHT: 0.547 in. [13.89 mm]
WEIGHT:	1.1 oz. (31.2 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	4.5" LONG FLEXIBLE CABLE with RIGHT ANGLE MMCX (OPTION: MCX, SMA, SMB, SSMA, SSMB, SSMC, OR TNC)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD	-2	-1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
					–	–	–	5
1			ADHESIVE GASKET	12345G-3M-1.2G	–	–	–	3
1					–			2
1					–	–	–	1

PARTS LIST

SIZE:	FREQ. BAND	LNA:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6" DIA.		P: PASSIVE (WITHOUT LNA
3: 3.5" DIA.		P2: DUAL CP (RHCP/LHCP) AND PASSIVE (WITHOUT LNA)
4: MINIATURE		P2L: DUAL LINEAR (VERT./HOR.) AND PASSIVE (WITHOUT LNA)

P/N: 1.2G1215P2L-8NSSF-4

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	SS: SMA MALE, SSF: SMA FEMALE	-1: GLOSS WHITE #17925 PER FED-STD-595B
#: CABLE LENGTH (IN)	MM: MCX MALE, MMF: MCX FEMALE	-2: LUSTER LESS GRAY #36320 PER FED-STD-595B
	OTHER CONNECTORS ARE ALSO AVAILABLE	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
		-4: LUSTER LESS BLACK #37038 PER FED-STD-595B

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX ± .015 .XXX ± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ ⌀.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Mar-11-05
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

DUAL LINEAR (V/H)
L1/L2 ACTIVE or PASSIVE
GPS ANTENNA

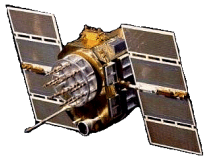
SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.2G1215P2L-8NSSF-4 | REV A

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Dual RHCP/LHCP L1/L2 GPS Antenna, P/N: 1.2G1215P2-8NSSF-4

1.2” Square, Flat Mount Configuration



Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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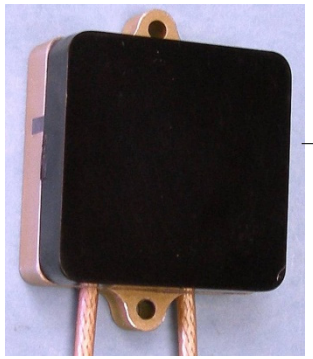
REVISIONS

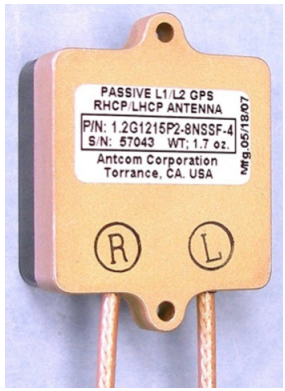
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	3dB More in Gain	Sep-21-06	S.H

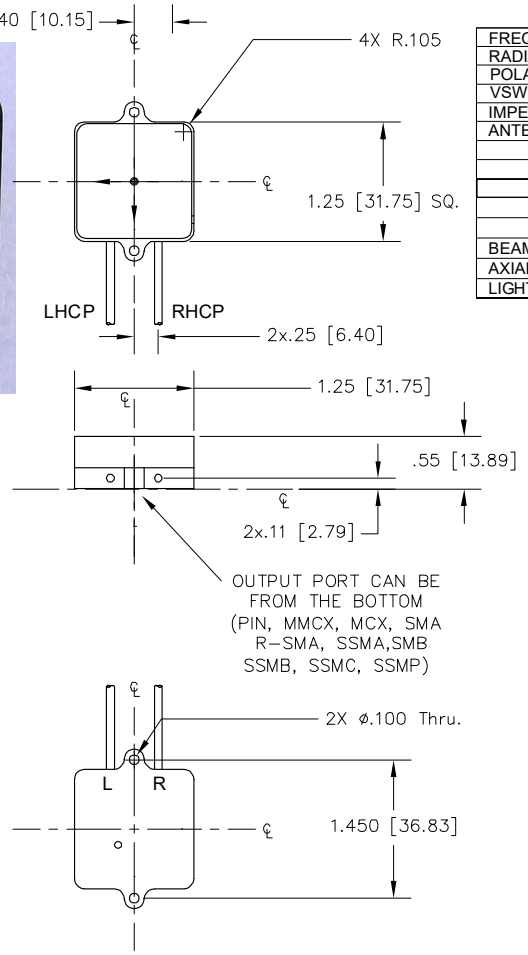
SPECIFICATIONS

ELECTRICAL:

	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
FREQUENCY:						
RADIATIONPATTERN:	HEMISPHERICAL					
POLARIZATION:	DUAL RHCP/LHCP					
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.		Free Space	3 in G.P.	
@ 90 ° (ZENITH):	- 0.8	+ 3.8		-3.7	+ 2.7	
@ 10 ° Elevation:	- 9.3	- 4.3		- 9.9	- 6.3	
@ 20 ° Elevation:	- 6.8	- 2.2		- 9.2	- 4.2	
@ 30 ° Elevation:	- 5.2	- 0.7		- 7.8	- 2.4	
@ 60 - 90 ° Elevation	> - 2.1	> 2.5		> - 4.7	> 1.3	
BEAMWIDTH (3dB):	100 Deg.	120 Deg.		100 Deg.	90 Deg.	
AXIAL RATIO:	2.5 dB			3		
LIGHTNING PROTECTION:	DC GROUNDING					







LNA OPTION:

LNA GAIN:	24.0 dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	1.250 in.[31.75 mm] SQ. HEIGHT: 0.547 in. [13.89 mm]
WEIGHT:	1.1 oz. (31.2 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	4.5" LONG FLEXIBLE CABLE with RIGHT ANGLE MMCX (OPTION: MCX, SMA, SMB, SSMA, SSMB, SSMC, OR TNC)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

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QUANTITY REQD	-2	-1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
			PARTS LIST					
					–	–	–	5
1			ADHESIVE GASKET	12345G-3M-1.2G	–	–	–	3
1					–			2
1					–	–	–	1

SIZE	FREQ.BAND	LNA:
1: 2" SQ.	1215:L1/L2	A2: WITH20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH40 dB LNA
2: 2.6" DIA.		P: PASSIVE(WITHOUTLNA
3: 3.5" DIA.		P2: DUALCP (RHCP/LHCP)AND PASSIVE(WITHOUTLNA)
4: MINIARINC		P2L: DUALLINEAR(VERT./HOR.)AND PASSIVE(WITHOUTLNA)

P/N: 1.2G1215P2-8NSSF-4

CABLE'SLENGTH	CONNECTOR	COLOR
X: NO CABLE	SS: SMA MALE, SSF: SMA FEMALE	-1: GLOSSWHITE#17925PERFED-STD-595B
#: CABLE LENGTH(IN)	MM: MCX MALE, MMF: MCX FEMALE	-2: LUSTERLESSGRAY#36320PERFED-STD-595B
	OTHER CONNECTORS ARE ALSO AVAILABLE	-3: OLIVEDRAB GREEN#34031PERFED-STD-595B
		-4: LUSTERLESSBLACK#37038PERFED-STD-595B

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES, PER: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Mar-11-05
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

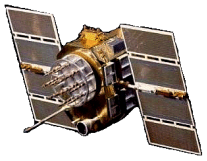
DUAL RHCP/LHCP
L1/L2 ACTIVE or PASSIVE
GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.2G1215P2-8NSSF-4 | REV A
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active or Passive L1/L2 GPS Antenna, P/N: 1.2G1215X-XS-X Rev C

(Improved Gain) 1.2" Square, Back Connector Configurations



ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	3dB More In Gain	Sep-21-06	S.H
	C	Connector Flange Thickness	Mar-19-09	S.H

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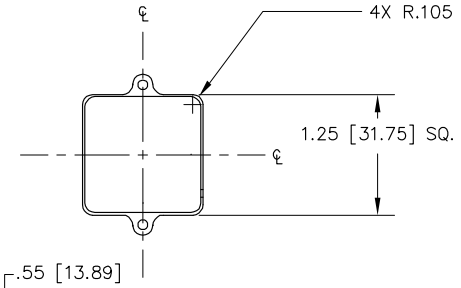
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ANTENNA GAIN (dBic):	Free Space	3 in G.P.		Free Space	3 in G.P.
@ 90 ° (ZENITH):	- 0.8	+ 3.8		-3.7	+ 2.7
@ 10 ° Elevation:	- 9.3	- 4.3		- 9.9	- 6.3
@ 20 ° Elevation:	- 6.8	- 2.2		- 9.2	- 4.2
@ 30 ° Elevation:	- 5.2	- 0.7		- 7.8	- 2.4
@ 60 - 90 ° Elevation	> - 2.1	> 2.5		> - 4.7	> 1.3
BEAM WIDTH (3dB):	100 Deg.	120 Deg.		100 Deg.	90 Deg.
AXIAL RATIO:	2.5 dB			3	
LIGHTNING PROTECTION:	DC GROUNDING				

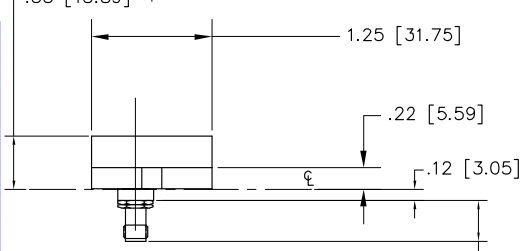




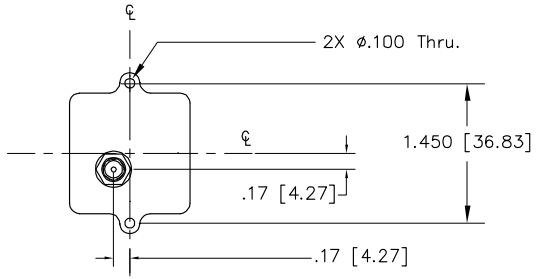








Max. Dim: 0.25" [6.37] (MCX/MMCX),
0.46"[11.68] (SMA/R-SMA),
0.57" [14.53] (TNC), 0.83"[21.00] (TNC-BH),
0.72" [18.29] (N, N-BH)



SIZE:	FREQ. BAND	LNA:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		
4: MINI ARINC		

P/N: 1.2G1215A2-XS-X

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS; M: MCX;	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	MM: MMCX, SMB; SSMA, SSMB, SSMC,	-2: LUSTER LESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SSMP, T, TB: TNC, TNC-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	L-RM: Right Angle Male Lemo	-4: LUSTER LESS BLACK #37038 PER FED-STD-595B

LNA OPTION:

LNA GAIN:	24.0 dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	1.250 in.[31.75 mm] SQ. HEIGHT: 0.547 in. [13.89 mm]
WEIGHT:	1.4 oz. (39.2 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	4.5" LONG FLEXIBLE CABLE with RIGHT ANGLE MMCX (OPTION: MCX, SMA, SMB, SSMA, SSMB, SSMC, OR TNC)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD		DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
				–	–	–	5
1		ADHESIVE GASKET	12345G-3M-1.2G	–	–	–	3
1				–			2
1				–	–	–	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ ⌀.005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH Mar-11-05 | CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE
GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.2G1215X-XS-X | REV C

SCALE 1/1 | SHEET 1 OF 1

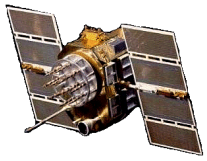
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

NMO Connector Option is Now Available for Some Antennas

Active or Passive L1/L2 GPS Antenna, P/N: 1.2G1215X-XS-5-256 Rev D

(Improved Gain) 1.2” Square, Back Connector Configurations



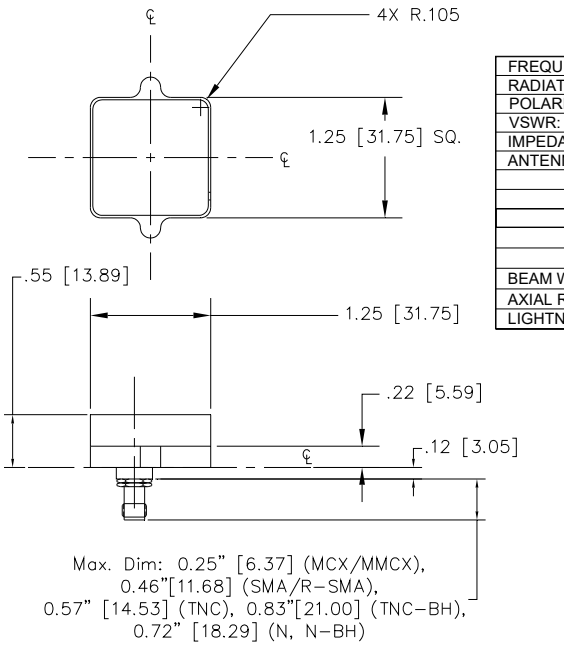
ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

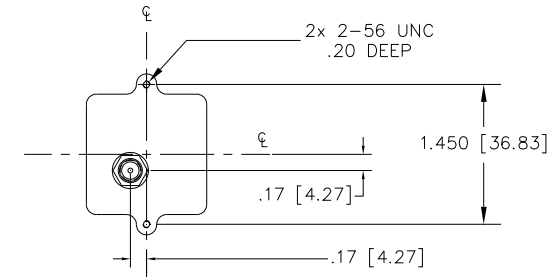
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REVISIONS

ZONE	REV	DESCRIPTION	DATE	REVISED	APPROVED
	A	3dB More in Gain	Sep-21-06		S.H
	C	Connector Flange THickness	Mar-19-09		S.H
	D	Added new Part No.	Sept-04-12	P.T	S.H





SPECIFICATIONS

ELECTRICAL:

	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
FREQUENCY:						
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.		Free Space	3 in G.P.	
@ 90 ° (ZENITH):	- 0.8	+ 3.8		- 3.7	+ 2.7	
@ 10 ° Elevation:	- 9.3	- 4.3		- 9.9	- 6.3	
@ 20 ° Elevation:	- 6.8	- 2.2		- 9.2	- 4.2	
@ 30 ° Elevation:	- 5.2	- 0.7		- 7.8	- 2.4	
@ 60 - 90 ° Elevation:	> - 2.1	> 2.5		> - 4.7	> 1.3	
BEAM WIDTH (3dB):	100 Deg.	120 Deg.		100 Deg.	90 Deg.	
AXIAL RATIO:	2.5 dB			3		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	24.0 dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	1.250 in.[31.75 mm] SQ. HEIGHT: 0.547 in. [13.89 mm]
WEIGHT:	1.4 oz. (39.2 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	4.5" LONG FLEXIBLE CABLE with RIGHT ANGLE MMCX (OPTION: MCX, SMA, SMB, SSMA, SSMB, SSMC SMP, OR TNC

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		
4: MINI ARINC		

P/N: 1.2G1215A2-XS-5-256

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS; M: MCX:	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	MM: MMCX, SMB; SSMA, SSMB, SSMC,	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SSMP, T, TB: TNC, TNC-Bulkhead	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	SMP: SMP FEMALE; SMPM: SMP MALE	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
	L-RM: Right Angle Male Lemo	-5: TAN #33446 PER FED-STD-595B

QUANTITY REQD	ITEM NO	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
1	2					
1	1	ADHESIVE GASKET	12345G-3M-1.2G	–	–	–
-2	-1	PARTS LIST				

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

ORIGINALLY DRAWN	S. HUYNH	Mar-11-05
ORIGINALLY DESIGNED	S. HUYNH	Mar-11-05
UPDATED	S. Huynh	Aug-27-12
UPDATE DRAWN	P. Tran	Aug-27-12
APPROVED	S. HUYNH	Aug-27-12

ANTCOM CORP. TORRANCE CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE
GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	1.2G1215A2-XS-5-256	D

SCALE 1/1 SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STAMP IS RED

NMO Connector Option is Now Available for Some Antennas

Active or Passive L1/L2 GPS Antenna

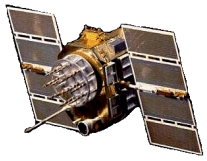
P/N: 1.0G1215A2-3UFL-4- *LW*

1.0G15A4-3S-2-LW (Active L1 Only) ; 1.0G15P-3S-2-LW (Passive L1 Only)

New 1.0" Square, Flat Mount, Bottom Cable, Light Weight Configuration

ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf



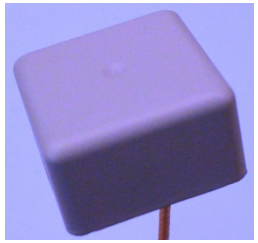
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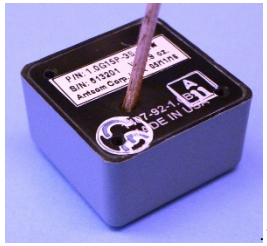
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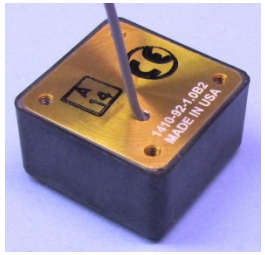
REVISIONS

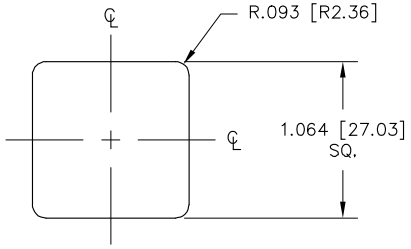
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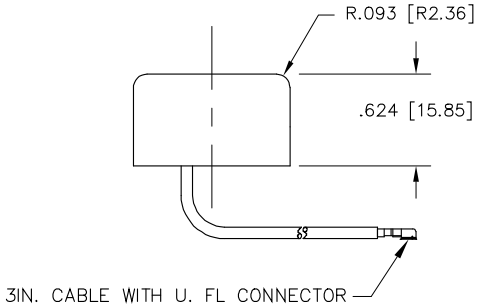


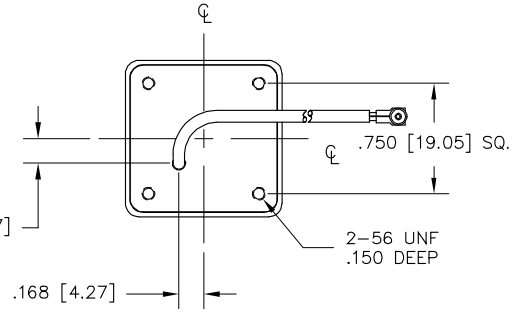












SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP			
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	Free Space	3 in G.P.
@ 90 ° (ZENITH):	- 0.8	+ 3.8	-3.7	+ 2.7
@ 10 ° Elevation:	- 9.3	- 4.3	- 9.9	- 6.3
@ 20 ° Elevation:	- 6.8	- 2.2	- 9.2	- 4.2
@ 30 ° Elevation:	- 5.2	- 0.7	- 7.8	- 2.4
@ 60 - 90 ° Elevation:	> - 2.1	> 2.5	> - 4.7	> 1.3
BEAM WIDTH (3dB):	100 Deg.	120 Deg.	100 Deg.	90 Deg.
AXIAL RATIO:	2.5 dB		3	
LIGHTNING PROTECTION:	DC GROUNDING			

LNA OPTION:

LNA GAIN:	24.0 dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	1.06 In. [27.03 mm] SQ. HEIGHT: 0.624 in. [15.85 mm]
WEIGHT:	0.96 oz. (27.3 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	3.0" CABLE with U.FL (OPTION: MCX, SMA, SMB, SSMA, SSMB, SSMC, OR TNC)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 1" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		
4: MINI ARINC		

P/N: 1.0G1215A2-3UFL-4-LW

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	UFL: U.FL	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAC, N: NO MAC,	S: SMA; RS: R-SMA; M: MCX; RM: R-MCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	MM: MMCX; RMM: R-MMCX; SSMA, SSMB,	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	SMB, SSMC, SSMP, T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: TAN #37038 PER FED-STD-595B

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
2	1						2
1	1	–	–	–	–	–	1
PARTS LIST							

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCRS ¶ THREADS PER MIL-S-8879 DIA'S ON A COMMON ¢ .005
MACHINED SURFACES
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Dec-05-11
ORIGINALLY DESIGNED	S. HUYNH	Dec-05-11
UPDATED	S. HUYNH	Feb-25-14
UPDATE DRAWN	P. TRAN	Feb-25-14
APPROVED	S. HUYNH	Feb-25-14

TORRANCE, CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	1.0G1215A2-3UFL-4-LW	–

SCALE 1/1 SHEET 1 OF 1

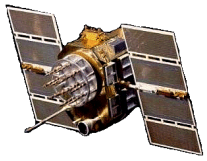
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

NMO Connector Option is Now Available for Some Antennas

Active or Passive L1/L2 GPS Antenna, P/N: 1.2G1215X-XS-X-*NF* Rev C

(Improved Gain) 1.2” Square, Back Connector Configurations



ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	3dB More In Gain	Sep-21-06	S.H
	C	Connector Flange Thickness	Mar-19-09	S.H

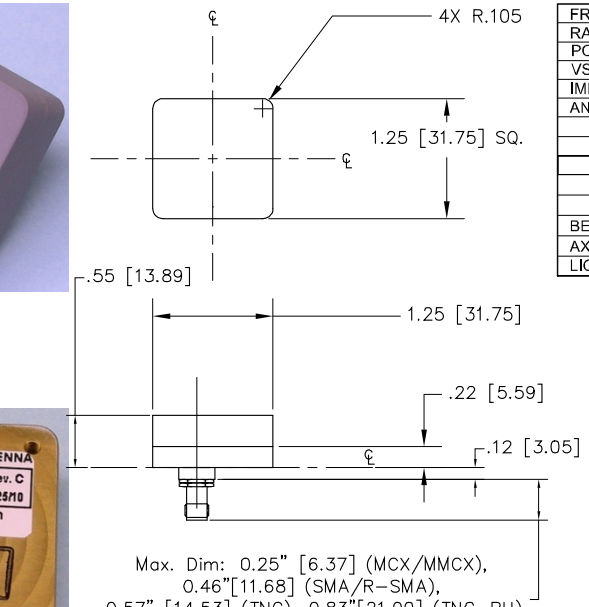
SPECIFICATIONS

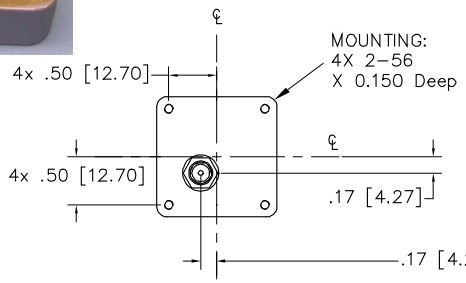
ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL				
POLARIZATION:	RHCP				
VSWR:	< 1.5:1			< 1.5:1	
IMPEDANCE:	50 ohms			50 ohms	
ANTENNA GAIN (dBic):	Free Space	3 in G.P.		Free Space	3 in G.P.
@ 90 ° (ZENITH):	- 0.8	+ 3.8		-3.7	+ 2.7
@ 10 ° Elevation:	- 9.3	- 4.3		- 9.9	- 6.3
@ 20 ° Elevation:	- 6.8	- 2.2		- 9.2	- 4.2
@ 30 ° Elevation:	- 5.2	- 0.7		- 7.8	- 2.4
@ 60 - 90 ° Elevation:	> - 2.1	> 2.5		> - 4.7	> 1.3
BEAM WIDTH (3dB):	100 Deg.	120 Deg.		100 Deg.	90 Deg.
AXIAL RATIO:	2.5 dB			3	
LIGHTNING PROTECTION:	DC GROUNDING				









LNA OPTION:

LNA GAIN:	24.0 dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	1.250 in.[31.75 mm] SQ. HEIGHT: 0.547 In. [13.89 mm]
WEIGHT:	1.4 oz. (39.2 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	4.5" LONG FLEXIBLE CABLE with RIGHT ANGLE MMCX (OPTION: MCX, SMA, SMB, SSMA, SSMB, SSMC, OR TNC)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD	ITEM NO	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
				-	-	-
1		ADHESIVE GASKET	12345G-3M-1.2G	-	-	-
1				-	-	-
1				-	-	-
-2	-1	PARTS LIST				

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		
4: MINI ARINC		

P/N: 1.2G1215A2-XS-X-NF

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS; M: MCX;	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG,	MM: MMCX, SMB: SSMA, SSMB, SSMC,	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SSMP, T, TB: TNC, TNC-Bulkhead	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	L-RM: Right Angle Male Lemo	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005. MACHINED SURFACES 125. DO NOT SCALE DRAWING

DRAWN S. HUYNH Feb-11-10; CHECKED; ENGINEER; APPROVED S. HUYNH Feb-11-10; CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE
GPS ANTENNA

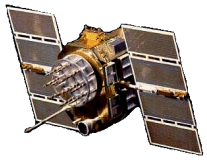
SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.2G1215X-XS-X-NF | REV C

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active or Passive L1/L2 GPS Antenna, P/N: 1.2G1215X-XP-X-NF Rev C

(Improved Gain) 1.2” Square, Back Connector Configurations

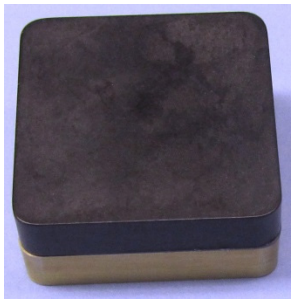


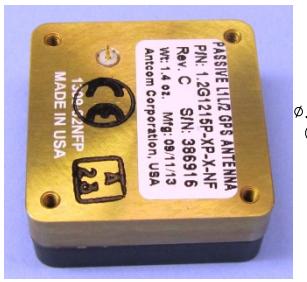
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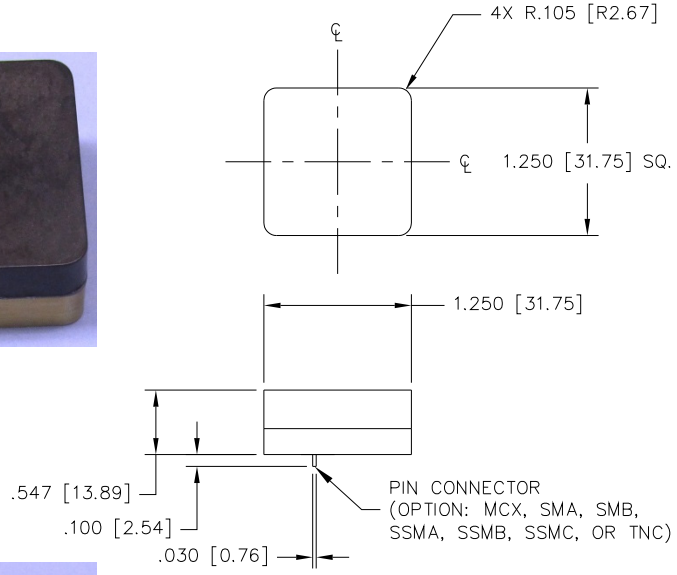
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

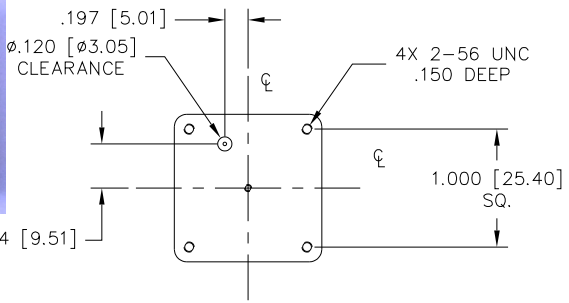
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SPECIFICATIONS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
–	–	–	–	S.H

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP			
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	Free Space	3 in G.P.
@ 90 ° (ZENITH):	- 0.8	+ 3.8	-3.7	+ 2.7
@ 10 ° Elevation:	- 9.3	- 4.3	- 9.9	- 6.3
@ 20 ° Elevation:	- 6.8	- 2.2	- 9.2	- 4.2
@ 30 ° Elevation:	- 5.2	- 0.7	- 7.8	- 2.4
@ 60 - 90 ° Elevation:	> - 2.1	> 2.5	> - 4.7	> 1.3
BEAM WIDTH (3dB):	100 Deg.	120 Deg.	100 Deg.	90 Deg.
AXIAL RATIO:	2.5 dB		3 dB	
LIGHTNING PROTECTION:	DC GROUNDING			

LNA OPTION:

LNA GAIN:	24.0 dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	1.250 in.[31.75 mm] SQ. HEIGHT: 0.547 in. [13.89 mm]
WEIGHT:	1.4 oz. (39.2 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	PIN (OPTION: MCX, SMA, SMB, SSMA, SSMB, SSMC, OR TNC)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		
4: MINI ARINC		

P/N: 1.2G1215A2-XP-X-NF

QUANTITY REQD		DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
1							3
1							2
1		ADHESIVE GASKET	12345G-3M-1.2G	–	–	–	1
–2	–1	PARTS LIST					

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS; M: MCX;	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	MM: MMCX, SMB; SSMA, SSMB, SSMC,	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SSMP, T, TB: TNC, TNC-Bulkhead	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	L-RM: Right Angle Male Lemo	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005. MACHINED SURFACES 125. DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Feb-11-10
ORIGINALLY DESIGNED	S. HUYNH	Feb-11-10
UPDATED	S. HUYNH	Aug-28-13
UPDATE DRAWN	P. TRAN	Aug-28-13
APPROVED	S. HUYNH	Aug-28-13

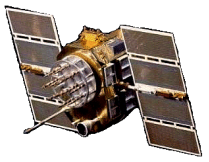
ANTCOM CORP. TORRANCE, CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE
GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	1.2G1215X-XP-X-NF	C

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

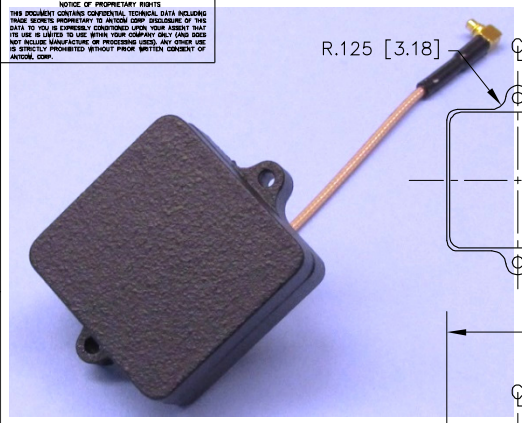


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SPECIFICATIONS

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
B	PAINTING WITH STIC-KOTO 8100	04-25-12	S.H
D	DIMENSION+TOLERANCE CORRECTION	Jan-20-16	S.H
E	REV K BASEPLATE NEW BONDING/LEAK TEST PROCESS	Jan-25-17	S.H
D2	BACK TO REV D W/ PR1440 ADHESIVE	Feb-16-17	S.H

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP			
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	Free Space	3 in G.P.
@ 90 ° (ZENITH):	- 0.8	+ 3.8	-3.7	+ 2.7
@ 10 ° Elevation:	- 9.3	- 4.3	- 9.9	- 6.3
@ 20 ° Elevation:	- 6.8	- 2.2	- 9.2	- 4.2
@ 30 ° Elevation:	- 5.2	- 0.7	- 7.8	- 2.4
@ 60 - 90 ° Elevation:	> - 2.1	> 2.5	> - 4.7	> 1.3
BEAM WIDTH (3dB):	100 Deg.	120 Deg.	100 Deg.	90 Deg.
AXIAL RATIO:	2.5 dB		3dB	
LIGHTNING PROTECTION:	DC GROUNDING			

LNA OPTION:

LNA GAIN:	24.0 dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	1.250 In.[31.75 mm] SQ. HEIGHT: 0.547 in. [13.89 mm]
WEIGHT:	1.1 oz. (31.2 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	4.5" LONG FLEXIBLE CABLE with RIGHT ANGLE MMCX (OPTION: MCX, SMA, SMB, SSMA, SSMB, SSMC, OR TNC)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:	TUNE OPTION:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA	DRS: ANTENNA TUNED FOR TOP MOUNTING
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA	ON DRS CHASSIS
2: 2.6" DIA.		P: WITHOUT LNA	
3: 3.5" DIA.			ES: EXTRA SEALED
4: MINI ARINC			

P/N: 1.2G1215A2-4RMM-4-DRS-ES

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; M: MCX; RM: R-MCX	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG,	MM: MMCX; RM: R-MMCX; SSMA, SSMB,	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SMB, SSMC, SSMP, T, TB; TNC, TNC-Bulkhead	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	L-RM: Right Angle Male Lemo	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

QUANTITY REQD		DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
1		O-RING, Item 553-025	AS568A-025	–	–	2
1		ADHESIVE GASKET, Item 549vs	12345G-3M-0.9GC	–	–	1
-2	-1		PARTS LIST			

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ANTENNA TUNED FOR TOP MOUNTING OF CHASSIS WITH STIC-KOTO 8100 SERIES

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ⌀ .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Dec-05-11
ORIGINALLY DESIGNED	S. HUYNH	Dec-05-11
UPDATED	S. HUYNH	Feb-16-17
UPDATE DRAWN	P. TRAN	Feb-16-17
APPROVED	S. HUYNH	Feb-16-17

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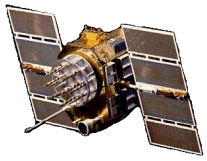
OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	1.2G1215A2-4RMM-4-DRS-ES	D2

SCALE 1/1 SHEET 1 OF 1

Active or Passive L1/L2 GPS Antenna, P/N: 1.2G1215X-4.5MM-X Rev B

(Improved Gain) 1.2” Square, Back Connector Configurations

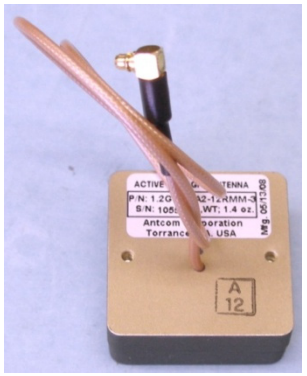


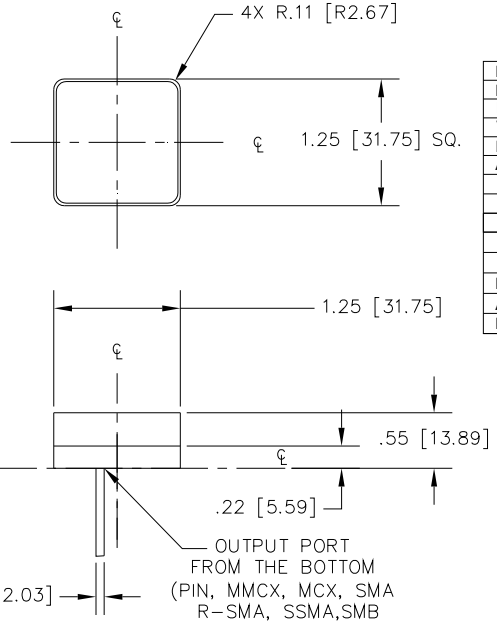
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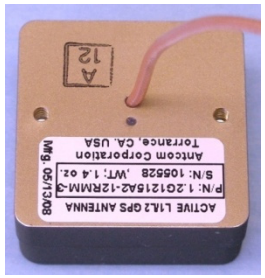
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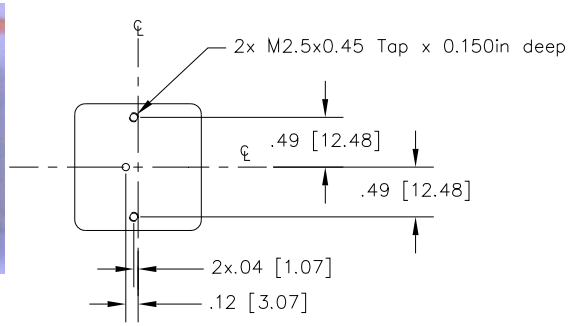
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SPECIFICATIONS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	3dB More in Gain	Sep-21-06	S.H
	B	No mounting Flange	Feb-08	S.H

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL				
POLARIZATION:	RHCP				
VSWR:	< 1.5:1			< 1.5:1	
IMPEDANCE:	50 ohms			50 ohms	
ANTENNA GAIN (dBic):	Free Space	3 in G.P.		Free Space	3 in G.P.
@ 90 ° (ZENITH):	- 0.8	+ 3.8		-3.7	+ 2.7
@ 10 ° Elevation:	- 9.3	- 4.3		- 9.9	- 6.3
@ 20 ° Elevation:	- 6.8	- 2.2		- 9.2	- 4.2
@ 30 ° Elevation:	- 5.2	- 0.7		- 7.8	- 2.4
@ 60 - 90 ° Elevation:	> - 2.1	> 2.5		> - 4.7	> 1.3
BEAM WIDTH (3dB):	100 Deg.	120 Deg.		100 Deg.	90 Deg.
AXIAL RATIO:	2.5 dB			3	
LIGHTNING PROTECTION:	DC GROUNDING				

LNA OPTION:

LNA GAIN:	24.0 dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	1.250 in.[31.75 mm] SQ. HEIGHT: 0.547 in. [13.89 mm]
WEIGHT:	1.29 oz. (36.6 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	4.5" LONG FLEXIBLE CABLE with RIGHT ANGLE MMCX (OPTION: MCX, SMA, SMB, SSMA, SSMB, SSMC, OR TNC)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		
4: MINI ARINC		

P/N: 1.2G1215A2-4.5MM-4

ITEM NO.	QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
3	1					
2	1					
1	1	ADHESIVE GASKET	12345G-3M-1.2G	-	-	-

PARTS LIST

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS; M: MCX;	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	MM: MMCX, SMB; SSMA, SSMB, SSMC,	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SSMP, T, TB: TNC, TNC-Bulkhead	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	L-RM: Right Angle Male Lemo	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .016, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Mar-11-05
ORIGINALLY DESIGNED	S. HUYNH	Mar-11-05
UPDATE DRAWN	P. TRAN	Aug-22-13
DESIGN UPDATE	S. HUYNH	Aug-22-13
APPROVED	S. HUYNH	Aug-22-13

ANTCOM CORP. TORRANCE CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE
GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	1.2G1215X-4.5MM-X	B

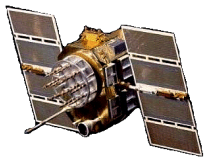
SCALE 1/1 SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STAMP IS RED

NMO Connector Option is Now Available for Some Antennas

20,000G L1/L2 GPS Antenna, P/N: 1.2G1215X-XX-X-U Rev A

1.2” Square, Front Mount, Back Cable Configurations



Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

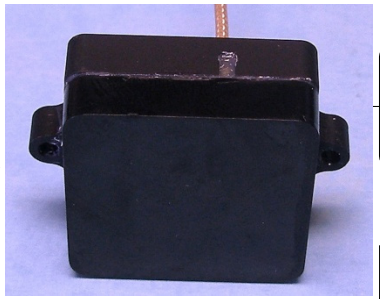
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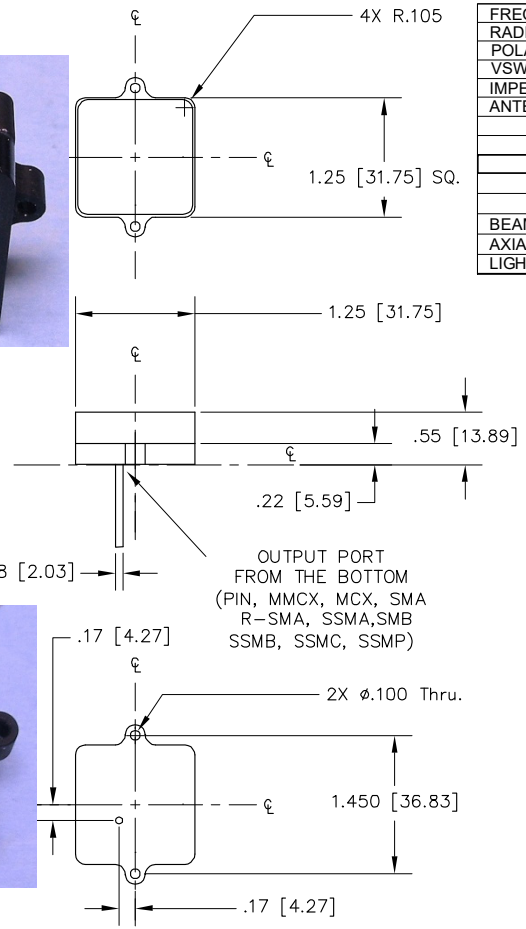
SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz	
RADIATIONPATTERN:	HEMISPHERICAL				
POLARIZATION:	RHCP				
VSWR:	< 1.5:1			< 1.5:1	
IMPEDANCE:	50 ohms			50 ohms	
ANTENNA GAIN (dBic):	Free Space	3 in G.P.		Free Space	3 in G.P.
@ 90 ° (ZENITH):	- 0.8	+ 3.8		-3.7	+ 2.7
@ 10 ° Elevation:	- 9.3	- 4.3		- 9.9	- 6.3
@ 20 ° Elevation:	- 6.8	- 2.2		- 9.2	- 4.2
@ 30 ° Elevation:	- 5.2	- 0.7		- 7.8	- 2.4
@ 60 - 90 ° Elevation:	> - 2.1	> 2.5		> - 4.7	> 1.3
BEAM WIDTH (3dB):	100 Deg.	120 Deg.		100 Deg.	90 Deg.
AXIAL RATIO:	2.5 dB			3	
LIGHTNING PROTECTION:	DC GROUNDING				







LNA OPTION:

LNA GAIN:	24.0 dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	1.250 in.[31.75 mm] SQ. HEIGHT: 0.547 in. [13.89 mm]
WEIGHT:	1.33 oz. (37.7 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	4.5" LONG FLEXIBLE CABLE with RIGHT ANGLE MMCX (OPTION: MCX, SMA, SMB, SSMA, SSMB, SSMC, OR TNC)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	20,000 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:	High Shock/Vibration Options:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA	U: 20,000G
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA	
2: 2.6" DIA.		P: WITHOUT LNA	
3: 3.5" DIA.			
4: MINI ARINC			

P/N: 1.2G1215P-4.5MM-4-U

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS; M: MCX;	-1: GLOSSWHITE#17925 PER FED-STD-595B
M: MAG, N: NO MAG.	MM: MMCX, SMB; SSMA, SSMB, SSMC,	-2: LUSTERLESS GRAY#36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SSMP, T, TB: TNC, TNC-Bulkhead	-3: OLIVE DRAB GREEN#34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	L-RM: Right Angle Male Lemo	-4: LUSTERLESS BLACK#37038 PER FED-STD-595B

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
				–	–	–
5						
4	1	ADHESIVE GASKET	12345G-3M-1.2G	–	–	–
3	1			–		
2	1			–	–	–
1	1			–	–	–

PARTS LIST

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ ⌀.005 M. MACHINED SURFACES 125/ V. DO NOT SCALE DRAWING.

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH Mar-11-05 | CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

High Vibration L1/L2 GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.2G1215X-XX-X-U | REV A

SCALE 1/1 | SHEET 1 OF 1

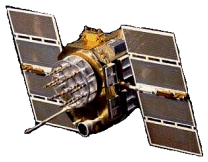
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	3dB More in Gain	Sep-21-06	S.H
	B			

REVISIONS

NMO Connector Option is Now Available for Some Antennas

20,000G L1 GPS Antenna, P/N: 0.9G15P-0.86NSMP-4-U-GDD

1.2” Sq. x 0.294in Thick , Front Mount, Side Cable Configuration

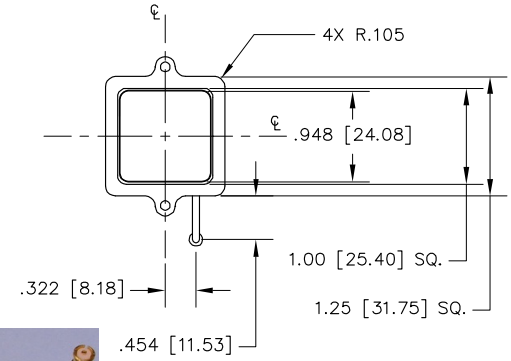


ISO 9001:2008/FAA Approved Facility

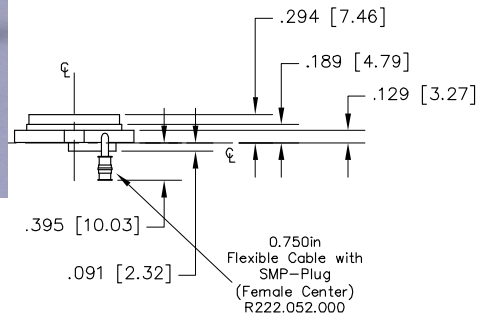
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

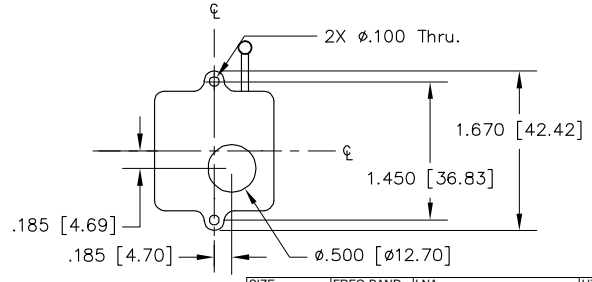
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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz					
RADIATIONPATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 1.5:1					
IMPEDANCE:	50 ohms					
ANTENNA GAIN (dBic):	Free Space	3 in G.P.				
@ 90 ° (ZENITH):	- 0.8	+ 3.8				
@ 10 ° Elevation:	- 9.3	- 4.3				
@ 20 ° Elevation:	- 6.8	- 2.2				
@ 30 ° Elevation:	- 5.2	- 0.7				
@ 60 - 90 ° Elevation	> - 2.1	> 2.5				
BEAMWIDTH (3dB):	100 Deg.	120 Deg.				
AXIAL RATIO:	2.5 dB					
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	24.0 dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	1.250 in.[31.75 mm] SQ. HEIGHT: 0.294 in. [7.46 mm]
WEIGHT:	0.75 oz. (22 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541F Type I Class 1A
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	0.860in SMP-Plug (Female Center) Cable (OPTION: MCX, SMA, SMB, SSMA, SSMB, SSMC, OR TNC)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	20,000 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE	FREQ.BAND	LNA:	High Shock/VibrationOptions:
1: 2" SQ.	1215:L1/L2	A2: WITH20 dB LNA	U: 20,000G
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH40 dB LNA	
2: 2.6" DIA.		P: WITHOUTLNA	
3: 3.5" DIA.			
4: MINIARINC			

P/N: 0.9G15P-0.86NSMP-4-U-GDD

CABLE*SLENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS; M: MCX;	-1: GLOSSWHITE#17925PER FED-STD-595B
M: MAG, N: NO MAG.	MM: MMCX, SMB; SSMA, SSMB, SSMC,	-2: LUSTERLESSGRAY#36320PER FED-STD-595B
#: CABLE LENGTH(IN)	SSMP, SMP, T, TB: TNC, TNC-Bulkhead	-3: OLIVEDRAB GREEN#34031PER FED-STD-595B
R: RIGHTANGLECON.	L-RM: Right Angle Male Lemo	-4: LUSTERLESSBLACK#37038PER FED-STD-595B

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
5				–	–	–
3	1	ADHESIVE GASKET	12345G–3M–1.2G	–	–	–
2	1			–		
1	1			–	–	–
PARTS LIST						

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005 Ⓜ
MACHINED SURFACES √32
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH OCT-21-09
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

High Vibration L1 GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 0.9G15P-0.86NSMP-4-U-GDD | REV
SCALE 1/1 | SHEET 1 OF 1

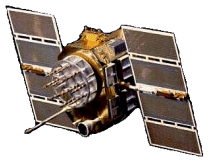
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

NMO Connector Option is Now Available for Some Antennas

20,000G L1 GPS Antenna, P/N: 0.9G15P-XX-X-U Rev A

1.2" Square, Front Mount, Back Cable Configurations



Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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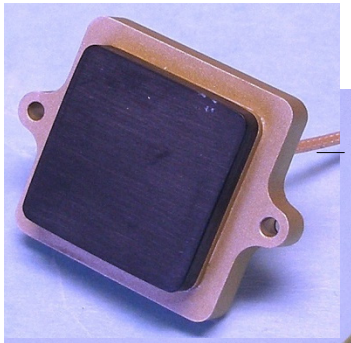
REVISIONS

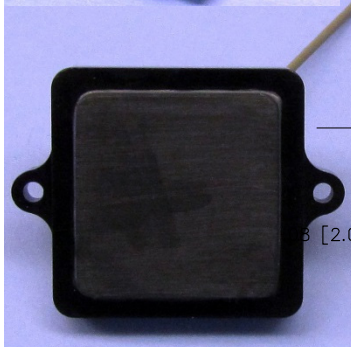
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	3dB More in Gain	Sep-21-06	S.H
	B			

SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz					
RADIATIONPATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 1.5:1					
IMPEDANCE:	50 ohms					
ANTENNA GAIN (dBic):	Free Space	3 in G.P.				
@ 90 ° (ZENITH):	- 0.8	+ 3.8				
@ 10 ° Elevation:	- 9.3	- 4.3				
@ 20 ° Elevation:	- 6.8	- 2.2				
@ 30 ° Elevation:	- 5.2	- 0.7				
@ 60 - 90 ° Elevation	> - 2.1	> 2.5				
BEAM WIDTH (3dB):	100 Deg.	120 Deg.				
AXIAL RATIO:	2.5 dB					
LIGHTNING PROTECTION:	DC GROUNDING					







LNA OPTION:

LNA GAIN:	24.0 dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	1.250 in.[31.75 mm] SQ. HEIGHT: 0.547 in. [13.89 mm]
WEIGHT:	0.95 oz. (27 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	4.5" LONG FLEXIBLE CABLE with RIGHT ANGLE MMCX (OPTION: MCX, SMA, SMB, SSMA, SSMB, SSMC, OR TNC)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	20,000 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD	-1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
		PARTS LIST					
				–	–	–	5
1		ADHESIVE GASKET	12345G-3M-1.2G	–	–	–	3
1				–			2
1				–	–	–	1

SIZE	FREQ.BAND	LNA:	High Shock/VibrationOptions:
1: 2" SQ.	1215:L1/L2	A2: WITH 20 dB LNA	U: 20,000G
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA	
2: 2.6" DIA.		P: WITHOUT LNA	
3: 3.5" DIA.			
4: MINIATURE			

P/N: 0.9G15P-4.5MM-4-U

CABLE*SLENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS; M: MCX;	-1: GLOSSWHITE#17925PER FED-STD-595B
M: MAG, N: NO MAG.	MM: MMCX, SMB; SSMA, SSMB, SSMC,	-2: LUSTERLESSGRAY#36320PER FED-STD-595B
#: CABLE LENGTH(IN)	SSMP, T, TB, TNC, TNC-Bulkhead	-3: OLIVEDRAB GREEN#34031PER FED-STD-595B
R: RIGHTANGLECON.	L-RM: Right Angle Male Lemo	-4: LUSTERLESSBLACK#37038PER FED-STD-595B

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005 M. MACHINED SURFACES √125. DO NOT SCALE DRAWING.

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH Mar-11-05 | CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

High Vibration L1 GPS ANTENNA

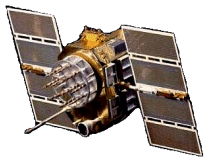
SIZE D | CAGE NO 3CVE1 | DRAWING NO 0.9G15X-XX-X-U | REV A

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active L1 GPS Antenna, P/N: 0.9G15A2-6RM-4 Rev B

1.2” Square, Front Mount, Back Cable Configurations



Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	3dB More In Gain	Sep-21-06	S.H
	B	With LNA and Filter	July-01-09	S.H

SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz (Tuned on VS-050A-01Rev. - Housing)					
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 1.5:1					
IMPEDANCE:	50 ohms					
ANTENNA GAIN (dBic):	Free Space	3 in G.P.				
@ 90 ° (ZENITH):	- 0.8	+ 3.8				
@ 10 ° Elevation:	- 9.3	- 4.3				
@ 20 ° Elevation:	- 6.8	- 2.2				
@ 30 ° Elevation:	- 5.2	- 0.7				
@ 60 - 90 ° Elevation	> - 2.1	> 2.5				
BEAM WIDTH (3dB):	100 Deg.	120 Deg.				
AXIAL RATIO:	2.5 dB					
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	24.0 dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA
FILTER:	2-POLE FITLER (P/N: KFF6338A)

MECHANICAL:

SIZE:	1.250 in.[31.75 mm] SQ. HEIGHT: 0.540 in. [13.59 mm]
WEIGHT:	1.05 oz. (30 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	6" LONG FLEXIBLE CABLE with RIGHT ANGLE MCX (OPTION: MCX, SMA, SMB, SSMA, SSMB, SSMC, OR TNC)

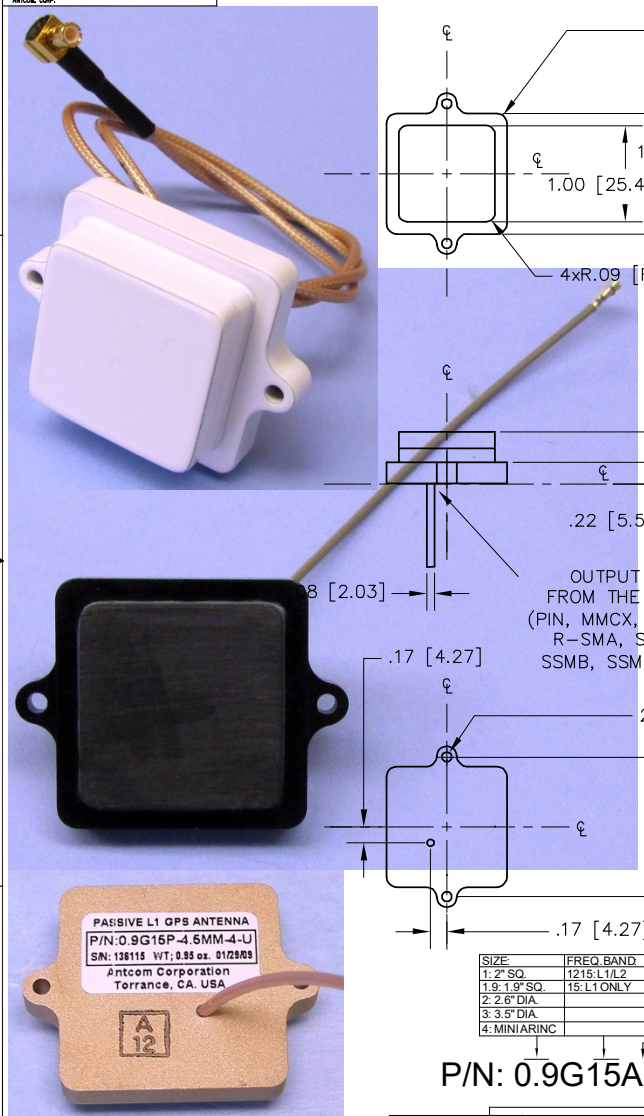
ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	>30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100



SIZE:	FREQ. BAND	LNA:	High Shock/Vibration Options:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA	U: 20,000G
1.9: 1.9" SQ.	15: L1 ONLY		
2: 2.6" DIA.		P: WITHOUT LNA	
3: 3.5" DIA.			
4: MINI ARINC			

QUANTITY REQD	DESCRIPTION	PART NO	FINISH	ITEM NO
			-	5
1	Conductive ADHESIVE GASKET	12345G-3M-0.9G	-	3
1				2
1			-	1

PARTS LIST

P/N: 0.9G15A2-6RM-4

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS; M: MCX;	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG.N: NO MAG.	MM: MMCX, SMB; SSMA, SSMB, SSMC,	-2: LUSTER LESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SSMP, T, TB: TNC, RM: RIGHT ANGLE MCX	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	L-RM: Right Angle Male Lemo	-4: LUSTER LESS BLACK #37038 PER FED-STD-595B

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ ⌀.005. MACHINED SURFACES 125/. DO NOT SCALE DRAWING

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH July-01-09 | CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

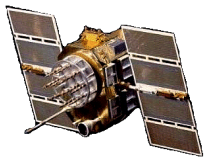
Active L1 GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 0.9G15A2-6RM-4 | REV B

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS Antenna, P/N: 1.2G1215X-MNX-X Rev A
(Improved Gain) 1.2" Square
Flush Magnetic Mount/Back Side Connector Configuration



ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	3dB More In Gain	Sep-21-06	S.H

SPECIFICATIONS

ELECTRICAL:

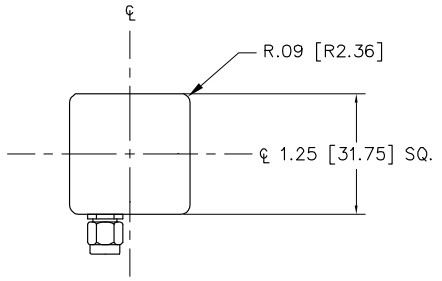
FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL				
POLARIZATION:	RHCP				
VSWR:	< 1.5:1			< 1.5:1	
IMPEDANCE:	50 ohms			50 ohms	
ANTENNA GAIN (dBic):	Free Space	3 in G.P.		Free Space	3 in G.P.
@ 90 ° (ZENITH):	- 0.8	+ 3.8		-3.7	+ 2.7
@ 10 ° Elevation:	- 9.3	- 4.3		- 9.9	- 6.3
@ 20 ° Elevation:	- 6.8	- 2.2		- 9.2	- 4.2
@ 30 ° Elevation:	- 5.2	- 0.7		- 7.8	- 2.4
@ 60 - 90 ° Elevation	> - 2.1	> 2.5		> - 4.7	> 1.3
BEAM WIDTH (3dB):	100 Deg.	120 Deg.		100 Deg.	90 Deg.
AXIAL RATIO:	2.5 dB			3	
LIGHTNING PROTECTION:	DC GROUNDING				

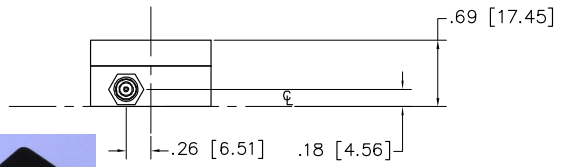


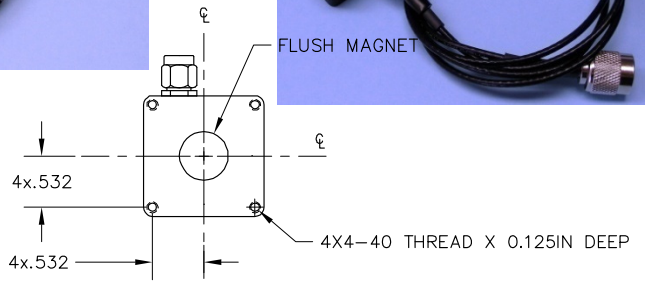












LNA OPTION:

LNA GAIN:	24.0 dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	1.250 in.[31.75 mm] SQ. HEIGHT: 0.69 in. [17.45 mm]
WEIGHT:	1.4 oz. (39.2 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA MALE (OPTION: MMCX, MCX, SMA OR TNC)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD		DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
				–	–	–	5
1				–	–	–	3
1				–	–	–	2
1				–	–	–	1
–2	–1	PARTS LIST					

SIZE:	FREQ. BAND	LNA OPTION
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		
4: MINIARINC		

P/N: 1.2G1215A2-MNSM-4

CABLE'S LENGTH	CONNECTOR	COLOR
MN: FLUSH MAG.	SM: SMA-M, S: SMA, RS: R-SMA, P: PINS,	-1: GLOSS WHITE #17925 PER FED-STD-595B
N: NO MAG.	M: MCX, MM: MMCX, SMB: SSMA, SSMB	-2: LUSTER LESS GRAY #36320 PER FED-STD-595B
	SSMC, SSMP, T, TB: TNC, TNC-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	L-RM: Right Angle Male Lemo	-4: LUSTER LESS BLACK #37038 PER FED-STD-595B

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .015, .XXX ± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005 M. MACHINED SURFACES 125. DO NOT SCALE DRAWING

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH Mar-11-05 | CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

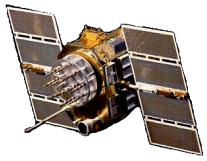
1.2in SQ. FLUSH MAGNETIC MOUNT L1/L2 GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.2G1215A2-MNSM-4 | REV A

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

High Temperature Performance L1/L2 GPS Antenna
P/N: 6BH-G1215P-XS-4
1.3G Blade Configuration

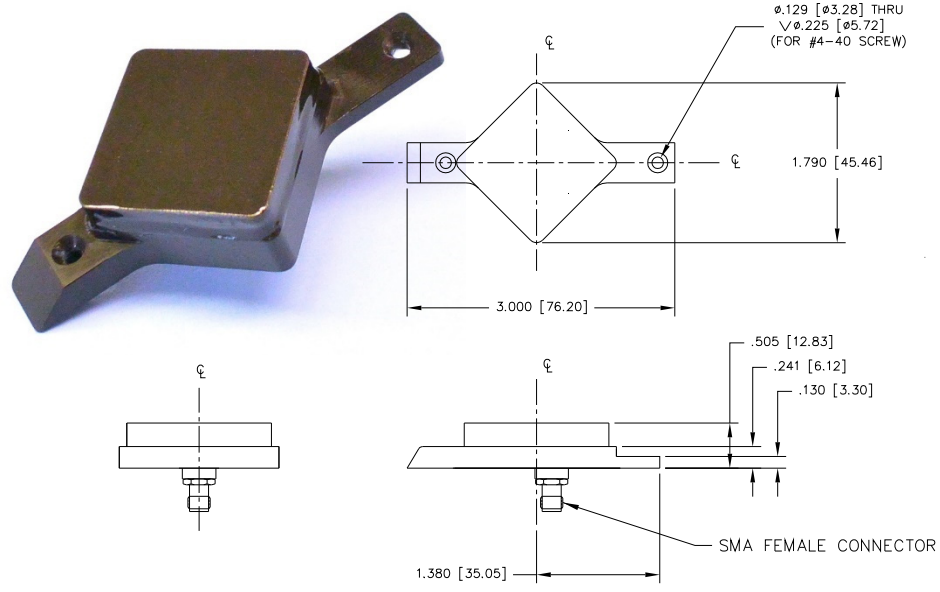


ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	-	-	-	-



SPECIFICATIONS

ELECTRICAL:

	L1 GPS: 1575.42 ± 15.0 MHz		L2 GPS: 1227.60 ± 12 MHz	
FREQUENCY:	L1 GLONASS: 1598 - 1609 MHz		L2 GLONASS: 1242 - 1252 MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP			
VSWR:	< 2.0:1		< 2.0:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	Free Space	3 in G.P.
@ 90 ° (ZENITH):	+ 0.4	+ 3.2	- 2.2	+ 0.0
@ 10 ° Elevation:	- 4.6	- 4.1	- 10.6	- 4.4
@ 15 ° Elevation:	- 4.5	- 3.8	- 8.5	- 3.5
@ 20 ° Elevation:	- 4.5	- 3.5	- 6.3	- 2.5
@ 30 ° Elevation:	- 3.3	- 1.8	- 4.0	- 1.7
@ 40 ° Elevation:	- 2.5	- 0.6	- 3.3	- 1.6
@ 50 ° Elevation:	- 2.0	+ 0.5	- 3.3	- 1.5
@ 60 ° Elevation:	- 1.5	+ 1.5	- 3.3	- 0.9
@ 70 ° Elevation:	- 0.7	+ 2.4	- 3.2	- 0.4
@ 80 ° Elevation:	+ 0.1	+ 3.0	- 3.2	- 0.1
BEAM WIDTH (3dB):	100 Deg.	80 Deg.	100 Deg.	140 Deg.
AXIAL RATIO:	1.0 dB		3.0 dB	
LIGHTNING PROTECTION:	DC GROUNDING			

LNA OPTION:

LNA GAIN: 24.0 dB (Option: 43 dB)
LNA NOISE FIGURE: 1.8 dB
LNA P 1dB Out: +10 dB
VOLTAGE/CURRENT: (+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE: 1.79 in. [33.53 mm] x 3.00in. [76.20mm]
HEIGHT: .505 in. [12.83 mm]

WEIGHT: 2.6 oz. (73.7 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441F

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, ABRASION, UV, SOLVENT,
SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: SMA FEMALE CONNECTOR
OPTION: MCX, QMA, TNC, SMB, SSMA, SSMB, SSMC, SSMP, MCX, OR SMP)

ENVIRONMENTAL:

TEMPERATURE: -85 °F TO +1,100 °F [-65 °C TO +600 °C]
ALTITUDE: 70,000 ft.
VIBRATION: ~ 20K G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
1	–	O-RING	MS28776-25	–	–	–	1
-2	-1	PARTS LIST					

2. MOUNTING SCREWS ARE SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

P/N: 6BH-G1215P-XS-X

COLOR:
-1: GLOSS WHITE #17925 PER FED-STD-595B
-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .015, .XXX ± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN: S. HUYNH Mar-29-02
ORIGINALLY DESIGNED: S. HUYNH Mar-29-02
UPDATE DRAWN: P. TRAN April-09-13
UPDATE DESIGN: S. HUYNH April-09-13
APPROVED: S. HUYNH April-09-13

ANTCOM CORP. TORRANCE CALIFORNIA

HIGH TEMPERATURE PERFORMANCE L1/L2 GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 6BH-G1215P-XS-X | REV –
SCALE 1/1 | SHEET 1 OF 1

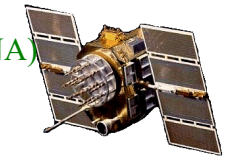
High Temperature Performance L1/L2 GPS Antenna

P/N: 6BH-3CG1215A2-XT-4 (Active L1L2, 22 dB LNA); P/N: 6BH-3CG15A2-XT-4 (Active L1, 22 dB LNA)
P/N: 6BH-3CG1215P-XT-4 (Passive L1/L2); P/N: 6BH-3CG15P-XT-4 (Passive L1)

Other Mounting Foot Print and Connector Options are Available

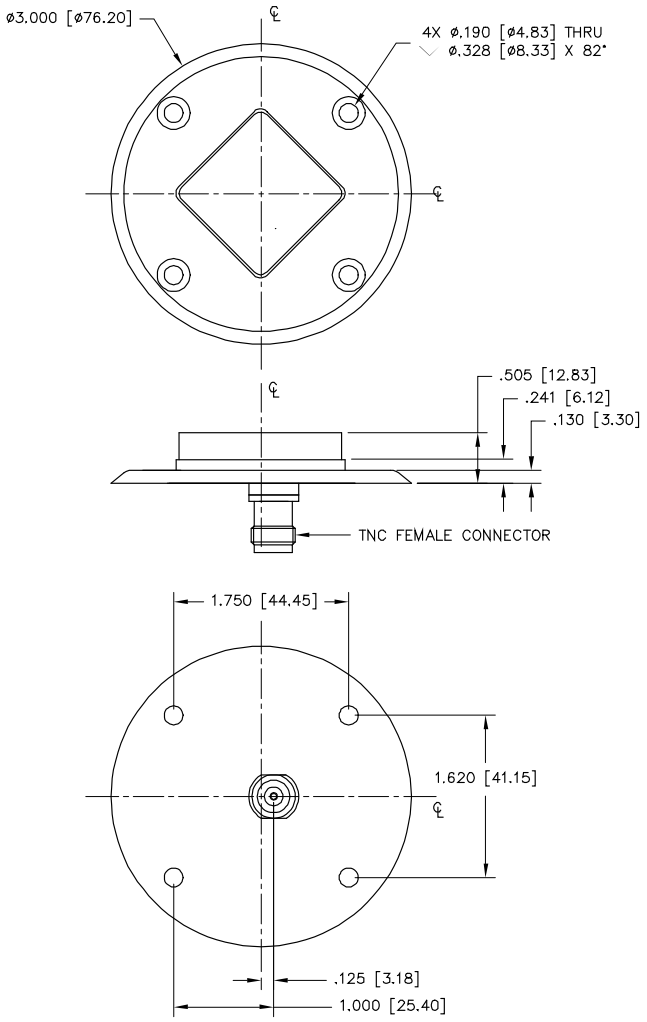
ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf



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SPECIFICATIONS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	-	-	-	-

ELECTRICAL:

	L1 GPS: 1575.42 ± 15.0 MHz		L2 GPS: 1227.60 ± 12 MHz	
FREQUENCY:	L1 GLONASS: 1598 - 1609 MHz		L2 GLONASS: 1242 - 1252 MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP			
VSWR:	< 2.0:1		< 2.0:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	3 In G.P.	Free Space	3 In G.P.
@ 90 ° (ZENITH):	+ 0.4	+ 3.2	- 2.2	+ 0.0
@ 10 ° Elevation:	- 4.6	- 4.1	- 10.6	- 4.4
@ 15 ° Elevation:	- 4.5	- 3.8	- 8.5	- 3.5
@ 20 ° Elevation:	- 4.5	- 3.5	- 6.3	- 2.5
@ 30 ° Elevation:	- 3.3	- 1.8	- 4.0	- 1.7
@ 40 ° Elevation:	- 2.5	- 0.6	- 3.3	- 1.6
@ 50 ° Elevation:	- 2.0	+ 0.5	- 3.3	- 1.5
@ 60 ° Elevation:	- 1.5	+ 1.5	- 3.3	- 0.9
@ 70 ° Elevation:	- 0.7	+ 2.4	- 3.2	- 0.4
@ 80 ° Elevation:	+ 0.1	+ 3.0	- 3.2	- 0.1
BEAM WIDTH (3dB):	100 Deg.	80 Deg.	100 Deg.	140 Deg.
AXIAL RATIO:	1.0 dB		3.0 dB	
LIGHTNING PROTECTION:	DC GROUNDING			

LNA OPTION:

LNA GAIN: 22.0 dB
LNA NOISE FIGURE: 1.8 dB
LNA P 1dB Out: +10 dB
VOLTAGE/CURRENT: (+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE: 3.00 In.[76.2 mm] DIAMETER
HEIGHT: .505 in [12.83 mm]

WEIGHT: 3.6 oz. (102 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441F

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, ABRASION, UV, SOLVENT,
SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: TNC FEMALE
OPTION: MCX, QMA, SMA, SMB, SSMA, SSMB, SSMC, SSMP,
MCX, OR SMP)

ENVIRONMENTAL:

TEMPERATURE: -85 °F TO +1,100 °F [-65 °C TO +600 °C]
ALTITUDE: 70,000 ft.
VIBRATION: ~ 20K G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541,
MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

P/N: 6BH-3CG1215P-XS-X

COLOR:
-1: GLOSS WHITE #17925 PER FED-STD-595B
-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
-5: DESERT TAN #33446 PER FED-STD-595B

QUANTITY REQD	-2	-1	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
	1	-	-	-	-	-	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ⌀ .005 TIR
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Apr-09-13
ORIGINALLY DESIGNED	S. HUYNH	Apr-09-13
UPDATE DRAWN	P. TRAN	Dec-09-16
UPDATE DESIGN	S. HUYNH	Dec-09-16
APPROVED	S. HUYNH	Dec-09-16

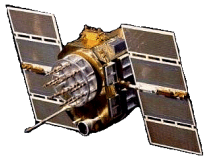
ANTCOM CORP. TORRANCE CALIFORNIA

HIGH TEMPERATURE PERFORMANCE
L1/L2 GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 6BH-3CG1215P-XS-X | REV -
SCALE 1/1 | SHEET 1 OF 1

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:



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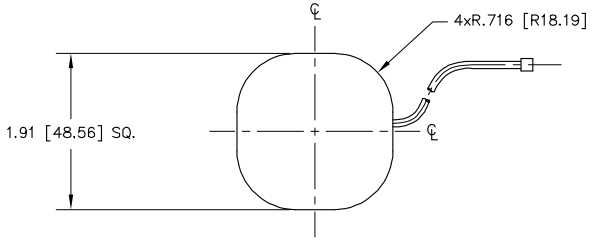
REVISIONS

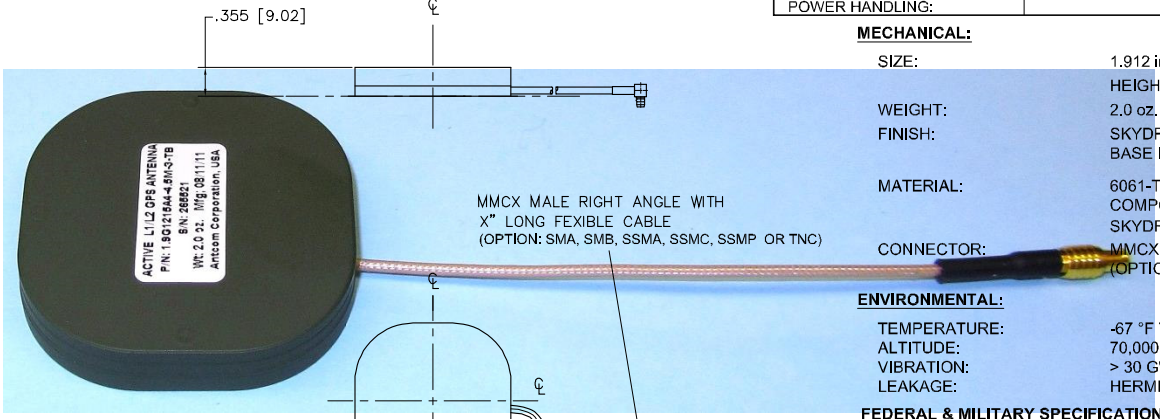
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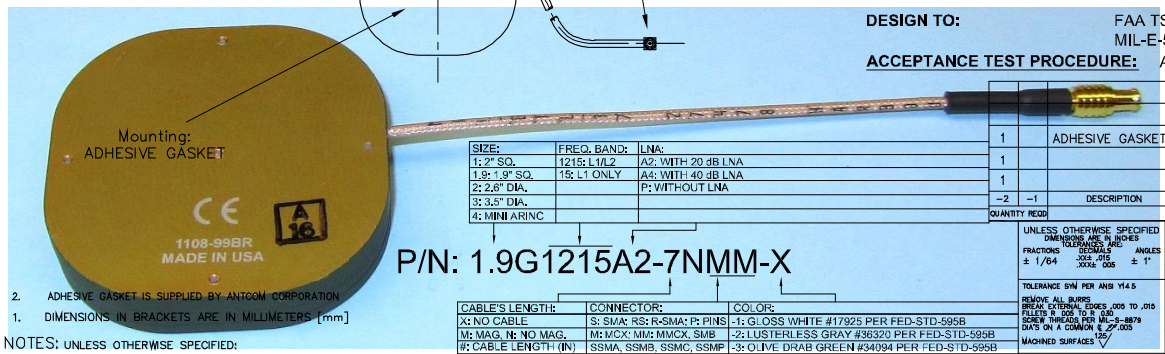
SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation:	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation:	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	20 dB			20 dB		
LNA NOISE FIGURE:	1.9 dB			1.8 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/10mA, 3V/10mA, 3.3V/12mA, (2.5-24)V/<20mA					
POWER HANDLING:	1 Watt CW					







MECHANICAL:

SIZE:	1.912 in.[48.56 mm] SQ.
	HEIGHT: 0.355 In. [9.02 mm]
WEIGHT:	2.0 oz. (56.7 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	MMCX MALE RIGHT ANGLE WITH X" LONG CABLE (OPTION: SMA, SMB, SSMA, SSMC, SSMP OR TNC)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD	-2	-1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
					–	–	–	5
1			ADHESIVE GASKET	12345G-3M-1G	–	–	–	3
1					–			2
1					–	–	–	1

PARTS LIST

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		
4: MINI ARINC		

P/N: 1.9G1215A2-7NMM-X

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX, SMB	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SSMA, SSMB, SSMC, SSMP	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	T: TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879 CLASS 2A COMMON & .09"-.005. MACHINED SURFACES 125. DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Feb-19-04
ORIGINALLY DESIGNED	S. HUYNH	Feb-19-04
UPDATED	S. HUYNH	July-11-13
UPDATE DRAWN	P. TRAN	July-11-13
APPROVED	S. HUYNH	July-11-13

ANTCOM CORP. TORRANCE CALIFORNIA

1.9" SQ. ACTIVE OR PASSIVE L1/L2 GPS ANTENNA WITH CABLE

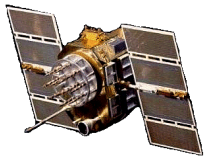
SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.9G1215X-XNX-X | REV A

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active or Passive L1/L2 GPS Antenna, P/N: 1.9G1215X-XP2-X

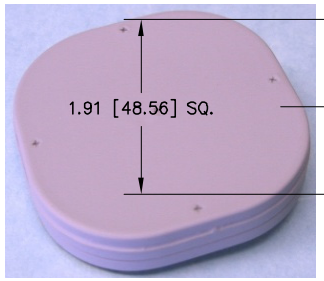
1.9" Square, Flat Mount Configurations

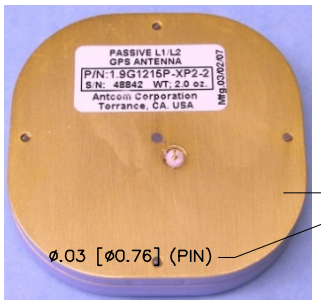


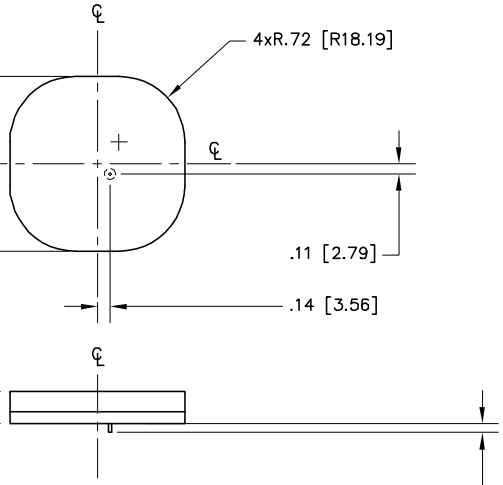
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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0.10" (PIN), 0.25" [6.37] (MCX/MMCX), 0.46"[11.68] (SMA/R-SMA), 0.57" [14.53] (TNC), 0.83"[21.00] (TNC-BH), 0.72" [18.29] (N, N-BH)

SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42±12) MHz			L2: (1227.60±12) MHz		
RADIATIONPATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH)	+ 2.7	+ 4.7	+ 3.1	+ 1.5	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 4.4	- 1.8	- 1.9	- 6.7	- 3.8	- 3.5
@ 20 ° Elevation:	- 2.3	- 0.3	+ 0.6	- 5.6	- 2.0	- 0.8
@ 30 ° Elevation:	- 0.8	+ 1.4	+ 1.7	- 4.5	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 2.0	> 3.9	> 2.4	> 0.0	> 2.7	> 2.2
BEAM WIDTH (3dB):	113 Deg.	114 Deg.	143 Deg.	85 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNINGPROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN: (21.0+/-2.0) dB
LNA NOISE FIGURE: 1.8 dB
LNA P 1dB Out: +16 dBm
VOLTAGE/CURRENT: (+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE: 1.912 in.[48.56 mm] SQ.
HEIGHT: 0.355 in. [9.02 mm]
WEIGHT: 2.0 oz. (56.7 g)
FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL: 6061-T6 ALUMINUM ALLOY BASE THERMOSET PLASTIC RADOME, UV, ABRASION AND SKYDROL RESISTANCE
CONNECTOR: 0.030" DIA. PIN, 0.100" LONG (OPTION: SMA, TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: >30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, AND MIL-STD-810

NMO Connector Option is Now Available for Some Antennas

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
1		ADHESIVE GASKET	12345G-3M-1G	–	–	–

PARTS LIST

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		
4: MINI ARINC		

P/N: 1.9G1215P-XP2-X

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P, P2: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG	M: MCX; MM: MMC X	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: RS: R-SM A	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Sep-19-01
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

1.9" SQUARE
L1/L2 PASSIVE
GPS ANTENNA

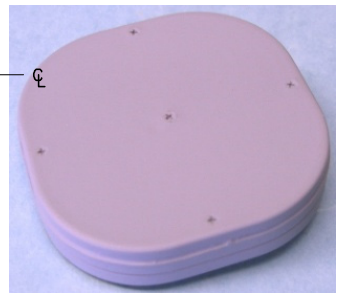
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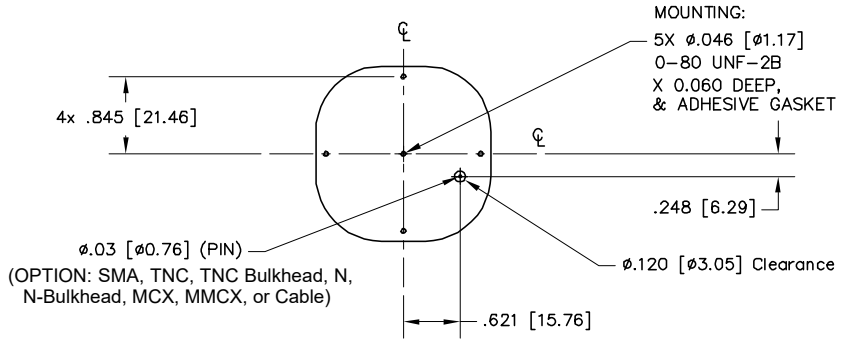
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ZONE	REV	DESCRIPTION	DATE	APPROVED

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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42±12) MHz			L2: (1227.60±12) MHz		
RADIATIONPATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH)	+ 2.7	+ 4.7	+ 3.1	+ 1.5	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 4.4	- 1.8	- 1.9	- 6.7	- 3.8	- 3.5
@ 20 ° Elevation:	- 2.3	- 0.3	+ 0.6	- 5.6	- 2.0	- 0.8
@ 30 ° Elevation:	- 0.8	+ 1.4	+ 1.7	- 4.5	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 2.0	> 3.9	> 2.4	> 0.0	> 2.7	> 2.2
BEAM WIDTH (3dB):	113 Deg.	114 Deg.	143 Deg.	85 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNINGPROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	(21.0+/-2.0) dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	1.912 in.[48.56 mm] SQ. HEIGHT: 0.355 in. [9.02 mm]
WEIGHT:	2.0 oz. (56.7 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE THERMOSET PLASTIC RADOME, UV, ABRASION AND SKYDROL RESISTANCE
CONNECTOR:	0.030" DIA. PIN, 0.060" LONG (OPTION: SMA, TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	>30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, AND MIL-STD-810

NMO Connector Option is Now Available for Some Antennas

QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
1	ADHESIVE GASKET	12345G-3M-1G	–	–	–	1

PARTS LIST

SIZE :	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		
4: MINI ARINC		

P/N: 1.9G1215P-XP-X

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P: PIN S	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG	M: MCX; MM: MMC X	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhea d	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Sep-19-01
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

OUTLINE DRAWING
L1/L2 PASSIVE
GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.9G1215P-XP-X | REV –
SCALE 1/1 | SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STAMP IS RED

ZONE	REV	DESCRIPTION	DATE	APPROVED

REVISIONS

Passive L1/L2 GPS Antenna
P/N: 1.9G1215P-XRS-X-LM
(1.9” Sq. x 0.355” Thick), Flat Mount Configuration

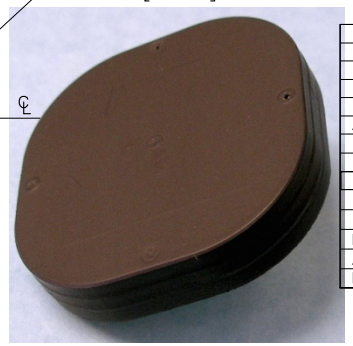
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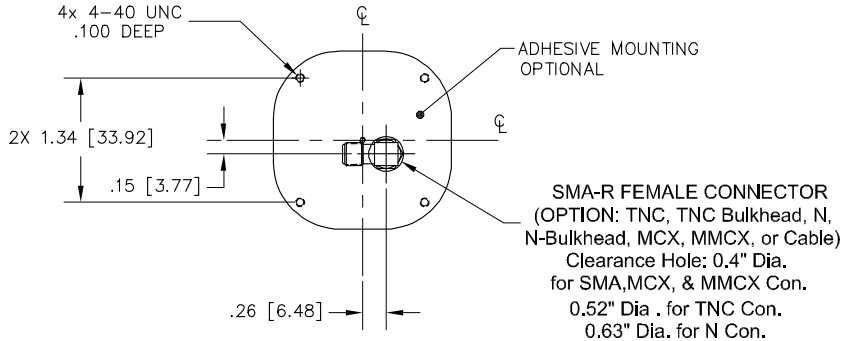
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	ADDED MOUNTING HOLES	05/02/12	S.H





SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
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IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 2.7	+ 4.7	+ 3.1	+ 1.5	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 4.4	- 1.8	- 1.9	- 6.7	- 3.8	- 3.5
@ 20 ° Elevation:	- 2.3	- 0.3	+ 0.6	- 5.6	- 2.0	- 0.8
@ 30 ° Elevation:	- 0.8	+ 1.4	+ 1.7	- 4.5	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 2.0	> 3.9	> 2.4	> 0.0	> 2.7	> 2.2
BEAM WIDTH (3dB):	113 Deg.	114 Deg.	143 Deg.	85 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

MECHANICAL:

SIZE:	1.912 in.[48.56 mm] SQ. HEIGHT: 0.355 in. [9.02 mm]
WEIGHT:	2.0 oz. (56.7 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE THERMOSET PLASTIC RADOME, UV, ABRASION AND SKYDROL RESISTANCE
CONNECTOR:	SMA-R FEMALE (OPTION: SMA, TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	>30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, AND MIL-STD-810

SIZE:	FREQ. BAND:	LNA:
1: 2” SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9” SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6” DIA.		P: WITHOUT LNA
3: 3.5” DIA.		
4: MINI ARINC		

QUANTITY REQD	ITEM NO	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
	3					
	2					
-1	1	ADHESIVE GASKET	12345G-3M-1G	–	–	–

PARTS LIST

P/N: 1.9G1215P-XRS-4-LM

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	RS: R-SMA	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG. N: NO MAG.	S: SMA; P, P2: PINS	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	M: MCX; MM: MMCX	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	T: TNC, N: N	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .015, .XXX ± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
RADII TO BE 0.050 TO .080
SCRS THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Sep-19-01
ORIGINALLY DESIGNED	S. HUYNH	Sep-19-01
UPDATED	S. HUYNH	April-07-15
UPDATE DRAWN	P. TRAN	April-07-15
APPROVED	S. HUYNH	April-07-15

ANTCOM CORP. TORRANCE CALIFORNIA

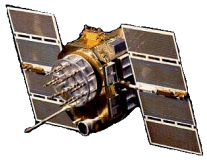
1.9” SQUARE
L1/L2 PASSIVE
GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	1.9G1215P-XRS-4-LM	–

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Passive L1/L2 GPS Antenna, P/N: 1.9G1215P-XS-X-LM
(1.9” Sq. x 0.355” Thick) , Flat Mount Configuration



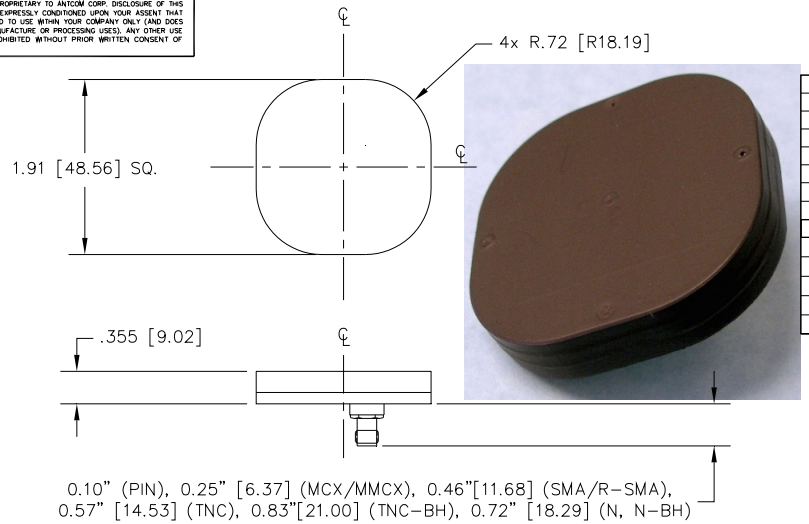
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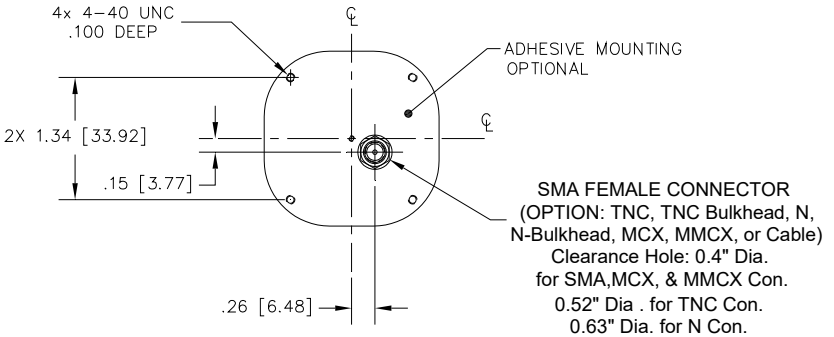
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	ADDED MOUNTING HOLES	05/02/12	S.H





SPECIFICATIONS

ELECTRICAL:

	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
FREQUENCY:						
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 2.7	+ 4.7	+ 3.1	+ 1.5	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 4.4	- 1.8	- 1.9	- 6.7	- 3.8	- 3.5
@ 20 ° Elevation:	- 2.3	- 0.3	+ 0.6	- 5.6	- 2.0	- 0.8
@ 30 ° Elevation:	- 0.8	+ 1.4	+ 1.7	- 4.5	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 2.0	> 3.9	> 2.4	> 0.0	> 2.7	> 2.2
BEAM WIDTH (3dB):	113 Deg.	114 Deg.	143 Deg.	85 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

MECHANICAL:

SIZE: 1.912 in.[48.56 mm] SQ.
HEIGHT: 0.355 in. [9.02 mm]

WEIGHT: 2.0 oz. (56.7 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
THERMOSET PLASTIC RADOME, UV, ABRASION AND
SKYDROL RESISTANCE

CONNECTOR: SMA FEMALE
(OPTION: SMA, TNC, TNC-Bulkhead, N, N-Bulkhead,
MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: >30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541,
MIL-E-5400, MIL-I-45208A, AND MIL-STD-810

NMO Connector Option is Now Available for Some Antennas

1	–	–	–	–	–	1
QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO

PARTS LIST

SIZE:	FREQ. BAND:	LNA:
1: 2” SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9” SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6” DIA.		P: WITHOUT LNA
3: 3.5” DIA.		
4: MINI ARINC		

P/N: 1.9G1215P-XS-4

CABLE’S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P, P2: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: RS: R-SMA	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Sep-19-01
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

1.9” SQUARE
L1/L2 PASSIVE
GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	1.9G1215P-XS-4-LM	A

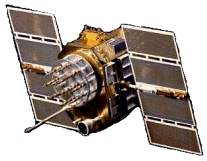
SCALE 1/1 SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STAMP IS RED

Active or Passive L1/L2 GPS Antenna, P/N: 1.9G1215X-XS-X

P/N: 1.9G1216A-5RM-X-TB (Active, 5in Cable, Right MCX Connector, No Paint)

(1.9" Sq. x 0.355" Thick) , Flat Mount Configuration

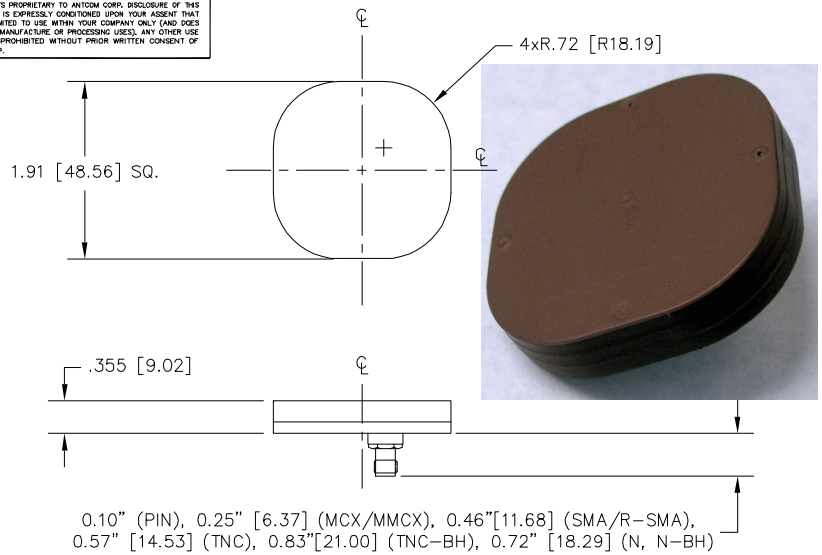


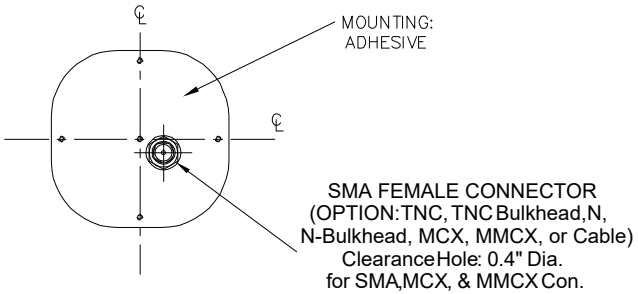
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Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATION S

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 2.7	+ 4.7	+ 3.1	+ 1.5	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 4.4	- 1.8	- 1.9	- 6.7	- 3.8	- 3.5
@ 20 ° Elevation:	- 2.3	- 0.3	+ 0.6	- 5.6	- 2.0	- 0.8
@ 30 ° Elevation:	- 0.8	+ 1.4	+ 1.7	- 4.5	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 2.0	> 3.9	> 2.4	> 0.0	> 2.7	> 2.2
BEAM WIDTH (3dB):	113 Deg.	114 Deg.	143 Deg.	85 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	(21.0+/-2.0) dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	1.912 in.[48.56 mm] SQ. HEIGHT: 0.355 in. [9.02 mm]
WEIGHT:	2.0 oz. (56.7 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE THERMOSET PLASTIC RADOME, UV, ABRASION AND SKYDROL RESISTANCE
CONNECTOR:	SMA FEMALE (OPTION: SMA, TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	>30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, AND MIL-STD-810

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		
4: MINI ARINC		

P/N: 1.9G1215P-XS-4

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P, P2: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: RS: R-SMA	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
1	1	ADHESIVE GASKET	12345G-3M-1G	–	–	–

PARTS LIST

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Sep-19-01
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

1.9" SQUARE
L1/L2 PASSIVE
GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.9G1215P-XS-4 | REV –
SCALE 1/1 | SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STAMP IS RED

ZONE	REV	DESCRIPTION	DATE	APPROVED

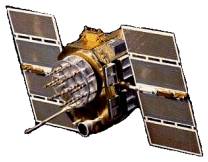
REVISIONS

NMO Connector Option is Now Available for Some Antennas

Passive L1/L2 GPS Antenna, P/N: 1.9G1215X-XRS-4 Rev D (380-232-5005)

Low Profile 1.9" Square, Flat/Back Mount Configuration

Suitable for Forming Multiple Element CRPA



ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

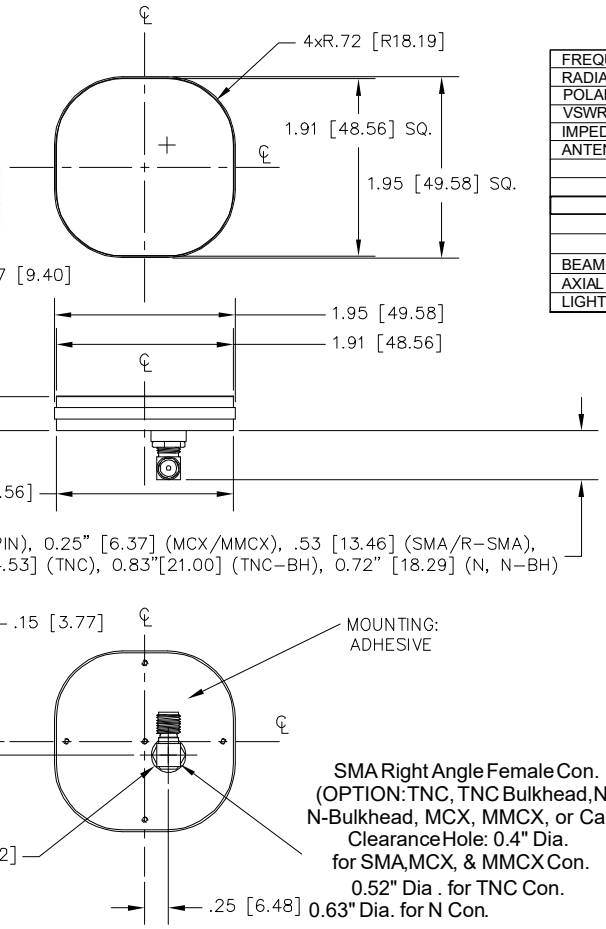
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SPECIFICATION S

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	C	0.010in THICKER	FEB/08/07	S.H

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 2.7	+ 4.7	+ 3.1	+ 1.5	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 4.4	- 1.8	- 1.9	- 6.7	- 3.8	- 3.5
@ 20 ° Elevation:	- 2.3	- 0.3	+ 0.6	- 5.6	- 2.0	- 0.8
@ 30 ° Elevation:	- 0.8	+ 1.4	+ 1.7	- 4.5	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 2.0	> 3.9	> 2.4	> 0.0	> 2.7	> 2.2
BEAM WIDTH (3dB):	113 Deg.	114 Deg.	143 Deg.	85 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	(21.0+/-2.0) dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	1.91 in.[48.6mm] SQ. HEIGHT: 0.37in [9.4 mm]
WEIGHT:	2.1 oz. (59 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE THERMOSET PLASTIC RADOME, UV, ABRASION AND SKYDROL RESISTANCE
CONNECTOR:	SMA RIGHT ANGLE FEMALE (OPTION: SMA, TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	>30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, AND MIL-STD-810

QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
1	ADHESIVE GASKET	12345G-3M-1G	–	–	–	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .020 .XXX± .010 ANGLES ± 1°

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		P2: WITHOUT LNA, WITH RHCP/LHCP POLARIZATION
4: MINI ARINC		P2L: WITHOUT LNA, WITH DUAL LINEAR POLARIZATION

P/N: 1.9G1215P-XRS-4

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P, P2: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: RS: R-SM A	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .020 .XXX± .010 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ ⌀.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Sep-19-01
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

1.9" SQUARE, L1/L2 PASSIVE GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.9G1215P-XRS-4 | REV D
SCALE 1/1 | SHEET 1 OF 1

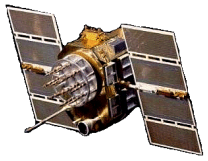
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NMO Connector Option is Now Available for Some Antennas

Passive L1/L2 GPS Antenna, P/N: 1.9G1215X-XRS-4 **Rev B**

Low Profile 1.9" Square, Flat/Back Mount Configuration

Suitable for Forming Multiple Element CRPA

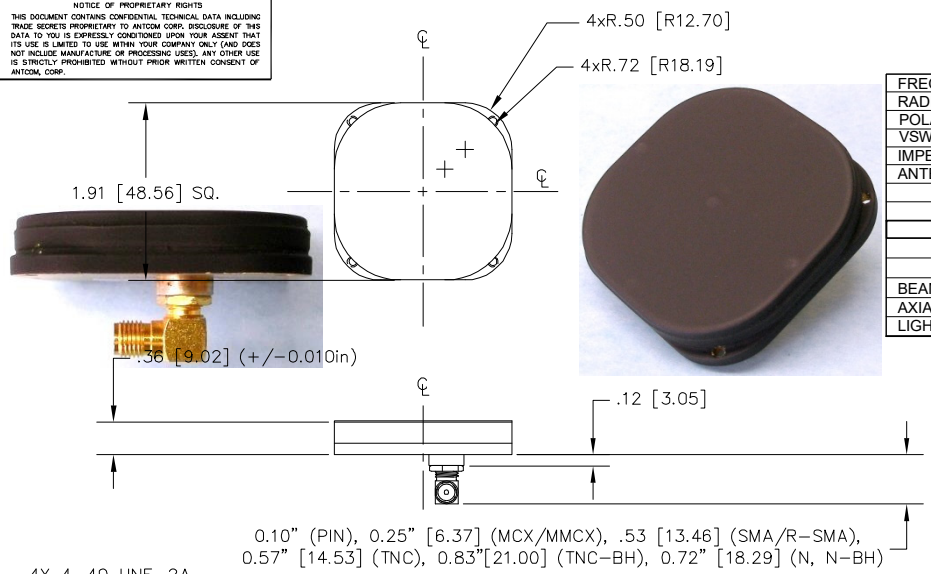


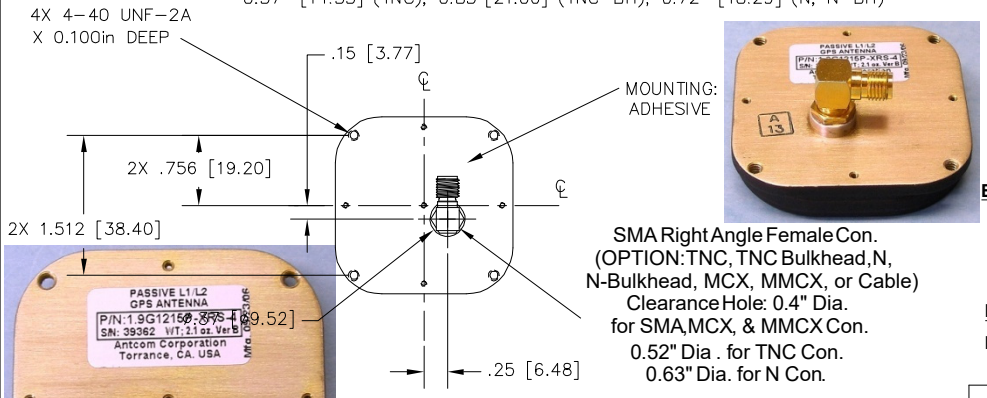
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SMA Right Angle Female Con.
(OPTION:TNC, TNC Bulkhead,N,
N-Bulkhead, MCX, MMCX, or Cable)
Clearance Hole: 0.4" Dia.
for SMA,MCX, & MMCX Con.
0.52" Dia . for TNC Con.
0.63" Dia. for N Con.

SPECIFICATION S

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 2.7	+ 4.7	+ 3.1	+ 1.5	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 4.4	- 1.8	- 1.9	- 6.7	- 3.8	- 3.5
@ 20 ° Elevation:	- 2.3	- 0.3	+ 0.6	- 5.6	- 2.0	- 0.8
@ 30 ° Elevation:	- 0.8	+ 1.4	+ 1.7	- 4.5	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 2.0	> 3.9	> 2.4	> 0.0	> 2.7	> 2.2
BEAM WIDTH (3dB):	113 Deg.	114 Deg.	143 Deg.	85 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	(21.0+/-2.0) dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	1.912 in.[48.56mm] SQ. HEIGHT: 0.36 in. [9.02 mm]
WEIGHT:	2.0 oz. (56.7 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE THERMOSET PLASTIC RADOME, UV, ABRASION AND SKYDROL RESISTANCE
CONNECTOR:	SMA RIGHT ANGLE FEMALE (OPTION: SMA, TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	>30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, AND MIL-STD-810

NMO Connector Option is Now Available for Some Antennas

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
1	1	ADHESIVE GASKET	12345G-3M-1G	–	–	–

PARTS LIST

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		P2: WITHOUT LNA, WITH RHCP/LHCP POLARIZATION
4: MINI ARINC		P2L: WITHOUT LNA, WITH DUAL LINEAR POLARIZATION

P/N: 1.9G1215P-XRS-4

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P, P2: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: RS: R-SM A	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .020 .XXX± .010 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Sep-19-01
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

1.9" SQUARE, L1/L2 PASSIVE GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.9G1215P-XRS-4 | REV B
SCALE 1/1 | SHEET 1 OF 1

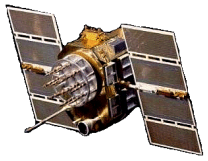
ORIGINAL DOCUMENT WHEN STAMP IS RED

ZONE	REV	DESCRIPTION	DATE	APPROVED

REVISIONS

Passive L1/L2 GPS Antenna, P/N: 2.3G1215P-XRS-4 Rev A

Low Profile (2.15x2.07x0.37) in, Flat/Front Mount Configuration



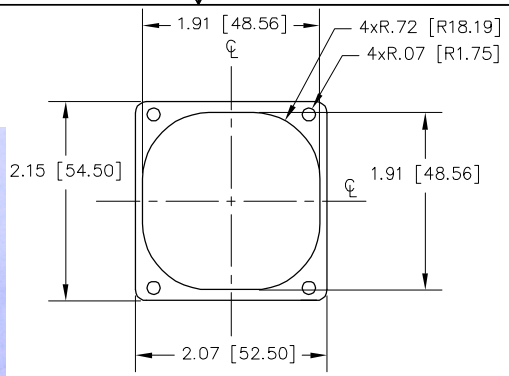
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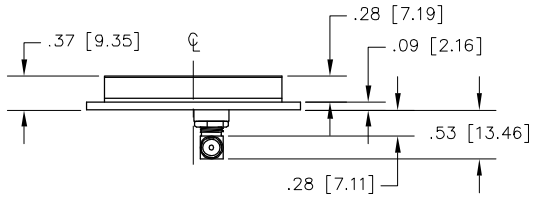
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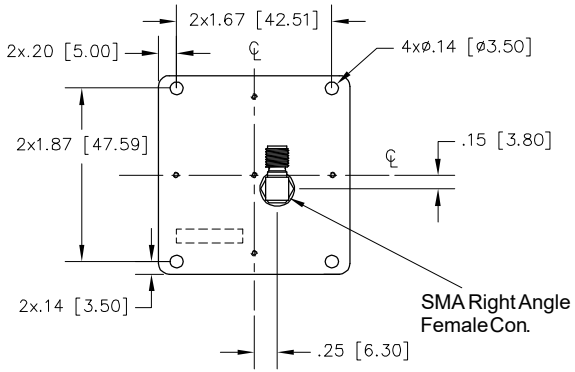
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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 2.7	+ 4.7	+ 3.1	+ 1.5	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 4.4	- 1.8	- 1.9	- 6.7	- 3.8	- 3.5
@ 20 ° Elevation:	- 2.3	- 0.3	+ 0.6	- 5.6	- 2.0	- 0.8
@ 30 ° Elevation:	- 0.8	+ 1.4	+ 1.7	- 4.5	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 2.0	> 3.9	> 2.4	> 0.0	> 2.7	> 2.2
BEAM WIDTH (3dB):	113 Deg.	114 Deg.	143 Deg.	85 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	(21.0+/-2.0) dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	2.31 in. [58.56 mm] SQ. HEIGHT: 0.37 in. [9.35 mm]
WEIGHT:	2.4 oz. (68 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE THERMOSET PLASTIC RADOME, UV, ABRASION AND SKYDROL RESISTANCE
CONNECTOR:	SMA RIGHT ANGLE FEMALE (OPTION: PIN, TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	>30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, AND MIL-STD-810

NMO Connector Option is Now Available for Some Antennas

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2.3: 2.3" SQ.		P: WITHOUT LNA
2: 2.6" DIA.		P2: WITHOUT LNA, WITH RHCP/LHCP POLARIZATION
3: 3.5" DIA.		P2L: WITHOUT LNA, WITH DUAL LINEAR POLARIZATION

P/N: 2.3G1215P-XRS-4

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P, P2: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: RS: R-SMA	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
1				–	–	–

PARTS LIST

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .020 .XXX± .010 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Sep/04/07
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

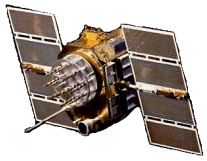
L1/L2 PASSIVE GPS ANTENNA for NLOS (PAM)

SIZE D | CAGE NO 3CVE1 | DRAWING NO 2.3G1215P-XRS-4 | REV A
SCALE 1/1 | SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STAMP IS RED

Active L1/L2 GPS Antenna, P/N: 2.3G1215A2-6.2MM-4 Rev G

Low Profile (2.15x2.07x0.37) in, Flat/Front Mount Configuration

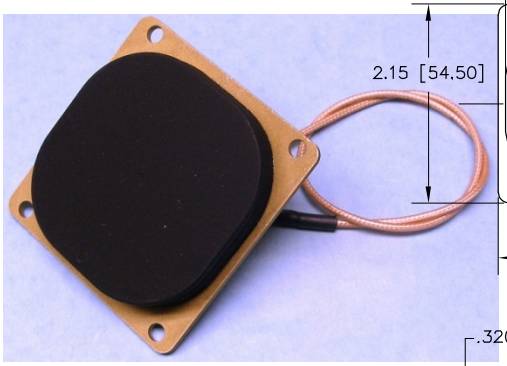


ISO 9001:2008/FAA Approved Facility

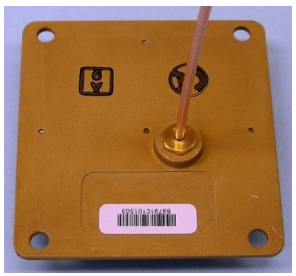
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

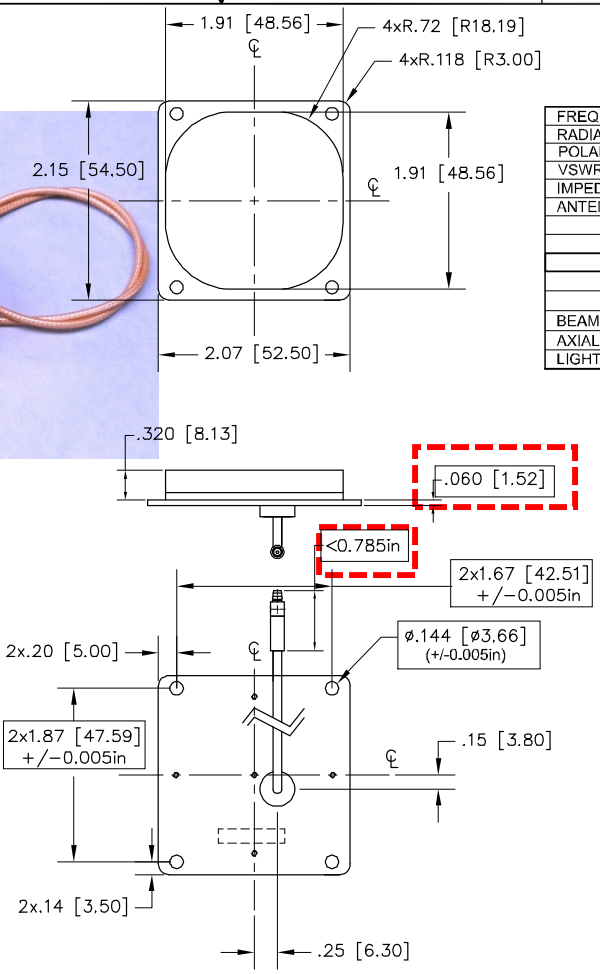
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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 2:1			< 2:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 2.7	+ 4.7	+ 3.1	+ 1.5	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 4.4	- 1.8	- 1.9	- 6.7	- 3.8	- 3.5
@ 20 ° Elevation:	- 2.3	- 0.3	+ 0.6	- 5.6	- 2.0	- 0.8
@ 30 ° Elevation:	- 0.8	+ 1.4	+ 1.7	- 4.5	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 2.0	> 3.9	> 2.4	> 0.0	> 2.7	> 2.2
BEAM WIDTH (3dB):	113 Deg.	114 Deg.	143 Deg.	85 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA:

LNA GAIN:	(21.0+/-2.0) dB
LNA NOISE FIGURE:	1.8 dB (Without Filter)
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	2.15 in. [54.5 mm] x 2.07 in. [52.5 mm]
	HEIGHT: 0.38 in. [9.6 mm]
WEIGHT:	2.09 oz [59.25 g]
FINISH:	BASE IRIDITE PER MIL-DLT-5541 Type I CLass 1A
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE THERMOSET PLASTIC RADOME
CONNECTOR:	6.2in MMCX Male Cable

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	>30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, AND MIL-STD-810

NMO Connector Option is Now Available for Some Antennas

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH 30 dB LNA; A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A1: WITH 10 dB LNA
2.3: 2.3" SQ.		P: WITHOUT LNA
2: 2.6" DIA.		P2: WITHOUT LNA, WITH RHCP/LHCP POLARIZATION
3: 3.5" DIA.		P2L: WITHOUT LNA, WITH DUAL LINEAR POLARIZATION

P/N: 2.3G1215A2-6.2MM-4

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P, P2: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: RS: R-SMA	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

ITEM NO	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	QUANTITY REQD
1			–	–	–	1

PARTS LIST

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	E	Mounting Hole Size/Location	Feb-21-09	S.H
	F	Flange Thickess 0.09in to 0.06in Cable from 10.7in to 6.2in	June-30-09	S.H
	G	Weight to 2.09oz, Chem Film, Label	Feb-07-10	S.H

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .010 .XXX± .010 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Sep/04/07
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

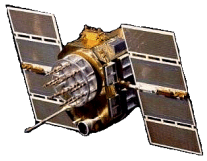
L1/L2 Active GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	2.3G1215A2-6.2MM-4	G

SCALE 1/1 SHEET 1 OF 1

Active L1/L2 GPS Antenna, P/N: 2.3G1215A2-10.7MM-4 Rev E

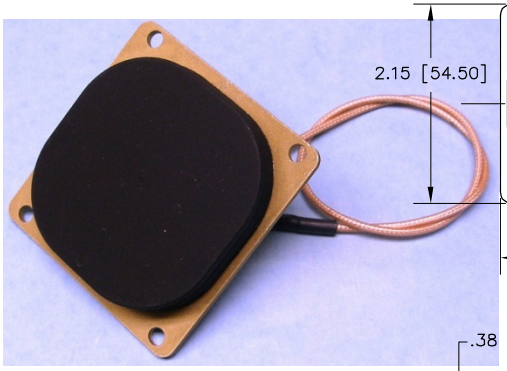
Low Profile (2.15x2.07x0.37) in, Flat/Front Mount Configuration



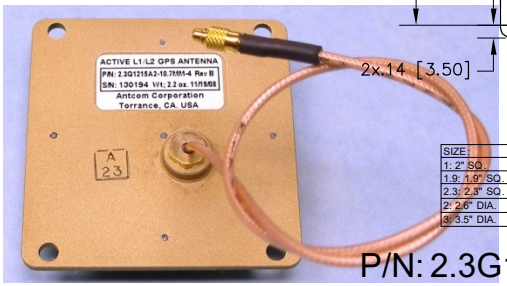
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

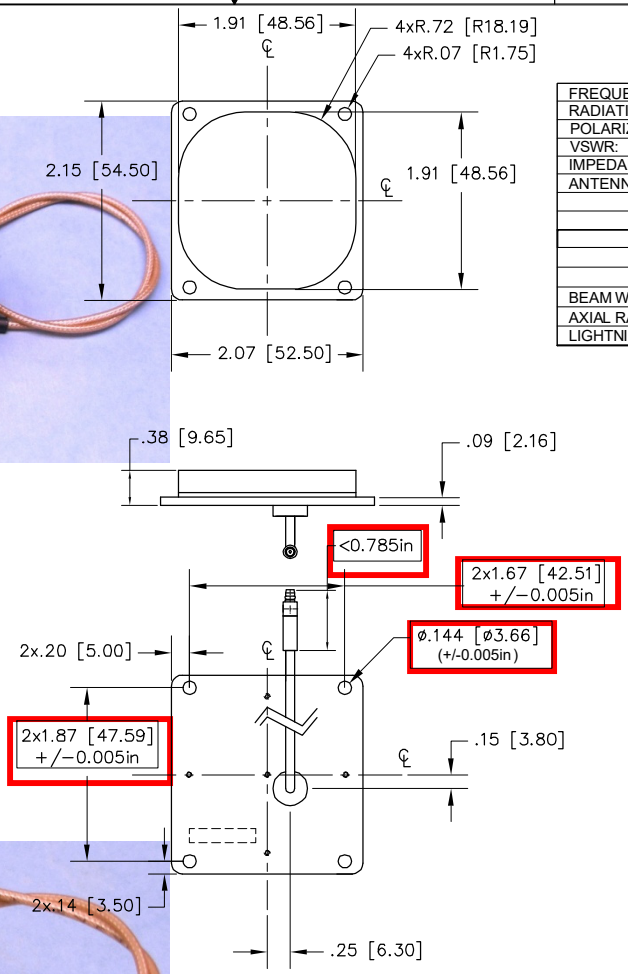
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POLARIZATION:	RHCP					
VSWR:	< 2:1			< 2:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 2.7	+ 4.7	+ 3.1	+ 1.5	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 4.4	- 1.8	- 1.9	- 6.7	- 3.8	- 3.5
@ 20 ° Elevation:	- 2.3	- 0.3	+ 0.6	- 5.6	- 2.0	- 0.8
@ 30 ° Elevation:	- 0.8	+ 1.4	+ 1.7	- 4.5	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 2.0	> 3.9	> 2.4	> 0.0	> 2.7	> 2.2
BEAM WIDTH (3dB):	113 Deg.	114 Deg.	143 Deg.	85 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA:

LNA GAIN:	(21.0+/-2.0) dB
LNA NOISE FIGURE:	1.8 dB (Without Filter)
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	2.15 in. [54.5 mm] x 2.07 in. [52.5 mm] HEIGHT: 0.38 in. [9.6 mm]
WEIGHT:	2.2 oz [62 g]
FINISH:	BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE THERMOSET PLASTIC RADOME
CONNECTOR:	10.7in MMCX Male Cable

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	>30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, AND MIL-STD-810

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	E	Mounting Hole Size/Location	Feb-21-09	S.H

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH 30 dB LNA; A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A1: WITH 10 dB LNA
2.3: 2.3" SQ.		P: WITHOUT LNA
2: 2.6" DIA.		P2: WITHOUT LNA, WITH RHCP/LHCP POLARIZATION
3: 3.5" DIA.		P2L: WITHOUT LNA, WITH DUAL LINEAR POLARIZATION

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P, P2: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: RS: R-SM A	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

ITEM NO	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	QUANTITY REQD
1		–	–	–	–	1

PARTS LIST

P/N: 2.3G1215A2-10.7MM-4

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .010 .XXX± .010 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Sep/04/07
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

L1/L2 Active GPS ANTENNA for BAE (LTLM)

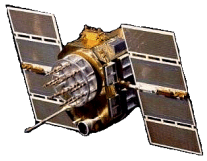
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SCALE 1/1 | SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STRIP IS RED

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS Antenna, P/N: 2.3G1215A2-XRS-X Rev A

Low Profile (2.15x2.07x0.37) in, Flat/Front Mount Configuration, No Paint



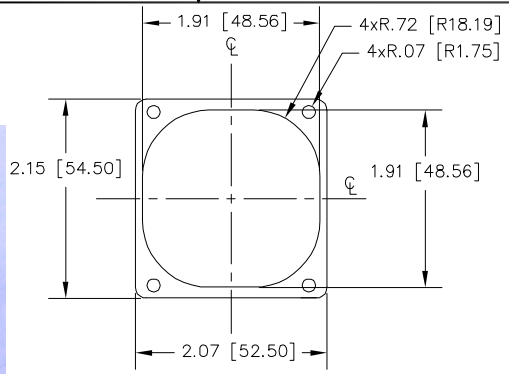
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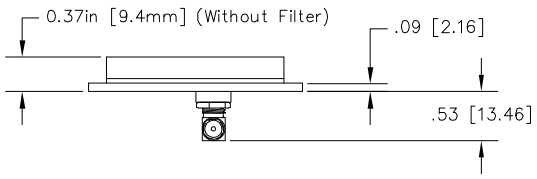
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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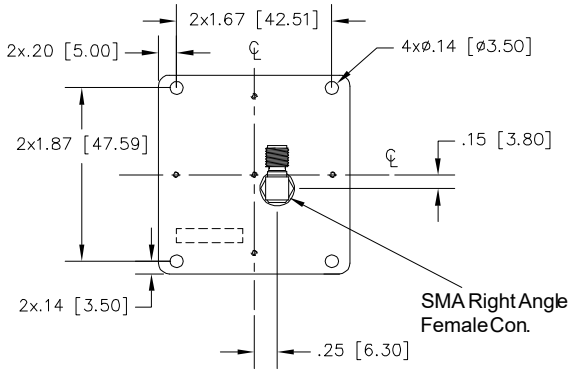
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SPECIFICATION S

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 2.7	+ 4.7	+ 3.1	+ 1.5	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 4.4	- 1.8	- 1.9	- 6.7	- 3.8	- 3.5
@ 20 ° Elevation:	- 2.3	- 0.3	+ 0.6	- 5.6	- 2.0	- 0.8
@ 30 ° Elevation:	- 0.8	+ 1.4	+ 1.7	- 4.5	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 2.0	> 3.9	> 2.4	> 0.0	> 2.7	> 2.2
BEAM WIDTH (3dB):	113 Deg.	114 Deg.	143 Deg.	85 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA:

LNA GAIN:	(21.0+/-2.0) dB
LNA NOISE FIGURE:	1.8 dB (Without Filter)
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	2.15 in. [54.5 mm] x 2.07 in. [52.5 mm] HEIGHT: 0.40 in. [10.16 mm]
WEIGHT:	2.92 oz. (82.7 g)
FINISH:	BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE THERMOSET PLASTIC RADOME
CONNECTOR:	SMA RIGHT ANGLE FEMALE

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	>30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, AND MIL-STD-810

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH 30 dB LNA; A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A1: WITH 10 dB LNA
2.3: 2.3" SQ.		P: WITHOUT LNA
2: 2.6" DIA.		P2: WITHOUT LNA, WITH RHCP/LHCP POLARIZATION
3: 3.5" DIA.		P2L: WITHOUT LNA, WITH DUAL LINEAR POLARIZATION

P/N 2.3G1215A2-XRS-X

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P, P2: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: RS: R-SMA	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

ITEM NO	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	QUANTITY REQD
1	–	–	–	–	–	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .020 .XXX± .010 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Sep/04/07
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

L1/L2 Active GPS ANTENNA for BAE (LTLM)

SIZE D | CAGE NO 3CVE1 | DRAWING NO 2.3G1215A2-XRS-X | REV A

SCALE 1/1 SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STAMP IS RED

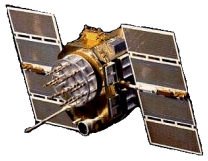
ZONE	REV	DESCRIPTION	DATE	APPROVED

REVISIONS

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS Antenna, P/N: 2.3G1215A-XRS-4 Rev A

Low Profile (2.15x2.07x0.37) in, Flat/Front Mount Configuration

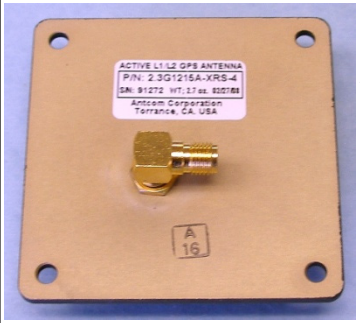


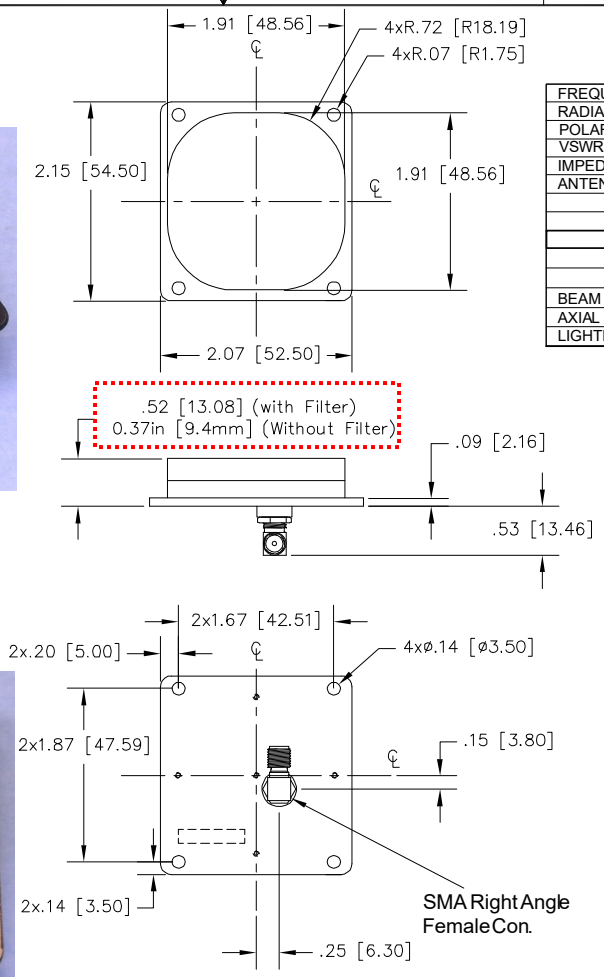
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 2.7	+ 4.7	+ 3.1	+ 1.5	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 4.4	- 1.8	- 1.9	- 6.7	- 3.8	- 3.5
@ 20 ° Elevation:	- 2.3	- 0.3	+ 0.6	- 5.6	- 2.0	- 0.8
@ 30 ° Elevation:	- 0.8	+ 1.4	+ 1.7	- 4.5	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 2.0	> 3.9	> 2.4	> 0.0	> 2.7	> 2.2
BEAM WIDTH (3dB):	113 Deg.	114 Deg.	143 Deg.	85 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	-A-: (33.0+/-2.0) dB; -A2-: (21.0+/-2.0) dB
LNA NOISE FIGURE:	1.8 dB (Without Filter); 2.4 dB (with Filter)
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	2.15 in. [54.5 mm] x 2.07 in. [52.5 mm] HEIGHT: 0.40 in. [10.16 mm]
WEIGHT:	2.92 oz. (82.7 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE THERMOSET PLASTIC RADOME, UV, ABRASION AND SKYDROL RESISTANCE
CONNECTOR:	SMA RIGHT ANGLE FEMALE (OPTION: PIN, TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	>30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, AND MIL-STD-810

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH 30 dB LNA/FILTER; A2: WITH 20 dB LNA/FILTER
1.9: 1.9" SQ.	15: L1 ONLY	A1: WITH 10 dB LNA/FILTER
2.3: 2.3" SQ.		P: WITHOUT LNA
2: 2.6" DIA.		P2: WITHOUT LNA, WITH RHCP/LHCP POLARIZATION
3: 3.5" DIA.		P2L: WITHOUT LNA, WITH DUAL LINEAR POLARIZATION

P/N: 2.3G1215A-XRS-4

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P, P2: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: RS: R-SMA	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

ITEM NO	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	QUANTITY REQD
1			–	–	–	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .020 .XXX± .010 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Sep/04/07
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

L1/L2 Active GPS ANTENNA for NLOS (PAM)

SIZE D | CAGE NO 3CVE1 | DRAWING NO 2.3G1215A-XRS-4 | REV A
SCALE 1/1 | SHEET 1 OF 1

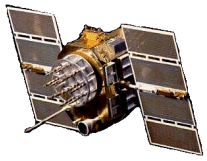
ZONE	REV	DESCRIPTION	DATE	APPROVED

REVISIONS

NMO Connector Option is Now Available for Some Antennas

RHCP/LHCP L1/L2 GPS Antenna, P/N: 2.3G1215P2-20SSMCB-3 Rev A

Low Profile (2.15x2.07x0.37) in, Flat/Front Mount Configuration

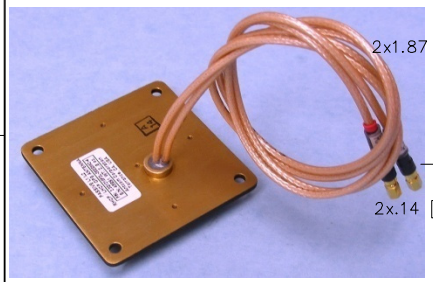


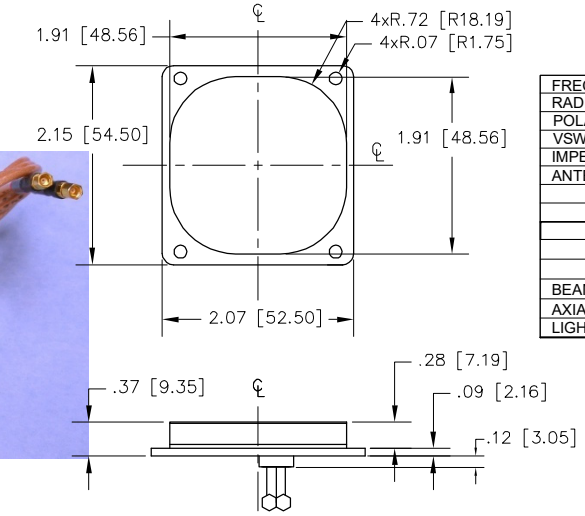
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

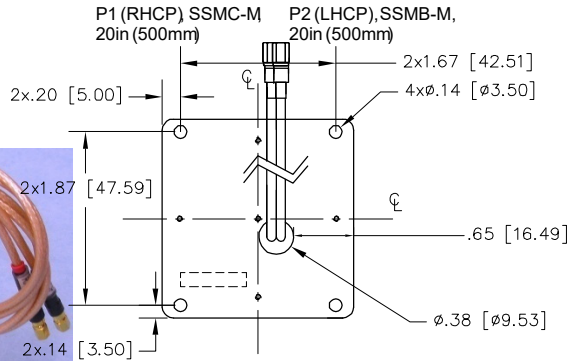
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SPECIFICATION S

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP/LHCP					
VSWR:	< 2.0:1			< 2.0:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 2.7	+ 4.7	+ 3.1	+ 1.5	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 4.4	- 1.8	- 1.9	- 6.7	- 3.8	- 3.5
@ 20 ° Elevation:	- 2.3	- 0.3	+ 0.6	- 5.6	- 2.0	- 0.8
@ 30 ° Elevation:	- 0.8	+ 1.4	+ 1.7	- 4.5	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 2.0	> 3.9	> 2.4	> 0.0	> 2.7	> 2.2
BEAM WIDTH (3dB):	113 Deg.	114 Deg.	143 Deg.	85 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	(21.0+/-2.0) dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	2.31 in. [58.56 mm] SQ. HEIGHT: 0.37 in. [9.35 mm]
WEIGHT:	2.8 oz. (80 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE THERMOSET PLASTIC RADOME, UV, ABRASION AND SKYDROL RESISTANCE
CONNECTOR:	P1: RHCP with 20 in (500mm) SSMC MALE CABLES P2: LHCP with 20 in (500mm) SSMB MALE CABLES

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	>30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, AND MIL-STD-810

NMO Connector Option is Now Available for Some Antennas

SIZE:	FREQ. BAND:	POLARIZATION/LNA OPTIONS:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2.3: 2.3" SQ.		P: WITHOUT LNA
2: 2.6" DIA.		P2: WITHOUT LNA, WITH RHCP/LHCP POLARIZATION
3: 3.5" DIA.		P2L: WITHOUT LNA, WITH DUAL LINEAR POLARIZATION

P/N: 2.3G1215P2-20SSMCB-3

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P, P2: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	SSMC, SSMB	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: RS: R-SMA	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

ITEM NO	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	QUANTITY REQD
1	–	–	–	–	–	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .020 .XXX± .010 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Sep/05/07
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

L1/L2 PASSIVE RHCP/LHCP GPS ANTENNA for NLOS (PAM)

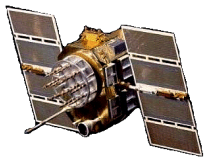
SIZE D | CAGE NO 3CVE1 | DRAWING NO 2.3G1215P2-20SSMCB-3 | REV A
SCALE 1/1 | SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STAMP IS RED

Passive L1/L2 GPS Antenna, P/N: 2.3G1215X-XRS-4

Low Profile 2.3" Square, Flat/Back Mount Configuration

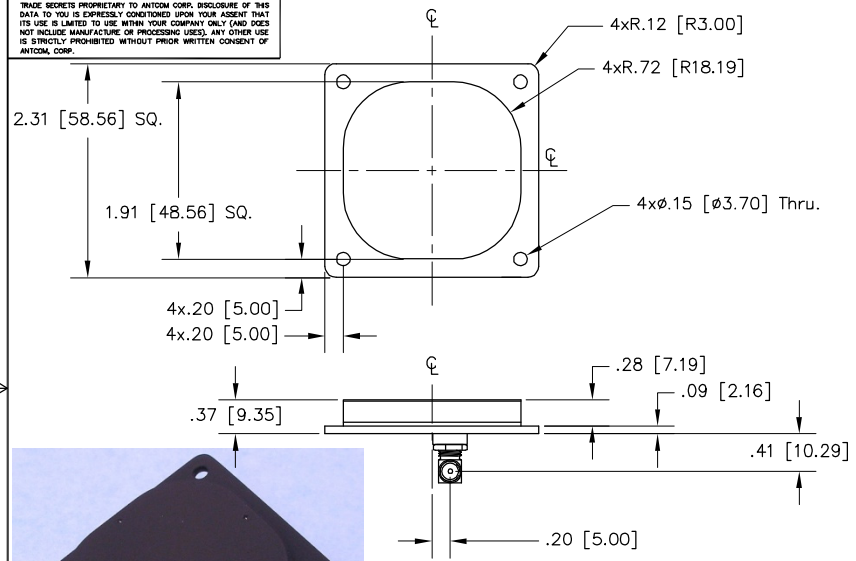
Suitable for Forming Multiple Element CRPA

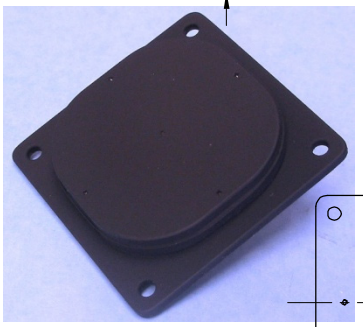


Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SMA Right Angle Female Con.
(OPTION: TNC, TNC Bulkhead, N,
N-Bulkhead, MCX, MMCX, or Cable)
Clearance Hole: 0.4" Dia.
for SMA, MCX, & MMCX Con.
0.52" Dia . for TNC Con.
0.63" Dia. for N Con.

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2.3: 2.3" SQ.		P: WITHOUT LNA
2: 2.6" DIA.		P2: WITHOUT LNA, WITH RHCP/LHCP POLARIZATION
3: 3.5" DIA.		P2L: WITHOUT LNA, WITH DUAL LINEAR POLARIZATION

P/N: 2.3G1215P-XRS-4

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P, P2: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: RS: R-SM A	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

SPECIFICATION S

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 2.7	+ 4.7	+ 3.1	+ 1.5	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 4.4	- 1.8	- 1.9	- 6.7	- 3.8	- 3.5
@ 20 ° Elevation:	- 2.3	- 0.3	+ 0.6	- 5.6	- 2.0	- 0.8
@ 30 ° Elevation:	- 0.8	+ 1.4	+ 1.7	- 4.5	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 2.0	> 3.9	> 2.4	> 0.0	> 2.7	> 2.2
BEAM WIDTH (3dB):	113 Deg.	114 Deg.	143 Deg.	85 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	(21.0+/-2.0) dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	2.31 in. [58.56 mm] SQ. HEIGHT: 0.37 in. [9.35 mm]
WEIGHT:	2.3 oz. (65.2 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE THERMOSET PLASTIC RADOME, UV, ABRASION AND SKYDROL RESISTANCE
CONNECTOR:	SMA FEMALE (OPTION: PIN, TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	>30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, AND MIL-STD-810

ITEM NO	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	QUANTITY REQD
1			–	–	–	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .020 .XXX± .010 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH DEC-08-06
CAD FILE NO

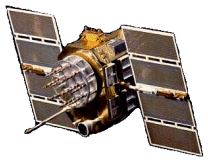
ANTCOM CORP. TORRANCE CALIFORNIA

2.3" SQUARE, L1/L2 PASSIVE GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 2.3G1215P-XRS-4 | REV
SCALE 1/1 | SHEET 1 OF 1

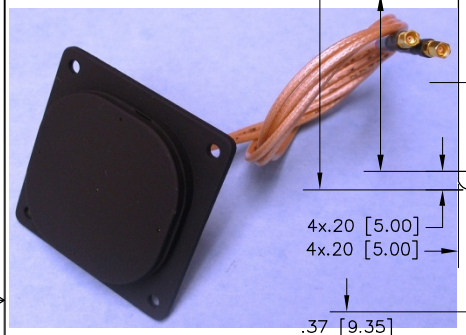
ORIGINAL DOCUMENT WHEN STAMP IS RED

NMO Connector Option is Now Available for Some Antennas

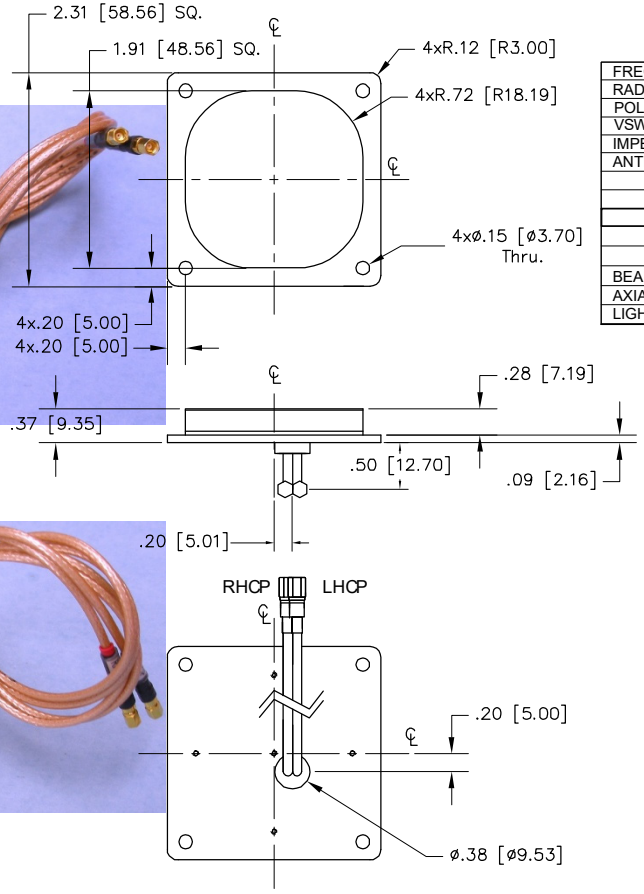


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SPECIFICATION S

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP/LHCP					
VSWR:	< 2.0:1			< 2.0:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 2.7	+ 4.7	+ 3.1	+ 1.5	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 4.4	- 1.8	- 1.9	- 6.7	- 3.8	- 3.5
@ 20 ° Elevation:	- 2.3	- 0.3	+ 0.6	- 5.6	- 2.0	- 0.8
@ 30 ° Elevation:	- 0.8	+ 1.4	+ 1.7	- 4.5	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 2.0	> 3.9	> 2.4	> 0.0	> 2.7	> 2.2
BEAM WIDTH (3dB):	113 Deg.	114 Deg.	143 Deg.	85 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	(21.0+/-2.0) dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	2.31 in. [58.56 mm] SQ. HEIGHT: 0.37 in. [9.35 mm]
WEIGHT:	2.8 oz. (80 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE THERMOSET PLASTIC RADOME, UV, ABRASION AND SKYDROL RESISTANCE
CONNECTOR:	20 IN SSMC MALE CABLES (OPTION: SMC, SMB, SSMB, SMA, PIN, TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	>30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, AND MIL-STD-810

NMO Connector Option is Now Available for Some Antennas

ZONE	REV	DESCRIPTION	DATE	APPROVED
		REVISIONS		

QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
1			–	–	–	1

PARTS LIST

SIZE:	FREQ. BAND:	POLARIZATION/LNA OPTIONS:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2.3: 2.3" SQ.		P: WITHOUT LNA
2: 2.6" DIA.		P2: WITHOUT LNA, WITH RHCP/LHCP POLARIZATION
3: 3.5" DIA.		P2L: WITHOUT LNA, WITH DUAL LINEAR POLARIZATION

P/N: 2.3G1215P2-20SSMC-3

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P, P2: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: RS: R-SM A	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .020 .XXX± .010 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH DEC-08-06
CAD FILE NO

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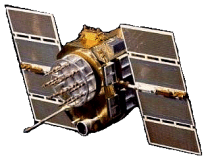
2.3" SQUARE, L1/L2 PASSIVE RHCP/LHCP GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 2.3G1215P2-20SSMC-3 | REV
SCALE 1/1 | SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STAMP IS RED

RHCP/LHCP L1/L2 GPS Antenna, P/N: 1.9G1215P2-20SSMCB-3 Rev D

Low Profile (1.9X1.9x0.36) in, Flat/Front Mount Configuration

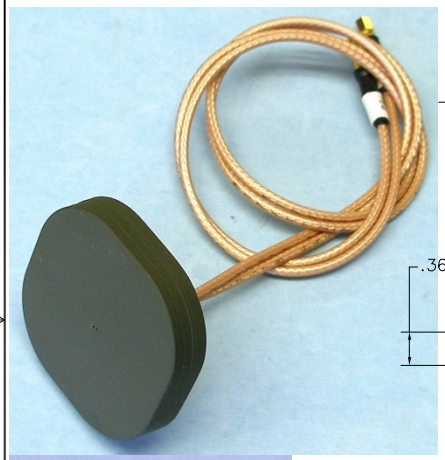


ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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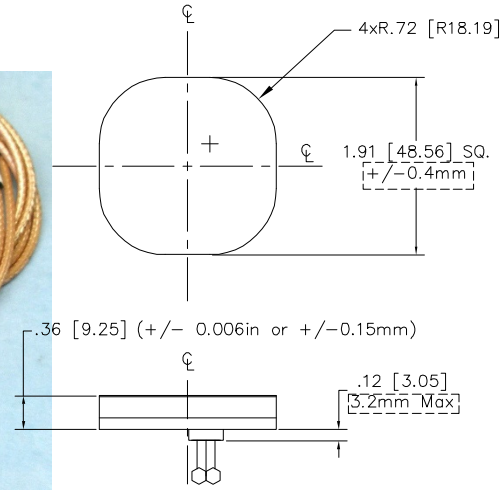












1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

SPECIFICATION S

ELECTRICAL:

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POLARIZATION:	RHCP/LHCP					
VSWR:	< 2.0:1			< 2.0:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 2.7	+ 4.7	+ 3.1	+ 1.5	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 4.4	- 1.8	- 1.9	- 6.7	- 3.8	- 3.5
@ 20 ° Elevation:	- 2.3	- 0.3	+ 0.6	- 5.6	- 2.0	- 0.8
@ 30 ° Elevation:	- 0.8	+ 1.4	+ 1.7	- 4.5	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 2.0	> 3.9	> 2.4	> 0.0	> 2.7	> 2.2
BEAM WIDTH (3dB):	113 Deg.	114 Deg.	143 Deg.	85 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	(21.0+/-2.0) dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	1.912 in.[48.56mm] SQ. HEIGHT: 0.36 in. [9.25 mm]
WEIGHT:	2.4 oz. (69 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE THERMOSET PLASTIC RADOME, UV, ABRASION AND SKYDROL RESISTANCE
CONNECTOR:	19.69 IN SSMC MALE CABLES (OPTION: SMC, SMB, SSMB, SMA, PIN, TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	>30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, AND MIL-STD-810

NMO Connector Option is Now Available for Some Antennas

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
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PARTS LIST

SIZE:	FREQ. BAND:	POLARIZATION/LNA OPTIONS:
1: 2" SQ.	1215: L1/L2	A2: WITH 20 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: WITH 40 dB LNA
2.3: 2.3" SQ.		P: WITHOUT LNA
2: 2.6" DIA.		P2: WITHOUT LNA, WITH RHCP/LHCP POLARIZATION
3: 3.5" DIA.		P2L: WITHOUT LNA, WITH DUAL LINEAR POLARIZATION

P/N: 1.9G1215P2-20SSMCB-3

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P, P2: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: RS: R-SMA	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .020 .XXX± .010 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH June-05-08
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

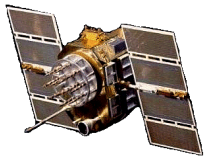
1.9" SQUARE, L1/L2 PASSIVE RHCP/LHCP GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.9G1215P2-20SSMCB-3 | REV D
SCALE 1/1 | SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STAMP IS RED

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	D	Dim in Rect Boxes	Oct-07-08	S.H

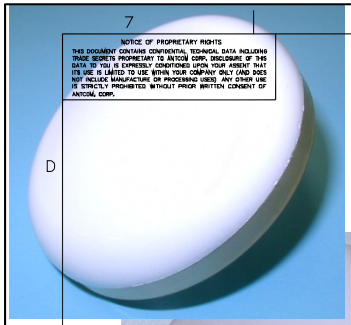
Active or Passive L1/L2 GPS Antennas
P/N: 2G1215A-XRS-X
2.6” Diameter, Back Mount, Right Angle SMA Connector Configurations

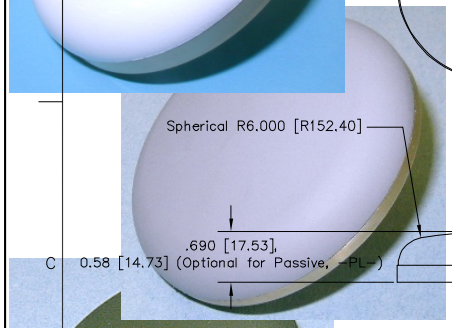


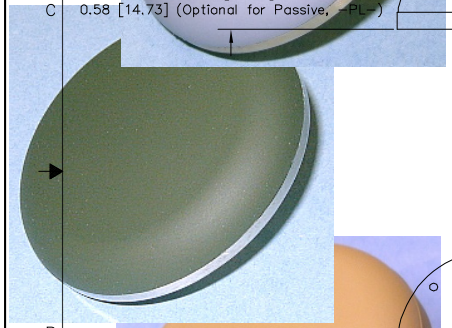
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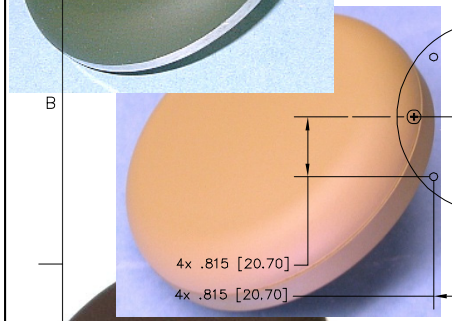
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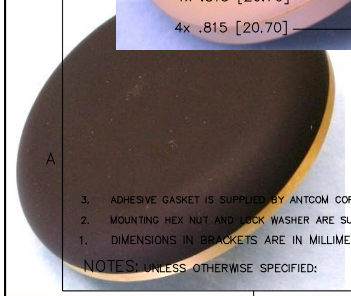
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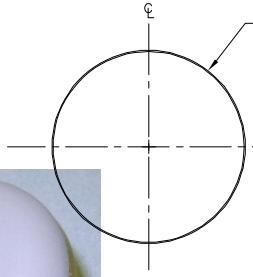


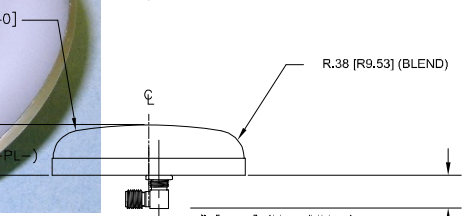


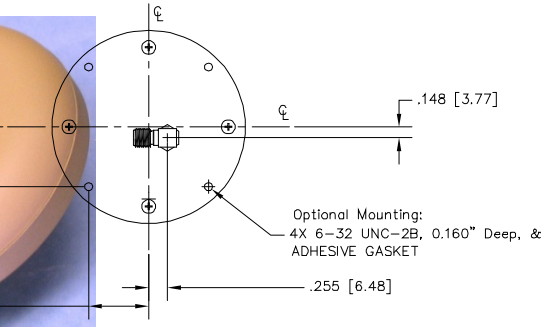












SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 5.0	+ 4.7	+ 3.1	+ 0.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.1	- 1.8	- 1.9	- 5.8	- 3.8	- 3.5
@ 20 ° Elevation:	- 0.6	- 0.3	+ 0.6	- 4.3	- 2.0	- 0.8
@ 30 ° Elevation:	+ 0.9	+ 1.4	+ 1.7	- 3.4	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 4.0	> 3.9	> 2.4	> - 0.9	> 2.7	> 2.2
BEAM WIDTH (3dB):	103 Deg.	114 Deg.	143 Deg.	94 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE: DIAMETER: 2.63 In.[66.80 mm]
HEIGHT: 0.690 in. [17.53 mm], 0.58" [14.73](Optional for Passive)

WEIGHT: 4.22 oz. (119 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: RIGHT ANGLE SMA FEMALE CONNECTOR
(OPTION: TNC, SMA, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD		DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
PARTS LIST							
				–	–	–	5
1		ADHESIVE GASKET	12345G-3M-2G	–	–	–	3
1		WASHER, LOCK	AN936B816	–			2
1		HEX NUT, MOUNTING	1/2-20 HEX	–	–	–	1

SIZE:	FREQ. BAND:	LNA:
1: 2” SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9” SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6” DIA.		P: WITHOUT LNA
3: 3.5” DIA.		PL: WITHOUT LNA and THINNER (HEIGHT = 0.58”)
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 2G1215A-XRS-1

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS:R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

3. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
2. MOUNTING HEX NUT AND LOCK WASHER ARE SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015 .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON ℄ .OF.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

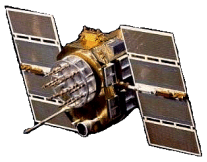
DRAWN
CHECKED M. BOAS 01-05-29
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA
OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE GPS ANTENNA
SIZE D | CAGE NO 3CVE1 | DRAWING NO 2G1215A-XRS-1 | REV -
SCALE 1/1 SHEET 1 OF 1

ZONE	REV	DESCRIPTION	DATE	APPROVED

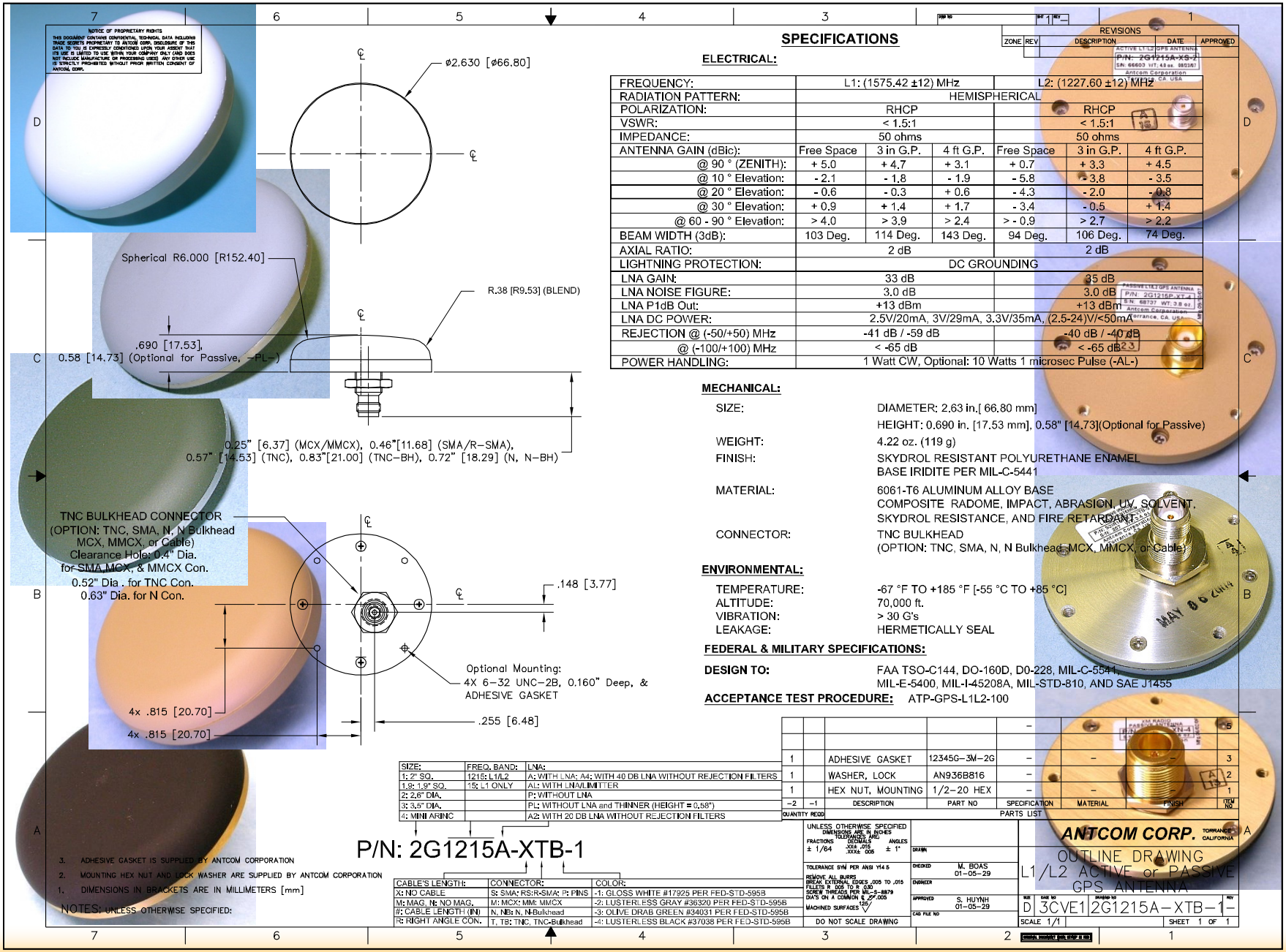
NMO Connector Option is Now Available for Some Antennas

Active or Passive L1/L2 GPS Antennas, P/N: 2G1215X-XX-X
P/N: 2G1215A-XSS-2
2.6” Diameter, Bulkhead/Back Mount Configurations



ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

ANTCOM CORPORATION . 367 Van Ness Way, #602 . Torrance, CA 90501 . Tel: (310) 782-1076 . Fax: (310) 782-1086 . E-mail: antennas@antcom.com . http://www.antcom.com



SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 5.0	+ 4.7	+ 3.1	+ 0.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.1	- 1.8	- 1.9	- 5.8	- 3.8	- 3.5
@ 20 ° Elevation:	- 0.6	- 0.3	+ 0.6	- 4.3	- 2.0	- 0.8
@ 30 ° Elevation:	+ 0.9	+ 1.4	+ 1.7	- 3.4	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 4.0	> 3.9	> 2.4	> - 0.9	> 2.7	> 2.2
BEAM WIDTH (3dB):	103 Deg.	114 Deg.	143 Deg.	94 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE: DIAMETER: 2.63 in.[66.80 mm]
HEIGHT: 0.690 in. [17.53 mm], 0.58" [14.73](Optional for Passive)

WEIGHT: 4.22 oz. (119 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5541

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: TNC BULKHEAD
(OPTION: TNC, SMA, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541
MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD	–1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
				PARTS LIST			
1		ADHESIVE GASKET	12345G–3M–2G	–	–	–	3
1		WASHER, LOCK	AN936B816	–	–	–	2
1		HEX NUT, MOUNTING	1/2–20 HEX	–	–	–	1

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (HEIGHT = 0.58")
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS:R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø .27 .005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

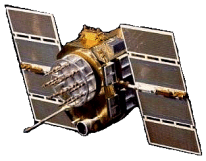
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SIZE D | CAGE NO 3CVE1 | DRAWING NO 2G1215A–XTB–1 | REV –
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active or Passive L1/L2 GPS Antennas, P/N: 2G1215A-XTBR-X

2.6" Diameter, *Centered* Bulkhead/Back Mount Configurations



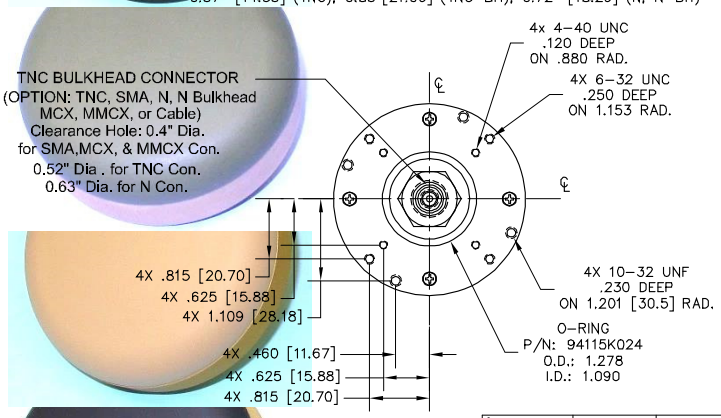
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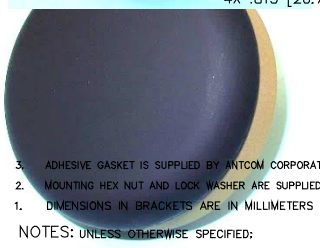
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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	WEIGHT CORRECTION, NEW BSPLT	5/21/15	S.H







SPECIFICATIONS

ELECTRICAL:

	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
FREQUENCY:						
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 5.0	+ 4.7	+ 3.1	+ 0.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.1	- 1.8	- 1.9	- 5.8	- 3.8	- 3.5
@ 20 ° Elevation:	- 0.6	- 0.3	+ 0.6	- 4.3	- 2.0	- 0.8
@ 30 ° Elevation:	+ 0.9	+ 1.4	+ 1.7	- 3.4	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 4.0	> 3.9	> 2.4	> - 0.9	> 2.7	> 2.2
BEAM WIDTH (3dB):	103 Deg.	114 Deg.	143 Deg.	94 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	DIAMETER: 2.63 in.[66.8 mm] HEIGHT: 0.885 In. [22.48 mm]
WEIGHT:	5.64 oz. (160 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	TNC BULKHEAD (OPTION: TNC, SMA, N, N Bulkhead, MCX, MMCX, or Cable)

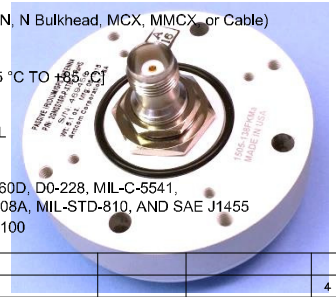
ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100



ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
		PARTS LIST				
4	1	O-RING	94115K024		-	-
3	1	ADHESIVE GASKET	12345G-3M-2G		-	-
2	1	WASHER, LOCK	AN936B816			
1	1	HEX NUT, MOUNTING	1/2-20 HEX		-	-

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (HEIGHT = 0.58")
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 2G1215A-XTBR-1

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS:R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: DESERT TAN #33446 PER FED-STD-595B

3. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
2. MOUNTING HEX NUT AND LOCK WASHER ARE SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ±.015, .XXX ±.005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ⌀ .005. MACHINED SURFACES 125. DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	05-29-01
ORIGINALLY DESIGNED	S. HUYNH	05-29-01
UPDATED	S. HUYNH	May-21-15
UPDATE DRAWN	P. TRAN	May-21-15
APPROVED	S. HUYNH	May-21-15

ANTCOM CORP. TORRANCE, CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE
GPS ANTENNA

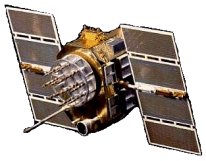
SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	2G1215A-XTBR-1	A

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active or Passive L1/L2 GPS Antennas, P/N: 2G1215A-XTNB-X

2.6" Diameter, 5/8-24 Bulkhead/Back Mount Configurations



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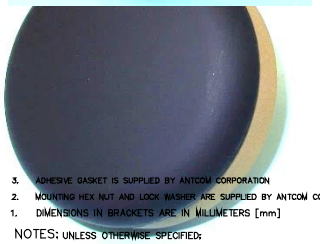
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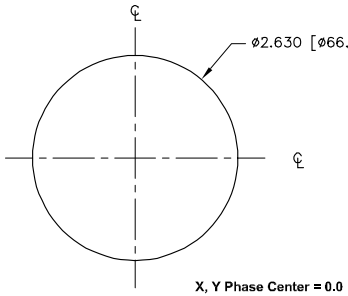


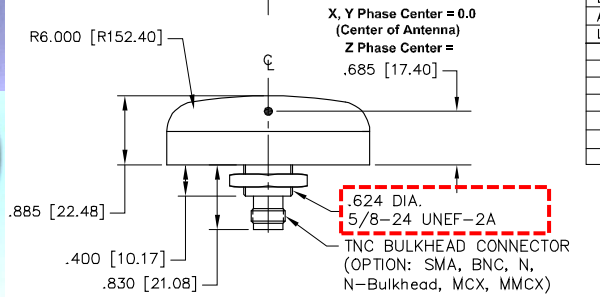


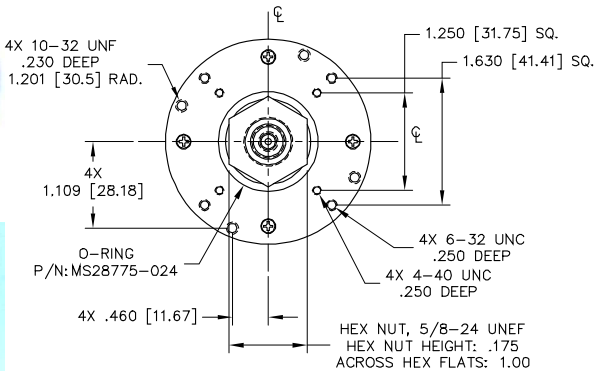












REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	NEW BASEPLATE	05/21/15	S.H

SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 5.0	+ 4.7	+ 3.1	+ 0.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.1	- 1.8	- 1.9	- 5.8	- 3.8	- 3.5
@ 20 ° Elevation:	- 0.6	- 0.3	+ 0.6	- 4.3	- 2.0	- 0.8
@ 30 ° Elevation:	+ 0.9	+ 1.4	+ 1.7	- 3.4	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 4.0	> 3.9	> 2.4	> - 0.9	> 2.7	> 2.2
BEAM WIDTH (3dB):	103 Deg.	114 Deg.	143 Deg.	94 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	DIAMETER: 2.63 in.[66.8 mm] HEIGHT: 0.885 in. [22.48 mm]
WEIGHT:	5.9 oz. (167.3 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	TNC FEMALE BULKHEAD (OPTION: TNC, SMA, N, N Bulkhead, MCX, MMCX, or Cable)

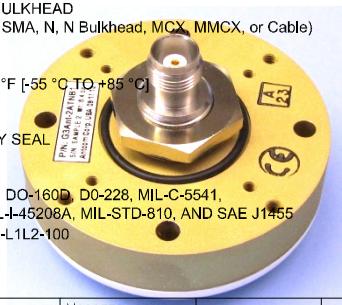
ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100



SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (HEIGHT = 0.58")
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 2G1215A-XTNB-1

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; B: BNC	-1: GLOSS WHITE #17925 PER FED-STD-595B
#: CABLE LENGTH (IN)	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
M: MAG, N: NO MAG.	N: N; NB: N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
	T: TNC; TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
	TNB: TNC-Bulkhead with N Connector Thread on Bulkhead	-5: DESERT TAN #33446 PER FED-STD-595B

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	FINISH
3	1	O–RING, (94115K024) Item 553	MS28775–024	–
2	1	ADHESIVE GASKET	12345G–3M–2G	–
1	1	HEX NUT AND LOCK WASHER, Item 489N	489N	–

PARTS LIST

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. MOUNTING HEX NUT AND LOCK WASHER ARE SUPPLIED BY ANTCOM CORPORATION
3. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Jan–05–29
ORIGINALLY DESIGNED	S. HUYNH	Jan–05–29
UPDATED	S. HUYNH	Aug–12–13
UPDATE DRAWN	P. TRAN	Aug–12–13
APPROVED	S. HUYNH	Aug–12–13

ANTCOM CORP. TORRANCE, CALIFORNIA

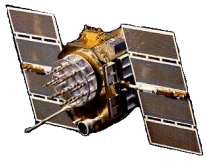
OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	2G1215A–XTNB–1	A

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Conformal L1/L2 GPS FRPA Antenna Element Can be Used to Form Multiple Element CRPA 2.6" Diameter, P/N: 2CG1215X-XS-2-X Rev A



ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

ANTCOM CORPORATION . 367 Van Ness Way, #602 . Torrance, CA 90501 . Tel: (310) 782-1076 . Fax: (310) 782-1086 . E-mail: antennas@antcom.com . http://www.antcom.com

NOTICE OF PROPRIETARY RIGHTS
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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	ADAPTING PLATE, 90° ROTATION	Aug/10/07	S.H

SPECIFICATIONS

ELECTRICAL:

	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
FREQUENCY:						
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 5.0	+ 4.7	+ 3.1	+ 0.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.1	- 1.8	- 1.9	- 5.8	- 3.8	- 3.5
@ 20 ° Elevation:	- 0.6	- 0.3	+ 0.6	- 4.3	- 2.0	- 0.8
@ 30 ° Elevation:	+ 0.9	+ 1.4	+ 1.7	- 3.4	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 4.0	> 3.9	> 2.4	> - 0.9	> 2.7	> 2.2
BEAM WIDTH (3dB):	103 Deg.	114 Deg.	143 Deg.	94 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	33 dB	35 dB
LNA NOISE FIGURE:	3.0 dB	3.0 dB
LNA P1dB Out:	+13 dBm	+13 dBm
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA	
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB	-40 dB / -40 dB
@ (-100/+100) MHz	< -65 dB	< -65 dB
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)	

MECHANICAL:

SIZE: DIAMETER: 2.60 in.[66.04 mm]
HEIGHT: 0.655 in. [16.63 mm], 0.460in. [11.68mm] (without Radome)

WEIGHT: 5.5 oz. (156 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

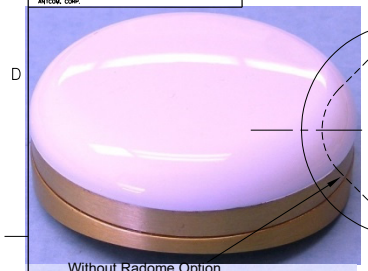
CONNECTOR: SMA FEMALE
(OPTION: TNC, N, TNC- & N-Bulkhead, MCX, MMCX, or Cable)

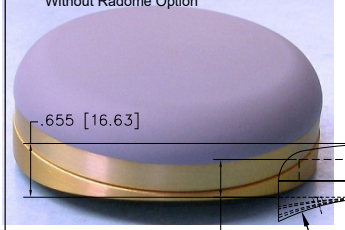
ENVIRONMENTAL:

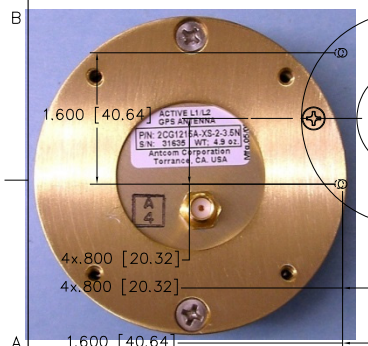
TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

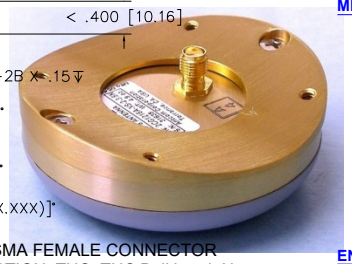
FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455









SIZE OPTION:	FREQ. BAND:	LNA OPTION:	CONFORMAL RADIUS OPTION:
1: 2" SQ.	1215: L1/L2	A: WITH LNA	-3: 3.000" RADIUS (SDBII)
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER	-3.5N: 3.500" RADIUS (NETFIRE, GMLRS)
2: 2.6" DIA.		P: WITHOUT LNA	-4P: 4.000" RADIUS (PAVEWAY)
3: 3.5" DIA.			-6M: 6.000" RADIUS (MAVERICK)
4: MINI ARINC			-7.5E: 7.500" RADIUS (EGBU, MALD)
			-14A: 14.00" RADIUS (ACM)
			-X: X" RADIUS (0: Flat, No Radius)

P/N: 2CG1215A-XS-2-X

CABLE'S LENGTH:	CONNECTOR OPTION:	COLOR OPTION:
X: NO CABLE	S: SMA; RS: Right Angle SMA	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

ITEM NO.	QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
5				-	-	-
3	1	ADHESIVE GASKET	12345G-3M-2G	-	-	-
2	1			-	-	-
1	1			-	-	-

PARTS LIST

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ⌀ ⌀F.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

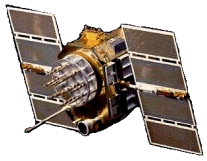
DRAWN
CHECKED M. BOAS DEC-12-03
ENGINEER
APPROVED S. HUYNH DEC-12-03
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA
2.6"DIA. X" RADIUS CONFORMAL L1/L2 GPS ANTENNA
SIZE D | CAGE NO 3CVE1 | DRAWING NO 2CG1215A-XS-2-X | REV A
SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active or Passive L1/L2 GPS Antennas, P/N: 2G1215A-XMS-X

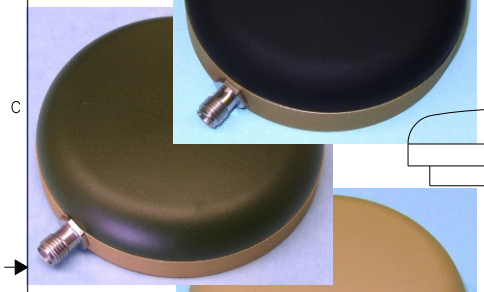
2.6” Diameter, Flat Strong Magnetic (38lbs) Mount Configurations

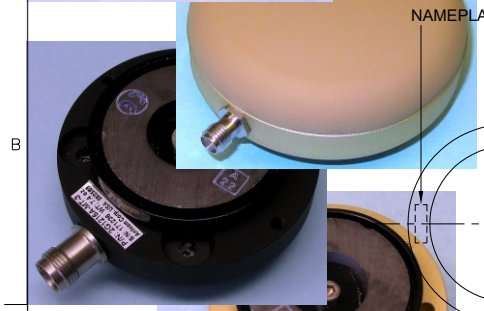


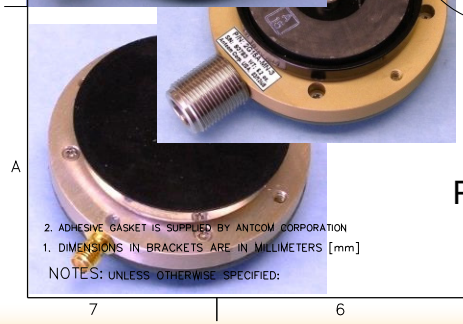
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

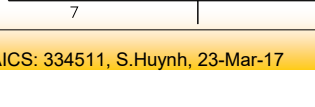
ANTCOM CORPORATION . 367 Van Ness Way, #602 . Torrance, CA 90501 . Tel: (310) 782-1076 . Fax: (310) 782-1086 . E-mail: antennas@antcom.com . http://www.antcom.com

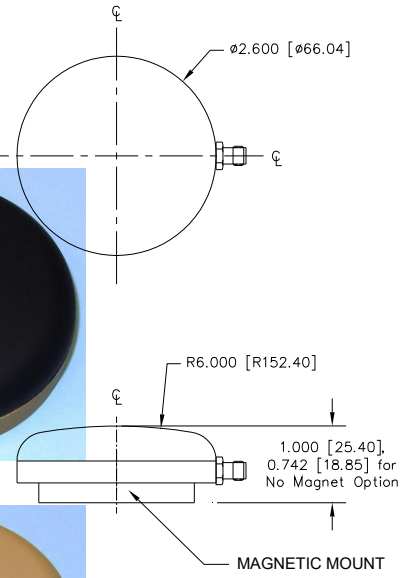


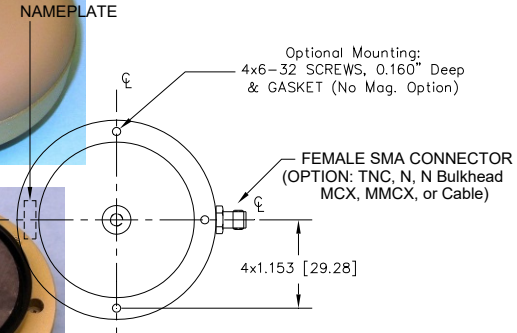












SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 5.0	+ 4.7	+ 3.1	+ 0.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.1	- 1.8	- 1.9	- 5.8	- 3.8	- 3.5
@ 20 ° Elevation:	- 0.6	- 0.3	+ 0.6	- 4.3	- 2.0	- 0.8
@ 30 ° Elevation:	+ 0.9	+ 1.4	+ 1.7	- 3.4	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 4.0	> 3.9	> 2.4	> - 0.9	> 2.7	> 2.2
BEAM WIDTH (3dB):	103 Deg.	114 Deg.	143 Deg.	94 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

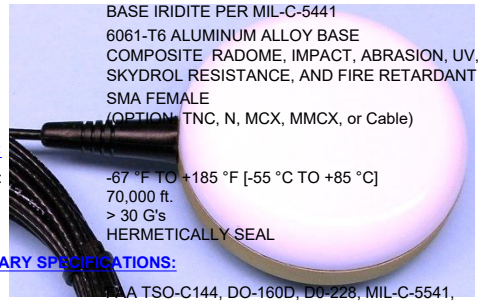
SIZE: DIAMETER: 2.60 in.[66.04 mm]
HEIGHT: 1.0 in. [25.4 mm], 0.742 [18.85] for No Magnet Option

WEIGHT: 7.00 oz. [0.198 Kg], 4.00 oz. [0.113 Kg] (WITHOUT MAGNET)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: SMA FEMALE
(OPTION: TNC, N, MCX, MMCX, or Cable)



ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, DO-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		A2: WITH 20 LNA WITHOUT REJECTION FILTERS.
4: MINI ARINC		A4: WITH 40 LNA WITHOUT REJECTION FILTERS.

P/N: 2G1215A-MS-X ← **Color** ↓

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	LABEL ON THE BOTTOM	April/10/07	S.H

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH
5	–			–	–
3	1	ADHESIVE GASKET	12345G-3M-2G	–	–
2	1				
1	1			–	–

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES
DO NOT SCALE DRAWING

DRAWN
CHECKED M. BOAS 01-05-29
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 2G1215A-MS-X | REV A
SCALE 1/1 | SHEET 1 OF 1

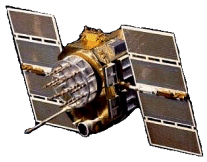
2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
NOTES: UNLESS OTHERWISE SPECIFIED:

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS Antennas

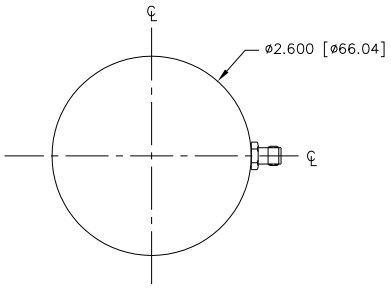
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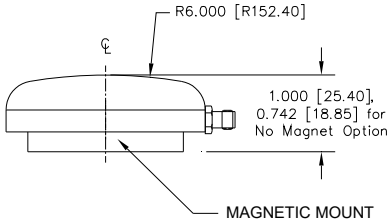
2.6” Diameter, Flat Strong Magnetic (38lbs) Mount Configurations

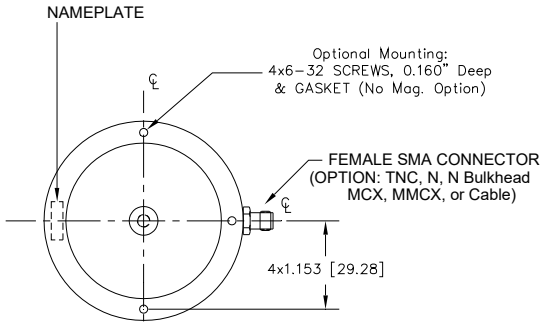


ANTCOM CORPORATION . 367 Van Ness Way, #602 . Torrance, CA 90501 . Tel: (310) 782-1076 . Fax: (310) 782-1086 . E-mail: antennas@antcom.com . http://www.antcom.com

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	LABEL ON THE BOTTOM	April/10/07	S.H







SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 5.0	+ 4.7	+ 3.1	+ 0.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.1	- 1.8	- 1.9	- 5.8	- 3.8	- 3.5
@ 20 ° Elevation:	- 0.6	- 0.3	+ 0.6	- 4.3	- 2.0	- 0.8
@ 30 ° Elevation:	+ 0.9	+ 1.4	+ 1.7	- 3.4	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 4.0	> 3.9	> 2.4	> - 0.9	> 2.7	> 2.2
BEAM WIDTH (3dB):	103 Deg.	114 Deg.	143 Deg.	94 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE: DIAMETER: 2.60 in.[66.04 mm]
HEIGHT: 1.0 in. [25.4 mm], 0.742 [18.85] for No Magnet Option

WEIGHT: 7.00 oz. [0.198 Kg], 4.00 oz. [0.113 Kg] (WITHOUT MAGNET)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: SMA FEMALE
(OPTION: TNC, N, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD	ITEM NO	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
				-	-	5
1		ADHESIVE GASKET	12345G-3M-2G	-	-	3
1						2
1				-	-	1
-2	-1	PARTS LIST				

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		A2: WITH 20 LNA WITHOUT REJECTION FILTERS.
4: MINI ARINC		A4: WITH 40 LNA WITHOUT REJECTION FILTERS.

P/N: 2G1215A-MS-X ← **Color** ↓

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .015, .XXX ± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005 TIR
MACHINED SURFACES 125
DO NOT SCALE DRAWING

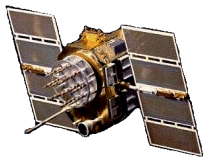
DRAWN
CHECKED M. BOAS 01-05-29
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE
GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 2G1215A-MS-X | REV A
SCALE 1/1 | SHEET 1 OF 1

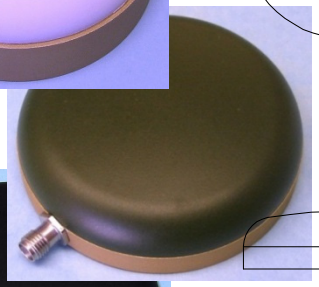
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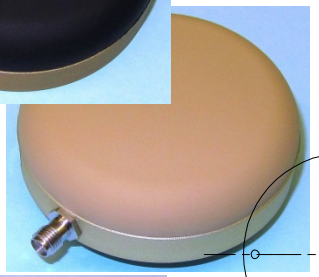
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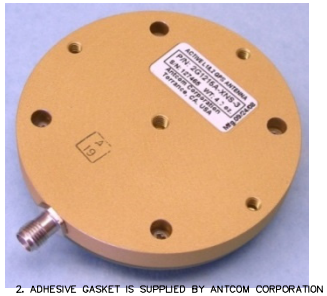
NOTICE OF PROPRIETARY RIGHTS
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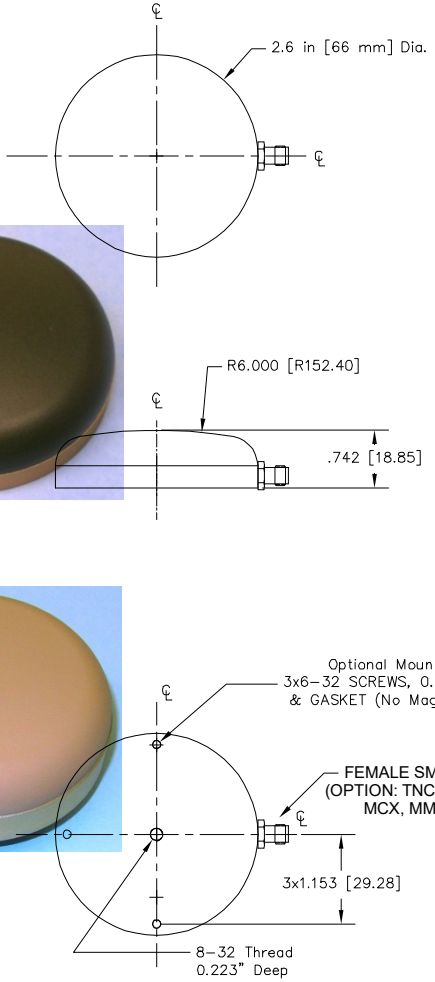












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REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	LABEL ON THE BOTTOM	April/10/07	S.H

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IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 5.0	+ 4.7	+ 3.1	+ 0.7	+ 3.3	+ 4.5
@ 10 ° Elevation	- 2.1	- 1.8	- 1.9	- 5.8	- 3.8	- 3.5
@ 20 ° Elevation	- 0.6	- 0.3	+ 0.6	- 4.3	- 2.0	- 0.8
@ 30 ° Elevation	+ 0.9	+ 1.4	+ 1.7	- 3.4	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 4.0	> 3.9	> 2.4	> - 0.9	> 2.7	> 2.2
BEAM WIDTH (3dB):	103 Deg.	114 Deg.	143 Deg.	94 Deg.	106 Deg.	74 Deg.
AXIAL RATIO	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA,3V/29mA,3.3V/35mA,(2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

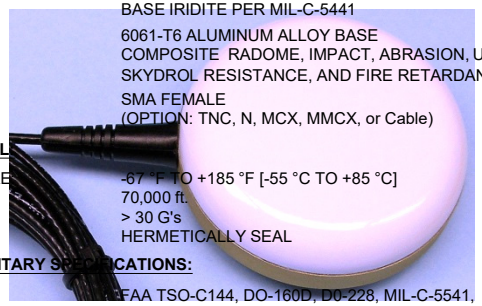
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BASE IRIDITE PER MIL-C-5441

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ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

				–	–	5
1		ADHESIVE GASKET	12345G-3M-2G	–	–	3
1						2
1				–	–	1
–2	–1	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
QUANTITY REQD			PARTS LIST			

SIZE:	FREQ. BAND:	LNA:
1: 2” SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9” SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6” DIA.		P: WITHOUT LNA
3: 3.5” DIA.		A2: WITH 20 LNA WITHOUT REJECTION FILTERS.
4: MINIARINC		A4: WITH 40 LNA WITHOUT REJECTION FILTERS.

P/N: 2G1215A-NS-3

CABLE’S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMC X	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhea d	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX: .030 .XXX: .015 .XXXX: .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED M. BOAS 01-05-29
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

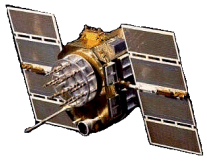
OUTLINE DRAWING
L1/L2 ACTIVE
GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 2G1215A-NS-3 | REV A
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS Antennas
P/N: 2G1215A-XNT-X Rev B for TNC Connector
P/N: 2G1215A-XNS-X for SMA Connector
2.6" Diameter, Flat Mount, Side Connector, Green

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf



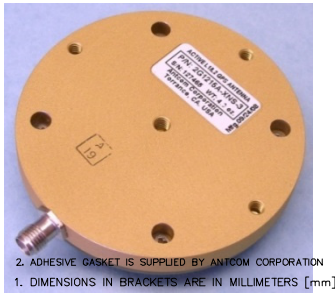
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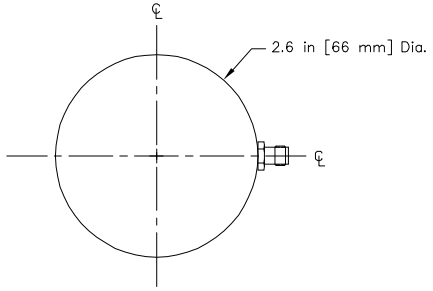


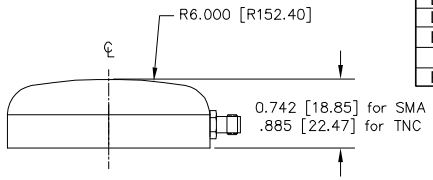


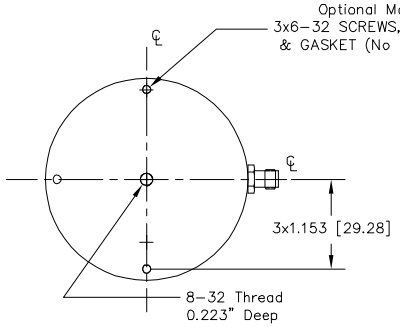


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P/N: 2G1215A-NX-X

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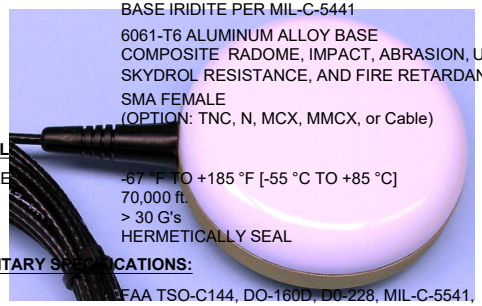
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						4
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DRAWN
CHECKED M. BOAS 01-05-29
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE
GPS ANTENNA

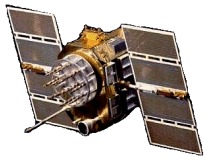
SIZE D | CAGE NO 3CVE1 | DRAWING NO 2G1215A-NX-X | REV B
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

DAGR's Remote Antenna 1 (RA-1), Active L1/L2 GPS Antenna
P/N: 2DG1215A-MNT-3 Rev B for TNC Connector
P/N: 2DG1215A-MNS-3 Rev B for SMA Connector
2.6" Diameter, Flat Strong Magnetic (20lbs) Mount Configurations

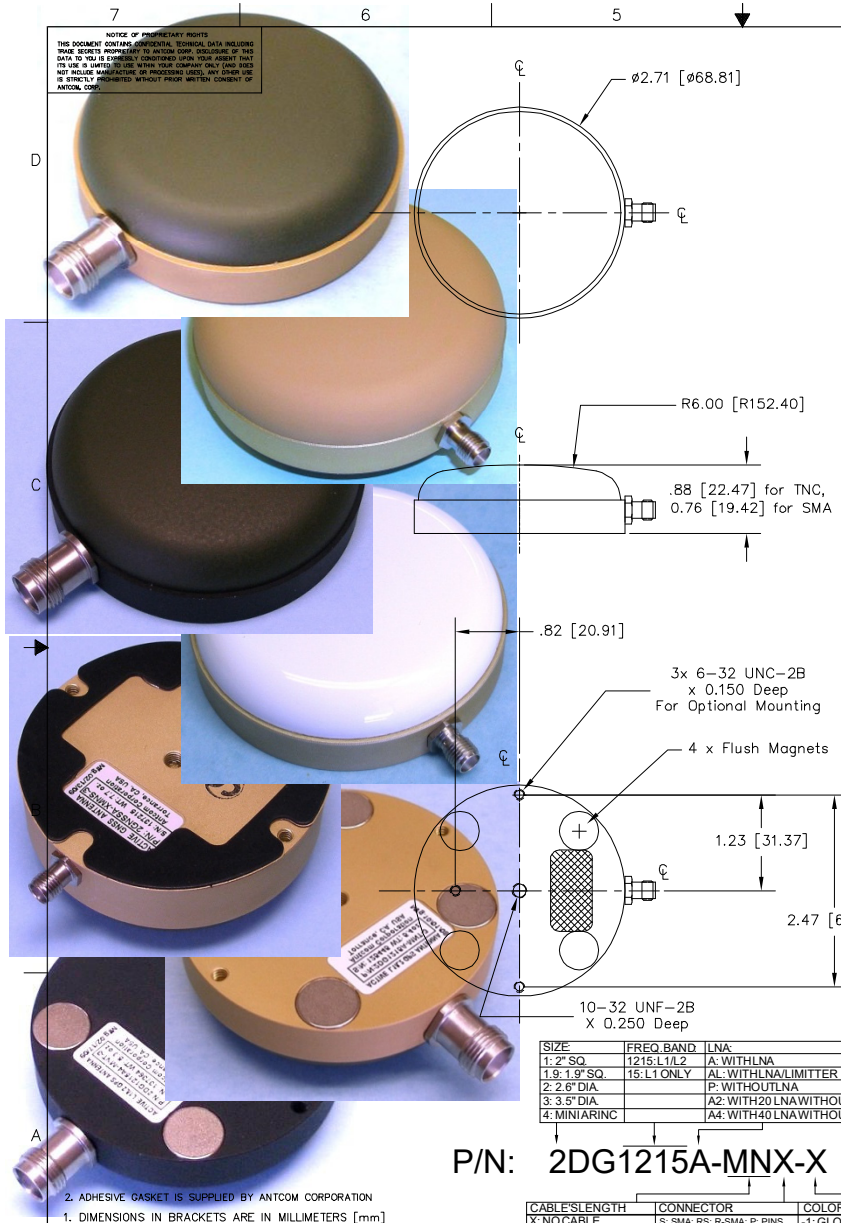
ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf



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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42±15) MHz			L2: (1227.60±15 MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 2.0:1			< 2.0:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 5.0	+ 4.7	+ 3.1	+ 0.7	+ 3.3	+ 4.5
@ 10 ° Elevation	- 2.1	- 1.8	- 1.9	- 5.8	- 3.8	- 3.5
@ 20 ° Elevation	- 0.6	- 0.3	+ 0.6	- 4.3	- 2.0	- 0.8
@ 30 ° Elevation	+ 0.9	+ 1.4	+ 1.7	- 3.4	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 4.0	> 3.9	> 2.4	> - 0.9	> 2.7	> 2.2
BEAM WIDTH (3dB):	103 Deg.	114 Deg.	143 Deg.	94 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	(2.5 to 24)Vdc @ (30 to 50)mA					
REJECTION @ (-50/+50)MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100)MHz	< -65 dB			< -65 dB		
POWER HANDLING	1 Watt CW					

MECHANICAL:

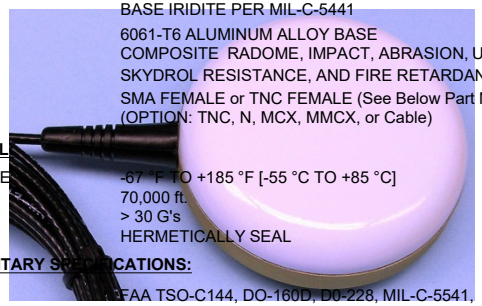
SIZE: DIAMETER: 2.71 in. [68.81 mm]
HEIGHT: 0.76 in. [19.42mm] for SMA; 0.88in [22.47mm] for TNC

WEIGHT: 4.00 oz. [113 g] for SMA; 5.40 oz. [153 g] for TNC

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: SMA FEMALE or TNC FEMALE (See Below Part Number)
(OPTION: TNC, N, MCX, MMCX, or Cable)



ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE	FREQ. BAND	LNA
1: 2" SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		A2: WITH 20 LNA WITHOUT REJECTION FILTERS.
4: MINI ARINC		A4: WITH 40 LNA WITHOUT REJECTION FILTERS.

P/N: 2DG1215A-MNX-X

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
MN: FLUSH MAGNET	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T: TNC, TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH
5	–			–	–
4					
3	1	ADHESIVE GASKET	12345G–3M–2G	–	–
2	1				
1	1			–	–

PARTS LIST

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .030 .XXX ± .010, ANGLES ± 2'. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ ⌀.005. MACHINED SURFACES 125/. DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

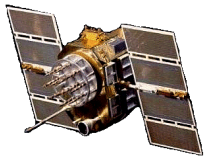
ANTCOM CORP. TORRANCE, CALIFORNIA

L1/L2 ACTIVE GPS ANTENNA
(DAGR Remote Antenna 1, RA–1)

SIZE D | CAGE NO 3CVE1 | DRAWING NO 2DG1215A–MNX–X | REV B
SCALE 1/1 | SHEET 1 OF 1

ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	STRONGER MAGNETS	April/10/07	S.H
	B	THICKER BASE FOR TNC	Oct–01–08	S.H

NMO Connector Option is Now Available for Some Antennas



ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	STRONGER MAGNETS	April/10/07	S.H

ELECTRICAL:

FREQUENCY:	L1: (1575.42±15) MHz			L2: (1227.60±15 MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 2.0:1			< 2.0:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNAGAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 5.0	+ 4.7	+ 3.1	+ 0.7	+ 3.3	+ 4.5
@ 10 ° Elevation	- 2.1	- 1.8	- 1.9	- 5.8	- 3.8	- 3.5
@ 20 ° Elevation	- 0.6	- 0.3	+ 0.6	- 4.3	- 2.0	- 0.8
@ 30 ° Elevation	+ 0.9	+ 1.4	+ 1.7	- 3.4	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 4.0	> 3.9	> 2.4	> - 0.9	> 2.7	> 2.2
BEAM WIDTH (3dB):	103 Deg.	114 Deg.	143 Deg.	94 Deg.	106 Deg.	74 Deg.
AXIAL RATIO	2 dB			2 dB		
LIGHTNINGPROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	(2.5 to 24)Vdc @ (30 to 50)mA					
REJECTION@ (-50/+50)MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100)MHz	< -65 dB			< -65 dB		
POWERHANDLING	1 Watt CW					

MECHANICAL:

SIZE: DIAMETER: 2.71 in. [68.81 mm]
HEIGHT: 0.76 in. [19.42mm]

WEIGHT: 4.00 oz. [113 g]

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: SMA FEMALE
(OPTION: TNC, N, MCX, MMCX, or Cable)

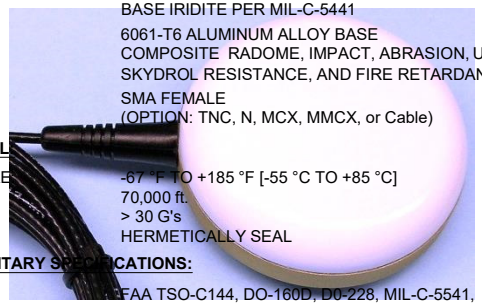
ENVIRONMENTAL

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, DO-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100





SIZE:	FREQ.BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		A2: WITH 20 LNA WITHOUT REJECTION FILTERS.
4: MINIARINC		A4: WITH 40 LNA WITHOUT REJECTION FILTERS.

P/N: 2DG1215A-MNS-X ← Color

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
MN: FLUSH MAGNET	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhea d	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH
5				–	–
3	1	ADHESIVE GASKET	12345G-3M-2G	–	–
2	1				
1	1			–	–

PARTS LIST

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .030, .XXX± .010, ANGLES ± 2'
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

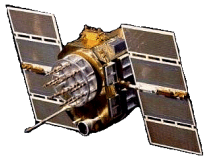
L1/L2 ACTIVE GPS ANTENNA
(DAGR Remote Antenna 1, RA-1)

SIZE D | CAGE NO 3CVE1 | DRAWING NO 2DG1215A-MNS-X | REV A
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Combined Inmarsat & L1/L2 GPS Antennas, P/N: 2G1216P-NS-3

2.6" Diameter, Shoulder Mount Configurations



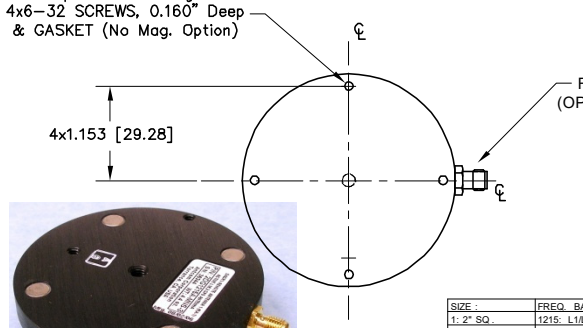
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Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

	L1/L2 GPS				Rx/Tx INMARSAT/GLONASS/IRIDIUM		
FREQUENCY (MHz):	L1: (1575.42 ±12)		L2: (1227.60 ±12)		(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1626)
ANTENNA GAIN (dBic):	3.5" Dia. GP	4 ft G.P.	3.5" Dia. GP	4 ft G.P.	3.5" Dia. GP	Free Space	3.5" Dia. GP
@ 90 ° (ZENITH):	+ 5.5	+ 4.5	+ 3.3	+ 4.9	+ 3.1	+ 3.4	+ 4.3
@ 10 ° Elevation:	- 1.2	- 1.4	- 3.8	- 3.6	- 3.7	- 3.1	- 2.2
@ 20 ° Elevation:	+ 0.3	+ 1.4	- 2.0	- 0.1	- 2.0	- 1.1	- 0.6
@ 30 ° Elevation:	+ 1.8	+ 2.2	- 0.5	- 1.8	- 1.3	0.0	+ 0.8
@ 60 - 90 ° Elevation:	> 4.8	> 3.8	> 2.7	> 3.0	> 2.0	>+2.6	>+3.5
BEAM WIDTH (3dB):	106 Deg.	130 Deg.	106 Deg.	75 Deg.	106 Deg.	106 Deg.	106 Deg.
RADIATION PATTERN:	HEMISPHERICAL						
POLARIZATION:	RHCP						
VSWR:	< 1.5:1						
IMPEDANCE:	50 ohms						
AXIAL RATIO:	2 dB						
LIGHTNING PROTECTION:	DC GROUNDING						
POWER HANDLING:	200 Watts CW (WITHOUT LNA)						

MECHANICAL:

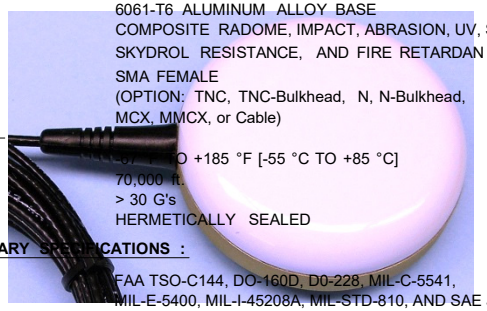
SIZE: DIAMETER: 2.60 in.[66.04 mm]
HEIGHT: 0.657 in. [16.69 mm], .49 9 in. [12.67mm] (No Radome op tion)

WEIGHT: 7.00 oz. [0.198 Kg], 4.00 oz. [0.113 Kg] (WITHOUT MAGNET)

FINISH: SKYDROL RESIS TANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIA L: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,
SKYDROL RESISTANCE, AND FIRE RETARDAN T

CONNECTOR: SMA FEMALE
(OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead,
MCX, MMCX, or Cable)



ENVIRONMENTAL:

TEMPERATURE: [illegible] TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS :

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541,
MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD	-1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
							5
1		ADHESIVE GASKET	12345G-3M-1G	–	–	–	3
1				–			2
1				–	–	–	1

PARTS LIST

SIZE :	FREQ. BAND :	LNA :
1: 2" SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.	1216: L1/L2 &	P: WITHOUT LNA
3: 3.5" DIA.	RX/TX INMARSA T	PL: WITHOUT LNA and THINNER (0.58" THICK)
4: MINI ARINC	GLONASS/IRIDIUM	

P/N: 2G1216P-NS-3

CABLE'S LENGTH :	CONNECTOR :	COLOR :
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: No Magnet	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN.)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125

DRAWN
CHECKED M. BOAS OCT-30-03
ENGINEER
APPROVED S. HUYNH OCT-30-03
DWG FILE NO

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

2.6" Dia. Shoulder Mount, L1/L2 GPS/INMARSAT/ GLONASS/IRIDIUM ANTENNA

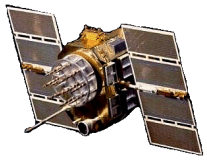
SIZE D | CAGE NO 3CVE1 | DRAWING NO 2G1216P-NS-3 | REV –
SCALE 1/1 | SHEET 1 OF 1

ZONE	REV	DESCRIPTION	DATE	APPROVED

NMO Connector Option is Now Available for Some Antennas

Glass Mount L1/L2 GPS Antennas, P/N: 2G1215A-GMS-X

2.6" Diameter, Glass/Magnetic Mount Configurations

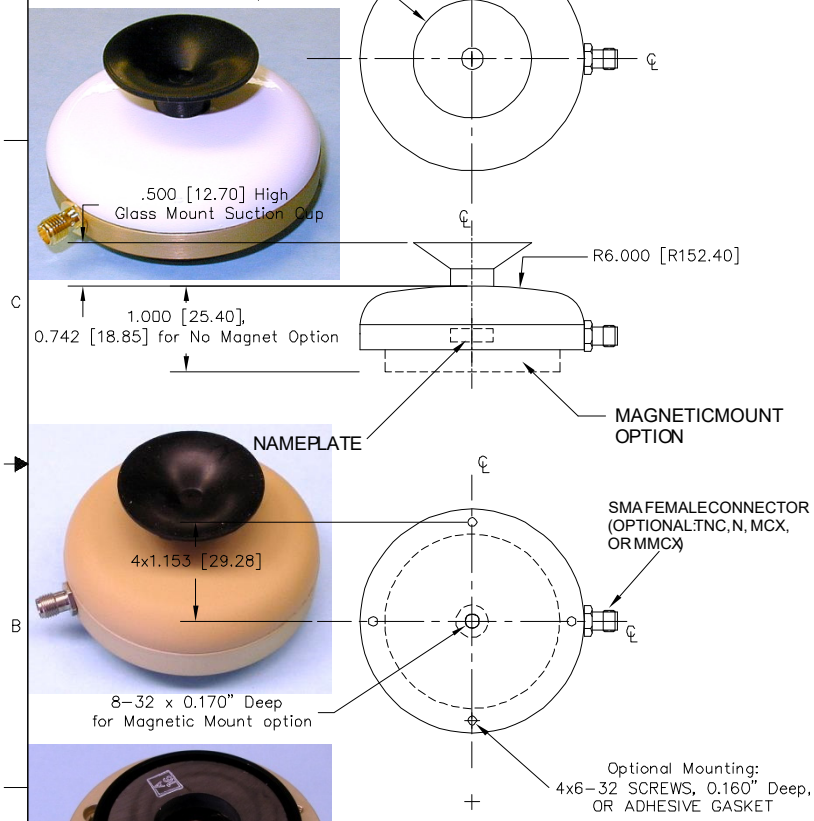


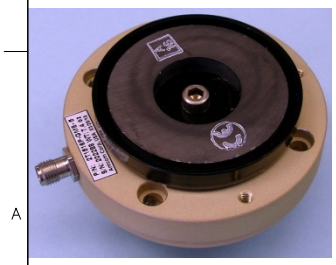
ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 5.0	+ 4.7	+ 3.1	+ 0.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.1	- 1.8	- 1.9	- 5.8	- 3.8	- 3.5
@ 20 ° Elevation:	- 0.6	- 0.3	+ 0.6	- 4.3	- 2.0	- 0.8
@ 30 ° Elevation:	+ 0.9	+ 1.4	+ 1.7	- 3.4	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 4.0	> 3.9	> 2.4	> - 0.9	> 2.7	> 2.2
BEAM WIDTH (3dB):	103 Deg.	114 Deg.	143 Deg.	94 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	DIAMETER: 2.60 in.[66.04 mm] HEIGHT: 1.0 in. [25.4 mm], 0.742 [18.85] for No Magnet Option
WEIGHT:	7.00 oz. [0.198 Kg], 4.00 oz. [0.113 Kg] (WITHOUT MAGNET)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR :	SMA FEMALE (OPTION: TNC, N, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE :	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE :	70,000 ft.
VIBRATION :	> 30 G's
LEAKAGE :	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE :	FREQ. BAND :	LNA :
1: 2" SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		A2: WITH 20 LNA WITHOUT REJECTION FILTERS.
4: MINI ARINC		A4: WITH 40 LNA WITHOUT REJECTION FILTERS.

P/N: 2G1215A-GMS-1

MOUNTING/CABLE	CONNECTOR :	COLOR :
X: BOTTOM CONNECTOR	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
#N: NO MAGNET	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#M: WITH MAGNET	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
#G: WITH GLASS MOUNT	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
#GM: GLASS/MAGNETIC MOUNT		
#: CABLE LENGTH, EMTY FOR NO CABLE		

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH
5				–	–
3	1	ADHESIVE GASKET	12345G–3M–2G	–	–
2	1				
1	1			–	–

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .030 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005 126. MACHINED SURFACES. DO NOT SCALE DRAWING.

DRAWN
CHECKED M. BOAS 01–05–29
ENGINEER
APPROVED S. HUYNH 01–05–29
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

GLASS/MAGETIC MOUNT L1/L2 ACTIVE or PASSIVE GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 2G1215A–GMS–X | REV –

SCALE 1/1 SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STAMP IS RED

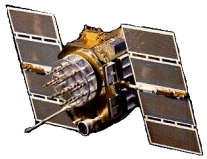
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New 2-Ports Antenna

2.6in Dia. Magnetic Mount Configuration

Also Available in Other Colors And Connectors

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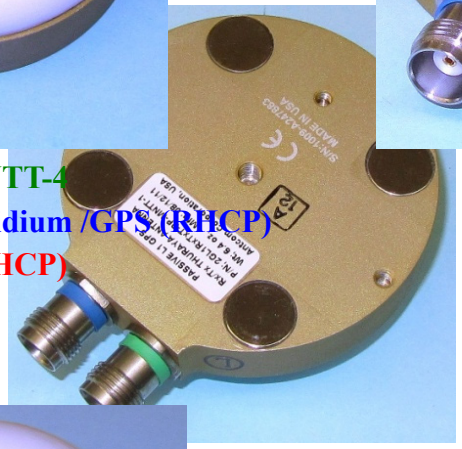
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P/N: 2GW51215A-MNTT-1,
Active L1/L2 GPS
and
Passive C-Band



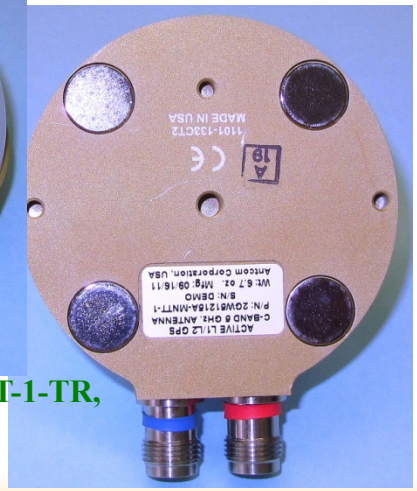
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Passive Inmarsat/Iridium /GPS (RHCP)
Passive Thuraya (LHCP)



P/N: 2GINT-AA-MNTT-4
Active Rx
Inmarsat/
Iridium/GPS
(RHCP) &
Active Rx
Thuraya (LHCP)







P/N: 2GWGPS-LSCKuA-MNTT-1-TR,
Active L1/L2 GPS and
Passive L/S/C/Ku-Band

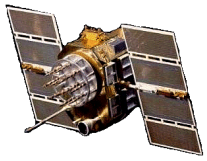




P/N: 2GL1L2GSM8-AP-24NS-3,
Active L1/L2 GPS
and
Passive GSM

Active L1/L2 GPS & Active XM Antenna

P/N: 3G121523RL-AA-XTT-1: 3.5" Diameter, Conformal Configurations



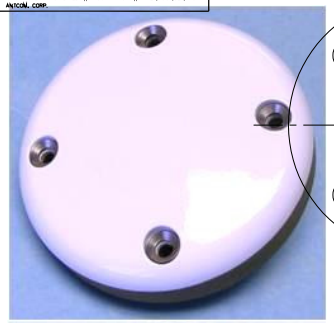
ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

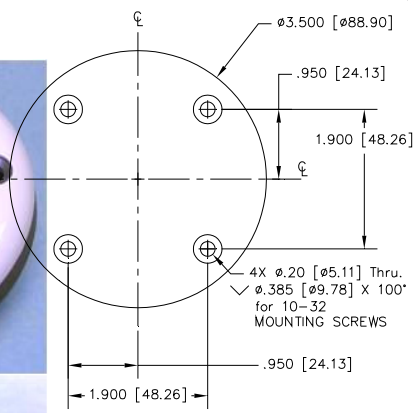
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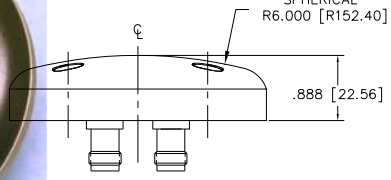
REVISIONS

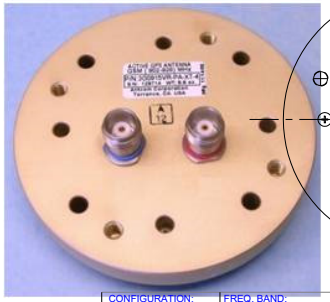
ZONE	REV	DESCRIPTION	DATE	APPROVED

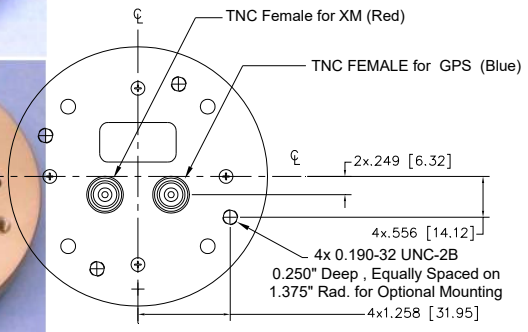












SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz		XM: (2338.75 +/- 10) MHz
RADIATION PATTERN:	HEMISPHERICAL				
POLARIZATION:	RHCP		RHCP		LHCP
VSWR:	< 2.0:1		< 2.0:1		< 2.0:1
IMPEDANCE:	50 ohms		50 ohms		50 ohms
ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 5.0	+ 3.1	+ 0.7	+ 4.5	+ 4.6
@ 10 ° Elevation:	- 2.1	- 1.9	- 5.8	- 3.5	- 1.1
@ 20 ° Elevation:	- 0.6	+ 0.6	- 4.3	- 0.8	+2.2
@ 30 ° Elevation:	+ 0.9	+ 1.7	- 3.4	+ 1.4	+2.2
@ 60 - 90 ° Elevation:	> 4.0	> 2.4	> - 0.9	> 2.2	—
BEAM WIDTH (3dB):	103 Deg.	143 Deg.	94 Deg.	74 Deg.	—
AXIAL RATIO:	2 dB		2 dB		2 dB
LIGHTNING PROTECTION:	DC GROUNDING				
LNA GAIN:	33 dB		35 dB		33 dB
LNA NOISE FIGURE:	2 dB		2 dB		2 dB
LNA P1dB Out:	+13 dBm		+13 dBm		+13 dBm
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA				
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)				

MECHANICAL:

SIZE:	DIAMETER: 3.50 in.[88.90 mm] HEIGHT: 0.888 in. [23 mm]
WEIGHT:	9.2 oz. (261g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	TNC FEMALE (OPTION: SMA, TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, SMP, BNC, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

FAA TSO-C144, DO-160D, D0-228, MIL-C-5541,
MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

CONFIGURATION:	FREQ. BAND:	GPS/WSI LNA:	CABLE'S LENGTH:	GPS/IRIDIUM/WSI CON.:	COLOR:
1: 2" SQ. (FLAT)	1625: Tx/Rx	A: WITH LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	25: Rx ONLY	P: WITHOUT LNA	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	16: Tx ONLY		#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)	151623: L1L2 GPS/XM (SIRIUS)		R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)	121523: L1/L2 GPS/IRIDIUM/XM				
53: (HELIX ROD)	151615: GPS/IRIDIUM/WSI				
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

P/N: 3G121523RL-AA-XTT-1

QUANTITY REQD		DESCRIPTION	PART NO	FINISH	ITEM NO
		PARTS LIST			
4		MONTING SCREWS: 10-32, 1", Item 579	J507C1032R16	–	3
4		WASHER, CUSTOM C'SINK	3G15P1001-6		2
1		GASKET	3G15P1001-3G	–	1

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015 .XXX± .010, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH Oct-24-11 | CAD FILE NO | DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA

3.5" Dia., Active L1L2-GPS & Active XM ANTENNA

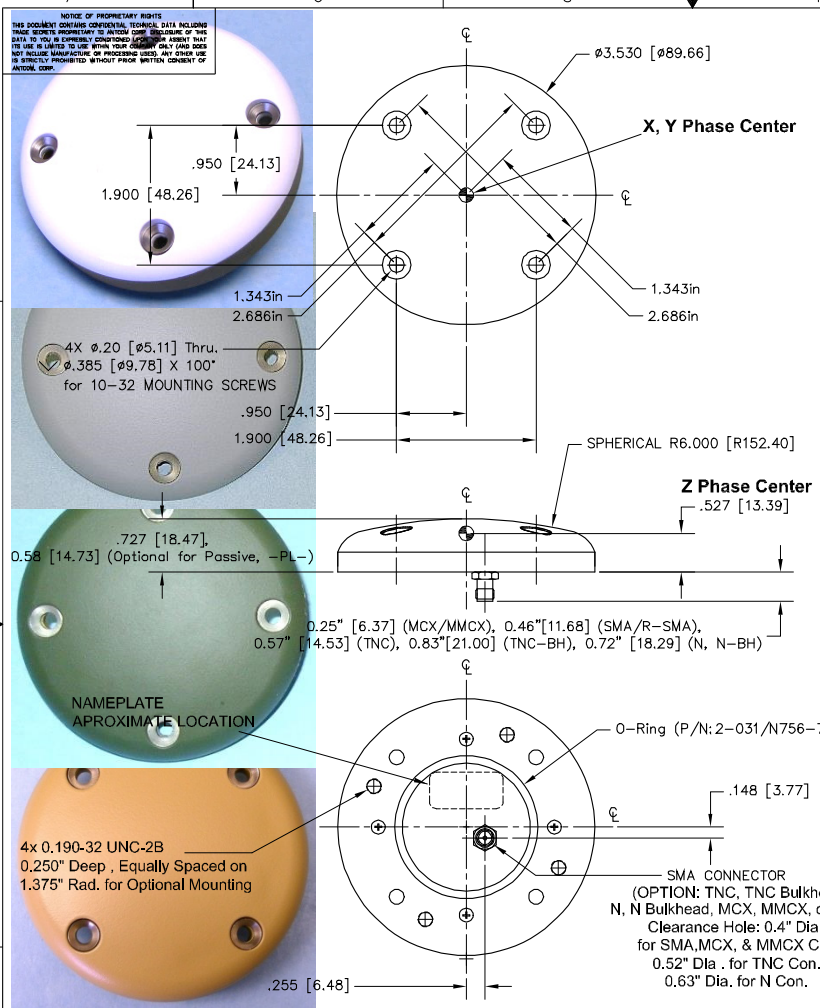
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SCALE 1/1 | SHEET 1 OF 1

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NMO Connector Option is Now Available for Some Antennas

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SPECIFICATIONS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	Power Handling for Passive Ant.	04/04/11	S.H
	B	New Diameter	07/28/15	S.H

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	16 in G.P.	4 ft G.P.	Free Space	16 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 0.4	+ 3.5	- 3.5	+ 1.5	+ 4.9
@ 10 ° Elevation:	- 1.8	- 3.2	- 2.0	- 3.5	- 4.0	- 3.5
@ 20 ° Elevation:	- 0.3	- 1.0	+ 0.8	- 2.0	- 2.0	- 0.1
@ 30 ° Elevation:	+ 1.4	+ 0.9	+ 1.8	- 0.5	0.0	1.8
@ 60 - 90 ° Elevation:	> 3.9	+3.4/+0.4	> 2.8	> 2.7	+2.4/+1.9	> 3.0
BEAM WIDTH (3dB):	114 Deg.	118 Deg.	139 Deg.	106 Deg.	111 Deg.	75 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	Passive: 200w, Active: 1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	DIAMETER: 3.53 in.[89.66 mm] HEIGHT: 0.727 In. [18.47 mm], 0.58" [14.73] (Optional for Passive)
WEIGHT:	6.8 oz. (191 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD		DESCRIPTION	PART NO	ITEM NO
4	–	MOUNTING SCREWS: 10-32, 3/4"	MS24693C274	5
A/R	–	WASHER, CUSTOM C'SINK	3G15P100-3G	3
1	1	O-Ring, or GASKET	2-031/N756-75, OR 3G15P100-3G	1
-2	-1	PARTS LIST		

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (HEIGHT = 0.58")
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 3G1215A-XS-1

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RO: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: DESERT TAN #33446 PER FED-STD-595B

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XXX ±.010, .XXXX ±.005. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS AND BREAK EXTERNAL EDGES .015 MAX. FILLETS R .005 TO R .015. SCREW THREADS PER MIL-S-7742. DIA'S ON A COMMON CENTERLINE. MACHINED SURFACES.

DESIGNED S. HUYNH May-29-01; UPDATED S. HUYNH July-28-15; UPDATE DRAWN P. TRAN July-28-15; APPROVED S. HUYNH July-28-15

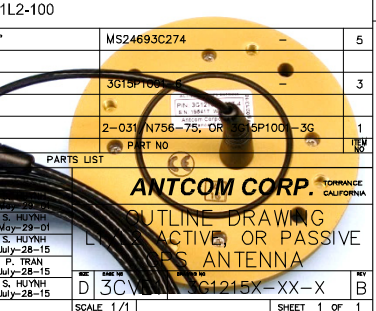
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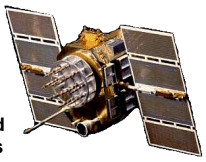
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SCALE 1/1 | SHEET 1 OF 1

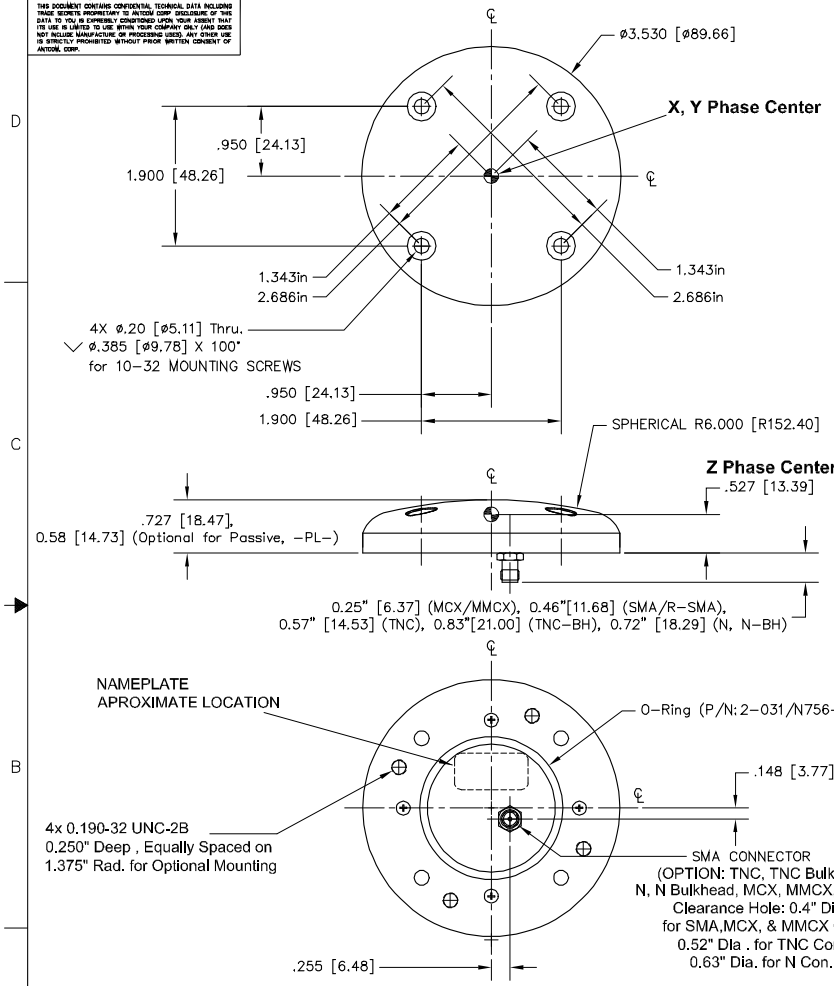


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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	16 in G.P.	4 ft G.P.	Free Space	16 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 0.4	+ 3.5	+ 3.3	+ 1.5	+ 4.9
@ 10 ° Elevation:	- 1.8	- 3.2	- 2.0	- 3.8	- 4.0	- 3.6
@ 20 ° Elevation:	- 0.3	- 1.0	+ 0.8	- 2.0	- 2.0	- 0.1
@ 30 ° Elevation:	+ 1.4	+ 0.9	+ 1.8	- 0.5	0.0	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	+3.4/+0.4	> 2.8	> 2.7	+2.4/+1.5	> 3.0
BEAM WIDTH (3dB):	114 Deg.	118 Deg.	139 Deg.	106 Deg.	111 Deg.	75 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	Passive: 200w, Active: 1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	DIAMETER: 3.53 in.[89.66 mm] HEIGHT: 0.727 In. [18.47 mm], 0.58" [14.73] (Optional for Passive)
WEIGHT:	6.8 oz. (191 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	Power Handling for Passive Ant.	04/04/11	S.H
	B	New Diameter	07/28/15	S.H

QUANTITY REQD	ITEM NO	DESCRIPTION	PART NO		ITEM NO
PARTS LIST					
4	–	MOUNTING SCREWS: 10-32, 3/4"	MS24693C274	–	5
A/R	–	WASHER, CUSTOM C'SINK	3G15P1001-6	–	3
1	1	O-Ring, or GASKET	2-031/N756-75, OR 3G15P1001-3G		1
–2	–1	DESCRIPTION	PART NO		ITEM NO

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (HEIGHT = 0.58")
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 3G1215A-XS-4

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RO: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: DESERT TAN #33446 PER FED-STD-595B

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .01, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø ø.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	May-29-01
ORIGINALLY DESIGNED	S. HUYNH	May-29-01
UPDATED	S. HUYNH	July-28-15
UPDATE DRAWN	P. TRAN	July-28-15
APPROVED	S. HUYNH	July-28-15

ANTCOM CORP. TORRANCE CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE, OR PASSIVE
GPS ANTENNA

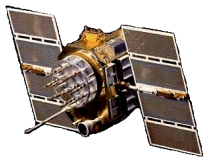
SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	3G1215A-XS-4	B

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS Antennas, P/N: 3G1215A2-XT-X

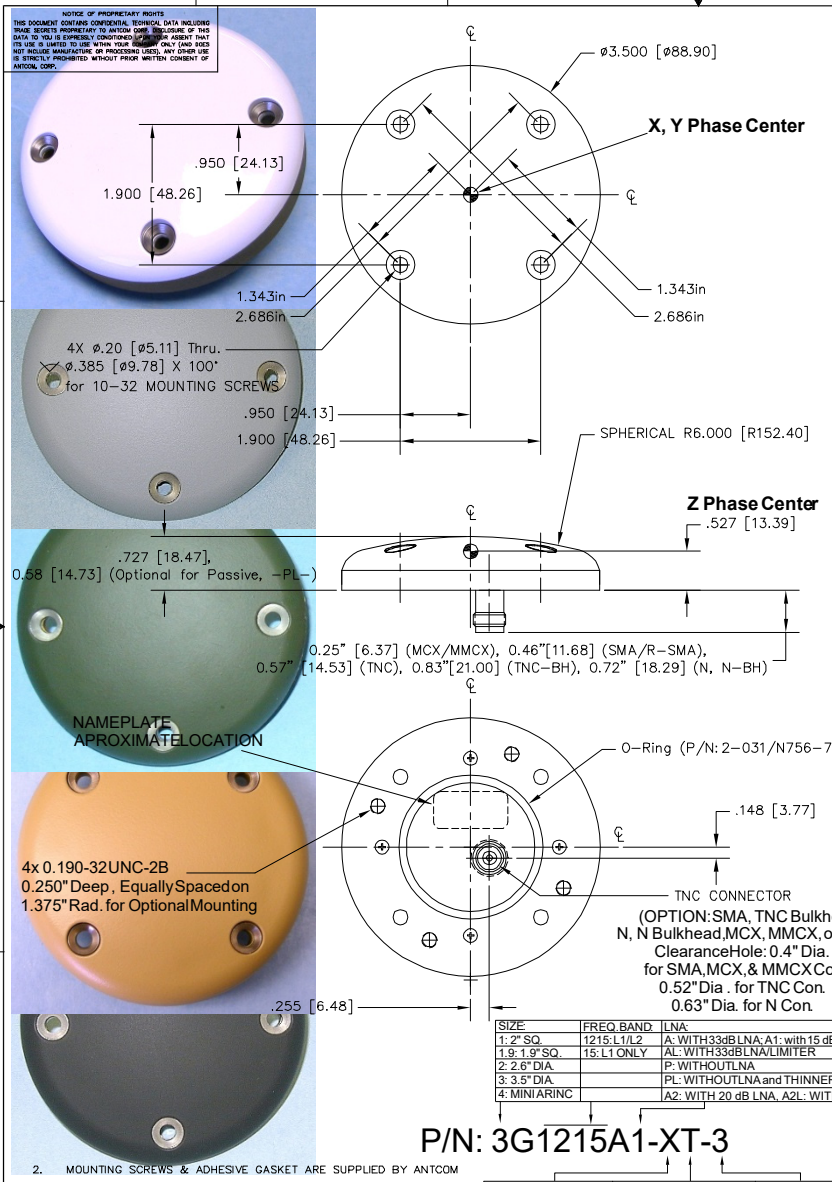
3.5” Diameter Configurations, Front/back Mount



Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SIZE	FREQ. BAND	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH 33dB LNA; A1: with 15 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH 33dB LNA/LIMITER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (HEIGHT= 0.58")
4: MINI ARINC		A2: WITH 20 dB LNA, A2L: WITH 20dB LNA/LIMITER

P/N: 3G1215A1-XT-3

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; RD: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTER LESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTER LESS BLACK #37038 PER FED-STD-595B

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
NOTES: UNLESS OTHERWISE SPECIFIED:

SPECIFICATIONS

ELECTRICAL: 2.5V/20mA, 3V/20mA, 3.3V/20mA, (2.5-24)V/<30mA

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	16 in G.P.	4 ft G.P.	Free Space	16 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 0.4	+ 3.5	+ 4.3	+ 1.5	+ 4.9
@ 10 ° Elevation	- 1.8	- 3.2	- 2.0	- 0.8	- 4.0	- 3.6
@ 20 ° Elevation	- 0.3	- 1.0	+ 0.8	- 2.0	- 2.0	- 0.1
@ 30 ° Elevation	+ 1.4	+ 0.9	+ 1.8	- 0.5	0.0	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	+3.4/+04	> 2.8	> 2.7	+2.4/+16	> 3.0
BEAM WIDTH (3dB):	114 Deg.	118 Deg.	139 Deg.	106 Deg.	111 Deg.	75 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	15 dB					
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	(3-5)V/<19mA					
REJECTION@ (-50/+50)MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100)MHz	< -65 dB			< -65 dB		
POWER HANDLING	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	DIAMETER: 3.50 in.[88.90 mm] HEIGHT: 0.727 in. [18.47 mm], 0.58" [14.73] (Optional for Passive)
WEIGHT:	6.8 oz. (191 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

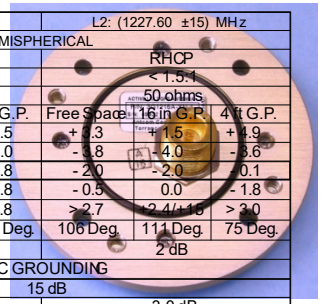
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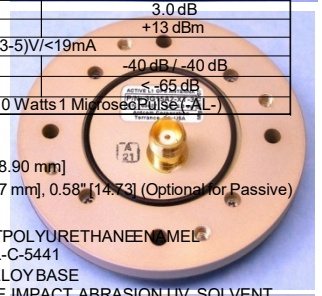
TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100









REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

QUANTITY REQD		DESCRIPTION	PART NO	ITEM NO
		PARTS LIST		
4	–	MOUNTING SCREWS: 10-32, 3/4"	MS24693C274	5
A/R	–	WASHER, CUSTOM C'SINK	3G15P1001-3G	3
1	1	O-Ring, or GASKET	2-031/N756-75, or 12345G-3M-3G	1
-2	-1			

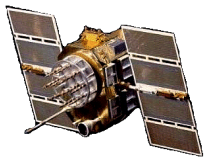
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005
TOLERANCE SYM PER
REMOVE ALL BURRS BREAK EXTERNAL FILLETS R .005 TO .015 SCREW THREADS PER DIA'S ON A COMM
MACHINED SURFACE
DO NOT SCALE DRAWING

CHECKED	M. BOAS	01-05-29
ENGINEER		
APPROVED	S. HUYNH	01-05-29
CAD FILE NO		

ANTCOM CORP. TORRANCE, CALIFORNIA
OUTLINE DRAWING
ACTIVE, OR PASSIVE
GPS ANTENNA
SIZE D | CAGE CODE 3CVE1 | DWG NO 3G1215A1-XT-X | REV –
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

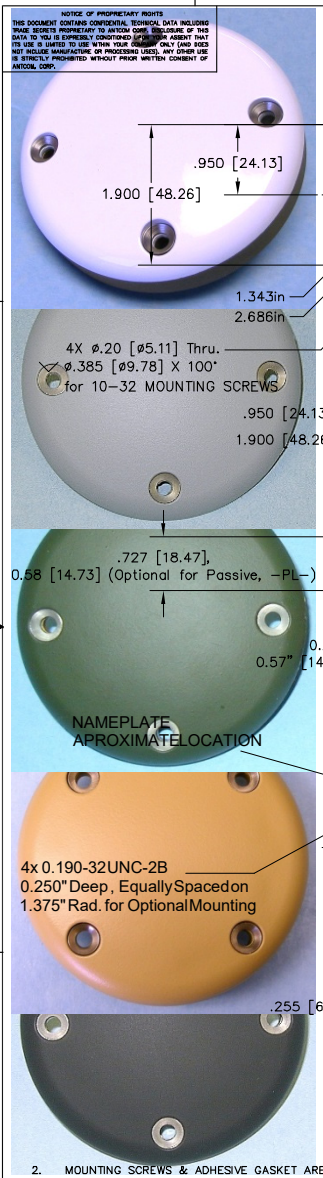
Active or Passive L1/L2 GPS Antennas, P/N: 3G1215X-XX-X-C
3.5" Diameter Configurations, Front/back Mount



Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
FREQUENCY:						
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNAGAIN (dBic):	Free Space	16 in G.P.	4 ft G.P.	Free Space	16 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 0.4	+ 3.5	+ 3.3	+ 1.5	+ 4.9
@ 10 ° Elevation	- 1.8	- 3.2	- 2.0	- 3.8	- 4.0	- 3.6
@ 20 ° Elevation	- 0.3	- 1.0	+ 0.8	- 2.0	- 2.0	- 0.1
@ 30 ° Elevation	+ 1.4	+ 0.9	+ 1.8	- 0.5	0.0	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	+3.4/+04	> 2.8	> 2.7	+2.4/+15	> 3.0
BEAM WIDTH (3dB):	114 Deg.	118 Deg.	139 Deg.	106 Deg.	111 Deg.	75 Deg.
AXIAL RATIO	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	DIAMETER: 3.50 in.[88.90 mm] HEIGHT: 0.727 in. [18.47 mm], 0.58" [14.73] (Optional for Passive)
WEIGHT:	6.8 oz. (191 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

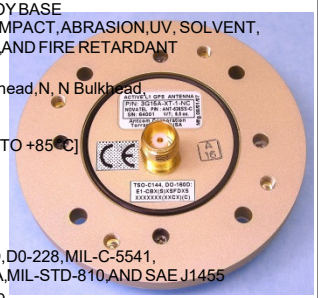
ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100



2-031/N756-75, or 12345G-3M-3G

QUANTITY REQD	ITEM NO	DESCRIPTION	PART NO	ITEM NO
4	-	MOUNTING SCREWS: 10-32, 3/4"	MS24693C274	5
A/R	-	WASHER, CUSTOM C'SINK	3G15P1001-6	3
1	1	O-Ring, or GASKET	2-031/N756-75, OR 3G15P1001-3G	1
-2	-1	PARTS LIST		

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4 WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (HEIGHT= 0.58")
4: MINIATURE		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 3G1215P-XT-1-C

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; RD: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG.; N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTER LESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTER LESS BLACK #37038 PER FED-STD-595B
		-5: TAN #: FS 23446 or 33446, FED-STD-595

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX ± .015 .XXX ± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ ⌀.005
MACHINED SURFACES 125/
DO NOT SCALE DRAWING

DRAWN
CHECKED M. BOAS 01-05-29
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE, OR PASSIVE
GPS ANTENNA

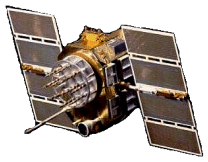
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SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS Antennas

P/N: 3G1215A-XS-1-PGPS

3.5” Diameter Configurations, Other Connector and Color Options are Available



Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

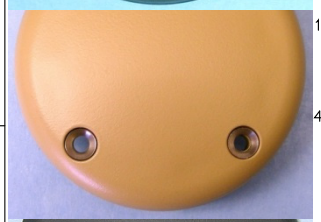
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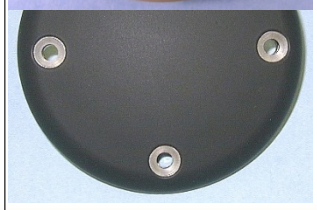
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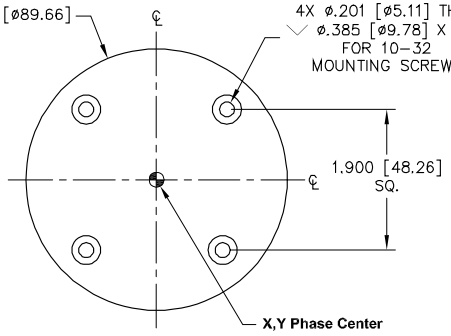


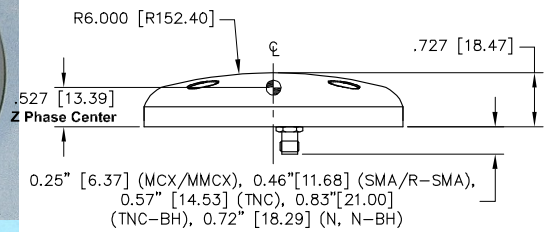


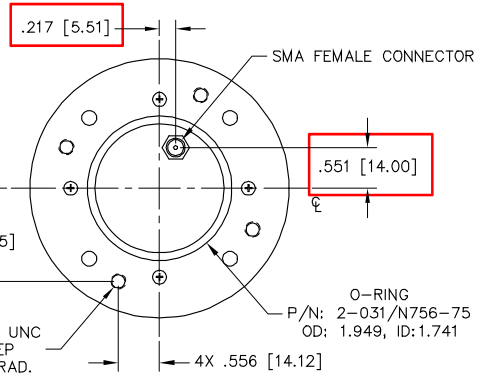












SPECIFICATIONS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	16 in G.P.	4 ft G.P.	Free Space	16 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 0.4	+ 3.5	+ 3.3	+ 1.5	+ 4.9
@ 10 ° Elevation:	- 1.8	- 3.2	- 2.0	- 3.8	- 4.0	- 3.6
@ 20 ° Elevation:	- 0.3	- 1.0	+ 0.8	- 2.0	- 2.0	- 0.1
@ 30 ° Elevation:	+ 1.4	+ 0.9	+ 1.8	- 0.5	0.0	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	+3.4/+0.4	> 2.8	> 2.7	+2.4/+1.5	> 3.0
BEAM WIDTH (3dB):	114 Deg.	118 Deg.	139 Deg.	106 Deg.	111 Deg.	75 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	Passive: 200w, Active: 1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	DIAMETER: 3.53 in.[89.66 mm] HEIGHT: 0.727 in. [18.47 mm]
WEIGHT:	6.8 oz. (191 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	LNA:
1: 2” SQ.	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9” SQ.	A1: WITH LNA/LIMITER
2: 2.6” DIA.	P: WITHOUT LNA
3: 3.5” DIA.	P1: WITHOUT LNA and THINNER (HEIGHT = 0.58”)
4: MINI ARINC	A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 3G1215A-XS-1-PGPS

FREQ. BAND:	CONNECTOR:	COLOR:
1215: L1/L2	S: SMA; RO: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
15: L1 ONLY	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	N, NB: N, N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: DESERT TAN #33446 PER FED-STD-595B

ITEM NO.	QUANTITY REQD	-2	-1	DESCRIPTION	PART NO	ITEM NO.
				PARTS LIST		
3	4	–	–	MOUNTING SCREWS: 10–32, 3/4”	MS24693C274	3
	A/R	–	–	WASHER, CUSTOM C’SINK	3G15P1001–6	
1	1	1	–	O–Ring, or GASKET	2–031/N756–75, OR 3G15P1001–3G	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

ORIGINALLY DRAWN	S. HUYNH	July–28–15
ORIGINALLY DESIGNED	S. HUYNH	July–28–15
UPDATED	S. HUYNH	Dec–07–16
UPDATE DRAWN	P. TRAN	Dec–07–16
APPROVED	S. HUYNH	Dec–07–16

ANTCOM CORP. TORRANCE CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE, OR PASSIVE
GPS ANTENNA

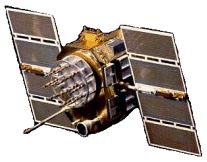
SIZE	CAGE NO.	DRAWING NO.	REV
D	3CVE1	3G1215A–XS–1–PGPS	–

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

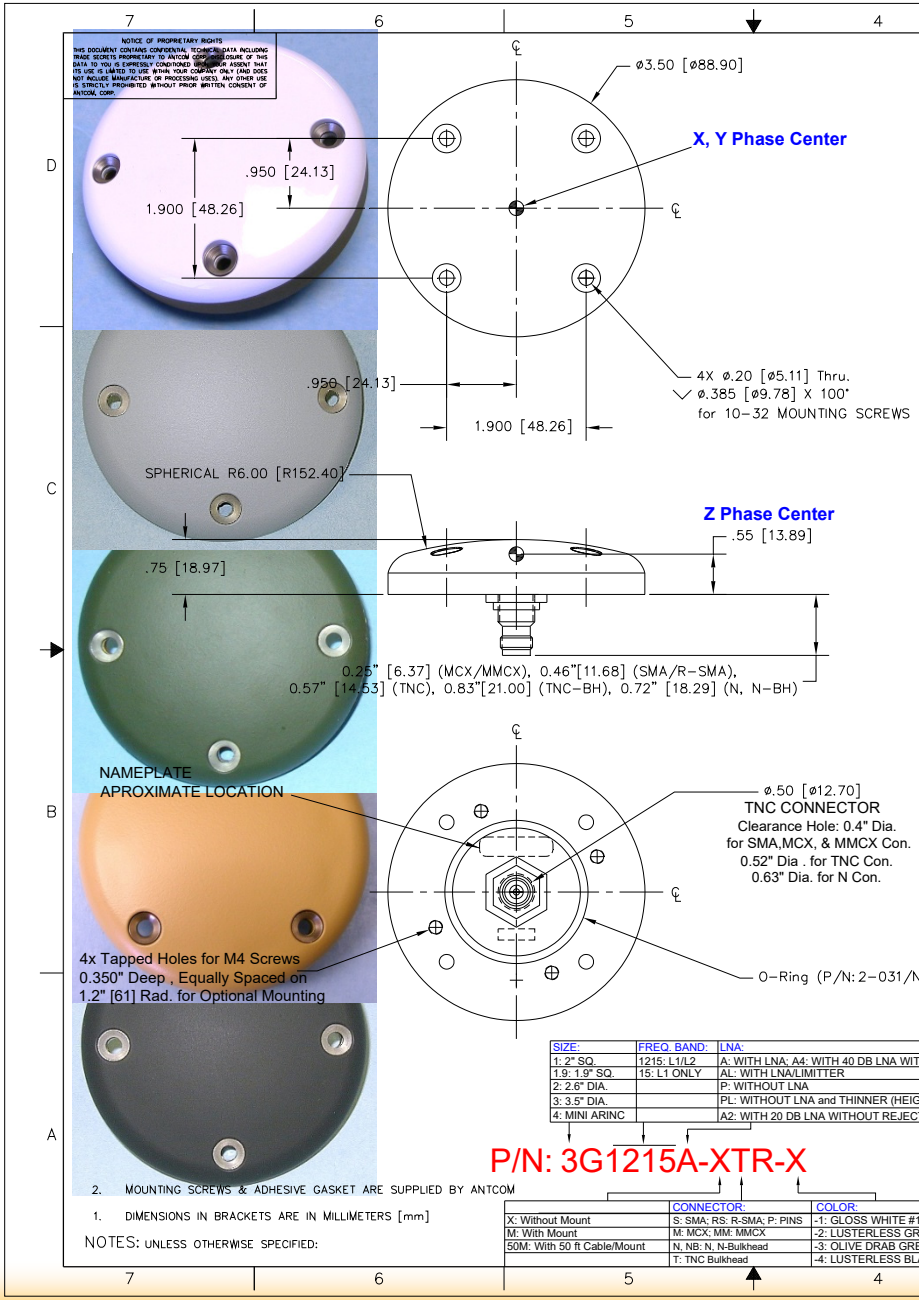
Active L1/L2 GPS Antennas, P/N: 3G1215A-XTR-X, REV A

3.5” Diameter, Configurations



Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

ANTCOM CORPORATION . 367 Van Ness Way, #602 . Torrance, CA 90501 . Tel: (310) 782-1076 . Fax: (310) 782-1086 . E-mail: antennas@antcom.com . http://www.antcom.com



SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz		L2: (1227.60 ±15) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 3.5	+ 3.3	+ 4.9
@ 10 ° Elevation:	- 1.8	- 2.0	- 3.8	- 3.6
@ 20 ° Elevation:	- 0.3	+ 0.8	- 2.0	- 0.1
@ 30 ° Elevation:	+ 1.4	+ 1.8	- 0.5	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	> 2.8	> 2.7	> 3.0
BEAM WIDTH (3dB):	114 Deg.	139 Deg.	106 Deg.	75 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING			
LNA GAIN:	33 dB		35 dB	
LNA NOISE FIGURE:	3.0 dB		3.0 dB	
LNA P1dB Out:	+13 dBm		+13 dBm	
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA			
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB		-40 dB / -40 dB	
@ (-100/+100) MHz	< -65 dB		< -65 dB	
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)			

MECHANICAL:

SIZE: DIAMETER: 3.50 in.[88.90 mm]
HEIGHT: 0.75 in. [18.97 mm], 0.58" [14.73] (Optional for Passive)

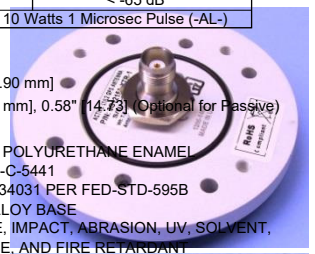
WEIGHT: 7.90 oz. (224 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

COLOR: OLIVE DRAB GREEN #34031 PER FED-STD-595B

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

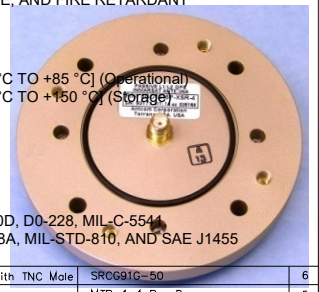
CONNECTOR: TNC CONNECTOR



ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C] (Operational)
-85 °F TO +302 °F [-65 °C TO +150 °C] (Storage)

ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL
HAILSTONES: < 0.5" Dia.



FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541,
MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ITEM NO	PART NO	DESCRIPTION	QTY
6	SRCG91C-50	50 Ft Belden 9104 Cable with TNC Male	1
5	MTR-1-1 Rev D	Antenna Mount	1
4	J507C1032R12, or 93085A831	MOUNTING SCREWS: 10-32, 3/4"	4
3	3G15P1001-70	WASHER, CUSTOM C'SINK	4
2	92015A139/7289A18	M8 Set Screw/Allen Wrench	1/1
1	3G15P1001-3G, 2-031/N756-75	GASKET or O-RING	1

PARTS LIST

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (HEIGHT =0.58")
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 3G1215A-XTR-X

	CONNECTOR:	COLOR:
X: Without Mount	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: With Mount	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
50M: With 50 ft Cable/Mount	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
	T: TNC Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .015, .XXX ± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

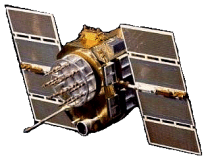
DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH 10-24-11
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA
L1/L2 ACTIVE GPS ANTENNA/ ANTENNA KIT
SIZE D | CAGE NO 3CVE1 | DRAWING NO 3G1215A-XTR-X | REV A
SCALE 1/1 | SHEET 1 OF 1

ZONE	REV	DESCRIPTION	DATE	APPROVED

NMO Connector Option is Now Available for Some Antennas

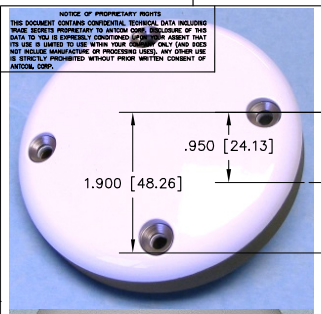
Active or Passive L1/L2 GPS Antenna/Antenna Kit, P/N: 3G1215X-XXR-X
P/N: 3G1215A-MTR-5 (P/N:4201246-005)
3.5” Diameter, Pipe Mount/Cable Configuration

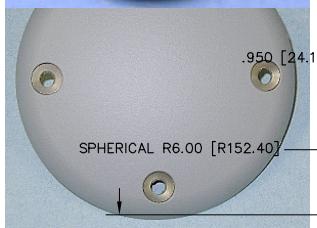


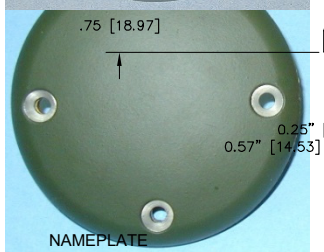
ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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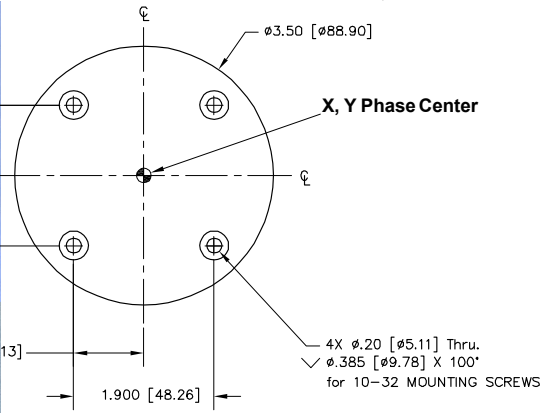
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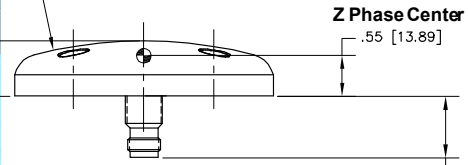


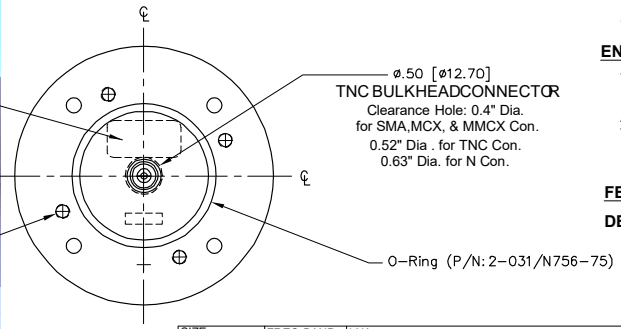












SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz		L2: (1227.60 ±15) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNAGAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 3.5	+ 3.3	+ 4.9
@ 10 ° Elevation	- 1.8	- 2.0	- 3.8	- 3.6
@ 20 ° Elevation	- 0.3	+ 0.8	- 2.0	- 0.1
@ 30 ° Elevation	+ 1.4	+ 1.8	- 0.5	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	> 2.8	> 2.7	> 3.0
BEAMWIDTH(3dB):	114 Deg.	139 Deg.	106 Deg.	75 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNINGPROTECTION:	DC GROUNDING			
LNA GAIN:	33 dB		35 dB	
LNA NOISE FIGURE:	3.0 dB		3.0 dB	
LNA P1dB Out:	+13 dBm		+13 dBm	
LNA DC POWER:	2.5V/20mA,3V/29mA,3.3V/35mA,(2.5-24)V/<50mA			
REJECTION@ (-50/+50)MHz	-41 dB / -59 dB		-40 dB / -40 dB	
@ (-100/+100)MHz	< -65 dB		< -65 dB	
POWERHANDLING	1 WattCW, Optional:10 Watts 1 MicrosecPulse (-AL-)			

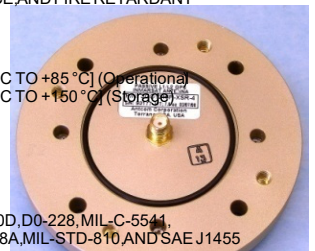
MECHANICAL:

SIZE:	DIAMETER: 3.50 in.[88.90 mm] HEIGHT:0.75 in. [18.97mm], 0.58" [14.73](Optionalfor Passive)
WEIGHT:	7.90 oz. (224 g)
FINISH:	SKYDROLRESISTANTPOLYURETHANEENAMEL BASE IRIDITE PER MIL-C-5541
COLOR:	OLIVE DRAB GREEN#34031PER FED-STD-595B
MATERIAL:	6061-T6ALUMINUMALLOY BASE COMPOSITE RADOME,IMPACT,ABRASION,UV, SOLVENT, SKYDROLRESISTANCE,AND FIRE RETARDANT
CONNECTOR:	TNC Bulkhead



ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C] (Operational) -85 °F TO +302 °F [-65 °C TO +150 °C] (Storage)
ALTITUDE:	70,000ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLYSEAL
HAILSTONES:	< 0.5" Dia.



FEDERAL& MILITARYSPECIFICATIONS

DESIGNTO: FAA TSO-C144,DO-160D,D0-228,MIL-C-5541, MIL-E-5400,MIL-I-45208A,MIL-STD-810,AND SAE J1455

ITEM NO	DESCRIPTION	PART NO	QTY
6	-50MTR-	50 Ft Belden 9104 Cable with TNC Male	SRCG91G-50	1
5	-MTR-/-50MTR-	Antenna Mount	MTR-1-1 Rev D	1
4	-MTR-/-50MTR-	MOUNTING SCREWS: 10-32, 3/4"	J507C1032R12, or 93085A831	4
3	-MTR-/-50MTR-	WASHER, CUSTOM C'SINK	3G15P1001-70	4
2	-MTR-/-50MTR-	M8 Set Screw/Allen Wrench	92015A139/7289A18	1/1
1	-MTR-/-50MTR-	GASKET or O-RING	3G15P1001-3G, 2-031/N756-75	1

PARTS LIST

SIZE:	FREQ.BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4WITH40 DB LNA WITHOUT REJECTIONFILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITHLNA/LIMITTER
2: 2.6" DIA.		P: WITHOUTLNA
3: 3.5" DIA.		PL: WITHOUTLNA and THINNER(HEIGHT=0.58")
4: MINI ARINC		A2: WITH20 DB LNA WITHOUTREJECTIONFILTERS

P/N: 3G1215A-XXR-X

	CONNECTOR	COLOR
X: WithoutMount	S: SMA; RS: R-SMA; P: PINS	-1: GLOSSWHITE#17925PERFED-STD-595B
M: With Mount	M: MCX; MM: MMCX	-2: LUSTERLESSGRAY#36320PER FED-STD-595B
50M: With 50 ft Cable/Mount	N, NB: N, N-Bulkhead	-3: OLIVEDRAB GREEN#34031PER FED-STD-595B
	T: TNC Bulkhead	-4: LUSTERLESSBLACK#37038PER FED-STD-595B

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ ⌀.005. MACHINED SURFACES 125/. DO NOT SCALE DRAWING.

DRAWN | CHECKED M. BOAS 01-05-29 | ENGINEER | APPROVED S. HUYNH 01-05-29 | CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

L1/L2 ACTIVE GPS ANTENNA/ ANTENNA KIT

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3G1215A-XXR-X | REV

SCALE 1/1 | SHEET 1 OF 1

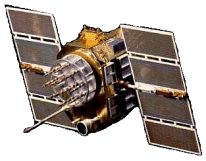
REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

NMO Connector Option is Now Available for Some Antennas

Active or Passive L1/L2 GPS Antennas
P/N: 3G1215X-MNS-X Rev A For Magnet, Thinner Version
P/N: 3G1215X-XNS-X Rev A For No Magnet, Thinner Version
3.5" Diameter Configurations, Flat, Front/Back Flush Magnetic Mount

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf



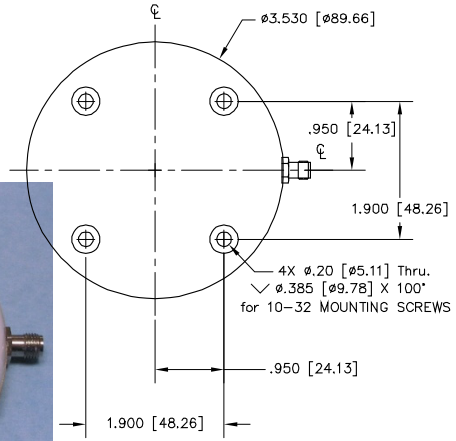
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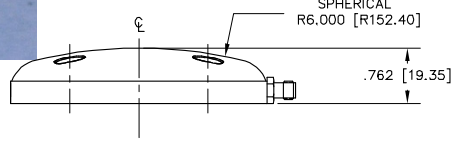
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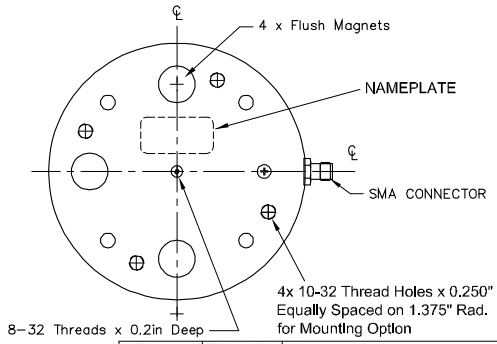
REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED









SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBIc):	Free Space	16 In G.P.	4 ft G.P.	Free Space	16 In G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 0.4	+ 3.5	+ 3.3	+ 1.5	+ 4.9
@ 10 ° Elevation:	- 1.8	- 3.2	- 2.0	- 3.8	- 4.0	- 3.6
@ 20 ° Elevation:	- 0.3	- 1.0	+ 0.8	- 2.0	- 2.0	- 0.1
@ 30 ° Elevation:	+ 1.4	+ 0.9	+ 1.8	- 0.5	0.0	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	+3.4/+0.4	> 2.8	> 2.7	+2.4/+1.5	> 3.0
BEAM WIDTH (3dB):	114 Deg.	118 Deg.	139 Deg.	106 Deg.	111 Deg.	75 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	DIAMETER: 3.53 In.[89 mm] HEIGHT: 0.76 In. [19 mm]
WEIGHT:	6.8 oz. (191 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100 2-031/N756-75, or 12345G-3M-3G

QUANTITY REQD		DESCRIPTION	PART NO		ITEM NO
		PARTS LIST			
4	–	MOUNTING SCREWS: 10-32, 3/4"	MS24693C274	–	5
A/R	–	WASHER, CUSTOM C'SINK	3G15P1001-6	–	3
1		EPDM NON-ADHESIVE GASKET	3G15P1001-3G		2
1		or ADHESIVE GASKET	12345G-3M-3G		1

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER
2: 2.8" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (HEIGHT = 0.58")
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 3G1215A-MNS-1

CABLE'S LENGTH:	CONNECTOR:	COLOR: -1: GLOSS WHITE #17925 PER FED-STD-595B
X: Bottom Connector	S: SMA; RD: R-SMA; P: PINS	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
XN: No MAG.	M: MCX; MM: MMCX	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
MN: FLUSH MAG	T: TNC (for Big Non-Flush Mag Option Only)	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
M: Big Non-Flush Mag.	N: N (for Big Non-Flush Mag Option Only)	-5: DESERT TAN

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON ∅ .25 .005 MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH April-27-07
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

FLUSH MAGNETIC MOUNT L1/L2 ACTIVE, OR PASSIVE GPS ANTENNA

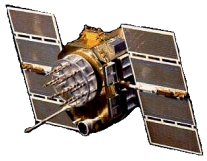
SIZE D | CAGE NO 3CVE1 | DRAWING NO 3G1215X-MNX-X | REV A

SCALE 1/1 SHEET 1 OF 1

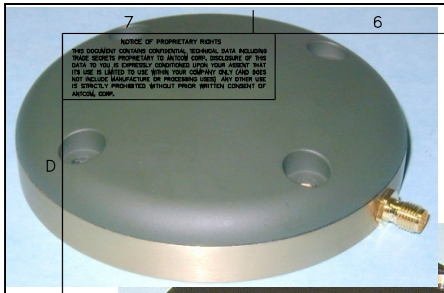
NMO Connector Option is Now Available for Some Antennas

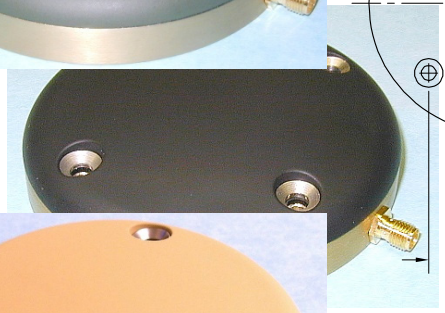
Active or Passive L1/L2 GPS Antennas
P/N: 3G1215X-MNS-X Rev A2 for Magnet, Thinner Version
P/N: 3G1215X-XNS-X Rev A2 for No Magnet, Thinner Version
3.5" Diameter Configurations, Flat, Front/Back Flush Magnetic Mount

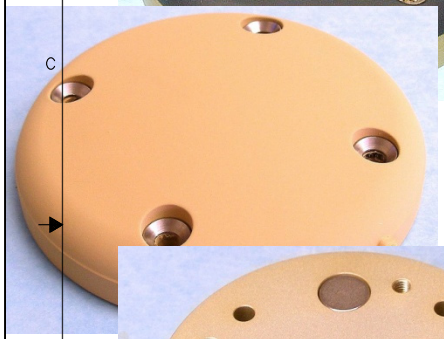
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf



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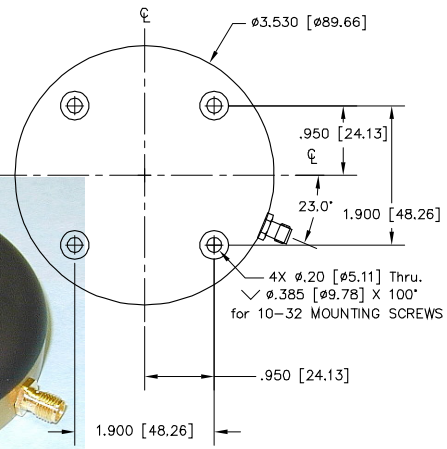


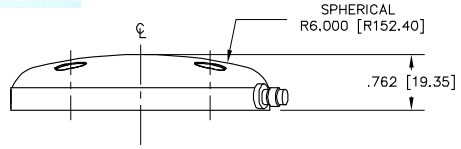


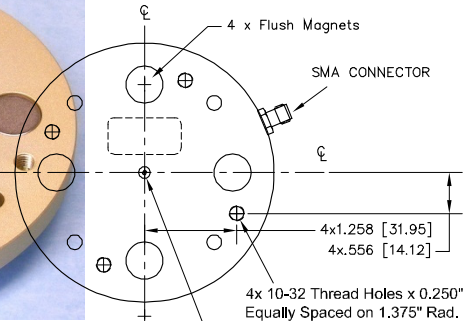












SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBIc):	Free Space	16 In G.P.	4 ft G.P.	Free Space	16 In G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 0.4	+ 3.5	+ 3.3	+ 1.5	+ 4.9
@ 10 ° Elevation:	- 1.8	- 3.2	- 2.0	- 3.8	- 4.0	- 3.6
@ 20 ° Elevation:	- 0.3	- 1.0	+ 0.8	- 2.0	- 2.0	- 0.1
@ 30 ° Elevation:	+ 1.4	+ 0.9	+ 1.8	- 0.5	0.0	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	+3.4/+0.4	> 2.8	> 2.7	+2.4/+1.5	> 3.0
BEAM WIDTH (3dB):	114 Deg.	118 Deg.	139 Deg.	106 Deg.	111 Deg.	75 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	DIAMETER: 3.53 in.[89 mm] HEIGHT: 0.76 in. [19 mm]
WEIGHT:	6.8 oz. (191 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100 2-031/N756-75, or 12345G-3M-3G

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (HEIGHT = 0.58")
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 3G1215A-MNS-1

CABLE'S LENGTH:	CONNECTOR:	COLOR: -1: GLOSS WHITE #17925 PER FED-STD-595B
X: Bottom Connector	S: SMA; RO: R-SMA; P: PINS	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
XN: No MAG.	M: MCX; MM: MMCX	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
MN: FLUSH MAG	T: TNC (for Big Non-Flush Mag Option Only)	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
M: Big Non-FLush Mag.	N: N (for Big Non-Flush Mag Option Only)	-5: DESERT TAN

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	
		PARTS LIST		
1	1	or ADHESIVE GASKET	12345G-3M-3G	
2	1	EPDM NON-ADHESIVE GASKET	3G15P1001-3G	
3	A/R	WASHER, CUSTOM C'SINK	3G15P1001-6	
4				
5	4	MOUNTING SCREWS: 10-32, 3/4"	MS24693C274	

ZONE	REV	DESCRIPTION	DATE	APPROVED
	A2	Connector CLock Angle	01-05-29	S.H

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø .004. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH Apri-27-07 | CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

FLUSH MAGNETIC MOUNT L1/L2 ACTIVE, OR PASSIVE GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3G1215X-MNX-X | REV A2 | SCALE 1/1 | SHEET 1 OF 1

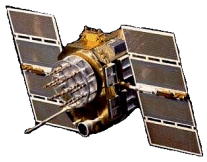
NMO Connector Option is Now Available for Some Antennas

Active or Passive L1/L2 GPS Antennas

P/N: 3G1215X-MNT-X Rev B for TNC Connector, P/N: 3G1215X-XNT-X Rev B for No Magnet
P/N: 3G1215X-MNS-X Rev B for SMA Connector, P/N: 3G1215X-XNS-X Rev B for No Magnet
3.5" Diameter Configurations, Flat, Front/Back Flush Magnetic Mount

ISO 9001:2008/FAA Approved Facility

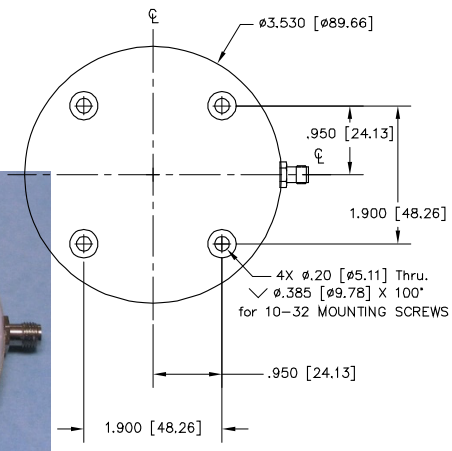
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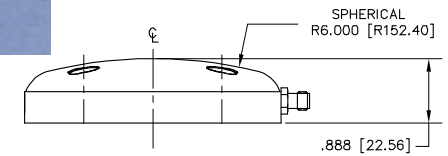


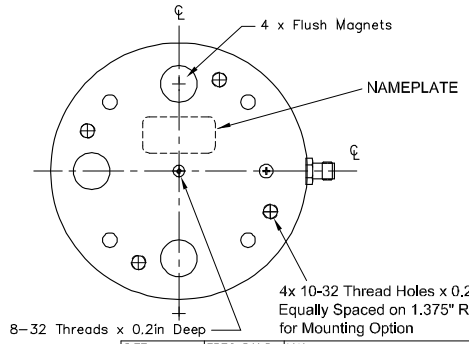
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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	16 in G.P.	4 ft G.P.	Free Space	16 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 0.4	+ 3.5	+ 3.3	+ 1.5	+ 4.9
@ 10 ° Elevation:	- 1.8	- 3.2	- 2.0	- 3.8	- 4.0	- 3.6
@ 20 ° Elevation:	- 0.3	- 1.0	+ 0.8	- 2.0	- 2.0	- 0.1
@ 30 ° Elevation:	+ 1.4	+ 0.9	+ 1.8	- 0.5	0.0	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	+3.4/+0.4	> 2.8	> 2.7	+2.4/+1.5	> 3.0
BEAM WIDTH (3dB):	114 Deg.	118 Deg.	139 Deg.	106 Deg.	111 Deg.	75 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	DIAMETER: 3.53 in.[89 mm] HEIGHT: 0.888 in [22.56 mm]
WEIGHT:	<6.8 oz. (191 g) for SMA, < 9.1oz. (217g) for TNC
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE or TNC FEMALE (See Below Part Number) (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100 2-031/N756-75, or 12345G-3M-3G

QUANTITY REQD		DESCRIPTION	PART NO		ITEM NO
		PARTS LIST			
4	–	MOUNTING SCREWS: 10-32, 3/4"	MS24693C274	–	5
A/R	–	WASHER, CUSTOM C'SINK	3G15P1001-6	–	3
1		EPDM NON-ADHESIVE GASKET	3G15P1001-3G		2
1		or ADHESIVE GASKET	12345G-3M-3G		1

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (HEIGHT = 0.58")
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 3G1215A-MNX-X

CABLE'S LENGTH:	CONNECTOR:	COLOR: -1: GLOSS WHITE #17925 PER FED-STD-595B
X: Bottom Connector	S: SMA; RD: R-SMA; P: PINS	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
XN: No MAG.	M: MCX; MM: MMCX	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
MN: FLUSH MAG	T: TNC	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
M: Big Non-Flush Mag.	N: N	-5: DESERT TAN

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XXX ± .015, .XXXX ± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DATS ON A COMMON Ø .25" .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Apr8-27-07
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

FLUSH MAGNETIC MOUNT L1/L2 ACTIVE, OR PASSIVE GPS ANTENNA

SIZE	DWG NO	REV
D	3CVE1	3G1215X-MNX-X B

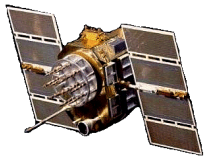
SCALE 1/1 SHEET 1 OF 1

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

NMO Connector Option is Now Available for Some Antennas

Active or Passive L1/L2 GPS Antennas

P/N: 3G1215X-MNT-X Rev B2 for TNC Connector, P/N: 3G1215X-XNT-X Rev B2 for No Magnet
P/N: 3G1215X-MNS-X Rev B2 for SMA Connector, P/N: 3G1215X-XNS-X Rev B2 for No Magnet
3.5" Diameter Configurations, Flat, Front/Back Flush Magnetic Mount



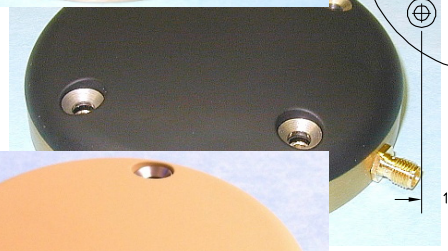
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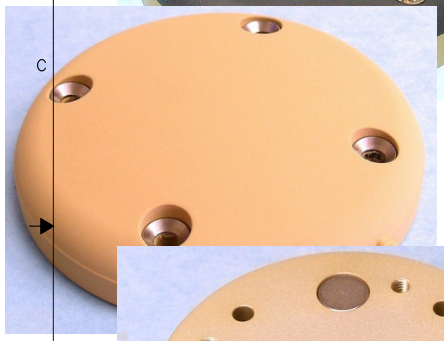
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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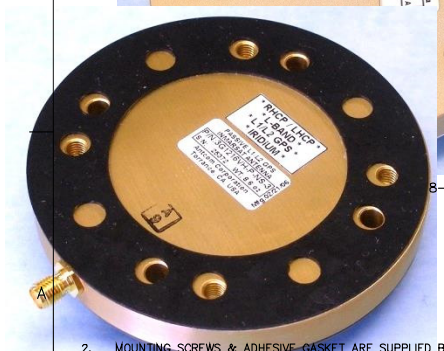
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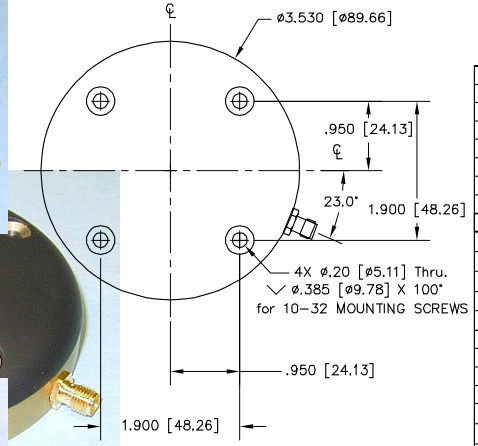


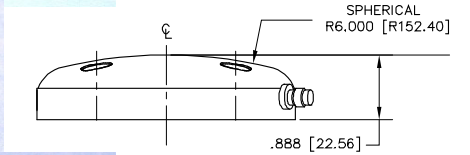


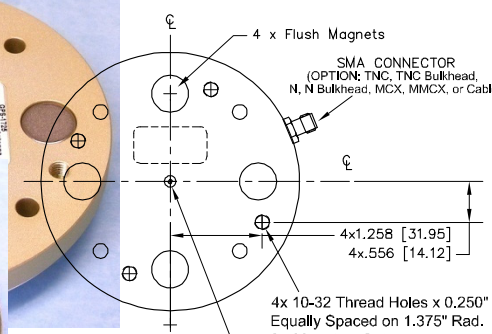












SPECIFICATIONS

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	B2	Connector Clock Angle	01-05-29	S.H

ELECTRICAL:

	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
FREQUENCY:						
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBIc):	Free Space	16 in G.P.	4 ft G.P.	Free Space	16 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 0.4	+ 3.5	+ 3.3	+ 1.5	+ 4.9
@ 10 ° Elevation:	- 1.8	- 3.2	- 2.0	- 3.8	- 4.0	- 3.6
@ 20 ° Elevation:	- 0.3	- 1.0	+ 0.8	- 2.0	- 2.0	- 0.1
@ 30 ° Elevation:	+ 1.4	+ 0.9	+ 1.8	- 0.5	0.0	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	+3.4/+0.4	> 2.8	> 2.7	+2.4/+1.5	> 3.0
BEAM WIDTH (3dB):	114 Deg.	118 Deg.	139 Deg.	106 Deg.	111 Deg.	75 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	DIAMETER: 3.53 in.[89 mm] HEIGHT: 0.888 in [22.56 mm]
WEIGHT:	<6.8 oz. (191 g) for SMA, < 9.1oz. (217g) for TNC
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE or TNC FEMALE (See Below Part Number) (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100 2-031/N756-75, or 12345G-3M-3G

QUANTITY REQD		DESCRIPTION	PART NO		ITEM NO
		PARTS LIST			
4	–	MOUNTING SCREWS: 10-32, 3/4"	MS24693C274	–	5
A/R	–	WASHER, CUSTOM C'SINK	3G15P1001-6	–	3
1		EPDM NON-ADHESIVE GASKET	3G15P1001-3G		2
1		or ADHESIVE GASKET	12345G-3M-3G		1

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (HEIGHT = 0.58")
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 3G1215A-MNX-X

CABLE'S LENGTH:	CONNECTOR:	COLOR: -1: GLOSS WHITE #17925 PER FED-STD-595B
X: Bottom Connector	S: SMA; RD: R-SMA; P: PINS	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
XN: No MAG.	M: MCX; MM: MMCX	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
MN: FLUSH MAG	T: TNC	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
M: Big Non-FLush Mag.	N: N	-5: DESERT TAN

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

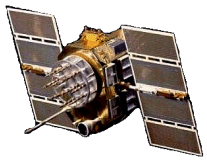
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON ℄ Ø.005 M
MACHINED SURFACES 125
DO NOT SCALE DRAWING
DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Apr1-27-07
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

FLUSH MAGNETIC MOUNT L1/L2 ACTIVE, OR PASSIVE GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3G1215X-MNX-XB2 | REV
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas



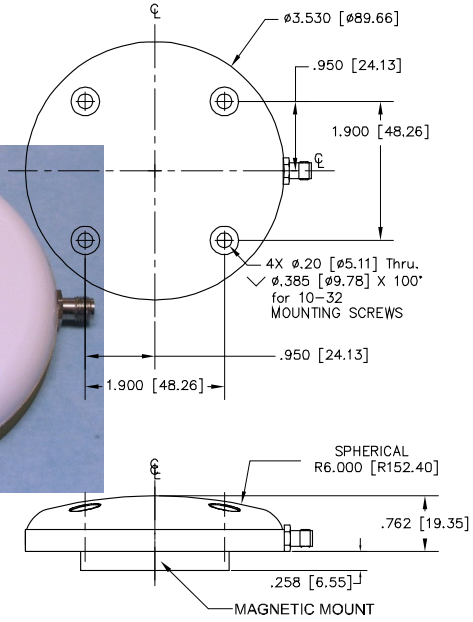
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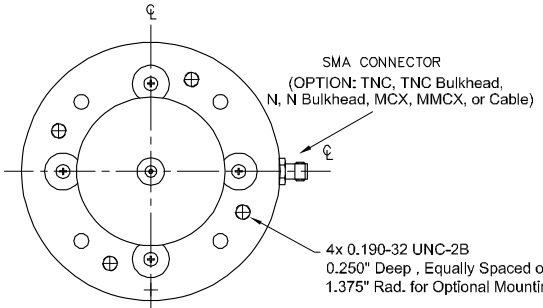
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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED







SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	16 in G.P.	4 ft G.P.	Free Space	16 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 0.4	+ 3.5	+ 3.3	+ 1.5	+ 4.9
@ 10 ° Elevation:	- 1.8	- 3.2	- 2.0	- 3.8	- 4.0	- 3.6
@ 20 ° Elevation:	- 0.3	- 1.0	+ 0.8	- 2.0	- 2.0	- 0.1
@ 30 ° Elevation:	+ 1.4	+ 0.9	+ 1.8	- 0.5	0.0	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	+3.4/+0.4	> 2.8	> 2.7	+2.4/+1.5	> 3.0
BEAM WIDTH (3dB):	114 Deg.	118 Deg.	139 Deg.	106 Deg.	111 Deg.	75 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	DIAMETER: 3.53 in.[89 mm] HEIGHT: 0.76 in. [19 mm]
WEIGHT:	10.8 oz. (306g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100 2-031/N756-75, or 12345G-3M-3G

QUANTITY REQD		DESCRIPTION	PART NO		ITEM NO
		PARTS LIST			
4	–	MOUNTING SCREWS: 10-32, 3/4"	MS24693C274	–	5
A/R	–	WASHER, CUSTOM C'SINK	3G15P1001-6	–	3
1		EPDM NON-ADHESIVE GASKET	3G15P1001-3G		2
1		or ADHESIVE GASKET	12345G-3M-3G		1

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (HEIGHT = 0.58")
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 3G1215A-MS-1

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: Bottom Connector	S: SMA; RD: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
N: No MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
MN: FLUSH MAG	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
M: Big Non-FLush Mag.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONS ± 1/64 DECIMALS .XX ±.010 .XXX ±.005 ANGLES ± 1°
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MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
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ENGINEER
APPROVED S. HUYNH Apr1-27-07
CAD FILE NO

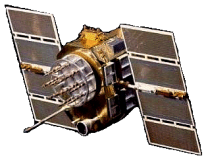
ANTCOM CORP. TORRANCE CALIFORNIA

MAGNETIC MOUNT
L1/L2 ACTIVE, OR PASSIVE
GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	3G1215X-MX-X	A

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas



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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	A2	Connector CLock Angle	01-05-29	S.H

SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	16 in G.P.	4 ft G.P.	Free Space	16 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 0.4	+ 3.5	+ 3.3	+ 1.5	+ 4.9
@ 10 ° Elevation:	- 1.8	- 3.2	- 2.0	- 3.8	- 4.0	- 3.6
@ 20 ° Elevation:	- 0.3	- 1.0	+ 0.8	- 2.0	- 2.0	- 0.1
@ 30 ° Elevation:	+ 1.4	+ 0.9	+ 1.8	- 0.5	0.0	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	+3.4/+0.4	> 2.8	> 2.7	+2.4/+1.5	> 3.0
BEAM WIDTH (3dB):	114 Deg.	118 Deg.	139 Deg.	106 Deg.	111 Deg.	75 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	DIAMETER: 3.53 in.[89 mm] HEIGHT: 0.76 in. [19 mm]
WEIGHT:	10.8 oz. (306g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

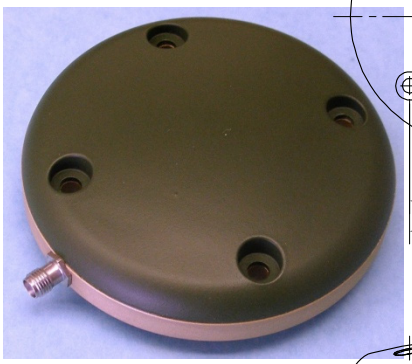
ENVIRONMENTAL:

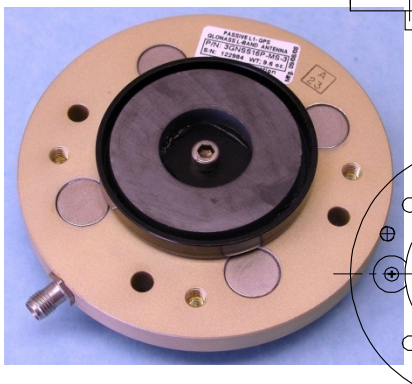
TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100 2-031/N756-75, or 12345G-3M-3G





SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (HEIGHT = 0.58")
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 3G1215A-MS-1

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: Bottom Connector	S: SMA; RD: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
N: No MAG.	M: MCX; MME MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
MN: FLUSH MAG	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
M: Big Non-Flush Mag.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

QUANTITY REQD		DESCRIPTION	PART NO	ITEM NO.
		PARTS LIST		
4	–	MOUNTING SCREWS: 10-32, 3/4"	MS24693C274 –	5
A/R	–	WASHER, CUSTOM C'SINK	3G15P1001-6 –	3
1		EPDM NON-ADHESIVE GASKET	3G15P1001-3G	2
1		or ADHESIVE GASKET	12345G-3M-3G	1

NOTES: UNLESS OTHERWISE SPECIFIED:

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64 DECIMALS .XXX ±.015 .XXXX ±.005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON ℄ Ø.005 MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH April-27-07
CAD FILE NO

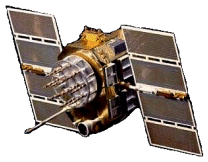
ANTCOM CORP. TORRANCE CALIFORNIA

MAGNETIC MOUNT L1/L2 ACTIVE, OR PASSIVE GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3G1215X-MX-X | REV A2

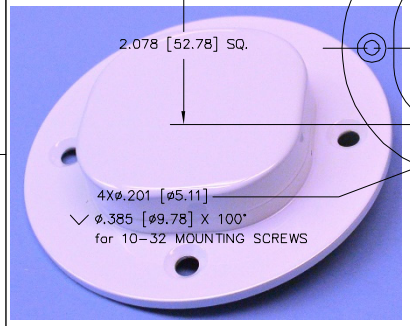
SCALE 1/1 SHEET 1 OF 1

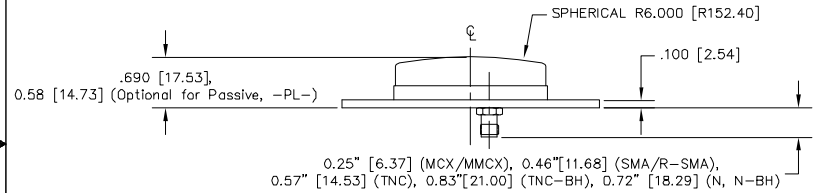
NMO Connector Option is Now Available for Some Antennas

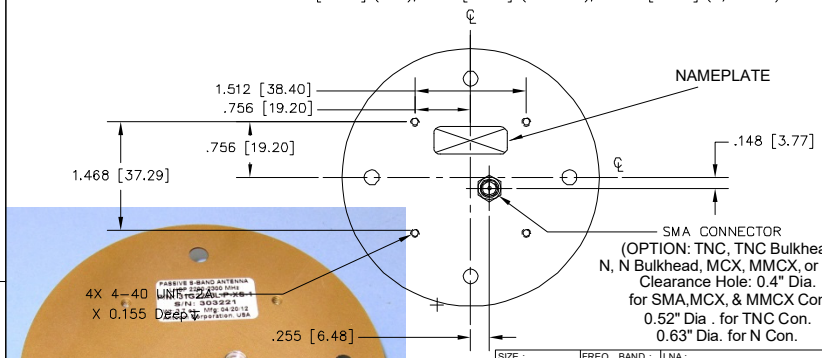


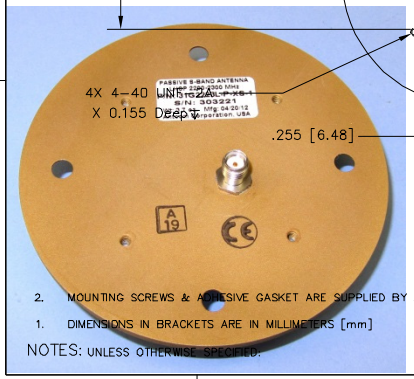
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SIZE :	FREQ. BAND :	LNA :
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (HEIGHT = 0.58")
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 31G1215X-XX-1

CABLE'S LENGTH :	CONNECTOR :	COLOR :
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN.)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 3.5	+ 3.3	+ 4.9
@ 10 ° Elevation:	- 1.8	- 2.0	- 3.8	- 3.6
@ 20 ° Elevation:	- 0.3	+ 0.8	- 2.0	- 0.1
@ 30 ° Elevation:	+ 1.4	+ 1.8	- 0.5	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	> 2.8	> 2.7	> 3.0
BEAM WIDTH (3dB):	114 Deg.	139 Deg.	106 Deg.	75 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING			
LNA GAIN:	33 dB		35 dB	
LNA NOISE FIGURE:	3.0 dB		3.0 dB	
LNA P1dB Out:	+13 dBm		+13 dBm	
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA			
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB		-40 dB / -40 dB	
@ (-100/+100) MHz	< -65 dB		< -65 dB	
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)			

MECHANICAL:

SIZE:	DIAMETER: 3.50 in.[88.90 mm] HEIGHT: 0.690 in. [17.53 mm], 0.58"[14.73] (Optional for Passive)
WEIGHT:	4.0 oz. (113 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

4	-	MOUNTING SCREWS: 10-32, 3/4"	MS24693C274	-	5
A/R	-			-	3
1	1	GASKET	3G15P1001-3G	-	1
-2	-1	DESCRIPTION	PART NO	FINISH	ITEM NO
QUANTITY REQD		PARTS LIST			

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

DRAWN | CHECKED M. BOAS MAR-16-04 | ENGINEER | APPROVED S. HUYNH MAR-16-04 | CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE, OR PASSIVE
GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 31G1215X-XX-X | REV -

SCALE 1/1 | SHEET 1 OF 1

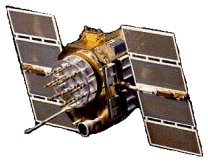
ORIGINAL DOCUMENT WHEN STAMP IS RED

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 RHCP GPS + 1.37 GHz LHCP Antenna for GPS/Telemetry Applications

P/N: 3G121513RL-AP-XRS2-2-TAIL2

3.5” Diameter Top Mount, Also Available in other Frequency Bands and Configurations

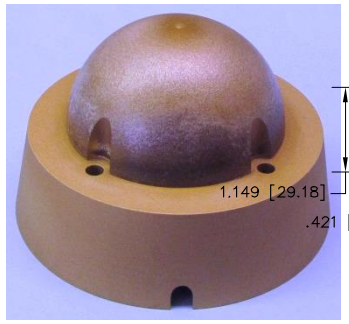


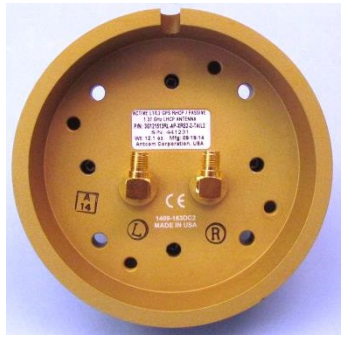
ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

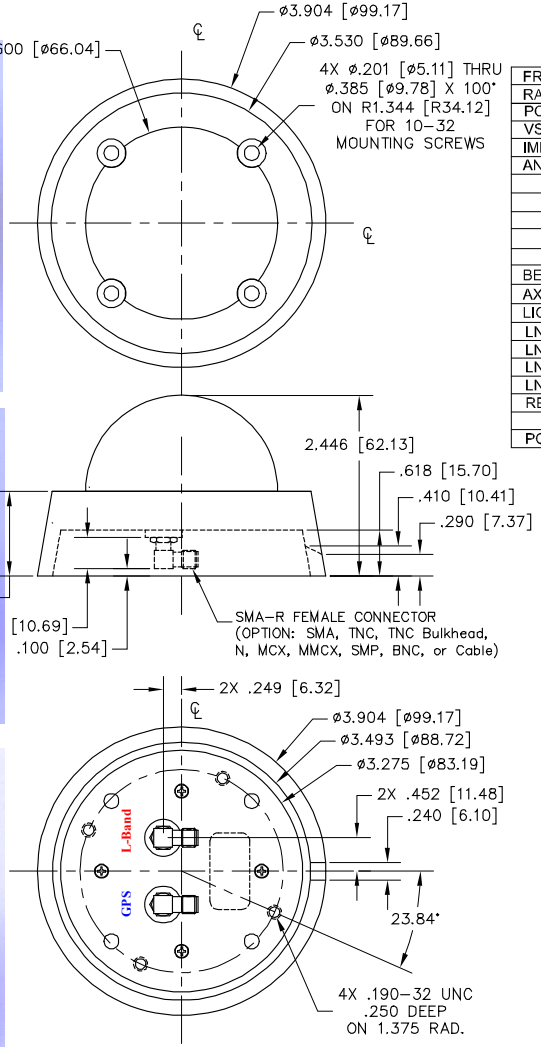
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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz		(1370 +/- 20) MHz	
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP		RHCP		LHCP	
VSWR:	< 2.0:1		< 2.0:1		< 2.0:1	
IMPEDANCE:	50 ohms		50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 3.5	+ 3.3	+ 4.9	+ 3.3	+ 4.9
@ 10 ° Elevation:	- 1.8	- 2.0	- 3.8	- 3.6	- 3.8	- 3.6
@ 20 ° Elevation:	- 0.3	+ 0.8	- 2.0	- 0.1	- 2.0	- 0.1
@ 30 ° Elevation:	+ 1.4	+ 1.8	- 0.5	- 1.8	- 0.5	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	> 2.8	> 2.7	> 3.0	> 2.7	> 3.0
BEAM WIDTH (3dB):	114 Deg.	139 Deg.	106 Deg.	75 Deg.	106 Deg.	75 Deg.
AXIAL RATIO:	2 dB		2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB		35 dB			
LNA NOISE FIGURE:	3 dB		3 dB			
LNA P1dB Out:	+13 dBm		+13 dBm			
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION: @ (-50/+50) MHz	-41 dB / -59 dB		-40 dB / -40 dB			
@ (-100/+100) MHz	< -65 dB		< -65 dB			
POWER HANDLING:	Passive: 200w, Active: 1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	DIAMETER: 3.90 in. [99.17 mm] HEIGHT: 2.45 in. [62.1 mm]
WEIGHT:	9.2 oz. (261g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	R-SMA FEMALE (OPTION: SMA, TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, SMP, BNC, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD	DESCRIPTION	PART NO	FINISH	ITEM NO
			–	3
				2
4	MONTING SCREWS: 10–32, 1.75"L, Item 579–1.75	91771A837	–	1

PARTS LIST

P/N: 3G121513RL-AP-XRS2-2-TAIL2

CONFIGURATION:	FREQ. BAND:	LNA:	CABLE'S LENGTH:	GPS/IRIDIUM/WSI CON.:	COLOR:
1: 2" SQ. (FLAT)	1215: L1/L2	P: WITHOUT LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.8: 1.8" SQ. (FLAT)	15: L1 ONLY	A: WITH LNA 33dB	M: WITH MAG. MOUNT	RS: R-SMA	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	B3B1	A2: WITH 24 dB LNA	#: CABLE LENGTH (IN)	M: MCX; MM: MMCX	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)	B3L1	A4: WITH 43 dB LNA	R: RIGHT ANGLE CON.	N: N; NB: N-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)	L1RWN			T: TNC; TB: TNC- Bulkhead	-5: TAN #33446 PER FED-STD-595B
	15161S: GPS/IRIDIUM/WSI				
	121513: L1/L2/1.370 GHz				

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XXs ±.015, .XXXs ±.010, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

ORIGINALLY DRAWN	S. HUYNH	Oct–24–11
ORIGINALLY DESIGNED	S. HUYNH	Oct–24–11
UPDATED	S. HUYNH	June–30–14
UPDATE DRAWN	P. TRAN	June–30–14
APPROVED	S. HUYNH	June–30–14

ANTCOM CORP. TORRANCE CALIFORNIA

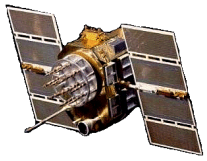
Active L1L2 GPS/1.37 GHz ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3G121513RL–AP–XRS2–2–TAIL2 | REV –

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 RHCP GPS + 1.37 GHz LHCP Antenna
P/N: 3G121513RL-AP-XRS2-2-TAIL
3.5” Diameter Top Mount Configuration

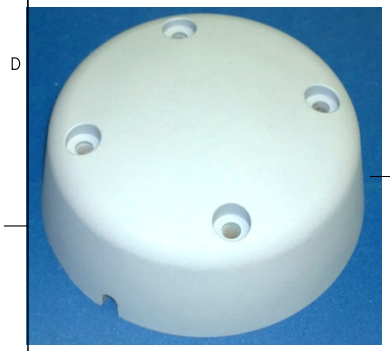


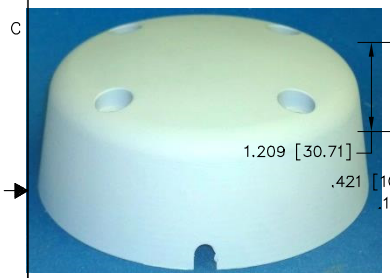
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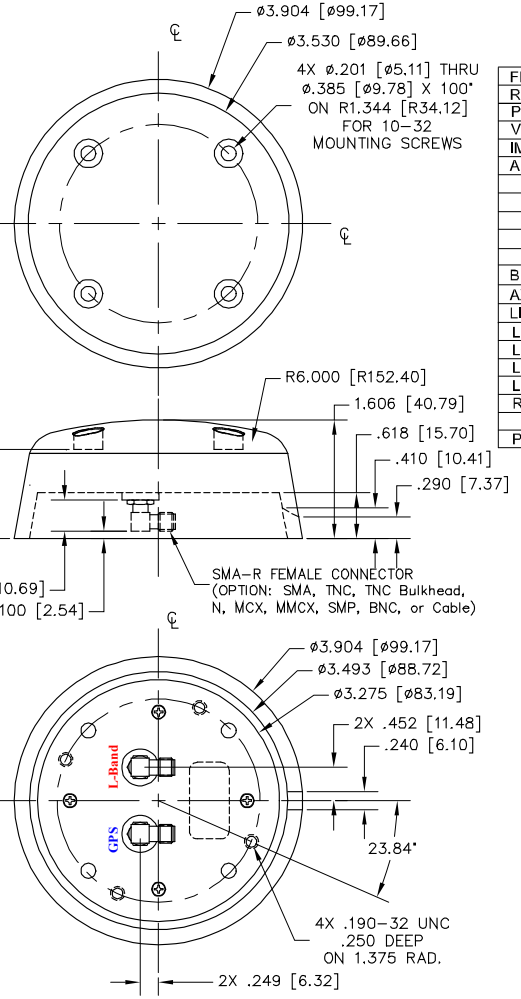
REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED









SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz		(1370 +/- 20) MHz	
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP		RHCP		LHCP	
VSWR:	< 2.0:1		< 2.0:1		< 2.0:1	
IMPEDANCE:	50 ohms		50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 3.5	+ 3.3	+ 4.9	+ 3.3	+ 4.9
@ 10 ° Elevation:	- 1.8	- 2.0	- 3.8	- 3.6	- 3.8	- 3.6
@ 20 ° Elevation:	- 0.3	+ 0.8	- 2.0	- 0.1	- 2.0	- 0.1
@ 30 ° Elevation:	+ 1.4	+ 1.8	- 0.5	- 1.8	- 0.5	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	> 2.8	> 2.7	> 3.0	> 2.7	> 3.0
BEAM WIDTH (3dB):	114 Deg.	139 Deg.	106 Deg.	75 Deg.	106 Deg.	75 Deg.
AXIAL RATIO:	2 dB		2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB		35 dB			
LNA NOISE FIGURE:	3 dB		3 dB			
LNA P1dB Out:	+13 dBm		+13 dBm			
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION: @ (-50/+50) MHz	-41 dB / -59 dB		-40 dB / -40 dB			
@ (-100/+100) MHz	< -65 dB		< -65 dB			
POWER HANDLING:	Passive: 200w, Active: 1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	DIAMETER: 3.90 in. [99.17 mm] HEIGHT: 1.61 in. [40.8 mm]
WEIGHT:	9.2 oz. (261g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	R-SMA FEMALE (OPTION: SMA, TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, SMP, BNC, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE:

ATP-3G-L1L2-100

CONFIGURATION:	FREQ. BAND:	LNA:	CABLE'S LENGTH:	GPS/IRIDIUM/WSI CON.:	COLOR:
1: 2" SQ. (FLAT)	1215: L1/L2	P: WITHOUT LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	15: L1 ONLY	A: WITH LNA 33dB	M: WITH MAG. MOUNT	RS: R-SMA	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	B351	A2: WITH 24 dB LNA	#: CABLE LENGTH (IN)	M: MCX; MM: MMCX	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)	B3L1	A4: WITH 43 dB LNA	R: RIGHT ANGLE CON.	N: N; NB: N-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)	L1RxIN			T: TNC; TB: TNC- Bulkhead	-5: TAN #33446 PER FED-STD-595B
5A: (HELIX ROD)	151615: GPS/IRIDIUM/WSI				
5B: (HELIX BLADE)	121513: L1/L2/1.370 GHz				
3D: (HELIX HANDHELD)					

P/N: 3G121513RL-AP-XRS2-2-TAIL

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

QUANTITY REQD	DESCRIPTION	PART NO	FINISH	ITEM NO
			–	3
				2
4	MONTING SCREWS: 10-32, 1.75"L, Item 579-1.75	91771A837	–	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .010, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø .005 MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN: S. HUYNH Oct-24-11
ORIGINALLY DESIGNED: S. HUYNH Oct-24-11
UPDATED: S. HUYNH June-30-14
UPDATE DRAWN: P. TRAN June-30-14
APPROVED: S. HUYNH June-30-14

ANTCOM CORP. TORRANCE CALIFORNIA

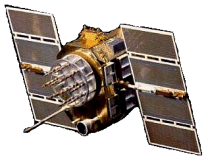
Active L1L2 GPS/1.37 GHz ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3G121513RL-AP-XRS2-2-TAIL | REV
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Passive L1/L2 GPS Antennas, P/N: 3G1215P-AS-E-012

3.5” Diameter, Conformal Configurations



ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

ANTCOM CORPORATION . 367 Van Ness Way, #602 . Torrance, CA 90501 . Tel: (310) 782-1076 . Fax: (310) 782-1086 . E-mail: antennas@antcom.com . http://www.antcom.com

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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz		L2: (1227.60 ±15) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	15 in Dia. Tube, 2 ft Long	Free Space	15 in Dia. Tube, 2 ft Long
@ 90 ° (ZENITH):	+ 5.4	+ 3.5	+ 4.1	+ 4.2
@ 10 ° Elevation:	- 1.6	+ 0.2	- 3.2	- 0.2
@ 20 ° Elevation:	0.0	+ 2.0	- 1.6	+ 1.0
@ 30 ° Elevation:	+ 1.3	+ 2.8	- 0.3	+ 1.9
@ 60 - 90 ° Elevation:	> 4.2	> 2.0	> 2.7	> 3.7
BEAM WIDTH (3dB):	102 Deg.	149 Deg.	93 Deg.	133 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING			
POWER HANDLING:	200 Watt CW			

MECHANICAL:

SIZE: DIAMETER = 3.50 in.[88.90 mm]
HEIGHT = 0.657 in. [16.69 mm]

WEIGHT: 7.0 oz. (198 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

COLOR: GLOSS WHITE #17925 PER FED-STD-595B

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: SMA FEMALE (GOLD PLATED)
(OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

4	–	MOUNTING SCREWS: 10-32, 3/4”	MS24693C274	–	5
1		Adpater Plate for for 15” Dia.	3G1215P-AS-E-012-B2		4
				–	3
1	1			–	1
–2	–1	DESCRIPTION	PART NO	FINISH	ITEM NO
QUANTITY REQD		PARTS LIST			

SIZE :	FREQ. BAND :	LNA :
1: 2” SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9” SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER
2: 2.6” DIA.		P: WITHOUT LNA
3: 3.5” DIA.		PL: WITHOUT LNA and THINNER (HEIGHT = 0.58”)
4: MINI ARINC		

P/N: 3G1215P-AS-E-012

CABLE'S LENGTH :	CONNECTOR :	COLOR :
X: NO ADAPTE R	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG .	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
A: WITH ADAPTER	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. MOUNTING SCREWS & GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125/
DO NOT SCALE DRAWING

DRAWN
CHECKED M. BOAS 01-05-29
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

L1/L2 PASSIVE GPS ANTENNA for EGBU

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3G1215P-AS-E-012 | REV –
SCALE 1/1 | SHEET 1 OF 1

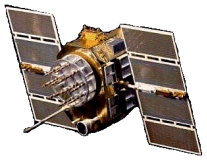
ORIGINAL DOCUMENT WHEN STAMP IS RED

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

NMO Connector Option is Now Available for Some Antennas

Passive L1/L2 GPS Antennas, P/N: 3G1215PL-AS-P-012-2R Rev G

3.5” Diameter, Conformal Configurations

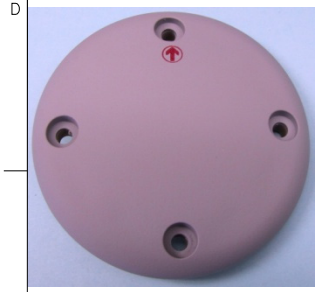


Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	Correct for Gasket & 5/8Screws	Mar-08-06	S.H
	C	Change to High Power LIMITER Diodes/Color Code	Jan-09	S.H
	D	New Aeroflex's Diode P/N: MA51806-223-003	April-23-10	S.H
	G	Revised Tolerance per Raytheon specs. added Item 2 - MS24693-C273	Jan-18-13	S.H







SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz		L2: (1227.60 ±15) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.7:1		< 1.7:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	8 in Dia. Tube, 2 ft Long	Free Space	8 in Dia. Tube, 2 ft Long
@ 90 ° (ZENITH):	+ 5.4	+ 3.5	+ 4.1	+ 4.2
@ 10 ° Elevation:	- 1.6	+ 0.2	- 3.2	- 0.2
@ 20 ° Elevation:	0.0	+ 2.0	- 1.6	+ 1.0
@ 30 ° Elevation:	+ 1.3	+ 2.8	- 0.3	+ 1.9
@ 60 - 90 ° Elevation:	> 4.2	> 2.0	> 2.7	> 3.7
BEAM WIDTH (3dB):	102 Deg.	149 Deg.	93 Deg.	133 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING			
POWER HANDLING:	Pin Max: +66 dBm, Pout Max: +44 dBm			

MECHANICAL:

SIZE:	DIAMETER = 3.50 in.[88.90 mm] HEIGHT = 0.785 in. [19.94 mm]
WEIGHT:	8.9 oz. (252 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
COLOR:	-2R: GRAY #36375 PER FED-STD-595B
MATERIAL:	BASE: 6061-T6 ALUMINUM ALLOY RADOME: ULTEM2100 COMPOSITE for IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH 33dBLNA, A2: with 20 dB LNA, A4: with 40 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER/FILTER
2: 2.6" DIA.		P: PASSIVE (WITHOUT LNA)
3: 3.5" DIA.		PL: PASSIVE WITH LIMITER/FILTER
4: MINI ARINC		

CABLE'S LENGTH:	FEMALE CONNECTOR:	COLOR:
A: WITH ADAPTER	S: SMA; RS:R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
X: NO ADAPTER	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
M: MAG., N: NO MAG.	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-2R: GRAY #36375 PER FED-STD-595B

ITEM NO	PART NO	DESCRIPTION	QUANTITY REQD
4	3G15P1001-70	Washer	4
3	2252718-1 Rev B	CONDUCTIVE GASKET	2
2	MS24693-C273	MOUNTING SCREWS: 10-32, 5/8"	4
1	3G1215P-AS-P-012-B2	Adpater Plate for for 4" Vehicle Radius	1

PARTS LIST

P/N:3G1215PL-AS-P-012-2R

2. MOUNTING SCREWS & GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX ± .03 .XXX ± .010 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ ⌀F.005
MACHINED SURFACES 126

DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	May-10-09
ORIGINALLY DESIGNED	S. HUYNH	May-10-09
UPDATED	S. Huynh	Sept-10-12
UPDATE DRAWN	P. Tran	Sept-10-12
APPROVED	S. HUYNH	Sept-10-12

ANTCOM CORP. TORRANCE CALIFORNIA

L1/L2 PASSIVE GPS

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	3G1215PL-AS-P-012-2R	G

SCALE 1/1 SHEET 1 OF 1

ORIGINAL DOCUMENT WHITE STAMP IS RED

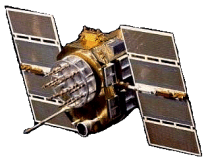
NMO Connector Option is Now Available for Some Antennas

Passive L1/L2 GPS Antenna

P/N: 3G1215PL-AS-P-012-2R Rev I

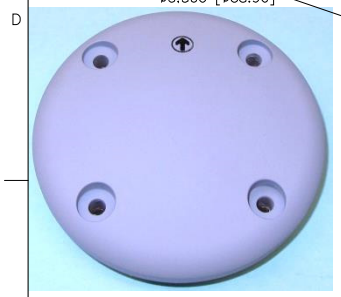
3.5” Diameter, Conformal Configurations

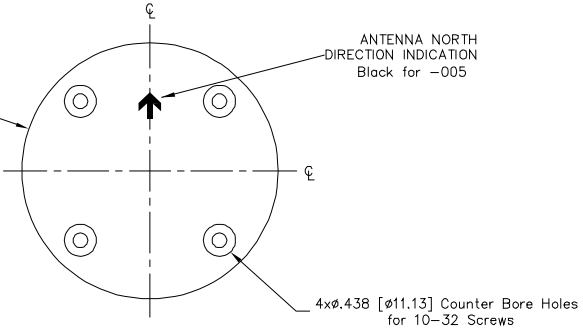
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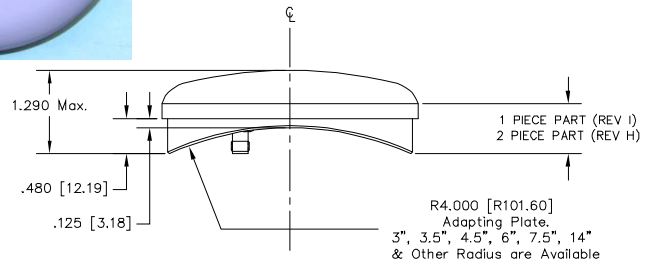


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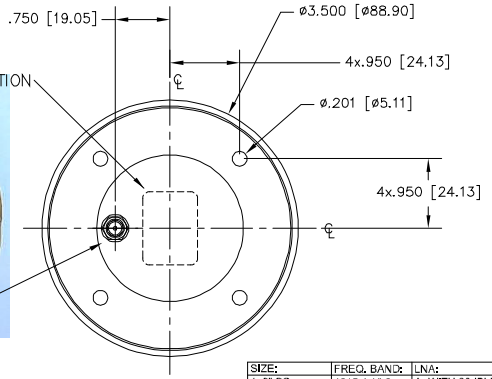
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SMA FEMALE
CONNECTOR
0.4" Dia Clearance Hole
for SMA,MCX, MMCX Con.
0.52" Dia Clearance Hole for TNC Con.
0.63" Dia Clearance Hole for N Con.

SPECIFICATIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	C	Change to High Power LIMITER Diodes/Color Code	Jan–09	S.H
	D	New Aeroflex's Diode P/N: UM5180B–223–003	April–23–10	S.H
	E	Rotate Mounting Screws 45°, Screw Type	July–01–12	S.H
	H	Revised Tolerance per Raytheon specs. added Item 3 – MS3212–38L	Jan–18–13	S.H
	I	ADD 4.000" RAD ADAPTING PLATE	Oct–12–15	S.H

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz		L2: (1227.60 ±15) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.7:1		< 1.7:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	8 in Dia. Tube, 2 ft Long	Free Space	8 in Dia. Tube, 2 ft Long
@ 90 ° (ZENITH):	+ 5.4	+ 3.5	+ 4.1	+ 4.2
@ 10 ° Elevation:	- 1.6	+ 0.2	- 3.2	- 0.2
@ 20 ° Elevation:	0.0	+ 2.0	- 1.6	+ 1.0
@ 30 ° Elevation:	+ 1.3	+ 2.8	- 0.3	+ 1.9
@ 60 - 90 ° Elevation:	> 4.2	> 2.0	> 2.7	> 3.7
BEAM WIDTH (3dB):	102 Deg.	149 Deg.	93 Deg.	133 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING			
POWER HANDLING:	Pin Max: +66 dBm, Pout Max: +44 dBm			

MECHANICAL:

SIZE:	DIAMETER = 3.50 in.[88.90 mm] HEIGHT = 0.785 in. [19.94 mm]
WEIGHT:	8.9 oz. (252 g) + 2.145 oz. (60.81 g) Adapter Plate = 11.05 oz. (313 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441F
COLOR:	-2R: GRAY #36375 PER FED-STD-595B
MATERIAL:	BASE: 6061-T6 ALUMINUM ALLOY RADOME: ULTEM2100 COMPOSITE for IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH 33dBLNA, A2: with 20 dB LNA, A4: with 40 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER/FILTER
2: 2.6" DIA.		P: PASSIVE (WITHOUT LNA)
3: 3.5" DIA.		PL: PASSIVE WITH LIMITER/FILTER
4: MINI ARINC		

P/N:3G1215PL-AS-P-012-2R

CABLE'S LENGTH:	FEMALE CONNECTOR:	COLOR:
A: WITH ADAPTER	S: SMA; RS:R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
X: NO ADAPTER	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
M: MAG., N: NO MAG.	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-2R: GRAY #36375 PER FED-STD-595B

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO
4	4	Screw, 10–32 Self Seal, Self Lock	MS3212–38L
2	1	CONDUCTIVE GASKET	2252718–2 Rev B

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX ± .03 .XXX ± .010 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	May–10–09
ORIGINALLY DESIGNED	S. HUYNH	May–10–09
UPDATED	S. Huynh	Oct–12–15
UPDATE DRAWN	P. Tran	Oct–12–15
APPROVED	S. HUYNH	Oct–12–15

ANTCOM CORP. TORRANCE, CALIFORNIA

L1/L2 PASSIVE GPS

SIZE	CAGE NO	drawing no	REV
D	3CVE1	3G1215PL–AS–P–012–2R	I

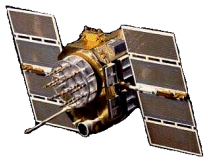
SCALE 1/1 SHEET 1 OF 1

2. MOUNTING SCREWS & GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
NOTES: UNLESS OTHERWISE SPECIFIED:

NMO Connector Option is Now Available for Some Antennas

Passive L1/L2 GPS Antennas, P/N: 3G1215PL-XS-P-012-2R Rev C

3.5" Diameter, Configurations



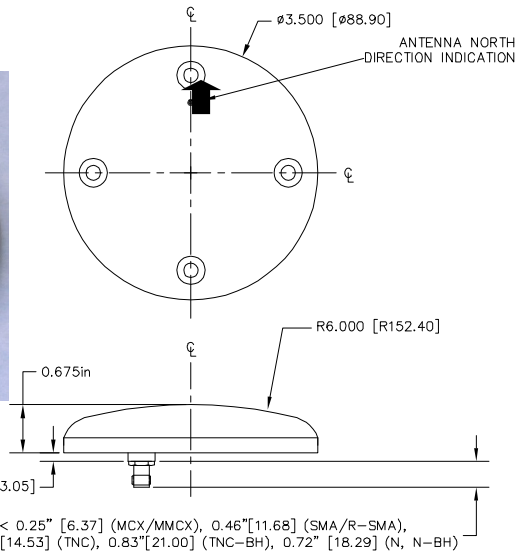
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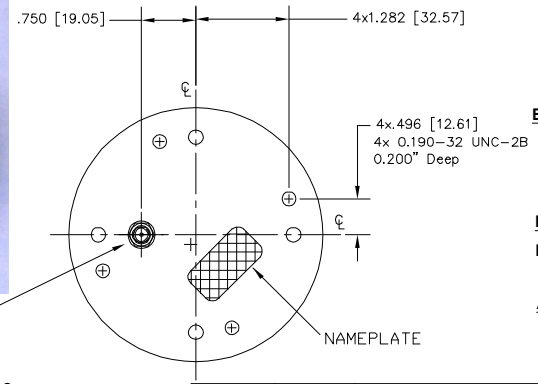
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REVISIONS			
ZONE REV	DESCRIPTION	DATE	APPROVED
A	Name Plate, Washers, Screws	DEC-21-06	S.H
B	Stronger Material for Connector	May-23-08	S.H
C	Correction for typo in Heigh	Aug-27-08	S.H









SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz		L2: (1227.60 ±15) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNAGAIN (dBic):	Free Space	8 in Dia. Tube, 2 ft Long	Free Space	8 in Dia. Tube, 2 ft Long
@ 90 ° (ZENITH):	+ 5.4	+ 3.5	+ 4.1	+ 4.2
@ 10 ° Elevation	- 1.6	+ 0.2	- 3.2	- 0.2
@ 20 ° Elevation	0.0	+ 2.0	- 1.6	+ 1.0
@ 30 ° Elevation	+ 1.3	+ 2.8	- 0.3	+ 1.9
@ 60 - 90 ° Elevation:	> 4.2	> 2.0	> 2.7	> 3.7
BEAMWIDTH(3dB):	102 Deg.	149 Deg.	93 Deg.	133 Deg.
AXIALRATIO	2 dB		2 dB	
LIGHTNINGPROTECTION:	DC GROUNDING			
POWERHANDLING	200 WattCW			

MECHANICAL:

SIZE:	DIAMETER= 3.50 in.[88.90mm] HEIGHT= 0.675in.[17.15mm]
WEIGHT:	6.8 oz. (191 g)
FINISH:	SKYDROLRESISTANTPOLYURETHANEENAMEL BASE IRIDITEPER MIL-C-5441
COLOR:	GLOSS WHITE #17925 PER FED-STD-595B
MATERIAL:	6061-T6ALUMINUMALLOY BASE COMPOSITE RADOME,IMPACT,ABRASION,UV, SOLVENT, SKYDROLRESISTANCE,AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION:TNC, TNC Bulkhead,N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLYSEAL

FEDERAL& MILITARYSPECIFICATIONS

DESIGNTO: FAA TSO-C144,DO-160D,D0-228,MIL-C-5541, MIL-E-5400,MIL-I-45208A,MIL-STD-810,AND SAE J1455

ACCEPTANCETEST PROCEDURE ATP-GPS-L1L2-100

SIZE:	FREQ.BAND:	LNA:
1: 2" SQ.	1215:L1/L2	A: WITH33dBLNA,A2: with 20 dB LNA, A4: with 40 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITHLNA/LIMITER/FILTER
2: 2.6" DIA.		P: PASSIVE (WITHOUTLNA)
3: 3.5" DIA.		PL: PASSIVEWITHLIMITER/FILTER
4: MINIARINC		

P/N:3G1215PL-XS-P-012-X

CABLE'SLENGTH	CONNECTOR	COLOR
X: NOADAPTER	S: SMA, RS:R-SMA; P: PINS	-1: GLOSSWHITE#17925PERFED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESSGRAY#36320PER FED-STD-595B
#: CABLE LENGTH(IN)	N, NB: N, N-Bulkhead	-3: OLIVEDRAB GREEN#34031 PER FED-STD-595B
A: WITHADAPTER	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESSBLACK#37038PER FED-STD-595B
		-2R: GRAY #36375 PER FED-STD-595B

QUANTITY REQD		DESCRIPTION	PART NO	ITEM NO.
		PARTS LIST		
1		CONDUCTIVE GASKET (Option)	2252718	6
4		WASHERS (ITEM 518)	3G15P1001-7	5
1		Adpater Plate for for 4" Radius (Option)	3G1215P-AS-P-012-B2	4
1		Adpater Plate for for 7.5" Radius (Option)	3G1215P-AS-E-012-B2	3
1		Adpater Plate for for 3.5" Radius (Option)	3G1215P-AS-3.5-012-B2	2
1		Adpater Plate for for X" Radius (Option)	3G1215P-AS-X-012-B2	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .010 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ ⌀.005 M
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

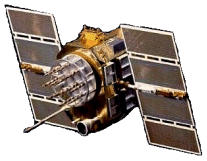
ANTCOM CORP. TORRANCE CALIFORNIA

L1/L2 PASSIVE GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3G1215PL-XS-P-012-X | REV C
SCALE 1/1 | SHEET 1 OF 1

2. MOUNTING SCREWS & GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
NOTES: UNLESS OTHERWISE SPECIFIED:

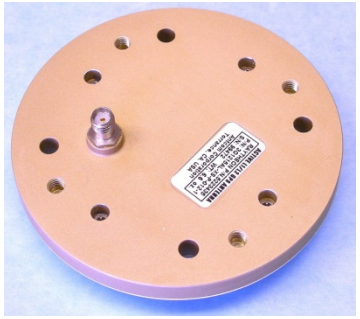
NMO Connector Option is Now Available for Some Antennas

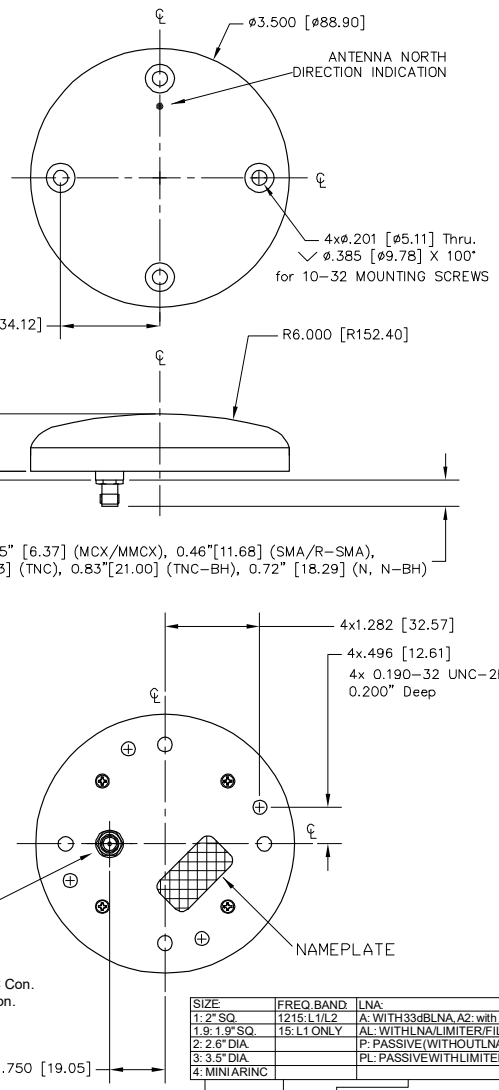


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SPECIFICATIONS

ELECTRICAL:

	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
FREQUENCY:						
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNAGAIN (dBic):	Free Space	16 in G.P.	4 ft G.P.	Free Space	16 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 0.4	+ 3.5	+ 3.3	+ 1.5	+ 4.9
@ 10 ° Elevation	- 1.8	- 3.2	- 2.0	- 3.8	- 4.0	- 3.6
@ 20 ° Elevation	- 0.3	- 1.0	+ 0.8	- 2.0	- 2.0	- 0.1
@ 30 ° Elevation	+ 1.4	+ 0.9	+ 1.8	- 0.5	0.0	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	+3.4/+04	> 2.8	> 2.7	+2.4/+15	> 3.0
BEAM WIDTH (3dB):	114 Deg.	118 Deg.	139 Deg.	106 Deg.	111 Deg.	75 Deg.
AXIAL RATIO	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB					
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	(3-5)V/<19mA					
REJECTION@ (-50/+50)MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100)MHz	< -65 dB			< -65 dB		
POWER HANDLING	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	DIAMETER= 3.50 in. [88.90mm] HEIGHT= 0.770 in. [19.56mm]
WEIGHT:	6.8 oz. (191 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
COLOR:	GLOSS WHITE #17925 PER FED-STD-595B
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (GOLD PLATED) (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH 33dB LNA, A2: with 20 dB LNA, A4: with 40 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER/FILTER
2: 2.6" DIA.		P: PASSIVE (WITHOUT LNA)
3: 3.5" DIA.		PL: PASSIVE WITH LIMITER/FILTER
4: MINIATURE		

P/N: 3G1215AL-XS-P-012-1

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO ADAPTER	S: SMA; RS:R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTER LESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
A: WITH ADAPTER	T, TB: TNC, TNC-Bulkhead	-4: LUSTER LESS BLACK #37038 PER FED-STD-595B
		-2R: GRAY #36375 PER FED-STD-595B

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	ITEM NO
	1	CONDUCTIVE GASKET (Option)	2252718	6
	4	WASHERS (ITEM 518)	3G15P1001-7	5
	1	Adpater Plate for for 4" Radius (Option)	3G1215P-AS-P-012-B2	4
	1	Adpater Plate for for 7.5" Radius (Option)	3G1215P-AS-E-012-B2	3
	1	Adpater Plate for for 3.5" Radius (Option)	3G1215P-AS-3.5-012-B2	2
	1	Adpater Plate for for X" Radius (Option)	3G1215P-AS-X-012-B2	1

PARTS LIST

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	Name Plate, Washers, Screws	DEC-21-06	S.H

2. MOUNTING SCREWS & GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .010 ANGLES ± 2°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ ⌀.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

Active L1/L2
Paveway GPS Anrtenna

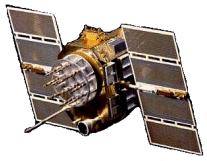
SIZE D | CAGE NO 3CVE1 | DRAWING NO 3G1215AL-XS-P-012-1 | REV A
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Passive L1/L2 GPS Conformal Antenna

4U884-6552303-001 Rev C (15090SOCN2263689-1)

Antcom's P/N: 3G1215P-XS-3-7.5EM Rev D



ISO 9001:2008/FAA Approved Facility

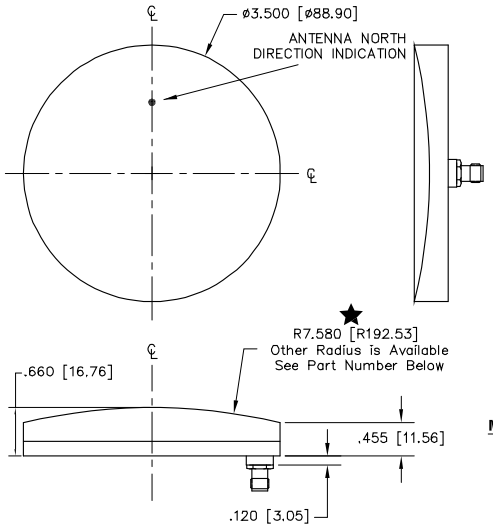
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

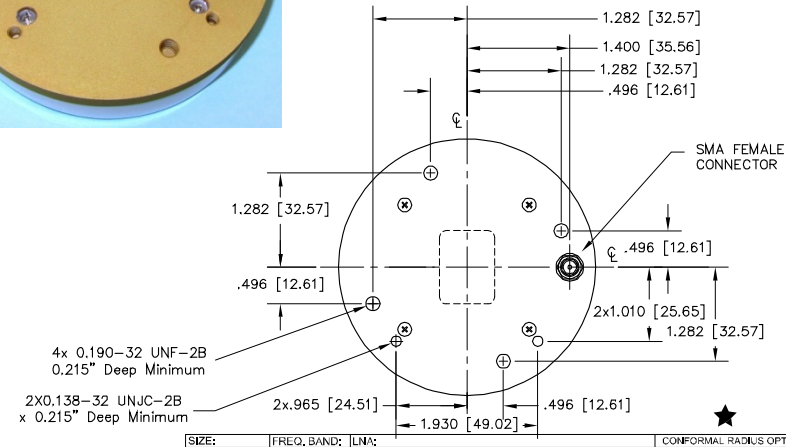
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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz		L2: (1227.60 ±15) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	8 in Dia. Tube, 2 ft Long	Free Space	8 in Dia. Tube, 2 ft Long
@ 90 ° (ZENITH):	+ 5.4	+ 3.5	+ 4.1	+ 4.2
@ 10 ° Elevation:	- 1.6	+ 0.2	- 3.2	- 0.2
@ 20 ° Elevation:	0.0	+ 2.0	- 1.6	+ 1.0
@ 30 ° Elevation:	+ 1.3	+ 2.8	- 0.3	+ 1.9
@ 60 - 90 ° Elevation:	> 4.2	> 2.0	> 2.7	> 3.7
BEAM WIDTH (3dB):	102 Deg.	149 Deg.	93 Deg.	133 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING			
POWER HANDLING:	200 Watt CW			

MECHANICAL:

SIZE:	DIAMETER = 3.50 in.[88.90 mm] HEIGHT = 0.660 in. [16.76 mm]
WEIGHT:	7.0 oz. (198 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
COLOR:	GLOSS WHITE #17925 PER FED-STD-595B
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (GOLD PLATED) (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	B	Format Change	OCT-31-08	S.H
	C	No top Screw Radome	Nov-24-10	S.H
	D	2D Bar Code Label	Dec-01-11	S.H

SIZE:	FREQ. BAND:	LNA:	CONFORMAL RADIUS OPTION:
1: 2" SQ.	1215: L1/L2	A: WITH 33dBLNA, A2: with 20 dB LNA, A4: with 40 dB LNA	-3: 3.000" RADIUS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER/FILTER	-3.5N: 3.500" RADIUS (NETFIRE, GMLRS, NLOS)
2: 2.6" DIA.		P: PASSIVE (WITHOUT LNA)	-4P: 4.000" RADIUS (PAVEWAY)
3: 3.5" DIA.		PL: PASSIVE WITH LIMITER/FILTER	-6M: 6.000" RADIUS (MAVERICK)
4: MINI ARINC			-7.5EM: 7.500" RADIUS (EGBU, MALD)
			-14A: 14.00" RADIUS (ADM)
			-X: X" RADIUS (0: Flat, No Radius)

P/N:3G1215P-XS-3-7.5EM

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO ADAPTER	S: SMA; RS:R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
A: WITH ADAPTER	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-2R: GRAY #36375 PER FED-STD-595B

QUANTITY REQD		DESCRIPTION	PART NO	ITEM NO
		PARTS LIST		
4	–	MOUNTING SCREWS: 10–32, 3/4"	MS24693C274	5
1		Adpater Plate for for 4" Radius Radome (Option)	3G1215P-XS-3-4P-B3	4
1		Adpater Plate for for 7.5" Radius Radome (Option)	3G1215P-XS-3-7.5EM-B3	3
1		Adpater Plate for for 3.5" Radius Radome (Option)	3G1215P-XS-3-3.5N-B3	2
1	1	Adpater Plate for for X" Radius Radome (Option)	3G1215P-XS-3-X-B3	1
–2	–1			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON Ø .00X±.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED M. BOAS 01-05-29
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

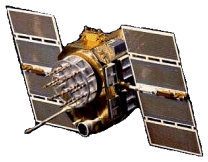
PASSIVE L1/L2 GPS CONFORMAL ANTENNA
4U884-6552303-001 Rev A
(15090SOCN2263689-1)

SIZE D | SAME AS 3CVE1 | DRAWING NO 3G1215P-XS-3-7.5EM | REV D
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Passive L1/L2 GPS Antennas, P/N: 3G1215P-XS-3-7.5EM

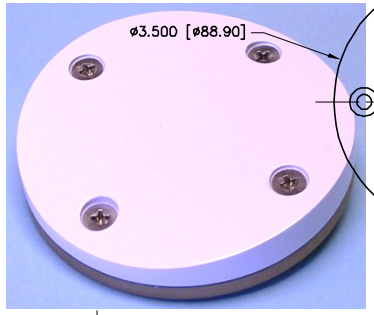
3.5” Diameter, Conformal Configurations

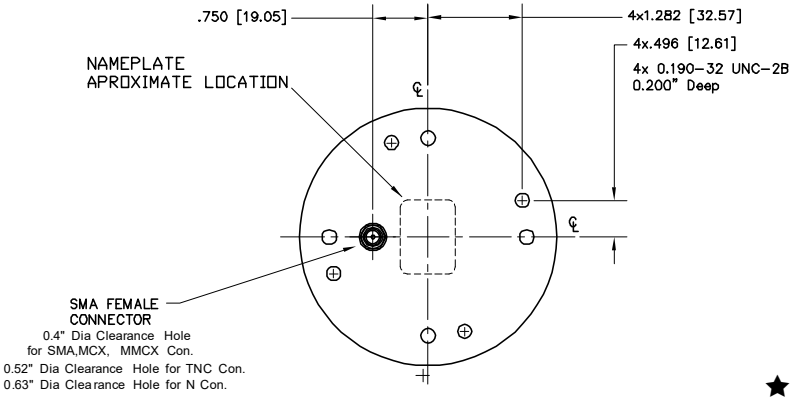


Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz		L2: (1227.60 ±15) MHz	
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POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	8 in Dia. Tube, 2 ft Long	Free Space	8 in Dia. Tube, 2 ft Long
@ 90 ° (ZENITH):	+ 5.4	+ 3.5	+ 4.1	+ 4.2
@ 10 ° Elevation:	- 1.6	+ 0.2	- 3.2	- 0.2
@ 20 ° Elevation:	0.0	+ 2.0	- 1.6	+ 1.0
@ 30 ° Elevation:	+ 1.3	+ 2.8	- 0.3	+ 1.9
@ 60 - 90 ° Elevation:	> 4.2	> 2.0	> 2.7	> 3.7
BEAM WIDTH (3dB):	102 Deg.	149 Deg.	93 Deg.	133 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING			
POWER HANDLING:	200 Watt CW			

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SIZE:	DIAMETER = 3.50 in.[88.90 mm] HEIGHT = 0.660 in. [16.76 mm]
WEIGHT:	7.0 oz. (198 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
COLOR:	GLOSS WHITE #17925 PER FED-STD-595B
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (GOLD PLATED) (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE :	FREQ. BAND :	LNA :	CONFORMAL RADIUS OPTION:
1: 2" SQ.	1215: L1/L2	A: WITH 33dBLNA, A2: with 20 dB LNA, A4: with 40 dB LNA	-3: 3.000" RADIUS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER/FILTER	-3.5N: 3.500" RADIUS (NETFIRE, GMLRS, NLOS)
2: 2.6" DIA.		P: PASSIVE (WITHOUT LNA)	-4P: 4.000" RADIUS (PAVEWAY)
3: 3.5" DIA.		PL: PASSIVE WITH LIMITER/FILTER	-6M: 6.000" RADIUS (MAVERICK)
4: MINI ARINC			-7.5EM: 7.500" RADIUS (EGBU, MALD)
			-14A: 14.00" RADIUS (ACM)
			-X: X" RADIUS (0: Flat, No Radius)

P/N: 3G1215P-XS-3-7.5EM

CABLE'S LENGTH :	CONNECTOR :	COLOR :
X: NO ADAPTE R	S: SMA; RS:R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
A: WITH ADAPTER	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-2R: GRAY #36375 PER FED-STD-595B

QUANTITY REQD		DESCRIPTION	PART NO	ITEM NO
		PARTS LIST		
4	–	MOUNTING SCREWS: 10-32, 3/4"	MS24693C274	5
1		Adpater Plate for for 4" Radius Radome (Option)	3G1215P-XS-3-4P-B3	4
1		Adpater Plate for for 7.5" Radius Radome (Option)	3G1215P-XS-3-7.5EM-B3	3
1		Adpater Plate for for 3.5" Radius Radome (Option)	3G1215P-XS-3-3.5N-B3	2
1	1	Adpater Plate for for X" Radius Radome (Option)	3G1215P-XS-3-X-B3	1
-2	-1			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015 .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .000 TO .015
FILLETS R .000 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø".003 125/
MACHINED SURFACES ▽

DRAWN
CHECKED M. BOAS 01-05-29
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA

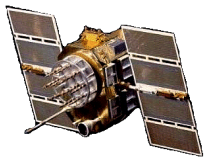
3.5 in Dia. L1/L2 GPS ANTENNA With Conformal Radome

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3G1215P-XS-3-7.5EM | REV –

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS Antenna
P/N: 3G1215A-XS-1-7.5EM
Other Frequencies, Connector and Color Options are Available

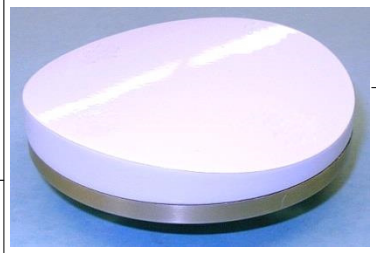


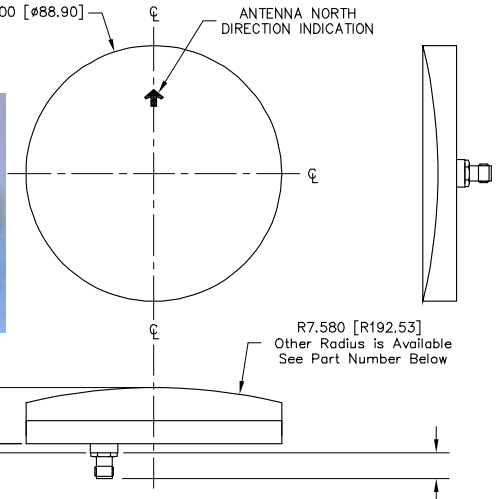
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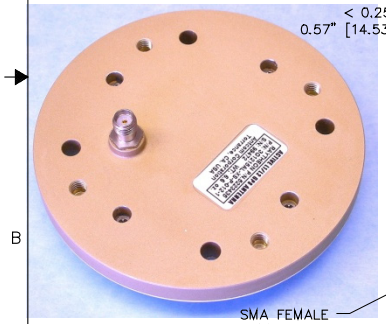
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

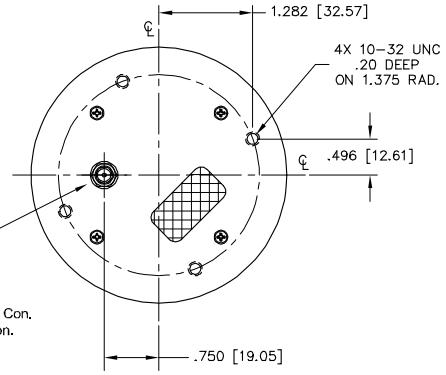
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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	16 in G.P.	4 ft G.P.	Free Space	16 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 0.4	+ 3.5	+ 3.3	+ 1.5	+ 4.9
@ 10 ° Elevation:	- 1.8	- 3.2	- 2.0	- 3.8	- 4.0	- 3.6
@ 20 ° Elevation:	- 0.3	- 1.0	+ 0.8	- 2.0	- 2.0	- 0.1
@ 30 ° Elevation:	+ 1.4	+ 0.9	+ 1.8	- 0.5	0.0	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	+3.4/+0.4	> 2.8	> 2.7	+2.4/+1.5	> 3.0
BEAM WIDTH (3dB):	114 Deg.	118 Deg.	139 Deg.	106 Deg.	111 Deg.	75 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB					
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	(3-5)V/<19mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	DIAMETER = 3.50 in.[88.90 mm] HEIGHT = 0.770 in. [19.56 mm]
WEIGHT:	6.8 oz. (191 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441F
COLOR:	GLOSS WHITE #17925 PER FED-STD-595B
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:	CONFORMAL RADIUS OPTION:
1: 2" SQ.	12: L1/L2	A: WITH 33dBLNA, A2: with 20 dB LNA, A4: with 40 dB LNA	-3: 3.000" RADIUS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER/FILTER	-3.5N: 3.500" RADIUS (NETFIRE, GMLRS, NLOS)
2: 2.6" DIA.		P: PASSIVE (WITHOUT LNA)	-4P: 4.000" RADIUS (PAVEWAY)
3: 3.5" DIA.		PL: PASSIVE WITH LIMITER/FILTER	-6M: 6.000" RADIUS (MAVERICK)
4: MINI ARINC			-7.5EM: 7.500" RADIUS (EGBU, MALD)
			-14A: 14.00" RADIUS (ACM)
			-X: X" RADIUS (0: Flat, No Radius)

P/N: 3G1215A-XS-1-7.5EM

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO ADAPTER	S: SMA; RS:R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
A: WITH ADAPTER	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: DESERT TAN #33446 PER FED-STD-595B

NOTES: UNLESS OTHERWISE SPECIFIED:

ITEM NO	PART NO	DESCRIPTION	QUANTITY REQD
2			1
1			1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .015, .XXX ± .010, ANGLES ± 2°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015 X 45° CHAMFER. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø .005 M A B. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

ORIGINALLY DRAWN	S. HUYNH	06-29-01
ORIGINALLY DESIGNED	S. HUYNH	06-29-01
UPDATED	S. HUYNH	June-03-16
UPDATE DRAWN	P. TRAN	June-03-16
APPROVED	S. HUYNH	June-03-16

ANTCOM CORP. TORRANCE, CALIFORNIA

ACTIVE L1/L2 GPS ANTENNA

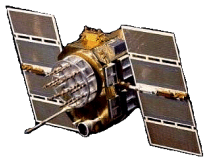
SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	3G1215A-XS-1-7.5EM	–

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Passive L1/L2 GPS Antenna, P/N: 3G1215P-XX-X

3.5” Diameter, Conformal Configurations



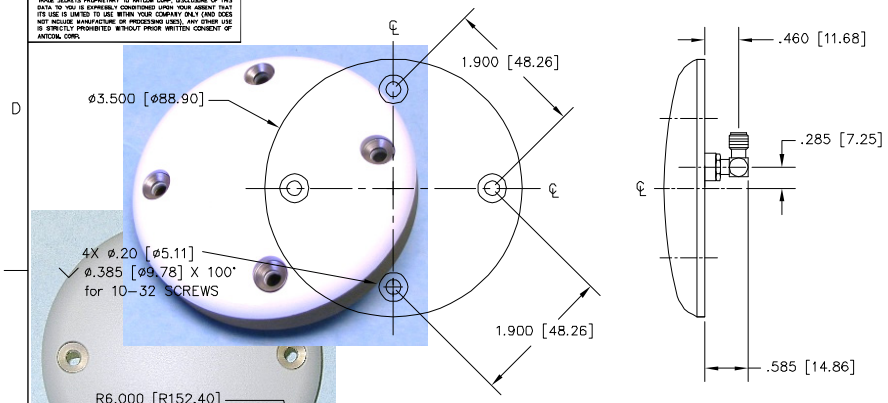
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED



2. MOUNTING SCREWS & GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

SIZE :	FREQ. BAND :	LNA :
1: 2” SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9” SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER
2: 2.6” DIA.		P: WITHOUT LNA
3: 3.5” DIA.		PL: WITHOUT LNA and THINNER (HEIGHT = 0.58”)
4: MINI ARINC		

P/N: 3G1215P-XRS-1

CABLE'S LENGTH :	CONNECTOR :	COLOR :
X: NO ADAPTE R	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG .	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
A: WITH ADAPTER	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 3.5	+ 3.3	+ 4.9
@ 10 ° Elevation:	- 1.8	- 2.0	- 3.8	- 3.6
@ 20 ° Elevation:	- 0.3	+ 0.8	- 2.0	- 0.1
@ 30 ° Elevation:	+ 1.4	+ 1.8	- 0.5	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	> 2.8	> 2.7	> 3.0
BEAM WIDTH (3dB):	114 Deg.	139 Deg.	106 Deg.	75 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING			
POWER HANDLING:	200 Watt CW			

MECHANICAL:

SIZE:	DIAMETER = 3.50 in.[88.90 mm] HEIGHT = 0.560 in. [14.22 mm]
WEIGHT:	4.00 oz. (113 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
COLOR:	GLOSS WHITE #17925 PER FED-STD-595B
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA RIGHT ANGLE FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD		DESCRIPTION	PART NO	FINISH	ITEM NO
		PARTS LIST			
4	–	MOUNTING SCREWS: 10-32, 3/4”	MS24693C274	–	5
	–			–	
1	1	ADHESIVE GASKET	12345G-3M-3G	–	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .030 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125

DRAWN
CHECKED M. BOAS 01-05-29
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA

OUTLINE DRAWING
L1/L2 PASSIVE
GPS ANTENNA

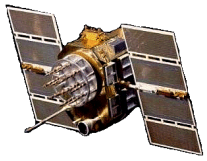
SIZE D | DWG NO 3CVE1 | DRAWING NO 3G1215P-XRS-X | REV –

SCALE 1/1 | SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STAMP IS RED

NMO Connector Option is Now Available for Some Antennas

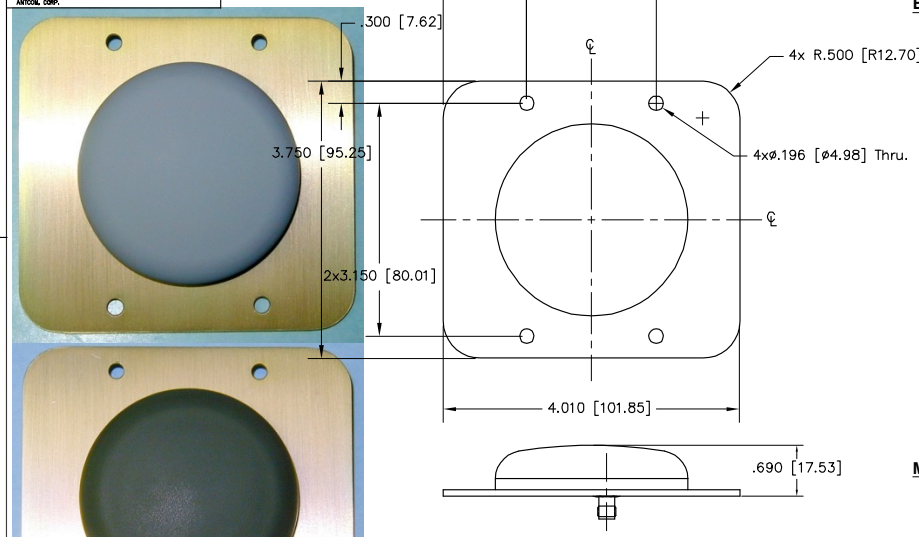
Active or Passive L1/L2 GPS Antennas, P/N: 3.75G1215A-XS-4-T (3.75"x4.0") Configurations, Compatible to Trimble's P/N: 22433-40



Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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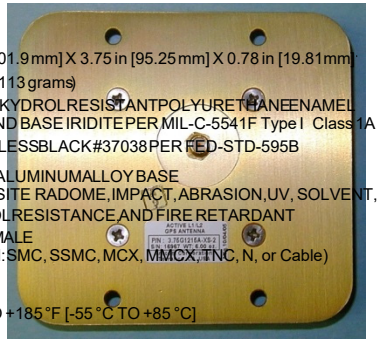


SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNAGAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 3.5	+ 3.3	+ 4.9
@ 10 ° Elevation	- 1.8	- 2.0	- 3.8	- 3.6
@ 20 ° Elevation	- 0.3	+ 0.8	- 2.0	- 0.1
@ 30 ° Elevation	+ 1.4	+ 1.8	- 0.5	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	> 2.8	> 2.7	> 3.0
BEAM WIDTH (3dB):	114 Deg.	139 Deg.	106 Deg.	75 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING			
LNA GAIN:	33 dB		35 dB	
LNA NOISE FIGURE:	3.0 dB		3.0 dB	
LNA P1dB Out:	+13 dBm		+13 dBm	
LNA DC POWER:	2.5V/20mA,3V/29mA,3.3V/35mA,(2.5-24)V/<50mA			
REJECTION@ (-50/+50)MHz	-41 dB / -59 dB		-40 dB / -40 dB	
@ (-100/+100)MHz	< -65 dB		< -65 dB	
POWER HANDLING	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)			

MECHANICAL:



SIZE:	4.0 in. [101.9 mm] X 3.75 in [95.25 mm] X 0.78 in [19.81 mm]
WEIGHT:	4.00 oz. (113 grams)
FINISH:	BLACK SKYDROL RESISTANT POLYURETHANE ENAMEL PAINT AND BASE IRIDITE PER MIL-C-5541F Type I Class 1A
COLOR:	LUSTERLESS BLACK #37038 PER FED-STD-595B
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: SMC, SSMC, MCX, MMCX, TNC, N, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000ft.
VIBRATION:	> 30 G's
HUMIDITY:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4 WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (HEIGHT= 0.58")
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 3.75G1215A-XS-4-T

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead d	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH
5				–	–
3	1			–	–
2	4	8–32 Pan Head, 1/2in long	MS 51957–45		
1	1			–	–

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .010, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ ⌀.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH May–01–03
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

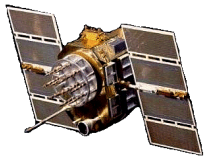
OUTLINE DRAWING
L1/L2 ACTIVE
GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3.75G1215A–XS–4–T | REV –
SCALE 1/1 | SHEET 1 OF 1

ZONE	REV	DESCRIPTION	DATE	APPROVED

CC: 3CVE1, NAICS: 334511, S.Huynh, 23-Mar-17

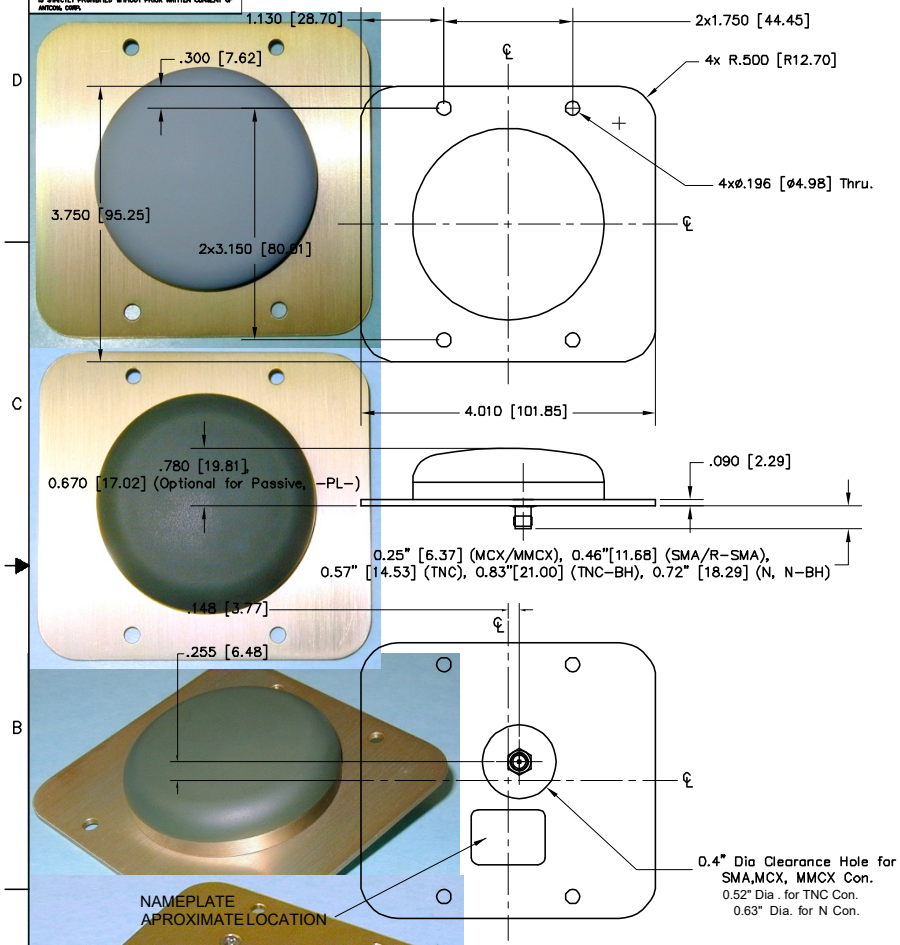
Active or Passive L1/L2 GPS Antennas, P/N: 3.75G1215A-XS-4
(3.75"x4.0") Configurations



Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

ANTCOM CORPORATION . 367 Van Ness Way, #602 . Torrance, CA 90501 . Tel: (310) 782-1076 . Fax: (310) 782-1086 . E-mail: antennas@antcom.com . http://www.antcom.com

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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 3.5	+ 3.3	+ 4.9
@ 10 ° Elevation:	- 1.8	- 2.0	- 3.8	- 3.6
@ 20 ° Elevation:	- 0.3	+ 0.8	- 2.0	- 0.1
@ 30 ° Elevation:	+ 1.4	+ 1.8	- 0.5	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	> 2.8	> 2.7	> 3.0
BEAM WIDTH (3dB):	114 Deg.	139 Deg.	106 Deg.	75 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING			
LNA GAIN:	33 dB		35 dB	
LNA NOISE FIGURE:	3.0 dB		3.0 dB	
LNA P1dB Out:	+13 dBm		+13 dBm	
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA			
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB		-40 dB / -40 dB	
@ (-100/+100)MHz	< -65 dB		< -65 dB	
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)			

MECHANICAL:



SIZE:	4.0 in. [101.9 mm] X 3.75 in [95.25 mm] X 0.78 in [19.81mm]
WEIGHT:	4.00 oz. (113 grams)
FINISH:	BLACK SKYDROL RESISTANT POLYURETHANE ENAMEL PAINT AND HARD BLACK ANODIZED BASE
COLOR:	LUSTERLESS BLACK #37038 PER FED-STD-595B
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: SMC, TNC, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
HUMIDITY:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

					–	–	–	5
1		ADHESIVE GASKET	12345G-3M-2G		–	–	–	3
1					–			2
1					–	–	–	1
-2	-1	DESCRIPTION	PART NO		SPECIFICATION	MATERIAL	FINISH	ITEM NO
QUANTITY REQD		PARTS LIST						

SIZE :	FREQ. BAND :	LNA :
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (HEIGHT = 0.58")
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 3.75G1215A-XS-4

CABLE'S LENGTH :	CONNECTOR :	COLOR :
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN.)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .020. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø .005. MACHINED SURFACES 125. DO NOT SCALE DRAWING

DRAWN | CHECKED M. BOAS May-01-03 | ENGINEER | APPROVED S. HUYNH May-01-03 | CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

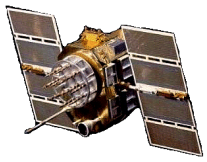
OUTLINE DRAWING
L1/L2 ACTIVE
GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3.75G1215X-XX-X | REV –

SCALE 1/1 | SHEET 1 OF 1

CC: 3CVE1, NAICS: 334511, S.Huynh, 23-Mar-17

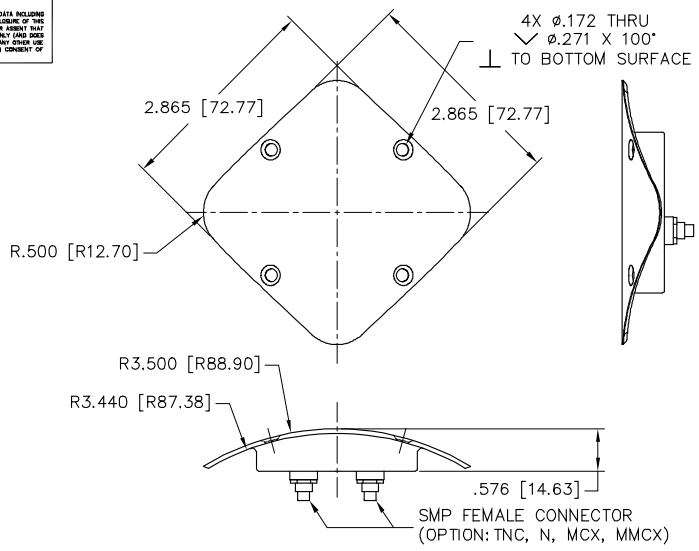
Passive L1/L2 GPS Antenna, P/N: 3CG1215P-XSMP2-2-3.41R-300C
(2.865in x 2.865in x 0.576in), 3.44in Conformal Radius Configuration
2 Channels of Separate L1 and L2 or 2x L1/L2 Ports are Available in This and Other Configurations

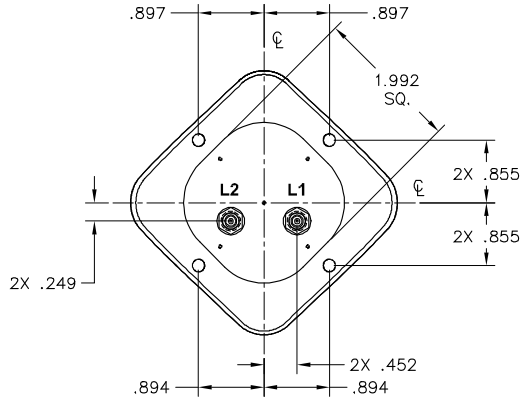


ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz		L2: (1227.60 ±15) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	24 in Dia. Tube, 2 ft Long	Free Space	24 in Dia. Tube, 2 ft Long
@ 90 ° (ZENITH):	+ 4.5	+ 4.2	+ 2.5	+ 4.6
@ 10 ° Elevation:	- 1.5	- 3.0	- 4.3	- 2.1
@ 20 ° Elevation:	0.0	- 0.9	- 3.0	- 0.9
@ 30 ° Elevation:	+ 1.1	+ 1.1	- 1.5	+ 0.4
@ 60 - 90 ° Elevation:	> 3.0	> 2.8	> 1.7	> 3.1
BEAM WIDTH (3dB):	112 Deg.	120 Deg.	104 Deg.	102 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING			
POWER HANDLING:	200 Watt CW			

MECHANICAL:

SIZE: 2.865 In.[72.77 mm] x 2.865 In.[72.77 mm]
HEIGHT = 0.576in. [14.63 mm]
WEIGHT: <5.5 oz. (160 g)
FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441
MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR: SMP FEMALE
(OPTION: TNC, N, MCX, or MMCX)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +572 °F [-55 °C TO +300 °C]
ALTITUDE: 100,000 ft.
SHOCK: 100 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	P: WITHOUT LNA
3: 3.5" SQ.		AL: WITH LNA/LIMITER/FILTER (INPUT: +50dBm, OUPUT:+30 dBm)
2: 2.6" DIA.		PL: PASSIVE WITH LIMITER/FILTER (INPUT: +50dBm, OUPUT:+30 dBm)
4: MINI ARINC		

P/N: 3CG1215P-XSMP2-2-3.41R-300C

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA: P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX: MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

NOTES: UNLESS OTHERWISE SPECIFIED:

QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	FINISH	ITEM NO
1	–	–	–	–	1

PARTS LIST

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

ORIGINALLY DRAWN	S. HUYNH	June-07-12
ORIGINALLY DESIGNED	S. HUYNH	June-07-12
UPDATED	S. HUYNH	Oct-06-15
UPDATE DRAWN	P. TRAN	Oct-06-15
APPROVED	S. HUYNH	Oct-06-15

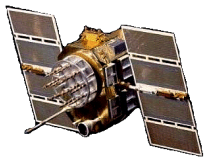
ANTCOM CORP. TORRANCE CALIFORNIA

L1/L2 PASSIVE GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3CG1215P-XSMP2-2-3.41R-300C | REV –

SCALE 1/1 | SHEET 1 OF 1

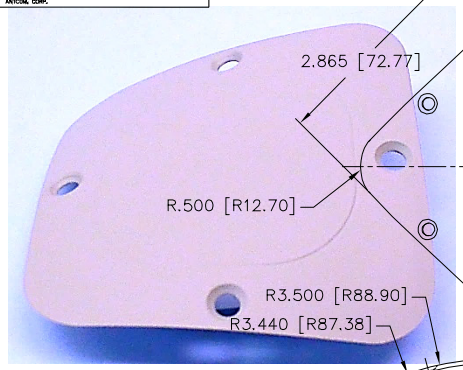
Passive L1/L2 GPS Antenna, P/N: 3CG1215P-2SSMCR-2-3.41R-300C
(2.865in x 2.865in x 0.576in), 3.44in Conformal Radius Configuration
2 Channels of Separate L1 and L2 or 2x L1/L2 Ports are Available in This and Other Configurations

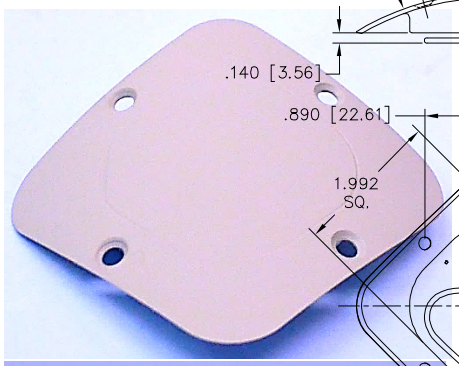


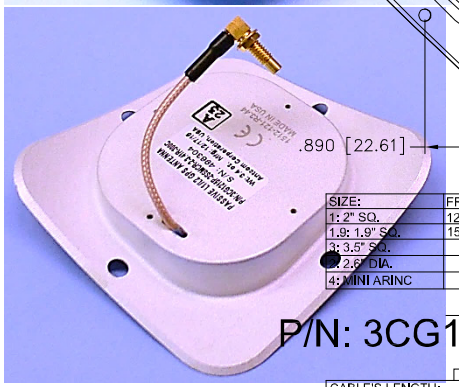
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SPECIFICATIONS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	DATA	12/18/15	S.H.

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz	L2: (1227.60 ±15) MHz
RADIATION PATTERN:	HEMISPHERICAL	
POLARIZATION:	RHCP	RHCP
VSWR:	< 1.5:1	< 1.5:1
IMPEDANCE:	50 ohms	50 ohms
ANTENNA GAIN (dBic):	Free Space	Free Space
@ 90 ° (ZENITH), Peak:	+ 2.0	+ 0.2
@ 10 ° Elevation, MInImum:	- 5.8	- 5.0
@ 20 ° Elevation:	- 4.5	- 3.9
@ 30 ° Elevation:	- 2.8	- 3.5
@ 60 - 90 ° Elevation:	> +1.7	> -0.8
BEAM WIDTH (3dB):	105 Deg.	90 Deg.
AXIAL RATIO:	3 dB	3 dB
LIGHTNING PROTECTION:	DC GROUNDING	
POWER HANDLING:	200 Watt CW	

MECHANICAL:

SIZE: 2.865 in.[72.77 mm] x 2.865 in.[72.77 mm]
HEIGHT = 0.526In. [13.36 mm]
WEIGHT: 3.4 oz. (96 g)
FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441F
MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR: SSMC-R MALE CABLE
(OPTION:SMA, TNC, MCX, MMCX)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +752 °F [-55 °C TO +400 °C (TOP SURFACE)]
ALTITUDE: 100,000 ft.
SHOCK: 100 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	P: WITHOUT LNA
3: 3.5" SQ.		AL: WITH LNA/LIMITER/FILTER (INPUT: +50dBm, OUPUT:+30 dBm)
2.6" DIA.		PL: PASSIVE WITH LIMITER/FILTER (INPUT: +50dBm, OUPUT:+30 dBm)
4: MINI ARINC		

P/N: 3CG1215P-XSSMCR-2-3.41R-300C

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SMP: SMP; SSMCR: SSMC-R	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-595B

NOTES: UNLESS OTHERWISE SPECIFIED:

QUANTITY REQD		PARTS LIST				
–2	–1	DESCRIPTION	PART NO	SPECIFICATION	FINISH	ITEM NO
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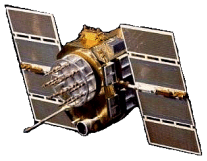
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ANTCOM CORP. TORRANCE, CALIFORNIA

L1/L2 PASSIVE GPS ANTENNA

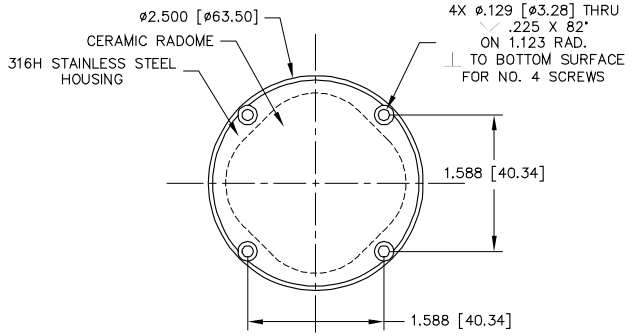
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ORIGINALLY DESIGNED	S. HUYNH	June–07–12
UPDATED	S. HUYNH	Oct–06–15
UPDATE DRAWN	P. TRAN	Oct–06–15
APPROVED	S. HUYNH	Oct–06–15

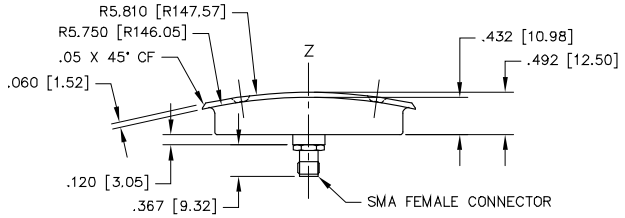
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SCALE 1/1 | SHEET 1 OF 1

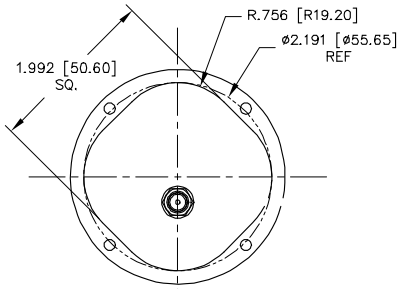


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SPECIFICATIONS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±13) MHz	L2: (1227.60 ±13) MHz
RADIATION PATTERN:	HEMISPHERICAL (360° In Azimuth/ >90° In El)	
POLARIZATION:	RHCP	RHCP
VSWR:	< 1.5:1	< 1.5:1
IMPEDANCE:	50 ohms	50 ohms
ANTENNA GAIN (dBic):	Free Space	Free Space
@ 90 ° (ZENITH):	+ 2.0	+ 0.2
@ 10 ° Elevation:	- 5.8	- 5.0
@ 20 ° Elevation:	- 4.5	- 3.9
@ 30 ° Elevation:	- 2.8	- 3.5
@ 60 - 90 ° Elevation:	> +1.7	> -0.8
BEAM WIDTH (3dB):	105 Deg.	90 Deg.
AXIAL RATIO:	3 dB	3 dB
LIGHTNING PROTECTION:	DC GROUNDING	
POWER HANDLING:	200 Watt CW	

MECHANICAL:

SIZE: 2.50 In [63.50 mm] DIAMETER
HEIGHT = 0.492in. [12.50 mm]
WEIGHT: 3.4 oz. (96 g)
FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441F
COATING PER MIL-PRF-85582E AND MIL-PRF-85285E
MATERIAL: 316H STAINLESS STEEL HOUSING
CERAMIC RADOME, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE AND FIRE RETARDANT
CONNECTOR: SMA FEMALE
(OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, or MMCX)

ENVIRONMENTAL:

TEMPERATURE: -70 °F TO +1600 °F [-57 °C TO +871 °C]
ALTITUDE: 100,000 ft.
SHOCK/VIBRATION: 100 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D (ENV/EMI), DO-228 (ENV/EMI), MIL-C-5541F, MIL-PRF-39012 (CONN), MIL-STD-810G (ENV/EMI), MIL-HDBK-5400 (ELEC) MIL-STD-464C (ELEC MAG), MIL-STD-130N-1 (ID), MIL-STD-889B (METAL) RCC-319-14 (TERMINATION) , RCC-324-01(SAFETY), MIL-STD-1472 MIL-E-5400, MIL-I-45208A, SAE J1455, AND NAS411-1 (HAZ)

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	P: WITHOUT LNA
3: 3.5" SQ.		AL: WITH LNA/LIMITER/FILTER (INPUT: +50dBm, OUPUT:+30 dBm)
2: 2.6" DIA.		PL: PASSIVE WITH LIMITER/FILTER (INPUT: +50dBm, OUPUT:+30 dBm)
4: MINI ARINC		

P/N: 2.5CG1215P-XS-X-5.75R-871C

CABLE'S LENGTH:	CONNECTOR:	COLOR:	CONFORMAL RADIUS:
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B	5.75: 5.75in.
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B	
#: CABLE LENGTH (IN)	SMP: SMP; SSMCR: SSMC-R	-3: CAMO GREEN #34094 PER FED-STD-595B	
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B	
		-5: DESERT TAN #33446 PER FED-STD-595B	

		–		–	–	–	3
		–		–	–	–	2
	1	2–WAYS POWER DIVIDER		2G1215S–XS2–2	–	–	1
–2	–1	DESCRIPTION		PART NO	MATERIAL	FINISH	ITEM NO
QUANTITY REQD		PARTS LIST					

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE: FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON ⌀ ⌀ .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Dec–21–15
ORIGINALLY DESIGNED	S. HUYNH	Dec–21–15
UPDATED	S. HUYNH	Mar–03–16
UPDATE DRAWN	P. TRAN	Mar–03–16
APPROVED	S. HUYNH	Mar–03–16

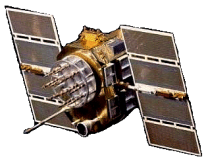
ANTCOM CORP. TORRANCE CALIFORNIA

CONFORMAL L1L2 GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	2.5CG1215P–XS–X–5.75R–871C	–

SCALE 1/1 SHEET 1 OF 1

CC: 3CVE1, NAICS: 334511, S.Huynh, 23-Mar-17

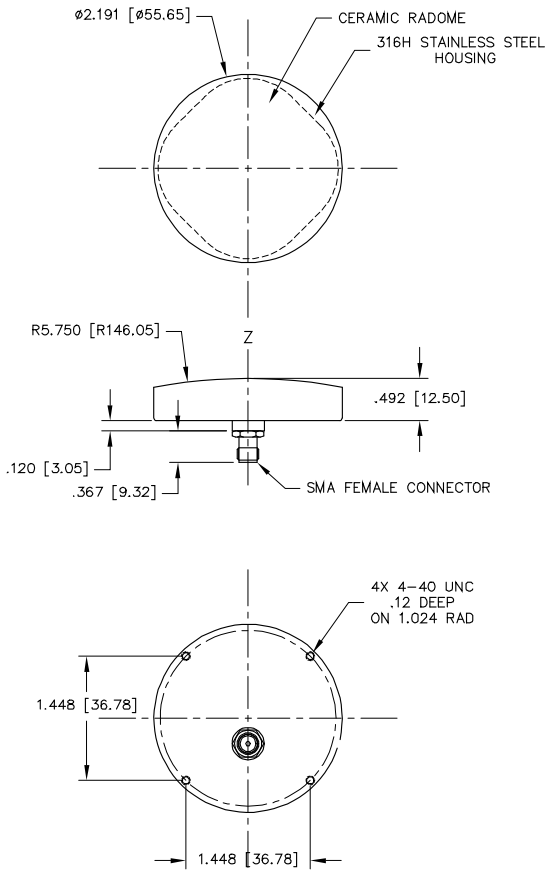


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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED



SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±13) MHz	L2: (1227.60 ±13) MHz
RADIATION PATTERN:	HEMISPHERICAL (360° In Azimuth/ >90° In El)	
POLARIZATION:	RHCP	RHCP
VSWR:	< 1.5:1	< 1.5:1
IMPEDANCE:	50 ohms	50 ohms
ANTENNA GAIN (dBic):	Free Space	Free Space
@ 90 ° (ZENITH):	+ 2.0	+ 0.2
@ 10 ° Elevation:	- 5.8	- 5.0
@ 20 ° Elevation:	- 4.5	- 3.9
@ 30 ° Elevation:	- 2.8	- 3.5
@ 60 - 90 ° Elevation:	> +1.7	> -0.8
BEAM WIDTH (3dB):	105 Deg.	90 Deg.
AXIAL RATIO:	3 dB	3 dB
LIGHTNING PROTECTION:	DC GROUNDING	
POWER HANDLING:	200 Watt CW	

MECHANICAL:

SIZE: 2.191 In [55.65 mm] DIAMETER
HEIGHT = 0.492in. [12.50 mm]
WEIGHT: <3.0 oz. (85 g)
FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441F
COATING PER MIL-PRF-85582E AND MIL-PRF-85285E
MATERIAL: 316H STAINLESS STEEL HOUSING
CERAMIC RADOME, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE AND FIRE RETARDANT
CONNECTOR: SMA FEMALE
(OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, or MMCX)

ENVIRONMENTAL:

TEMPERATURE: -70 °F TO +1600 °F [-57 °C TO +871 °C]
ALTITUDE: 100,000 ft.
SHOCK/VIBRATION: 100 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D (ENV/EMI), DO-228 (ENV/EMI), MIL-C-5541F, MIL-PRF-39012 (CONN), MIL-STD-810G (ENV/EMI), MIL-HDBK-5400 (ELEC) MIL-STD-464C (ELEC MAG), MIL-STD-130N-1 (ID), MIL-STD-889B (METAL) RCC-319-14 (TERMINATION) , RCC-324-01(SAFETY), MIL-STD-1472 MIL-E-5400, MIL-I-45208A, SAE J1455, AND NAS411-1 (HAZ)

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	P: WITHOUT LNA
3: 3.5" SQ.		AL: WITH LNA/LIMITER/FILTER (INPUT: +50dBm, OUPUT:+30 dBm)
2: 2.6" DIA.		PL: PASSIVE WITH LIMITER/FILTER (INPUT: +50dBm, OUPUT:+30 dBm)
4: MINI ARINC		

P/N: 2CG1215P-XS-X-5.75R-871C

CABLE'S LENGTH:	CONNECTOR:	COLOR:	CONFORMAL RADIUS:
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B	5.75: 5.75In.
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B	
#: CABLE LENGTH (IN)	SMP: SMP; SSMCR: SSMC-R	-3: CAMO GREEN #34094 PER FED-STD-595B	
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B	
		-5: DESERT TAN #33446 PER FED-STD-595B	

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH
3		–	–	–	–
2		–	–	–	–
1	1	2-WAYS POWER DIVIDER	2G1215S-XS2-2	–	–
	-2	-1	PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .010, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON ℄ Ø.005 M
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Dec-21-15
ORIGINALLY DESIGNED	S. HUYNH	Dec-21-15
UPDATED	S. HUYNH	Mar-03-16
UPDATE DRAWN	P. TRAN	Mar-03-16
APPROVED	S. HUYNH	Mar-03-16

ANTCOM CORP. TORRANCE CALIFORNIA

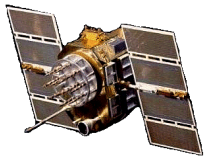
CONFORMAL L1L2 GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	2CG1215P-XS-X-5.75R-871C	–

SCALE 1/1 SHEET 1 OF 1

Passive L1/L2 GPS Antenna, P/N: 3CG1215P-8SSMC-3-3.41 Rev P3

3.5” Square, Conformal Radius Configuration

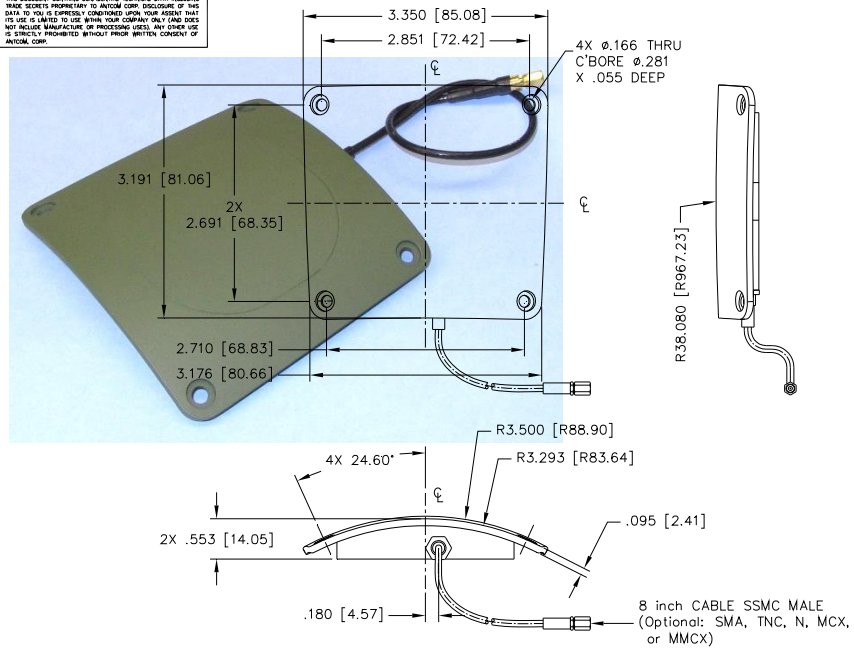


ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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REVISIONS						
ZONE	REV	DESCRIPTION	DATE	REQUESTED	REVISED	APPROVED
	P1	REVISED DRAWING PER LMCO IGES FILE	06/08/12	K.L	P.T	S.H
	P2	REVISED C'BORE DIMENSIONS	06/14/12	K.L	P.T	S.H
	P3	REVISED CONNECTOR LOCATION	06/21/12	S.H	P.T	S.H

SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	24 in Dia. Tube, 2 ft Long	Free Space	24 in Dia. Tube, 2 ft Long
@ 90 ° (ZENITH):	+ 4.5	+ 4.2	+ 2.5	+ 4.6
@ 10 ° Elevation:	- 1.5	- 3.0	- 4.3	- 2.1
@ 20 ° Elevation:	0.0	- 0.9	- 3.0	- 0.9
@ 30 ° Elevation:	+ 1.1	+ 1.1	- 1.5	+ 0.4
@ 60 - 90 ° Elevation:	> 3.0	> 2.8	> 1.7	> 3.1
BEAM WIDTH (3dB):	112 Deg.	120 Deg.	104 Deg.	102 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING			
POWER HANDLING:	200 Watt CW			

MECHANICAL:

SIZE:	3.50 in.[88.90 mm] SQ. HEIGHT = 0.553in. [14.04 mm]
WEIGHT:	<5.5 oz. (160 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
COLOR:	OLIVE DRAB GREEN, FED-STD-595B, COLOR #34094
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SSMC MALE WITH 8 in. CABLE (OPTION: SMA, TNC, N, MCX, or MMCX

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER/FILTER (INPUT: +50dBm, OUPUT:+30 dBm)
3: 3.5" SQ.		P: WITHOUT LNA
2: 2.6" DIA.		PL: PASSIVE WITH LIMITER/FILTER (INPUT: +50dBm, OUPUT:+30 dBm)
4: MINI ARINC		

P/N: 3CG1215P-XSSMC-3-3.41

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	FINISH
4	–			–
1	1			–
–2	–1	PARTS LIST		

2. MOUNTING SCREWS ARE SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005 M
MACHINED SURFACES 125 √
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	April–24–12
ORIGINALLY DESIGNED	S. HUYNH	April–24–12
UPDATE DRAWN	PHIL TRAN	June–07–12
APPROVED	S. HUYNH	June–07–12
CAD FILE NO		

ANTCOM CORP. TORRANCE CALIFORNIA

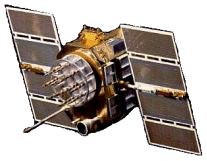
L1/L2 PASSIVE GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	3CG1215P–XSSMC–3–3.41	P3

SCALE 1/1 SHEET 1 OF 1

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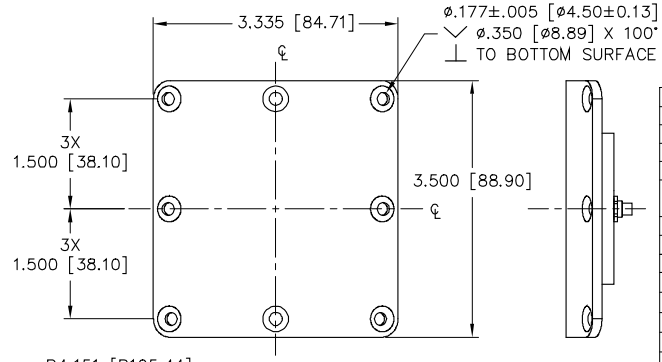
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Active L1/L2 GPS Antenna, P/N: 3CG1215AL-XMM-4-4.015
(3.335in x 3.500in x 0.642in), 4.015in Conformal Radius Configuration
2 Channels of Separate L1 and L2 or 2x L1/L2 Ports are Available in This and Other Configurations

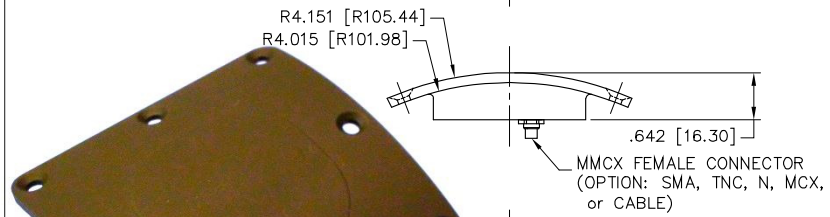


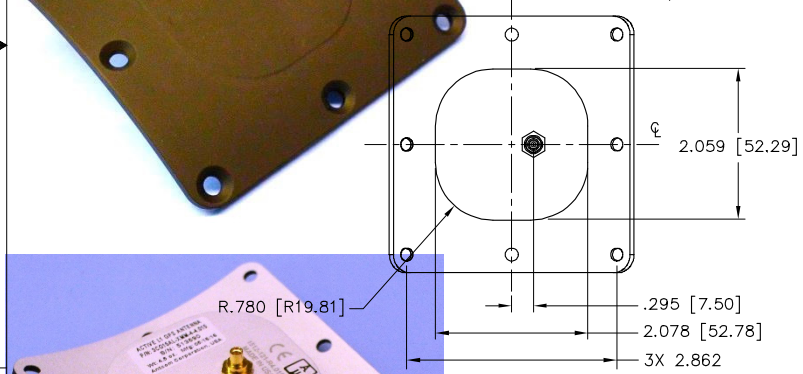
ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

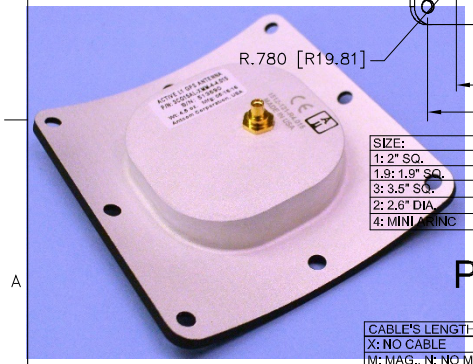
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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz		L2: (1227.60 ±15) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	24 in Dia. Tube, 2 ft Long	Free Space	24 in Dia. Tube, 2 ft Long
@ 90 ° (ZENITH):	+ 4.5	+ 4.2	+ 2.5	+ 4.6
@ 10 ° Elevation:	- 1.5	- 3.0	- 4.3	- 2.1
@ 20 ° Elevation:	0.0	- 0.9	- 3.0	- 0.9
@ 30 ° Elevation:	+ 1.1	+ 1.1	- 1.5	+ 0.4
@ 60 - 90 ° Elevation:	> 3.0	> 2.8	> 1.7	> 3.1
BEAM WIDTH (3dB):	112 Deg.	120 Deg.	104 Deg.	102 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING			
POWER HANDLING:	200 Watt CW			

MECHANICAL:

SIZE:	3.50 In.[88.90 mm] x 3.335In. [84.81mm] HEIGHT = 0.642in. [16.30 mm]
WEIGHT:	<5.5 oz. (160 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	MMCX FEMALE CONNECTOR (OPTION: SMA, TNC, N, MCX, or CABLE)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	P: WITHOUT LNA
3: 3.5" SQ.		AL: WITH LNA/LIMITER/FILTER (INPUT: +50dBm, OUPUT:+30 dBm)
2: 2.6" DIA.		PL: PASSIVE WITH LIMITER/FILTER (INPUT: +50dBm, OUPUT:+30 dBm)
4: MINI ARINC		

P/N: 3CG15AL-XMM-4-4.015

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: DESERT TAN #33446 PER FED-STD-595B

NOTES: UNLESS OTHERWISE SPECIFIED:

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

QUANTITY REQD		PARTS LIST				
-2	-1	DESCRIPTION	PART NO	SPECIFICATION	FINISH	ITEM NO
1	1	–	–	–	–	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ⌀ Ø.005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

ORIGINALLY DRAWN	S. HUYNH	June-07-12
ORIGINALLY DESIGNED	S. HUYNH	June-07-12
UPDATED	S. HUYNH	Oct-06-15
UPDATE DRAWN	P. TRAN	Oct-06-15
APPROVED	S. HUYNH	Oct-06-15

ANTCOM CORP. TORRANCE CALIFORNIA

L1/L2 GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3CG15AL-XMM-4-4.015 | REV –

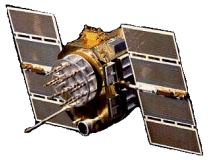
SCALE 1/1 | SHEET 1 OF 1

(1.560-1.616) GHz **L1-GNSS/L-Band Antenna**

P/N: 4.8Dx2.9WRAP-1.58R-XS-X-400C (2 Antennas + 1 Power Combiner Set)

Aluminum Flange/Body with Conformal Ceramic Radome

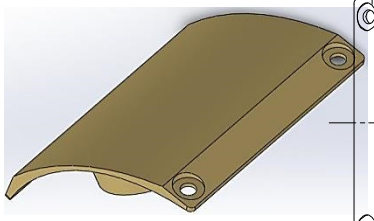
(2.90in x 2.90in x .566in), 2.205in Conformal Radius Configuration. Up to 500C for 1min

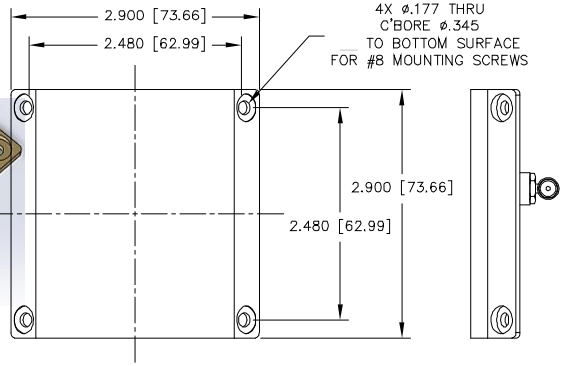


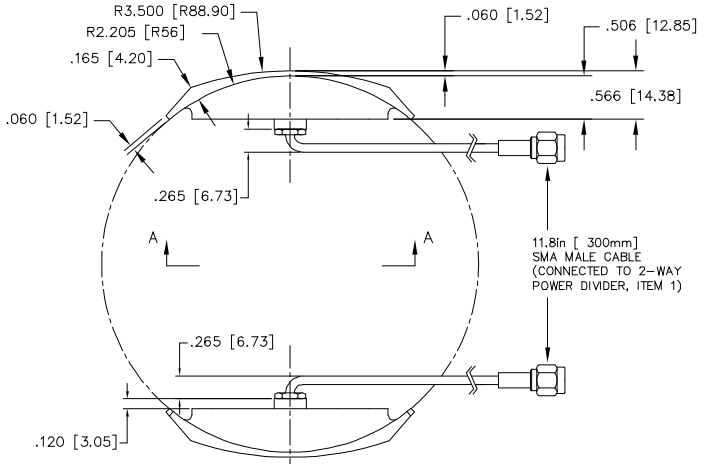
ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

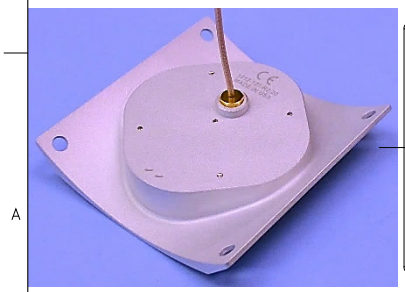
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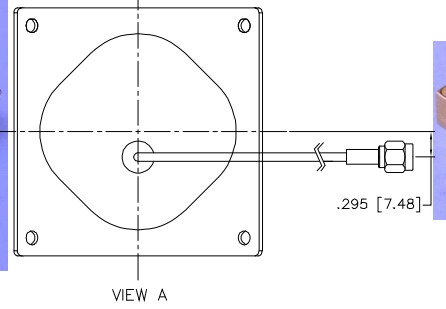
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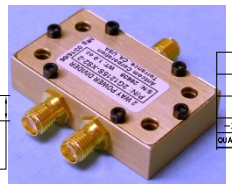












SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	(1.560 - 1.616) GHz	
RADIATION PATTERN:	HEMISPHERICAL	
POLARIZATION:	RHCP	
VSWR:	2.0:1	
GAIN (dB):	Free Space	4.4 in Dia. Tube, 2 ft Long
@ 90° (Zenith):	+ 5.4	+ 3.5
@ 10° Elevation (Ave):	- 1.6	+ 0.2
@ 20° Elevation (Ave):	0.0	+ 2.0
@ 30° Elevation (Ave):	+ 1.3	+ 2.8
@ 60 - 90 ° Elevation:	> 4.2	> 2.0
Beam Width (3dB):	102 Deg.	149 Deg.
AXIAL RATIO @ Zenith:	3.0 dB	
IMPEDANCE:	50 Ohms	
POWER HANDLING:	200 Watt	
DC GROUNDING:	YES (LIGHTNING PROTECTION)	

MECHANICAL:

SIZE:	2.90 in [73.66 mm] X 2.90 in [73.66 mm] HEIGHT = 0.566 in. [14.38 mm]
WEIGHT:	(4.39 oz. (124.5 g)/Antenna) x 2 + (0.96 oz. (27.2 g)/Power Combiner = 9.74 oz (276 g) Total
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541 Class 1A
COLOR:	GLOSS WHITE #17925 PER FED-STD-595B LUSTERLESS GRAY #36320 PER FED-STD-595B OLIVE DRAB GREEN #34031 PER FED-STD-595B LUSTERLESS BLACK #37038 PER FED-STD-595B TAN #33446 PER FED-STD-595B
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE CERAMIC RADOME, IMPACT, ABRASION, UV, SOLVENT, AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	SMA MALE CABLES (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67°F TO +752 °F [-55 °C TO +400 °C (TOP SURFACE)]
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO:	FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, AND SAE J1455 MIL-STD-810F

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH
3					
2		-	-	-	-
1	1	2-WAYS POWER DIVIDER	2G1215S-XS2-2	-	-

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015 .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125

ORIGINALLY DRAWN	S. HUYNH Feb-01-13
ORIGINALLY DESIGNED	S. HUYNH Feb-01-13
UPDATED	S. HUYNH Dec-21-15
UPDATE DRAWN	P. TRAN Dec-21-15
APPROVED	S. HUYNH Dec-21-15

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA

Conformal L-Band ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	4.8Dx2.9WRAP-1.58R-XS-X-400C	—

SCALE 1/1 SHEET 1 OF 1

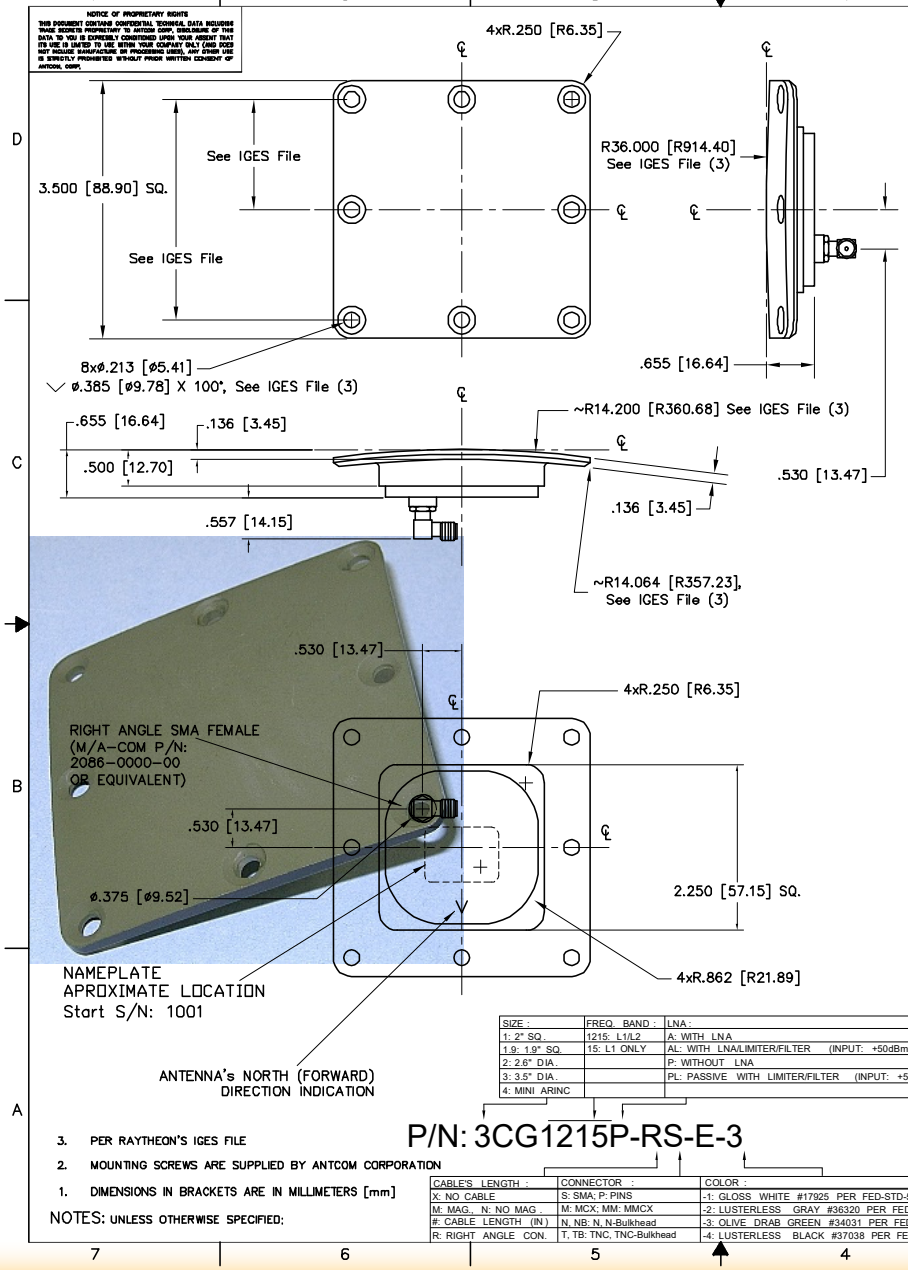
ZONE	REV	DESCRIPTION	DATE	APPROVED

REVISIONS

NMO Connector Option is Now Available for Some Antennas

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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	24 in Dia. Tube, 2 ft Long	Free Space	24 in Dia. Tube, 2 ft Long
@ 90 ° (ZENITH):	+ 4.5	+ 4.2	+ 2.5	+ 4.6
@ 10 ° Elevation:	- 1.5	- 3.0	- 4.3	- 2.1
@ 20 ° Elevation:	0.0	- 0.9	- 3.0	- 0.9
@ 30 ° Elevation:	+ 1.1	+ 1.1	- 1.5	+ 0.4
@ 60 - 90 ° Elevation:	> 3.0	> 2.8	> 1.7	> 3.1
BEAM WIDTH (3dB):	112 Deg.	120 Deg.	104 Deg.	102 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING			
POWER HANDLING:	200 Watt CW			

MECHANICAL:

SIZE:	3.50 in.[88.90 mm] SQ. HEIGHT = 0.655 in. [16.64 mm]
WEIGHT:	<5.5 oz. (160 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
COLOR:	FIELD GREEN, FED-STD-595, COLOR#34095
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA RIGHT ANGLE FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD		DESCRIPTION	PART NO	FINISH	ITEM NO
4	–	MOUNTING SCREWS: 10-32, 3/4”	MS24693C274	–	5
	–			–	
1	1			–	1

PARTS LIST

SIZE :	FREQ. BAND :	LNA :
1: 2” SQ.	1215: L1/L2	A: WITH LNA
1.9: 1.9” SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER/FILTER (INPUT: +50dBm, OUPUT:+30 dBm)
2: 2.6” DIA.		P: WITHOUT LNA
3: 3.5” DIA.		PL: PASSIVE WITH LIMITER/FILTER (INPUT: +50dBm, OUPUT:+30 dBm)
4: MINI ARINC		

CABLE’S LENGTH :	CONNECTOR :	COLOR :
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN.)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

P/N: 3CG1215P-RS-E-3

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. MOUNTING SCREWS ARE SUPPLIED BY ANTCOM CORPORATION
3. PER RAYTHEON’S IGES FILE

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ±.01, .XXX ±.005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .010 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005. MACHINED SURFACES 126. DO NOT SCALE DRAWING.

DRAWN
CHECKED M. BOAS 01-05-29
ENGINEER
APPROVED S. HUYNH July-18-05
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

L1/L2 PASSIVE GPS ANTENNA for ACM (6544099)

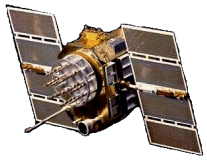
SIZE D | CAGE NO 3CVE1 | DRAWING NO 3CG1215P-RS-E-3 | REV –

SCALE 1/1 | SHEET 1 OF 1

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

Active or Passive L1/L2 GPS Antennas, P/N: 3CG1215X-XX-X-X

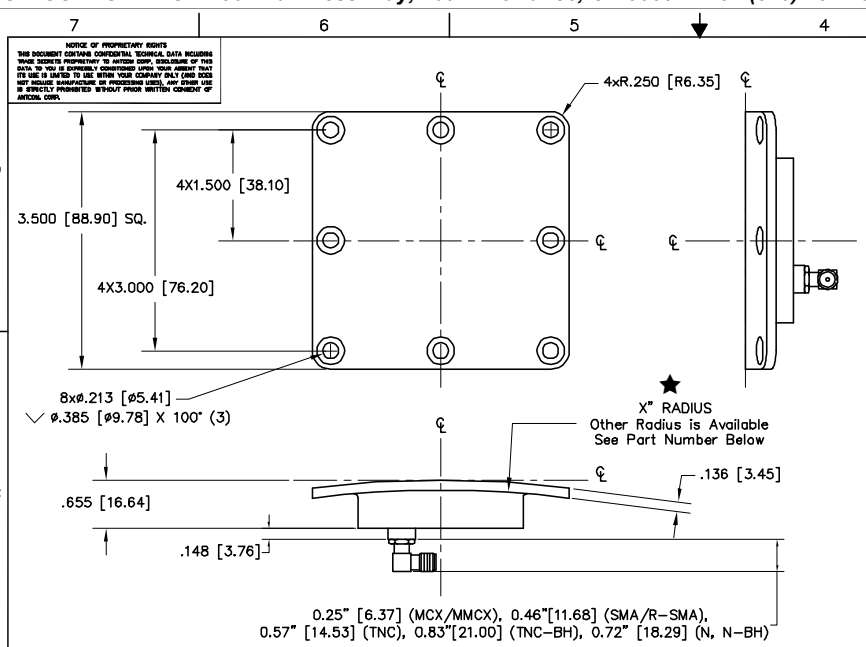
3.5” Square, Xin Radius Conformal Configurations

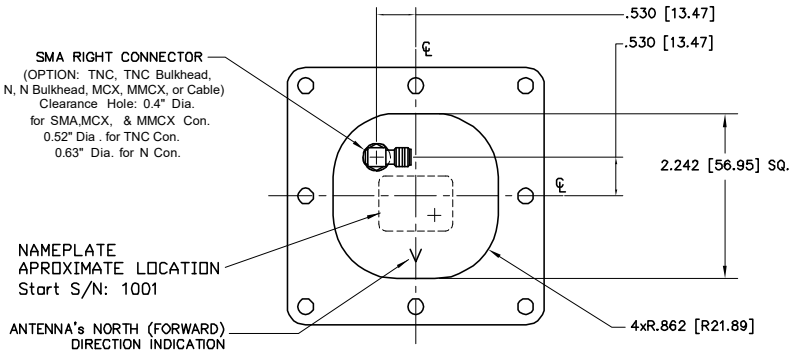


ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

	L1: (1575.42 ±15) MHz		L2: (1227.60 ±15) MHz	
FREQUENCY:				
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	24 in Dia. Tube, 2 ft Long	Free Space	24 in Dia. Tube, 2 ft Long
@ 90 ° (ZENITH):	+ 4.5	+ 4.2	+ 2.5	+ 4.6
@ 10 ° Elevation:	- 1.5	- 3.0	- 4.3	- 2.1
@ 20 ° Elevation:	0.0	- 0.9	- 3.0	- 0.9
@ 30 ° Elevation:	+ 1.1	+ 1.1	- 1.5	+ 0.4
@ 60 - 90 ° Elevation:	> 3.0	> 2.8	> 1.7	> 3.1
BEAM WIDTH (3dB):	112 Deg.	120 Deg.	104 Deg.	102 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING			
POWER HANDLING:	200 Watt CW			

MECHANICAL:

SIZE:	3.50 in.[88.90 mm] SQ. HEIGHT = 0.655 in. [16.64 mm]
WEIGHT:	<5.5 oz. (160 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
COLOR:	FIELD GREEN, FED-STD-595, COLOR#34095
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA RIGHT ANGLE FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE :	FREQ. BAND :	LNA :	CONFORMAL RADIUS OPTION:
1: 2" SQ.	1215: L1/L2	A: WITH LNA	-3: 3.000"RADIUS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITER/FILTER (INPUT: +50dBm, OUPUT:+30 dBm)	-3.5N: 3.500"RADIUS (NETFIRE, GMLRS, NLOS)
2: 2.6" DIA.		P: WITHOUT LNA	-4P: 4.000"RADIUS (PAVEWAY)
3: 3.5" DIA.		PL: PASSIVE WITH LIMITER/FILTER (INPUT: +50dBm, OUPUT:+30 dBm)	-6M: 6.000"RADIUS (MAVERICK)
4: MINI ARINC			-7.5EM: 7.500"RADIUS (EGBU, MALD)
			-14A: 14.00"RADIUS (ACM)
			-X: X" RADIUS (0: Flat, No Radius)

P/N: 3CG1215P-XRS-3-X

CABLE'S LENGTH :	FEMALE CONNECTOR:	COLOR :
X: NO CABLE	S: SMA; RS: R-SMA	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG .	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN.)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

QUANTITY REQD		DESCRIPTION	PART NO	FINISH	ITEM NO
4	–	MOUNTING SCREWS: 10-32, 3/4"	MS24693C274	–	5
	–			–	
1	1			–	1
-2	-1				

PARTS LIST

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .000 TO .015. FILLETS R .000 TO R .020. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø .000. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

DRAWN

CHECKED M. BOAS 01-05-29

ENGINEER

APPROVED S. HUYNH 01-05-29

CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

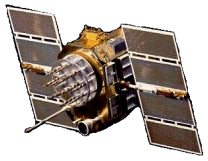
3.5" SQ. CONFORMAL L1/L2 GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3CG1215P-XRS-3-X | REV –

SCALE 1/1 | SHEET 1 OF 1

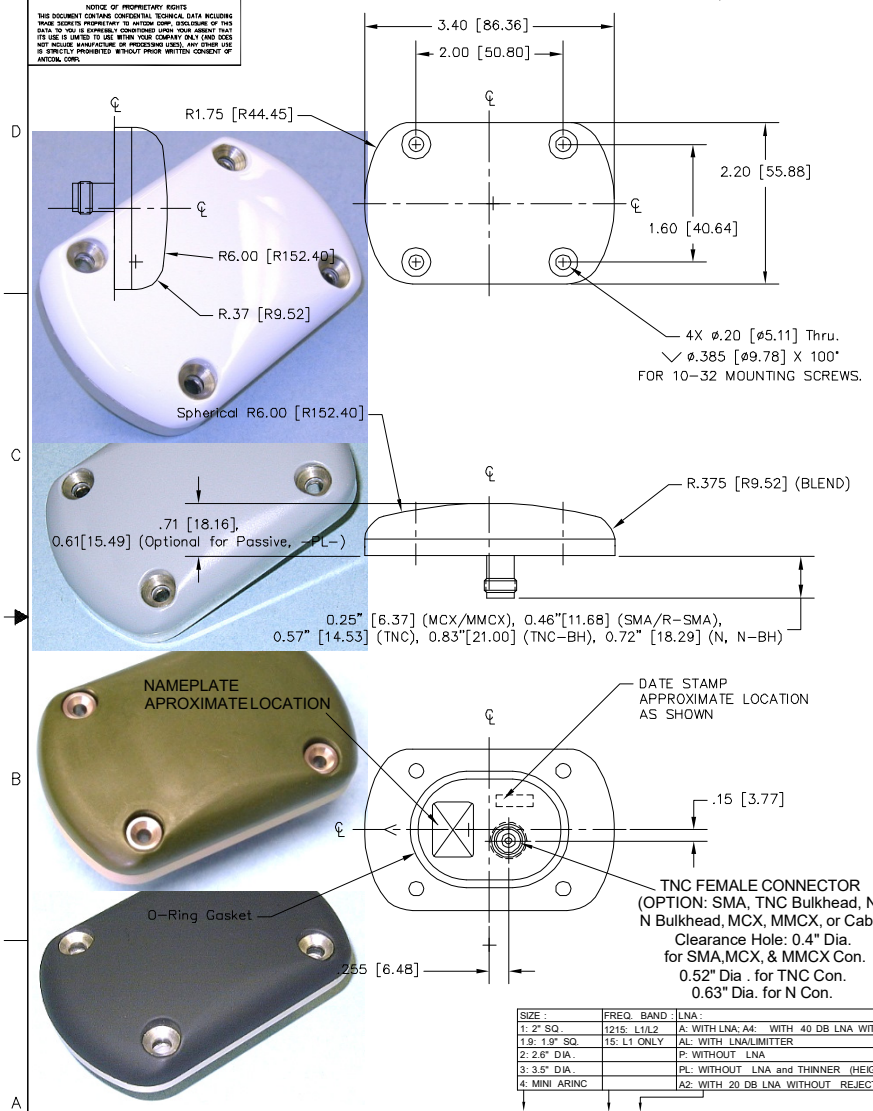
CC: 3CVE1, NAICS: 334511, S.Huynh, 23-Mar-17

Active or Passive L1/L2 GPS Antennas
P/N: 4G1215X-XX-X
(3.4” x 2.2”) Mini Arinc Configurations



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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	16 in G.P.	4 ft G.P.	Free Space	16 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.6	+ 0.3	+ 2.9	+ 1.8	+ 1.9	+ 5.3
@ 10 ° Elevation:	- 2.5	- 3.1	- 1.8	- 4.2	- 3.1	- 2.3
@ 20 ° Elevation:	- 1.1	- 1.1	+ 0.7	- 2.9	- 1.1	+ 0.4
@ 30 ° Elevation:	+ 0.5	+ 0.9	+ 1.7	- 2.0	+ 0.5	+ 2.3
@ 60 - 90 ° Elevation:	> 3.6	+ 3.1/+ 0.3	> 2.1	> 0.9	+ 3.1/+ 1.9	> 3.2
BEAM WIDTH (3dB):	103 Deg.	120 Deg.	146 Deg.	108 Deg.	120 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	WIDTH: 2.20 in. [55.88 mm], LENGTH 3.40 in. [86.36 mm], HEIGHT: 0.72 in. [18.16 mm], 0.61" [15.49] (Optional for Passive)
WEIGHT:	5.15 oz. (146 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	TNC FEMALE (OPTION: SMA, TNC Bulkhead, N, N Bulkhead MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

QUANTITY REQD		PARTS LIST			ITEM NO
		DESCRIPTION	PART NO	FINISH	
1		O-RING	2-031/N756-75	-	1
A/R	-				
				-	3
4	-	MOUNTING SCREW: (10-32, 1")	MS24693C276		4
4	-	MOUNTING SCREWS for -PL- ONLY: (10-32, 3/4")	MS24693C274	-	5

SIZE :	FREQ. BAND :	LNA :
1: 2" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (HEIGHT = 0.61")
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 4G1215A-XT-1

CABLE'S LENGTH :	CONNECTOR :	COLOR :
X: NO CABLE	S: SMA; RS:R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG .	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN.)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. O-RING, AND MOUNTING SCREWS ARE SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .030 TO R .050. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.000 125/ MACHINED SURFACES. DO NOT SCALE DRAWING.

DRAWN | CHECKED M. BOAS 01-06-01 | ENGINEER | APPROVED S. HUYNH 01-06-01 | CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE, OR PASSIVE
GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 4G1215X-XX-X | REV -

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active or Passive L1/L2 GPS Antennas

P/N: 4G1215X-XXC-X

(3.4” x 2.2”) Mini Arinc Center Connector Configurations

ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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REVISIONS

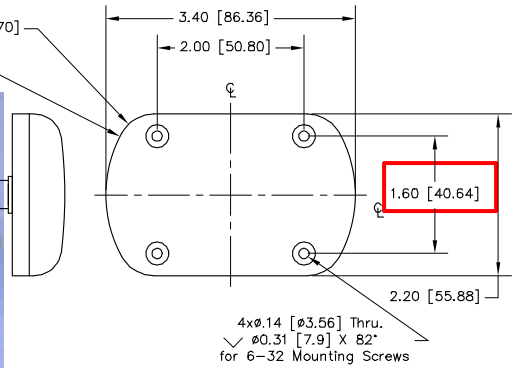
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	1.60in Mounting Spacing VSWR: 2.0	Nov-11-08	S.H

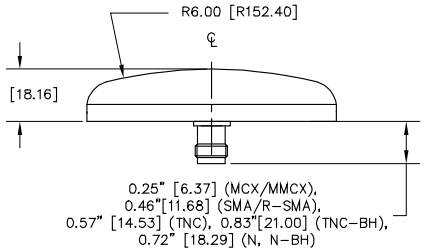


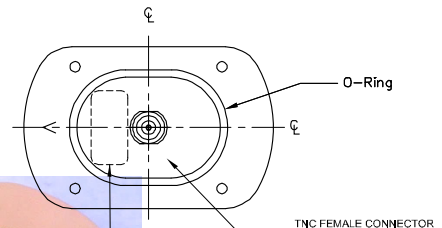


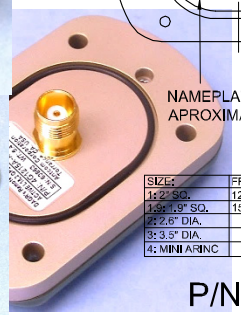


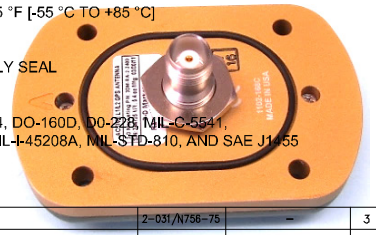












SPECIFICATIONS

ELECTRICAL:

	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
FREQUENCY:						
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 2:1			< 2:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	16 In G.P.	4 ft G.P.	Free Space	16 In G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.6	+ 0.3	+ 2.9	+ 1.8	+ 1.9	+ 5.3
@ 10 ° Elevation:	- 2.5	- 3.1	- 1.8	- 4.2	- 3.1	- 2.3
@ 20 ° Elevation:	- 1.1	- 1.1	+ 0.7	- 2.9	- 1.1	+ 0.4
@ 30 ° Elevation:	+ 0.5	+ 0.9	+ 1.7	- 2.0	+ 0.5	+ 2.3
@ 60 - 90 ° Elevation:	> 3.6	+ 3.1/+ 0.3	> 2.1	> 0.9	+ 3.1/+ 1.9	> 3.2
BEAM WIDTH (3dB):	103 Deg.	120 Deg.	146 Deg.	108 Deg.	120 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	WIDTH: 2.20 in. [55.88 mm], LENGTH 3.40 in. [86.36 mm], HEIGHT: 0.72 in. [18.16 mm], 0.61" [15.49] (Optional for Passive)
WEIGHT:	5.15 oz. (146 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	TNC FEMALE (OPTION: SMA, TNC Bulkhead, N, N Bulkhead MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: with +33dB LNA; A2: with 20 dB LNA; A27: with +27 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: with +40 dB LNA; AL: WITH LNA/LIMITER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (HEIGHT = 0.61")
4: MINI ARINC		

P/N: 4G1215A-XTC-3

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., NI NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N: N, NB: N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	T: TNC, TB:TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: DESERT TAN #33446 PER FED-STD-595B

QUANTITY REQD		DESCRIPTION	PART NO	FINISH	ITEM NO
		PARTS LIST			
1	–	O-RING	2-031/N756-75	–	3
4	–	MOUNTING SCREW: (6-32, 1")	91500A153	–	2
4	–	MOUNTING SCREWS for -PL- ONLY: (6-32, 3/4")	91500A151	–	1

2. O-RING, AND MOUNTING SCREWS ARE SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .01, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	01-06-01
ORIGINALLY DESIGNED	S. HUYNH	01-06-01
UPDATED	S. HUYNH	June-02-16
UPDATE DRAWN	P. TRAN	June-02-16
APPROVED	S. HUYNH	June-02-16

ANTCOM CORP. TORRANCE CALIFORNIA

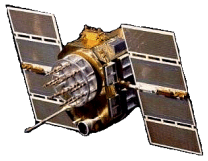
OUTLINE DRAWING
L1/L2 ACTIVE, OR PASSIVE GPS ANTENNA

SIZE	CAGE NO.	DRAWING NO.	REV
D	3CVE1	4G1215A-XTC-3	A

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

DAGR's Remote Antenna 2 (RA-2), P/N: 4G1215A-XTBC-3
P/N: 7190427+001 (4G1215A27-XTBC-3)
(3.4" x 2.2") Mini Arinc Center Connector Configurations

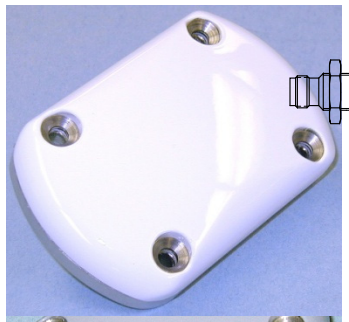


ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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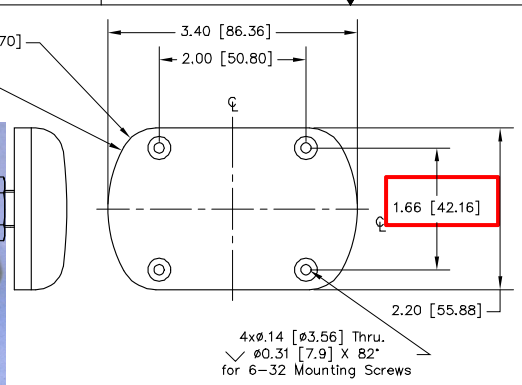
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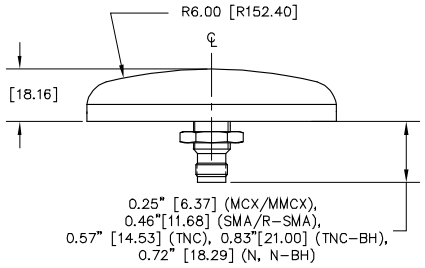


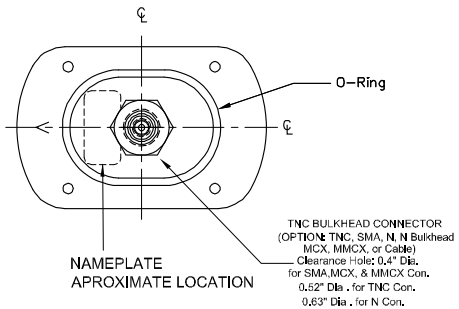












SPECIFICATIONS

REVISIONS			
ZONE REV	DESCRIPTION	DATE	APPROVED
C	1.66in Mounting Spacing	Dec-01-08	S.H

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 2:1			< 2:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	16 In G.P.	4 ft G.P.	Free Space	16 In G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.6	+ 0.3	+ 2.9	+ 1.8	+ 1.9	+ 5.3
@ 10 ° Elevation:	- 2.5	- 3.1	- 1.8	- 4.2	- 3.1	- 2.3
@ 20 ° Elevation:	- 1.1	- 1.1	+ 0.7	- 2.9	- 1.1	+ 0.4
@ 30 ° Elevation:	+ 0.5	+ 0.9	+ 1.7	- 2.0	+ 0.5	+ 2.3
@ 60 - 90 ° Elevation:	> 3.6	+ 3.1/+ 0.3	> 2.1	> 0.9	+ 3.1/+ 1.9	> 3.2
BEAM WIDTH (3dB):	103 Deg.	120 Deg.	146 Deg.	108 Deg.	120 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	WIDTH: 2.20 in. [55.88 mm], LENGTH 3.40 in. [86.36 mm], HEIGHT: 0.72 in. [18.16 mm], 0.61" [15.49] (Optional for Passive)
WEIGHT:	5.15 oz. (146 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	TNC FEMALE BULKHEAD (OPTION: SMA, TNC Bulkhead, N, N Bulkhead MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455



2. O-RING, AND MOUNTING SCREWS ARE SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
NOTES: UNLESS OTHERWISE SPECIFIED:

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: with +33dB LNA; A2: with 20 dB LNA; A27: with +27 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: with +40 dB LNA; AL: WITH LNA/LIMITER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (HEIGHT = 0.61")
4: MINI ARINC		

P/N: 4G1215A-XTBC-3

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N: N, NB: N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	T: TNC, TB:TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: DESERT TAN #33446 PER FED-STD-595B

QUANTITY REQD		DESCRIPTION	PART NO	FINISH	ITEM NO
		PARTS LIST			
1	–	O-RING	2-031/N756-75	–	3
4	–	MOUNTING SCREW: (6-32, 1")	91500A153	–	2
4	–	MOUNTING SCREWS for -PL- ONLY: (6-32, 3/4")	91500A151	–	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .010, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø ±.005
125 MACHINED SURFACES
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	01-06-01
ORIGINALLY DESIGNED	S. HUYNH	01-06-01
UPDATED	S. HUYNH	June-02-16
UPDATE DRAWN	P. TRAN	June-02-16
APPROVED	S. HUYNH	June-02-16

ANTCOM CORP. TORRANCE CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE, OR PASSIVE GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	4G1215A-XTBC-3	C

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

CC: 3CVE1, NAICS: 334511, S.Huynh, 23-Mar-17

Passive L1/L2 GPS Antenna

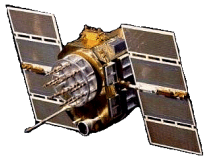
P/N: 4G1215P-XTC-3-0.65T (TNC)

P/N: 4G1215P-XTBC-3-0.65T (TNC-Bulkhead)

(3.4" x 2.2") Mini Arinc Center Connector Configuration

ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf



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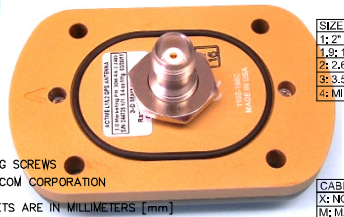
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	C	THINNER BSPLT	05/09/16	APPROVED

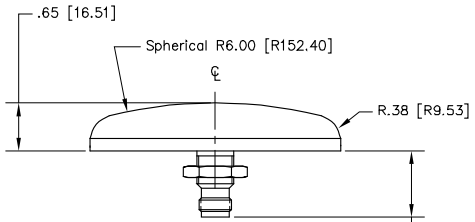


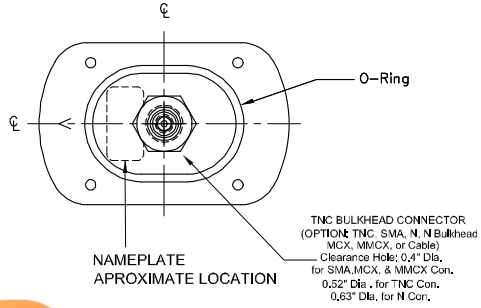












SPECIFICATIONS

ELECTRICAL:

	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
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POLARIZATION:	RHCP			RHCP		
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IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	16 in G.P.	4 ft G.P.	Free Space	16 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.6	+ 0.3	+ 2.9	+ 1.8	+ 1.9	+ 5.3
@ 10 ° Elevation:	- 2.5	- 3.1	- 1.8	- 4.2	- 3.1	- 2.3
@ 20 ° Elevation:	- 1.1	- 1.1	+ 0.7	- 2.9	- 1.1	+ 0.4
@ 30 ° Elevation:	+ 0.5	+ 0.9	+ 1.7	- 2.0	+ 0.5	+ 2.3
@ 60 - 90 ° Elevation:	> 3.6	+ 3.1/+ 0.3	> 2.1	> 0.9	+ 3.1/+ 1.9	> 3.2
BEAM WIDTH (3dB):	103 Deg.	120 Deg.	146 Deg.	108 Deg.	120 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

MECHANICAL:

SIZE:	WIDTH: 2.20 in. [55.88 mm], LENGTH 3.40 in. [86.36 mm], HEIGHT: 0.65 in. [16.51 mm]
WEIGHT:	5.15 oz. (146 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	TNC FEMALE BULKHEAD (OPTION: SMA, TNC Bulkhead, N, N Bulkhead MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: with +33dB LNA; A2: with 20 dB LNA; A27: with +27 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: with +40 dB LNA; AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		
4: MINI ARINC		

QUANTITY REQD		PARTS LIST			
		DESCRIPTION	PART NO	FINISH	ITEM NO
1		O-RING	2-031/N756-75	-	1
4	-	MOUNTING SCREW: (6-32, 1")	91500A153	-	2
4	-	MOUNTING SCREWS for -PL- ONLY: (6-32, 3/4")	91500A151	-	3

P/N: 4G1215P-XTBC-3-0.65T

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N: N, NB: N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
R: RIGHT ANGLE CON.	T: TNC, TB:TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: DESERT TAN #33446 PER FED-STD-595B

2. O-RING, AND MOUNTING SCREWS ARE SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCE ON: FRACTIONS ± 1/64, DECIMALS .XX ± .015, .XXX ± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .003 TO R .005. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø .005. MACHINED SURFACES 125. DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	01-06-01
ORIGINALLY DESIGNED	S. HUYNH	01-06-01
UPDATED BY	S. HUYNH	May-09-16
DRAWN BY	P. TRAN	May-09-16
APPROVED	S. HUYNH	May-09-16

ANTCOM CORP. TORRANCE CALIFORNIA

OUTLINE DRAWING
PASSIVE L1/L2 GPS ANTENNA

SIZE: D | DWG NO: 3CVE1 | DRAWING NO: 4G1215P-XTBC-3-0.65T | REV: C

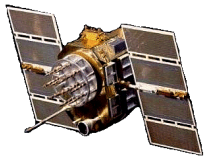
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

DAGR's Remote Antenna 1 (RA-1), Active L1/L2 GPS Antenna

P/N: 4G1215A-XMNS-3-D (-3: Green, -1: White, -5: Tan; -4: Black)

(2.973" x 2.161") Side Connector Configuration



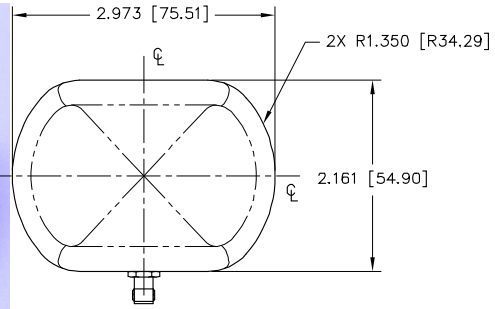
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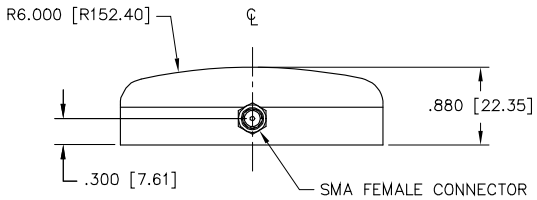
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

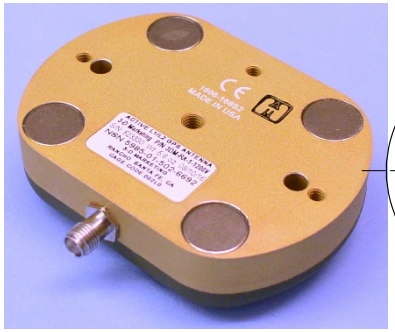
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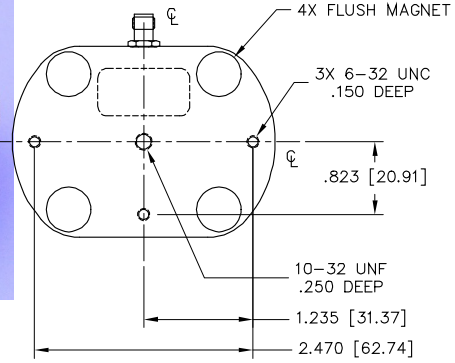
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SPECIFICATIONS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	B	SMALLER FOOT PRINT	06/20/16	S.H.

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15 MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 2.0:1			< 2.0:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 5.0	+ 4.7	+ 3.1	+ 0.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.1	- 1.8	- 1.9	- 5.8	- 3.8	- 3.5
@ 20 ° Elevation:	- 0.6	- 0.3	+ 0.6	- 4.3	- 2.0	- 0.8
@ 30 ° Elevation:	+ 0.9	+ 1.4	+ 1.7	- 3.4	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 4.0	> 3.9	> 2.4	> - 0.9	> 2.7	> 2.2
BEAM WIDTH (3dB):	103 Deg.	114 Deg.	143 Deg.	94 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	(2.5 to 24)Vdc @ (30 to 50)mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW					

MECHANICAL:

SIZE:	WIDTH: 2.161 in. [54.90 mm], LENGTH 2.973 in. [75.51 mm], HEIGHT: 0.880 in. [22.34 mm]
WEIGHT:	6.2 oz. (175.7 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE

ENVIRONMENTAL:

TEMPERATURE:	OPERATING: -67 °F TO +185 °F [-55 °C TO +85 °C] STORAGE: -71 °F TO +185 °F [-57 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

P/N: 4G1215A-XMNS-3-D

CONNECTOR:	COLOR:
S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
N, NB: N, N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
	-5: DESERT TAN #33446 PER FED-STD-595B

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO.	MATERIAL	FINISH
1	–	–	–	–	–

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ±.010, .XXX ±.005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005 M. MACHINED SURFACES 125/. DO NOT SCALE DRAWING.

ORIGINALLY DRAWN	S. HUYNH	June-08-12
ORIGINALLY DESIGNED	S. HUYNH	June-08-12
UPDATED	S. HUYNH	June-20-16
UPDATE DRAWN	P. TRAN	June-20-16
APPROVED	S. HUYNH	June-20-16

ANTCOM CORP. TORRANCE CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE, OR PASSIVE
GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	002LO	4G1215A-XMNS-3-D	B

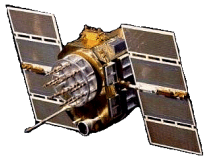
SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

DAGR's Remote Antenna 1 (RA-1)

Active L1/L2 GPS Antenna, 4G1215A-XMNS-3 Rev A (P/N: 3DM-RA-1-1200V Rev A)

(3.4" x 2.2") Side Connector, Mini Arinc Configurations



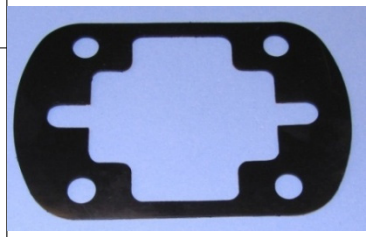
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

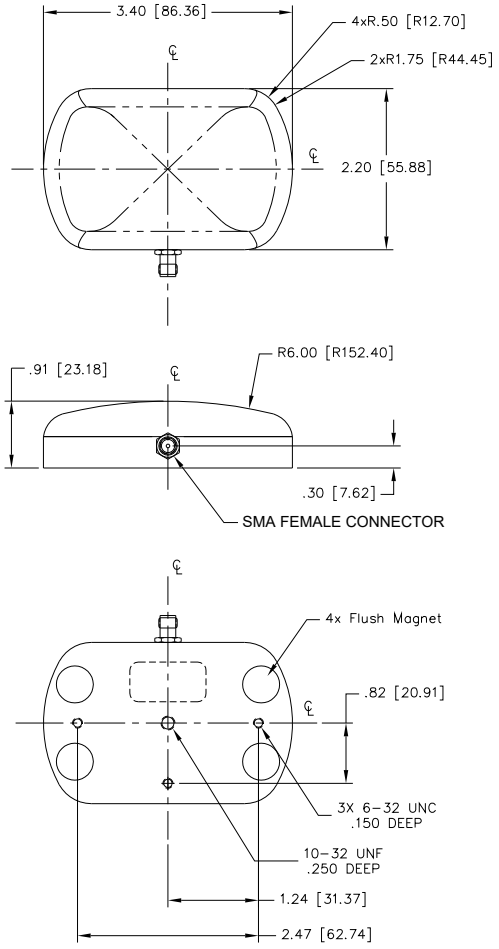
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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15 MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 2.0:1			< 2.0:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 5.0	+ 4.7	+ 3.1	+ 0.7	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 2.1	- 1.8	- 1.9	- 5.8	- 3.8	- 3.5
@ 20 ° Elevation:	- 0.6	- 0.3	+ 0.6	- 4.3	- 2.0	- 0.8
@ 30 ° Elevation:	+ 0.9	+ 1.4	+ 1.7	- 3.4	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 4.0	> 3.9	> 2.4	> - 0.9	> 2.7	> 2.2
BEAM WIDTH (3dB):	103 Deg.	114 Deg.	143 Deg.	94 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	(2.5 to 24)Vdc @ (30 to 50)mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW					

MECHANICAL:

SIZE:	WIDTH: 2.20 in. [55.88 mm], LENGTH 3.40 in. [86.36 mm], HEIGHT: 0.91 in. [23.18 mm]
WEIGHT:	7.49 oz. (212.4 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE

ENVIRONMENTAL:

TEMPERATURE:	OPERATING: -67 °F TO +185 °F [-55 °C TO +85 °C] STORAGE: -71 °F TO +185 °F [-57 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

NMO Connector Option is Now Available for Some Antennas

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

QUANTITY REQD	DESCRIPTION	PART NO.	MATERIAL	FINISH	ITEM NO.
1	ADHESIVE GASKET	Magnet-Cover - 4G (Item 541-4G)	-	-	1

PARTS LIST

2. ADHESIVE GASKET SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .010 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125/
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Jan-06-01
ORIGINALLY DESIGNED	S. HUYNH	Jan-06-01
UPDATE DRAWN	PHIL TRAN	June-08-12
APPROVED	S. HUYNH	June-08-12
CAD FILE NO		

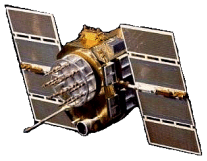
3D Marketing CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE, OR PASSIVE
GPS ANTENNA

SIZE D | CAGE NO 002L0 | DRAWING NO 3DM-RA-1-1200V | REV A
SCALE 1/1 | SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STAMP IS RED

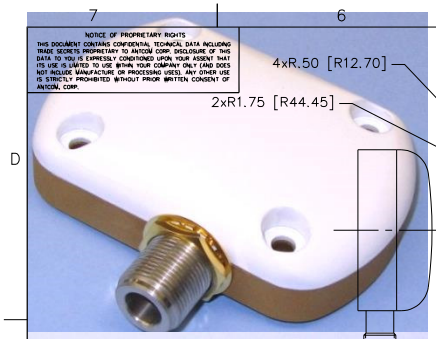
Active or passive L1/L2 GPS Antenna, P/N: 4G1215A-XNT-1
(3.4" x 2.2") Mini Arinc Configurations

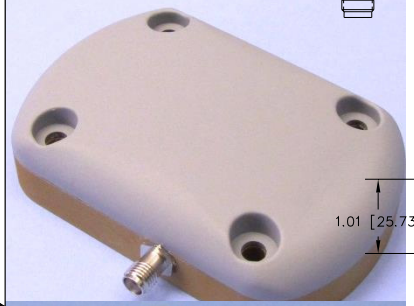


ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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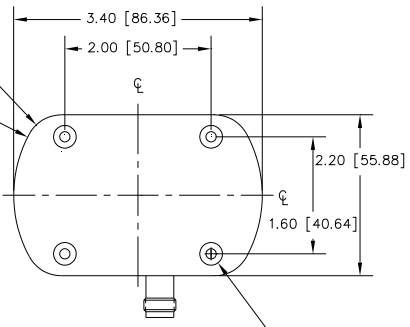
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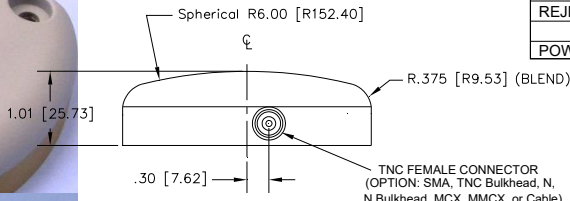


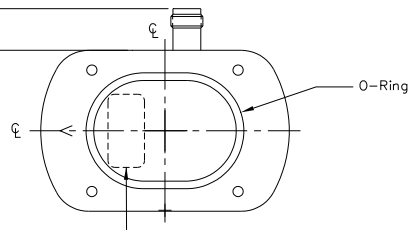












NAMEPLATE
APROXIMATE LOCATION

SPECIFICATIONS

ELECTRICAL:

	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
FREQUENCY:						
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	16 in G.P.	4 ft G.P.	Free Space	16 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.6	+ 0.3	+ 2.9	+ 1.8	+ 1.9	+ 5.3
@ 10 ° Elevation:	- 2.5	- 3.1	- 1.8	- 4.2	- 3.1	- 2.3
@ 20 ° Elevation:	- 1.1	- 1.1	+ 0.7	- 2.9	- 1.1	+ 0.4
@ 30 ° Elevation:	+ 0.5	+ 0.9	+ 1.7	- 2.0	+ 0.5	+ 2.3
@ 60 - 90 ° Elevation:	> 3.6	+ 3.1/+ 0.3	> 2.1	> 0.9	+ 3.1/+ 1.9	> 3.2
BEAM WIDTH (3dB):	103 Deg.	120 Deg.	146 Deg.	108 Deg.	120 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)					

MECHANICAL:

SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH 3.40 in. [86.36 mm], HEIGHT: 1.01 in. [25.65 mm], 0.90" [22.86mm] (Optional for Passive)
WEIGHT: 8.03 oz. (227 g)
FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL, BASE IRIDITE PER MIL-C-5441
MATERIAL: 6061-T6 ALUMINUM ALLOY BASE, COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR: TNC FEMALE (OPTION: SMA, TNC Bulkhead, N, N Bulkhead MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	FINISH
5	4	MOUNTING SCREWS for -PL- ONLY: (6-32, 3/4")	91500A151	-
4	4	MOUNTING SCREW: (6-32, 1")	91500A153	-
3				-
	A/R			
1	1	O-RING	2-031/N756-75	-

PARTS LIST

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: with +33dB LNA; A2: with 20 dB LNA; A27: with +27 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: with +40 dB LNA; AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (HEIGHT = 0.61")
4: MINI ARINC		

P/N: 4G1215A-XNT-1

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. O-RING, AND MOUNTING SCREWS ARE SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .010, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005 M. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Feb-10-12
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE, OR PASSIVE GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 4G1215A-XNT-1 | REV -
SCALE 1/1 | SHEET 1 OF 1

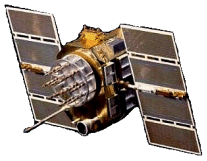
ZONE	REV	DESCRIPTION	DATE	APPROVED

REVISIONS

NMO Connector Option is Now Available for Some Antennas

Antcom's P/N: 4G1215PL-9SMB-2

Passive L1/L2 GPS, with Diplexer, Filters, Limiter
with 9in SMB Straight Plug Cable from bottom
2 Top-Mounting Hole Mini Arinc Configuration, 2.2inx3.4inx0.71in

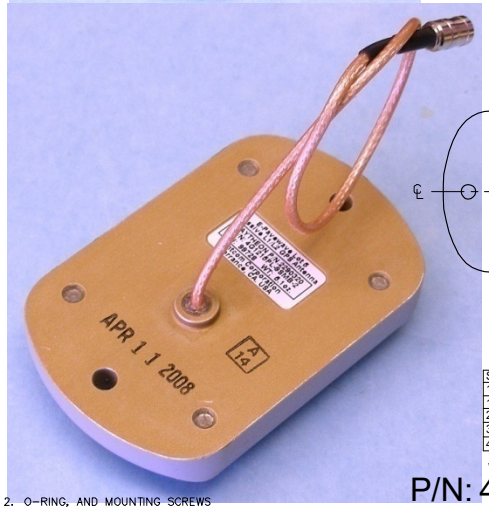


Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
FREQUENCY:						
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNAGAIN (dBic):	Free Space	16 in G.P.	4 ft G.P.	Free Space	16 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.6	+ 0.3	+ 2.9	+ 1.8	+ 1.9	+ 5.3
@ 10 ° Elevation	- 2.5	- 3.1	- 1.8	- 4.2	- 3.1	- 2.3
@ 20 ° Elevation	- 1.1	- 1.1	+ 0.7	- 2.9	- 1.1	+ 0.4
@ 30 ° Elevation	+ 0.5	+ 0.9	+ 1.7	- 2.0	+ 0.5	+ 2.3
@ 60 - 90 ° Elevation:	> 3.6	+ 3.1/+ 0.3	> 2.1	> 0.9	+ 3.1/+ 1.9	> 3.2
BEAMWIDTH (3dB):	103 Deg.	120 Deg.	146 Deg.	108 Deg.	120 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNINGPROTECTION:	DC GROUNDING					

LNA OPTION

LNA GAIN:	33 dB	35 dB
LNA NOISE FIGURE:	3.0 dB	3.0 dB
LNA P1dB Out:	+13 dBm	+13 dBm
LNA DC POWER:	2.5V/20mA,3V/29mA,3.3V/35mA,(2.5-24)V/<50mA	
REJECTION@ (-50/+50)MHz	-41 dB / -59 dB	-40 dB / -40 dB
@ (-100/+100)MHz	< -65 dB	< -65 dB
POWERHANDLING	1 Watt CW, Optional: 10 Watts 1 MicrosecPulse (-AL-)	

MECHANICAL:

SIZE: WIDTH:2.20 in. [55.88 mm], LENGTH3.40 in. [86.36 mm], HEIGHT: 0.71 in. [18.16 mm]

WEIGHT: 5.15 oz. (146 g)

FINISH: SKYDROLRESISTANTPOLYURETHANEENAMEL BASE IRIDITEPER MIL-C-5441

MATERIAL: 6061-T6ALUMINUMALLOY BASE COMPOSITE RADOME,IMPACT,ABRASION,UV, SOLVENT, SKYDROLRESISTANCE AND FIRE RETARDANT

CONNECTOR: 9in SMB MALE CABLE (OPTION:SMA, SSMB, SMC, SSMC, TNC, N, MCX, MMCX)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLYSEAL

FEDERAL & MILITARYSPECIFICATIONS

DESIGNTO: FAA TSO-C144,DO-160D,D0-228,MIL-C-5541, MIL-E-5400,MIL-I-45208A,MIL-STD-810,AND SAE J1455

SIZE	FREQ. BAND	LNA:
1: 2" SQ.	1215: L1/L2	A: with +33dB LNA; A2: with 20 dB LNA; A27: with +27 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: with +40 dB LNA; AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUTLNA
3: 3.5" DIA.		PL: WITHOUTLNA and with LOWPASSFILTER/LIMITTER
4: MINI ARINC		

P/N: 4G1215PL-5SMB-2

CABLE'S LENGTH	CONNECTOR	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG._N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SMB, SSMB, SMC, SSMC	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLECON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: TAN#: FS23446or33446,FED-STD-595

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	FINISH
5	4	–	MOUNTING SCREWS for –PL– ONLY: (10–32, 3/4")	MS24693C274	–
4	4	–	MOUNTING SCREW: (10–32, 1")	MS24693C276	
3					–
1	A/R	–			
1	1			–	

PARTS LIST

2. O-RING, AND MOUNTING SCREWS ARE SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .008 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005 M. MACHINED SURFACES 125
DO NOT SCALE DRAWING
DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Mar-29-08
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

E-PAVEWAVE LOT 5
L1/L2 PASSIVE
GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 4G1215PL-5SMB-2 | REV –
SCALE 1/1 | SHEET 1 OF 1

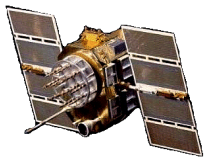
ZONE	REV	DESCRIPTION	DATE	APPROVED

REVISIONS

NMO Connector Option is Now Available for Some Antennas

Dual Polarization (RHCP/LHCP) L1/L2 GPS Antenna, P/N: 4G1215RL-P-XSS-2
Dual Polarization (Vertical/Horizontal) L1/L2 GPS Antenna, P/N: 4G1215VH-P-XSS-2
Dual Polarization (RHCP/LHCP) L1/L2 GPS/Glonass, Antenna, P/N: G5AntRL-4PSS2
2.2in. x 3.4in. X 0.71in. Configurations with Front/Back Mounting Option

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

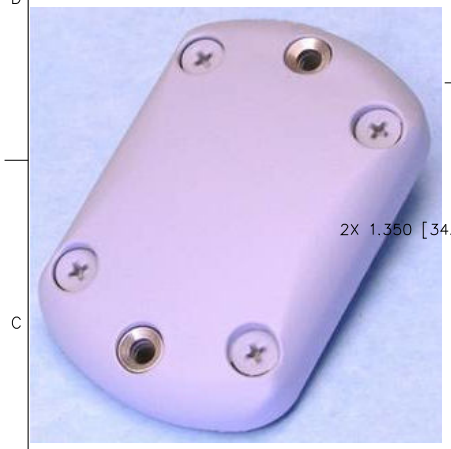


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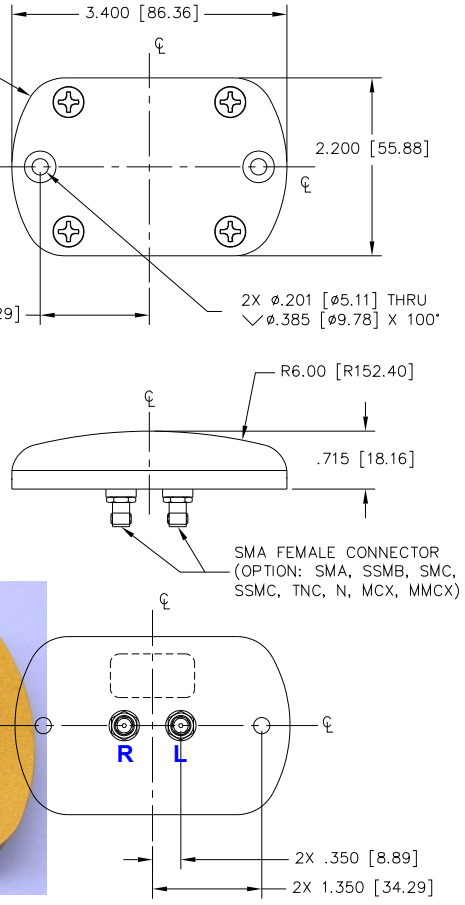
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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED







SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	16 in G.P.	4 ft G.P.	Free Space	16 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.6	+ 0.3	+ 2.9	+ 1.8	+ 1.9	+ 5.3
@ 10 ° Elevation:	- 2.5	- 3.1	- 1.8	- 4.2	- 3.1	- 2.3
@ 20 ° Elevation:	- 1.1	- 1.1	+ 0.7	- 2.9	- 1.1	+ 0.4
@ 30 ° Elevation:	+ 0.5	+ 0.9	+ 1.7	- 2.0	+ 0.5	+ 2.3
@ 60 - 90 ° Elevation:	> 3.6	+ 3.1/+ 0.3	> 2.1	> 0.9	+ 3.1/+ 1.9	> 3.2
BEAM WIDTH (3dB):	103 Deg.	120 Deg.	146 Deg.	108 Deg.	120 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	33 dB	35 dB
LNA NOISE FIGURE:	3.0 dB	3.0 dB
LNA P1dB Out:	+13 dBm	+13 dBm
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA	
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB	-40 dB / -40 dB
@ (-100/+100) MHz	< -65 dB	< -65 dB
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)	

MECHANICAL:

SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH 3.40 in. [86.36 mm], HEIGHT: 0.71 in. [18.16 mm]
WEIGHT: 5.15 oz. (146 g)
FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441F
MATERIAL: 6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR: 9in SMB MALE CABLE (OPTION: SMA, SSMB, SMC, SSMC, TNC, N, MCX, MMCX)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: with +33dB LNA; A2: with 20 dB LNA; A27: with +27 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: with +40 dB LNA; AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and with LOW PASS FILTER/LIMITTER
4: MINI ARINC		

P/N: 4G1215RL-P-XSS-2

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SMB, SSMB, SMC, SSMC	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: TAN #: FS 23446 or 33446, FED-STD-595

ITEM NO	PART NO	DESCRIPTION	QUANTITY REQD	
2	–	MOUNTING SCREWS for –PL– ONLY: (10–32, 3/4")	MS24693C274	4 –
1	–	MOUNTING SCREW: (10–32, 1")	MS24693C276	4 –

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCE ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON Ø .254.005
MACHINED SURFACES 125/
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Mar-29-08
ORIGINALLY DESIGNED	S. HUYNH	Mar-29-08
UPDATED	S. HUYNH	Oct-01-13
UPDATE DRAWN	P. TRAN	Oct-01-13
APPROVED	S. HUYNH	Oct-01-13

ANTCOM CORP. TORRANCE CALIFORNIA

RHCP/LHCP L1/L2 PASSIVE GPS ANTENNA

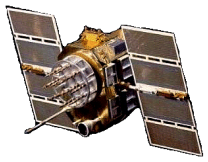
SIZE D | CAGE NO 3CVE1 | DRAWING NO 4G1215RL-P-XSS-2 | REV –
SCALE 1/1 | SHEET 1 OF 1

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS Antenna, P/N: 743G1215A-XTA-1
(4.7” x 3.0”) 743 Arinc Configuration

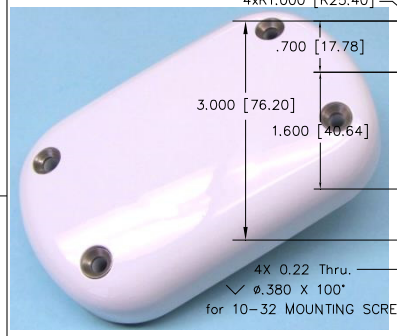


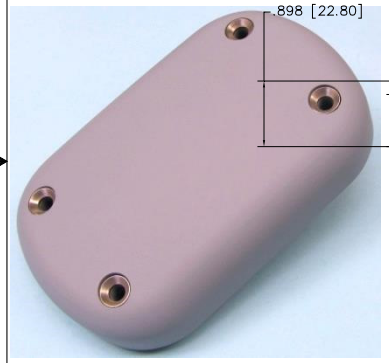
ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 3.5	+ 3.3	+ 4.9
@ 10 ° Elevation:	- 1.8	- 2.0	- 3.8	- 3.6
@ 20 ° Elevation:	- 0.3	+ 0.8	- 2.0	- 0.1
@ 30 ° Elevation:	+ 1.4	+ 1.8	- 0.5	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	> 2.8	> 2.7	> 3.0
BEAM WIDTH (3dB):	114 Deg.	139 Deg.	106 Deg.	75 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING			
LNA GAIN:	33 dB		35 dB	
LNA NOISE FIGURE:	3.0 dB		3.0 dB	
LNA P1dB Out:	+13 dBm		+13 dBm	
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA			
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB		-40 dB / -40 dB	
@ (-100/+100) MHz	< -65 dB		< -65 dB	
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)			

MECHANICAL:

SIZE:	WIDTH: 3.00 in. [76.20 mm], LENGTH 4.700 in. [119.38 mm], HEIGHT: 0.898 in. [22.80 mm]
WEIGHT:	9.36 oz. (265 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	TNC FEMALE (OPTION: SMA, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

QUALIFIED TO: FAA TSO-C144, DO-160D: E1-CBX(S)XSFDXSXXXXXXX(XXCX)(C)

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD	DESCRIPTION	PART NO	FINISH	ITEM NO
	PARTS LIST			
			-	5
4	MOUNTING SCREW: (10-32, 1")	MS24693C276		4
			-	3
1	O-RING	2-036/N756-75	-	1

SIZE:	FREQ. BAND:	LNA:
1.9: 1.9" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
2: 2.6" DIA.	15: L1 ONLY	AL: WITH LNA/LIMITER
3: 3.5" DIA.		P: WITHOUT LNA
4: MINI ARINC		PL: WITHOUT LNA and THINNER (HEIGHT = 0.58")
42: 743 ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 743G1215A-XTA-1

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .015, .XXX ± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DATS ON A COMMON ℄ OF .005. MACHINED SURFACES 125 √. DO NOT SCALE DRAWING.

DRAWN | CHECKED | ENGINEER | APPROVED: S. HUYNH July-02-10 | CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

743 Arinc, L1/L2 ACTIVE, OR PASSIVE GPS ANTENNA

SIZE: D | CAGE NO: 3CVE1 | DRAWING NO: 743G1215X-XXA-X | REV: -

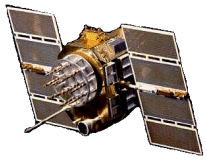
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Antcom's Active L1/L2 GPS Antenna

P/N: 743G1115A-XT-1

Avionics Arinc 743 Configuration Also available in 1G, 2G, 3G Configurations

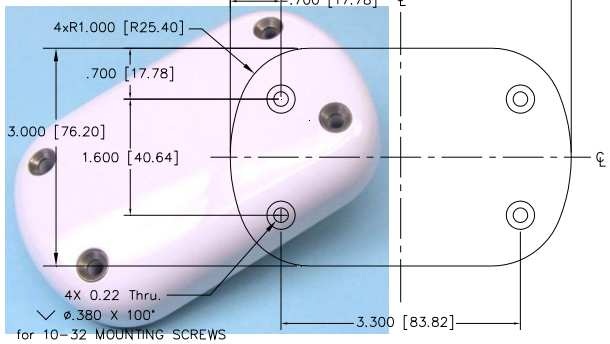


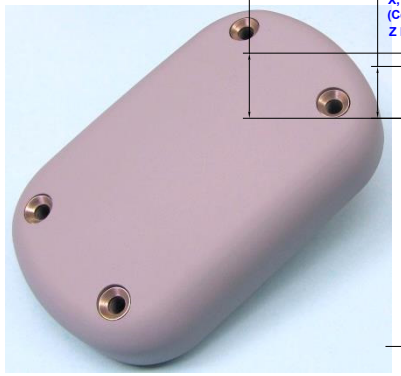
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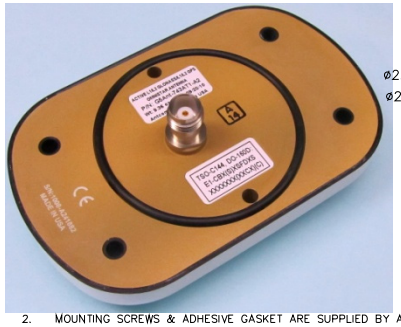
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

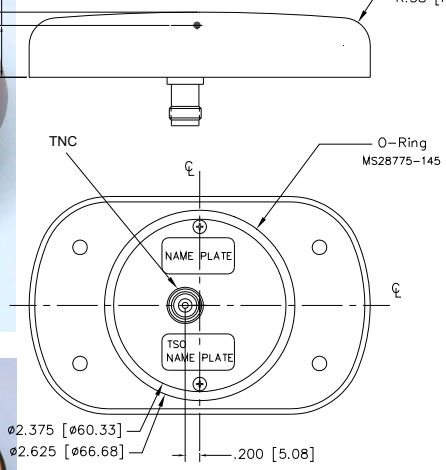
ANTCOM CORPORATION . 367 Van Ness Way, #602 . Torrance, CA 90501 . Tel: (310) 782-1076 . Fax: (310) 782-1086 . E-mail: antennas@antcom.com . http://www.antcom.com

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SPECIFICATIONS

ELECTRICAL:

	L5 GPS E5, E5a, E5b Galileo L5 IRNSS				OmniSTAR / L-Band L6 Galileo B1 Compass		L1 GPS E1, E2 Galileo L1 IRNSS		L1 GLONASS	
FREQUENCY:	1176.45 ± 12 MHz 1164.45 - 1219.14 MHz 1176.45 ± 15 MHz				1542.50 ± 14.0 MHz 1542.50 ± 5.0 MHz 1561.098 ± 10 MHz		1575.42 ± 15.0 MHz 1575.42 ± 17.0 MHz 1575.42 ± 12.0 MHz		1609 ± 7.0 MHz	
RADIATION PATTERN:	HEMISPHERICAL									
POLARIZATION:	RHCP				RHCP		RHCP		RHCP	
VSWR:	< 2.0:1				< 2.0:1		< 2.0:1		< 2.0:1	
IMPEDANCE:	50 ohms				50 ohms		50 ohms		50 ohms	
ANTENNA Ave. GAIN (dBic):	Free Space	4 ft G.P.			Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 5.0	+ 6.0			+ 2.0	0.0	+ 2.0	0.0	+ 1.3	- 0.5
@ 10 ° Elevation:	- 1.8	- 1.6			- 3.7	- 3.5	- 3.9	- 3.5	- 4.4	- 3.8
@ 20 ° Elevation:	0.0	+ 1.4			- 2.4	- 0.6	- 2.5	- 0.5	- 3.1	- 0.9
@ 30 ° Elevation:	+ 1.6	+ 3.7			- 1.7	+ 0.9	- 1.7	+ 0.7	- 2.3	0.0
@ 60 ° Elevation:	+ 4.0	+ 4.5			+ 1.2	+ 0.3	+ 1.2	+ 0.1	+ 0.6	- 1.1
BEAM WIDTH (3dB):	110 Deg.	120 Deg.			110 Deg.	145 Deg.	110 Deg.	150 Deg.	110 Deg.	150 Deg.
AXIAL RATIO:	1 dB	1 dB			1 dB	2 dB	1 dB	3 dB	3 dB	5 dB
LIGHTNING PROTECTION:	DC GROUNDING									
LNA GAIN:	35 dB									
LNA NOISE FIGURE:	2 dB									
LNA P1dB Out:	+13 dBm									
LNA DC POWER:	(2.5 to 24)V / < 50 mA									
POWER HANDLING:	10 Watt with Limiter									

MECHANICAL:

SIZE:	WIDTH: 3.00 in. [76.20 mm], LENGTH 4.700 in. [119.38 mm], HEIGHT: 0.898 in. [22.80 mm]
WEIGHT:	9.36 oz. (265 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541F CLASS 1A
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	TNC TYPE FEMALE (OPTION: SMA, BNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

SIZE:	LNA:
1: 2" SQ.	A: WITH LNA
1.9: 1.9" SQ.	P: WITHOUT LNA
2: 2.6" DIA.	
3: 3.5" DIA.	
4: MINI ARINC; 42, 743: 743 ARINC.	
52: 2.6" DIA. ON 5" GROUND PLANE	
72: 7" DIA. CHOKE RING	

QUANTITY REQD	DESCRIPTION	PART NO	FINISH	ITEM NO
	PARTS LIST			
1	O-Ring or Gasket	2-142/N756-75		1
4	Mounting Screw: 10-32, 1"	MS24693C276		3

P/N: 743G1115A-XT-1

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; B: BNC	-1: GLOSS WHITE #17925 PER FED-STD-595B
	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	N: N, NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B
	T: TNC, TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .030 .XXX± .010 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .016
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005
125√
MACHINED SURFACES
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH July-03-10
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA
743 ARINC, ACTIVE L1/L5 GPS ANTENNA
SIZE D | CAGE NO 3CVE1 | DRAWING NO 743G1115A-XT-1 | REV
SCALE 1/1 | SHEET 1 OF 1

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

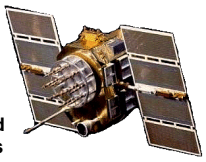
NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS Antenna, P/N: 42G1215A-XX-X-RoHS
P/N: 42G1215A-15S-5-RoHS (with 15in SMA Male Cable, Tan Color)
Arinc 743 Configuration. Other Color, Cable, and Connector Options are Available

ISO 9001:2008/FAA Approved Facility

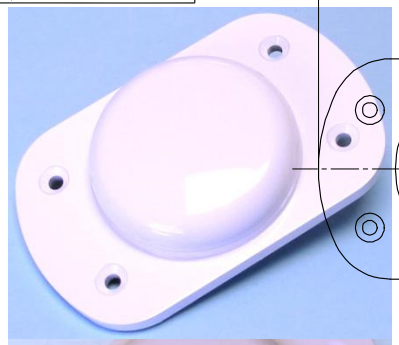
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

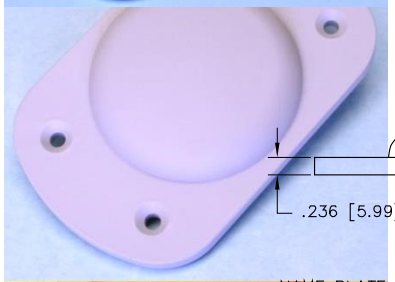
FAA Approved TSO Antennas



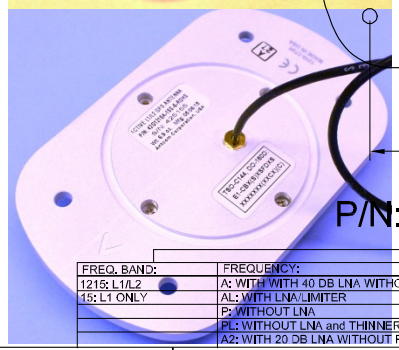
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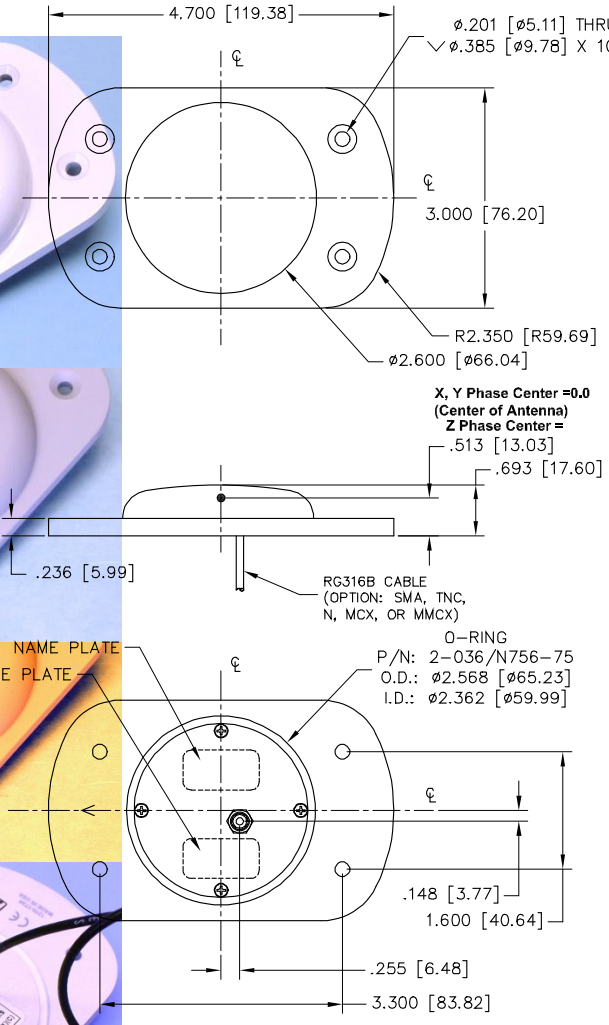
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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 3.5	+ 3.3	+ 4.9
@ 10 ° Elevation:	- 1.8	- 2.0	- 3.8	- 3.6
@ 20 ° Elevation:	- 0.3	+ 0.8	- 2.0	- 0.1
@ 30 ° Elevation:	+ 1.4	+ 1.8	- 0.5	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	> 2.8	> 2.7	> 3.0
BEAM WIDTH (3dB):	114 Deg.	139 Deg.	106 Deg.	75 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING			
LNA GAIN:	33 dB		35 dB	
LNA NOISE FIGURE:	3.0 dB		3.0 dB	
LNA P1dB Out:	+13 dBm		+13 dBm	
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA			
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB		-40 dB / -40 dB	
@ (-100/+100) MHz	< -65 dB		< -65 dB	
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)			

MECHANICAL:

SIZE:	WIDTH: 3.00 in. [76.20 mm], LENGTH 4.700 in. [119.38 mm], HEIGHT: 0.6930 in. [17.60 mm]
WEIGHT:	6.8 oz. (191 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	RG316B CABLE (OPTION: SMA, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

QUALIFIED TO: FAA TSO-C144, DO-160D: E1-CBX(S)XSFDXSXXXXXXX(XXCX)(C)

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	FINISH
		PARTS LIST		
4	4	MOUNTING SCREW: (10-32, 1")	MS24693C276	-
1	1	O-RING	2-036/N756-75	-

P/N: 42G1215A-XX-X-RoHS

FREQ. BAND:	FREQUENCY:	CONNECTOR:	COLOR:
1215: L1/L2	A: WITH WITH 40 DB LNA WITHOUT REJECTION FILTERS	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
15: L1 ONLY	AL: WITH LNA/LIMITER	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	P: WITHOUT LNA	N, NB: N, N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
	PL: WITHOUT LNA and THINNER (HEIGHT = 0.58")	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
	A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS	X: X in. CABLE	-5: DESERT TAN #33446 PER FED-STD-595B

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .010, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .025 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø .004 .005. MACHINED SURFACES 125. DO NOT SCALE DRAWING

ORIGINALLY DRAWN: S. HUYNH May-29-01
ORIGINALLY DESIGNED: S. HUYNH May-29-01
UPDATED: S. HUYNH May-06-15
UPDATE DRAWN: P. TRAN May-06-15
APPROVED: S. HUYNH May-06-15

ANTCOM CORP. TORRANCE, CALIFORNIA

743 Arinc, L1/L2 ACTIVE, OR PASSIVE GPS ANTENNA

SIZE: D | CAGE NO: 3CVE1 | DRAWING NO: 42G1215A-XX-X-RoHS | REV: -

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

TSO Cert Active L1/L2 GPS Antenna, P/N: 42G1215A-XT-1
Also Know as P/N: ANT-A72GA-TW-N
(4.7" x 3.0") 743 Arinc Configuration

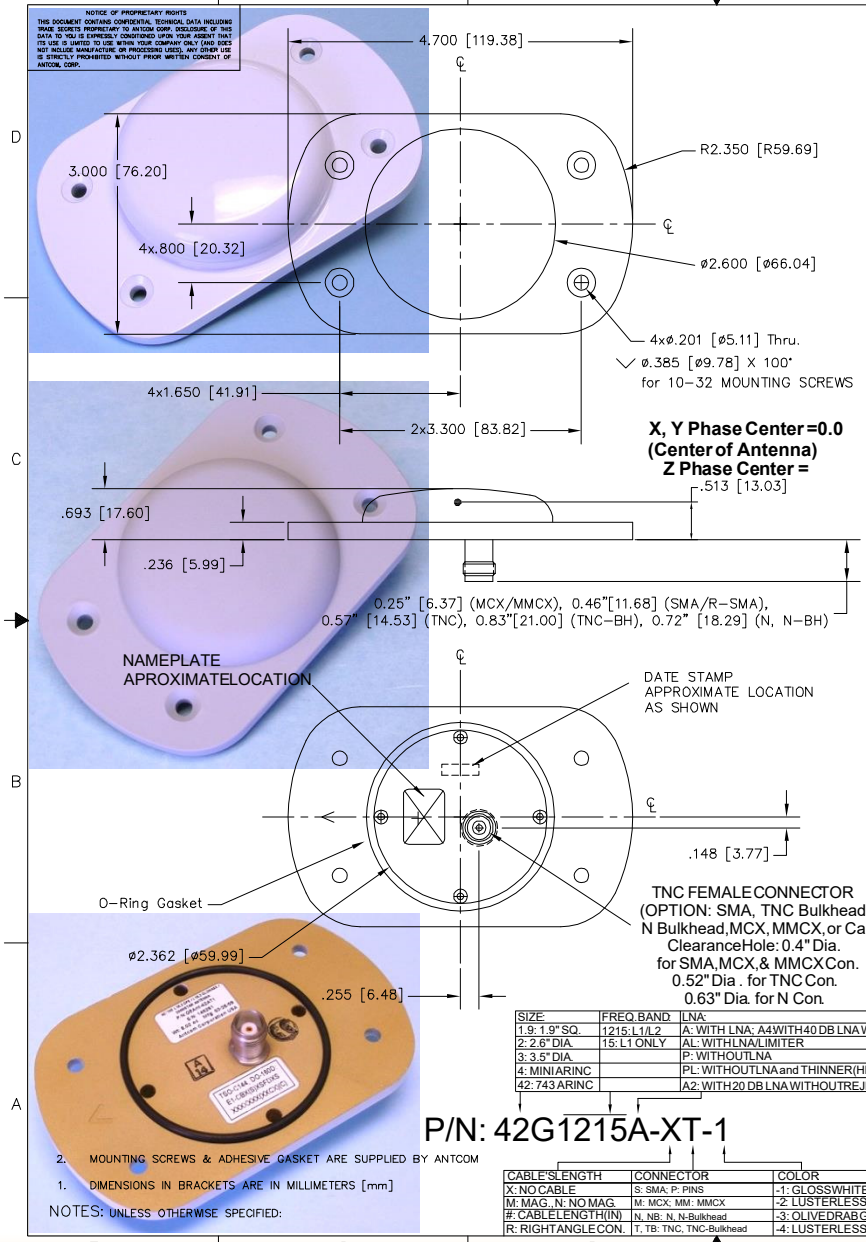
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Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

FAA Approved TSO Antennas

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SIZE:	FREQ.BAND	LNA:
1.9: 1.9" SQ.	1215: L1/L2	A: WITH LNA; A4:WITH40 DB LNA WITHOUT REJECTIONFILTERS
2: 2.6" DIA.	15: L1 ONLY	AL: WITH LNA/LIMITER
3: 3.5" DIA.		P: WITHOUTLNA
4: MINI ARINC		PL: WITHOUTLNA and THINNER(HEIGHT= 0.58")
42: 743 ARINC		A2: WITH20 DB LNA WITHOUTREJECTIONFILTERS

P/N: 42G1215A-XT-1

CABLE'SLENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; P: PINS	-1: GLOSSWHITE#17925PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESSGRAY#36320PER FED-STD-595B
#: CABLELENGTH(IN)	N, NB: N, N-Bulkhead	-3: OLIVEDRABGREEN#34031PER FED-STD-595B
R: RIGHTANGLECON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESSBLACK#37038PER FED-STD-595B

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNAGAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 3.5	+ 3.3	+ 4.9
@ 10 ° Elevation	- 1.8	- 2.0	- 3.8	- 3.6
@ 20 ° Elevation	- 0.3	+ 0.8	- 2.0	- 0.1
@ 30 ° Elevation	+ 1.4	+ 1.8	- 0.5	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	> 2.8	> 2.7	> 3.0
BEAM WIDTH (3dB):	114 Deg.	139 Deg.	106 Deg.	75 Deg.
AXIAL RATIO	2 dB		2 dB	
LIGHTNINGPROTECTION:	DC GROUNDING			
LNA GAIN:	33 dB		35 dB	
LNA NOISE FIGURE:	3.0 dB		3.0 dB	
LNA P1dB Out:	+13 dBm		+13 dBm	
LNA DC POWER:	2.5V/20mA,3V/29mA,		3.3V/35mA,(2.5-24)V/<50mA	
REJECTION@ (-50/+50)MHz	-41 dB / -59 dB		-40 dB / -40 dB	
@ (-100/+100)MHz	< -65 dB		< -65 dB	
POWER HANDLING	1 Watt CW, Optional: 10 Watts 1 MicrosecPulse (-AL-)			

MECHANICAL:

SIZE:	WIDTH: 3.00 in. [76.20 mm], LENGTH 4.700 in. [119.38 mm], HEIGHT: 0.6930 in. [17.60 mm]
WEIGHT:	6.8 oz. (191 g)
FINISH:	SKYDROLRESISTANTPOLYURETHANEENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6ALUMINUMALLOY BASE COMPOSITE RADOME,IMPACT,ABRASION,UV, SOLVENT, SKYDROLRESISTANCE,AND FIRE RETARDANT
CONNECTOR:	TNC FEMALE (OPTION:SMA, TNC Bulkhead,N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLYSEAL

FEDERAL& MILITARYSPECIFICATIONS

QUALIFIEDTO: FAA TSO-C144,DO-160D:E1-CBX(S)XSFDXSXXXXXXX(XXCX)(C)

ACCEPTANCETEST PROCEDURE ATP-GPS-L1L2-100

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

QUANTITY REQD	DESCRIPTION	PART NO	FINISH	ITEM NO
PARTS LIST				
			-	5
4	MOUNTING SCREW: (10-32, 1")	MS24693C276		4
			-	3
1	O-RING	2-036/N756-75	-	1

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø ARE .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED M. BOAS 01-05-29
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

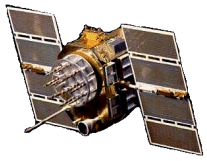
743 Arinc, L1/L2 ACTIVE, OR PASSIVE GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 42G1215X-XX-X | REV -

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

L1/L2 GPS/Glonass Antenna
P/N: 42G1215A-XT-1-EB
with L5 Capability (Avionics Arinc 743 Mount)

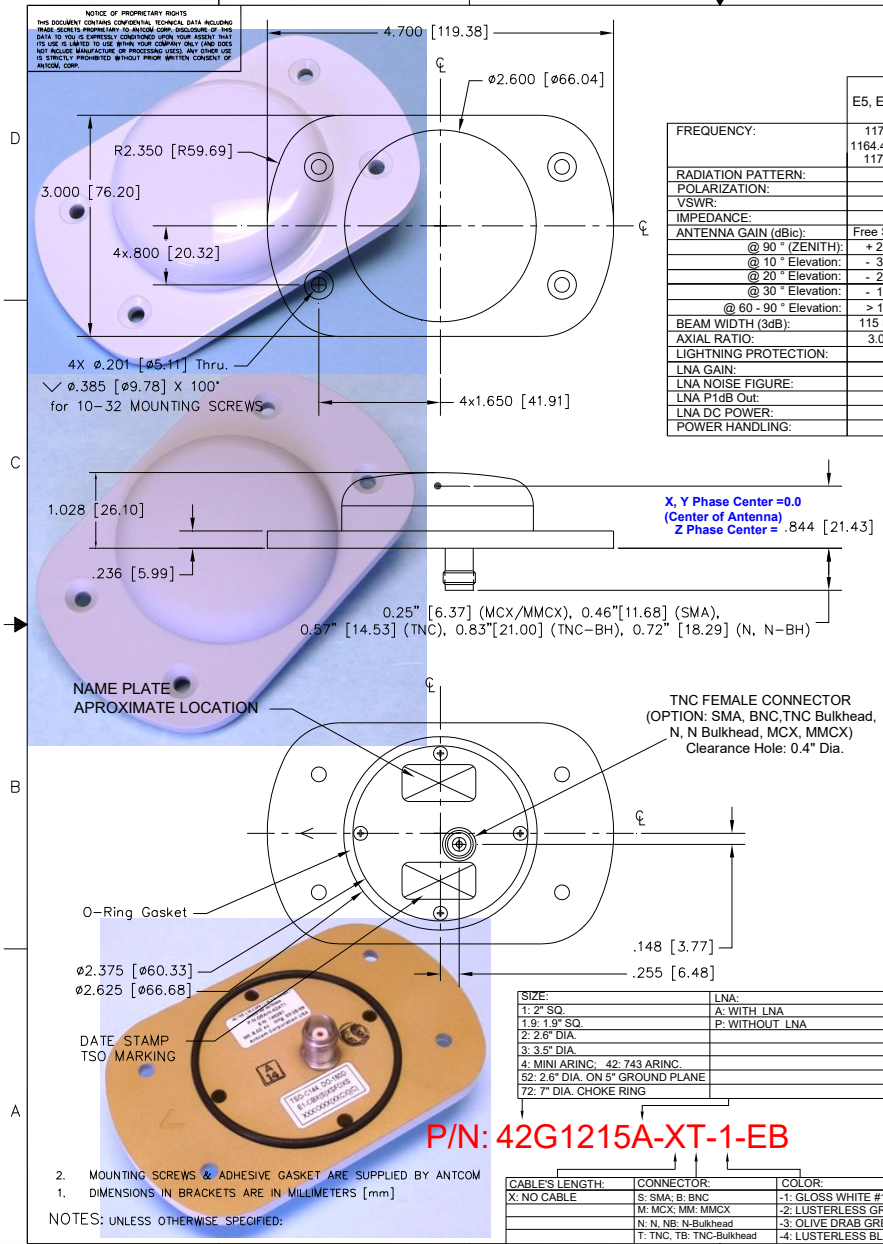


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Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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P/N: 42G1215A-XT-1-EB

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

SPECIFICATIONS

ELECTRICAL:

	L5 GPS E5, E5a, E5b Galileo L5 IRNSS		L2 GPS B2 Compass		L2 GLONASS E6 Galileo B3 Compass		OmniSTAR / L-Band L6 Galileo B1 Compass		L1 GPS E1, E2 Galileo L1 IRNSS		L1 GLONASS	
FREQUENCY:	1176.45 ± 12 MHz 1164.45 - 1219.14 MHz 1176.45 ± 15 MHz		1227.60 ± 12 MHz 1207.14 ± 10 MHz		1252.50 ± 7.5 MHz 1266.75 - 1290.75 MHz 1268.52 ± 10 MHz		1542.50 ± 14.0 MHz 1542.50 ± 5.0 MHz 1561.098 ± 10 MHz		1575.42 ± 15.0 MHz 1575.42 ± 17.0 MHz 1575.42 ± 12.0 MHz		1609 ± 7.0 MHz	
RADIATION PATTERN:	HEMISPHERICAL											
POLARIZATION:	RHCP		RHCP		RHCP		RHCP		RHCP		RHCP	
VSWR:	< 2.0:1		< 2.0:1		< 2.0:1		< 2.0:1		< 2.0:1		< 2.0:1	
IMPEDANCE:	50 ohms		50 ohms		50 ohms		50 ohms		50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 2.4	+ 3.0	+ 2.9	+ 3.9	+ 2.4	+ 3.5	- 1.4	- 3.2	+ 4.5	+ 3.9	+ 2.0	- 3.1
@ 10 ° Elevation:	- 3.9	- 5.1	- 3.8	- 4.6	- 4.4	- 5.6	- 8.5	- 8.7	- 2.3	- 1.9	- 8.8	- 8.2
@ 20 ° Elevation:	- 2.8	- 1.8	- 2.4	- 1.2	- 3.0	- 1.9	- 7.0	- 5.4	- 1.0	+ 1.1	- 7.5	- 5.2
@ 30 ° Elevation:	- 1.4	+ 0.3	- 0.7	+ 1.0	- 1.5	+ 0.2	- 6.0	- 3.9	+ 0.1	+ 2.2	- 6.4	- 4.3
@ 60 - 90 ° Elevation:	> 1.3	> 0.5	> 1.8	> 1.1	> 1.1	> 0.2	> - 2.6	> -5.8	> 3.2	> 0.7	> - 3.1	> -6.3
BEAM WIDTH (3dB):	115 Deg.	127 Deg.	121 Deg.	125 Deg.	116 Deg.	128 Deg.	102 Deg.	130 Deg.	105 Deg.	135 Deg.	95 Deg.	132 Deg.
AXIAL RATIO:	3.0 dB	2.0 dB	3.5 dB	2.0 dB	4.0 dB	3.0 dB	2.0 dB	2.0 dB	7.0 dB	7.0 dB	6.0 dB	8.0 dB
LIGHTNING PROTECTION:	DC GROUNDING											
LNA GAIN:	35 dB		35 dB		35 dB		33 dB		33 dB		33 dB	
LNA NOISE FIGURE:	3.0 dB		3.0 dB		3.0 dB		3.0 dB		3.0 dB		3.0 dB	
LNA P1dB Out:	+13 dBm		+13 dBm		+13 dBm		+13 dBm		+13 dBm		+13 dBm	
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA											
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)											

MECHANICAL:

SIZE: WIDTH: 3.00 in. [76.20 mm], LENGTH 4.700 in. [119.38 mm], HEIGHT: 1.028 in. [26.10 mm]

WEIGHT: 9.60 oz. (272 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: TNC TYPE FEMALE
(OPTION: SMA, BNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	ECO# 0004, RELEASE	11-06-08	S. HUYNH

SIZE:	LNA:
1: 2" SQ.	A: WITH LNA
1.9: 1.9" SQ.	P: WITHOUT LNA
2: 2.6" DIA.	
3: 3.5" DIA.	
4: MINI ARINC, 42: 743 ARINC.	
52: 2.6" DIA. ON 5" GROUND PLANE	
72: 7" DIA. CHOKE RING	

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; B: BNC	-1: GLOSS WHITE #17925 PER FED-STD-595B
	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	N: N, NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B
	T: TNC, TB: TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

QUANTITY REQD	DESCRIPTION	PART NO	FINISH	ITEM NO
				5
				4
4	Mounting Screw: 10-32, 1"	MS24693C276		3
				2
1	O-Ring or Gasket	2-142/N756-75		1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .010, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125/
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Nov-06-08
ORIGINALLY DESIGNED	S. HUYNH	Nov-06-08
UPDATED	S. HUYNH	Sept-21-12
UPDATE DRAWN	P. TRAN	Sept-21-12
APPROVED	S. HUYNH	Sept-21-12

ANTCOM CORP. TORRANCE CALIFORNIA

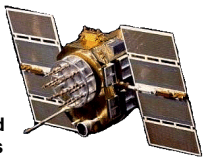
OUTLINE DRAWING
743 ARINC, ACTIVE OR PASSIVE GNSS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	42G1215X-XX-X-EB	A

SCALE 1/1 SHEET 1 OF 1

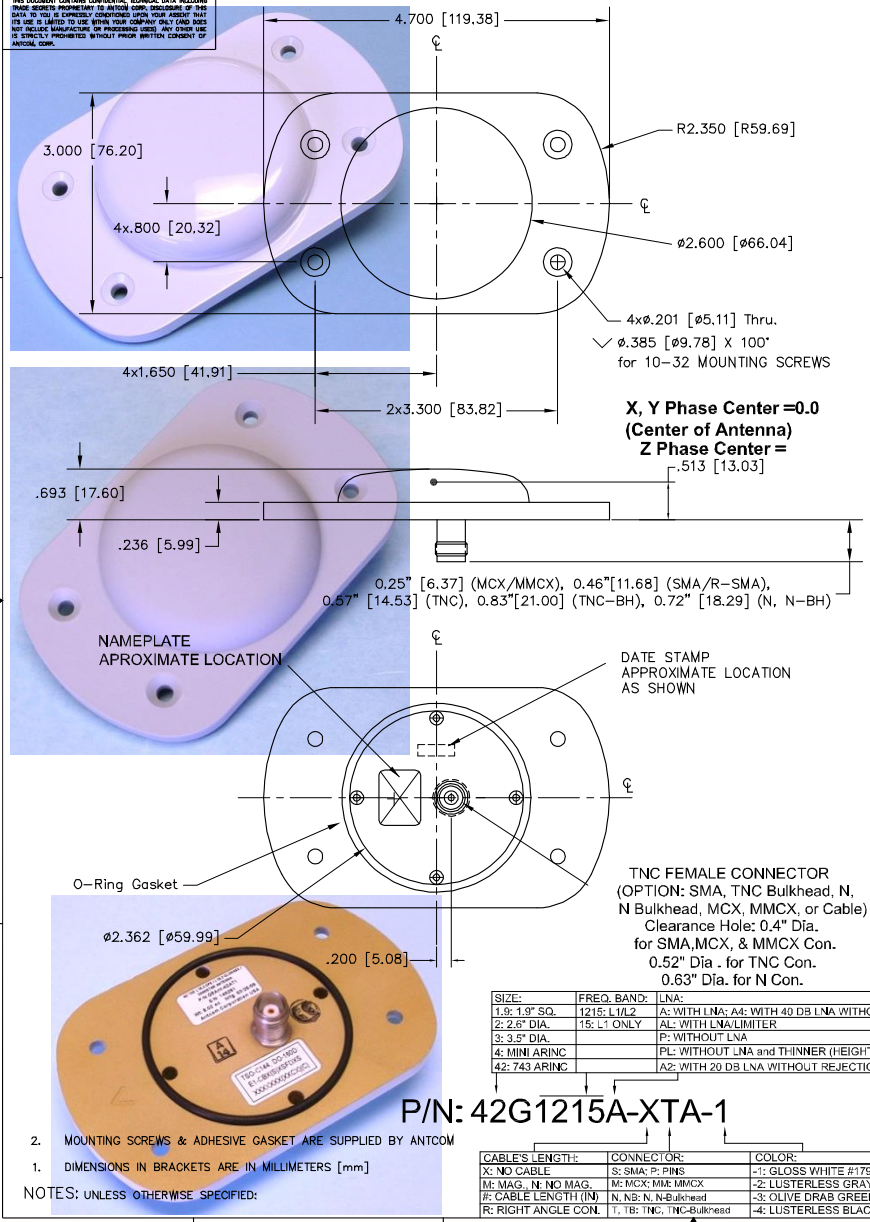
ORIGINAL DOCUMENT WHEN STAMP IS RED

NMO Connector Option is Now Available for Some Antennas



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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 3.5	+ 3.3	+ 4.9
@ 10 ° Elevation:	- 1.8	- 2.0	- 3.8	- 3.6
@ 20 ° Elevation:	- 0.3	+ 0.8	- 2.0	- 0.1
@ 30 ° Elevation:	+ 1.4	+ 1.8	- 0.5	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	> 2.8	> 2.7	> 3.0
BEAM WIDTH (3dB):	114 Deg.	139 Deg.	106 Deg.	75 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING			
LNA GAIN:	33 dB		35 dB	
LNA NOISE FIGURE:	3.0 dB		3.0 dB	
LNA P1dB Out:	+13 dBm		+13 dBm	
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA			
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB		-40 dB / -40 dB	
@ (-100/+100) MHz	< -65 dB		< -65 dB	
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)			

MECHANICAL:

SIZE:	WIDTH: 3.00 in. [76.20 mm], LENGTH 4.700 in. [119.38 mm], HEIGHT: 0.6930 in. [17.60 mm]
WEIGHT:	6.8 oz. (191 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	TNC FEMALE (OPTION: SMA, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

QUALIFIED TO: FAA TSO-C144, DO-160D: E1-CBX(S)XSFDXSXXXXXXX(XXCX)(C)

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD	DESCRIPTION	PART NO	FINISH	ITEM NO
	PARTS LIST			
			–	5
4	MOUNTING SCREW: (10-32, 1")	MS24693C276		4
			–	3
1	O-RING	2-036/N756-75	–	1

SIZE:	FREQ. BAND:	LNA:
1.9: 1.9" SQ.	1215: L1/L2	A: WITH LNA; A4: WITH 40 DB LNA WITHOUT REJECTION FILTERS
2: 2.6" DIA.	15: L1 ONLY	AL: WITH LNA/LIMITER
3: 3.5" DIA.		P: WITHOUT LNA
4: MINI ARINC		PL: WITHOUT LNA and THINNER (HEIGHT = 0.58")
42: 743 ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 42G1215A-XTA-1

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES, ARE: FRACTIONS ± 1/64, DECIMALS .XX ±.015, .XXX ±.005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DATS ON A COMMON ø .25" .005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

DRAWN: S. HUYNH July-02-10. CHECKED. ENGINEER. APPROVED. CAD FILE NO.

ANTCOM CORP. TORRANCE CALIFORNIA

743 Arinc, L1/L2 ACTIVE, OR PASSIVE GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 42G1215X-XXA-X | REV –

SCALE 1/1 | SHEET 1 OF 1

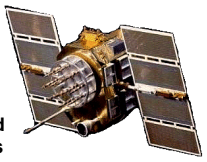
NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS Antenna, P/N: 42G1215A-XTC-1
(4.7” x 3.0”) 743 Arinc Configuration
TSO Cert P/N: 42G1215A-XT-1-5

ISO 9001:2008/FAA Approved Facility

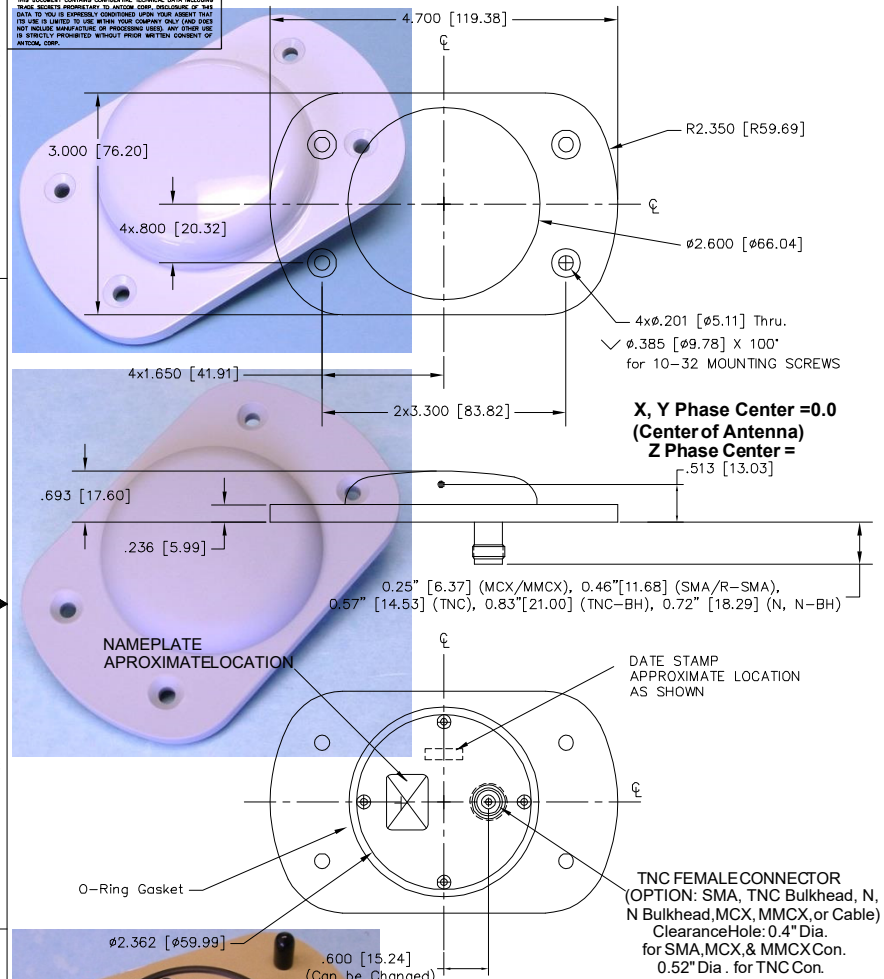
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

FAA Approved TSO Antennas



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2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 3.5	+ 3.3	+ 4.9
@ 10 ° Elevation:	- 1.8	- 2.0	- 3.8	- 3.6
@ 20 ° Elevation:	- 0.3	+ 0.8	- 2.0	- 0.1
@ 30 ° Elevation:	+ 1.4	+ 1.8	- 0.5	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	> 2.8	> 2.7	> 3.0
BEAM WIDTH (3dB):	114 Deg.	139 Deg.	106 Deg.	75 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING			
LNA GAIN:	33 dB		35 dB	
LNA NOISE FIGURE:	3.0 dB		3.0 dB	
LNA P1dB Out:	+13 dBm		+13 dBm	
LNA DC POWER:	2.5V/20mA,3V/29mA,3.3V/35mA,(2.5-24)V/<50mA			
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB		-40 dB / -40 dB	
@ (-100/+100) MHz	< -65 dB		< -65 dB	
POWER HANDLING	1 Watt CW, Optional: 10 Watts 1 MicrosecPulse (-AL-)			

MECHANICAL:

SIZE:	WIDTH: 3.00 in. [76.20 mm], LENGTH 4.700 in. [119.38 mm], HEIGHT: 0.6930 in. [17.60 mm]
WEIGHT:	6.8 oz. (191 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE AND FIRE RETARDANT
CONNECTOR:	TNC FEMALE (OPTION: SMA, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

QUALIFIED TO: FAA TSO-C144, DO-160D:E1-CBX(S)XSFDXSXXXXXXX(XXCX)(C)

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100

QUANTITY REQD	DESCRIPTION	PART NO	FINISH	ITEM NO
PARTS LIST				
			-	5
4	MOUNTING SCREW: (10-32, 1")	MS24693C276		4
			-	3
1	O-RING	2-036/N756-75	-	1

SIZE:	FREQ. BAND	LNA:
1.9: 1.9" SQ.	1215: L1/L2	A: WITH LNA; A4 WITH 40 DB LNA WITHOUT REJECTION FILTERS
2: 2.6" DIA.	15: L1 ONLY	AL: WITH LNA/LIMITER
3: 3.5" DIA.		P: WITHOUT LNA
4: MINI ARINC		PL: WITHOUT LNA and THINNER (HEIGHT = 0.58")
42: 743 ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 42G1215A-XTC-1

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG.,N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .015, .XXX ± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Z# .005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

DRAWN | CHECKED M. BOAS 01-05-29 | ENGINEER | APPROVED S. HUYNH 01-05-29 | CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

743 Arinc, L1/L2 ACTIVE, OR PASSIVE GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 42G1215X-XXC-X- | REV

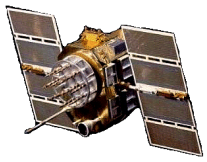
SCALE 1/1 | SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STAMP IS RED

NMO Connector Option is Now Available for Some Antennas

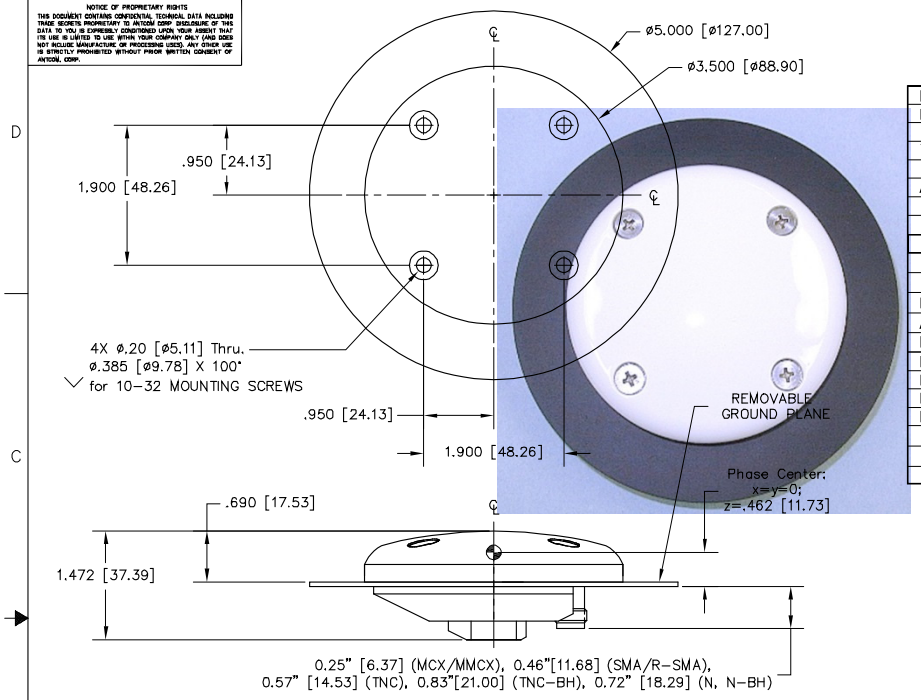
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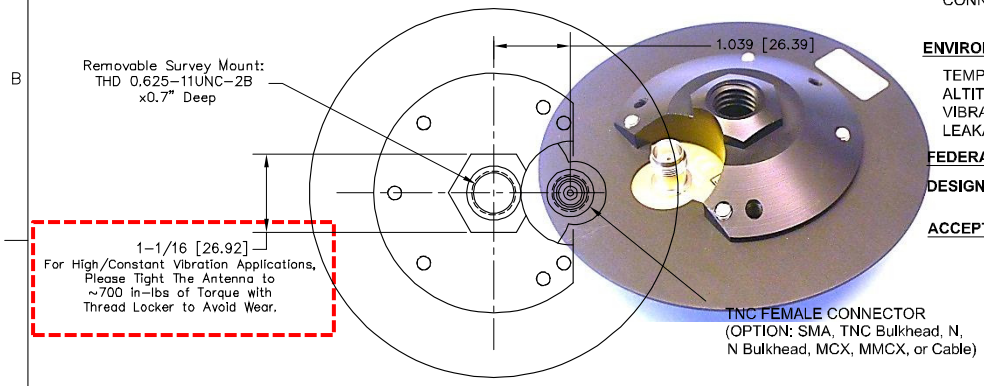
3.5" Diameter, Survey and Pipe Mount Configurations



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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	16 in G.P.	4 ft G.P.	Free Space	16 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 0.4	+ 3.5	+ 3.3	+ 1.5	+ 4.9
@ 10 ° Elevation:	- 1.8	- 3.2	- 2.0	- 3.8	- 4.0	- 3.6
@ 20 ° Elevation:	- 0.3	- 1.0	+ 0.8	- 2.0	- 2.0	- 0.1
@ 30 ° Elevation:	+ 1.4	+ 0.9	+ 1.8	- 0.5	0.0	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	+3.4/+0.4	> 2.8	> 2.7	+2.4/+1.5	> 3.0
BEAM WIDTH (3dB):	114 Deg.	118 Deg.	139 Deg.	106 Deg.	111 Deg.	75 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)					

MECHANICAL:

SIZE:	DIAMETER: 3.50 in.[88.90 mm] HEIGHT: 0.690 in. [17.53 mm], 0.58" [14.73] (Optional for Passive)
WEIGHT:	6.8 oz. (191 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL WITH NICKEL PLATED BASE
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	TNC FEMALE CONNECTOR (OPTION: SMA, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD	DESCRIPTION	PART NO	FINISH	ITEM NO
	PARTS LIST			
4	MOUNTING SCREWS: 10-32, 3/4"	MS24693C274	-	5
				4
1	5" DIA. GROUND PLANE	12G1215P001-B6	-	3
1	SURVEY ANTENNA MOUNT	MTR-3 Rev A		2
			-	1

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	Moved Connector Inward	Aug-22-06	S.H
	B	NEW MOUNT	5/20/15	S.H

P/N: 53G1215A-XT-1

SIZE:		FREQ. BAND:	LNA:	CABLE'S LENGTH:	CONNECTOR:	COLOR:
1: 2" SQ.	42: ARINC 743	GO1216: L1/L2 GPS/GNSS/L-Band	A: 33 dB Gain	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ.	5: 5" CIRCULAR	GO1215: L1/L2 GPS/L-Band	A4: 40 dB Gain	M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA.		GO16: L1 GPS/GNSS/L-Band	A2: 20 dB Gain	#: CABLE LENGTH (IN)	N: NB: N, N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
3: 3.5" DIA.		G1215: L1/L2, G1115: L1/L5	P: WITHOUT LNA	R: RIGHT ANGLE CON.	T: TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC		GO1116: L1/L2/L3/L5/L6 GPS/GNSS/Galileo				-5: DESERT TAN #33446 PER FED-STD-595B

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN: S. HUYNH 01-05-29
ORIGINALLY DESIGNED: S. HUYNH 01-05-29
UPDATED: S. HUYNH May-20-15
UPDATE DRAWN: P. TRAN May-20-15
APPROVED: S. HUYNH May-20-15

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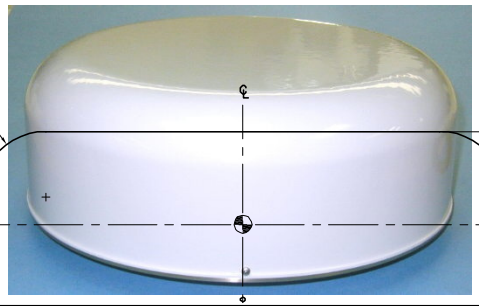
OUTLINE DRAWING
ACTIVE L1/L2 GPS
SURVEY ANTENNA

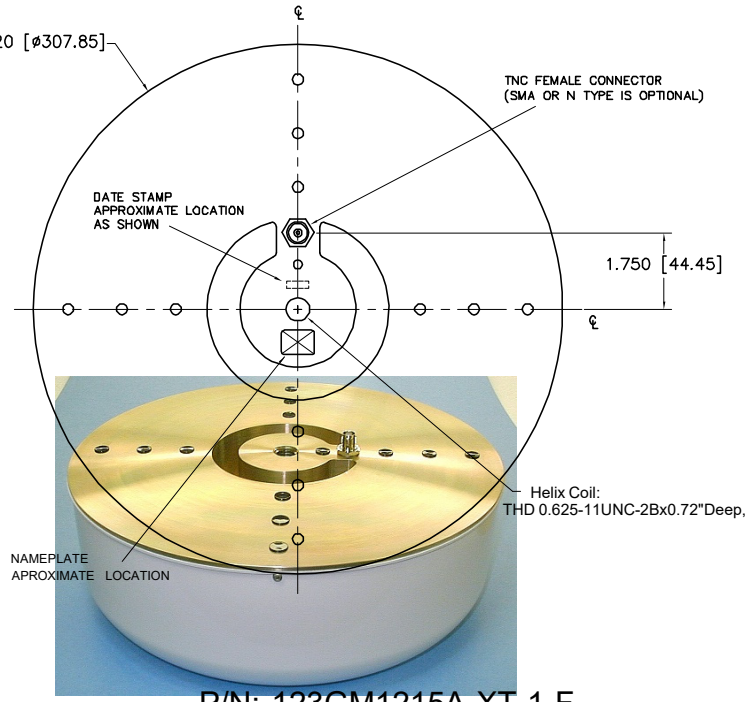
SIZE D | DWG NO 3CVE1 | 53G1215A-XT-1 | REV B
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

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P/N: 123GM1215A-XT-1-F

SPECIFICATIONS

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz		L2: (1227.60 ±15) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
GAIN (dBic) & AR (dB)	GAIN	AR	GAIN	AR
@ 90° (Zenith):	+7.7	0.2	+4.7	1.0
@ 10° Elevation:	-5.3	3.0	-9.9	10
@ 20° Elevation:	-2.7	3.0	-6.5	7.0
@ 30° Elevation:	-0.4	3.0	-3.6	5.0
@ 45° Elevation:	+2.9	2.0	0.0	4.0
@ 70° Elevation:	+6.8	1.0	+3.5	1.5
BEAM WIDTH (3dB)	67.4 Deg.		63.5 Deg.	
LIGHTNING PROTECTION:	DC GROUNDING			
LNA GAIN:	20 dB (..-A2-..), 33 dB (..-A-..), 40 dB (..-A4-..)			
LNA NOISE FIGURE:	1.9 dB			
LNA P1dB Out:	+13 dBm			
LNA DC POWER:	(2.5-24) V / < 35 mA			

MECHANICAL:

SIZE:	DIAMETER: 12.120 in. [307.85 mm] HEIGHT: 4.125 in. [104.78 mm]
WEIGHT:	4.5 lbs. (2.04 Kg)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE
CONNECTOR:	TNC FEMALE (SMA, OR N TYPE IS OPTIONAL)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

4	–	MOUNTING SCREWS	MS24693C273	5
1	1	INTERNAL ANTENNA / CABLE	3G1215A-XS-1 / SMA-MR-RG316-3.2in-TNC-FB	4
1	1	CHOKE RING ADAPTER	12G1215P001-B4	3
1	1	CHOKE RING / PLUGS	12G1215P001-B3 / 85985K12	2
1	1	RADOME	12G1215-R-5	1
-2	-1	DESCRIPTION	PART NO	ITEM NO
QUANTITY REQD		PARTS LIST		

CHOKE SIZE :	ANT. SIZE :	FREQ. BAND :	LNA :	CABLE'S LENGTH :	CONNECTOR :	COLOR :
12: 12 in Dia.	1: 2" SQ.	1215: L1/L2	A: WITH LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
	1.9: 1.9" SQ.	15: L1 ONLY	A2: WITH 20 dB LNA	M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	2: 2.6" DIA.		A4: WITH 40 dB LNA	#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
	3: 3.5" DIA.		P: WITHOUT LNA	R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
	4: MINI ARINC					

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .000 TO .015
FILLETS R .000 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø".003 M A B
MACHINED SURFACES 125

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH 02-08-13
CAD FILE NO
DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA

OUTLINE DRAWING
ACTIVE L1/L2 CHOKE RING
GPS ANTENNA

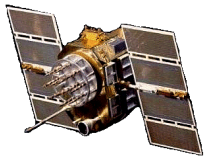
SIZE D | CAGE NO 3CVE1 | DRAWING NO 123GM1215A-XT-1-F | REV –

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS Choke Ring Antennas, P/N: 123GM1215A-XT-1

12” Diameter x 8.7” High, Pipe Mount Configuration

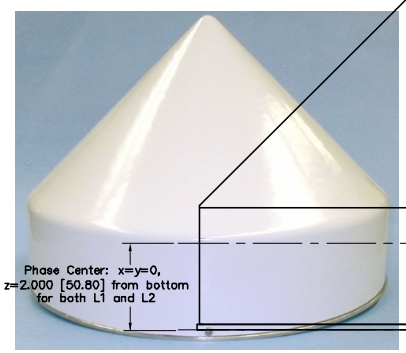


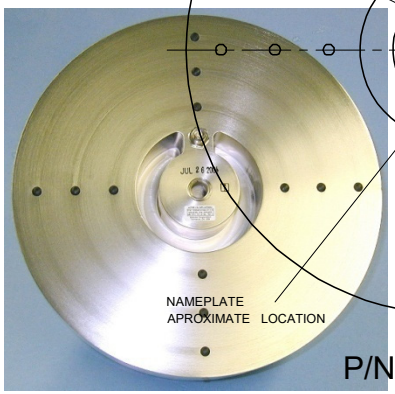
ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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P/N: 123GM1215A-XT-1

SPECIFICATIONS

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±13) MHz		L2: (1227.60 ±13) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
GAIN (dBic) & AR (dB)	GAIN	AR	GAIN	AR
@ 90° (Zenith):	+7.7	0.2	+4.7	1.0
@ 10° Elevation:	-5.3	3.0	-9.9	10
@ 20° Elevation:	-2.7	3.0	-6.5	7.0
@ 30° Elevation:	-0.4	3.0	-3.6	5.0
@ 45° Elevation:	+2.9	2.0	0.0	4.0
@ 70° Elevation:	+6.8	1.0	+3.5	1.5
BEAM WIDTH (3dB)	67.4 Deg.		63.5 Deg.	
LIGHTNING PROTECTION:	DC GROUNDING			
LNA GAIN:	20 dB (..-A2-..), 33 dB (..-A-..), 40 dB (..-A4-..)			
LNA NOISE FIGURE:	1.9 dB			
LNA P1dB Out:	+13 dBm			
LNA DC POWER:	(2.5-24) V / < 35 mA			

MECHANICAL:

SIZE:	DIAMETER: 12.120 in. [307.85 mm] HEIGHT: 8.774 in. [222.85 mm]
WEIGHT:	4.5 lbs. (2.04 Kg)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE
CONNECTOR:	TNC FEMALE (SMA, OR N TYPE IS OPTIONAL)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

QUANTITY REQD		DESCRIPTION	PART NO	ITEM NO
		PARTS LIST		
4	–	MOUNTING SCREWS	MS24693C273	5
1	1	INTERNAL ANTENNA / CABLE	3G1215A-XS-1 / SMA-MR-RG316-3.2in-TNC-FB	4
1	1	CHOKE RING ADAPTER	12G1215P001-B4	3
1	1	CHOKE RING / PLUGS	12G1215P001-B3 / 85985K12	2
1	1	RADOME	12G1215-R-6	1

CHOKE SIZE :	ANT. SIZE :	FREQ. BAND :	LNA :	CABLE'S LENGTH :	CONNECTOR :	COLOR :
12: 12 in Dia.	1: 2" SQ.	1215: L1/L2	A: WITH 33 dB LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
	1.9: 1.9" SQ.	15: L1 ONLY	A2: WITH 20 dB LNA	M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	2: 2.6" DIA.		A4: WITH 40 dB LNA	#: CABLE LENGTH (IN.)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
	3: 3.5" DIA.			R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
	4: MINI ARINC		P: WITHOUT LNA			

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XXX ±.015, .XXXX ±.005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .020. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø .XX .005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH 02-08-13 | CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

OUTLINE DRAWING
ACTIVE L1/L2 CHOKE RING GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 123GM1215A-XT-1 | REV –

SCALE 1/1 | SHEET 1 OF 1

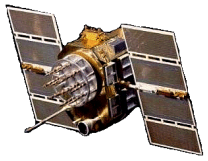
NMO Connector Option is Now Available for Some Antennas

http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts1.pdf (Amplifiers/Power Divider/Combiner/Filters)

Active L1/L2 GPS / **IRIDIUM** / **GSM+3G** Antenna

4.9in Tall, Blade Configuration, Top Mount

P/N: 5B3G1216LRR-AP-XTTT-1, with TNC, SMA, N, BNC Connector Options.

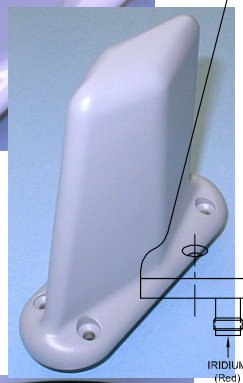


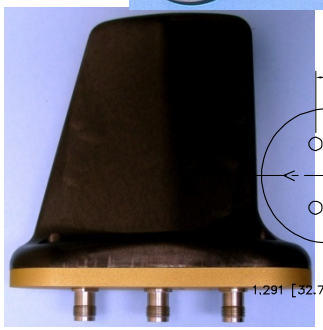
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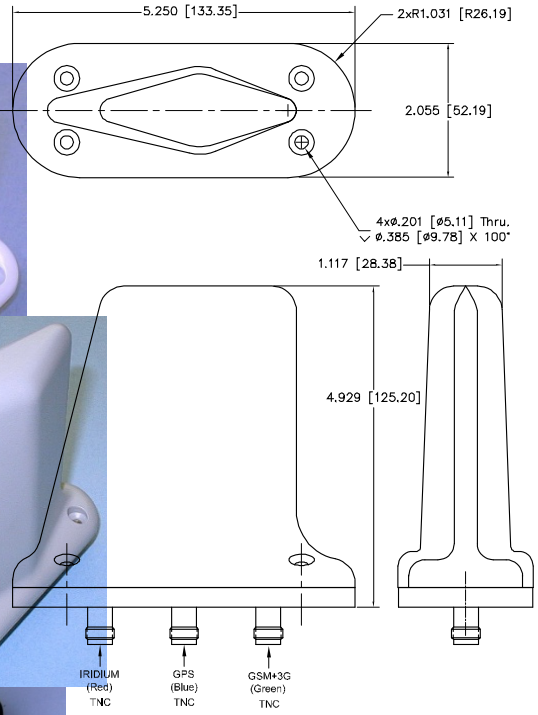
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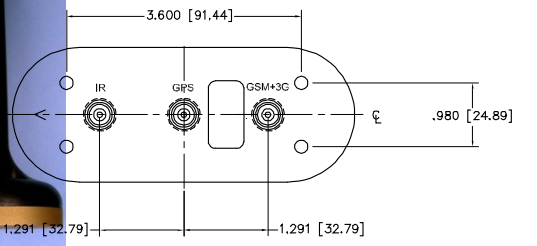
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SPECIFICATIONS

ELECTRICAL:

	GPS (L1 or L1/L2, See P/N in Bottom Table)				IRIDIUM		GSM+3G
FREQUENCY:	L1: (1575.4 ±13)		L2: (1227.6 ±13) MHz		(1610.0 - 1626.5) MHz		(800-2500) MHz
RADIATION PATTERN:	HEMISPHERICAL				HEMISPHERICAL		Verticle
POLARIZATION:	RHCP				RHCP		OMNI
VSWR:	< 2:1				< 2:1		< 2:1
GAIN (dB):	F.S.	4 ft G.P	F.S.	4 ft G.P	4 ft G.P.	F.S	
@ 90° (Zenith):	+ 4.6	+ 2.9	+ 1.8	+ 5.3	+4.9	+5.0	
@ 10° Elevation:	- 2.5	- 1.8	- 4.2	- 2.3	-1.0	-2.5	
@ 20° Elevation:	- 1.1	+ 0.7	- 2.9	+ 0.4	+1.5	-0.5	+4.5
@ 30° Elevation:	+ 0.5	+ 1.7	- 2.0	+ 2.3	+2.4	+1.0	
@ 60° to 90°Elevation:	> 3.6	> 2.1	> 0.9	> 3.2	>+3.3	>+2.7	
BEAM WIDTH (3dB):	103 °	146 °	108 °	74 °	129 °	98 °-106 °	
AXIAL RATIO @ Zenith:	2 dB				2 dB		
POWER HANDLING:	1 Watt				30 W		
LIGHTNING PROTECTION:	DC GROUNDING				DC GROUNDING		
FILTER:	2 2-POL						
LNA GAIN:	(33.0+/-1.0) dB				N/A		
LNA P 1dB Out:	+16 dBm				N/A		
LNA NOISE FIGURE:	2.9 dB (Filter loss is Included)				N/A		
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (30 TO 50) mA				N/A		

MECHANICAL:

SIZE:	WIDTH: 2.055 in. [52 mm], LENGTH: 5.25 in. [133 mm], HEIGHT: 4.929 in. [125.2 mm]
WEIGHT:	11.2 oz. (318 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	GPS: TNC-F (Blue). IRIDIUM: TNC-F (Red), GSM+3G: TNC-F (Green) (OPTION: SMA, TNC, TNC Bulkhead, N, N Bulkhead, BNC, MCX, MMCX, or Cable)
MOUNTING:	FIXED MOUNT 4 x 10-32 MOUNTING SCREWS PROVIDED

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

CONFIGURATION:	FREQ. BAND:	CABLE'S LENGTH:	GSM/GPS/IRIDIUM CON.:	COLOR:
5G: (5.0x2.2) INCH RECT.	08: CELLULAR (824-894) MHz (US/Canada)	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
	09: GSM (876-960) MHz (EUROPE/ASIA/AFRICA/M-East)	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	18: DCS (1710-1880) MHz (EUROPE/ASIA/AFRICA/M-East)	#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
	19: PCS (1850-1990) MHz (US/Canada)	R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
3B: BLADE	3G: GSM+3G (800 to 2500) MHz		B: BNC Female	-5: TAN #: FS 23446 or 33446, FED-STD-595
5B: 5 INCH BLADE		15: L1 GPS (1575+/-12) MHz		
		12: L1/L2 GPS (1575+/-12) / (1227+/-12) MHz		

P/N: 5B3G1216LRR-AP-XTTT-1

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ALL SCREWS ARE SUPPLIED BY ANTCOM CORPORATION

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
4	MOUNTING SCREW: (10-32, 1.25")	MS24693-C278	-	-	5
					3
1			-	-	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONS ± 1/64 DECIMALS .XX± .03 .XXX± .015 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Aug-23-10
CAD FILE NO
DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA

Avionics

L1/L2 GPS/IRIDIUM/GSM+3G BLADE ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	5B3G1216LRR-AP-XTTT-1	A

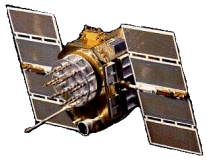
SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

L1L2 GPS / IRIDIUM / GSM+3G Antenna

5.8in Tall Blade, 743 Arinc Configuration, Top Mount

P/N: 5B743G1516LRR-AP-XTTT-1, with TNC, SMA, N, BNC Connector Options

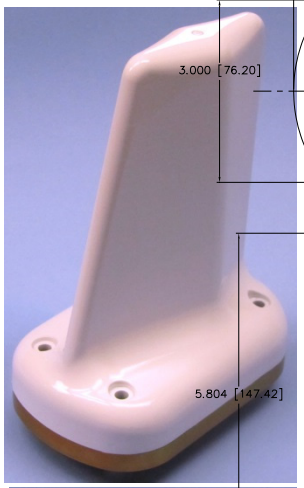


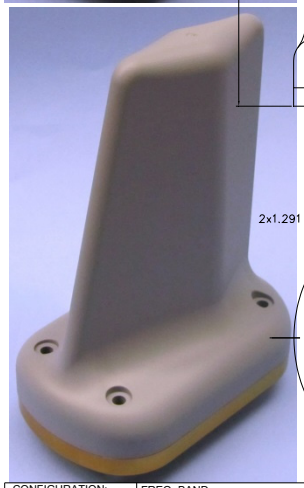
ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:

	GPS (L1 or L1/L2, See P/N in Bottom Table)				IRIDIUM		GSM+3G
FREQUENCY:	L1: (1575.4 ±13)				(1610.0 - 1626.5) MHz		(800-2500) MHz
RADIATION PATTERN:	HEMISPHERICAL				HEMISPHERICAL		Verticle
POLARIZATION:	RHCP				RHCP		OMNI
VSWR:	< 2:1				< 2:1		< 2:1
GAIN (dB):	F.S.	4 ft G.P			4 ft G.P.	F.S	
@ 90° (Zenith):	+ 4.6	+ 2.9			+4.9	+5.0	
@ 10° Elevation:	- 2.5	- 1.8			-1.0	-2.5	
@ 20° Elevation:	- 1.1	+ 0.7			+1.5	-0.5	+4.5
@ 30° Elevation:	+ 0.5	+ 1.7			+2.4	+1.0	
@ 60° to 90°Elevation:	> 3.6	> 2.1			>+3.3	>+2.7	
BEAM WIDTH (3dB):	103 °	146 °			129 °	98 °-106 °	
AXIAL RATIO @ Zenith:	2 dB				2 dB		
POWER HANDLING:	1 Watt				30 W		
LIGHTNING PROTECTION:	DC GROUNDING				DC GROUNDING		
FILTER:	2 2-POL						
LNA GAIN:	(33.0+/-1.0) dB				N/A		
LNA P 1dB Out:	+16 dBm				N/A		
LNA NOISE FIGURE:	2.9 dB (Filter loss is Included)				N/A		
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (30 TO 50) mA				N/A		

MECHANICAL:

SIZE:	WIDTH: 2.055 in. [52 mm], LENGTH: 5.25 in. [133 mm], HEIGHT: 5.8 in. [147.4 mm]
WEIGHT:	15.2 oz. (430.9 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	GPS: TNC-F (Blue). IRIDIUM: TNC-F (Red), GSM+3G: TNC-F (Green) (OPTION: SMA, TNC, TNC Bulkhead, N, N Bulkhead, BNC, MCX, MMCX, or Cable)
MOUNTING:	FIXED MOUNT 4 x 10-32 MOUNTING SCREWS PROVIDED

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

CONFIGURATION:	FREQ. BAND:	CABLE'S LENGTH:	GSM/GPS/IRIDIUM CON.:	COLOR:
5G: (5.0x2.2) INCH RECT	08: CELLULAR (824-894) MHz (US/Canada)	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
	09: GSM (876-960) MHz (EUROPE/ASIA/AFRICA/M-East)	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	18: DCS (1710-1880) MHz (EUROPE/ASIA/AFRICA/M-East)	#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
	19: PCS (1850-1990) MHz (US/Canada)	R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
3B: BLADE	3G: GSM+3G (800 to 2500) MHz		B: BNC Female	-5: TAN #: FS 23446 or 33446, FED-STD-595
5B: 5 INCH BLADE	15: L1 GPS (1575+/-12) MHz			
	12: L1/L2 GPS (1575+/-12) / (1227+/-12) MHz			

P/N: 5B743G1516LRR-AP-XTTT-1

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ALL SCREWS ARE SUPPLIED BY ANTCOM CORPORATION

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO.
					2
4	MOUNTING SCREW: (10-32, 1.25")	MS24693-C278	-	-	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64 DECIMALS .XX± .030 .XXX± .015 ANGLES ± 1°

TOLERANCE SYM PER ANSI Y14.5

REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON ℄ Ø.005 MACHINED SURFACES 125

DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Aug-23-10
ORIGINALLY DESIGNED	S. HUYNH	Aug-23-10
UPDATED	S. Huynh	Sept-04-12
UPDATE DRAWN	P. Tran	Sept-04-12
APPROVED	S. HUYNH	Sept-04-12

ANTCOM CORP. TORRANCE CALIFORNIA

Avionics
GPS/IRIDIUM/GSM+3G
BLADE ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	5B743G1516LRR-AP-XTTT-1	—

SCALE 1/1 SHEET 1 OF 1

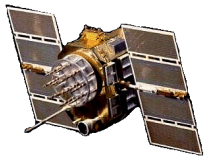
ORIGINAL DOCUMENT WHEN STAMP IS RED

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS / **IRIDIUM** / **GSM+3G** Antenna

4.9in Tall, Blade Configuration, Top Mount

P/N: 5B3G1216LRR-AP-XTTT-1, with TNC, SMA, N, BNC Connector Options.



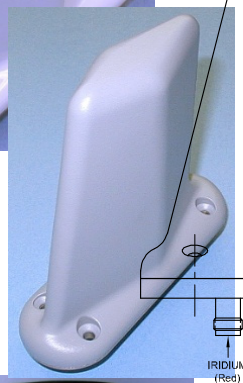
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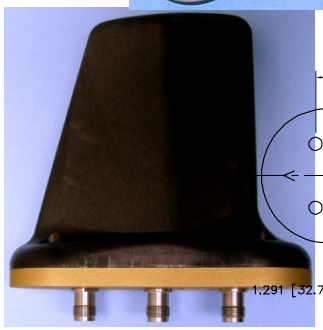
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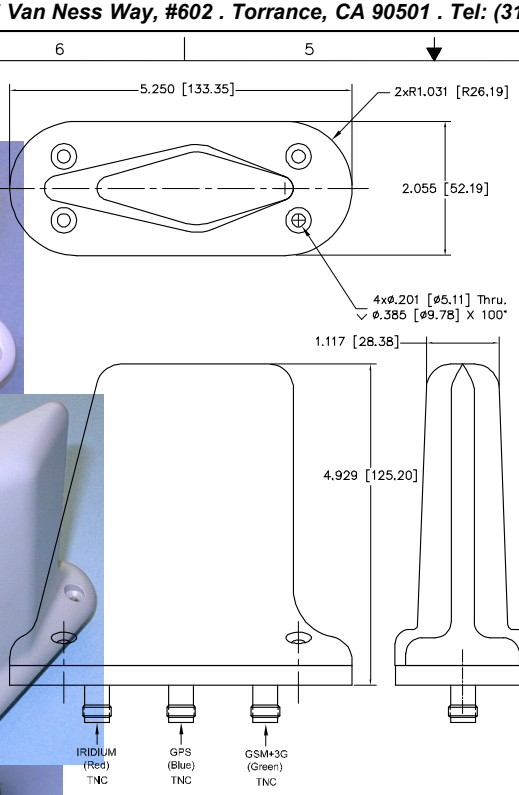
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

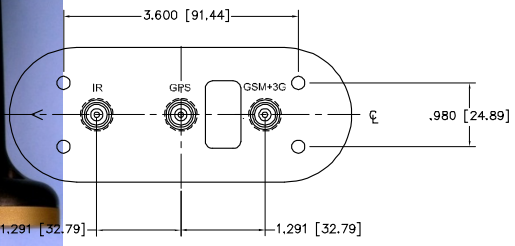
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SPECIFICATIONS

ELECTRICAL:

	GPS (L1 or L1/L2, See P/N in Bottom Table)				IRIDIUM		GSM+3G
FREQUENCY:	L1: (1575.4 ±13)		L2: (1227.6 ±13) MHz		(1610.0 - 1626.5) MHz		(800-2500) MHz
RADIATION PATTERN:	HEMISPHERICAL				HEMISPHERICAL		Verticle
POLARIZATION:	RHCP				RHCP		OMNI
VSWR:	< 2:1				< 2:1		< 2:1
GAIN (dB):	F.S.	4 ft G.P	F.S.	4 ft G.P	4 ft G.P.	F.S	
@ 90° (Zenith):	+ 4.6	+ 2.9	+ 1.8	+ 5.3	+4.9	+5.0	
@ 10° Elevation:	- 2.5	- 1.8	- 4.2	- 2.3	-1.0	-2.5	
@ 20° Elevation:	- 1.1	+ 0.7	- 2.9	+ 0.4	+1.5	-0.5	+4.5
@ 30° Elevation:	+ 0.5	+ 1.7	- 2.0	+ 2.3	+2.4	+1.0	
@ 60° to 90°Elevation:	> 3.6	> 2.1	> 0.9	> 3.2	>+3.3	>+2.7	
BEAM WIDTH (3dB):	103 °	146 °	108 °	74 °	129 °	98 °-106 °	
AXIAL RATIO @ Zenith:	2 dB				2 dB		
POWER HANDLING:	1 Watt				30 W		
LIGHTNING PROTECTION:	DC GROUNDING				DC GROUNDING		
FILTER:	2 2-POL						
LNA GAIN:	(33.0+/-1.0) dB				N/A		
LNA P 1dB Out:	+16 dBm				N/A		
LNA NOISE FIGURE:	2.9 dB (Filter loss is Included)				N/A		
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (30 TO 50) mA				N/A		

MECHANICAL:

SIZE:	WIDTH: 2.055 in. [52 mm], LENGTH: 5.25 in. [133 mm], HEIGHT: 4.929 in. [125.2 mm]
WEIGHT:	11.2 oz. (318 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	GPS: TNC-F (Blue). IRIDIUM: TNC-F (Red), GSM+3G: TNC-F (Green) (OPTION: SMA, TNC, TNC Bulkhead, N, N Bulkhead, BNC, MCX, MMCX, or Cable)
MOUNTING:	FIXED MOUNT 4 x 10-32 MOUNTING SCREWS PROVIDED

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

CONFIGURATION:	FREQ. BAND:	CABLE'S LENGTH:	GSM/GPS/IRIDIUM CON.:	COLOR:
5G: (5.0x2.2) INCH RECT.	08: CELLULAR (824-894) MHz (US/Canada)	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
	09: GSM (876-960) MHz (EUROPE/ASIA/AFRICA/M-East)	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	18: DCS (1710-1880) MHz (EUROPE/ASIA/AFRICA/M-East)	#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
	19: PCS (1850-1990) MHz (US/Canada)	R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
3B: BLADE	3G: GSM+3G (800 to 2500) MHz		B: BNC Female	-5: TAN #: FS 23446 or 33446, FED-STD-595
5B: 5 INCH BLADE		15: L1 GPS (1575+/-12) MHz		
		12: L1/L2 GPS (1575+/-12) / (1227+/-12) MHz		

P/N: 5B3G1216LRR-AP-XTTT-1

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ALL SCREWS ARE SUPPLIED BY ANTCOM CORPORATION

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
4	MOUNTING SCREW: (10-32, 1.25")	MS24693-C278	-	-	5
					3
1			-	-	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONS ± 1/64 DECIMALS .XX± .03 .XXX± .015 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Aug-23-10
CAD FILE NO
DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA

Avionics

L1/L2 GPS/IRIDIUM/GSM+3G BLADE ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	5B3G1216LRR-AP-XTTT-1	A

SCALE 1/1 SHEET 1 OF 1

ZONE	REV	DESCRIPTION	DATE	APPROVED

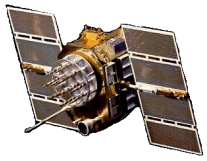
REVISIONS

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS / IRIDIUM / Wi-Fi Antenna

4.9in Tall, Blade Configuration, Top Mount

P/N: 5B121624RRL-AP-XTTT-1, with TNC, SMA, N, BNC Connector Options.



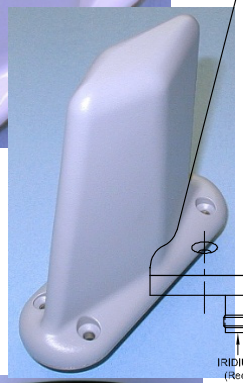
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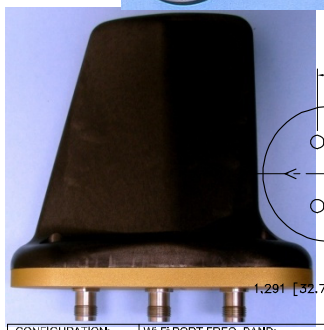
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

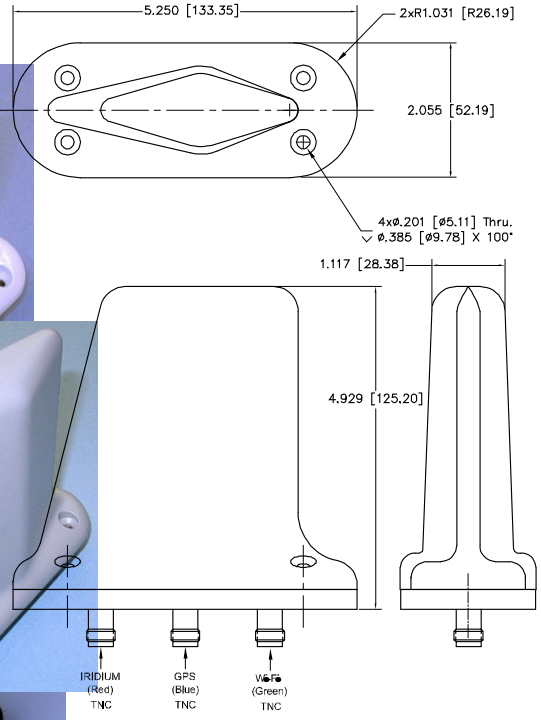
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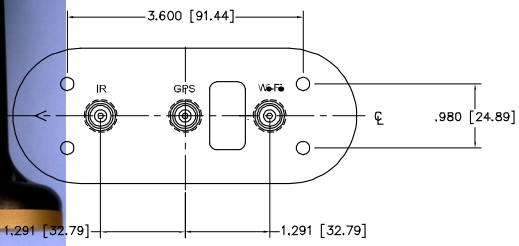
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SPECIFICATIONS

ELECTRICAL:

	GPS (L1 or L1/L2, See P/N in Bottom Table)				IRIDIUM		Wi-Fi
FREQUENCY:	L1: (1575.4 ±13)		L2: (1227.6 ±13) MHz		(1610.0 - 1626.5) MHz		(2400-2500) MHz
RADIATION PATTERN:	HEMISPHERICAL				HEMISPHERICAL		Verticle
POLARIZATION:	RHCP				RHCP		OMNI
VSWR:	< 2:1				< 2:1		< 2:1
GAIN (dB):	F.S.	4 ft G.P	F.S.	4 ft G.P	4 ft G.P.	F.S	
@ 90° (Zenith):	+ 4.6	+ 2.9	+ 1.8	+ 5.3	+4.9	+5.0	+4.5
@ 10° Elevation:	- 2.5	- 1.8	- 4.2	- 2.3	-1.0	-2.5	
@ 20° Elevation:	- 1.1	+ 0.7	- 2.9	+ 0.4	+1.5	-0.5	
@ 30° Elevation:	+ 0.5	+ 1.7	- 2.0	+ 2.3	+2.4	+1.0	
@ 60° to 90°Elevation:	> 3.6	> 2.1	> 0.9	> 3.2	>+3.3	>+2.7	
BEAM WIDTH (3dB):	103 °	146 °	108 °	74 °	129 °	98 °-106 °	(See Below Table for other Frequency Options for Wi-Fi Port)
AXIAL RATIO @ Zenith:	2 dB				2 dB		
POWER HANDLING:	1 Watt				30 W		
LIGHTNING PROTECTION:	DC GROUNDING				DC GROUNDING		
FILTER:	2 2-POL						
LNA GAIN:	(33.0+/-1.0) dB				N/A		
LNA P 1dB Out:	+16 dBm				N/A		
LNA NOISE FIGURE:	2.9 dB (Filter loss is Included)				N/A		
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (30 TO 50) mA				N/A		

MECHANICAL:

SIZE: WIDTH: 2.055 in. [52 mm], LENGTH: 5.25 in. [133 mm], HEIGHT: 4.929 in. [125.2 mm]

WEIGHT: 11.6 oz. (329 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,AND SKYDROL RESISTANCE, FIRE RETARDANT

CONNECTOR: GPS: TNC-F (Blue). IRIDIUM: TNC-F (Red), GSM+3G: TNC-F (Green)
(OPTION: SMA, TNC, TNC Bulkhead, N, N Bulkhead, BNC, MCX, MMCX, or Cable)

MOUNTING: FIXED MOUNT
4 x 10-32 MOUNTING SCREWS PROVIDED

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

CONFIGURATION:	Wi-Fi PORT FREQ. BAND:	CABLE'S LENGTH:	GSM/GPS/IRIDIUM CON.:	COLOR:
5G: (5.0x2.2) INCH RECT	08: CELLULAR (824-894) MHz (US/Canada)	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
	09: GSM (876-960) MHz (EUROPE/ASIA/AFRICA/M-East)	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	18: DCS (1710-1880) MHz (EUROPE/ASIA/AFRICA/M-East)	#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
	19: PCS (1850-1990) MHz (US/Canada); 24: (2.4-2.5) GHz	R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
	3G: (800 to 2500) MHz; C: (4.8-5.9) GHz		B: BNC Female	-5: TAN #: FS 23446 or 33446, FED-STD-595
5B: 5 INCH BLADE	SC: (2.4-2.5)/(4.8-5.9) GHz ; Lo1: (800 to 5900) MHz			
	GPS FREQ. BAND:			
	15: L1 GPS (1575+-12) MHz			
	12: L1/L2 GPS (1575+/-12) / (1227+/-12) MHz			

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
4		MOUNTING SCREW: (10-32, 1.25")	MS24693-C278	-	-	5
						3
1				-	-	1

PARTS LIST

P/N: 5B121624RRL-AP-XTTT-1

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ALL SCREWS ARE SUPPLIED BY ANTCOM CORPORATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES: FRACTIONS ± 1/64, DECIMALS .XX± .030, .XXX± .015, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Aug-23-10
CAD FILE NO
DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

Avionics
L1/L2 GPS/IRIDIUM/Wi-Fi
BLADE ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 5B121624RRL-AP-XTTT-1 | REV A
SCALE 1/1 | SHEET 1 OF 1

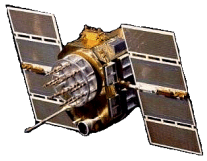
ZONE	REV	DESCRIPTION	DATE	APPROVED

NMO Connector Option is Now Available for Some Antennas

UHF + L1L2 GPS + Iridium Antenna

P/N: 5BIRL1L20.25RV-PAP-12BT2-2 (Lusterless Grey, with 12in RG-400 Cables)

4.9” Tall Blade, Top Mount Configuration



ISO 9001:2008/FAA Approved Facility

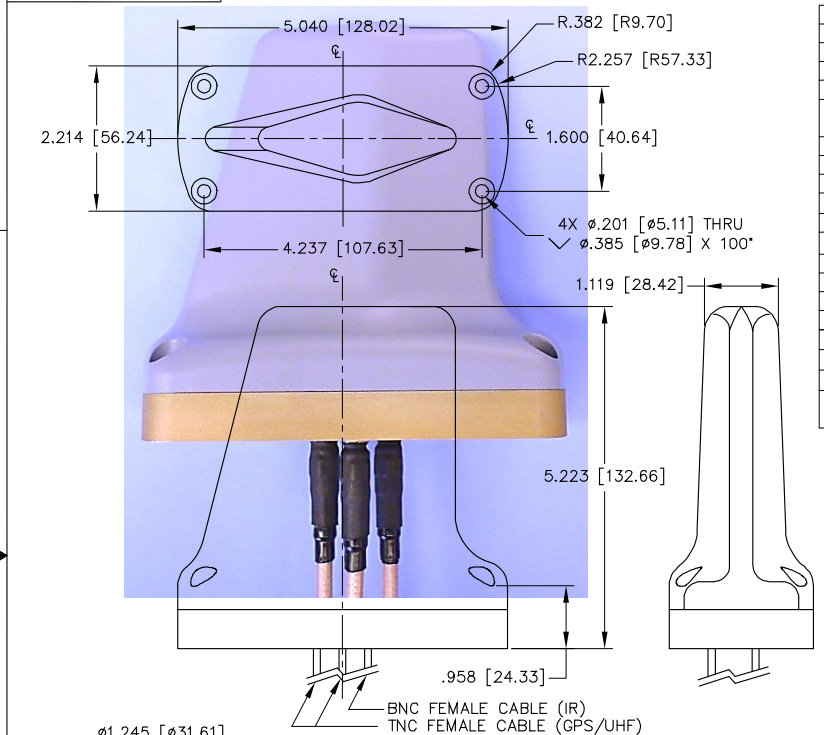
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

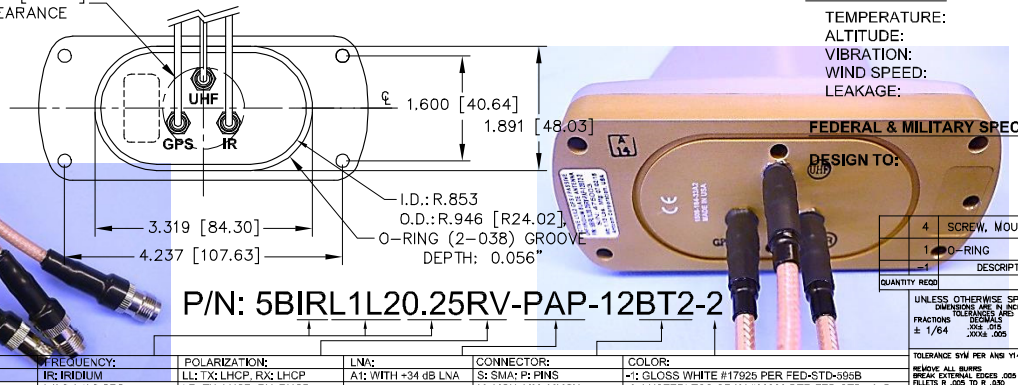
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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	–	–	–	–





P/N: 5BIRL1L20.25RV-PAP-12BT2-2

CONFIGURATION:	FREQUENCY:	POLARIZATION:	LNA:	CONNECTOR:	COLOR:
53: (HELIX ROD)	IR: IRIDIUM	LL: TX: LHCP, RX: LHCP	A1: WITH +34 dB LNA	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
5B: (HELIX BLADE)	L1L2: L1L2 GPS	LR: TX: LHCP, RX: RHCP	P: WITHOUT LNA	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
3D: (HELIX HANDHELD)	0.25: UHF(240-270) MHz	RL: TX: RHCP, RX: LHCP		N: N; NB: N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
13: (HELIX Sextant Port)		RR: TX: RHCP, RX: RHCP		T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
15: (HELIX Sextant Port)		V: VERTICAL, H: HORIZONTAL		B: BNC Female	-6: DESERT TAN #33446 PER FED-STD-595B

SPECIFICATIONS

ELECTRICAL:

	GPS (L1 or L1/L2, See P/N in Bottom Table)				IRIDIUM		UHF
FREQUENCY:	L1: (1575.4 ±13)		L2: (1227.6 ±13) MHz		(1610.0 - 1626.5) MHz		(240-270) MHz
RADIATION PATTERN:	HEMISPHERICAL				HEMISPHERICAL		VERTICAL
POLARIZATION:	RHCP				RHCP		OMNI
VSWR:	< 2:1				< 2:1		< 2.5:1
GAIN (dB):	F.S.	4 ft G.P	F.S.	4 ft G.P	4 ft G.P.	F.S	4 ft G.P.
@ 90° (Zenith):	+ 4.6	+ 2.9	+ 1.8	+ 5.3	+4.9	+5.0	
@ 10° Elevation:	- 2.5	- 1.8	- 4.2	- 2.3	-1.0	-2.5	
@ 20° Elevation:	- 1.1	+ 0.7	- 2.9	+ 0.4	+1.5	-0.5	- 2 dBil
@ 30° Elevation:	+ 0.5	+ 1.7	- 2.0	+ 2.3	+2.4	+1.0	
@ 60° to 90°Elevation:	> 3.6	> 2.1	> 0.9	> 3.2	>+3.3	>+2.7	
BEAM WIDTH (3dB):	103 °	146 °	108 °	74 °	129 °	98 °-106 °	OMNI
AXIAL RATIO @ Zenith:	2 dB				2 dB		N/A
POWER HANDLING:	1 Watt				30 W		100 W
LIGHTNING PROTECTION:	DC GROUNDING				DC GROUNDING		DC GROUNDING
FILTER:	2 2-POL						
LNA GAIN:	(33.0+/-1.0) dB				N/A		N/A
LNA P 1dB Out:	+16 dBm				N/A		N/A
LNA NOISE FIGURE:	2.9 dB (Filter loss is Included)				N/A		N/A
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (30 TO 50) mA				N/A		N/A

MECHANICAL:

SIZE:	WIDTH: 2.21 in. [56.24 mm], LENGTH: 5.04 in. [128.0 mm], HEIGHT: 5.223 in. [132.66 mm]
WEIGHT:	14.9 oz. (422 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	BNC FEMALE CABLE - IR TNC FEMALE CABLE - GPS/UHF (OPTION: TNC Bulkhead, SMA, N, N Bulkhead, BNC)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
WIND SPEED:	> 135 Miles/hr
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
4	SCREW, MOUNTING	MS24693-C286, ITEM 579GN	–	–	
1	O-RING	MS28775-024, ITEM 552	–	–	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ⌀ ⌀.005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

ORIGINALLY DRAWN	S. HUYNH	Dec-17-14
ORIGINALLY DESIGNED	S. HUYNH	Dec-17-14
UPDATED	S. HUYNH	June-21-15
UPDATE DRAWN	P. TRAN	June-21-15
APPROVED	S. HUYNH	June-21-15

ANTCOM CORP. TORRANCE CALIFORNIA

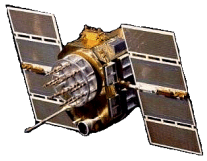
L1L2 GPS
IRIDIUM/UHF BLADE ANTENNA

SIZE: D | SAGE NO: 3CVE1 | DRAWING NO: 5BIRL1L20.25RV-PAP-12BT2-2 | REV: –

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

(225-500) MHz UHF / L1/L2 GPS Antenna
P/N: 5BE-225-500-1215-PA-XNT-2 (or 5BE-225-500-1215-XNT-2)
5" Tall Blade Configuration

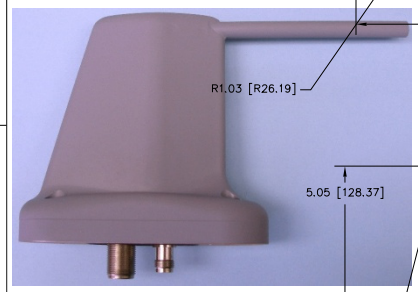


ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

	UHF	GPS				
FREQUENCY:	(225-500) MHz	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz	
RADIATION PATTERN:	OMNIDIRECTIONAL	HEMISPHERICAL				
POLARIZATION:	VERTICAL	RHCP			RHCP	
VSWR:	< 3:1, < 2.6:1 @ > 400MHz	< 2:1			< 2:1	
IMPEDANCE:	50 ohms	50 ohms			50 ohms	
ANTENNA GAIN (dBic):		Free Space	16 in G.P.	4 ft G.P.	Free Space	16 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):		+ 4.7	+ 0.4	+ 3.5	+ 3.3	+ 1.5	+ 4.9
@ 10 ° Elevation:	> -5 dBil,	- 1.8	- 3.2	- 2.0	- 3.8	- 4.0	- 3.6
@ 20 ° Elevation:	> -2dBil @ > 400MHz	- 0.3	- 1.0	+ 0.8	- 2.0	- 2.0	- 0.1
@ 30 ° Elevation:		+ 1.4	+ 0.9	+ 1.8	- 0.5	0.0	- 1.8
@ 60 - 90 ° Elevation:		> 3.9	+3.4/+0.4	> 2.8	> 2.7	+2.4/+1.5	> 3.0
BEAM WIDTH (3dB):	OMNIDIRECTIONAL	114 Deg.	118 Deg.	139 Deg.	106 Deg.	111 Deg.	75 Deg.
LIGHTNING PROTECTION:	DC GROUNDING						
LNA GAIN:		33 dB			35 dB		
LNA NOISE FIGURE:		3.0 dB			3.0 dB		
LNA P1dB Out:		+13 dBm			+13 dBm		
LNA DC POWER:		2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz		-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz		< -65 dB			< -65 dB		
POWER HANDLING:	200 watts	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)					

MECHANICAL:

SIZE: WIDTH 2.06 in. [52 mm], LENGTH 5.25 in. [133 mm],
HEIGHT 5.05 in. [128 mm]

WEIGHT: 14.9 oz. (422g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5541F

COLOR: LUSTERLESS GRAY #36320 PER FED-STD-595B
GLOSS WHITE #17925 PER FED-STD-595B
OLIVE DRAB GREEN #34031 PER FED-STD-595B
LUSTERLESS BLACK #37038 PER FED-STD-595B

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDAN

CONNECTOR: UHF: N-FEMALE ; GPS: TNC-FEMALE
(OPTION: SMA, MCX, MMCX, TNC, BNC, N)

ENVIRONMENTAL:

TEMPERATURE: -67°F TO +185°F [-55°C TO +85°C]
ALTITUDE: 70,000 ft.
VIBRATION: 10 G's
LEAKAGE: HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DO-160D, MIL-C-5541, MIL-E-5400, MIL-I-45208A, AND MIL-STD-810

SIZE:	START FREQ. (MHz):	STOP FREQ. (MHz):	Other Band	DC BLOCK/LIMITTER:	LNA:
1: 2" SQ.	225, 310, 350, 370,	310, 350, 370, 400,	S: (2.3-2.5) GHz	DL: WITH DC BLOCK	A1: WITH +23 dB LNA
1.9: 1.9" SQ.	400, 425, 450, 470,	410, 425, 450, 470,	C: (4.4-5.85) GHz	& WITH LIMITTER	A2: WITH +43 dB LNA
2: 2.6" DIA.	500, 820, 990, 1300	500, 820, 990, 1400	L: (1.7-2.0) GHz	BLANK: WITHOUT DC	P: WITHOUT LNA
3: 3.5" DIA.	1500, 1600, 1700	1550, 1650, 1750	1215: L1/L2 GPS	BLOCK NOR LIMITTER	
4: MINI ARINC	1800, 1990, 2400	1850, 1990, 2500	15: L1 GPS		
5B: Blade, 53: Rod	XXX	YYY			

CABLE'S LENGTH:	UHF/Other-Band CON.	COLOR:
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N: N/N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

P/N: 5BE-225-500-1215-PA-XNT-2

3. MOUNTING HOLE PATTERN COMPLIES WITH BOEING L-BAND AIRBORNE ANTENNAS
2. O-RING AND MOUNTING SCREWS ARE SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	FINISH
4	10-32 SCREW, MOUNTING, 1.25in		MS24693-C278	-	2
1	O-RING		MS28775-024	-	1

PARTS LIST

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE: FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DATS ON A COMMON ⌀ OF .005
MACHINED SURFACES 125

ORIGINALLY DRAWN	S. HUYNH	April-10-10
ORIGINALLY DESIGNED	S. HUYNH	April-10-10
UPDATED	S. HUYNH	April-08-13
UPDATE DRAWN	P. TRAN	April-08-13
APPROVED	S. HUYNH	April-08-13

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA

UHF/ L1/L2 GPS
BLADE ANTENNA
(Compatible to Boeing Foot Print)

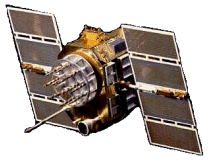
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SCALE 1/1 SHEET 1 OF 1

ORIGINAL DOCUMENT WITH STAMP IS RED

IRIDIUM Antenna, P/N: 91IR16RR-P-XB-X Rev C

1.36” Diameter x 8.6” Tall, C130/Sextant Port with Lock-Pin Configuration with BNC, TNC, SMA or N Connector Options



ISO 9001:2008/FAA Approved Facility

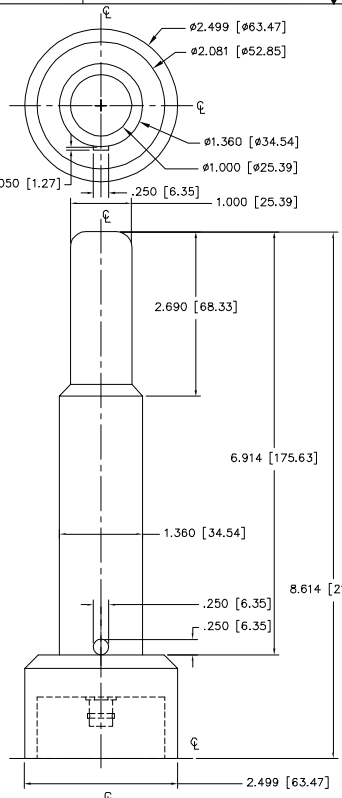
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

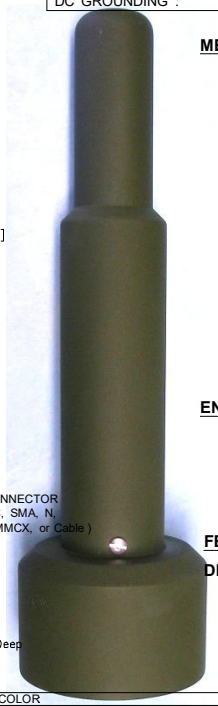
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SPECIFICATIONS

ELECTRICAL:

FREQUENCY (MHz):	(1575.42 ±15)	(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1616)	(1610-1626)	(1227.60 ±15)
GAIN (dBic) in FS/4ft GP	L1 GPS	Rx INMARSAT	Tx INMARSAT	GLONASS	IRIDIUM	L2 GPS
@ 90° (Zenith):	+1.1/+3.7	+0.7/+1.5	-0.3/0.0	+0.5/+2.9	+0.1/+1.1	-5.0
@ 10° Elevation :	-0.9/+0.0	-1.6/-1.3	-1.9/-1.0	-1.3/+0.2	-1.6/-0.8	-6.5 to -11.5
@ 20° Elevation :	-0.2/+2.0	-0.8/+1.0	-1.1/+1.2	-0.5/+2.4	-0.8/+1.2	-6.2 to -9.2
@ 30° Elevation :	+0.3/+2.0	-0.2/+1.0	-0.8/+0.4	+0.1/+2.1	-0.7/+1.1	-5.7 to -7.7
@ 45° Elevation :	+0.6/+1.5	+0.3/+0.6	-0.7/-0.8	-0.1/+1.0	-0.3/-0.3	-4.6 to -6.0
@ 70° Elevation :	+0.3/+1.3	+0.3/+0.4	-1.6/0.0	-0.3/+1.1	-0.7/0.0	-4.0
BEAM WIDTH (3dB)	173/155Deg.	173/155 Deg.	180/162Deg.	180/162Deg.	180/162Deg.	(107 to 170) Deg.
AXIAL RATIO (dB)	1 to 3	1 to 3	1 to 3	1 to 3	1 to 3	1 to 5
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 1.5: 1					
DC GROUNDING :	YES (LIGHTNING PROTECTION)					

MECHANICAL:

SIZE:	DIAMETERS= 1in [25mm], 1.36in[35mm], 2.6in [64mm] HEIGHT = 8.614 in. [218.79 mm]
WEIGHT:	7.1 oz. (201 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
COLOR:	GLOSS WHITE #17925 PER FED-STD-595B LUSTERLESS GRAY #36320 PER FED-STD-595B OLIVE DRAB GREEN #34031 PER FED-STD-595B LUSTERLESS BLACK #37038 PER FED-STD-595B
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	BNC CONNECTOR, (OPTION: TNC, SMA, N, N Bulkhead, MCX, MMCX)
MOUNTING:	FLAT, OR FIXED PIPE (3/4"-1.0" Dia.) MOUNT (PROVIDED)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000ft.
VIBRATION:	> 30 G's
WIND SPPED:	> 135 Miles/hr
LEAKAGE:	HERMETICALLY SEALED

FEDERAL& MILITARY SPECIFICATIONS

DESIGNTO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

CONFIGURATION:	POLARIZATION:	LNA:	CABLE'SLENGTH	CONNECTOR	COLOR
1: 2" SQ. (FLAT)	LL: TX: LHCP, RX: LHCP	A1: WITH+34 dB LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	LR: TX: LHCP, RX: RHCP	A2:	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	RL: TX: RHCP, RX: LHCP	P: WITHOUT LNA	#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)	RR: TX: RHCP, RX: RHCP		R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)				B: BNC Female	
53: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					
91: (HELIX Sextant Port)					

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ALL SCREWS ARE SUPPLIED BY ANTCOM CORPORATION

P/N: 91IR16RR-P-XB-4

ZONE	REV	DESCRIPTION	DATE	APPROVED
	B	ADD on BNC Connector Option	OCT-20-08	S.H
	C	LOCKING PIN	NOV-24-08	S.H

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	FINISH
5	4			-
4	1			
3	1			-
2	1			
1	1			-

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .016
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH May-20-08
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

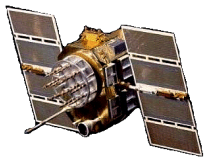
Sextant Port
IRIDIUM/GPS/GLONASS/
INMARSAT HELIX ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 91IR16RR-P-XB-4 | REV C
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

GPS/IRIDIUM Antenna, P/N: 91G1516RR-AP-XBB-X Rev C

1.36” Diameter x 8.6” Tall, C130/Sextant Port with Lock-Pin Configuration with BNC, TNC, SMA or N Connector Options

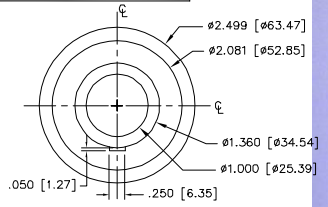


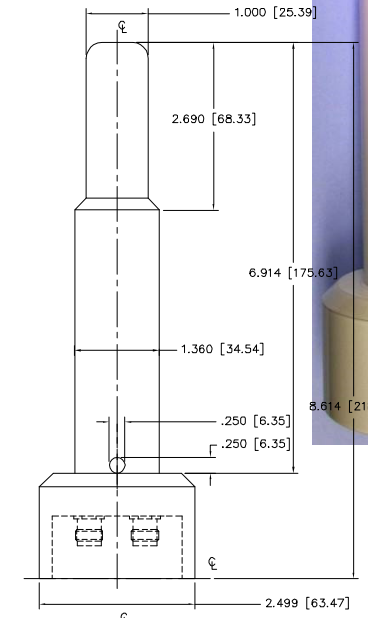
ISO 9001:2008/FAA Approved Facility

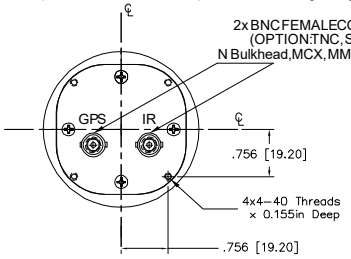
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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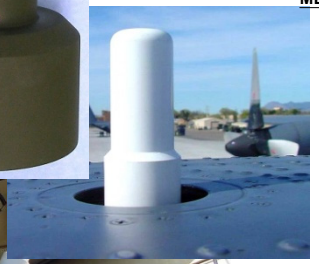
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CONFIGURATION :	FREQ. BAND :	POLARIZATION :	GPS/IRIDIUM LNA:
1: 2" SQ. (FLAT)	1516: L1 GPS & IRIDIU M	RR: RHCP/RHC P	A: WITH LNA
1.9: 1.9" SQ. (FLAT)	1216: L1/L2 GPS	RL:RHCP/LHC P	P: WITHOUT LNA
2: 2.6" DIA. (FLAT)	GPS & IRIDIU M	LL:LHCP/LHC P	
3: 3.5" DIA (FLAT)		LR:LHCP/RHC P	A2: WITH 20dB LNA
4: MINI ARINC (FLAT)			
53: (HELIX ROD)			
5B: (HELIX BLADE)			
5: 5" (FLAT)			
91: Sextant Port			

P/N: 91G1516RR-AP-XBB-4

CABLE'SLENGTH	GPS/IRIDIUMCON	COLOR
X: NO CABLE	S: SMA; B: BNC Female	-1: GLOSSWHITE#17925PER FED-STD-595B
M: MAG., N: No MAG.	M: MCX; MM: MMCX	-2: LUSTERLESSGRAY#36320 PER FED-STD-595B
#: CABLE LENGTH(IN)	N, NB: N, N-Bulkhead	-3: OLIVEDRAB GREEN#34031 PER FED-STD-595B
R: RIGHTANGLECON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESSBLACK#37038 PER FED-STD-595B

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

SPECIFICATIONS

ELECTRICAL:

FREQUENCY(MHz):	(1575.42 ±15)	(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1616)	(1610-1626)	
GAIN (dBic) in FS/4ft GP	L1 GPS	Rx INMARSAT	Tx INMARSAT	GLONASS	IRIDIUM	
@ 90° (Zenith):	-1.9/+0.7	-2.3/-1.5	-3.3/-3.0	-2.5/-0.1	-2.9/-1.9	
@ 10° Elevation	-3.9/-3.0	-4.6/-4.3	-4.9/-4.0	-4.3/-2.8	-3.6/-3.8	
@ 20° Elevation	-3.2/-1.0	-3.8/-2.0	-4.1/-1.8	-3.5/-0.6	-3.8/-1.8	
@ 30° Elevation	-2.7/-1.0	-3.2/-2.0	-3.8/-2.6	-2.9/-0.9	-3.7/-1.9	
@ 45° Elevation	-2.4/-1.5	-2.7/-2.4	-3.7/-3.8	-3.1/-2.0	-3.3/-3.3	
@ 70° Elevation	-2.7/-1.7	-2.7/-2.6	-4.6/-3.0	-3.3/-1.9	-3.7/-3.0	
BEAM WIDTH (3dB)	173/155 Deg.	173/155 Deg.	180/162 Deg.	180/162 Deg.	180/162 Deg.	
AXIAL RATIO (dB)	1 to 3	1 to 3	1 to 3	1 to 3	1 to 3	
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 1.5:1					
DC GROUNDING	YES (LIGHTNINGPROTECTION)					

LNA OPTION:

LNA GAIN:	33 dB	35 dB
LNA NOISE FIGURE:	3.0 dB	3.0 dB
LNA P1dB Out:	+13 dBm	+13 dBm
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA	
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB	-40 dB / -40 dB
@ (-100/+100) MHz	< -65 dB	< -65 dB
POWER HANDLING :	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)	

MECHANICAL:

SIZE: DIAMETERS= 1in [25mm], 1.36in[35mm], 2.6in [64mm]
HEIGHT = 8.614 in. [218.79 mm]

WEIGHT: 7.8 oz. (220 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: BNC CONNECTORS
(OPTION: TNC, SMA, N, N Bulkhead, MCX, MMCX)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	B	ADD on BNC Connector Option	OCt-20-08	S.H
	C	LOCKING PIN	NOV-24-08	S.H

QUANTITY REQD		DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
		PARTS LIST					
1	1			–	–	–	1
–2	–1						

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ ⌀.005
MACHINED SURFACES 125

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH OCt-20-08
CAD FILE NO

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

C130/SEXTANT PORT ACTIVE L1 GPS/IRIDIUM HELIX ANTENNA

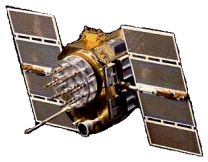
SIZE D | CAGE NO 3CVE1 | DRAWING NO 91G1516RR-AP-XBB-4 | REV C

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

L1/L2 GPS Antenna, P/N: 91G1215A-XB-X Rev C

1.36" Diameter x 8.6" Tall, C130/Sextant Port with Lock-Pin Configuration with BNC, TNC, SMA or N Connector Options

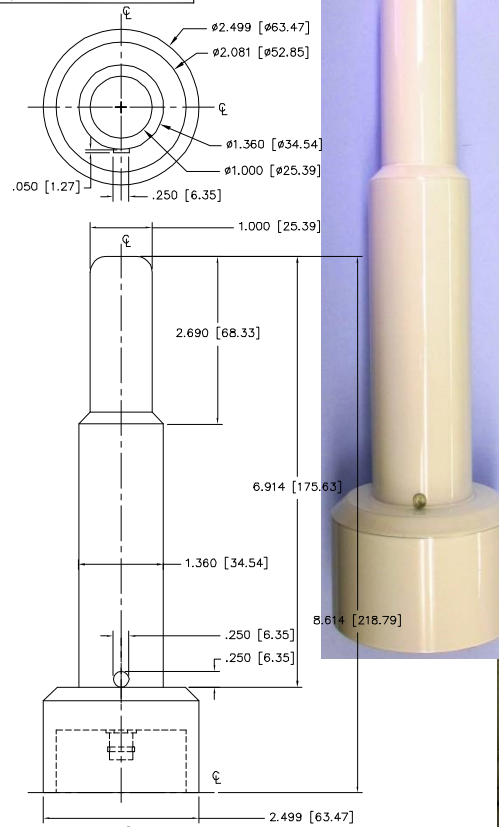


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Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	B	ADD on BNC Connector Option	OCT-20-08	S.H
	C	LOCKING PIN	NOV-24-08	S.H

ELECTRICAL:

FREQUENCY:	INMARSA T Rx: (1542 .50 ±17.5) MHz INMARSA T Tx: (1642 .50 ±17.5) MHz			
	GPS L1: (1575 .42 ±13) MHz			GPS L2: (1227 .60 ±13) MHz
RADIATION PATTERN:	HEMISPHERICAL			HEMISPHERICAL
POLARIZATION:	RHCP			RHCP
VSWR:	< 1.5:1	< 1.5:1	< 1.5:1	< 2.0:1
GAIN (dBic)	GPS L1	Satcom Tx	Satcom Rx	GPS L2
@ 90° (Zenith):	+2.6	-4.2	-0.7	0.0
@ 10° Elevation	0.0	-6.7	-4.2	-2.4 to -6.3
@ 20° Elevation	+1.2	-5.6	-2.9	-1.8 to -4.8
@ 30° Elevation	+1.7	-4.9	-2.1	-1.3 to -3.4
@ 45° Elevation	+2.4	-4.9	-1.4	-0.5 to -1.5
@ 70° Elevation	+2.3	-5.4	+0.1	0.0 to -0.5
BEAM WIDTH (3dB)	165 Deg.	155 Deg.	142 Deg.	(120 to 165) Deg.
AXIAL RATIO (dB)	1 to 3	1 to 3	1 to 4	1 to 5

DC GROUNDING: YES (LIGHTNING PROTECTION)

LNA OPTION:

LNA GAIN:	33 dB	35 dB
LNA NOISE FIGURE:	3.0 dB	3.0 dB
LNA P1dB Out:	+13 dBm	+13 dBm
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA	
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB	-40 dB / -40 dB
@ (-100/+100) MHz	< -65 dB	< -65 dB
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)	

MECHANICAL:

SIZE: DIAMETERS= 1in [25mm], 1.36in [35mm], 2.6in [64mm]
HEIGHT = 8.614 in. [218.79 mm]

WEIGHT: 7.8 oz. (220 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

COLOR: OLIVE DRAB GREEN #34031 PER FED-STD-595B

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: BNC CONNECTOR,
(OPTION: TNC, SMA, N, N Bulkhead, MCX, MMCX)
MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

FREQ. BAND:	LNA:
1215: L1/L2	A: WITH LNA
15: L1 ONLY	P: WITHOUT LNA
1216: L1/L2/INMARSAT	
0416: UHF/L1/L2/INMARSAT (2 Connectors)	

P/N: 91G1216A-XB-4

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; B: BNC Female	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: No MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
1	1		–	–	–	1
–2	–1					

PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH May-20-08
CAD FILE NO

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

C130/Sextant Port
ACTIVE L1/L2
GPS HELIX ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 91G1215A-XB-4 | REV C
SCALE 1/1 | SHEET 1 OF 1

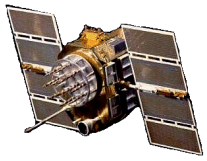
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

NMO Connector Option is Now Available for Some Antennas

IRIDIUM Antenna, P/N: 11IR16RR-P-XB-X Rev D

1.36” Diameter x 9.8” Tall, C130/Sextant Port with 2 Lock-Pin Configuration with BNC, TNC, SMA or N Connector Options



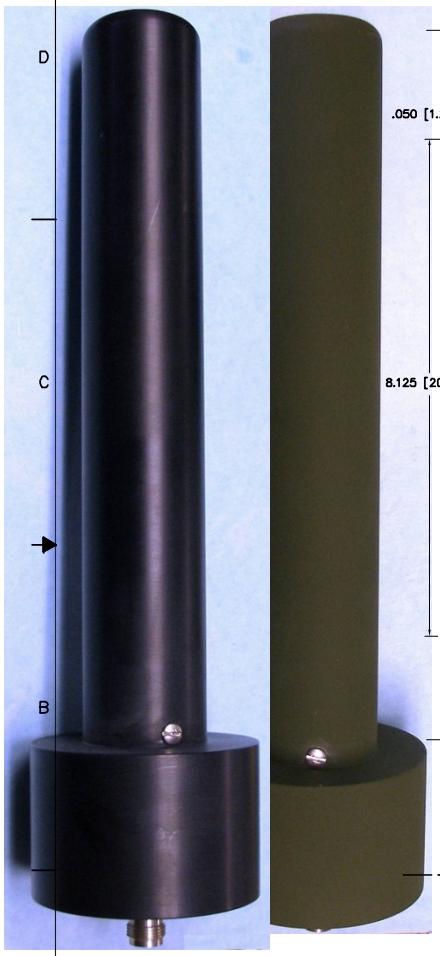
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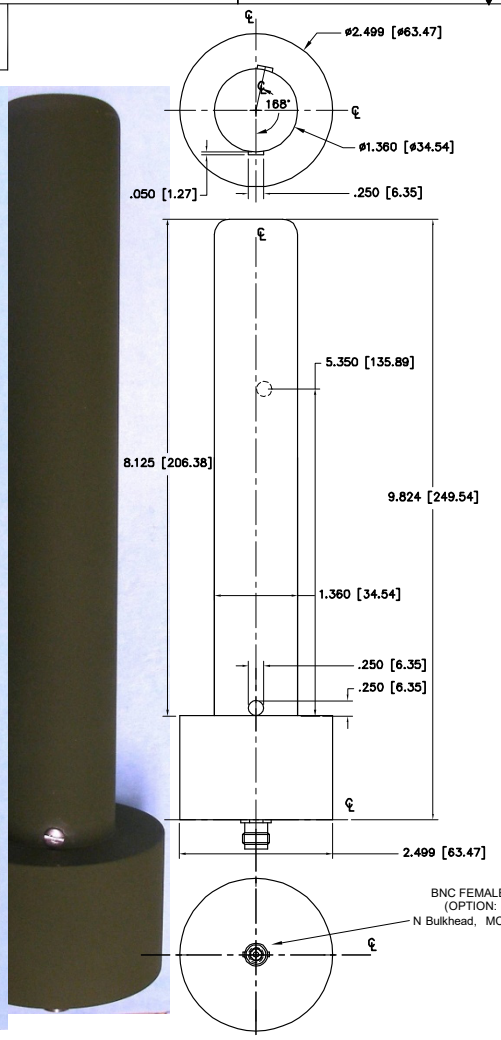
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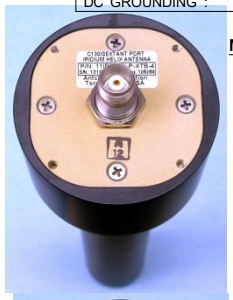
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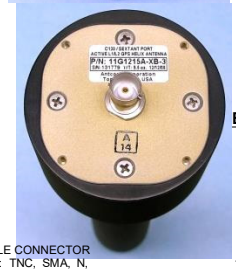
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REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	B	ADD on BNC Connector Option	OCT-20-08	S.H
	C	1 LOCKING PIN	NOV-24-08	S.H
	D	2 LOCKING PIN	Jan-20-09	S.H









SPECIFICATIONS

ELECTRICAL:

FREQUENCY (MHz):	(1575.42 ±15)	(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1616)	(1610-1626)	(1227.60 ±15)
GAIN (dBic) in FS/4ft GP	L1 GPS	Rx INMARSAT	Tx INMARSAT	GLONASS	IRIDIUM	L2 GPS
@ 90° (Zenith):	+1.1/+3.7	+0.7/+1.5	-0.3/0.0	+0.5/+2.9	+0.1/+1.1	-5.0
@ 10° Elevation :	-0.9/+0.0	-1.6/-1.3	-1.9/-1.0	-1.3/+0.2	-1.6/-0.8	-6.5 to -11.5
@ 20° Elevation :	-0.2/+2.0	-0.8/+1.0	-1.1/+1.2	-0.5/+2.4	-0.8/+1.2	-6.2 to -9.2
@ 30° Elevation :	+0.3/+2.0	-0.2/+1.0	-0.8/+0.4	+0.1/+2.1	-0.7/+1.1	-5.7 to -7.7
@ 45° Elevation :	+0.6/+1.5	+0.3/+0.6	-0.7/-0.8	-0.1/+1.0	-0.3/-0.3	-4.6 to -6.0
@ 70° Elevation :	+0.3/+1.3	+0.3/+0.4	-1.6/0.0	-0.3/+1.1	-0.7/0.0	-4.0
BEAM WIDTH (3dB)	173/155 Deg.	173/155 Deg.	180/162 Deg.	180/162 Deg.	180/162 Deg.	(107 to 170) Deg.
AXIAL RATIO (dB)	1 to 3	1 to 3	1 to 3	1 to 3	1 to 3	1 to 5
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR :	< 1.5:1					
DC GROUNDING :	YES (LIGHTNING PROTECTION)					

MECHANICAL:

SIZE:	DIAMETERS = 1.36in [35mm], 2.6in [64mm] HEIGHT = 9.824 in. [249 mm]
WEIGHT:	9.8 oz. (277 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
COLOR:	GLOSS WHITE #17925 PER FED-STD-595B LUSTERLESS GRAY #36320 PER FED-STD-595B OLIVE DRAB GREEN #34031 PER FED-STD-595B LUSTERLESS BLACK #37038 PER FED-STD-595B
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	BNC CONNECTOR, (OPTION: TNC, SMA, N, N Bulkhead, MCX, MMCX)
MOUNTING:	FLAT, OR FIXED PIPE (3/4"-1.0" Dia.) MOUNT (PROVIDED)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000ft.
VIBRATION:	> 30 G's
WIND SPPED:	> 135 Miles/hr
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

CONFIGURATION:	POLARIZATION:	LNA:	CABLE'SLENGTH	CONNECTOR	COLOR
1: 2" SQ. (FLAT)	LL: TX: LHCP, RX: LHCP	A1: WITH +34 dB LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	LR: TX: LHCP, RX: RHCP	M: WITH MAG. MOUNT	#: CABLE LENGTH (IN)	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	RL: TX: RHCP, RX: LHCP	P: WITHOUT LNA	N: N; NB: N-Bulkhead	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)	RR: TX: RHCP, RX: RHCP		R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)				B: BNC Female	
53: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					
91: (HELIX Sextant Port)					

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ALL SCREWS ARE SUPPLIED BY ANTCOM CORPORATION

P/N: 11IR16RR-P-XB-4

QUANTITY REQD	DESCRIPTION	PART NO	FINISH	ITEM NO
4			-	5
1				4
1			-	3
1				2
1			-	1
-1				

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .020. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø ⌀.005. MACHINED SURFACES 125/. DO NOT SCALE DRAWING

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH May-20-08 | CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

Sextant Port
IRIDIUM/GPS/GLONASS/
INMARSAT HELIX ANTENNA

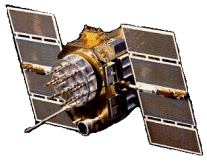
SIZE D | CAGE NO 3CVE1 | DRAWING NO 11IR16RR-P-XB-4 | REV D

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

GPS/IRIDIUM Antenna, P/N: 11G1516RR-AP-XBB-X Rev D

1.36” Diameter x 9.8” Tall, C130/Sextant Port with 2 Lock-Pin Configuration with BNC, TNC, SMA or N Connector Options

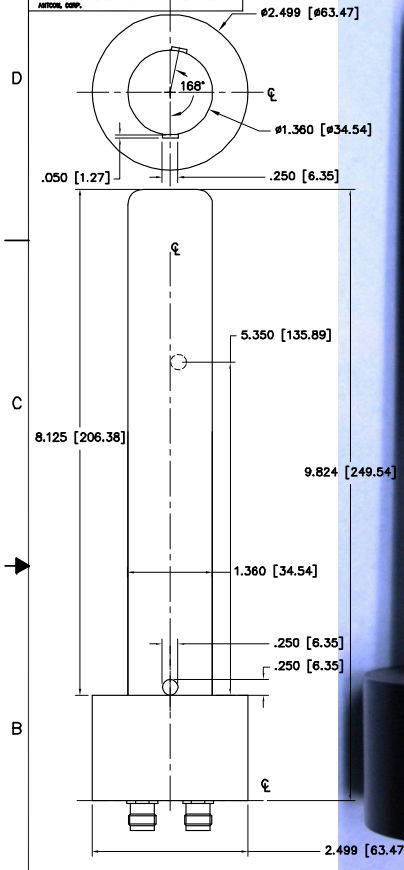


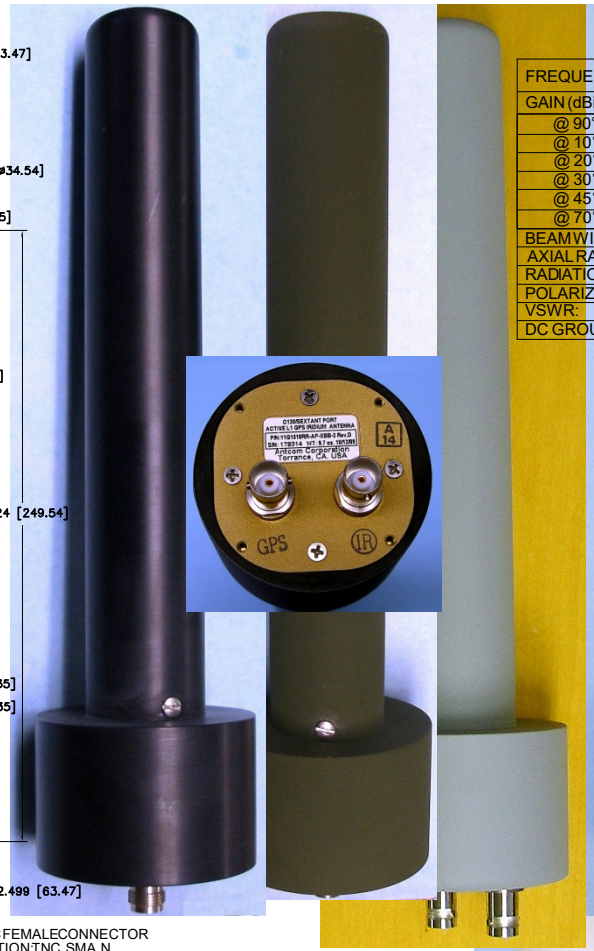
ISO 9001:2008/FAA Approved Facility

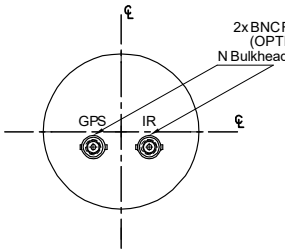
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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CONFIGURATION :	FREQ. BAND :	POLARIZATION :	GPS/IRIDIUM LNA:
1: 2" SQ. (FLAT)	1516: L1 GPS & IRIDIU M	RR: RHCP/RHC P	A: WITH LNA
1.9: 1.9" SQ. (FLAT)	1218: L1/L2 GPS	RL:RHCP/LHC P	P: WITHOUT LNA
2: 2.6" DIA. (FLAT)	GPS & IRIDIU M	LL:LHCP/LHC P	A2: WITH 20dB LNA
3: 3.5" DIA. (FLAT)		LR:LHCP/RHC P	
4: MINI ARINC (FLAT)			
53: (HELIX ROD)			
SB: (HELIX BLADE)			
5: 5" (FLAT)			
91, 11: Sextant Port			

P/N: 11G1516RR-AP-XBB-4

P/N: 11G1516RR-AP-9SS-2-U

CABLE'SLENGTH	GPS/IRIDIUMCON	COLOR
X: NO CABLE	S: SMA; B: BNC Female	-1: GLOSSWHITE#17925PERFED-STD-595B
M: MAG., N: No MAG.	M: MCX; MM: MMCX	-2: LUSTERLESSGRAY#36320PERFED-STD-595B
#: CABLE LENGTH(IN)	N, NB: N, N-Bulkhead	-3: OLIVEDRAB GREEN#34031PERFED-STD-595B
R: RIGHTANGLECON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESSBLACK#37038PERFED-STD-595B

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

SPECIFICATIONS

ELECTRICAL:

FREQUENCY(MHz):	(1575.42 ±15)	(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1616)	(1610-1626)	
GAIN (dBic) in FS/4ft GP	L1 GPS	Rx INMARSAT	Tx INMARSAT	GLONASS	IRIDIUM	
@ 90° (Zenith):	-1.9/+0.7	-2.3/-1.5	-3.3/-3.0	-2.5/-0.1	-2.9/-1.9	
@ 10° Elevation	-3.9/-3.0	-4.6/-4.3	-4.9/-4.0	-4.3/-2.8	-3.6/-3.8	
@ 20° Elevation	-3.2/-1.0	-3.8/-2.0	-4.1/-1.8	-3.5/-0.6	-3.8/-1.8	
@ 30° Elevation	-2.7/-1.0	-3.2/-2.0	-3.8/-2.6	-2.9/-0.9	-3.7/-1.9	
@ 45° Elevation	-2.4/-1.5	-2.7/-2.4	-3.7/-3.8	-3.1/-2.0	-3.3/-3.3	
@ 70° Elevation	-2.7/-1.7	-2.7/-2.6	-4.6/-3.0	-3.3/-1.9	-3.7/-3.0	
BEAM WIDTH (3dB)	173/155 Deg.	173/155 Deg.	180/162 Deg.	180/162 Deg.	180/162 Deg.	
AXIAL RATIO (dB)	1 to 3	1 to 3	1 to 3	1 to 3	1 to 3	
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 1.5:1					
DC GROUNDING	YES (LIGHTNINGPROTECTION)					

LNA OPTION:

LNA GAIN:	33 dB	35 dB
LNA NOISE FIGURE:	3.0 dB	3.0 dB
LNA P1dB Out:	+13 dBm	+13 dBm
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA	
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB	-40 dB / -40 dB
@ (-100/+100) MHz	< -65 dB	< -65 dB
POWER HANDLING :	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)	

MECHANICAL:

SIZE: DIAMETERS= 1.36in[35mm], 2.6in [64mm]
HEIGHT= 9.824 in. [249 mm]

WEIGHT: 9.8 oz. (277 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: BNC CONNECTORS
(OPTION: TNC, SMA, N, N Bulkhead, MCX, MMCX)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	B	ADD on BNC Connector Option	Oct-20-08	S.H
	C	1 Bottom LOCKING PIN	Nov-24-09	S.H
	D	2 LOCKING PIN	Jan-20-09	S.H

QUANTITY REQD		DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
-2	-1						
1	1			–	–	–	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .000 TO R .020. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ ⌀.005. MACHINED SURFACES 125/. DO NOT SCALE DRAWING

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH Oct-20-08 | CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

C130/SEXTANT PORT ACTIVE L1 GPS/IRIDIUM HELIX ANTENNA

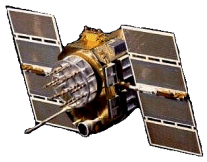
SIZE D | CAGE NO 3CVE1 | DRAWING NO 11G1516RR-AP-XBB-4 | REV D

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

L1/L2 GPS Antenna, P/N: 11G1215A-XB-X Rev D

1.36” Diameter x 9.8” Tall, C130/Sextant Port with 2 Lock-Pin Configuration with BNC, TNC, SMA or N Connector Options

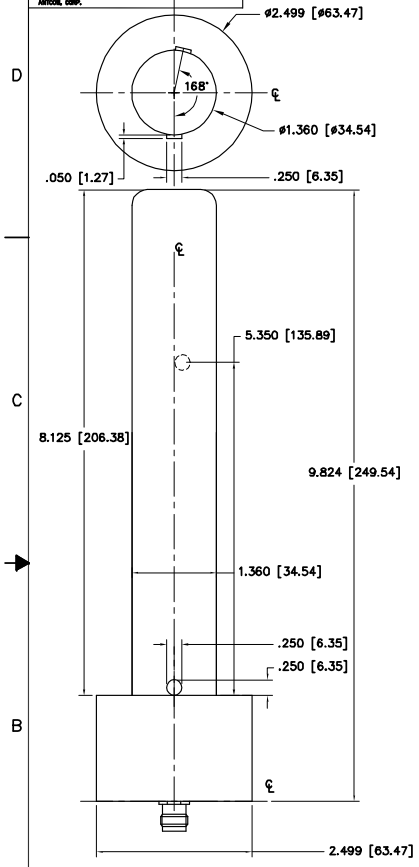


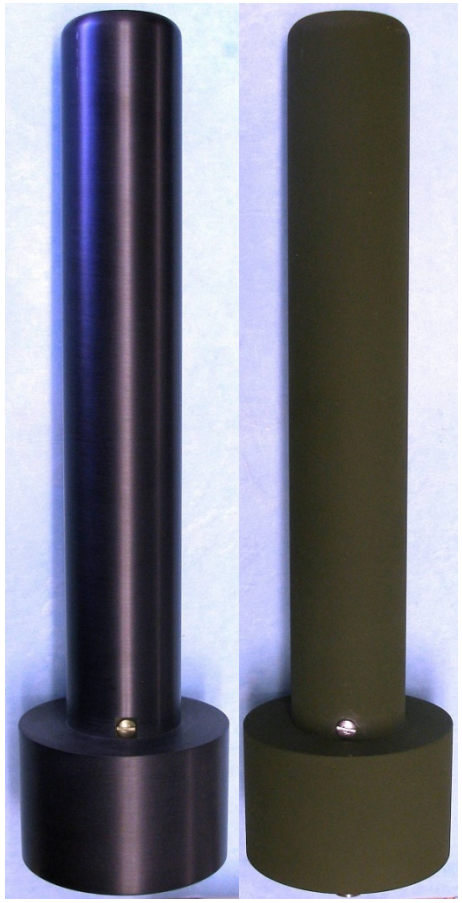
ISO 9001:2008/FAA Approved Facility

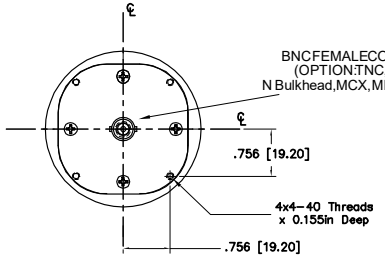
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	INMARSA T Rx: (1542 .50 ±17.5) MHz INMARSA T Tx: (1642 .50 ±17.5) MHz GPS L1: (1575 .42 ±13) MHz			GPS L2: (1227 .60 ±13) MHz
RADIATION PATTERN:	HEMISPHERICAL			HEMISPHERICAL
POLARIZATION:	RHCP			RHCP
VSWR:	< 1.5:1	< 1.5:1	< 1.5:1	< 2.0:1
GAIN (dBic)	GPS L1	Satcom Tx	Satcom Rx	GPS L2
@ 90° (Zenith):	+2.6	-4.2	-0.7	0.0
@ 10° Elevation	0.0	-6.7	-4.2	-2.4 to -6.3
@ 20° Elevation	+1.2	-5.6	-2.9	-1.8 to -4.8
@ 30° Elevation	+1.7	-4.9	-2.1	-1.3 to -3.4
@ 45° Elevation	+2.4	-4.9	-1.4	-0.5 to -1.5
@ 70° Elevation	+2.3	-5.4	+0.1	0.0 to -0.5
BEAM WIDTH (3dB)	165 Deg.	155 Deg.	142 Deg.	(120 to 165) Deg.
AXIAL RATIO (dB)	1 to 3	1 to 3	1 to 4	1 to 5

DC GROUNDING YES (LIGHTNING PROTECTION)

LNA OPTION

LNA GAIN:	33 dB	35 dB
LNA NOISE FIGURE:	3.0 dB	3.0 dB
LNA P1dB Out:	+13 dBm	+13 dBm
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA	
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB	-40 dB / -40 dB
@ (-100/+100) MHz	< -65 dB	< -65 dB
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)	

MECHANICAL:

SIZE: DIAMETERS= 1.36in [35mm], 2.6in [64mm]
HEIGHT= 9.824 in. [249 mm]

WEIGHT: 9.8 oz. (277 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

COLOR: OLIVE DRAB GREEN #34031 PER FED-STD-595B

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: BNC CONNECTOR,
(OPTION: TNC, SMA, N, N Bulkhead, MCX, MMCX)
MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100

				–				
1	1			–	–	–		1
–2	–1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH		ITEM NO
QUANTITY REQD		PARTS LIST						

FREQ. BAND:	LNA:	
1215: L1/L2	A: WITH LNA	
15: L1 ONLY	P: WITHOUT LNA	
1216: L1/L2/INMARSAT		
0416: UHF/L1/L2/INMARSAT (2 Connectors)		

P/N: 11G1216A-XB-4

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; B: BNC Female	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: No MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX ± .015 .XXX ± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH May–20–08
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

C130/Sextant Port
ACTIVE L1/L2
GPS HELIX ANTENNA

CAGE NO 3CVE1 | DRAWING NO 11G1215A–XB–4 | REV D
SCALE 1/1 | SHEET 1 OF 1

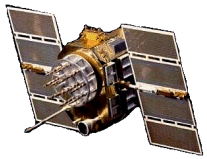
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	B	ADD on BNC Connector Option	OCT–20–08	S.H
	C	1 LOCKING PIN	NOV–24–08	S.H
	D	2 LOCKING PIN	Jan–20–09	S.H

NMO Connector Option is Now Available for Some Antennas

L1/L2 GPS/L-Band (1-2 GHz) Helix Antenna

P/N: 18x2.5H1215R-P-XX-1 (Passive) ; P/N: 18x2.5H1215R-A-XX-1 (Active with 30dB LNA or Rx only)

2.5" Diameter x 18" Tall, Front/Back Mount Configuration with SMA, TNC, N, or BNC Connector Options



ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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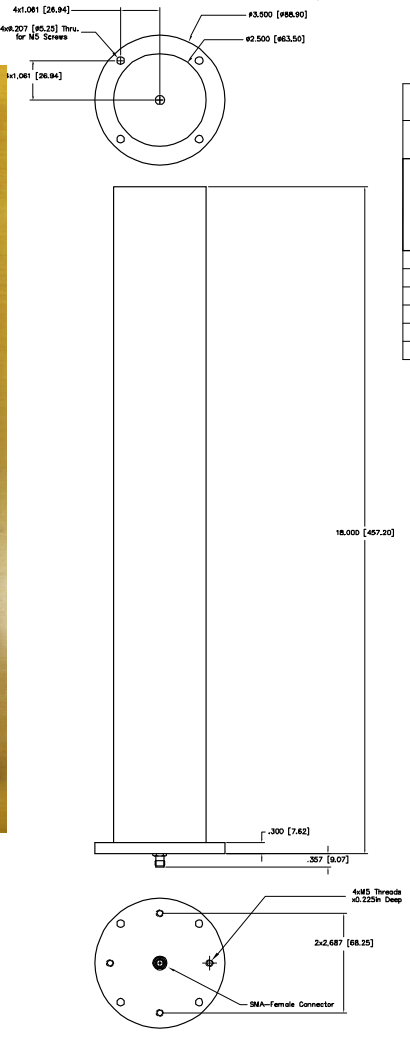
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SPECIFICATIONS

ELECTRICAL:

FREQUENCY (MHz):	L5 GPS E5, E5a, E5b, Galileo L5 IRNSS	L2 GPS B2 Compass	L2 GLONASS E6 Galileo B3 Compass	OmniSTAR / L-Band L6 Galileo B1 Compass	L1 GPS E1, E2 Galileo L1 IRNSS	L1 GLONASS
	1176.45 ± 12.0 MHz 1164.45 - 1219.14 MHz 1176.45 ± 15.0 MHz	1227.60 ± 12.0 MHz 1207.14 ± 10.0 MHz	1252.50 ± 7.5 MHz 1266.75 - 1290.75 MHz 1268.52 ± 10.0 MHz	1542.50 ± 14.0 MHz 1542.50 ± 5.0 MHz 1561.098 ± 10.0 MHz	1575.42 ± 15.0 MHz 1575.42 ± 17.0 MHz 1575.42 ± 12.0 MHz	1609.0 ± 7.0 MHz
GAIN (dBic) in FS	+ 11.5 dBic					
AXIAL RATIO (dB)	1 to 2					
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 1.7 : 1					
POWER HANDLING:	200 watts					

MECHANICAL:

SIZE:	TOP DIA: = 2.50 in [63.50 mm], BASE DIA = 3.50 in[88.90 mm] HEIGHT= 18 in. [457 mm]
WEIGHT:	16.2 oz. (460 +/-10) grams
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541F TYPE II CLASS 1A
COLOR:	GLOSS WHITE #17925 PER FED-STD-595B LUSTERLESS GRAY #36320 PER FED-STD-595B OLIVE DRAB GREEN #34031 PER FED-STD-595B LUSTERLESS BLACK #37038 PER FED-STD-595B
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	SMA-Female (OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, BNC)

ENVIRONMENTAL:

TEMPERATURE:	-166 °F TO +248 °F [-110 °C TO +120 °C]
ALTITUDE:	70,000ft.
VIBRATION:	> 30 G's

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541F, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

HIGH(in):	POLARIZATION:	LNA:	CABLE'SLENGTH	CONNECTOR	COLOR
	LL: TX: LHCP, RX: LHCP	A1: WITH +34 dB LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
	LR: TX: LHCP, RX: RHCP		M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	RL: TX: RHCP, RX: LHCP	P: WITHOUT LNA	#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
	RR: TX: RHCP, RX: RHCP		R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
	R: RHCP				
	L: LHCP				

P/N: 18x2.5H1215R-P-XS-1

QUANTITY REQD	DESCRIPTION	PART NO	FINISH	ITEM NO
4	MOUNTING SCREW: (M5 Pan Head Phillips, 10mm)	90116A250	–	5
4	MOUNTING SCREW: (M5 Pan Head Phillips, 20mm)	90116A260		4
1			–	3
1				2
1			–	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø ⌀ .005
MACHINED SURFACES 125
DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH DEC-07-09
CAD FILE NO
DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

HIGH GAIN GPS/GLONASS/IRIDIUM/ INMARSAT HELIX ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 18x2.5H1215R-P-XS-1 | REV

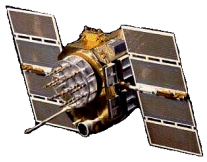
SCALE 1/1 SHEET 1 OF 1

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

NMO Connector Option is Now Available for Some Antennas

L1/L2 GPS/L-Band (1-2 GHz) Helix Antenna, P/N: 18x6.3H1215R-P-XS-1

2.5” Diameter x 18” Tall, Front/Back Mount Configuration, *for Space Applications* with SMA, TNC, N, or BNC Connector Options



ISO 9001:2008/FAA Approved Facility

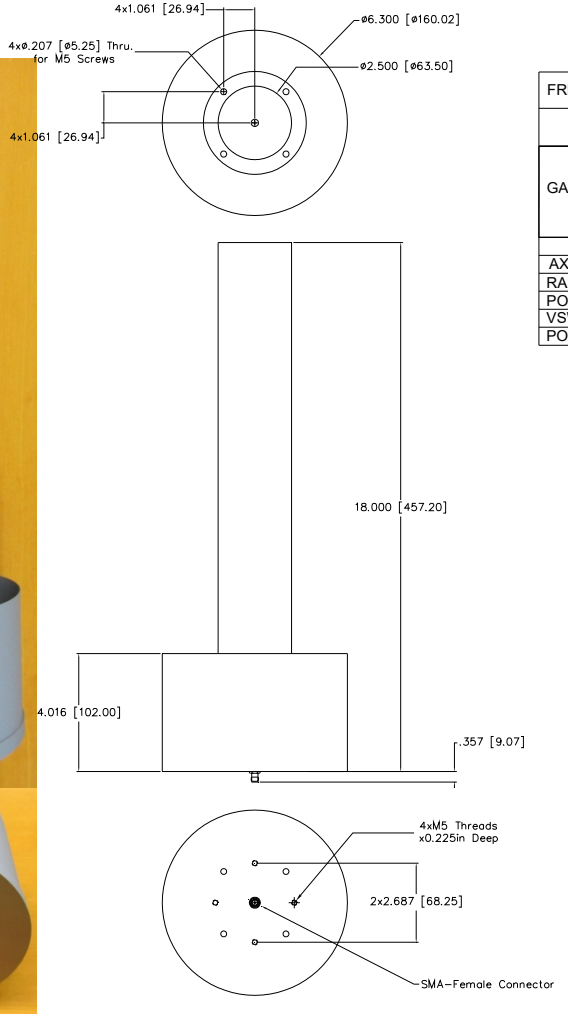
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

SPECIFICATIONS

ELECTRICAL:

FREQUENCY (MHz):	L5 GPS E5, E5a, E5b, Galileo L5 IRNSS	L2 GPS B2 Compass	L2 GLONASS E6 Galileo B3 Compass	OmniSTAR / L-Band L6 Galileo B1 Compass	L1 GPS E1, E2 Galileo L1 IRNSS	L1 GLONASS
	1176.45 ± 12.0 MHz 1164.45 - 1219.14 MHz 1176.45 ± 15.0 MHz	1227.60 ± 12.0 MHz 1207.14 ± 10.0 MHz	1252.50 ± 7.5 MHz 1266.75 - 1290.75 MHz 1268.52 ± 10.0 MHz	1542.50 ± 14.0 MHz 1542.50 ± 5.0 MHz 1561.098 ± 10.0 MHz	1575.42 ± 15.0 MHz 1575.42 ± 17.0 MHz 1575.42 ± 12.0 MHz	1609.0 ± 7.0 MHz
GAIN (dBic) in FS	+ 11.5 dBic					
AXIAL RATIO (dB)	1 to 2					
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 1.7 : 1					
POWER HANDLING:	200 watts					

MECHANICAL:

SIZE:	TOP DIA: = 2.50 in [63.50 mm], BASE DIA = 6.30 in[160.02 mm] HEIGHT = 18 in. [457 mm]
WEIGHT:	16.75 oz. (475 +/-10) grams
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541F TYPE II CLASS 1A
COLOR:	GLOSS WHITE #17925 PER FED-STD-595B LUSTERLESS GRAY #36320 PER FED-STD-595B OLIVE DRAB GREEN #34031 PER FED-STD-595B LUSTERLESS BLACK #37038 PER FED-STD-595B
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	SMA-Female (OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, BNC)

ENVIRONMENTAL:

TEMPERATURE:	-166 °F TO +248 °F [-110 °C TO +120 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541F, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

QUANTITY REQD	DESCRIPTION	PART NO	FINISH	ITEM NO
4	MOUNTING SCREW: (M5 Pan Head Phillips, 10mm)	90116A250	–	5
4	MOUNTING SCREW: (M5 Pan Head Phillips, 20mm)	90116A260		4
1			–	3
1				2
1			–	1

PARTS LIST

HIGH (in):	POLARIZATION:	LNA:	CABLE'S LENGTH:	CONNECTOR:	COLOR:
	LL: TX: LHCP, RX: LHCP	A1: WITH +34 dB LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
	LR: TX: LHCP, RX: RHCP		M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	RL: TX: RHCP, RX: LHCP	P: WITHOUT LNA	#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
	RR: TX: RHCP, RX: RHCP		R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
	R: RHCP				
	L: LHCP				

P/N: 18x6.3H1215R-P-XS-1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX ± .015 .XXX ± .005 ANGLES ± 1°
TOLERANCE SYM PER ANS Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ ø.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH DEC-07-09
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

HIGH GAIN GPS/GLONASS/IRIDIUM/ INMARSAT HELIX ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 18x6.3H1215R-P-XS-1 | REV

SCALE 1/1 | SHEET 1 OF 1

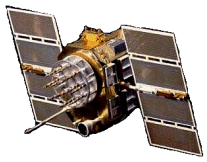
ORIGINAL DOCUMENT WHEN STAMP IS RED

NMO Connector Option is Now Available for Some Antennas

L1/L2 GPS/L-Band (1-2 GHz) Helix Antenna, P/N: 18x2.5H1215R-P-XN-1

2.5" Diameter x 18" Tall, Front/Back Mount Configuration, *500 watts*

with N, SMA, TNC, or BNC Connector Options



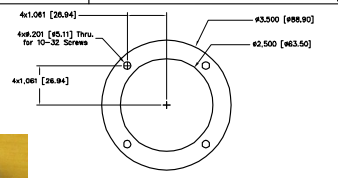
ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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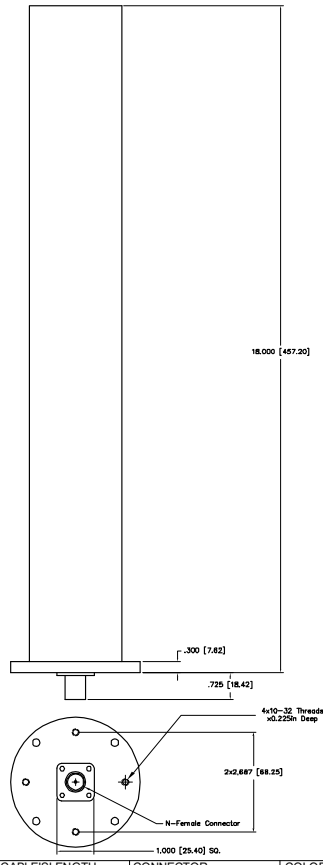
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REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED









SPECIFICATIONS

ELECTRICAL:

FREQUENCY (MHz):	L5 GPS E5, E5a, E5b, Galileo L5 IRNSS	L2 GPS B2 Compass	L2 GLONASS E6 Galileo B3 Compass	OmniSTAR / L-Band L6 Galileo B1 Compass	L1 GPS E1, E2 Galileo L1 IRNSS	L1 GLONASS
	1176.45 ± 12.0 MHz 1164.45 - 1219.14 MHz 1176.45 ± 15.0 MHz	1227.60 ± 12.0 MHz 1207.14 ± 10.0 MHz	1252.50 ± 7.5 MHz 1266.75 - 1290.75 MHz 1268.52 ± 10.0 MHz	1542.50 ± 14.0 MHz 1542.50 ± 5.0 MHz 1561.098 ± 10.0 MHz	1575.42 ± 15.0 MHz 1575.42 ± 17.0 MHz 1575.42 ± 12.0 MHz	1609.0 ± 7.0 MHz
GAIN (dBic) in FS	+ 11.5 dBic					
AXIAL RATIO (dB)	1 to 2					
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 1.7 : 1					
POWER HANDLING	500 watts					

MECHANICAL:

SIZE:	TOP DIA: = 2.50 in [63.50 mm], BASE DIA = 3.50 in[88.90 mm] HEIGHT= 18 in. [457 mm]
WEIGHT:	17.6 oz. (500 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541F TYPE II CLASS 1A
COLOR:	GLOSS WHITE #17925 PER FED-STD-595B LUSTERLESS GRAY #36320 PER FED-STD-595B OLIVE DRAB GREEN #34031 PER FED-STD-595B LUSTERLESS BLACK #37038 PER FED-STD-595B
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	N-Female (OPTION: TNC, SMA, N-Bulkhead, BNC)

MS51958-59

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541F, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

QUANTITY REQD	DESCRIPTION	PART NO	FINISH	ITEM NO
4	MOUNTING SCREW: (10-32 Pan Head Phillips, 1/2")	MS51958-63	-	5
4	MOUNTING SCREW: (10-32 Pan Head Phillips, 1/4")	MS51958-59		4
1	Pipe Mount (Item 482m, without Thread insert)	MTR-2-mod	-	3
1				2
1			-	1
-1	PARTS LIST			

HIGH(in):	POLARIZATION:	LNA:	CABLE'SLENGTH	CONNECTOR	COLOR
	LL: TX: LHCP, RX: LHCP	A1: WITH +34 dB LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
	LR: TX: LHCP, RX: RHCP		M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	RL: TX: RHCP, RX: LHCP	P: WITHOUT LNA	#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
	RR: TX: RHCP, RX: RHCP		R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
	R: RHCP				
	L: LHCP				

P/N: 18x2.5H1215R-P-XN-1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .015, .XXX ± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .016. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ ⌀.006. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH DEC-07-09 | CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

HIGH GAIN IRIDIUM/GPS/GLONASS/ INMARSAT HELIX ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 18x2.5H1215R-P-XN-1 | REV

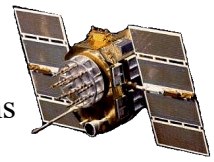
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

L1/L2 GPS/L-Band (1-2 GHz) Helix Antenna, P/N: 18x2.5H1215R-P-XN-1-J

500 watts, Low side/Back Lobes for Jamming Applications

2.5” Diameter x 18” Tall, Back Mount Configuration, with N, SMA, TNC, or BNC Connector Options



ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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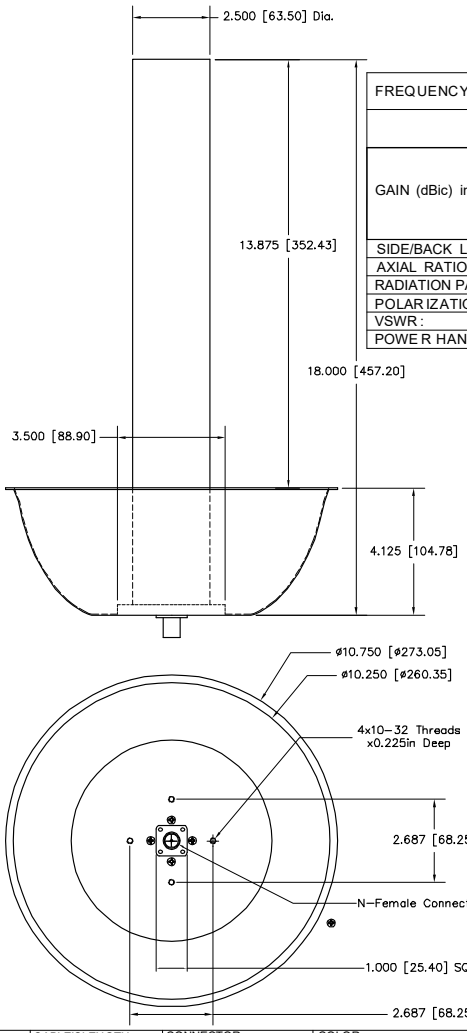
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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED







SPECIFICATIONS

ELECTRICAL:

FREQUENCY (MHz):	L5 GPS E5, E5a, E5b, Galileo L5 IRNSS	L2 GPS B2 Compass	L2 GLONASS E6 Galileo B3 Compass	OmniSTAR / L-Band L6 Galileo B1 Compass	L1 GPS E1, E2 Galileo L1 IRNSS	L1 GLONASS
	1176.45 ± 12.0 MHz 1164.45 - 1219.14 MHz 1176.45 ± 15.0 MHz	1227.60 ± 12.0 MHz 1207.14 ± 10.0 MHz	1252.50 ± 7.5 MHz 1266.75 - 1290.75 MHz 1268.52 ± 10.0 MHz	1542.50 ± 14.0 MHz 1542.50 ± 5.0 MHz 1561.098 ± 10.0 MHz	1575.42 ± 15.0 MHz 1575.42 ± 17.0 MHz 1575.42 ± 12.0 MHz	1609.0 ± 7.0 MHz
GAIN (dBic) in FS	> + 10.5 dBic					
SIDE/BACK LOBES:	< -20 dB					
AXIAL RATIO (dB)	1 to 2					
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 1.7 : 1					
POWER HANDLING	500 watts					

MECHANICAL:

SIZE:	TOP DIA: = 2.50 in [63.50 mm], BASE DIA = 3.50 in[88.90 mm] HEIGHT= 18 in. [457 mm]
WEIGHT:	33.5 oz. (950 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541F TYPE II CLASS 1A
COLOR:	GLOSS WHITE #17925 PER FED-STD-595B LUSTERLESS GRAY #36320 PER FED-STD-595B OLIVE DRAB GREEN #34031 PER FED-STD-595B LUSTERLESS BLACK #37038 PER FED-STD-595B
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	N-Female (OPTION: TNC, SMA, N-Bulkhead, BNC)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541F, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

QUANTITY REQD	DESCRIPTION	PART NO	ITEM NO
1	Pipe Mount (Item 482m, without Thread insert)	MTR-2-mod	4
1			3
1			2
1			1
8	MOUNTING SCREW: (10-32 Pan Head Phillips, 1/4")	MS51958-59	5

PARTS LIST

HIGH(in):	POLARIZATION:	LNA:	CABLE'SLENGTH	CONNECTOR	COLOR
	LL: TX: LHCP, RX: LHCP	A1: WITH+34 dB LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
	LR: TX: LHCP, RX: RHCP		M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	RL: TX: RHCP, RX: LHCP	P: WITHOUT LNA	#: CABLE LENGTH(IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
	RR: TX: RHCP, RX: RHCP		R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
	R: RHCP				
	L: LHCP				

P/N: 18x2.5H1215R-P-XN-1-J

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125/
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH DEC-07-09
CAD FILE NO

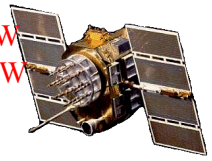
ANTCOM CORP. TORRANCE, CALIFORNIA

HIGH GAIN IRIDIUM/GPS/GLONASS/ INMARSAT HELIX ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 18x2.5H1215R-P-XN-1-J | REV

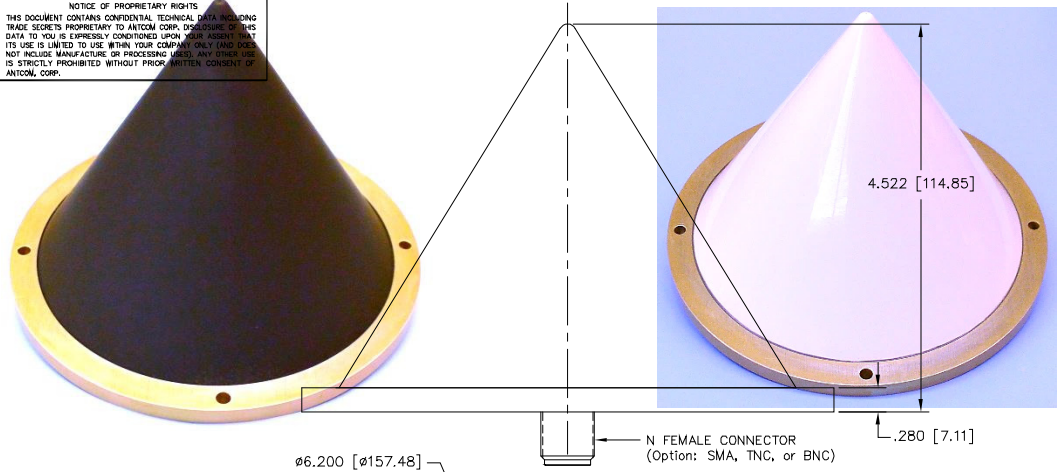
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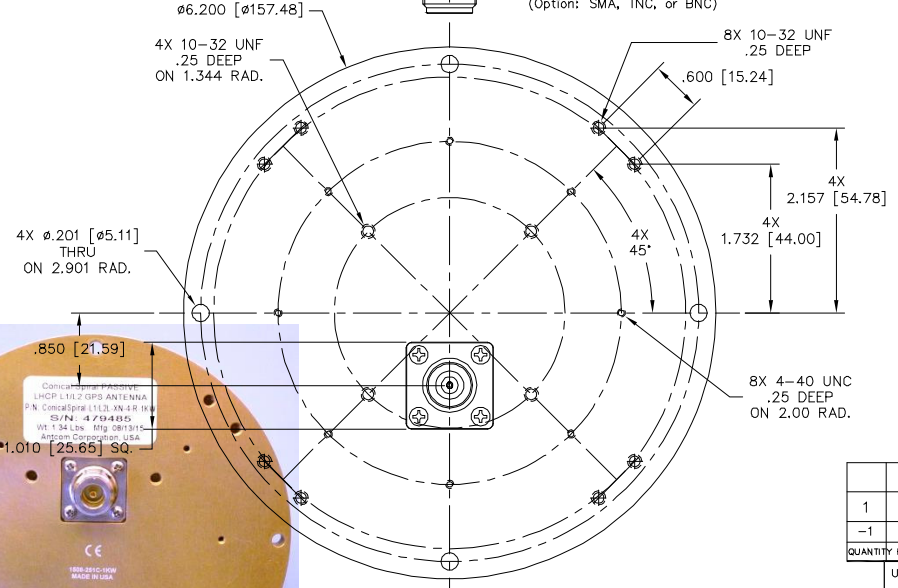
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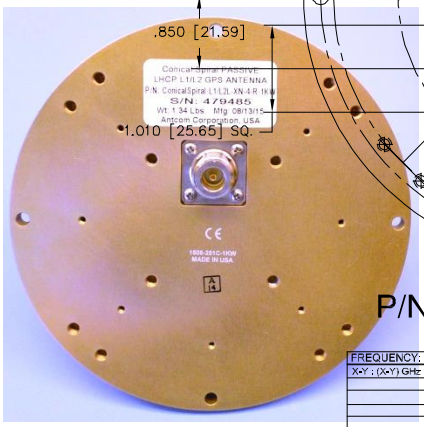


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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±15) MHz, L2: (1227.60 ±15) MHz
PATTERN:	HEMISPHERICAL
POLARIZATION:	LHCP
ANTENNA GAIN:	8 dBic,
BEAM WIDTH (3dB):	60 Deg.
BEAM WIDTH (10 dB):	120 Deg.
VSWR:	1.5:1
OUTPUT IMPEDANCE:	50 Ω
POWER HANDLING:	1 Kwatts
AXIAL RATIO:	3dB

MECHANICAL:

SIZE:	HEIGHT: 4.52 in [114.8 mm], Dia: 6.2 in [157.5 mm]
WEIGHT:	1.31 lbs (594 g)
MATERIAL:	THERMOSET PLASTIC RADOME, UV, ABRASION AND SKYDROL RESISTANCE
CONNECTOR:	N FEMALE (OPTION: SMA, TNC, or BNC)

ENVIRONMENTAL:

TEMPERATURE:	-67°F TO +185°F [-55°C TO +85°C]
ALTITUDE:	70,000 ft.
VIBRATION:	12 G's

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: DO-160D, MIL-C-5541, MIL-E-5400, MIL-I-45208A, AND MIL-STD-810

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

P/N: Conical-L1L2L-XN-4-R-1KW

FREQUENCY:	POLARIZATION:	FEMALE CONNECTOR:	COLOR:
X-Y: (X-Y) GHz	R: RHCP	S: SMA	-1: GLOSS WHITE #17925 PER FED-STD-595B
	L: LHCP	T: TNC	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
		N: N B: BNC	-3: CAMO GREEN #34094 PER FED-STD-595B
			-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
			-5: DESERT TAN #33446 PER FED-STD-595B

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
2						
1	-1	–	–	–	–	–

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	June-14-13
ORIGINALLY DESIGNED	S. HUYNH	June-14-13
UPDATED	S. HUYNH	Aug-13-15
UPDATE DRAWN	P. TRAN	Aug-13-15
APPROVED	S. HUYNH	Aug-13-15

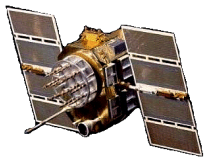
ANTCOM CORP. TORRANCE CALIFORNIA

CONICAL ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	Conical-L1L2L-XN-4-R-1KW	—

SCALE 1/1 SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STAMP IS RED

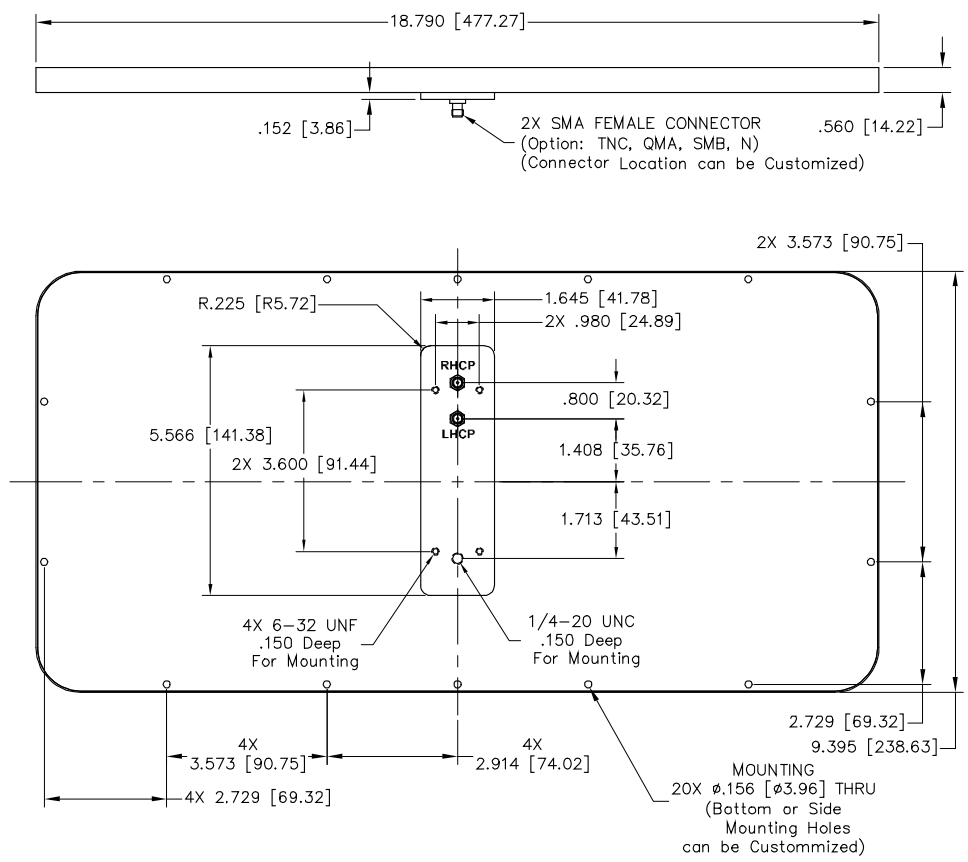


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SPECIFICATIONS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



ELECTRICAL:

FREQUENCY:	L1/L2 - See Below Table for P/N
PATTERN:	DIRECTIONAL
POLARIZATION:	RHCP, LHCP, or LINEAR - See Below Table for P/N
ANTENNA GAIN :	13 dBic
BEAM WIDTH:	EL: 40 Deg. AZ: 20 Deg.
VSWR:	2.0:1
OUTPUT IMPEDANCE:	50 ohms
POWER HANDLING:	100 watts
DC GROUNDING:	YES

LNA OPTION (For Rx Only):

LNA GAIN:	33 dB (P1dBout = +13 dBm)
LNA NOISE FIGURE:	2.2 dB
LNA VOLTAGE:	(+2.5 to +24) Volts DC
LNA DRAWING CURRENT:	< 30 mA

MECHANICAL:

SIZE:	9.39 in x 18.8 in x 0.56 in
WEIGHT:	1.35 lbs (612 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL, AND BLACK ANODIZED
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	TNC FEMALE (OPTION: SMA, QMA, SMB, N)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	30,000 ft.
VIBRATION:	> 20 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

FREQUENCY BAND:	POLARIZATION:	LNA:	CONNECTOR:	COLOR:
L1/L2: (1.575)/(1.227) GHz	V: VERTICAL	A: ACTIVE	S: SMA	-1: GLOSS WHITE #17925 PER FED-STD-595B
T: Rx/Tx Thuraya	R: RHCP	P: PASSIVE	Q: QMA	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
IN: Rx/Tx Inmarsat/Iridium	L: LHVP		SMB: SMB	-3: CAMO GREEN #34094 PER FED-STD-595B
1.6-1.9: (1.6 - 1.9) GHz	RL: RHCP/LHCP		T: TNC	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
2.2-2.3: (2.2 - 2.3) GHz	LR: LHCP/RHCP		N: N	-5: TAN #33446 PER FED-STD-595B
2.2-2.4: (2.2 - 2.4) GHz				-X: NO PAINT S: SPACE APPLICATION
2.4-2.5: (2.4 - 2.5) GHz				
2.2-2.5: (2.2 - 2.5) GHz				
LS: (1.625 - 1.85)/(2.2 - 2.4) GHz				
X.X-Y.Y: (X.XX - Y.YY) GHz				

P/N: 9X18A-L1L2RL-P-XSS-X-S

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	FINISH
3				
2	1			
1	1	–	–	–

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .020 .XXX± .010, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON ℄ ø.005 MACHINED SURFACES 125/
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Mar-12-12
ORIGINALLY DESIGNED	S. HUYNH	Mar-12-12
UPDATED	S. HUYNH	Dec-05-14
UPDATE DRAWN	P. TRAN	Dec-05-14
APPROVED	S. HUYNH	Dec-05-14

ANTCOM CORP. TORRANCE CALIFORNIA

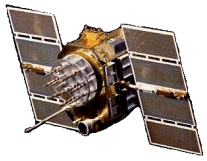
PASSIVE (RHCP/LHCP) L1/L2 GPS ARRAY ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	9X18A-L1L2RL-P-XSS-X-S	–

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

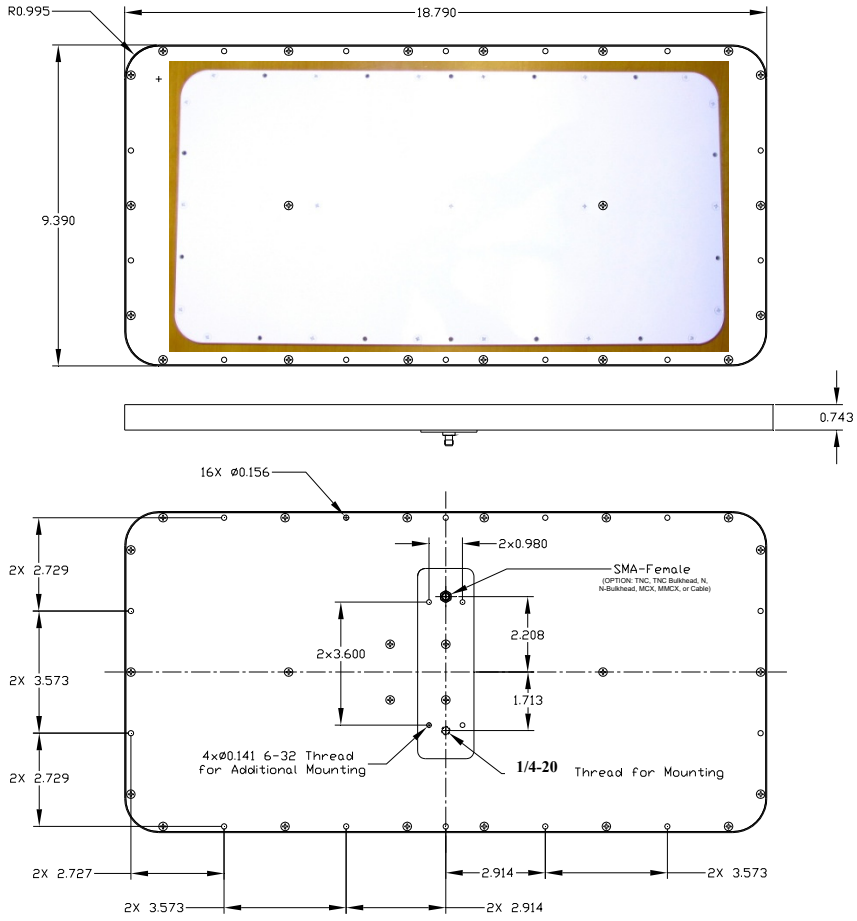
RHCP-Inmarsat Antenna Array, P/N: 9x18A-1.6R-P-XS-1 or LHCP-Thuraya Antenna Array, P/N: 9x18A-1.6L-P-XS-1
(9 x 18 x 0.6)in, Flat Panel, Back Mount Configurations



ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

L-BAND

FREQUENCY:	(1.5250 -1.6605) GHz
PATTERN:	DIRECTIONAL
POLARIZATION:	LHCP
ANTENNA GAIN :	>15 dBic
BEAM WIDTH (deg):	35
VSWR:	1.5:1
OUTPUT IMPEDANCE:	50 ohms
POWER HANDLING:	100 watts
DC GROUNDING:	YES

AUTO TRACK OPTION:

TRACKING:	360 Deg Azimuth @ (0.04 to 0.9) Deg/Sec
TRACKING MODE:	Sum/Different Mode, or Beacon Signal Level: >100 mV Demodulated DC
ACQUISITION TIME:	<35 sec @ (10 deg/sec)
DC POWER SUPPLY:	+24 Vdc/3 Amp.

MECHANICAL:

SIZE:	9.6in x 18.9in x 0.75in
WEIGHT:	1.35 lb (612 grams)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL, AND BLACK ANODIZED
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	SMA FEMALE CONNECTING TO 10m COMBINER SMB CABLE (OPTION: SMB, SMA, N, MCX, MMCX OR CABLES)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	30,000 ft.
VIBRATION:	> 20 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

SIZE:	NUMBER OF ELEMENT	FREQUENCY BAND:	S/C-BAND POL	CONNECTOR:	COLOR:
9X18: 9X18in		1516: 1525 to 1660 MHz	V: VERTICAL	S: SMA; P: PINS	-X: WITHOUT RADOME
			R: RHCP	M: MCX; MM: MMCX	-1: GLOSS WHITE #17925 PER FED-STD-595B
			L: LHVP	N: N; NB: N-Bulkhead	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
				T: TNC; TB: TNC- Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
					-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
					-5: TAN #: FS 23446 or 33446, FED-STD-595

9X18A-1516L-P-XS-1

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	FINISH
3				–
2	1	OPTIONAL Xft RF CABLE	SMA-M-LRM200-Xft-SMB-M	
1	1	1/3-20 ANTENNA MOUNT	HGX-PMT03	–

PARTS LIST

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ALL SCREWS ARE SUPPLIED BY ANTCOM CORPORATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .020, .XXX± .010, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø .005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH June-08-08 | CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

(1.525 -1.660) GHz L-BAND LHCP THURAYA ANTENNA ARRAY

SIZE D | CAGE NO 3CVE1 | DRAWING NO 9X18A-1.6L-P-XS-1 | REV

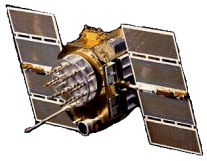
SCALE 1/1 | SHEET 1 OF 1

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

NMO Connector Option is Now Available for Some Antennas

High Gain L-BAND Antenna

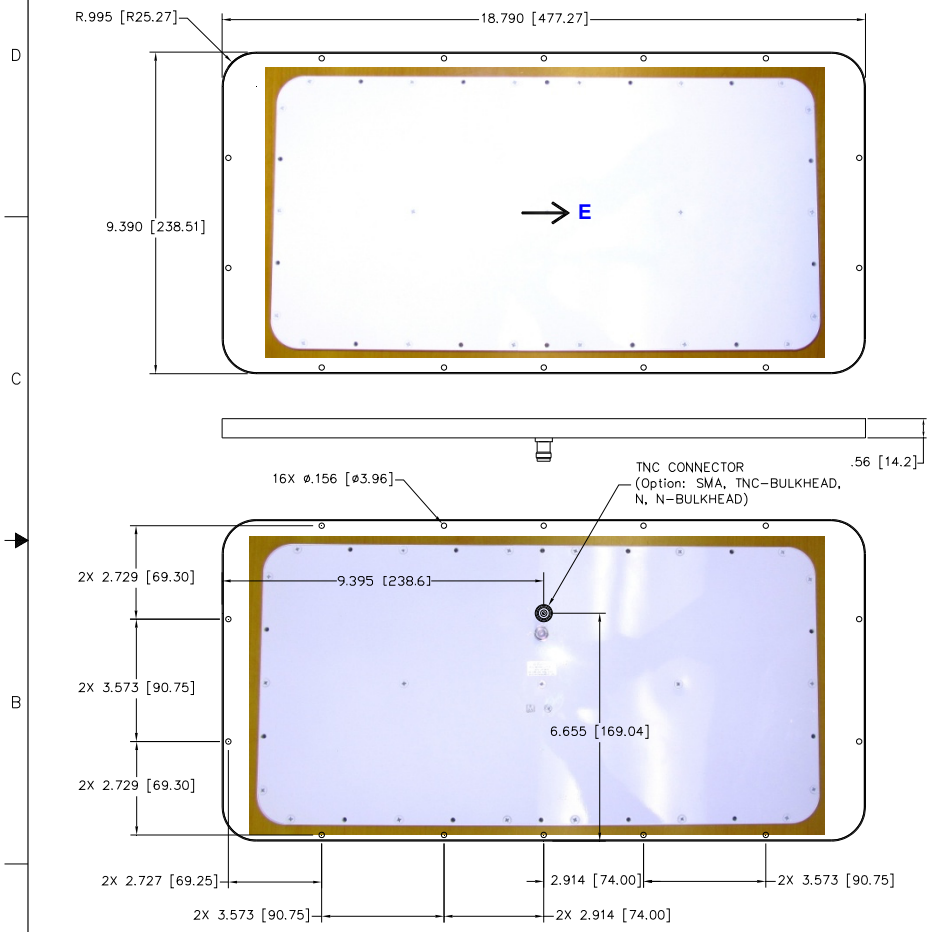
P/N: 9X18A-XX-YYX-A-XX-X



Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

L-BAND

FREQUENCY:	(X.XX - X.XX) GHz - See Below Table for P/N
PATTERN:	DIRECTIONAL
POLARIZATION:	RHCP, LHCP, or LINEAR - See Below Table for P/N
ANTENNA GAIN :	13 dB
BEAM WIDTH (deg):	20 X 40
VSWR:	2.0:1
OUTPUT IMPEDANCE:	50 ohms
POWER HANDLING:	100 watts
DC GROUNDING:	YES

LNA OPTION:

LNA GAIN:	33 dB (P1dBout = +13 dBm)
LNA NOISE FIGURE:	2.2 dB
LNA VOLTAGE:	(+2.5 to +24) Volts DC
LNA DRAWING CURRENT:	< 30 mA

MECHANICAL:

SIZE:	9.39in x 18.79in x 0.56in
WEIGHT:	2.33 lb (1.06 Kg)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL, AND BLACK ANODIZED
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	TNC FEMALE (OPTION: SMB, SMA, N, MCX, MMCX OR BNC)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	30,000 ft.
VIBRATION:	> 20 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

SIZE:	NUMBER OF ELEMENT:	FREQUENCY BAND:	S/C-BAND POL.	LNA:	CONNECTOR:	COLOR:
9X18: 9X18in		1215: L1L2	V: VERTICAL	A: ACTIVE	S: SMA; P: PINS	-X: WITHOUT RADOME
		1115: L1L2L5	R: RHCP	P: PASSIVE	M: MCX; MM: MMCX	-1: GLOSS WHITE #17925 PER FED-STD-595B
		1419: (1.4 to 1.9) GHz	L: LHVP		N: N; NB: N-Bulkhead	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
		1516: 1.525 to 1.660 GHz			T: TNC; TB: TNC- Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
		XXYY: X.X GHz TO Y.Y GHz				-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
					X: NO CABLE	-5: TAN #: FS 23446 or 33446, FED-STD-595

9X18A-XX-YYV-A-XT-5

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ALL SCREWS ARE SUPPLIED BY ANTCOM CORPORATION

ZONE	REV	DESCRIPTION	DATE	APPROVED

QUANTITY REQD	DESCRIPTION	PART NO	FINISH	ITEM NO
			–	3
1	OPTIONAL Xft RF CABLE	SMA-M-LRM200-Xft-SMB-M		2
1	1/3-20 ANTENNA MOUNT	HGX-PMT03	–	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .020, .XXX ± .010, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Mar-12-12
CAD FILE NO
DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA

L-BAND ARRAY ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	9X18A-XX-YYV-A-XT-5	–

SCALE 1/1 SHEET 1 OF 1

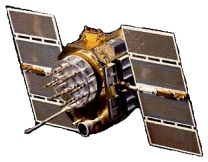
ORIGINAL DOCUMENT DATA STAMP IS RED

NMO Connector Option is Now Available for Some Antennas

8-Elements (16 Channels) RHCP/LHCP L1/L2 GPS Antenna Array

P/N: 9X18A-L1L2RL-P-XS16-1

(9 x 18 x 0.6)in, Flat Panel, Front Mount Configuration

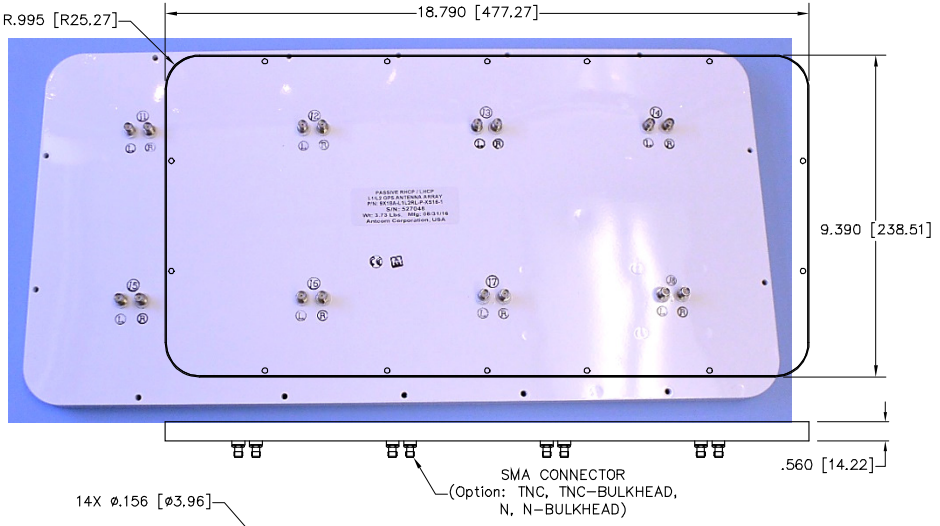


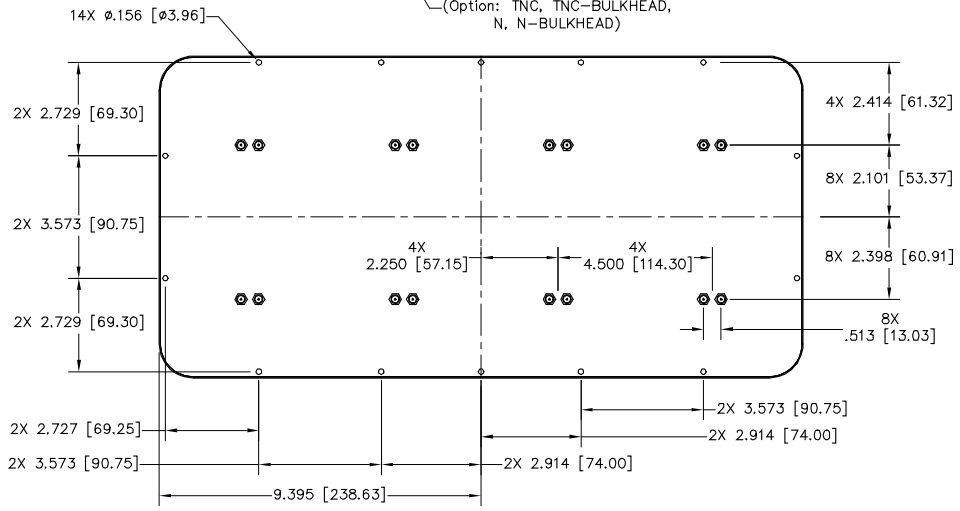
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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED





SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1L2
PATTERN:	DIRECTIONAL
POLARIZATION:	RHCP / LHCP
ANTENNA GAIN :	13 dB (Array); 3 dB (Element)
BEAM WIDTH (deg):	20 X 40 (Array); 106 - 114 (Element)
VSWR:	2.0:1
OUTPUT IMPEDANCE:	50 ohms
POWER HANDLING:	1 watts
DC GROUNDING:	YES

LNA OPTION:

LNA GAIN:	33 dB (P1dBout = +13 dBm)
LNA NOISE FIGURE:	2.2 dB
LNA VOLTAGE:	(+2.5 to +24) Volts DC
LNA DRAWING CURRENT:	< 30 mA

MECHANICAL:

SIZE:	9.39in x 18.79in x 0.56in
WEIGHT:	2.33 lb (1.06 Kg)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL, BASE IRIDITE PER MIL-C-5441F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC-BULKHEAD, N, N-BULKHEAD)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	30,000 ft.
VIBRATION:	> 20 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

P/N: 9X18A-L1L2RL-P-XS16-1

FREQUENCY BAND:	S/C-BAND POL.	LNA:	CONNECTOR:	COLOR:
1215: L1L2	V: VERTICAL	A: ACTIVE	S: SMA; P: PINS	-X: WITHOUT RADOME
1115: L1L2L5	R: RHCP	P: PASSIVE	M: MCX; MM: MMCX	-1: GLOSS WHITE #17925 PER FED-STD-595B
1419: (1,4 to 1,9) GHz	L: LHVP		N: N; NB: N-Bulkhead	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
1516: 1,525 to 1,660 GHz			T: TNC; TB: TNC- Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
XXYY: X.X GHz TO Y.Y GHz				-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
				-5: TAN #: FS 23446 or 33446, FED-STD-595

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	FINISH
2				
1				

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .020, .XXX± .010, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø .005. MACHINED SURFACES 125. DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Oct-23-12
ORIGINALLY DESIGNED	S. HUYNH	Oct-23-12
UPDATED	S. HUYNH	Sept-01-16
UPDATE DRAWN	P. TRAN	Sept-01-16
APPROVED	S. HUYNH	Sept-01-16

ANTCOM CORP. TORRANCE CALIFORNIA

L1/L2 GPS ANTENNA ARRAY

SIZE D | CAGE NO 3CVE1 | DRAWING NO 9X18A-L1L2RL-P-XS16-1 | REV –

SCALE 1/1 | SHEET 1 OF 1

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NMO Connector Option is Now Available for Some Antennas

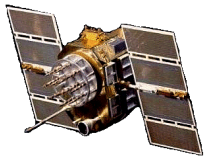
High Gain, 8 Channels L-BAND Antenna Array

P/N: 9X18A-L1L2R-A-XT8-1 (RHCP)

P/N: 9X18A-L1L2L-A-XT8-1 (LHCP)

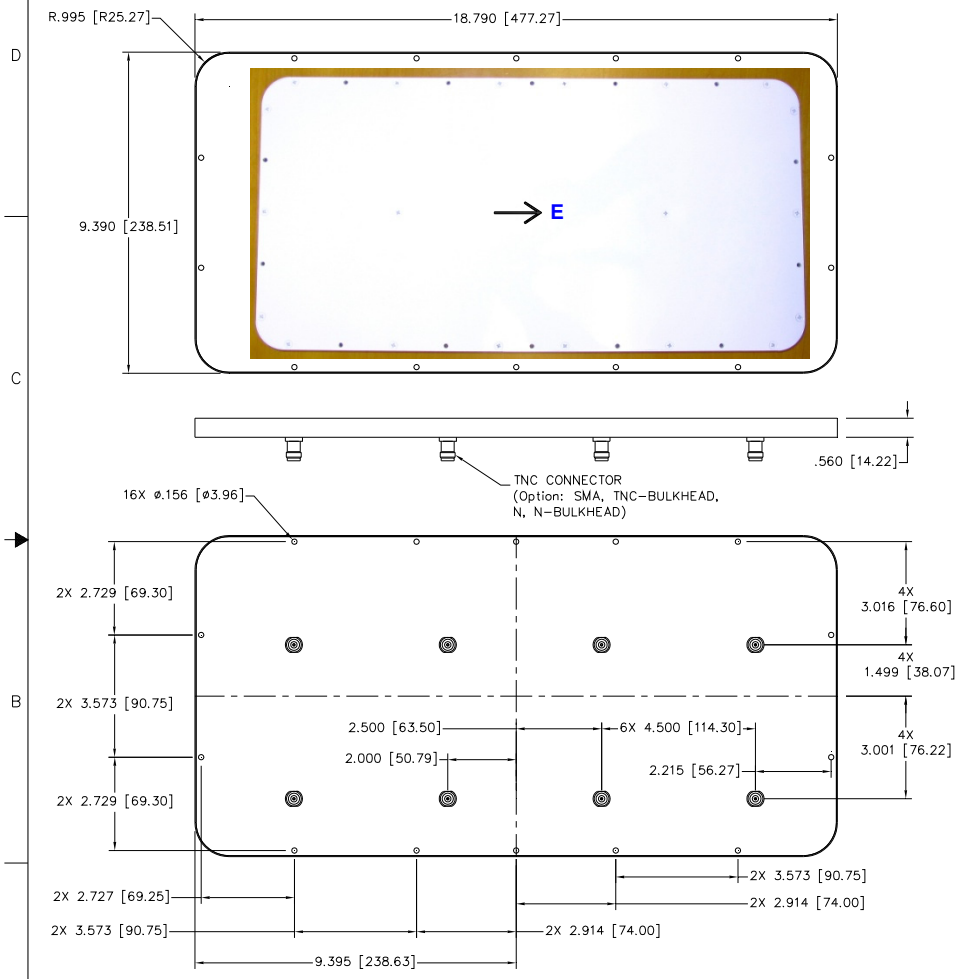
ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf



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SPECIFICATIONS

ELECTRICAL:

	L-BAND
FREQUENCY:	(X.XX - X.XX) GHz - See Below Table for P/N
PATTERN:	DIRECTIONAL
POLARIZATION:	RHCP, LHCP, or LINEAR - See Below Table for P/N
ANTENNA GAIN :	13 dB (Array); 3 dB (Element)
BEAM WIDTH (deg):	20 X 40 (Array); 106 - 114 (Element)
VSWR:	2.0:1
OUTPUT IMPEDANCE:	50 ohms
POWER HANDLING:	1 watts
DC GROUNDING:	YES

LNA OPTION:

LNA GAIN:	33 dB (P1dBout = +13 dBm)
LNA NOISE FIGURE:	2.2 dB
LNA VOLTAGE:	(+2.5 to +24) Volts DC
LNA DRAWING CURRENT:	< 30 mA

MECHANICAL:

SIZE:	9.39in x 18.79in x 0.56in
WEIGHT:	2.33 lb (1.06 Kg)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL, AND BLACK ANODIZED
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	TNC FEMALE (OPTION: SMB, SMA, N, MCX, MMCX OR BNC)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	30,000 ft.
VIBRATION:	> 20 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO:	FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

SIZE:	NUMBER OF	FREQUENCY BAND:	S/C-BAND POL.	LNA:	CONNECTOR:	COLOR:
9X18: 9X18in	ELEMENT:	1215: L1L2	V: VERTICAL	A: ACTIVE	S: SMA; P: PINS	-X: WITHOUT RADOME
		1115: L1L2L5	R: RHCP	P: PASSIVE	M: MCX; MM: MMCX	-1: GLOSS WHITE #17925 PER FED-STD-595B
		1419: (1.4 to 1.9) GHz	L: LHVP		N: N; NB: N-Bulkhead	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
		1516: 1.525 to 1.660 GHz			T: TNC; TB: TNC- Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
		XXYY: X.X GHz TO Y.Y GHz				-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
					X: NO CABLE	-5: TAN #: FS 23446 or 33446, FED-STD-595

9X18A-L1L2X-A-XT8-1

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	FINISH
2				
1		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64 DECIMALS .XX± .020 .XXX± .010 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON ⌀ ⌀.005 MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN: S. HUYNH Mar-12-12
ORIGINALLY DESIGNED: S. HUYNH Mar-12-12
UPDATED: S. HUYNH Oct-23-12
UPDATE DRAWN: P. TRAN Oct-23-12
APPROVED: S. HUYNH Oct-23-12

ANTCOM CORP. TORRANCE CALIFORNIA

L-BAND ARRAY ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	9X18A-L1L2X-A-XT8-1	-

SCALE 1/1 SHEET 1 OF 1

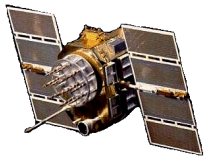
ORIGINAL DOCUMENT (INCH STAMP IS RED)

NMO Connector Option is Now Available for Some Antennas

New Ruggedized, High Corrosion/Harsh Environmental Resistant Helix Antennas

Inmarsat/Iridium/L1GPS/Glonass/Omnistar: *P/N: BINR-X-XX-U-XXX,* Iridium/L1GPS/Glonass/Omnistar: *P/N: BIRR-X-XX-U-XXX,*
Thuraya/Tx-Globalstar: *P/N: BTL-X-XX-U-XXX,* Active L1 GPS: *P/N: BL1-A-XX-U-XXX,*
Active L1 GPS/Glonass/L-Band: *P/N: BG3-A-XX-U-XXX,* for Active L1/L2: *P/N: BL1L2-A-XX-U-XXX*
for Buoy, Marines, Underwater, Ground, Weather Balloon, and Helicopter Applications
Also Available in other Mounting Configurations of 3G, 4G, 42G, 5G, S5, Mini-Arinc, and Arinc-743 Antenna Series

ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf



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SPECIFICATIONS

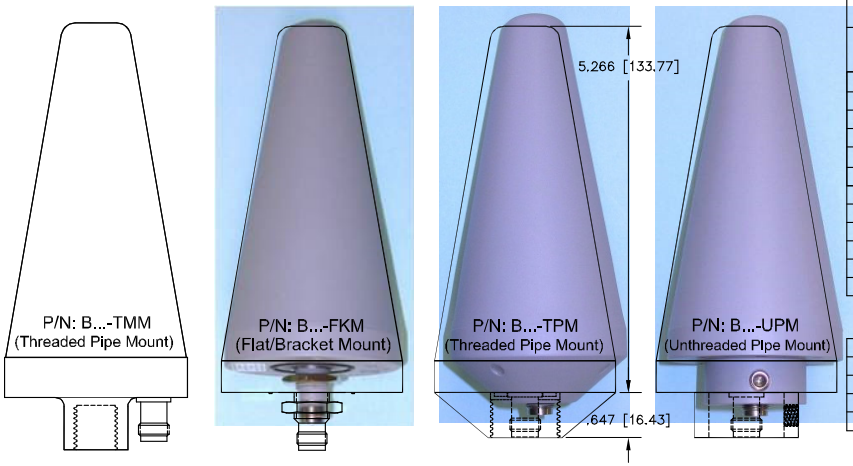
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

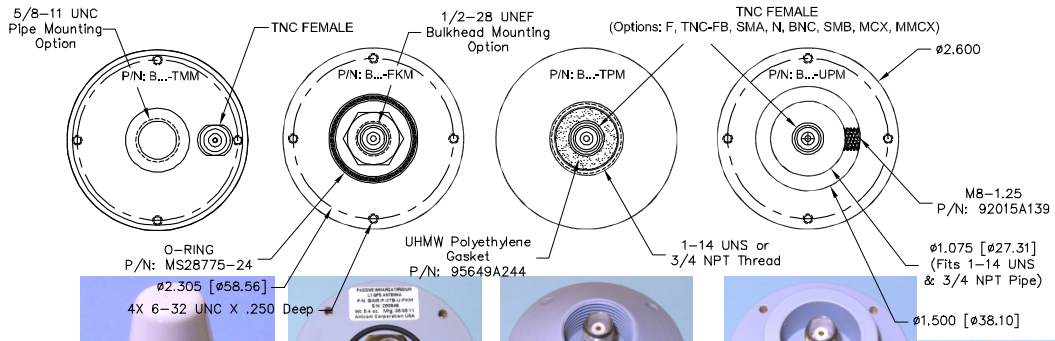
ELECTRICAL:

FREQUENCY (MHz):	(1575.42 ±15)	(1542.50 ±17.5)	(1642.50 ±17.5)	(1598 - 1609)	(1610-1626.5)	(1217.42 ±15)
GAIN (dBic) in FS/4ft GP	L1 GPS	Rx Inmarsat/B1 or Thuraya	Tx Inmarsat or Thuraya	GLONASS	IRIDIUM or Tx Globalstar	L2 GPS for L1/L2 Version
@ 90° (Zenith):	+1.1/+3.7	+0.7/+1.5	-0.3/0.0	+0.5/+2.9	+0.1/+1.1	0.0
@ 10° Elevation:	-0.9/+0.0	-1.6/-1.3	-1.9/-1.0	-1.3/+0.2	-1.6/-0.8	-2.4 to -6.3
@ 20° Elevation:	-0.2/+2.0	-0.8/+1.0	-1.1/+1.2	-0.5/+2.4	-0.8/+1.2	-1.8 to -4.8
@ 30° Elevation:	+0.3/+2.0	-0.2/+1.0	-0.8/+0.4	+0.1/+2.1	-0.7/+1.1	-1.3 to -3.4
@ 45° Elevation:	+0.6/+1.5	+0.3/+0.6	-0.7/-0.8	-0.1/+1.0	-0.3/-0.3	-0.5 to -1.5
@ 70° Elevation:	+0.3/+1.3	+0.3/+0.4	-1.6/0.0	-0.3/+1.1	-0.7/0.0	0.0 to -0.5
BEAM WIDTH (3dB)	173/155 Deg.	173/155 Deg.	180/162 Deg.	180/162 Deg.	180/162 Deg.	120/165 Deg.
AXIAL RATIO (dB)	1 to 3	1 to 3	1 to 3	1 to 3	1 to 3	1 to 5
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP	RHCP or LHCP	RHCP or LHCP	RHCP	RHCP or LHCP	RHCP
VSWR:	< 2:1					
DC GROUNDING:	YES (LIGHTNING PROTECTION)					

LNA OPTION (for GNSS or GNSS/Rx only VERSIONS (..-A-..)):

LNA GAIN (OPTION):	33 dB
LNA NOISE FIGURE:	3.0 dB
LNA P1dB Out:	+13 dBm
LNA DC POWER:	(2.5 to 24)V / < 50mA
POWER HANDLING:	PASSIVE:10W; LNA ACTIVE: 1 Watt CW





MECHANICAL:

SIZE:	DIAMETER: 2.60in. [66 mm] HEIGHT: 5.266 in. [133 mm]
WEIGHT:	< 8oz. (226g)
FINISH:	HERMETICALLY SEAL & TEFLON COATED
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE & RUGGEDIZED RADOME IMPACT, ABRASION, UV, SOLVENT, SKYDROL, CORROSION RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	TNC FEMALE (OPTION: TNC-BK, F, SMA, BNC, N, MCX, MMCX)

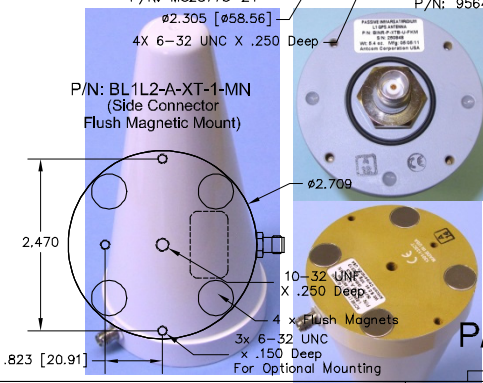
ENVIRONMENTAL:

TEMPERATURE:	-95 °F TO +194 °F [-70 °C TO +90 °C] -700ft to + 70,000 ft. (for -U-FKM/-U-TPM, from Mounting Surface)
VIBRATION:	30 G's HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, MIL-STD-461E/F, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100







5/8-11
Magnetic Standoff Antenna Mount,
P/N: MTR-3M (Item 484c)

ITEM NO	PART NO	DESCRIPTION	QUANTITY REQD
2			
1	3GIS-P1001-2-2G	Additional SILICON GASKET (Item 539a) for -FKM	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XXX± .010, .XXXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø ∅F.005 M
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	April–11–11
ORIGINALLY DESIGNED	S. HUYNH	April–11–11
UPDATED	S. HUYNH	April–28–13
UPDATE DRAWN	P. TRAN	April–28–13
APPROVED	S. HUYNH	April–28–13

ANTCOM CORP. TORRANCE CALIFORNIA

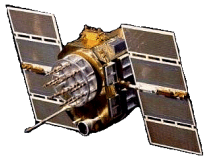
Imarsat/Iridium/L1GPS, or Thuraya/Tx-Globalstar or L1-GPS, or L1-GPS/Glonass/L-Band/B1, or L1/L2-GPS, or L1/L2-GPS/Glonass/B1/B3/B2/L5 Antenna

SIZE D | CAGE NO 3CVE1 | DRAWING NO BXXR-X-XX-X-XXX | REV A
SCALE 1/1 | SHEET 1 OF 1

P/N: BINR-P-XTB-U-XXX

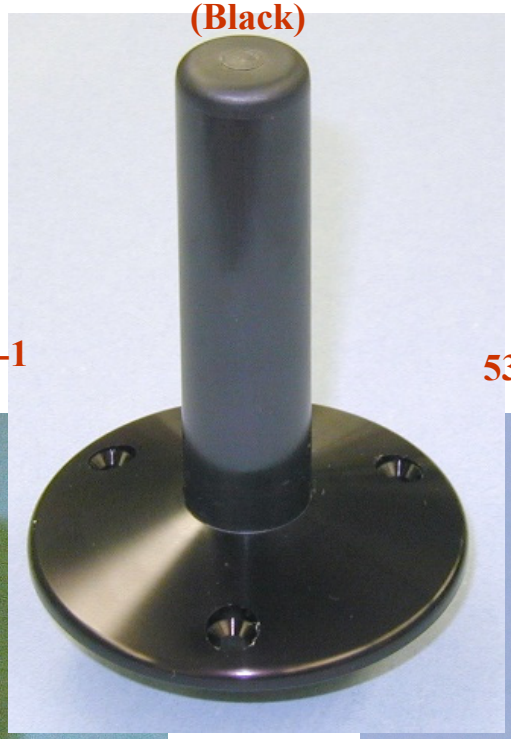
FREQUENCY (GHz):	POLARIZARION:	LNA:	FEMALE CONNECTOR:	COLOR: -U: TEFLON COATED GRAY for MARINES/BUOY APP.
IN: Imarsat/Iridium/L1GPS/Glonass (RHCP); IR: Iridium/L1GPS/Glonass (RHCP)	R: RHCP	P: PASSIVE A: with LNA/FILTERS for Rx only VERSIONS	T: TNC; TB: TNC-Bulkhead; F: F	-1: GLOSS WHITE #17925 PER FED-STD-595B PAINT
T: Thuraya/Tx Globalstar (LHCP); G: Tx only Globatar (LHCP)	L: LHCP		S: SMA; SMB; SMBR; B: BNC	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B PAINT
L1: L1 GPS Only; G3: L1 GPS/GLONASS/L-Band/B1; L1L2: L1/L2 GPS only	R: RHCP		M: MCX; MM: MMCX-MMR; MMCX-R	-3: OLIVE DRAB GREEN #34094 PER FED-STD-595B PAINT
G5: L1/L2 GPS/GLONASS/L-Band/B1/B3/B2/L5	R: RHCP		N: N/N-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B PAINT
Lo1: QUAD-BAND (GSM/PCS)/L-Band/Locata/M-F/S/C-Band	V: Linear (Vertical)		SMC, SSMC, SSMB, SSMA	-5: TAN #: FS 23446 or 33446, FED-STD-595 PAINT

NMO Connector Option is Now Available for Some Antennas

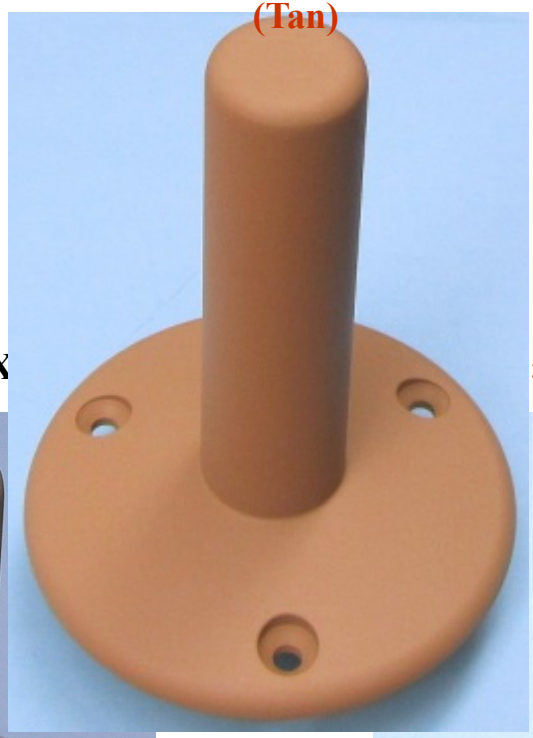


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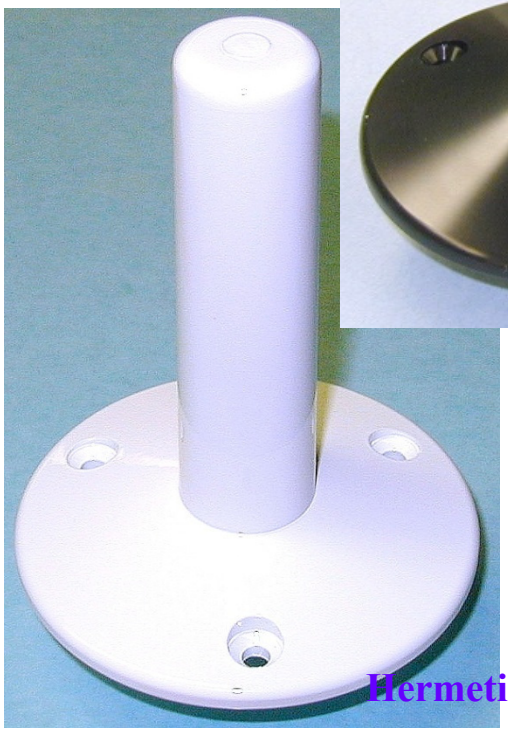
53G1215X-XX-4 (Black)



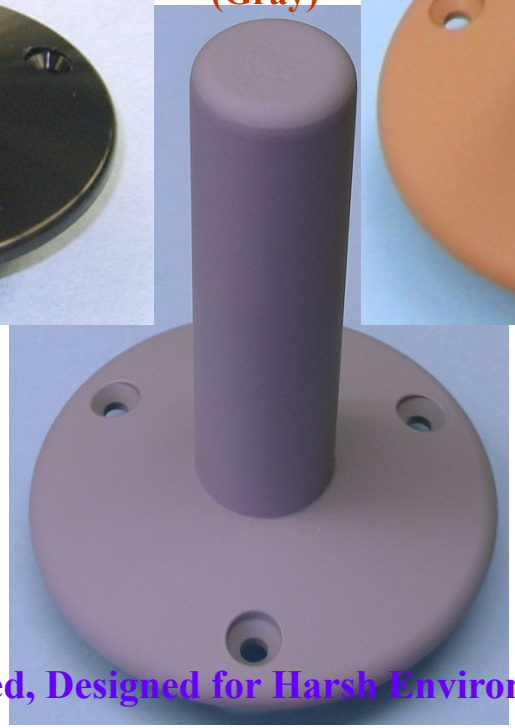
53G1215X-XX-5 (Tan)



53G1215X-XX-1 (White)



53G1215X-XX (Gray)



53G1215X-XX-3 (Green)

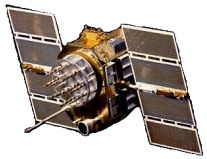


Hermetically Sealed, Designed for Harsh Environment Applications.

Connector is Available in SMA, MCX, MMCX, TNC, TNC-B, N, or N-Bulkhead (See Drawing)

L1 or L1/L2 GPS & Iridium/Inmarsat/Glonass Antennas

2.6” Base Diameter x 4.5” Tall, Flat Mount Configurations



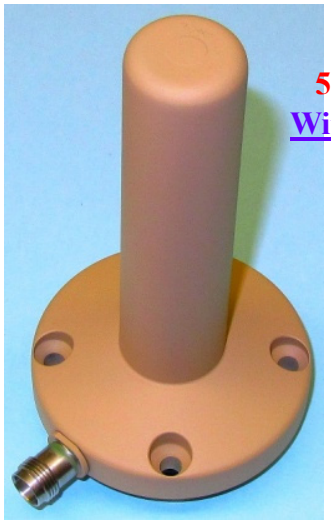
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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52G1215A-XNT-1 (White)
With TNC Connector on Side

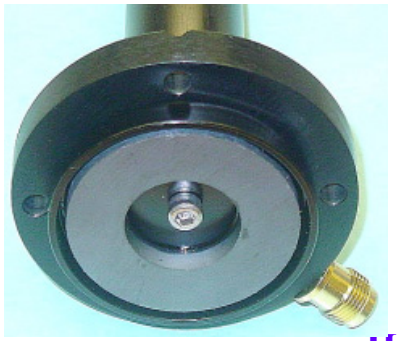


52G1215A-XNT-5 (Tan)
With TNC Connector on Side



52G1215A-XNT-4 (Black)
With TNC Connector on Side



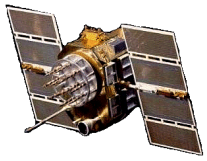




52G1215A-74NS-1 (White)
With 74in SMA Cable on Side

Hermetically Sealed, Designed for Harsh Environment Applications.

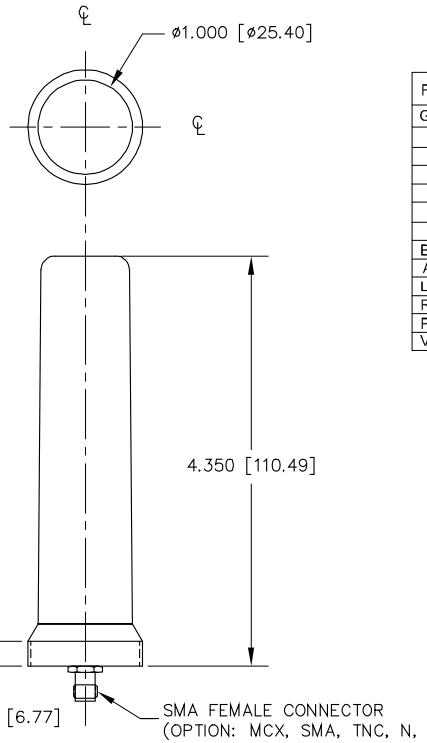
Connector is Available in SMA, MCX, MMCX, TNC, TNC-B, N, or N-Bulkhead (See Drawing)



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1" Dia. Pipe Mount
P/N: 71G-MOUNT
(Item 478a)

SPECIFICATIONS

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:

FREQUENCY (MHz):	(1575.42 ±15)	(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1616)	(1610-1626)
GAIN in FS/3in GP (dBic)	L1 GPS	Rx INMARSAT	Tx INMARSAT	GLONASS	IRIDIUM
@ 90° (Zenith):	+1.4/+1.1	+1.1/+0.7	+0.1/-0.3	+1.0/+0.5	+0.5/+0.1
@ 10° Elevation:	-1.5/ -0.9	-2.0/-1.6	-2.1/-1.9	-1.7/-1.3	-2.0/-1.6
@ 20° Elevation:	-0.5/-0.2	-1.0/-0.8	-1.1/-1.1	-0.6/-0.5	-0.9/-0.8
@ 30° Elevation:	+0.2/+0.3	-0.2/-0.2	-0.7/-0.8	0.0/+0.1	-0.3/-0.7
@ 45° Elevation:	+0.7/+0.6	+0.5/+0.3	-0.2/-0.7	+0.5/-0.1	+0.3/-0.3
@ 70° Elevation:	+1.2/+0.3	+1.0/+0.3	-0.4/-1.6	+0.7/-0.3	+0.2/-0.7
BEAM WIDTH (3dB)	152/173 Deg.	150/173 Deg.	170/180 Deg.	160/180 Deg.	160/182 Deg.
AXIAL RATIO (dB)	1 to 3	1 to 3	1 to 3	1 to 3	1 to 3
LIGHTNING PROTECTION:	DC GROUNDING				
RADIATION PATTERN:	HEMISPHERICAL				
POLARIZATION:	RHCP				
VSWR:	< 1.5:1				

LNA OPTION:

LNA GAIN:	(22.0+/-2.0) dB
LNA NOISE FIGURE:	2.0 dB
LNA P 1dB Out:	+13 dBm
VOLTAGE/CURRENT:	(+2.4 TO +5) Volts DC / (15 TO 30) mA

MECHANICAL:

SIZE:	DIAMETER: 1.00 in.[25.40 mm] HEIGHT: 4.35 in. [110.49 mm]
WEIGHT:	3.3 oz (93.55 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE CONNECTOR (OPTION: MCX, SMA, TNC, N, MCX, MMCX, QMA, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

CONFIGURATION:	FREQUENCY:	POLARIZATION:	LNA:	CONNECTOR:	COLOR:
1: 2" SQ. (FLAT)	1216: L1/L2/Inmarsat	LL: LHCP	A: WITH LNA	S: SMA; Q: QMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1216: L1/L2	RR: RHCP	P: WITHOUT LNA	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	15: L1	V: VERTICAL		N: N; NB: N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
3: 3.5" DIA. (FLAT)	16: IRIDIUM			T: TNC; TB: TNC- Bulkhead	-3O: OLIVE DRAB GREEN #34031 PER FED-STD-595B
4: MINI ARINC (FLAT)	RR: TX: RHCP, RX: RHCP				-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
5S: (HELIX ROD)					-6: TAN #33446 PER FED-STD-595B
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

P/N: 3D16RR-P-XS-1

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
1	1	–	–	–	–	1
–2	–1	PARTS LIST				

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE FRACTIONS ± 1/64 DECIMALS .XX± .010 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø ±.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Feb-23-04
ORIGINALLY DESIGNED	S. HUYNH	Feb-23-04
UPDATED	S. HUYNH	Feb-11-15
UPDATE DRAWN	P. TRAN	Feb-11-15
APPROVED	S. HUYNH	Feb-11-15

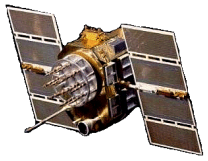
ANTCOM CORP. TORRANCE CALIFORNIA

L1GPS/INMARSAT/
IRIDIUM HELIX ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	3D16RR-P-XS-1	A

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas



ANTCOM CORPORATION . 367 Van Ness Way, #602 . Torrance, CA 90501 . Tel: (310) 782-1076 . Fax: (310) 782-1086 . E-mail: antennas@antcom.com . http://www.antcom.com

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REVISIONS

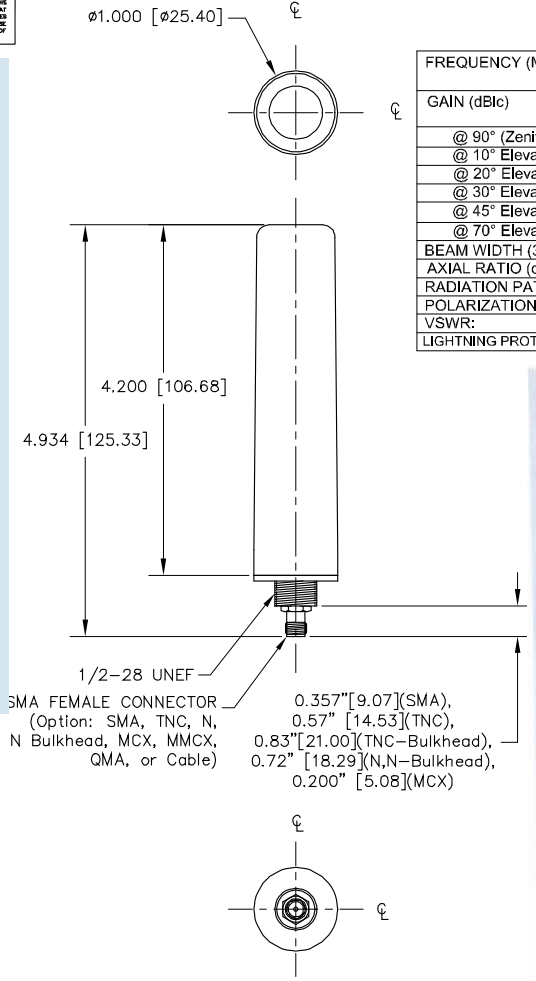
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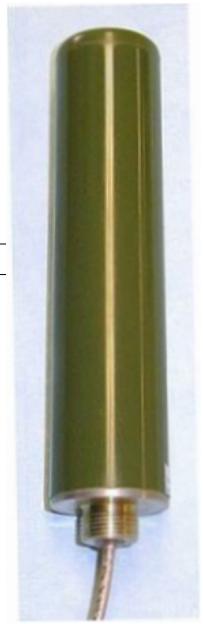
SPECIFICATIONS

ELECTRICAL:

FREQUENCY (MHz):	(1575.42 ±13)	(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1616)	(1616-1626)	(1227.60 ±13)	(1252.50 ±7.5)/ (1176.45 ±12)
GAIN (dBIc)	L1 GPS	Rx INMARSAT	Tx INMARSAT	GLONASS	IRIDIUM	L2 GPS	L2 GLONASS/ L5 GPS
@ 90° (Zenith):	+2.9	+0.7	-1.6	+0.3	-1.2	0.0	-1.0
@ 10° Elevation:	-0.4	-2.8	-4.9	-3.1	-4.3	-2.4 to -6.3	-3.4 to -7.3
@ 20° Elevation:	+0.5	-1.7	-3.5	-1.7	-3.0	-1.8 to -4.8	-2.8 to -5.8
@ 30° Elevation:	+1.7	-0.7	-2.4	-0.7	-1.9	-1.3 to -3.4	-2.3 to -4.4
@ 45° Elevation:	+2.4	+0.2	-2.3	-0.1	-1.8	-0.5 to -1.5	-1.5 to -2.5
@ 70° Elevation:	+2.3	+0.6	-2.1	+0.2	-1.6	0.0 to -0.5	-1.0 to -1.5
BEAM WIDTH (3dB)	142 Deg.	140 Deg.	146 Deg.	144 Deg.	145 Deg.	(120 to 165) Deg.	(120 to 165) Deg.
AXIAL RATIO (dB)	1 to 3	1 to 4	1 to 3	1 to 4	1 to 3	1 to 5	1 to 5
RADIATION PATTERN:	HEMISPHERICAL						
POLARIZATION:	RHCP						
VSWR:	< 1.5:1						
LIGHTNING PROTECTION:	D.C GROUNDING						







LNA OPTION:

LNA GAIN:	(22.0+/-2.0) dB
LNA NOISE FIGURE:	2.0 dB
LNA P 1dB Out:	+13 dBm
VOLTAGE/CURRENT:	(+2.4 TO +5) Volts DC / (15 TO 30) mA

MECHANICAL:

SIZE:	DIAMETER: 1.00 in.[25.40 mm] HEIGHT: 4.2 in. [106.67 mm]
WEIGHT:	1.25 oz (35.3 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: SMA Bulkhead, TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, QMA, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

CONFIGURATION:	FREQUENCY:	LNA:	CABLE'S LENGTH:	CONNECTOR:	COLOR:
1: 2" SQ. (FLAT)	1216: L1/L2/Inmarsat	A2: WITH LNA	X: NO CABLE	S: SMA	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1216: L1/L2	P: WITHOUT LNA	#: CABLE LENGTH (IN)	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	16: L1		R: RIGHT ANGLE CON.	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)	RR: TX: RHCP, RX: RHCP			T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)					-5: TAN #33446 PER FED-STD-595B
5S: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ALL SCREWS ARE SUPPLIED BY ANTCOM CORPORATION

P/N: 3D1216X-XS-X-3

QUANTITY REQD	ITEM NO	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
1	1	–	–	–	–	1
-2	-1	PARTS LIST				

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XXX ±.010, .XXXX ±.005, ANGLES ± 1°. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLET R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø ±.005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

ORIGINALLY DRAWN	S. HUYNH	Mar-08-12
ORIGINALLY DESIGNED	S. HUYNH	Mar-08-12
UPDATED	S. HUYNH	Mar-28-16
UPDATE DRAWN	P. TRAN	Mar-28-16
APPROVED	S. HUYNH	Mar-28-16

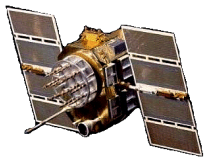
ANTCOM CORP. TORRANCE, CALIFORNIA

0.5-28 Threaded Base Helix GPS/INMARSAT/GLONASS/ IRIDIUM ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3D1216X-XS-X-3 | REV A

SCALE 1/1 | SHEET 1 OF 1

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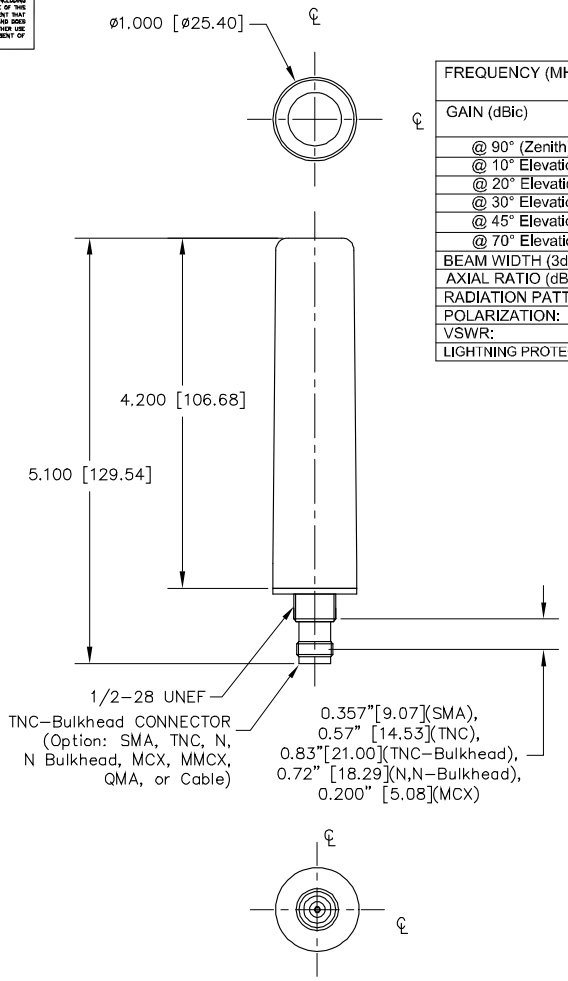
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GAIN (dBic)	L1 GPS	Rx INMARSAT	Tx INMARSAT	GLONASS	IRIDIUM	L2 GPS	L2 GLONASS/ L5 GPS
@ 90° (Zenith):	+2.9	+0.7	-1.6	+0.3	-1.2	0.0	-1.0
@ 10° Elevation:	-0.4	-2.8	-4.9	-3.1	-4.3	-2.4 to -6.3	-3.4 to -7.3
@ 20° Elevation:	+0.5	-1.7	-3.5	-1.7	-3.0	-1.8 to -4.8	-2.8 to -5.8
@ 30° Elevation:	+1.7	-0.7	-2.4	-0.7	-1.9	-1.3 to -3.4	-2.3 to -4.4
@ 45° Elevation:	+2.4	+0.2	-2.3	-0.1	-1.8	-0.5 to -1.5	-1.5 to -2.5
@ 70° Elevation:	+2.3	+0.6	-2.1	+0.2	-1.6	0.0 to -0.5	-1.0 to -1.5
BEAM WIDTH (3dB)	142 Deg.	140 Deg.	146 Deg.	144 Deg.	145 Deg.	(120 to 165) Deg.	(120 to 165) Deg.
AXIAL RATIO (dB)	1 to 3	1 to 4	1 to 3	1 to 4	1 to 3	1 to 5	1 to 5
RADIATION PATTERN:	HEMISPHERICAL						
POLARIZATION:	RHCP						
VSWR:	< 1.5:1						
LIGHTNING PROTECTION:	D.C GROUNDING						



LNA OPTION:

LNA GAIN:	(22.0+/-2.0) dB
LNA NOISE FIGURE:	2.0 dB
LNA P 1dB Out:	+13 dBm
VOLTAGE/CURRENT:	(+2.4 TO +5) Volts DC / (15 TO 30) mA

MECHANICAL:

SIZE:	DIAMETER: 1.00 in.[25.40 mm] HEIGHT: 5.1 in. [129.5 mm]
WEIGHT:	1.38 oz (39.0 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	TNC-Bulkhead (OPTION: SMA-Bulkhead, TNC, N, N-Bulkhead, MCX, MMCX, QMA, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

CONFIGURATION:	FREQUENCY:	LNA:	CABLE'S LENGTH:	CONNECTOR:	COLOR:
1: 2" SQ. (FLAT)	1216: L1/L2/Inmarsat	A2: WITH LNA	X: NO CABLE	S: SMA	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1216: L1/L2	P: WITHOUT LNA	#: CABLE LENGTH (IN)	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	16: L1		R: RIGHT ANGLE CON.	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)	RR: TX: RHCP, RX: RHCP			T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)					-5: TAN #33446 PER FED-STD-595B
5B: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

P/N: 3D1216X-XTB-X-3

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ALL SCREWS ARE SUPPLIED BY ANTCOM CORPORATION

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

QUANTITY REQD		DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
1	1	–	–	–	–	1
-2	-1	PARTS LIST				

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XXX ±.013, .XXXX ±.005, ANGLES ± 1°. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLET R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005 M. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

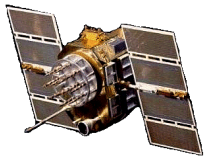
ANTCOM CORP. TORRANCE, CALIFORNIA

0.5-28 Threaded Base Helix GPS/INMARSAT/GLONASS/ IRIDIUM ANTENNA

ORIGINALLY DRAWN	S. HUYNH	Mar-08-12	
ORIGINALLY DESIGNED	S. HUYNH	Mar-08-12	
UPDATED	S. HUYNH	Oct-02-12	
UPDATE DRAWN	P. TRAN	Oct-02-12	
APPROVED	S. HUYNH	Oct-02-12	

SIZE: D | CAGE NO: 3CVE1 | DRAWING NO: 3D1216X-XTB-X-3 | REV: A
SCALE 1/1 | SHEET 1 OF 1

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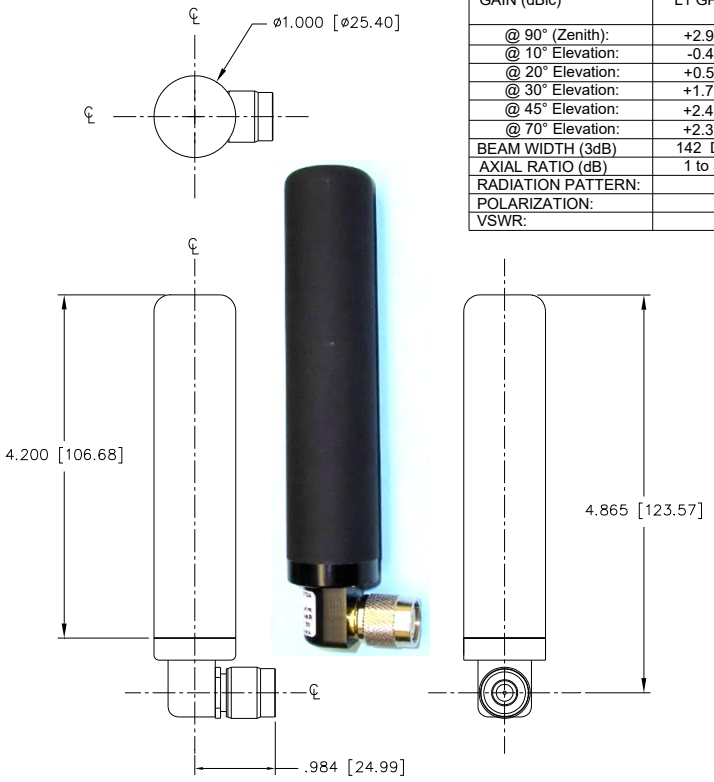
REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

SPECIFICATIONS

ELECTRICAL:

FREQUENCY (MHz):	(1575.42 ±13)	(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1616)	(1616-1626)	(1227.60 ±13)	(1252.50 ±7.5)/ (1176.45 ±12)
GAIN (dBic)	L1 GPS	Rx INMARSAT	Tx INMARSAT	GLONASS	IRIDIUM	L2 GPS	L2 GLONASS/ L5 GPS
@ 90° (Zenith):	+2.9	+0.7	-1.6	+0.3	-1.2	0.0	-1.0
@ 10° Elevation:	-0.4	-2.8	-4.9	-3.1	-4.3	-2.4 to -6.3	-3.4 to -7.3
@ 20° Elevation:	+0.5	-1.7	-3.5	-1.7	-3.0	-1.8 to -4.8	-2.8 to -5.8
@ 30° Elevation:	+1.7	-0.7	-2.4	-0.7	-1.9	-1.3 to -3.4	-2.3 to -4.4
@ 45° Elevation:	+2.4	+0.2	-2.3	-0.1	-1.8	-0.5 to -1.5	-1.5 to -2.5
@ 70° Elevation:	+2.3	+0.6	-2.1	+0.2	-1.6	0.0 to -0.5	-1.0 to -1.5
BEAM WIDTH (3dB)	142 Deg.	140 Deg.	146 Deg.	144 Deg.	145 Deg.	(120 to 165) Deg.	(120 to 165) Deg.
AXIAL RATIO (dB)	1 to 3	1 to 4	1 to 3	1 to 4	1 to 3	1 to 5	1 to 5
RADIATION PATTERN:	HEMISPHERICAL						
POLARIZATION:	RHCP						
VSWR:	< 1.5:1						



DC GROUNDING: YES (LIGHTNING PROTECTION)

LNA OPTION:

LNA GAIN: (22.0+/-2.0) dB
LNA NOISE FIGURE: 2.8 dB (Filter loss is Included)
LNA P 1dB Out: +13 dBm
VOLTAGE/CURRENT: (+2.4 TO +5) Volts DC / (15 TO 30) mA
REJECTION: 2 2-POLE FILTERS FOR EACH BAND

MECHANICAL:

SIZE: DIAMETER: 1.00 in.[25.40 mm]
HEIGHT: 4.2 in. [106.68 mm]
WEIGHT: 1.715 oz (48.62 g)
FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441
COLOR: WHITE #17925 PER FED-STD-595B
MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR: TNC MALE
(OPTION: MCX, SMA, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, QMA, or Cable)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455
ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

FREQ. BAND:	LNA:
1215: L1/L2	A: WITH LNA
15: L1 ONLY	P: WITHOUT LNA
1216: L1/L2/INMARSAT/GLONASS/IRIDIUM	
5: L1/L2/GPS/GLONASS/INMARSAT/IRRIDIUM	

P/N: 3DG5A-XTM-1

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: No MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

QUANTITY REQD	ITEM NO	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
1	1			–	–	–
–2	–1					

PARTS LIST

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ⌀ .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Feb-08-12
CAD FILE NO

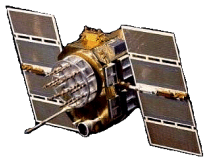
ANTCOM CORP. TORRANCE CALIFORNIA

HANDHELD L1/L2 GPS/INMARSAT/GLONASS/ IRIDIUM HELIX ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3DG5A-XTM-1 | REV –
SCALE 1/1 SHEET 1 OF 1

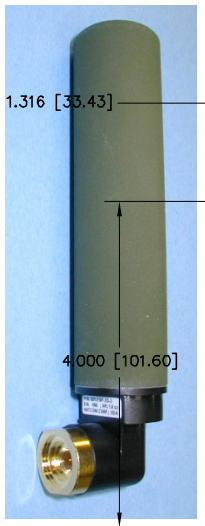
ORIGINAL DOCUMENT (RED STAMP IS RED)

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@ 10° Elevation:	-0.4	-2.8	-4.9	-3.1	-4.3	-2.4 to -6.3
@ 20° Elevation:	+0.5	-1.7	-3.5	-1.7	-3.0	-1.8 to -4.8
@ 30° Elevation:	+1.7	-0.7	-2.4	-0.7	-1.9	-1.3 to -3.4
@ 45° Elevation:	+2.4	+0.2	-2.3	-0.1	-1.8	-0.5 to -1.5
@ 70° Elevation:	+2.3	+0.6	-2.1	+0.2	-1.6	0.0 to -0.5
BEAM WIDTH (3dB)	142 Deg.	140 Deg.	146 Deg.	144 Deg.	145 Deg.	(120 to 165) Deg.
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RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 1.5:1					

DC GROUNDING: YES (LIGHTNING PROTECTION)

LNA OPTION:

LNA GAIN: (22.0+/-2.0) dB
LNA NOISE FIGURE: 2.8 dB (Filter loss is Included)
LNA P 1dB Out: +13 dBm
VOLTAGE/CURRENT: (+2.4 TO +5) Volts DC / (15 TO 30) mA
REJECTION: 2 2-POLE FILTERS FOR EACH BAND

MECHANICAL:

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WEIGHT: 3.3 oz (93.55 g)
FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441
COLOR: OLIVE DRAB GREEN #34031 PER FED-STD-595B
MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR: SMA MALE CONNECTOR, 360° SWIVELS
(OPTION: MCX, SMA, TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

FREQ. BAND:	LNA:
1215: L1/L2	A: WITH LNA
15: L1 ONLY	P: WITHOUT LNA
1216: L1/L2/INMARSAT/GLONASS/IRIDIUM	
0416: UHF/L1/L2/INMARSAT (2 Connectors)	

P/N: 3D1216X-XS-3

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: No MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

QUANTITY REQD	ITEM NO	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
PARTS LIST						
1	1			–	–	–
–2	–1			–	–	–

ZONE	REV	DESCRIPTION	DATE	APPROVED
REVISIONS				

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°
TOLERANCE 3YM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DATS ON A COMMON Ø .004
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED M. BOAS Aug-15-03
ENGINEER
APPROVED S. HUYNH Aug-15-03
CAD FILE NO

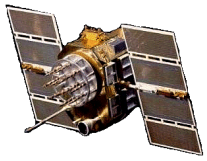
ANTCOM CORP TORRANCE #CALIFORNIA

HANDHELD L1/L2
GPS/INMARSAT/GLONASS/
IRIDIUM ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3D1216X-XS-3-2 | REV –
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

L1/L2/L5 GPS & Inmarsat/Iridium+L1/L2 Glonass Antennas, P/N: 6DG5A-XTM-1-PCL
Rx Only Thuraya Antenna, P/N: 3DRxTA-XTM-1-PCL
Rx Only Inmarsat/Iridium Antenna, P/N: 3DRxINA-XTM-1-PCL
Passive Rx/Tx Thuraya Antenna, P/N: 3DRxTxTP-XTM-1-PCL
Passive Rx/Tx Inmarsat/Iridium Antenna, P/N: 3DRxTxINP-XTM-1-PCL
1" Dia. X 6.5" Tall, Swivel, Side Mount Configurations



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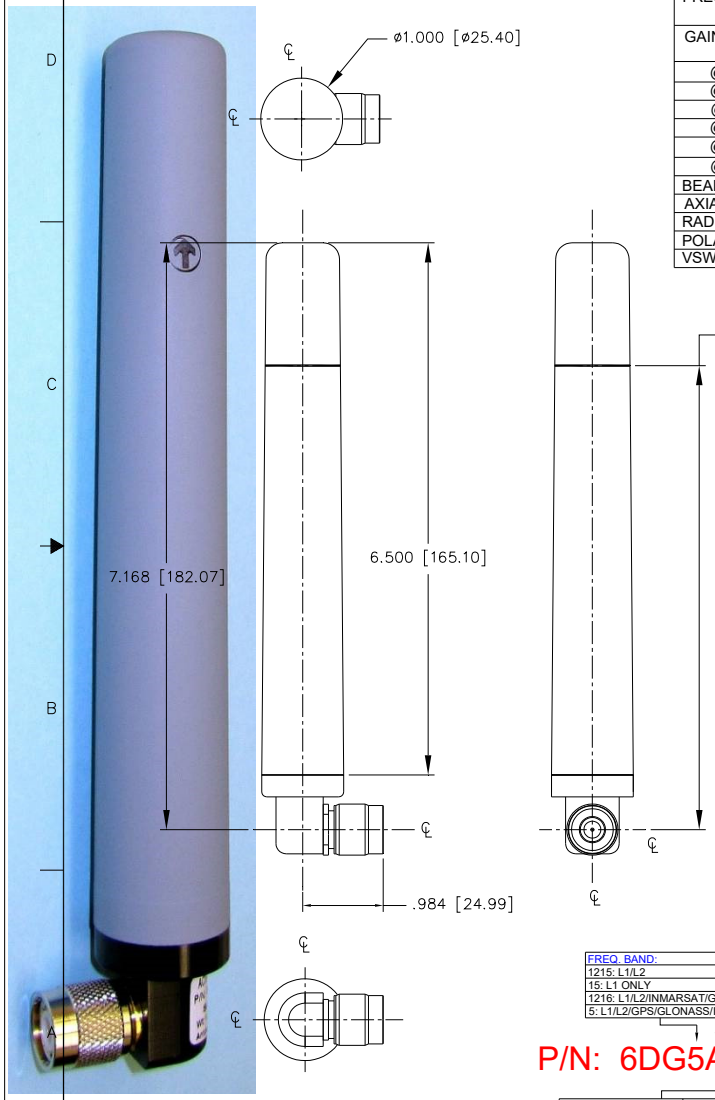
REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

SPECIFICATIONS

ELECTRICAL:

FREQUENCY (MHz):	(1575.42 ±13)	(1542.50 ±17.5)	(1642.50 ±17.5)	(1602-1616)	(1616-1626)	(1227.60 ±13)	(1252.50 ±7.5)/ (1176.45 ±12)
GAIN (dBic)	L1 GPS	Rx INMARSAT	Tx INMARSAT	GLONASS	IRIDIUM	L2 GPS	L2 GLONASS/ L5 GPS
@ 90° (Zenith):	+2.9	+0.7	-1.6	+0.3	-1.2	0.0	-1.0
@ 10° Elevation:	-0.4	-2.8	-4.9	-3.1	-4.3	-2.4 to -6.3	-3.4 to -7.3
@ 20° Elevation:	+0.5	-1.7	-3.5	-1.7	-3.0	-1.8 to -4.8	-2.8 to -5.8
@ 30° Elevation:	+1.7	-0.7	-2.4	-0.7	-1.9	-1.3 to -3.4	-2.3 to -4.4
@ 45° Elevation:	+2.4	+0.2	-2.3	-0.1	-1.8	-0.5 to -1.5	-1.5 to -2.5
@ 70° Elevation:	+2.3	+0.6	-2.1	+0.2	-1.6	0.0 to -0.5	-1.0 to -1.5
BEAM WIDTH (3dB)	142 Deg.	140 Deg.	146 Deg.	144 Deg.	145 Deg.	(120 to 165) Deg.	(120 to 165) Deg.
AXIAL RATIO (dB)	1 to 3	1 to 4	1 to 3	1 to 4	1 to 3	1 to 5	1 to 5
RADIATION PATTERN:	HEMISPHERICAL						
POLARIZATION:	RHCP						
VSWR:	< 1.5:1						



DC GROUNDING: YES (LIGHTNING PROTECTION)

LNA OPTION:

LNA GAIN: (22.0+/-2.0) dB
LNA NOISE FIGURE: 2.8 dB (Filter loss is Included)
LNA P 1dB Out: +13 dBm
VOLTAGE/CURRENT: (+2.4 TO +5) Volts DC / (15 TO 30) mA
REJECTION: 2 2-POLE FILTERS FOR EACH BAND

MECHANICAL:

SIZE: DIAMETER: 1.00 in.[25.40 mm]
HEIGHT: 6.5 in. [106.68 mm]
WEIGHT: 2.39 oz (67.76 g)
FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441
COLOR: WHITE #17925 PER FED-STD-595B
MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR: TNC MALE
(OPTION: MCX, SMA, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, QMA, or Cable)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

FREQ. BAND:	LNA:
1215: L1/L2	A: WITH LNA
15: L1 ONLY	P: WITHOUT LNA
1216: L1/L2/INMARSAT/GLONASS/IRIDIUM	
5: L1/L2/GPS/GLONASS/INMARSAT/IRRIDIUM	

QUANTITY REQD								
1	1			–				1
–2	–1	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH		ITEM NO

PARTS LIST

P/N: 6DG5A-XTM-1-PCL

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: No MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Mar-01-12
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

HANDHELD L1/L2/L5 GPS/INMARSAT/GLONASS/ IRIDIUM HELIX ANTENNA

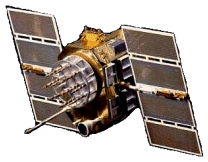
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SCALE 1/1 | SHEET 1 OF 1

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

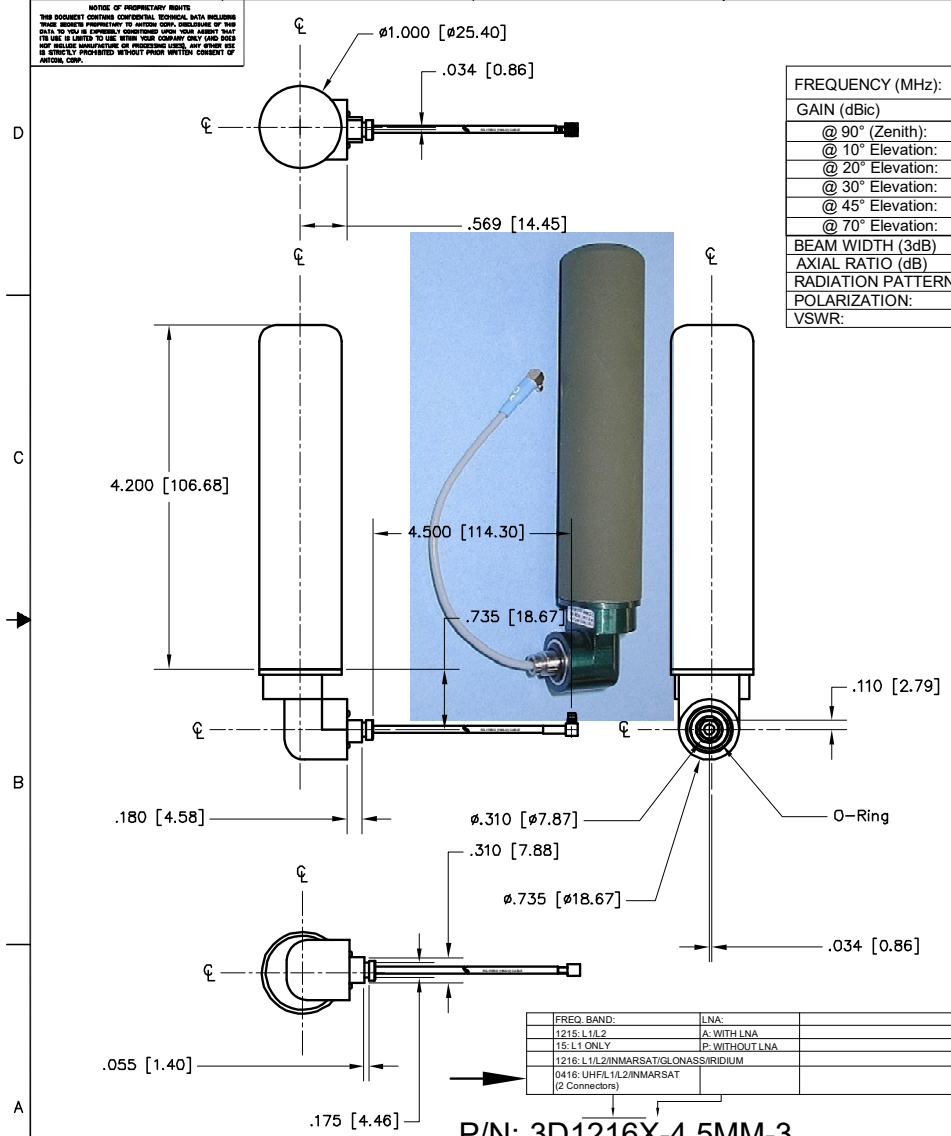
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

FREQUENCY (MHz):	(1575.42±13)	(1542.50±17.5)	(1642.50±17.5)	(1602-1616)	(1616-1626)	(1227.60±13)
GAIN (dBic)	L1 GPS	Rx INMARSAT	Tx INMARSAT	GLONASS	IRIDIUM	L2 GPS
@ 90° (Zenith):	+2.9	+0.7	-1.6	+0.3	-1.2	0.0
@ 10° Elevation:	-0.4	-2.8	-4.9	-3.1	-4.3	-2.4 to -6.3
@ 20° Elevation:	+0.5	-1.7	-3.5	-1.7	-3.0	-1.8 to -4.8
@ 30° Elevation:	+1.7	-0.7	-2.4	-0.7	-1.9	-1.3 to -3.4
@ 45° Elevation:	+2.4	+0.2	-2.3	-0.1	-1.8	-0.5 to -1.5
@ 70° Elevation:	+2.3	+0.6	-2.1	+0.2	-1.6	0.0 to -0.5
BEAM WIDTH (3dB)	142 Deg.	140 Deg.	146 Deg.	144 Deg.	145 Deg.	(120 to 165) Deg.
AXIAL RATIO (dB)	1 to 3	1 to 4	1 to 3	1 to 4	1 to 3	1 to 5
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 1.5:1					

DC GROUNDING: YES (LIGHTNING PROTECTION)

LNA OPTION:

LNA GAIN: (22.0+/-2.0) dB
LNA NOISE FIGURE: 2.8 dB (Filter loss is Included)
LNA P 1dB Out: +13 dBm
VOLTAGE/CURRENT: (+2.4 TO +5) Volts DC / (15 TO 30) mA
REJECTION: 2 2-POLE FILTERS FOR EACH BAND

MECHANICAL:

SIZE: DIAMETER: 1.00 in.[25.40 mm]
HEIGHT: 4.2 in. [106.68 mm]
WEIGHT: 3.3 oz (93.55 g)
FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441
COLOR: OLIVE DRAB GREEN #34031 PER FED-STD-595B
MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR: 4.5" Long Flexible Cable with Right Angle MMCX Connector
(OPTION: MCX, SMA, TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

FREQ. BAND:	LNA:
1215: L1/L2	A: WITH LNA
15: L1 ONLY	P: WITHOUT LNA
1216: L1/L2/INMARSAT/GLONASS/IRIDIUM	
0416: UHF/L1/L2/INMARSAT (2 Connectors)	

P/N: 3D1216X-4.5MM-3

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: No MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

QUANTITY REQD	ITEM NO	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
PARTS LIST							
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-2	-1						

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

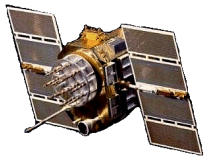
NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ±.015 .XXX ±.005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125/
DO NOT SCALE DRAWING

DRAWN
CHECKED M. BOAS Aug-15-03
ENGINEER
APPROVED S. HUYNH Aug-15-03
CAD FILE NO

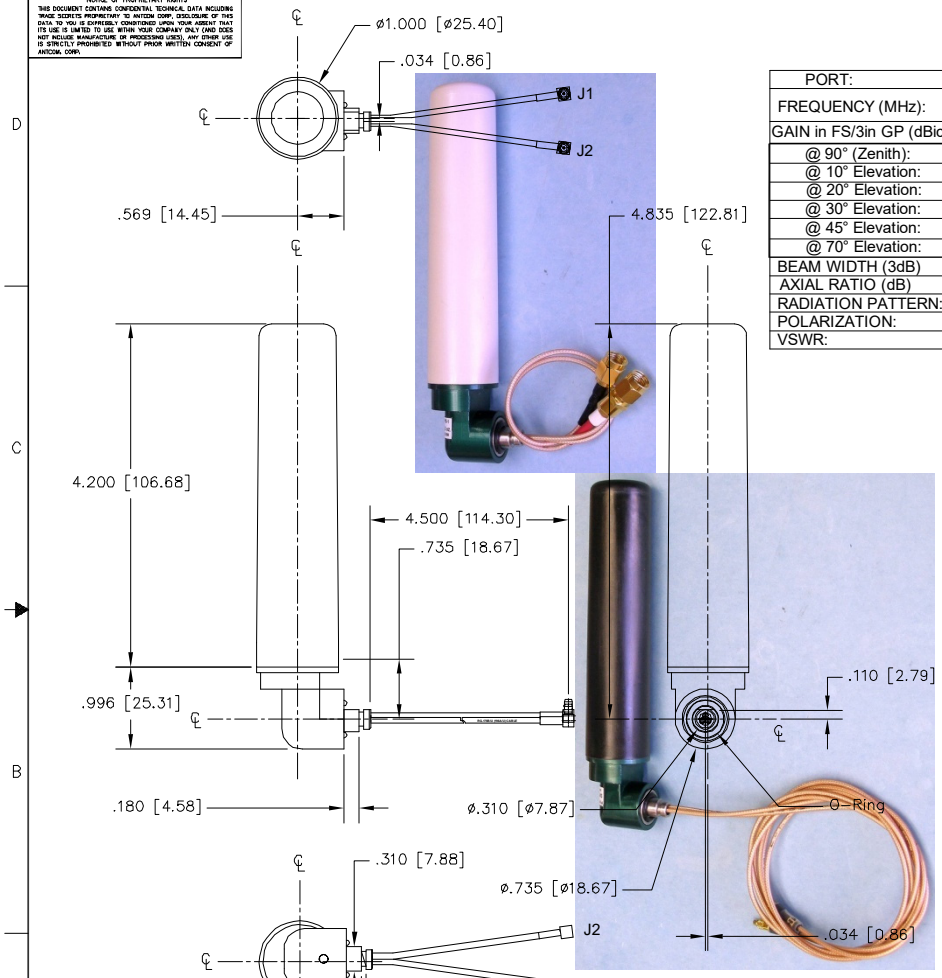
ANTCOM CORP TORRANCE, CALIFORNIA
HANDHELD L1/L2 GPS/INMARSAT/GLONASS/ IRIDIUM ANTENNA
SIZE D | CAGE NO 3CVE1 | DRAWING NO 3D1216X-4.5MM-3-2 | REV –
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas



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SPECIFICATIONS

ELECTRICAL:

PORT:	J1					J2
FREQUENCY (MHz):	(1575.42±15)	(1542.50±17.5)	(1642.50±17.5)	(1610-1626)	(1227.60±15)	(2400-2500)
GAIN in FS/3in GP (dBic)	L1 GPS	Rx INMARSAT	Tx INMARSAT	IRIDIUM	L2 GPS	Wi-Fi
@ 90° (Zenith):	+1.4/+1.1	+1.1/+0.7	+0.1/-0.3	+0.5/+0.1	-5.0	>2.5 dB
@ 10° Elevation:	-1.5/ -0.9	-2.0/-1.6	-2.1/-1.9	-2.0/-1.6	-6.5 to -11.5	
@ 20° Elevation:	-0.5/-0.2	-1.0/-0.8	-1.1/-1.1	-0.9/-0.8	-6.2 to -9.2	
@ 30° Elevation:	+0.2/+0.3	-0.2/-0.2	-0.7/-0.8	-0.3/-0.7	-5.7 to -7.7	
@ 45° Elevation:	+0.7/+0.6	+0.5/+0.3	-0.2/-0.7	+0.3/-0.3	-4.6 to -6.0	
@ 70° Elevation:	+1.2/+0.3	+1.0/+0.3	-0.4/-1.6	+0.2/-0.7	-4.0	
BEAM WIDTH (3dB)	152/173 Deg.	150/173 Deg.	170/180 Deg.	160/182 Deg.	(107 to 170) Deg.	50 ° x360 °
AXIAL RATIO (dB)	1 to 3	1 to 3	1 to 3	1 to 3	1 to 5	
RADIATION PATTERN:	HEMISPHERICAL					Omni
POLARIZATION:	RHCP					Vertical
VSWR:	< 1.5:1					

DC GROUNDING: YES (LIGHTNING PROTECTION)

LNA OPTION:

LNA GAIN: (22.0+/-2.0) dB
LNA NOISE FIGURE: 2.0 dB
LNA P 1dB Out: +13 dBm
VOLTAGE/CURRENT: (+2.4 TO +5) Volts DC / (15 TO 30) mA

MECHANICAL:

SIZE: DIAMETER: 1.00 in.[25.40 mm]
HEIGHT: 4.2 in. [106.68 mm]
WEIGHT: 3.3 oz (93.55 g)
FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441
COLOR: OLIVE DRAB GREEN #34031 PER FED-STD-595B
MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR: 4.5" Long Flexible Cable with Right Angle MMCX Connector (OPTION: MCX, SMA, TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, QMA, or Cable)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

FREQ. BAND:
1215: L1/L2
15: L1 ONLY
1216: L1/L2 GPS/Inmarsat/Iridium
121625: L1/L2 GPS/Inmarsat/Iridium and Wi-Fi

QUANTITY REQD		DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
1	1			–	–	–	1
–2	–1						

PARTS LIST

P/N: 3D121625RV-4.5MM-3

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; Q: QMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: No MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX ± .015 .XXX ± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ .000 / .003
MACHINED SURFACES 125/
DO NOT SCALE DRAWING

DRAWN
CHECKED M. BOAS Aug-15-03
ENGINEER
APPROVED S. HUYNH Aug-15-03
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

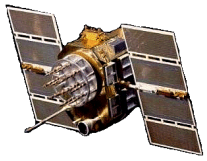
HANDHELD L1/L2 GPS/INMARSAT/IRIDIUM/ Wi-Fi ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3D121625RV-4.5MM-3 | REV –
SCALE 1/1 | SHEET 1 OF 1

ZONE	REV	DESCRIPTION	DATE	APPROVED

REVISIONS

NMO Connector Option is Now Available for Some Antennas



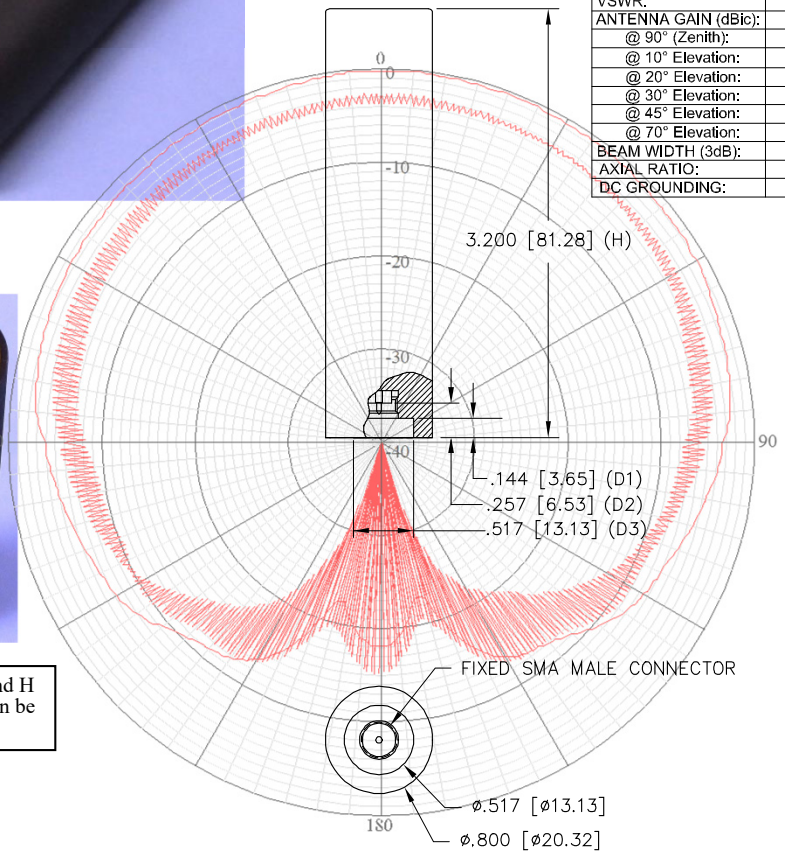
ANTCOM CORPORATION . 367 Van Ness Way, #602 . Torrance, CA 90501 . Tel: (310) 782-1076 . Fax: (310) 782-1086 . E-mail: antennas@antcom.com . http://www.antcom.com

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D1, D2, D3, and H Dimensions can be Customized.



SPECIFICATIONS

ELECTRICAL:

	L2 GPS	L2 GLONASS	Omnistar/L-Band Rx INMARSAT	L1 GPS	L1 GLONASS	IRIDIUM	Tx INMARSAT
FREQUENCY (MHz):	(1227.60 ±13)	(1242-1252)	(1542.50 ±17.5)	(1575.42 ±15)	(1598 - 1609)	(1610-1626)	(1642.50 ±17.5)
RADIATION PATTERN:	HEMISPHERICAL						
POLARIZATION:	RHCP						
VSWR:	< 1.5:1						
ANTENNA GAIN (dBic):							
@ 90° (Zenith):	-4.1	-3.8	-3.1	+0.3	+0.7	-0.1	-1.9
@ 10° Elevation:	-8.1	-8.0	-6.3	-2.7	-2.5	-3.3	-5.3
@ 20° Elevation:	-6.8	-6.6	-5.3	-1.8	-1.7	-2.5	-4.7
@ 30° Elevation:	-5.8	-5.6	-4.7	-1.2	-1.2	-2.0	-4.0
@ 45° Elevation:	-4.7	-4.6	-4.0	-0.5	-0.4	-1.2	-3.1
@ 70° Elevation:	-4.2	-4.1	-3.4	+0.1	+0.3	-0.5	-2.5
BEAM WIDTH (3dB):	145°	145°	155°	155°	155°	155°	155°
AXIAL RATIO:	1dB	2dB	1dB	1dB	1dB	1dB	1dB
DC GROUNDING:	YES (LIGHTNING PROTECTION)						

LNA OPTION:

LNA GAIN:	27 dB (-A), 33 dB (-A3), 44 dB (-A4)
LNA NOISE FIGURE:	2.0 dB
LNA P 1dB Out:	+13 dBm
VOLTAGE/CURRENT:	(+2.4 TO +5) Volts DC / (15 TO 30) mA

MECHANICAL:

SIZE:	DIAMETER: 0.80 in. [20.32 mm] HEIGHT: 3.20 in. [81.28 mm]
WEIGHT:	0.705 oz (20 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	FIXED SMA MALE (OPTION: MCX, SMA, MCX, MMCX, QMA, BNC or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

FREQUENCY:	POLARIZATION:	LNA:	CONNECTOR:	COLOR:
L1: L1/Glonass	R: RHCP	A: WITH 27 dB Gain LNA	S: SMA; SM: SMA MALE	-1: GLOSS WHITE #17925 PER FED-STD-595B
L1L2: L1L2/Glonass	L: LHCP	A3: WITH 33 dB Gain LNA	Q: QMA; P: PINS	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
IR: Iridium		A4: WITH 44 dB Gain LNA	M: MCX; MM: MMCX	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
IN: Inmarsat/Iridium		P: WITHOUT LNA	N: N; NB: N-Bulkhead	-4: NATURAL MOLDED BLACK WITH GLASS FILL
T: Thuraya			T: TNC; TB: TNC- Bulkhead	-5: TAN #: FS 23446 or 33446, FED-STD-595 PAINT
L1/IR: L1 GPS/Glonass/Iridium				
L1L2/IR: L1L2 GPS/Glonass/Iridium				
L1IN: L1 GPS/Glonass/Inmarsat/Iridium				
L1L2IN: L1L2 GPS Glonass/Inmarsat/Iridium				
SXR: S-BAND (RHCP)	X = 1 (2.4 - 2.5)GHz, X = 2 (2.3 - 2.4)GHz			
SXL: S-BAND (LHCP)	X = 3 (2.0 - 2.3)GHz			

P/N: HL1L2IRP-XSM-4-3

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

QUANTITY REQD	-2	-1	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
PARTS LIST							1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON ⌀ .005
MACHINED SURFACES
DO NOT SCALE DRAWING

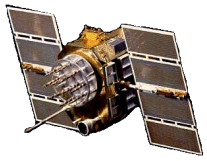
ANTCOM CORP. TORRANCE CALIFORNIA

L1L2 GPS/GLONASS + IRIDIUM/INMARSAT ANTENNA

ORIGINALLY DRAWN	S. HUYNH	May-25-11
ORIGINALLY DESIGNED	S. HUYNH	May-25-11
UPDATED	S. HUYNH	Feb-21-14
UPDATE DRAWN	P. TRAN	Feb-21-14
APPROVED	S. HUYNH	Feb-21-14

SIZE D | CAGE NO 3CVE1 | DRAWING NO HL1L2IRP-XSM-4-3 | REV A
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas



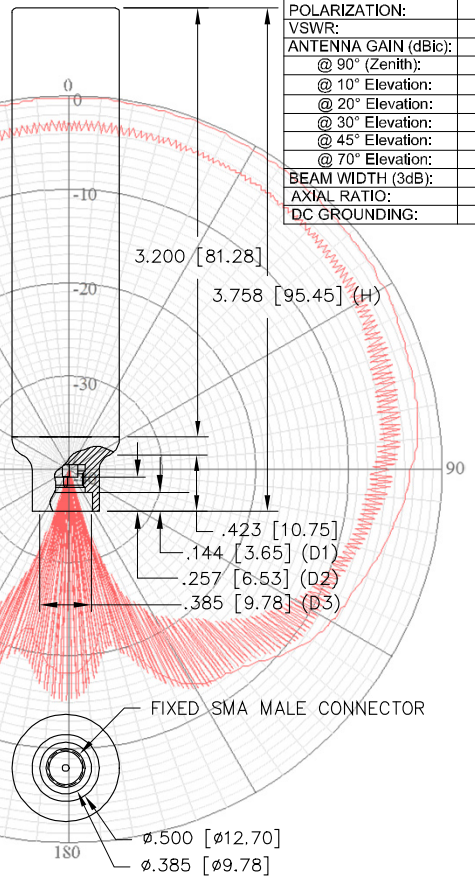
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D1, D2, D3, and H Dimensions can be Customized.



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POLARIZATION:	RHCP						
VSWR:	< 1.5:1						
ANTENNA GAIN (dBic):							
@ 90° (Zenith):	-4.1	-3.8	-3.1	+0.3	+0.7	0.0	-1.9
@ 10° Elevation:	-8.1	-8.0	-6.3	-2.7	-2.5	-3.3	-5.3
@ 20° Elevation:	-6.8	-6.6	-5.3	-1.8	-1.7	-2.5	-4.7
@ 30° Elevation:	-5.8	-5.6	-4.7	-1.2	-1.2	-2.0	-4.0
@ 45° Elevation:	-4.7	-4.6	-4.0	-0.5	-0.4	-1.2	-3.1
@ 70° Elevation:	-4.2	-4.1	-3.4	+0.1	+0.3	-0.5	-2.5
BEAM WIDTH (3dB):	145°	145°	155°	155°	155°	155°	155°
AXIAL RATIO:	1dB	2dB	1dB	1dB	1dB	1dB	1dB
DC GROUNDING:	YES (LIGHTNING PROTECTION)						

LNA OPTION:

LNA GAIN:	27 dB (-A-), 33 dB (-A3-), 44 dB (-A4-)
LNA NOISE FIGURE:	2.0 dB
LNA P 1dB Out:	+13 dBm
VOLTAGE/CURRENT:	(+2.4 TO +5) Volts DC / (15 TO 30) mA

MECHANICAL:

SIZE:	DIAMETER: 0.80 in. [20.32 mm] HEIGHT: 3.758 in. [95.45 mm]
WEIGHT:	0.705 oz (20 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	FIXED STAINLESS SMA MALE (OPTION: MCX, SMA, MCX, MMCX, QMA, BNC or Cable)

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ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

FREQUENCY:	POLARIZATION:	LNA:	CONNECTOR:	COLOR:
L1: L1/Glonass	R: RHCP	A: WITH 27 dB Gain LNA	S: SMA; SM: SMA MALE	-1: GLOSS WHITE #17925 PER FED-STD-595B
L1L2: L1L2/Glonass	L: LHCP	A3: WITH 33 dB Gain LNA	Q: QMA; P: PINS	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
IR: Iridium		A4: WITH 44 dB Gain LNA	M: MCX; MM: MMCX	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
IN: Inmarsat/Iridium		P: WITHOUT LNA	N: N; NB: N-Bulkhead	-4: NATURAL MOLDED BLACK WITH GLASS FILL
T: Thuraya			T: TNC; TB: TNC- Bulkhead	-5: TAN #: FS 23446 or 33446, FED-STD-595 PAINT
L1IR: L1 GPS/Glonass/Iridium				
L1L2IR: L1L2 GPS/Glonass/Iridium				
L1IN: L1 GPS/Glonass/Inmarsat/Iridium				
L1L2IN: L1L2 GPS Glonass/Inmarsat/Iridium				
SR: S-BAND (RHCP)				
SL: S-BAND (LHCP)				

P/N: HL1L2IRP-XSM-4-2

QTY REQD	-2	-1	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
			PARTS LIST				1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

ORIGINALLY DRAWN: S. HUYNH May-25-11
ORIGINALLY DESIGNED: S. HUYNH May-25-11
UPDATED: S. HUYNH Feb-21-14
UPDATE DRAWN: P. TRAN Feb-21-14
APPROVED: S. HUYNH Feb-21-14

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L1L2 GPS/GLONASS + IRIDIUM/INMARSAT ANTENNA

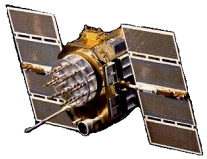
SIZE D | CAGE NO 3CVE1 | DRAWING NO HL1L2IRP-XSM-4-2 | REV A

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Inmarsat-GPS-Iridium-Glonass Helix Antenna

0.5” Diameter x 4.4” Tall, Threaded Bottom Mount Configuration



ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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Connector: TNC-F

Connector: SMA-F

0.7R1216P-XX-X 4.4” Tall Rod Configurations with Different Connectors

Connector: TNC-M

Connector: TNC-F

Connector: SMA-F

0.5R1216P-XX-X 4.4” Tall Rod Configurations with Different Connectors

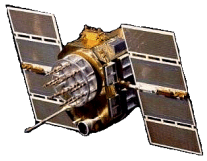
0.52R1216P-XTB-4 4.4” Tall Rod Configurations

Hermetically Sealed, Designed for Harsh Environment Applications.

Connector is Available in SMA, MCX, MMCX, TNC, TNC-B, N, or N-Bulkhead (See Drawing)

GPS/Iridium/Inmartsat Antenna, P/N: 0.7R1216X-6MM-4

0.5” Diameter x 4.4” Tall Configuration

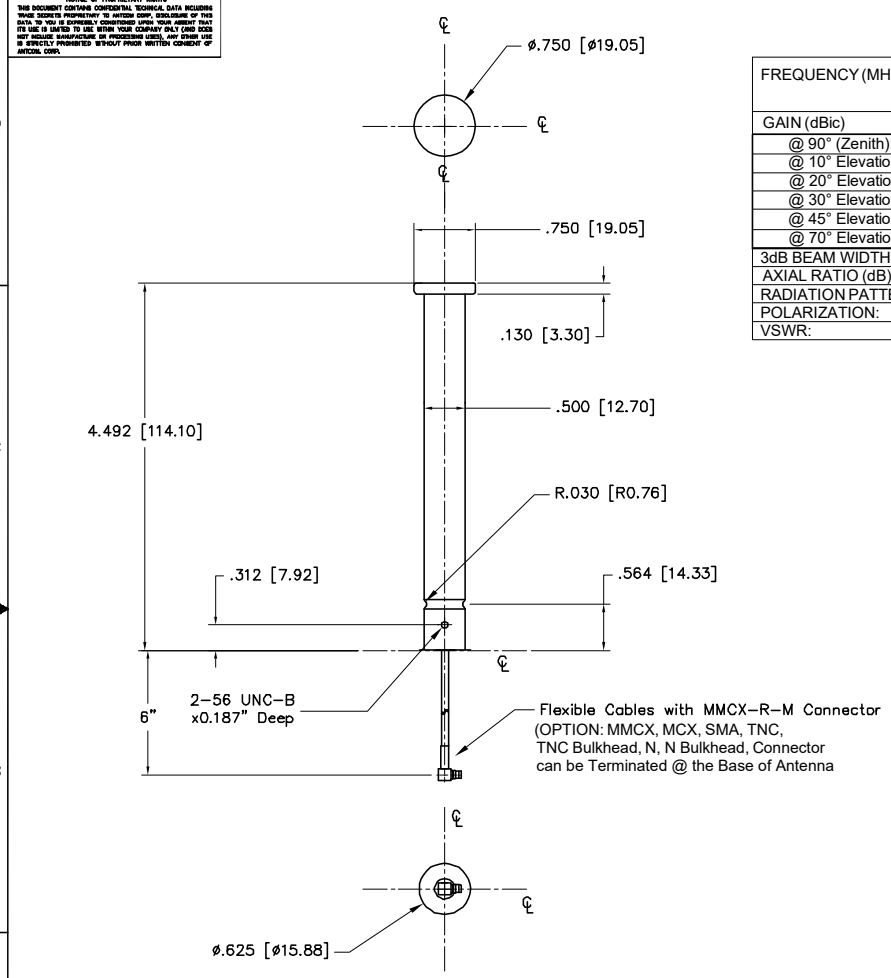


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Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

FREQUENCY (MHz):	(1575.42 ±13) L1 GPS	(1542.50 ±17.5) Rx INMARSAT	(1642.50 ±17.5) Tx INMARSAT	(1602-1616) GLONASS	(1616-1626) IRIDIUM	(1227.60 ±13) L2 GPS
GAIN (dBic)	IN FREE SPACE / ON 3.5” Dia. BASE PLATE					
@ 90° (Zenith):	+1.7/+1.0	+1.6/0.0	+2.3/-1.2	+2.1/+0.3	+1.6/-0.8	-6.0
@ 10° Elevation:	-2.9/+0.3	-3.0/-0.8	-1.4/-0.7	-1.8/+0.5	-2.0/-0.4	-8.5 to -13.5
@ 20° Elevation:	-1.1/+1.2	-1.3/+0.2	0.0/+0.1	-0.3/+1.3	-0.7/+0.4	-8.2 to -11.2
@ 30° Elevation:	+0.4/+1.8	+0.2/+1.0	+1.3/+0.4	+0.9/+1.4	+0.6/+0.7	-7.7 to -9.7
@ 45° Elevation:	+1.2/+1.9	+1.2/+1.0	+1.7/+0.4	+1.4/+1.6	+1.0/+0.6	-6.6 to -8.0
@ 70° Elevation:	+1.6/+1.5	+1.6/+0.4	+2.0/-1.0	+1.9/+0.8	+1.3/-0.2	-6.0
3dB BEAM WIDTH (Deg.)	133/177	131/175	142/180	137/180	139/182	107/170
AXIAL RATIO (dB)	1 to 3	1 to 4	1 to 3	1 to 3	1 to 3	1 to 5
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP					
VSWR:	< 2.0:1					

POWER HANDLING: 10 Watts (without GPS LNA)

LNA OPTION for GPS:

LNA GAIN: (27.0+/-2.0) dB
LNA NOISE FIGURE: <1.4 dB
LNA P 1dB Out: +13 dBm
VOLTAGE/CURRENT: (3-10) Volts/ 20mA

MECHANICAL:

SIZE: DIAMETER: 0.50 in.[12.70 mm]
HEIGHT: 3.862 in. [98.09 mm]
WEIGHT: < 2.8 oz (79.4 g)
FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441
COLOR: OLIVE DRAB GREEN #34031 PER FED-STD-595B
MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,
SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR: MMCX RIGHT ANGLE MALE WITH 7” LONG CABLE
(OPTION: MCX, SMA, TNC, TNC Bulkhead, N, N Bulkhead,
MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541,
MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

CONFIGURATION:	FREQUENCY:	LNA :	CABLE'S LENGTH :	CONNECTOR :	COLOR :
1: 2” SQ. (FLAT)	1216: L1/L2/Inmarsat	A1: WITH LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9” SQ. (FLAT)	1215: L1/L2		M: WITH MAG. MOUN T	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6” DIA. (FLAT)	15: L1	P: WITHOUT LNA	#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5” DIA. (FLAT)	RR: TX: RHCP, RX: RHC P		R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
0.5R: 0.5” Dia. Helix Rod					
53: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ALL SCREWS ARE SUPPLIED BY ANTCOM CORPORATION

P/N: 0.7R1216P-7MM-4

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

QUANTITY REQD		DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
1	1		–	–	–	1
–2	–1	PARTS LIST				

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ⌀ Ø".003
MACHINED SURFACES 125

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Feb-23-04
CAD FILE NO
DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA

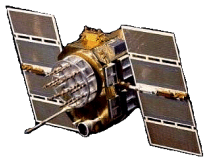
HANDHELD L1/L2
GPS/INMARSAT/GLONASS/
IRIDIUM ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 0.7R1216X-6MM-4 | REV –
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Mark VIIE L1/L2 GPS Antenna, P/N: XBG1215A2-XMM-4 Rev B

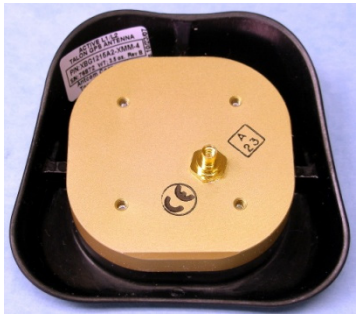
2.8"x3.1"x0.9", Back Mount Configuration

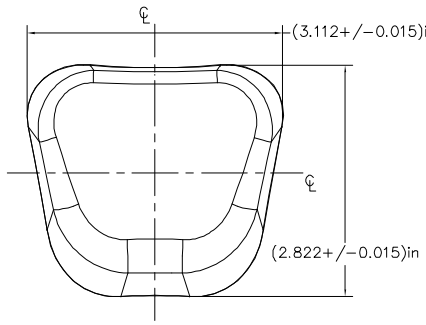


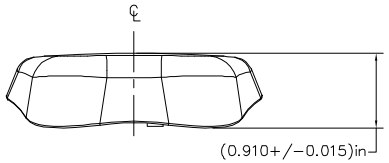
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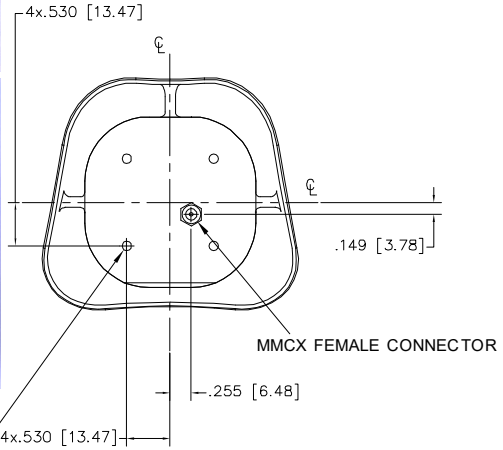












SPECIFICATIONS

ELECTRICAL:

	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
FREQUENCY:						
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.7:1			< 1.7:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNAGAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	21 dB			21 dB		
LNA NOISE FIGURE:	1.8 dB			1.8 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	(2.5 to 24) Volts dc @ <25 mA					
POWER HANDLING	1 Watt CW					

MECHANICAL:

SIZE:	LENGTH: 2.822 in, WIDTH: 3.112 in. HEIGHT: 0910 in
WEIGHT:	< 3.5 oz. (< 99 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	MMCX FEMALE (OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, SMA, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

ZONE	REV	DESCRIPTION	DATE	APPROVED
	B	Rev Outter Mounting Holes/Label	Aug/28/07	S.H

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH 33 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (0.58" THICK)
4: MINI ARINC		A2: WITH 20 DB LNA, A4: WITH 40 DB LNA

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG. N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead d	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

P/N: XBG1215A2-XMM-4

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH
5				–	–
3	1	Gasket (Item 544xb)	12345G-3M-1G-XB	–	–
2	1				
1	1			–	–

PARTS LIST

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .020, .XXX ± .020, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ ⌀.005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH Apr8-25-07 | CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE
MARK VIIE GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO XBG1215A2-XMM-4 | REV B

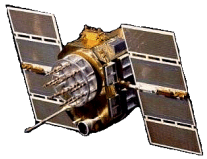
SCALE 1/1 | SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STAMP IS RED

NMO Connector Option is Now Available for Some Antennas

Talon L1/L2 GPS Antenna, P/N: XG1215A2-XMM-4

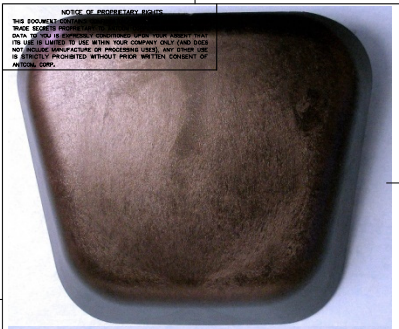
2.7"x3.0"x0.69", Back Mount Configuration



ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

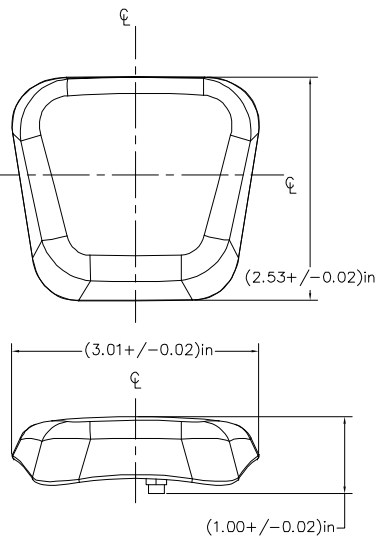
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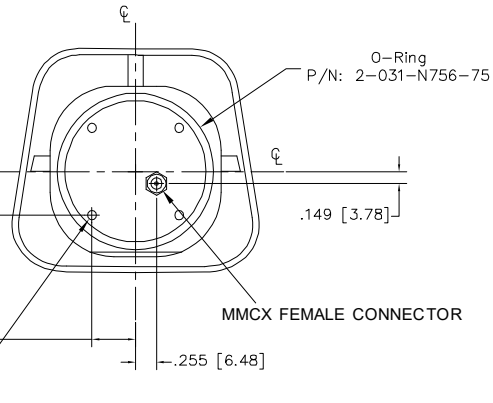
NOTICE OF PROPRIETARY RIGHTS
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SPECIFICATIONS

ELECTRICAL:

	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
FREQUENCY:						
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.7:1			< 1.7:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN:	21 dB			21 dB		
LNA NOISE FIGURE:	1.8 dB			1.8 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	(2.5 to 24) Volts dc @ <25 mA					
POWER HANDLING	1 Watt CW					

MECHANICAL:

SIZE: LENGTH: 2.725 in.[69.21 mm], WIDTH: 3.00 in. [76.36 mm]
HEIGHT: 0.690 in. [17.53 mm], 0.58" [14.73](Optional for Passive)

WEIGHT: < 3.5 oz. (< 99 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: MMCX FEMALE
(OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, SMA, or Cable)

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

QUANTITY REQD		DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
				–	–	–	5
1		O-RING	2-031-N756-75	–	–	–	3
1				–	–	–	2
1				–	–	–	1
-2	-1	PARTS LIST					

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: WITH 33 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and THINNER (0.58" THICK)
4: MINI ARINC		A2: WITH 20 DB LNA, A4: WITH 40 DB LNA

P/N: XG1215A2-XMM-4

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG. N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead d	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .020 .XXX ± .020, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER ML-S-8879. DIA'S ON A COMMON ℄ ⌀.005. MACHINED SURFACES 125/
DO NOT SCALE DRAWING

DRAWN
CHECKED W. BOAS 01-05-29
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

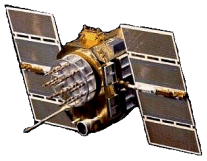
OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE
Talon GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO XG1215A2-XMM-4 | REV –
SCALE 1/1 | SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STAMP IS RED

NMO Connector Option is Now Available for Some Antennas

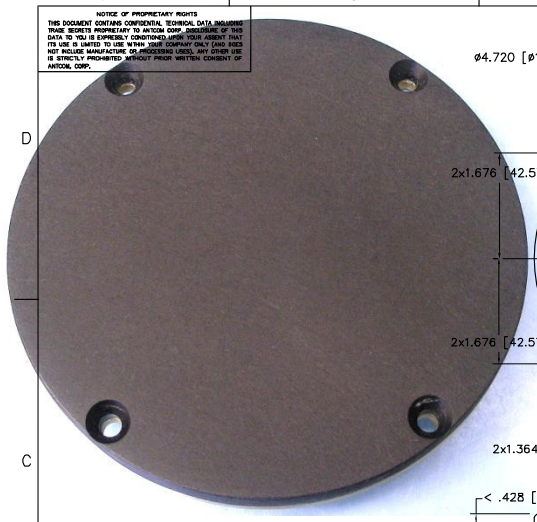
Active 1-Element (RHCP) L1/L2 GPS Antenna
(4.72” Dia. x 0.428” Thick), P/N: 4.7G1215A-XS-4 Rev H (Active)

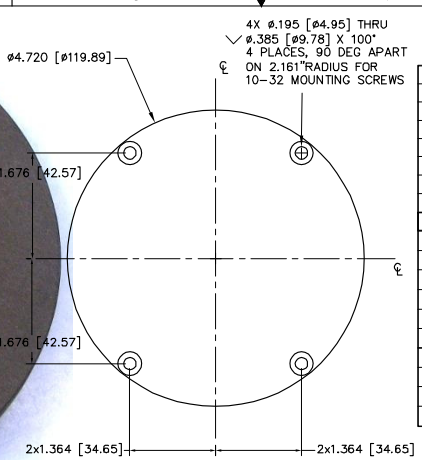


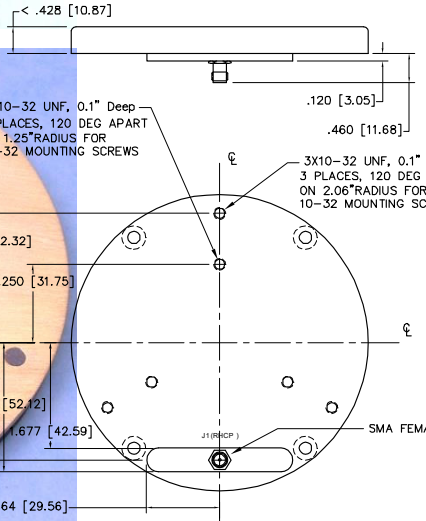
ISO 9001:2008/FAA Approved Facility

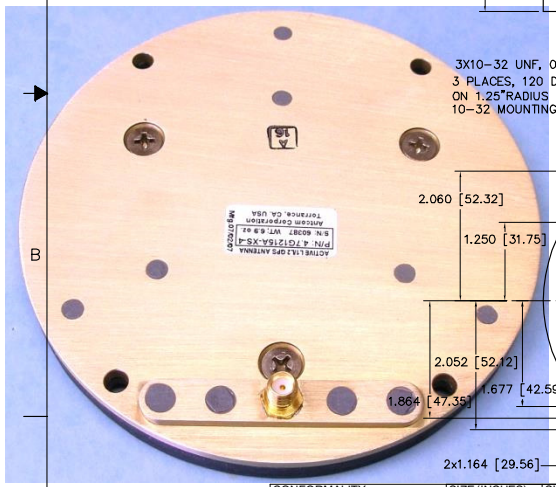
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

	L1: (1575.42 ±15) MHz			L2: (1227.60 ±15) MHz		
FREQUENCY:						
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA ELEMENT GAIN (dBic):	Free Space	3.5 in Dia.	4 ft G.P.	Free Space	3.5 in Dia.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.5	+ 5.4	+ 2.4	+ 2.5	+ 4.1	+ 5.6
@ 10 ° Elevation:	- 1.5	- 1.6	- 1.7	- 4.3	- 3.2	- 2.8
@ 20 ° Elevation:	0.0	0.0	+ 0.9	- 3.0	- 1.6	+ 0.5
@ 30 ° Elevation:	+ 1.1	+ 1.3	+ 2.0	- 1.5	- 0.3	+ 2.4
@ 60 - 90 ° Elevation:	> 3.0	> 4.2	> 2.5	> 1.7	> 2.7	> 3.6
BEAM WIDTH (3dB):	112 Deg.	102 Deg.	145 Deg.	104 Deg.	93 Deg.	80 Deg.
AXIAL RATIO:	2 dB			2 dB		
LNA GAIN OPTION	33 dB					
LNA NOISE FIGURE:	3.0 dB					
LNA P1dB Out:	+15 dBm					
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		

MECHANICAL:

SIZE:	DIAMETER: 4.72 in [119.89 mm] HEIGHT: 0.428 in. [10.87 mm]
WEIGHT:	12oz. (340 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, SMB, SSMB, SMC, SSMC, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	FINISH
4	–	MOUNTING SCREWS: 10-32, 3/4"	MS24693C274	–
A/R	–			–
1	1			–

PARTS LIST

CONFORMALITY:	SIZE (INCHES):	SHAPE	FREQ. BAND:	LNA:
CC: CONFORMAL/CURVED		C: CIRCULAR	1215: L1/L2	A: WITH LNA
CF: CONFORMAL/FLAT		S: SQUARE	15: L1 ONLY	AL: WITH LNA/LIMITER
NF: NOT CONFORMAL/FLAT		T: TRIANGULAR		P: WITHOUT LNA
NC: NOT CONFORMAL/CURVED		H: HEXAGON		P2: WITHOUT LNA/DUAL RHCP/LHCP POL
		R: RECTANGULAR		P2L: WITHOUT LNA/DUAL NEAR POLARIZATION

P/N: 4.7G1215A-XS-4

NUMBER OF ELEMENT:	CABLE'S LENGTH	CONNECTOR	COLOR
	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
	M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTER LESS GRAY #36320 PER FED-STD-595B
	#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
	R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTER LESS BLACK #37038 PER FED-STD-595B

DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XXX± .020

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XXX± .030 ANGLES
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH July-13-07
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

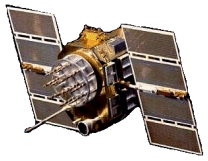
ACTIVE 1-ELEMENT
RHCP L1/L2 GPS
ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 4.7G1215A-XS-4 | REV H
SCALE 1/1 SHEET 1 OF 1

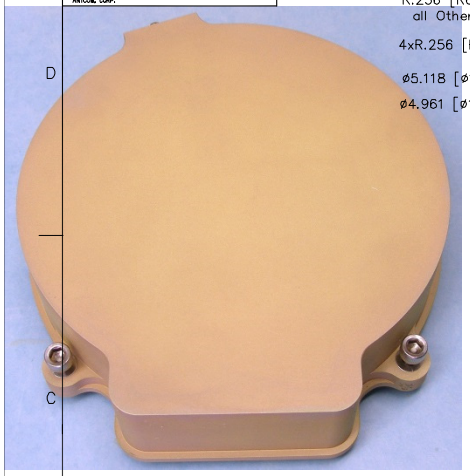
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

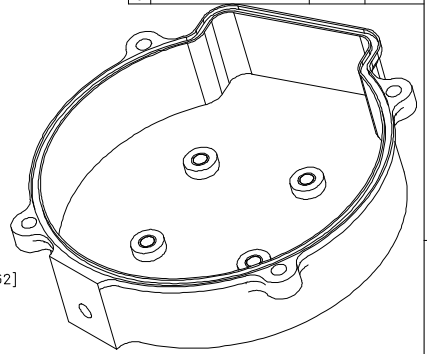
NMO Connector Option is Now Available for Some Antennas

Passive L1/L2 GPS Antenna for Inductive Coupler (5.118" Dia. x 1.255" Thick), P/N: 5ICG1215P-NT-5 Rev C (with TNC Connector and with below Changes in red Box),

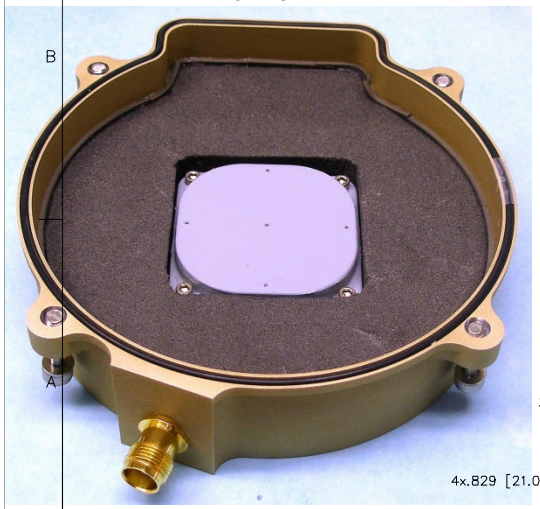


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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	B	Dim In Rect. Boxes	OCT-07-08	S.H
	C	Dim In Rect. Boxes	Nov-25-08	S.H

QTY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
			QQ-A-250/11	6061-T6 AL ALLOY	YELLOW IRIDITE PER MIL-C-5541 CLASS 3	1

QUANTITY REQD — PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ ⌀.005
MACHINED SURFACES 125/
DO NOT SCALE DRAWING

DRAWN S. HUYNH Dec-08-05
CHECKED
ENGINEER
APPROVED S. HUYNH Dec-08-05
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

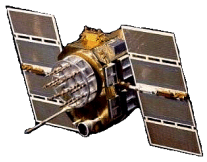
NLOSS Inductive Cover

SIZE D | CAGE NO 3CVE1 | DRAWING NO INDUCTIVE-COVER | REV C

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

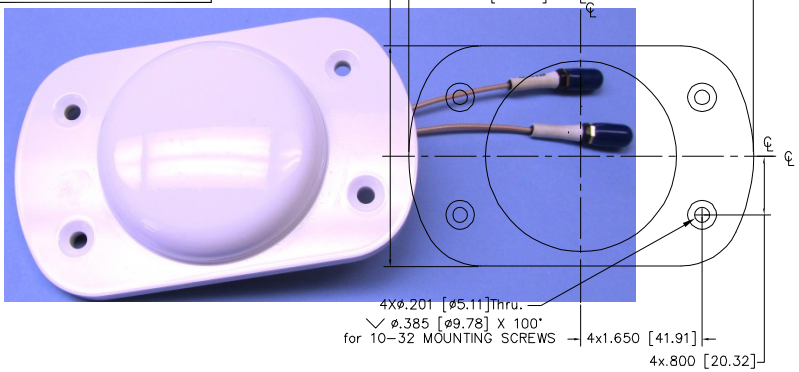
Dual Polarization (RHCP/LHCP) L1/L2 GPS Antenna
P/N: 42G1215RL-AA-5SSF-1
(4.7" x 3.0") 743 Arinc Configuration

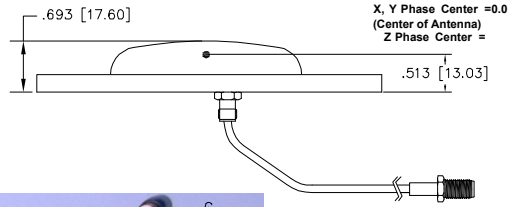


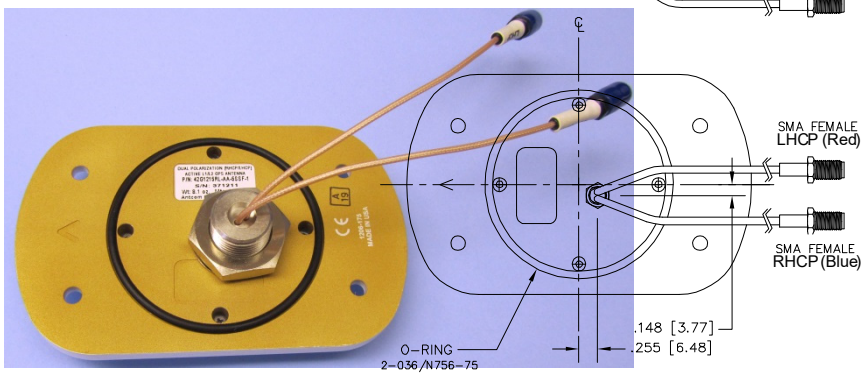
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

ANTCOM CORPORATION . 367 Van Ness Way, #602 . Torrance, CA 90501 . Tel: (310) 782-1076 . Fax: (310) 782-1086 . E-mail: antennas@antcom.com . http://www.antcom.com

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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP/LHCP		RHCP/LHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 3.5	+ 3.3	+ 4.9
@ 10 ° Elevation:	- 1.8	- 2.0	- 3.8	- 3.6
@ 20 ° Elevation:	- 0.3	+ 0.8	- 2.0	- 0.1
@ 30 ° Elevation:	+ 1.4	+ 1.8	- 0.5	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	> 2.8	> 2.7	> 3.0
BEAM WIDTH (3dB):	114 Deg.	139 Deg.	106 Deg.	75 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING			
LNA GAIN:	33 dB		35 dB	
LNA NOISE FIGURE:	3.0 dB		3.0 dB	
LNA P1dB Out:	+13 dBm		+13 dBm	
LNA DC POWER:	2.5V/20mA,3V/29mA,3.3V/35mA,(2.5-24)V/<50mA			
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)			

MECHANICAL:

SIZE:	WIDTH: 3.00 in. [76.20 mm], LENGTH 4.700 in. [119.38 mm], HEIGHT: 0.6930 in. [17.60 mm]
WEIGHT:	6.8 oz. (191 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE AND FIRE RETARDANT
CONNECTOR:	2x 5in SMA FEMALE CABLES (OPTION: SMA, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

QUALIFIED TO: FAA TSO-C144, DO-160D:E1-CBX(S)XSFDXSXXXXXXX(XXCX)(C)

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100

QUANTITY REQD	DESCRIPTION	PART NO	FINISH	ITEM NO
			–	5
4	MOUNTING SCREW: (10-32, 1")	MS24693C276		4
			–	3
1	O-RING	2-036/N756-75	–	1

PARTS LIST

SIZE:	FREQ. BAND:	POLARIZATION:	LNA:
1: 2" SQ.	1215: L1/L2	RL: RHCP/LHCP	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	VL: VER/HOR	AL: WITH LNA/LIMITER
2: 2.6" DIA.			P: WITHOUT LNA
3: 3.5" DIA.			PL: WITHOUT LNA and THINNER (HEIGHT = 0.58")
4: MINI ARINC			

P/N: 42G1215RL-AA-5SSF-1

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS XX± .015, XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DATA ON A COMMON ⊕ OF .005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH 01-05-29 | CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

743 Arinc
RHCP/LHCP ACTIVE L1/L2
GPS ANTENNA

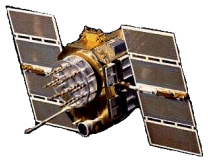
SIZE D | CAGE NO 3CVE1 | DRAWING NO 42G1215RL-AA-XSSF-1 | REV –

SCALE 1/1 | SHEET 1 OF 1

ZONE	REV	DESCRIPTION	DATE	APPROVED

NMO Connector Option is Now Available for Some Antennas

Dual Polarization (RHCP/LHCP) L1/L2 GPS Antenna
P/N: 42G1215RL-AA-XT-1
(4.7” x 3.0”) 743 Arinc Configuration

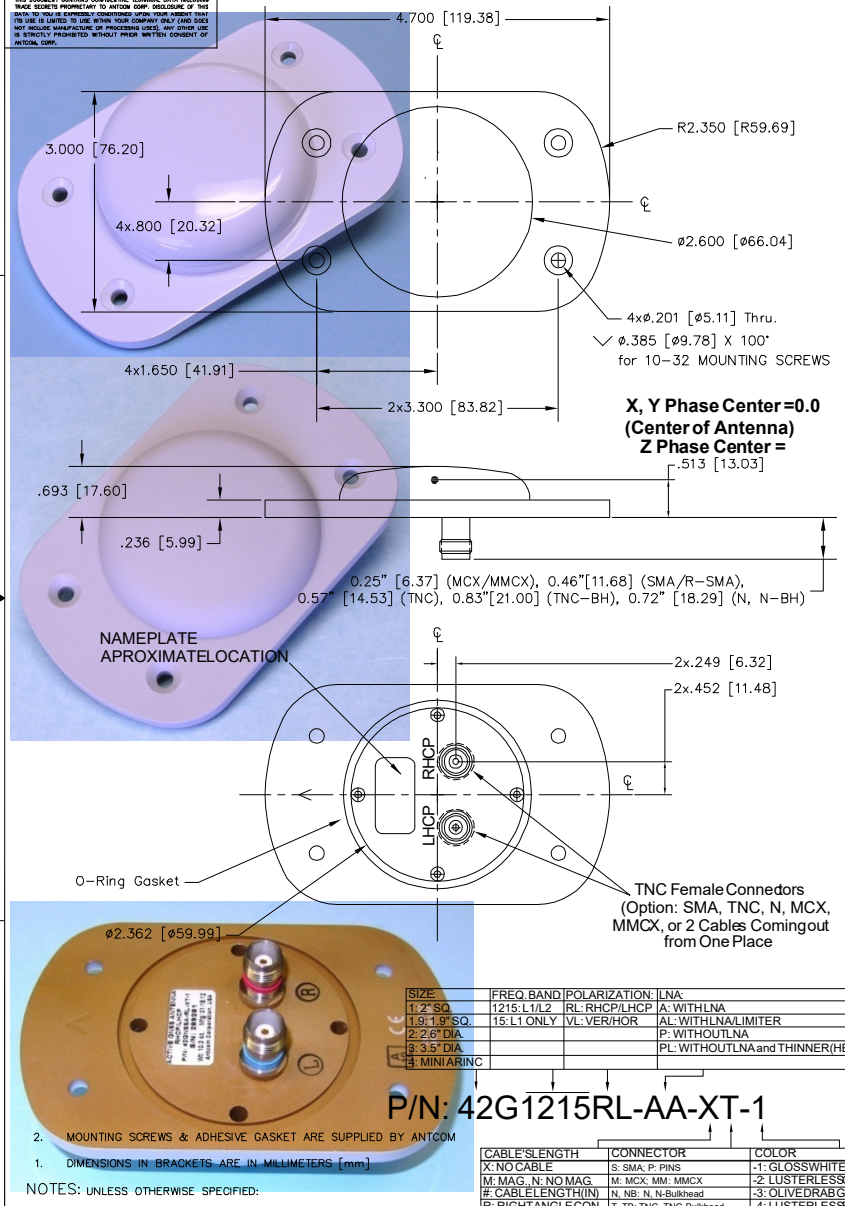


ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP/LHCP		RHCP/LHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNAGAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 3.5	+ 3.3	+ 4.9
@ 10 ° Elevation	- 1.8	- 2.0	- 3.8	- 3.6
@ 20 ° Elevation	- 0.3	+ 0.8	- 2.0	- 0.1
@ 30 ° Elevation	+ 1.4	+ 1.8	- 0.5	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	> 2.8	> 2.7	> 3.0
BEAMWIDTH (3dB):	114 Deg.	139 Deg.	106 Deg.	75 Deg.
AXIALRATIO:	2 dB		2 dB	
LIGHTNINGPROTECTION:	DC GROUNDING			
LNA GAIN:	33 dB		35 dB	
LNA NOISE FIGURE:	3.0 dB		3.0 dB	
LNA P1dB Out:	+13 dBm		+13 dBm	
LNA DC POWER:	2.5V/20mA,3V/29mA,3.3V/35mA,(2.5-24)V/<50mA			
POWERHANDLING	1 Watt CW, Optional: 10 Watts 1 MicrosecPulse (-AL-)			

MECHANICAL:

SIZE:	WIDTH: 3.00 in. [76.20 mm], LENGTH 4.700 in. [119.38 mm], HEIGHT: 0.6930 in. [17.60 mm]
WEIGHT:	6.8 oz. (191 g)
FINISH:	SKYDROLRESISTANTPOLYURETHANEENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUMALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROLRESISTANCE, AND FIRE RETARDANT
CONNECTOR:	TNC FEMALE (OPTION: SMA, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLYSEAL

FEDERAL& MILITARYSPECIFICATIONS

QUALIFIEDTO: FAA TSO-C144, DO-160D:E1-CBX(S)XSFDXSXXXXXXX(XXCX)(C)

ACCEPTANCETEST PROCEDURE ATP-GPS-L1L2-100

ITEM NO	PARTS LIST / DESCRIPTION	PART NO	FINISH	QUANTITY REQD
5			–	
4	MOUNTING SCREW: (10-32, 1")	MS24693C276		4
3			–	
1	O-RING	2-036/N756-75	–	1

SIZE:	FREQ. BAND	POLARIZATION:	LNA:
1: 2" SQ.	1215: L1/L2	RL: RHCP/LHCP	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	VL: VER/HOR	AL: WITH LNA/LIMITER
2: 2.6" DIA.			P: WITHOUTLNA
3: 3.5" DIA.			PL: WITHOUTLNA and THINNER (HEIGHT = 0.58")
4: MINI ARINC			

P/N: 42G1215RL-AA-XT-1

CABLE'SLENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; P: PINS	-1: GLOSSWHITE#17925PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESSGRAY#36320PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVEDRABGREEN#34031PER FED-STD-595B
R: RIGHTANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESSBLACK#37038PER FED-STD-595B

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .01, .XXX ± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005 M
MACHINED SURFACES 125
DO NOT SCALE DRAWING
DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

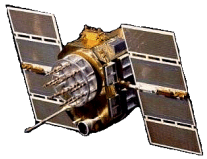
ANTCOM CORP. TORRANCE, CALIFORNIA

743 Arinc
RHCP/LHCP ACTIVE L1/L2
GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 42G1215RL-AA-XT-1 | REV –
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

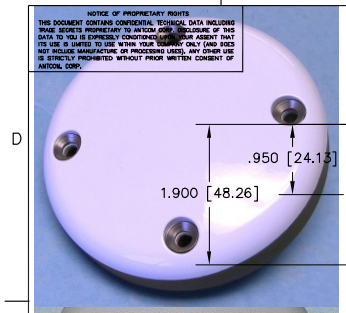
Dual Polarization (RHCP/LHCP) L1/L2GPS Antenna
P/N: 3G1215RL-PP-XS-X RevA (Old P/N: 3G1215PJ2-XS-1)
3.5" Diameter Configurations with Front/Back Mounting Option



Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

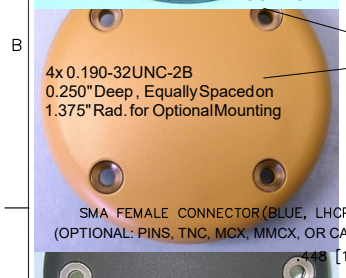
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SIZE:	FREQ.BAND:	POLARIZATION:	LNA:
1: 2" SQ.	1215: L1/L2	RL: RHCP/LHCP	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	VL: VER/HOR	AL: WITH LNA/LIMITER
2: 2.6" DIA.			P: WITHOUT LNA
3: 3.5" DIA.			PL: WITHOUT LNA and THINNER (HEIGHT= 0.58")
4: MINI ARINC			

P/N: 3G1215RL-PP-XS-1

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTER LESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTER LESS BLACK #37038 PER FED-STD-595B

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

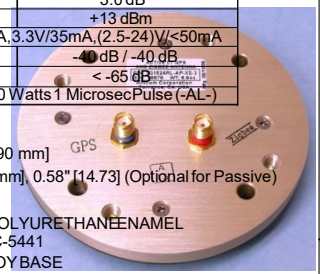
SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz	
RADIATION PATTERN:	HEMISPHERICAL			
POLARIZATION:	RHCP/LHCP		RHCP/LHCP	
VSWR:	< 1.5:1		< 1.5:1	
IMPEDANCE:	50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.7	+ 3.5	+ 3.3	+ 4.9
@ 10 ° Elevation	- 1.8	- 2.0	- 3.8	- 3.6
@ 20 ° Elevation	- 0.3	+ 0.8	- 2.0	- 0.1
@ 30 ° Elevation	+ 1.4	+ 1.8	- 0.5	- 1.8
@ 60 - 90 ° Elevation:	> 3.9	> 2.8	> 2.7	> 3.0
BEAM WIDTH (3dB):	114 Deg.	139 Deg.	106 Deg.	75 Deg.
AXIAL RATIO:	2 dB		2 dB	
LIGHTNING PROTECTION:	DC GROUNDING			
LNA GAIN OPTION	33 dB		35 dB	
LNA NOISE FIGURE:	3.0 dB		3.0 dB	
LNA P1dB Out:	+13 dBm		+13 dBm	
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA			
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB		-40 dB / -40 dB	
@ (-100/+100) MHz	< -65 dB		< -65 dB	
POWER HANDLING	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)			

MECHANICAL:

SIZE:	DIAMETER: 3.50 in.[88.90 mm] HEIGHT: 0.690 in. [17.53 mm], 0.58" [14.73] (Optional for Passive)
WEIGHT:	5.15 oz. (.146 Kg)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)





ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	3G1215PJ2-XX-X	Aug-21-06	S.H

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	FINISH	ITEM NO
		PARTS LIST			
4	–	MOUNTING SCREWS: 10-32, 3/4"	MS24693C274	–	5
A/R	–	WASHER, CUSTOM C'SINK	3G15P1001-6	–	3
1	1	ADHESIVE GASKET	12345G-3M-3G	–	1

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DRAWN
CHECKED M. BOAS 01-05-29
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

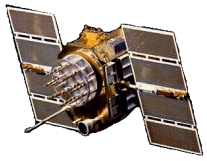
ANTCOM CORP. TORRANCE, CALIFORNIA

OUTLINE DRAWING
L1/L2 ACTIVE, OR PASSIVE
RHCP/LHCP GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3G1215RL-PP-XX-X | REV A
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Dual Polarization (RHCP/LHCP) L1/L2GPS Antenna
P/N: 1G1215RL-PP-XS-X RevA
2" Square Configurations with Back Mounting Option



Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

SPECIFICATIONS

ELECTRICAL:

	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
FREQUENCY:						
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP/LHCP			RHCP/LHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNAGAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.7	+ 4.7	+ 3.1	- 1.7	+ 3.3	+ 4.5
@ 10 ° Elevation	- 2.9	- 1.8	- 1.9	- 7.3	- 3.8	- 3.5
@ 20 ° Elevation	- 1.3	- 0.3	+ 0.6	- 6.2	- 2.0	- 0.8
@ 30 ° Elevation	0.0	+ 1.4	+ 1.7	- 5.2	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 3.0	> 3.9	> 2.4	> - 3.2	> 2.7	> 2.2
BEAM WIDTH (3dB):	108 Deg.	114 Deg.	143 Deg.	100 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					
LNA GAIN OPTION	33 dB			35 dB		
LNA NOISE FIGURE:	3.0 dB			3.0 dB		
LNA P1dB Out:	+13 dBm			+13 dBm		
LNA DC POWER:	2.5V/20mA,3V/29mA,3.3V/35mA,(2.5-24)V/<50mA					
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB			< -65 dB		
POWER HANDLING	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)					

MECHANICAL:

SIZE: LENGTH: 2.080 in.[52.78 mm], WIDTH: 2.080 in. [52.78 mm]
HEIGHT: 0.690 in. [17.53 mm], 0.58" [14.73](Optional for Passive)

WEIGHT: 2.88 oz. (82 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT

CONNECTOR: SMA FEMALE
(OPTION: TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

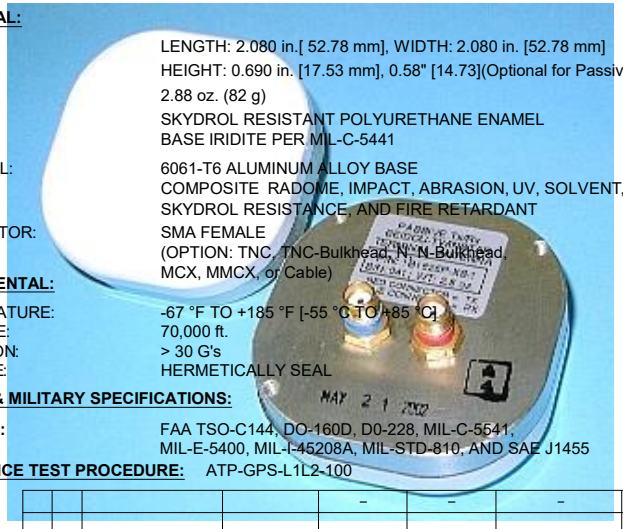
ENVIRONMENTAL:

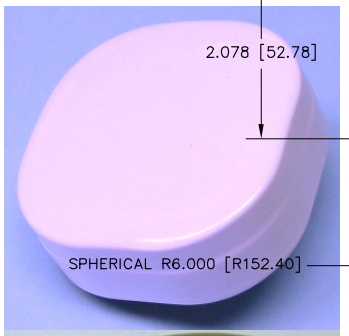
TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

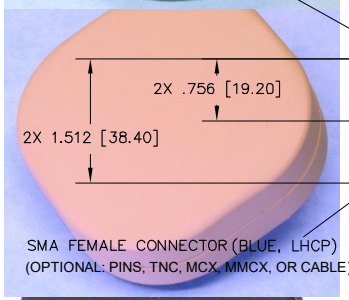
DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

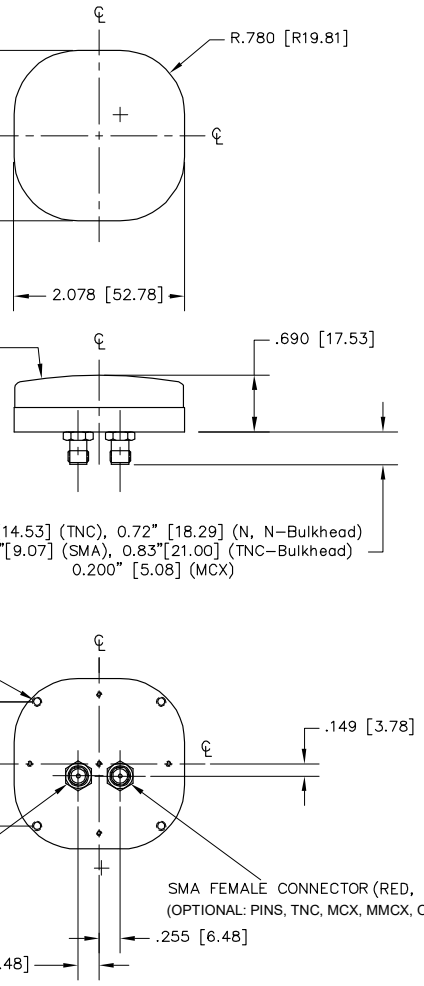












ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH
5				-	-	-
4						
3	1	ADHESIVE GASKET	12345G-3M-1G	-	-	-
2	1			-	-	-
1	1			-	-	-

PARTS LIST

SIZE:	FREQ. BAND:	POLARIZATION:	LNA:
1: 2" SQ.	1215: L1/L2	RL: RHCP/LHCP	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	VL: VER/HOR	AL: WITH LNA/LIMITER
2: 2.6" DIA.			P: WITHOUT LNA
3: 3.5" DIA.			PL: WITHOUT LNA and THINNER (HEIGHT= 0.58")
4: MINI ARINC			

P/N: 1G1215RL-PP-XS-1

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE#17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTER LESS GRAY#36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhead	-3: OLIVE DRAB GREEN#34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTER LESS BLACK#37038 PER FED-STD-595B

2. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX ±.015 .XXX ±.005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ ⌀.005
MACHINED SURFACES 125

DRAWN
CHECKED M. BOAS 01-05-29
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

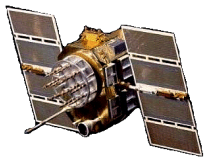
OUTLINE DRAWING
L1/L2 ACTIVE or PASSIVE
RHCP/LHCP GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1G1215RL-PP-XX-X | REV -

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Dual Polarization (RHCP/LHCP) L1/L2GPS Antenna
P/N: 1.9G1215RL-PP-XRS-X
1.9" Square Configurations with Back Mounting Option

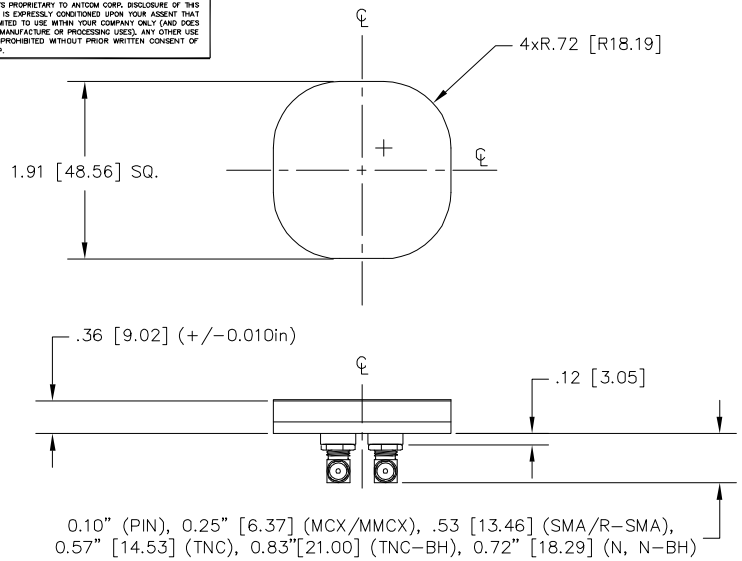


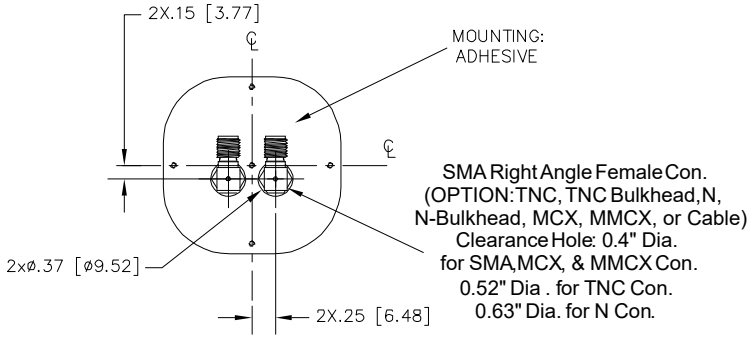
ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATION S

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP/LHCP					
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 2.7	+ 4.7	+ 3.1	+ 1.5	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 4.4	- 1.8	- 1.9	- 6.7	- 3.8	- 3.5
@ 20 ° Elevation:	- 2.3	- 0.3	+ 0.6	- 5.6	- 2.0	- 0.8
@ 30 ° Elevation:	- 0.8	+ 1.4	+ 1.7	- 4.5	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 2.0	> 3.9	> 2.4	> 0.0	> 2.7	> 2.2
BEAM WIDTH (3dB):	113 Deg.	114 Deg.	143 Deg.	85 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	(21.0+/-2.0) dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	1.912 in.[48.56mm] SQ. HEIGHT: 0.36 in. [9.02 mm]
WEIGHT:	2.3 oz. (65 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE THERMOSET PLASTIC RADOME, UV, ABRASION AND SKYDROL RESISTANCE
CONNECTOR:	0.030" DIA. PIN, 0.100" LONG (OPTION: SMA, TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	>30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, AND MIL-STD-810

SIZE:	FREQ. BAND	POLARIZATION	LNA:
1: 2" SQ.	1215: L1/L2	RL: RHCP/LHCP	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	VL: VER/HOR	AL: WITH LNA/LIMITER
2: 2.6" DIA			P: WITHOUT LNA
3: 3.5" DIA			PL: WITHOUT LNA and THINNER (HEIGHT = 0.58")
4: MINI ARINC			

P/N: 1G1215RL-PP-XRS-1

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; RS: SMA-R; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTER LESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhea d	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
1	1	ADHESIVE GASKET	12345G-3M-1G	–	–	–	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .020 .XXX± .010 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Sep-19-01
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

1.9" SQUARE, L1/L2 PASSIVE
RHCP/LHCP GPS ANTENNA

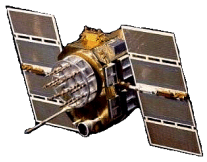
SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.9G1215RL-PP-XRS-4 | REV A
SCALE 1/1 | SHEET 1 OF 1

ORIGINAL DOCUMENT WHEN STAMP IS RED

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

NMO Connector Option is Now Available for Some Antennas

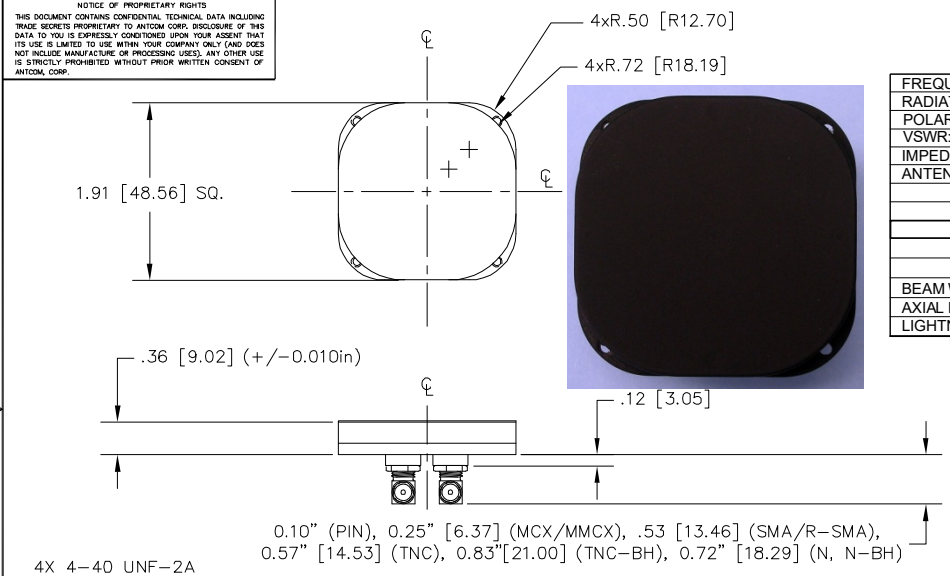
Dual Polarization (RHCP/LHCP) L1/L2GPS Antenna
P/N: 1.9G1215RL-PP-XRS-X Rev B
1.9" Square Configurations with Back Mounting Option

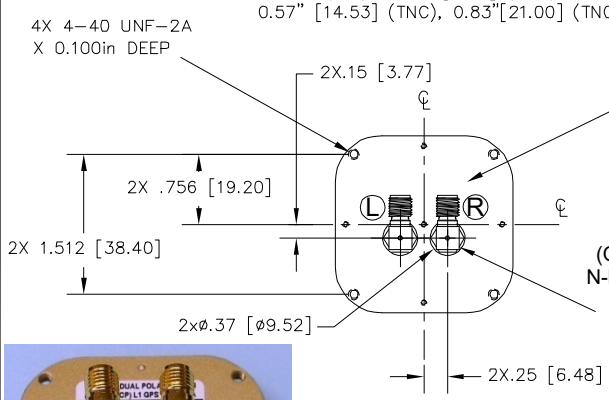


Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATION S

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP/LHCP					
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	3 in G.P.	4 ft G.P.	Free Space	3 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 2.7	+ 4.7	+ 3.1	+ 1.5	+ 3.3	+ 4.5
@ 10 ° Elevation:	- 4.4	- 1.8	- 1.9	- 6.7	- 3.8	- 3.5
@ 20 ° Elevation:	- 2.3	- 0.3	+ 0.6	- 5.6	- 2.0	- 0.8
@ 30 ° Elevation:	- 0.8	+ 1.4	+ 1.7	- 4.5	- 0.5	+ 1.4
@ 60 - 90 ° Elevation:	> 2.0	> 3.9	> 2.4	> 0.0	> 2.7	> 2.2
BEAM WIDTH (3dB):	113 Deg.	114 Deg.	143 Deg.	85 Deg.	106 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	(21.0+/-2.0) dB
LNA NOISE FIGURE:	1.8 dB
LNA P 1dB Out:	+16 dBm
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (15 TO 25) mA

MECHANICAL:

SIZE:	1.912 in.[48.56mm] SQ. HEIGHT: 0.36 in. [9.02 mm]
WEIGHT:	2.3 oz. (65 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE THERMOSET PLASTIC RADOME, UV, ABRASION AND SKYDROL RESISTANCE
CONNECTOR:	0.030" DIA. PIN, 0.100" LONG (OPTION: SMA, TNC, TNC-Bulkhead, N, N-Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	>30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, AND MIL-STD-810

SIZE:	FREQ. BAND	POLARIZATION	LNA:
1: 2" SQ.	1215: L1/L2	RL: RHCP/LHCP	A: WITH LNA
1.9: 1.9" SQ.	15: L1 ONLY	VL: VER/HOR	AL: WITH LNA/LIMITER
2: 2.6" DIA			P: WITHOUT LNA
3: 3.5" DIA			PL: WITHOUT LNA and THINNER (HEIGHT = 0.58")
4: MINI ARINC			

P/N: 1G1215RL-PP-XRS-1

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; RS: SMA-R; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhea d	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

ITEM NO	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	QUANTITY REQD
1	ADHESIVE GASKET	12345G-3M-1G	–	–	–	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .020 .XXX± .010 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Sep-19-01
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

1.9" SQUARE, L1/L2 PASSIVE
RHCP/LHCP GPS ANTENNA

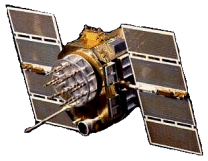
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SCALE 1/1 | SHEET 1 OF 1

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NMO Connector Option is Now Available for Some Antennas

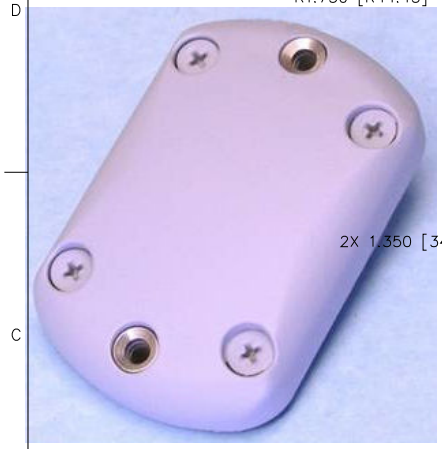
Dual Polarization (RHCP/LHCP) L1/L2 GPS Antenna, P/N: 4G1215RL-P-XSS-2
Dual Polarization (Vertical/Horizontal) L1/L2 GPS Antenna, P/N: 4G1215VH-P-XSS-2
Dual Polarization (RHCP/LHCP) L1/L2 GPS/Glonass, Antenna, P/N: G5AntRL-4PSS2
2.2in. x 3.4in. X 0.71in. Configurations with Front/Back Mounting Option

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

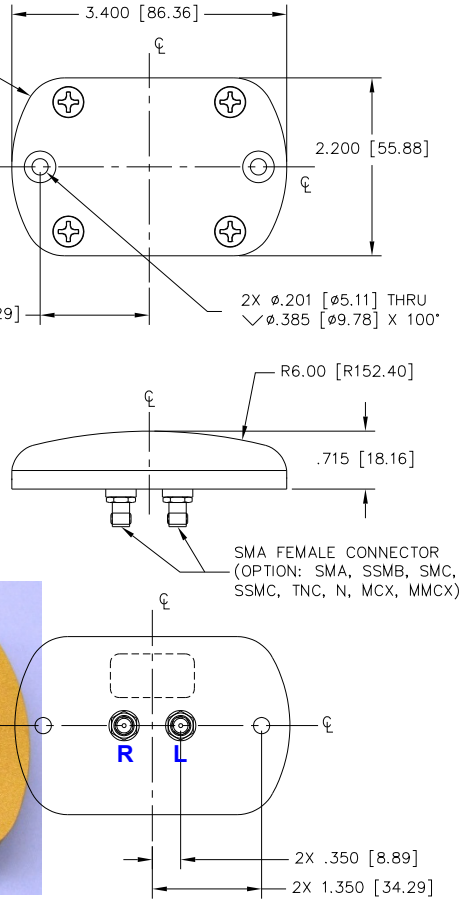


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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz			L2: (1227.60 ±12) MHz		
RADIATION PATTERN:	HEMISPHERICAL					
POLARIZATION:	RHCP			RHCP		
VSWR:	< 1.5:1			< 1.5:1		
IMPEDANCE:	50 ohms			50 ohms		
ANTENNA GAIN (dBic):	Free Space	16 in G.P.	4 ft G.P.	Free Space	16 in G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 4.6	+ 0.3	+ 2.9	+ 1.8	+ 1.9	+ 5.3
@ 10 ° Elevation:	- 2.5	- 3.1	- 1.8	- 4.2	- 3.1	- 2.3
@ 20 ° Elevation:	- 1.1	- 1.1	+ 0.7	- 2.9	- 1.1	+ 0.4
@ 30 ° Elevation:	+ 0.5	+ 0.9	+ 1.7	- 2.0	+ 0.5	+ 2.3
@ 60 - 90 ° Elevation:	> 3.6	+ 3.1/+ 0.3	> 2.1	> 0.9	+ 3.1/+ 1.9	> 3.2
BEAM WIDTH (3dB):	103 Deg.	120 Deg.	146 Deg.	108 Deg.	120 Deg.	74 Deg.
AXIAL RATIO:	2 dB			2 dB		
LIGHTNING PROTECTION:	DC GROUNDING					

LNA OPTION:

LNA GAIN:	33 dB	35 dB
LNA NOISE FIGURE:	3.0 dB	3.0 dB
LNA P1dB Out:	+13 dBm	+13 dBm
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA	
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB	-40 dB / -40 dB
@ (-100/+100) MHz	< -65 dB	< -65 dB
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 Microsec Pulse (-AL-)	

MECHANICAL:

SIZE:	WIDTH: 2.20 in. [55.88 mm], LENGTH 3.40 in. [86.36 mm], HEIGHT: 0.71 in. [18.16 mm]
WEIGHT:	5.15 oz. (146 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	9in SMB MALE CABLE (OPTION: SMA, SSMB, SMC, SSMC, TNC, N, MCX, MMCX)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

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DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

NMO Connector Option is Now Available for Some Antennas

SIZE:	FREQ. BAND:	LNA:
1: 2" SQ.	1215: L1/L2	A: with +33dB LNA; A2: with 20 dB LNA; A27: with +27 dB LNA
1.9: 1.9" SQ.	15: L1 ONLY	A4: with +40 dB LNA; AL: WITH LNA/LIMITTER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		PL: WITHOUT LNA and with LOW PASS FILTER/LIMITTER
4: MINI ARINC		

P/N: 4G1215RL-P-XSS-2

CABLE'S LENGTH:	CONNECTOR:	COLOR:
X: NO CABLE	S: SMA; RS: R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	SMB, SSMB, SMC, SSMC	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
		-5: TAN #: FS 23446 or 33446, FED-STD-595

QUANTITY REQD		DESCRIPTION	PART NO	FINISH	ITEM NO
		PARTS LIST			
4	–	MOUNTING SCREWS for –PL– ONLY: (10–32, 3/4")	MS24693C274	–	2
4	–	MOUNTING SCREW: (10–32, 1")	MS24693C276	–	1

1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLET'S R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005. MACHINED SURFACES 125

ORIGINALLY DRAWN	S. HUYNH	Mar-29-08
ORIGINALLY DESIGNED	S. HUYNH	Mar-29-08
UPDATED	S. HUYNH	Oct-01-13
UPDATE DRAWN	P. TRAN	Oct-01-13
APPROVED	S. HUYNH	Oct-01-13

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA

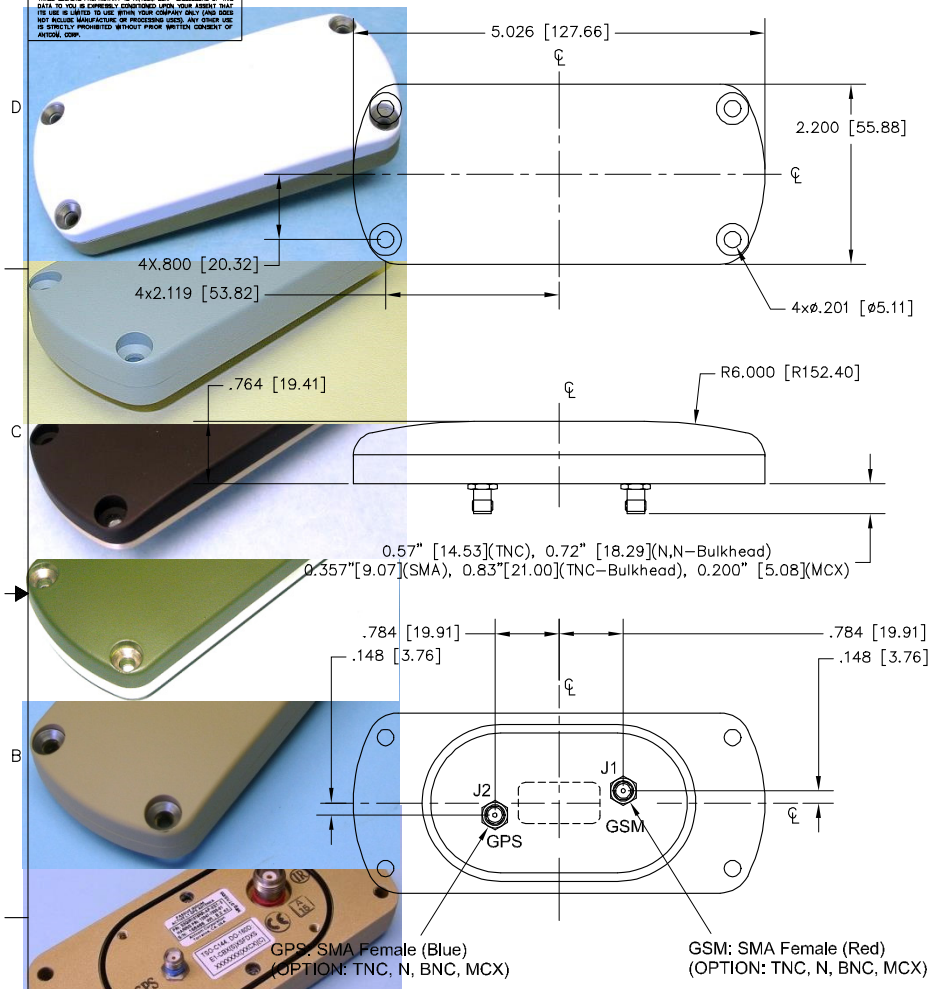
RHCP/LHCP L1/L2 PASSIVE GPS ANTENNA

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	4G1215RL-P-XSS-2	–

SCALE 1/1 SHEET 1 OF 1

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SPECIFICATIONS

ELECTRICAL:

	GPS (L1 or L1/L2, See P/N in Bottom Table)				GSM(ISM)
FREQUENCY:	L1: (1575.4 ±13)		L2: (1227.6 ±13) MHz		(See Bottom Table)
RADIATION PATTERN:	HEMISPHERICAL				Verticle / Horizontal
POLARIZATION:	RHCP				OMNI
VSWR:	< 1.5:1				< 2:1
GAIN (dB):	F.S.	4 ft G.P	F.S.	4 ft G.P	
@ 90° (Zenith):	+ 4.6	+ 2.9	+ 1.8	+ 5.3	
@ 10° Elevation:	- 2.5	- 1.8	- 4.2	- 2.3	
@ 20° Elevation:	- 1.1	+ 0.7	- 2.9	+ 0.4	
@ 30° Elevation:	+ 0.5	+ 1.7	- 2.0	+ 2.3	
@ 60° to 90°Elevation:	> 3.6	> 2.1	> 0.9	> 3.2	
BEAM WIDTH (3dB):	103 °	146 °	108 °	74 °	
AXIAL RATIO @ Zenith:	2 dB				
POWER HANDLING:	1 Watt				
LIGHTNING PROTECTION:	DC GROUNDING				
FILTER:	2 2-POL				
LNA GAIN:	(33.0+/-1.0) dB				
LNA P 1dB Out:	+16 dBm				
LNA NOISE FIGURE:	2.9 dB (Filter loss is Included)				
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (30 TO 50) mA				

MECHANICAL:

SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in. [127.66 mm]
HEIGHT: 0.764 in. [19.41 mm]

WEIGHT: < 8.0 oz. (226 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL
BASE IRIDITE PER MIL-C-5441

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,AND SKYDROL RESISTANCE, FIRE RETARDANT

CONNECTOR: GPS: TNC-F (Blue). IRIDIUM: TNC-F (Red), XM: TNC-F (Green)
(OPTION: SMA, TNC, TNC Bulkhead, N, N Bulkhead, BNC, MCX, MMCX, or Cable)

MOUNTING: FLAT FIXED MOUNT; O-RING &
4 x 10-32 MOUNTING SCREWS PROVIDED

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

CONFIGURATION:	FREQ. BAND:	CABLE'S LENGTH:	GSM/GPS/IRIDIUM CON.:	COLOR:
5G: (5.0x2.2)in Rect.	08: CELLULAR (824-894) MHz (US/Canada)	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
	09: GSM (876-960) MHz (Europe/Asia/Africa/M-East)	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	18: DCS (1710-1880) MHz (Europe/Asia/Africa/M-East)	#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
	19: PCS (1850-1990) MHz (US/Canada)	R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
3B: BLADE	Q4: QUAD BAND (All 4 bands above)		B: BNC Female	-5: TAN #: FS 23446 or 33446, FED-STD-595
	15: L1 GPS (1575+/-12) MHz			
	12: L1/L2 GPS (1575+/-12) / (1227+/-12) MHz			

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	FINISH
		PARTS LIST		
4	4	PANHEAD SCREW, 10-32, 1"L (Item 579)	MS24693C276	–
1	1	O-RING, Item 552	2-038-N756-75	–

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ALL SCREWS ARE SUPPLIED BY ANTCOM CORPORATION

P/N: 5G0915RL-PA-XSS-UU

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .030, .XXX ± .015, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005. MACHINED SURFACES 125. DO NOT SCALE DRAWING

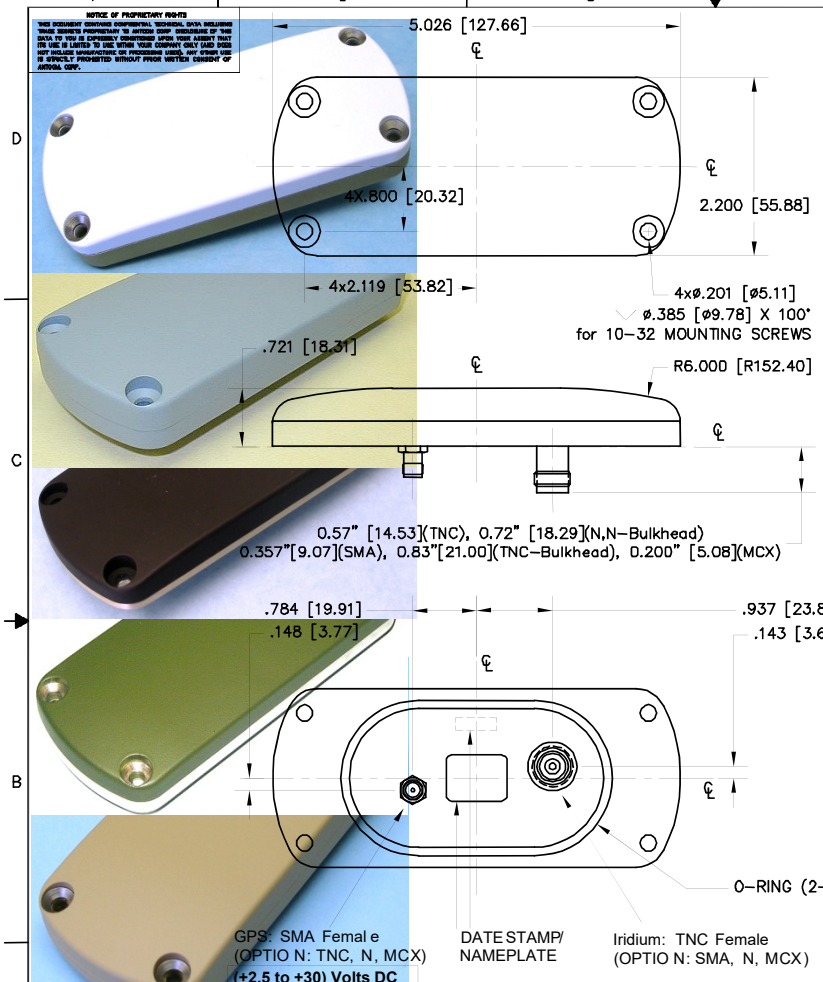
ORIGINALLY DRAWN: S. HUYNH July-12-09
ORIGINALLY DESIGNED: S. HUYNH July-12-09
UPDATED: S. HUYNH Feb-19-14
UPDATE DRAWN: P. TRAN Feb-19-14
APPROVED: S. HUYNH Feb-19-14

ANTCOM CORP. TORRANCE, CALIFORNIA
FLAT FIXED MOUNT GSM(ISM)/GPS ANTENNA
SIZE D | CAGE NO 3CVE1 | DRAWING NO 5G0915RL-PA-XSS-UU | REV –
SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

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SPECIFICATIONS

ELECTRICAL:

	IRIDIUM		L1 OR L1/L2 GPS			
FREQUENCY:	(1610.0 - 1626.5) MHz		L1: (1575.42 ±13) L2: (1227.60 ±13) MHz			
RADIATION PATTERN:	HEMISPHERICAL		HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP			
VSWR	< 1.5:1		< 1.5:1			
GAIN (dB):	4 ft G.P.	Free Space	F.S.	4 ft G.P	F.S.	4 ft G.P
@ 90° (Zenith):	+4.9	+5.0	+ 4.6	+ 2.9	+ 1.8	+ 5.3
@ 10° Elevation:	-1.0	-2.5	- 2.5	- 1.8	- 4.2	- 2.3
@ 20° Elevation:	+1.5	-0.5	- 1.1	+ 0.7	- 2.9	+ 0.4
@ 30° Elevation:	+2.4	+1.0	+ 0.5	+ 1.7	- 2.0	+ 2.3
@ 60° to 90° Elevation:	>+3.3	>+2.7	> 3.6	> 2.1	> 0.9	> 3.2
BEAMWIDTH(3dB):	129 °	98 °-106 °	103 °	146 °	108 °	74 °
AXIAL RATIO @ Zenith:	2 dB		2 dB			
POWER HANDLING:	30 W		1 Watt			
LIGHTNING PROTECTION:	DC GROUNDING		DC GROUNDING			
FILTER(REJ. @1616MHz):			> 60 dB			
LNA GAIN:	N/A		(33.0+/-1.0) dB			
LNA P 1dB Out:	N/A		+16 dBm			
LNA NOISE FIGURE:	N/A		2.8 dB (Filter loss is Included)			
VOLTAGE/CURRENT:	N/A		(+2.8 TO +28) Volts DC / (30 TO 50) mA			

MECHANICAL:

SIZE:	WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in [127.66 mm], HEIGHT: 0.721 in. [18.31 mm]
WEIGHT:	8.0 oz. (226 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	GPS: SMA FEMALE, IRIDIUM: TNC FEMALE (OPTION: SMA, TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)
MOUNTING	FLAT FIXED MOUNT; O-RING & 4 x 10-32 MOUNTING SCREWS PROVIDED

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455



CONFIGURATION:	FREQ. BAND:	GPS/IRIDIUM LNA:	CABLE'S LENGTH:	GPS/IRIDIUM CONNECTOR:	COLOR:
1: 2" SQ. (FLAT)	1516: L1 GPS & IRIDIUM	A: WITH LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1216: L1/L2 GPS	P: WITHOUT LNA	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	GPS & IRIDIUM		#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)			R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)					
53: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

P/N: S5GIR1216RR-AP-XST-X

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ALL SCREWS ARE SUPPLIED BY ANTCOM CORPORATION

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
4	4	MOUNTING SCREW: (10–32, 1")	MS24693C276	–	–	5
3	1	ADHESIVE GASKET	12345G–3M–4G			3
1	1	O–RING	2–038–N756–75	–	–	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .01, .XXX ± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .020. SCREW THREADS PER SAE–J–2670. MACHINED SURFACES 125. DO NOT SCALE DRAWING. DRAWN. CHECKED. ENGINEER. APPROVED S. HUYNH DEC–13–02. CAD FILE NO.

ANTCOM CORP. TORRANCE, CALIFORNIA

FLAT FIXED MOUNT ACTIVE IRIDIUM/L1/L2 GPS ANTENNA

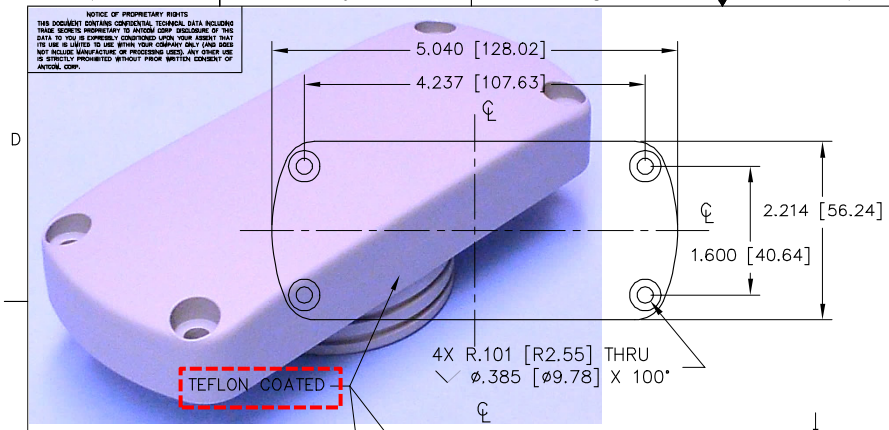
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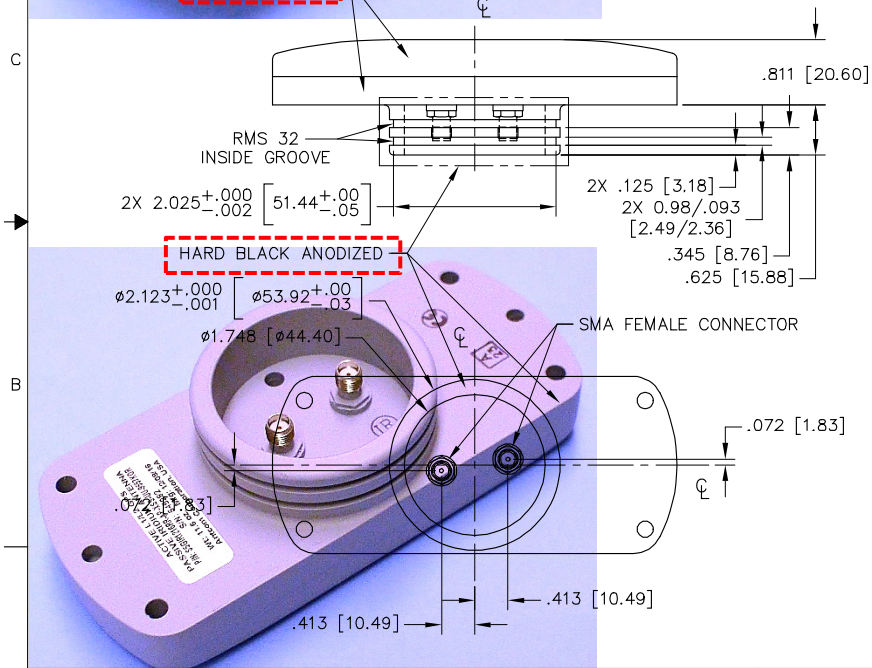
SCALE 1/1 | SHEET 1 OF 1

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SPECIFICATIONS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	TEFLON COATING	01/24/17	S.H

ELECTRICAL:

	IRIDIUM		L1 OR L1/L2 GPS			
FREQUENCY:	(1610.0 - 1626.5) MHz		L1: (1575.42 ±13)		L2: (1227.60 ±13) MHz	
RADIATION PATTERN:	HEMISPHERICAL		HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP			
VSWR:	< 1.5:1		< 1.5:1			
GAIN (dB):	4 ft G.P.	F.S.	F.S.	4 ft G.P	F.S.	4 ft G.P
@ 90° (Zenith):	+4.9	+5.0	+ 4.6	+ 2.9	+ 1.8	+ 5.3
@ 10° Elevation:	-1.0	-2.5	- 2.5	- 1.8	- 4.2	- 2.3
@ 20° Elevation:	+1.5	-0.5	- 1.1	+ 0.7	- 2.9	+ 0.4
@ 30° Elevation:	+2.4	+1.0	+ 0.5	+ 1.7	- 2.0	+ 2.3
@ 60° to 90°Elevation:	>+3.3	>+2.7	> 3.6	> 2.1	> 0.9	> 3.2
BEAM WIDTH (3dB):	129 °	98 °-106 °	103 °	146 °	108 °	74 °
AXIAL RATIO @ Zenith:	2 dB		2 dB			
POWER HANDLING:	30 W		1 Watt			
LIGHTNING PROTECTION:	DC GROUNDING		DC GROUNDING			
FILTER (REJ. @1616 MHz):			> 60 dB			
LNA GAIN:	N/A		(33.0+/-1.0) dB			
LNA P 1dB Out:	N/A		+16 dBm			
LNA NOISE FIGURE:	N/A		2.8 dB (Filter loss is Included)			
VOLTAGE/CURRENT:	N/A		(+2.8 TO +28) Volts DC / (30 TO 50) mA			

MECHANICAL:

SIZE:	WIDTH: 2.214 in. [56.24 mm], LENGTH: 5.040 in [128.02 mm], HEIGHT: 0.811 in. [20.60 mm]
WEIGHT:	10.9 oz. (308 g)
FINISH:	TEFLON COATED
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

QUANTITY REQD	–2	–1	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
PARTS LIST							
	4		MOUNTING SCREW: (10–32, 1")	MS24693C276	–	–	5
	1		ADHESIVE GASKET	12345G–3M–4G			3
	2		O–RING	9557K124	–	–	1

CONFIGURATION:	FREQ. BAND:	GPS LNA:	Connnector:	COLOR:
1: 2" SQ. (FLAT)	1516: L1 GPS & IRIDIUM	A: WITH LNA	S: SMA	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1216: L1L2 GPS & IRIDIUM	P: WITHOUT LNA	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)		A2: WITH 20dB LNA	N: N; NB: N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
3: 3.5" DIA. (FLAT)			T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)			B: BNC FEMALE	-5: DESERT TAN #33446 PER FED-STD-595B
5S: (HELIX ROD)				-UU: Gray Color Teflon Coating
5B: (HELIX BLADE)				
3D: (HELIX HANDHELD)				

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

ORIGINALLY DRAWN S. HUYNH Dec–13–02
ORIGINALLY DESIGNED S. HUYNH Dec–13–02
UPDATE S. HUYNH Jan–24–17
UPDATE DRAWN P. TRAN Jan–24–17
APPROVED S. HUYNH Jan–24–17

ANTCOM CORP. TORRANCE CALIFORNIA

ACTIVE L1L2 GPS/IRIDIUM ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO S5GIR1216RR–AP–XSS–UU–9557KOR | REV A

SCALE 1/1 | SHEET 1 OF 1

P/N: S5GIR1216RR-AP-XSS-UU-9557KOR

Active L1L2 GPS/XM Antenna, P/N: 5G121523RL-AA-XTT-1
(5.03"x2.08"x0.69"), Flat or Pipe Mount Configurations

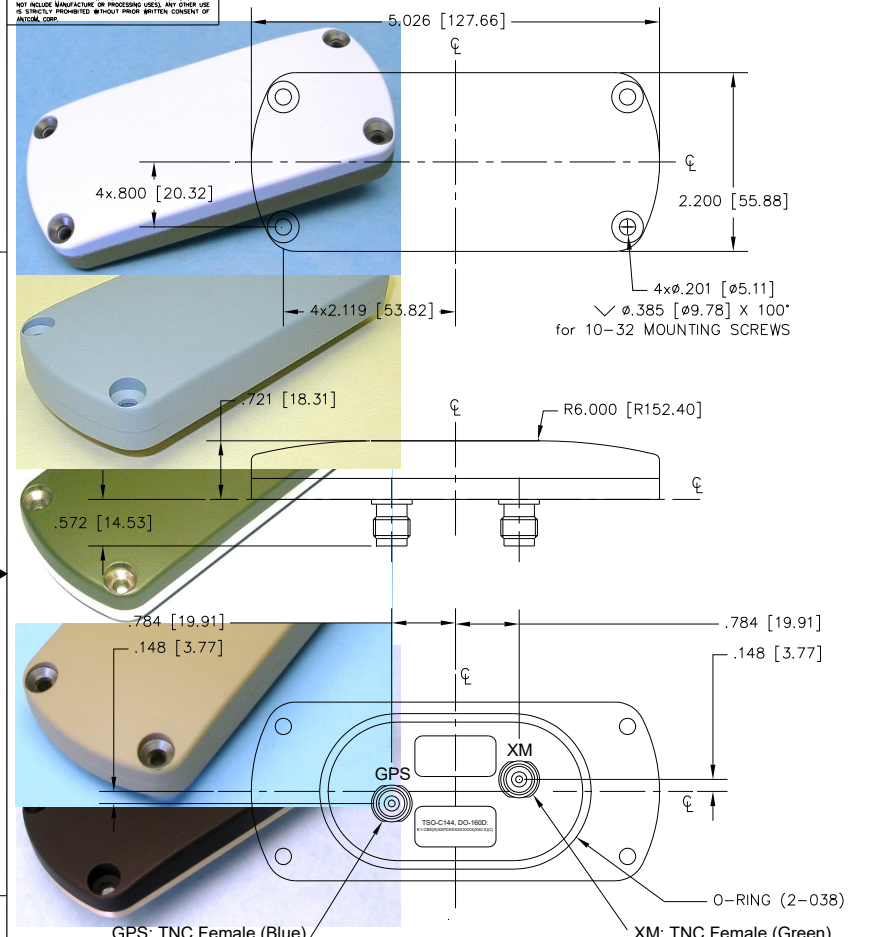
ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

FAA Approved TSO Antennas

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SPECIFICATIONS

ELECTRICAL:

	XM	L1/L2 GPS			
FREQUENCY:	(2338.75 +/- 10) MHz	L1: (1575.42 ±13)		L2: (1227.60 ±13) MHz	
RADIATION PATTERN:	HEMISPHERICAL	HEMISPHERICAL			
POLARIZATION:	LHCP	RHCP			
VSWR:	< 1.5:1	< 1.5:1			
GAIN (dB):	4 ft G.P.	F.S.	4 ft G.P	F.S.	4 ft G.P
@ 90° (Zenith):	+4.9	+ 4.6	+ 2.9	+ 1.8	+ 5.3
@ 10° Elevation:	-1.0	- 2.5	- 1.8	- 4.2	- 2.3
@ 20° Elevation:	+1.5	- 1.1	+ 0.7	- 2.9	+ 0.4
@ 30° Elevation:	+2.4	+ 0.5	+ 1.7	- 2.0	+ 2.3
@ 60° to 90°Elevation:	>+3.3	> 3.6	> 2.1	> 0.9	> 3.2
BEAM WIDTH (3dB):	129 °	103 °	146 °	108 °	74 °
AXIAL RATIO @ Zenith:	2 dB	2 dB			
POWER HANDLING:	30 W	1 Watt			
LIGHTNING PROTECTION:	DC GROUNDING	DC GROUNDING			
FILTER (REJ. @1616 MHz):		> 60 dB			
LNA GAIN:	(33 +/-2) dB	(33.0+/-1) dB			
LNA P 1dB Out:	+16dBm	+16 dBm			
LNA NOISE FIGURE:	2.2 dB	2.8 dB (Filter loss is Included)			
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / < 38 mA				

MECHANICAL:

SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in [127.66 mm], HEIGHT: 0.721 in. [18.31 mm]

WEIGHT: 8.2 oz. (232 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL, AND NICKEL PLATING

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,AND SKYDROL RESISTANCE, FIRE RETARDANT

CONNECTOR: GPS: TNC FEMALE (Blue); XM: TNC FEMALE (GREEN)

MOUNTING: FLAT FIXED MOUNT; O-RING & 4 x 10-32 MOUNTING SCREWS PROVIDED



ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

CONFIGURATION:	FREQ. BAND:	GPS/IRIDIUM LNA:	CABLE'S LENGTH:	GPS/IRIDIUM CONNECTOR:	COLOR:
1: 2" SQ. (FLAT)	1516: L1 GPS & IRIDIUM	A: WITH LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1523: L1 GPS & XM	P: WITHOUT LNA	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	0915: GSM & L1 GPS		#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)	1216: L1/L2 GPS & IRIDIUM	A2: WITH 20dB LNA	R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)	1223: L1/L2 GPS & XM				
53: (HELIX ROD)	0912: GSM & L1/L2 GPS				
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

P/N: 5G121523RL-AA-XTT-X

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ALL SCREWS ARE SUPPLIED BY ANTCOM CORPORATION

REVISIONS					
ZONE	REV	DESCRIPTION	DATE	REVISED	APPROVED
	-	ADDED L2 DATA TO 5G1523RL-AA-XTT	07/18/12	PHILTRAN	S.H

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
	PARTS LIST				
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	-	-	5
					3
1	O-RING	2-038-N756-75	-	-	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .020, .XXX± .010, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DATS ON A COMMON ℄ ±.005. MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	Dec-13-02
ORIGINALLY DESIGNED	S. HUYNH	Dec-13-02
UPDATE DRAWN	P. TRAN	July-18-12
APPROVED	S. HUYNH	July-18-12
CAD FILE NO		

ANTCOM CORP. TORRANCE CALIFORNIA

TSO APPROVED
ACTIVE L1L2 GPS/XM
ANTENNA

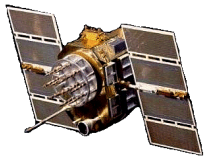
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SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS & (IRIDIUM/Inmarsat) Antenna

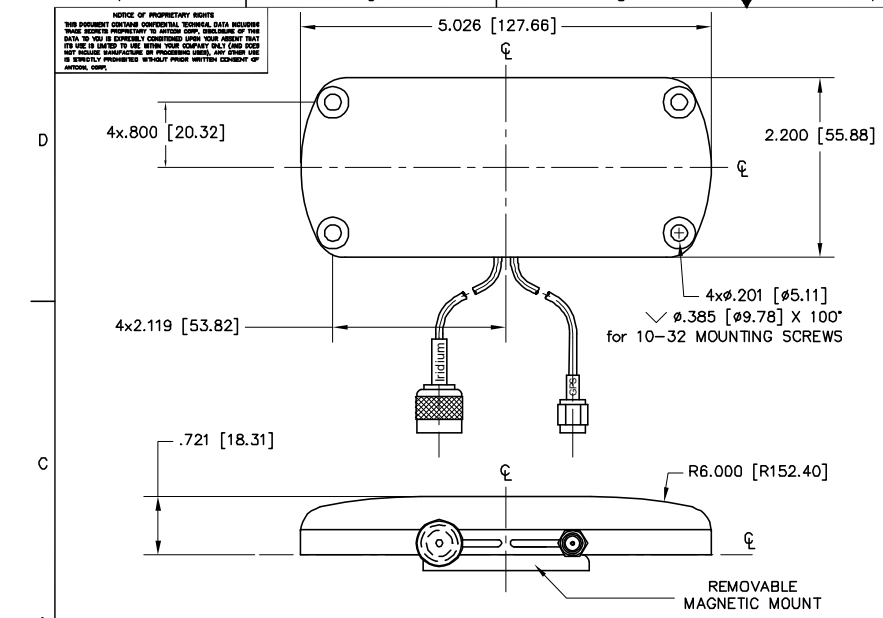
(5.03"x2.08"x0.69"), Magnetic Mount, Cable, P/N: S5GIR1516RR-AP-XMST-X

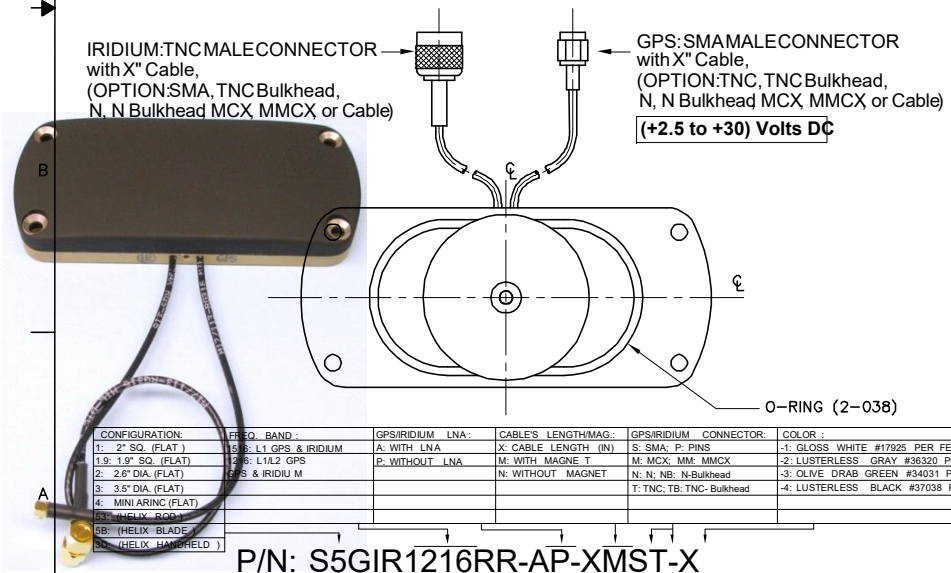


ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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CONFIGURATION:	FREQ. BAND :	GPS/IRIDIUM LNA :	CABLE'S LENGTH/MAG.:	GPS/IRIDIUM CONNECTOR:	COLOR :
1: 2" SQ. (FLAT)	5: L1 GPS & IRIDIUM	A: WITH LNA	X: CABLE LENGTH (IN)	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	12: L1/L2 GPS	P: WITHOUT LNA	M: WITH MAGNE T	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	GPS & IRIDIU M		N: WITHOUT MAGNET	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)				T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)					
5A: (HELIX ROD)					
5B: (HELIX BLADE)					
5C: (HELIX HANDHELD)					

P/N: S5GIR1216RR-AP-XMST-X

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ALL SCREWS ARE SUPPLIED BY ANTCOM CORPORATION

SPECIFICATIONS

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

ELECTRICAL:

	IRIDIUM		L1 OR L1/L2 GPS			
FREQUENCY:	(1610.0 - 1626.5) MHz		L1: (1575.42 ±13)		L2: (1227.60 ±13) MHz	
RADIATION PATTERN:	HEMISPHERICAL		HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP			
VSWR:	< 1.5:1		< 1.5:1			
GAIN (dB):	4 ft G.P.	Free Space	F.S.	4 ft G.P	F.S.	4 ft G.P
@ 90° (Zenith):	+4.9	+5.0	+ 4.6	+ 2.9	+ 1.8	+ 5.3
@ 10° Elevation:	-1.0	-2.5	- 2.5	- 1.8	- 4.2	- 2.3
@ 20° Elevation:	+1.5	-0.5	- 1.1	+ 0.7	- 2.9	+ 0.4
@ 30° Elevation:	+2.4	+1.0	+ 0.5	+ 1.7	- 2.0	+ 2.3
@ 60° to 90°Elevation:	>+3.3	>+2.7	> 3.6	> 2.1	> 0.9	> 3.2
BEAM WIDTH (3dB):	129 °	98 °-106 °	103 °	146 °	108 °	74 °
AXIAL RATIO @ Zenith:	2 dB		2 dB			
POWER HANDLING:	30 W		1 Watt			
LIGHTNING PROTECTION:	DC GROUNDING		DC GROUNDING			
FILTER (REJ. @1616 MHz):			> 60 dB			
LNA GAIN:	N/A		(33.0+/-1.0) dB			
LNA P 1dB Out:	N/A		+16 dBm			
LNA NOISE FIGURE:	N/A		2.8 dB (Filter loss is Included)			
VOLTAGE/CURRENT:	N/A		(+2.8 TO +28) Volts DC / (30 TO 50) mA			

MECHANICAL:

SIZE:	WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in [127.66 mm], HEIGHT: 0.721 in. [18.31 mm]
WEIGHT:	8.0 oz. (226 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	GPS: SMA FEMALE, IRIDIUM: TNC FEMALE (OPTION: SMA, TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)
MOUNTING:	FLAT FIXED MOUNT; O-RING & 4 x 10-32 MOUNTING SCREWS PROVIDED

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
	PARTS LIST				
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	-	-	5
1					3
1	O-RING	2-038-N756-75	-	-	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .015, .XXX ± .009, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .030 TO R .050. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø .005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH DEC-13-02 | CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

FLAT MAG MOUNT ACTIVE IRIDIUM/L1/L2 GPS ANTENNA

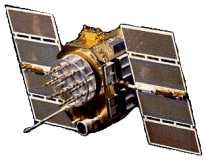
SIZE D | CAGE NO 3CVE1 | DRAWING NO S5GIR1516RR-AP-XMST-1 | REV —

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS & (IRIDIUM /Inmarsat) Antenna

(5.03”x2.08”x0.69”), Magnetic Mount, Side Connector, P/N: S5GIR1516RR-AP-MST-X

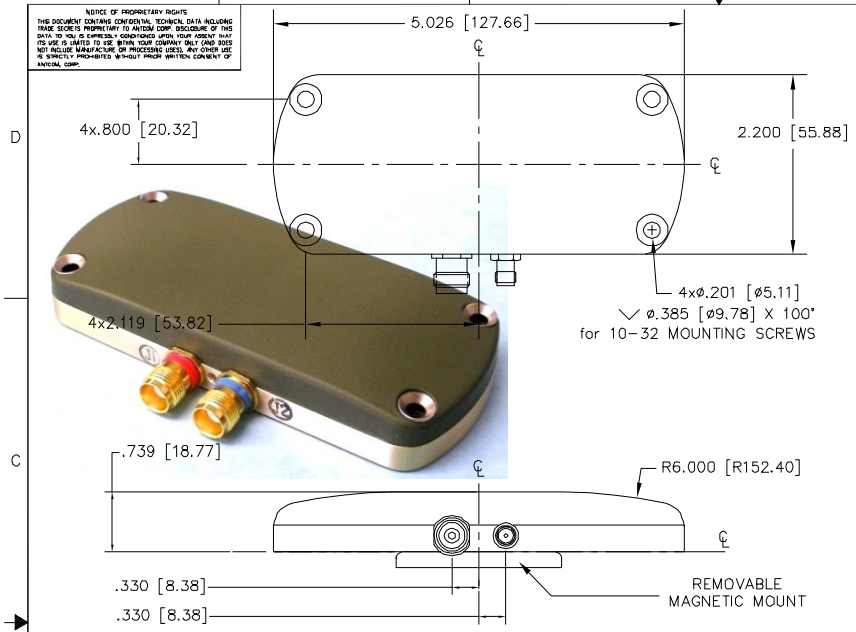


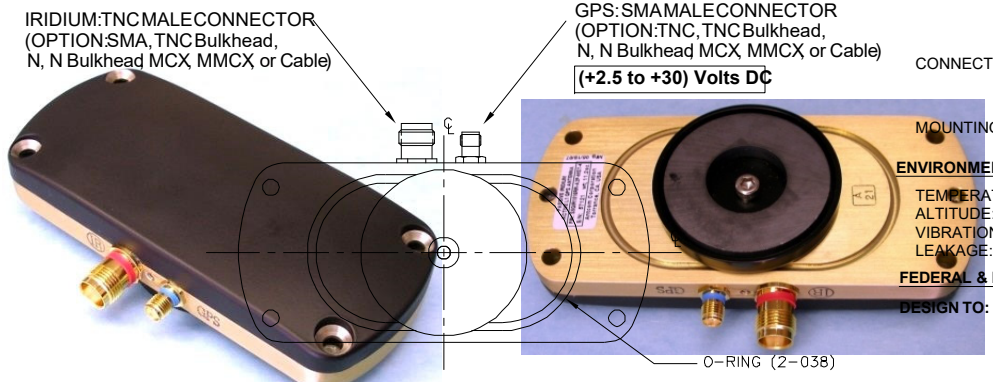
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Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

	IRIDIUM		L1 OR L1/L2 GPS			
FREQUENCY:	(1610.0 - 1626.5) MHz		L1: (1575.42 ±13)		L2: (1227.60 ±13) MHz	
RADIATION PATTERN:	HEMISPHERICAL		HEMISPHERICAL			
POLARIZATION:	RHCP		RHCP			
VSWR:	< 1.5:1		< 1.5:1			
GAIN (dB):	4 ft G.P.	Free Space	F.S.	4 ft G.P	F.S.	4 ft G.P
@ 90° (Zenith):	+4.9	+5.0	+ 4.6	+ 2.9	+ 1.8	+ 5.3
@ 10° Elevation:	-1.0	-2.5	- 2.5	- 1.8	- 4.2	- 2.3
@ 20° Elevation:	+1.5	-0.5	- 1.1	+ 0.7	- 2.9	+ 0.4
@ 30° Elevation:	+2.4	+1.0	+ 0.5	+ 1.7	- 2.0	+ 2.3
@ 60° to 90°Elevation:	>+3.3	>+2.7	> 3.6	> 2.1	> 0.9	> 3.2
BEAM WIDTH (3dB):	129 °	98 °-106 °	103 °	146 °	108 °	74 °
AXIAL RATIO @ Zenith:	2 dB		2 dB			
POWER HANDLING:	30 W		1 Watt			
LIGHTNING PROTECTION:	DC GROUNDING		DC GROUNDING			
FILTER (REJ. @1616 MHz):			> 60 dB			
LNA GAIN:	N/A		(33.0+/-1.0) dB			
LNA P 1dB Out:	N/A		+16 dBm			
LNA NOISE FIGURE:	N/A		2.8 dB (Filter loss is Included)			
VOLTAGE/CURRENT:	N/A		(+2.8 TO +28) Volts DC / (30 TO 50) mA			

MECHANICAL:

SIZE:	WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in [127.66 mm], HEIGHT: 0.739 in. [18.77 mm]
WEIGHT:	8.0 oz. (226 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	GPS: SMA FEMALE, IRIDIUM: TNC FEMALE (OPTION: SMA, TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)
MOUNTING:	FLAT FIXED MOUNT; O-RING & 4 x 10-32 MOUNTING SCREWS PROVIDED

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

CONFIGURATION:	FREQ. BAND :	GPS/IRIDIUM LNA :	CABLE'S LENGTH/MAG.:	GPS/IRIDIUM CONNECTOR:	COLOR :
1: 2" SQ. (FLAT)	1516: L1 GPS & IRIDIUM	A: WITH LNA		S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1216: L1/L2 GPS	P: WITHOUT LNA	M: WITH MAGNE T	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	GPS & IRIDIU M		N: WITHOUT MAGNET	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)				T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)					
53: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

P/N: S5GIR1216RR-AP-MST-X

4	MOUNTING SCREW: (10-32, 1")	MS24693C276	–	–	5
1					3
1	O-RING	2-038-N756-75	–	–	1
-2 -1	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
QUANTITY REQD		PARTS LIST			

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ALL SCREWS ARE SUPPLIED BY ANTCOM CORPORATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS XX ±.015, XXX ±.005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø .25" DIA. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH DEC-13-02 | CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

FLAT MAG MOUNT ACTIVE IRIDIUM/L1/L2 GPS ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO S5GIR1516RR-AP-MST-1 | REV –

SCALE 1/1 | SHEET 1 OF 1

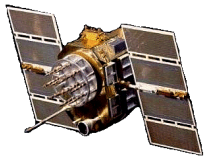
ZONE	REV	DESCRIPTION	DATE	APPROVED

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS & **IRIDIUM** Antenna
P/N: 1.21GIR1216RR-A2P-7MMRMM-4
(1.25"x 2.45"x 0.5"), Front/Back Mount with Bottom Cable

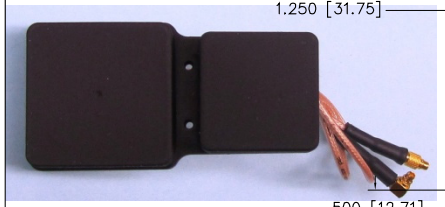
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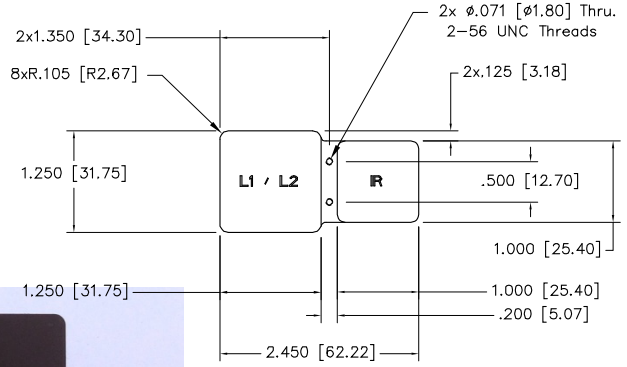
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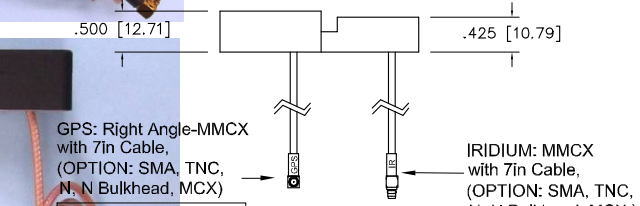
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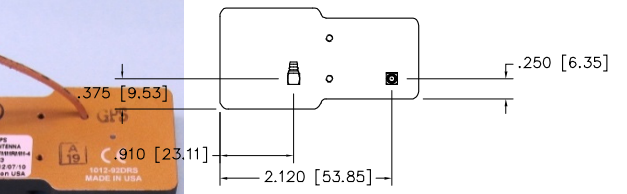












SPECIFICATIONS

ELECTRICAL:

	IRIDIUM	GPS			
FREQUENCY:	(1610.0 - 1626.5) MHz	L1: (1575.42 ±13)		L2: (1227.42 ±13)	
RADIATION PATTERN:	HEMISPHERICAL	HEMISPHERICAL			
POLARIZATION:	RHCP	RHCP			
VSWR:	< 2.0:1	< 2.0:1			
GAIN (dB):	Free Space	Free Space	3in G.P.	Free Space	3in G.P.
@ 90° (Zenith):	0.0	- 0.8	+ 3.8	-3.7	+ 2.7
@ 10° Elevation:	- 7.5	- 9.3	- 4.3	- 9.9	- 6.3
@ 20° Elevation:	- 5.5	- 6.8	- 2.2	- 9.2	- 4.2
@ 30° Elevation:	- 4.0	- 5.2	- 0.7	- 7.8	- 2.4
@ 60° Elevation:	- 2.3	> - 2.1	> 2.5	> - 4.7	> 1.3
BEAM WIDTH (3dB):	98 °-106 °	100 Deg.	120 Deg.	100 Deg.	90 Deg.
AXIAL RATIO @ Zenith:	2 dB	2.5 dB			
POWER HANDLING:	5 W	1 Watt			
LIGHTNING PROTECTION:	DC GROUNDING	DC GROUNDING			
LNA GAIN:	N/A	20dB			
LNA P 1dB Out:	N/A	+16 dBm			
LNA NOISE FIGURE:	N/A	2.8 dB			
VOLTAGE/CURRENT:	N/A	(+2.8 TO +28) Volts DC / (30) mA			

MECHANICAL:

SIZE:	WIDTH: 1.25 in. [31.7 mm], LENGTH: 2.450in [62.2 mm], HEIGHT: 0.5 in. [12.7 mm]
WEIGHT:	1.8 oz. (51 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL, AND CHEM FILM
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	IRIDIUM: MMCX-M (J1, Red); GPS: RIGHT ANGLE MMCX-M (J2, Blue)
MOUNTING:	2 x 2-56 SCREWS

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

CONFIGURATION:	FREQ. BAND:	GPS/IRIDIUM LNA:	CABLE'S LENGTH:	GPS/IRIDIUM CONNECTOR:	COLOR:
1: 2" SQ. (FLAT)	1516: L1 GPS & IRIDIUM	A: WITH LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1216: L1/L2 GPS	P: WITHOUT LNA	MN: Flush Mag. Mount	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	GPS & IRIDIUM		#: Cable Length (in)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)	1625: GLOBALSTAR	A2: WITH 20dB LNA	R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)	1523: GPS & XM				-5: DESERT TAN #33446 PER FED-STD-595B
53: (HELIX ROD)	1525: GPS & Vi◆F◆				
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

P/N: 1.21GIR1216RR-A2P-7MMRMM-4

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
4			–	–	5
					3
1			–	–	1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64 DECIMALS .XX± .020 .XXX± .010 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH DEC-01-10
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

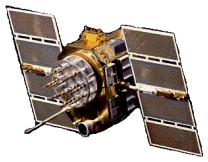
Low Profile Ruggedized Active GPS/IRIDIUM Antenna

SIZE	CAGE NO	DRAWING NO	REV
D	3CVE1	1.21GIR1216RR-A2P-7MMRMM-4	—

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active GPS & (**IRIDIUM**/Inmarsat or Thuraya) Antenna
P/N: 1.2GIR1516RR-A2P-7MM-4
(1.2”x 3.0”x 0.6”), Front, or Back Mount with Bottom Cable

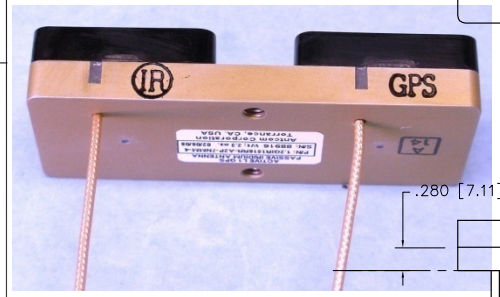


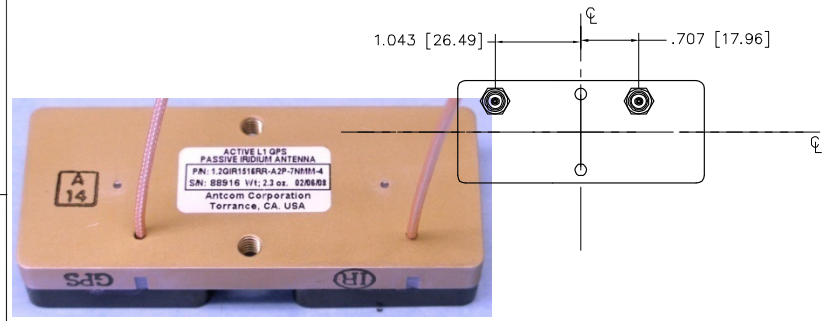
ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

	IRIDIUM	GPS
FREQUENCY:	(1610.0 - 1626.5) MHz	L1: (1575.42 ±13)
RADIATION PATTERN:	HEMISPHERICAL	HEMISPHERICAL
POLARIZATION:	RHCP	RHCP
VSWR:	< 1.5:1	< 1.5:1
GAIN (dB):	Free Space	F.S.
@ 90° (Zenith):	0.0	0.0
@ 10° Elevation:	- 7.5	- 7.5
@ 20° Elevation:	- 5.5	- 6.1
@ 30° Elevation:	- 4.0	- 4.5
@ 60° Elevation:	- 2.3	- 1.4
BEAM WIDTH (3dB):	98 °-106 °	103 °
AXIAL RATIO @ Zenith:	2 dB	2 dB
POWER HANDLING:	30 W	1 Watt
LIGHTNING PROTECTION:	DC GROUNDING	DC GROUNDING
LNA GAIN:	N/A	(33.0+/-1.0) dB, 20dB (-A2- Option)
LNA P 1dB Out:	N/A	+16 dBm
LNA NOISE FIGURE:	N/A	2.8 dB
VOLTAGE/CURRENT:	N/A	(+2.8 TO +28) Volts DC / (30) mA

MECHANICAL:

SIZE: WIDTH: 1.25 in. [31.7 mm], LENGTH: 3in [76.2 mm], HEIGHT: 0.6 in. [15.4 mm]

WEIGHT: 2.3 oz. (65 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL, AND CHEMFILM

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, AND SKYDROL RESISTANCE, FIRE RETARDANT

CONNECTOR: IRIDIUM: MMCX-RM(J1, Red); GPS: MMCX-RM(J2, Blue)

MOUNTING: FLAT FRONT (2 x 6-32 SCREWS), BACK (2 x 8-32 SCREWS),

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

CONFIGURATION:	FREQ BAND	GPS/IRIDIUM LNA:	CABLE'S LENGTH	GPS/IRIDIUM CONNECTOR	COLOR
1: 2" SQ. (FLAT)	1516: L1 GPS & IRIDIUM	A: WITH LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1216: L1/L2 GPS	P: WITHOUT LNA	MN: Flush Mag. Mount	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	GPS & IRIDIUM		#: Cable Length (in)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)	1625: GLOBALSTAR	A2: WITH 20dB LNA	R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)	1523: GPS & XM				
53: (HELIXROD)	1525: GPS & Wi-Fi				
5B: (HELIXBLADE)					
3D: (HELIXHANDHELD)					

P/N: 1.2G1516RR-A2P-7MM-4

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH
5	–	PARTS LIST	–	–	–
4					
3					
1					

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± 1/64 DECIMALS .XX± .020 .XXX± .010 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH June–27–07
CAD FILE NO
DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

Low Profile Ruggedized Active GPS/IRIDIUM Antenna

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.2G1516RR–A2P–7MM–4 | REV –

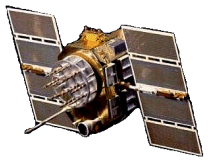
SCALE 1/1 SHEET 1 OF 1

ZONE	REV	DESCRIPTION	DATE	APPROVED

REVISIONS

NMO Connector Option is Now Available for Some Antennas

Active GPS & (IRIDIUM/ Inmarsat or Thuraya) Antennas
P/N: 1.21GIR1216RR-A3P-XSS-4
(1.2” x 3.0” x 0.6”) Front or Back Mount with Bottom Connector

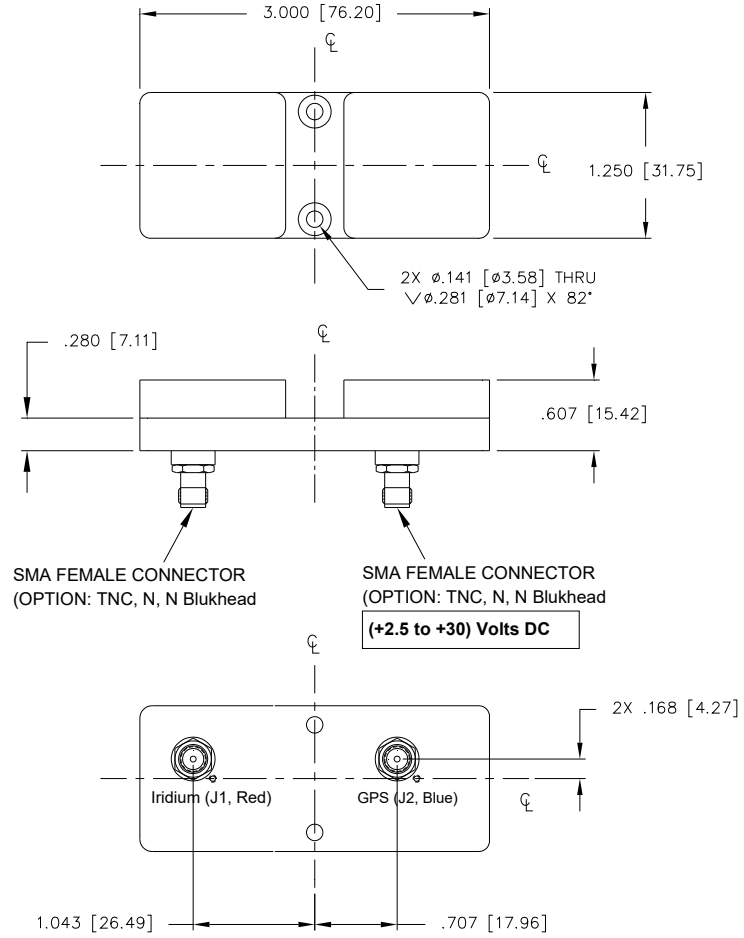


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Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

	IRIDIUM	GPS
FREQUENCY:	(1610.0 - 1626.5) MHz	L1: (1575.42 ±13)
RADIATION PATTERN:	HEMISPHERICAL	HEMISPHERICAL
POLARIZATION:	RHCP	RHCP
VSWR:	< 1.5:1	< 1.5:1
GAIN (dB):	Free Space	Free Space
@ 90° (Zenith):	0.0	0.0
@ 10° Elevation:	- 7.5	- 7.5
@ 20° Elevation:	- 5.5	- 6.1
@ 30° Elevation:	- 4.0	- 4.5
@ 60° Elevation:	- 2.3	- 1.4
BEAM WIDTH (3dB):	98 °-106 °	103 °
AXIAL RATIO @ Zenith:	2 dB	2 dB
POWER HANDLING:	30 W	1 Watt
LIGHTNING PROTECTION:	DC GROUNDING	DC GROUNDING
LNA GAIN:	N/A	(33.0+/-1.0) dB, 20dB (-A2- Option)
LNA P 1dB Out:	N/A	+16 dBm
LNA NOISE FIGURE:	N/A	2.8 dB
VOLTAGE/CURRENT:	N/A	(+2.8 TO +28) Volts DC / (30) mA

MECHANICAL:

SIZE: WIDTH: 1.25 in. [31.7 mm], LENGTH: 3in [76.2 mm], HEIGHT: 0.6 in. [15.4 mm]

WEIGHT: 2.3 oz. (65 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL, AND CHEM FILM

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE
COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,AND SKYDROL RESISTANCE, FIRE RETARDANT

CONNECTOR: SMA FEMALE: IRIDIUM - (J1, Red); GPS - (J2, Blue)
(Option: TNC, N, N Bulkhead)

MOUNTING: FLAT FRONT (2 x 6-32 SCREWS), BACK (2 x 8-32 SCREWS),

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000 ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

CONFIGURATION:	FREQ. BAND:	GPS/IRIDIUM LNA:	CABLE'S LENGTH:	GPS/IRIDIUM CONNECTOR:	COLOR:
1: 2" SQ. (FLAT)	1516: L1 GPS & IRIDIUM	A: WITH LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1216: L1/L2 GPS	P: WITHOUT LNA	MN: Flush Mag. Mount	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	GPS & IRIDIUM		#: Cable Length (in)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)	1625: GLOBALSTAR	A2: WITH 20dB LNA	R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)	1523: GPS & XM	A3: WITH 33dB LNA			
53: (HELIX ROD)	1525: GPS & Wi-Fi				
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

P/N: 1.2G1516RR-A3P-XSS-4

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
1		–	–		1

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .020, .XXX± .010, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ ⌀.005. MACHINED SURFACES 125/. DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	June-27-07
ORIGINALLY DESIGNED	S. HUYNH	June-27-07
UPDATED	S. Huynh	Sep-06-12
UPDATE DRAWN	P. TRAN	Sep-06-12
APPROVED	S. HUYNH	Sep-06-12

ANTCOM CORP. TORRANCE CALIFORNIA

Low Profile Ruggedized GPS/IRIDIUM Antenna

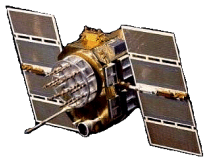
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SCALE 1/1 SHEET 1 OF 1

ORIGINAL DOCUMENT (RED STAMP IS RED)

NMO Connector Option is Now Available for Some Antennas

Active GPS & (**IRIDIUM**/Inmarsat or Thuraya) Antenna
P/N: 1.2GIR1516RR-A2P-7NMM-4
(1.2"x 3.0"x 0.6"), Front, or Back Mount with Cable

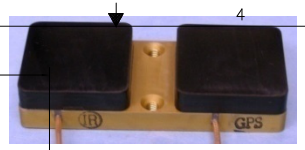


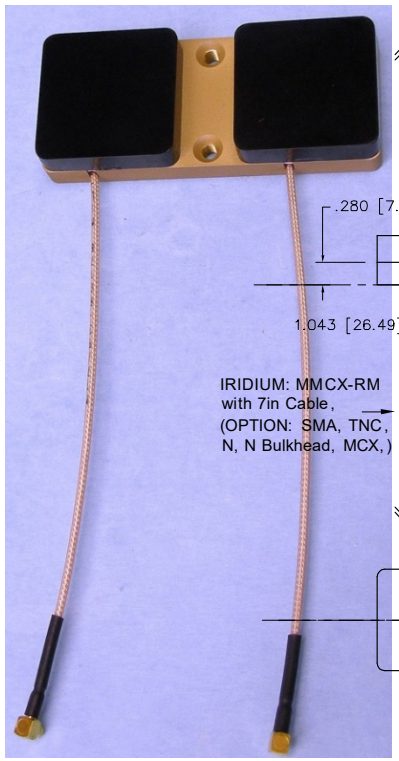
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SPECIFICATIONS

ELECTRICAL:

	IRIDIUM	GPS
FREQUENCY:	(1610.0 - 1626.5) MHz	L1: (1575.42 ±13)
RADIATION PATTERN:	HEMISPHERICAL	HEMISPHERICAL
POLARIZATION:	RHCP	RHCP
VSWR:	< 1.5:1	< 1.5:1
GAIN (dB):	Free Space	F.S.
@ 90° (Zenith):	0.0	0.0
@ 10° Elevation:	- 7.5	- 7.5
@ 20° Elevation:	- 5.5	- 6.1
@ 30° Elevation:	- 4.0	- 4.5
@ 60° Elevation:	- 2.3	- 1.4
BEAM WIDTH (3dB):	98 °-106 °	103 °
AXIAL RATIO @ Zenith:	2 dB	2 dB
POWER HANDLING:	30 W	1 Watt
LIGHTNING PROTECTION:	DC GROUNDIN G	DC GROUNDIN G
LNA GAIN:	N/A	(33.0+/-1.0) dB, 20dB (-A2- Option)
LNA P 1dB Out:	N/A	+16 dBm
LNA NOISE FIGURE:	N/A	2.8 dB
VOLTAGE/CURRENT:	N/A	(+2.8 TO +28) Volts DC / (30) mA

MECHANICAL:

SIZE: WIDTH: 1.25 in. [31.7 mm], LENGTH: 3in [76.2 mm], HEIGHT:0.6 in. [15.4 mm]

WEIGHT: 2.3 oz. (65 g)

FINISH: SKYDROL RESISTANT POLYURETHANE ENAMEL, AND CHEMFILM

MATERIAL: 6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, AND SKYDROL RESISTANCE, FIRE RETARDANT

CONNECTOR: IRIDIUM:MMCX-RM(J1, Red); GPS: MMCX-RM(J2, Blue)

MOUNTING: FLAT FRONT (2 x 6-32 SCREWS), BACK (2 x 8-32 SCREWS),

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE: 70,000ft.
VIBRATION: > 30 G's
LEAKAGE: HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810 AND SAE J1455

CONFIGURATION:	FREQ. BAND	GPS/IRIDIUM LNA:	CABLE'S LENGTH	GPS/IRIDIUM CONNECTOR	COLOR
1: 2" SQ. (FLAT)	1516: L1 GPS & IRIDIUM	A: WITH LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1216: L1/L2 GPS	P: WITHOUT LNA	MN: Flush Mag. Mount	M: MCX; MM: MMCX	-2: LUSTER LESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	GPS & IRIDIUM		#: Cable Length (in)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)	1625: GLOBALSTAR	A2: WITH 20dB LNA	R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTER LESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)	1523: GPS & XM				
53: (HELIX ROD)	1525: GPS & Wi-Fi				
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

P/N: 1.2G1516RR-A2P-7NMM-4

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH
5				–	–
4				–	–
3					
1				–	–

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .020, .XXX± .010, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON Ø ±.005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH June-27-07
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

Low Profile Ruggedized Active GPS/IRIDIUM Antenna

SIZE D | CAGE NO 3CVE1 | DRAWING NO 1.2G1516RR-A2P-7NMM-4 | REV –

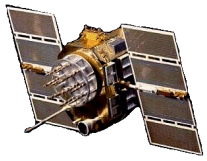
SCALE 1/1 SHEET 1 OF 1

ZONE	REV	DESCRIPTION	DATE	APPROVED

REVISIONS

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS & GSM Antenna
P/N: 2GG1215A-5SSF-1
2.6” Diameter, Back Mount Configuration



ISO 9001:2008/FAA Approved Facility

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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REVISIONS

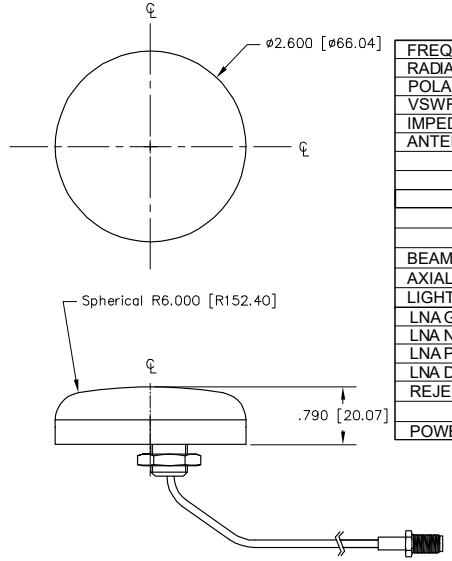
ZONE	REV	DESCRIPTION	DATE	APPROVED

SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42±12) MHz		L2: (1227.60±12) MHz		GSM (902 - 928) MHz
RADIATION PATTERN:	HEMISPHERICAL				OMNI
POLARIZATION:	RHCP		RHCP		VERTICAL
VSWR:	< 1.5:1		< 1.5:1		< 2.0:1
IMPEDANCE:	50 ohms		50 ohms		50 ohms
ANTENNAGAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.	
@ 90 ° (ZENITH):	+ 5.0	+ 3.1	+ 0.7	+ 4.5	
@ 10 ° Elevation	- 2.1	- 1.9	- 5.8	- 3.5	
@ 20 ° Elevation	- 0.6	+ 0.6	- 4.3	- 0.8	+ 2.0 dB
@ 30 ° Elevation	+ 0.9	+ 1.7	- 3.4	+ 1.4	
@ 60 - 90 ° Elevation:	> 4.0	> 2.4	> - 0.9	> 2.2	
BEAM WIDTH (3dB):	103 Deg.	143 Deg.	94 Deg.	74 Deg.	1/4 Monopole
AXIAL RATIO:	2 dB		2 dB		
LIGHTNING PROTECTION:	DC GROUNDING				
LNA GAIN:	33 dB		35 dB		
LNA NOISE FIGURE:	3.0 dB		3.0 dB		
LNA P1dB Out:	+13 dBm		+13 dBm		
LNA DC POWER:	2.5V/20mA,3V/29mA,3.3V/35mA,(2.5-24)V/<50mA				
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB		-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB		< -65 dB		
POWER HANDLING	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)				

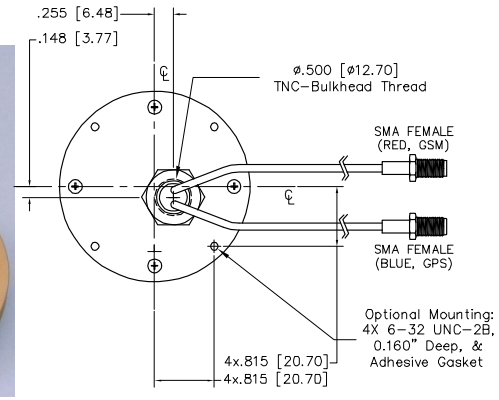




MECHANICAL:

SIZE:	DIAMETER: 2.60 in.[66.04 mm] HEIGHT: 0.790 in. [20.07 mm]
WEIGHT:	5.00 oz. (142g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE AND FIRE RETARDANT
CONNECTOR:	2 x 5in SMA FEMALE CABLES (OPTION: TNC, SMA, N, N Bulkhead, MCX, MMCX, or Cable)





ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	LNA:
1: 2” SQ.	G1215: GSM/L1/L2	A: WITH LNA; A4 WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9” SQ.	G15: GSM/L1	AL: WITH LNA/LIMITTER
2: 2.6” DIA.	1215: L1/L2	P: WITHOUT LNA
3: 3.5” DIA.	15: L1	PL: WITHOUT LNA and THINNER (HEIGHT= 0.58”)
4: MINIATURE		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

QUANTITY REQD	–	DESCRIPTION	PART NO	SPECIFICATION	MATERIAL	FINISH	ITEM NO
		PARTS LIST					
–2	–1						5
1		ADHESIVE GASKET	12345G–3M–2G	–	–	–	3
1		WASHER, LOCK	AN936B816	–	–	–	2
1		HEX NUT, MOUNTING	1/2–20 HEX	–	–	–	1

P/N: 2GG1215A-5SSF-1

CABLE’S LENGTH	GPS/GSM CONNECTOR	COLOR
X: NO CABLE	S: SMA; RS:R-SMA; P: PINS	-1: GLOSS WHITE#17925 PER FED-STD-595B
M: MAG.N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTER LESS GRAY#36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhea d	-3: OLIVE DRAB GREEN#34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTER LESS BLACK#37038 PER FED-STD-595B

3. ADHESIVE GASKET IS SUPPLIED BY ANTCOM CORPORATION
2. MOUNTING HEX NUT AND LOCK WASHER ARE SUPPLIED BY ANTCOM CORPORATION
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX ± .015, .XXX ± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ Ø.006. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH 01-05-29 | CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

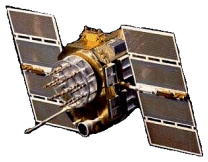
2.6in Dia/ Active L1/L2 GPS & GSM Antenna

SIZE D | CAGE NO 3CVE1 | DRAWING NO 2GG1215A-5SSF-1 | REV –

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS & GSM Antenna
P/N: 3GG1215A-5SSF-1
3.5” Diameter, Front/Back Mount Configuration

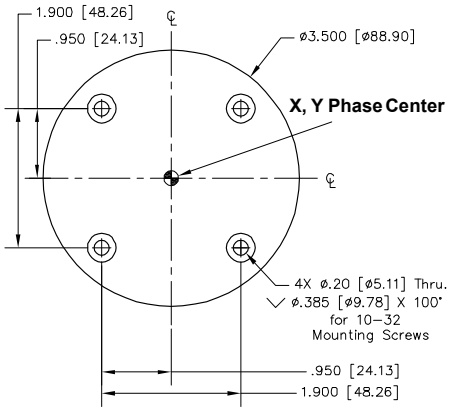


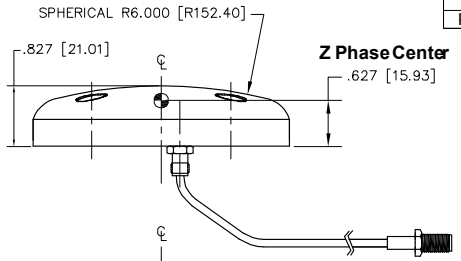
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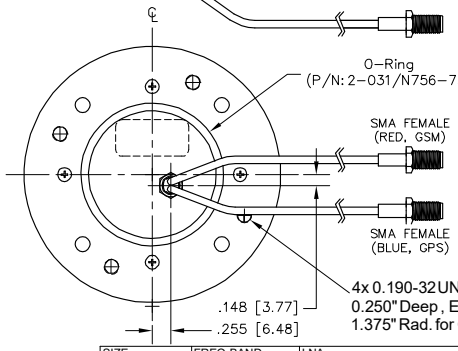
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42±12) MHz		L2: (1227.60±12) MHz		GSM (902 - 928) MHz
RADIATION PATTERN:	HEMISPHERICAL				OMNI
POLARIZATION:	RHCP		RHCP		VERTICAL
VSWR:	< 1.5:1		< 1.5:1		< 2.0:1
IMPEDANCE:	50 ohms		50 ohms		50 ohms
ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.	
@ 90 ° (ZENITH):	+ 5.0	+ 3.1	+ 0.7	+ 4.5	
@ 10 ° Elevation	- 2.1	- 1.9	- 5.8	- 3.5	+ 2.0 dB
@ 20 ° Elevation	- 0.6	+ 0.6	- 4.3	- 0.8	
@ 30 ° Elevation	+ 0.9	+ 1.7	- 3.4	+ 1.4	
@ 60 - 90 ° Elevation:	> 4.0	> 2.4	> - 0.9	> 2.2	
BEAM WIDTH (3dB):	103 Deg.	143 Deg.	94 Deg.	74 Deg.	1/4 Monopole
AXIAL RATIO	2 dB		2 dB		
LIGHTNING PROTECTION:	DC GROUNDING				
LNA GAIN:	33 dB		35 dB		
LNA NOISE FIGURE:	3.0 dB		3.0 dB		
LNA P1dB Out:	+13 dBm		+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA				
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB		-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB		< -65 dB		
POWER HANDLING	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)				

MECHANICAL:

SIZE:	DIAMETER: 3.50 in. [88.90 mm] HEIGHT: 0.827 in. [21.01 mm]
WEIGHT:	8.00 oz. (226g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	2 x 5in SMA FEMALE CABLES (OPTION: TNC, SMA, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100

ITEM NO	QUANTITY REQD	PART NO	DESCRIPTION
5	4	MS24693C274	MOUNTING SCREWS: 10-32, 3/4"
3	A/R	3G15P1001-6	WASHER, CUSTOM C'SINK
1	1	2-031/N756-75, OR 3G15P1001-3G	O-Ring, or GASKET
ITEM NO	-2	PART NO	DESCRIPTION
	-1	PARTS LIST	

SIZE:	FREQ. BAND	LNA:
1: 2" SQ.	G1215: GSM/L1/L2	A: WITH LNA; A4 WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	G15: GSM/L1	AL: WITH LNA/LIMITTER
2: 2.6" DIA.	1215: L1/L2	P: WITHOUT LNA
3: 3.5" DIA.	15: L1	PL: WITHOUT LNA and THINNER (HEIGHT= 0.58")
4: MINI ARINC		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 3GG1215A-5SSF-1

CABLE'S LENGTH	GPS/GSM CONNECTOR	COLOR
X: NO CABLE	S: SMA; RS-R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG	M: MCX; MM: MMCX	-2: LUSTER LESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhea d	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTER LESS BLACK #37038 PER FED-STD-595B

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DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH 01-05-29 | CAD FILE NO

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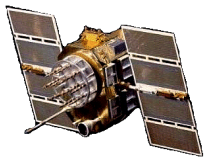
3.5in Dia. Active L1/L2 GPS & GSM Antenna

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3GG1215A-5SSF-1 | REV –

SCALE 1/1 | SHEET 1 OF 1

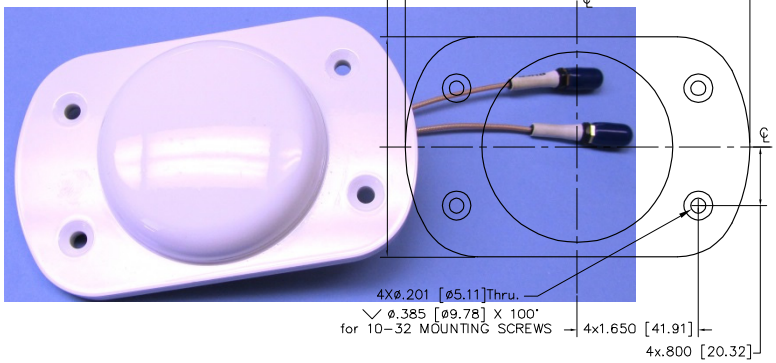
NMO Connector Option is Now Available for Some Antennas

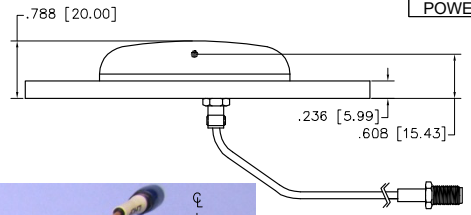
Active L1/L2 GPS & GSM Antenna
P/N: 42GG1215A-5SSF-1
Arinc 743, Front Mount Configuration

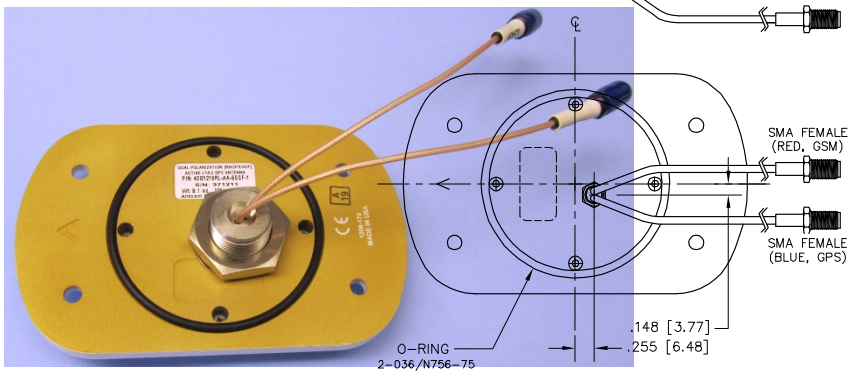


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ELECTRICAL:

FREQUENCY:	L1: (1575.42±12) MHz		L2: (1227.60±12) MHz		GSM (902 - 928) MHz
RADIATION PATTERN:	HEMISPHERICAL				OMNI
POLARIZATION:	RHCP		RHCP		VERTICAL
VSWR:	< 1.5:1		< 1.5:1		< 2.0:1
IMPEDANCE:	50 ohms		50 ohms		50 ohms
ANTENNAGAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.	
@ 90 ° (ZENITH):	+ 5.0	+ 3.1	+ 0.7	+ 4.5	
@ 10 ° Elevation	- 2.1	- 1.9	- 5.8	- 3.5	+ 2.0 dB
@ 20 ° Elevation	- 0.6	+ 0.6	- 4.3	- 0.8	
@ 30 ° Elevation	+ 0.9	+ 1.7	- 3.4	+ 1.4	
@ 60 - 90 ° Elevation:	> 4.0	> 2.4	> - 0.9	> 2.2	
BEAM WIDTH (3dB):	103 Deg.	143 Deg.	94 Deg.	74 Deg.	1/4 Monopole
AXIAL RATIO:	2 dB		2 dB		
LIGHTNING PROTECTION:	DC GROUNDING				
LNA GAIN:	33 dB		35 dB		
LNA NOISE FIGURE:	3.0 dB		3.0 dB		
LNA P1dB Out:	+13 dBm		+13 dBm		
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA				
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB		-40 dB / -40 dB		
@ (-100/+100) MHz	< -65 dB		< -65 dB		
POWER HANDLING	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)				

MECHANICAL:

SIZE:	WIDTH: 3.00 in. [76.20 mm], LENGTH 4.700 in. [119.38 mm], HEIGHT: 0.788 in. [20 mm]
WEIGHT:	8.00 oz. (226g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	2x 5in SMA FEMALE CABLES (OPTION: TNC, SMA, N, N Bulkhead, MCX, MMCX, or Cable)

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ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEAL

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DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	
4	–	MOUNTING SCREW: (10–32, 1")	MS24693C276	5
A/R	–		–	3
1	1	O–Ring, or GASKET	2–036/N756–75	1

PARTS LIST

SIZE:	FREQ BAND:	LNA:
1: 2" SQ.	G1215: GSM/L1/L2	A: WITH LNA; A4 WITH 40 DB LNA WITHOUT REJECTION FILTERS
1.9: 1.9" SQ.	G15: GSM/L1	AL: WITH LNA/LIMITTER
2: 2.6" DIA.	1215: L1/L2	P: WITHOUT LNA
3: 3.5" DIA.	15: L1	PL: WITHOUT LNA and THINNER (HEIGHT = 0.58")
42: ARINC 743		A2: WITH 20 DB LNA WITHOUT REJECTION FILTERS

P/N: 42GG1215A-5SSF-1

CABLE'S LENGTH	GPS/GSM CONNECTOR	COLOR
X: NO CABLE	S: SMA; RS:R-SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG, N: NO MAG.	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N, NB: N, N-Bulkhea d	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T, TB: TNC, TNC-Bulkhea d	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B

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1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES: MFG
FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH 01-05-29
CAD FILE NO
DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

ARINC 743 Active L1/L2 GPS & GSM Antenna

SIZE D | CAGE NO 3CVE1 | DRAWING NO 42GG1215A-5SSF-1 | REV –
SCALE 1/1 | SHEET 1 OF 1

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

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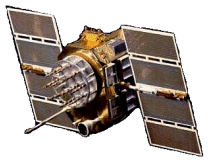
New Thuraya or Inmarsat/IRIDIUM/GPS Antenna

P/N: 3GNSS16X-P-XX-X, *with better Gain*

3.5" Diameter, Flat, Front/Back Magnetic Mount Configurations

2.6in Dia. & Arinc-743 Versions are also available

Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf



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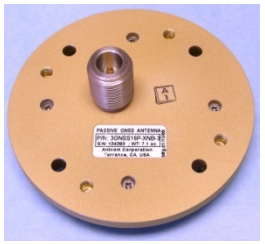
REVISIONS

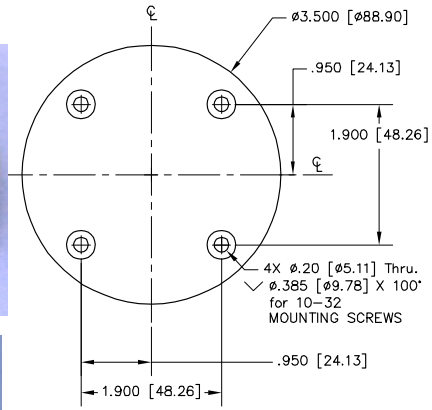
ZONE	REV	DESCRIPTION	DATE	APPROVED

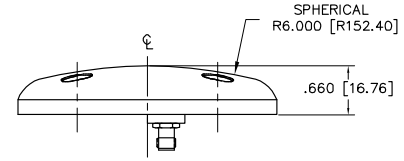


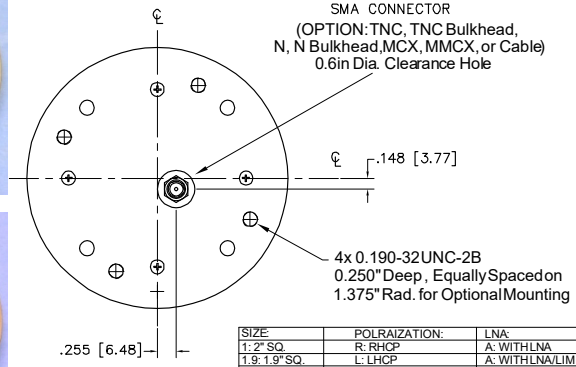












SPECIFICATIONS

ELECTRICAL:

	Rx Inmarsat OmniStar, L6 Galileo, B1 Compass (RHCP) or Rx-Thuraya (LHCP)		L1 GPS, E1, E2 Galileo, L1 IRNSS (RHCP)		IRIDIUM, L1 GLONASS (RHCP)		Tx Inmarsat (RHCP) or Tx-Thuraya (LHCP)	
FREQUENCY:	(1542.5± 17.5) MHz		(1575± 17) MHz		(1609 -1626) MHz		(1642.5± 17.5) MHz	
RADIATION PATTERN:	HEMISPHERICAL							
VSWR:	< 2.0:1		< 2.0:1		< 2.0:1		< 2.0:1	
IMPEDANCE:	50 ohms		50 ohms		50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.3	+ 0.8	+ 5.9	+ 4.6	+ 6.4	+ 3.9	+ 8.0	+ 4.1
@ 10 ° Elevation:	- 3.9	- 5.0	- 1.0	- 1.5	- 0.7	- 2.3	+ 1.0	- 2.4
@ 20 ° Elevation:	- 2.3	- 1.2	+ 0.5	+ 1.4	+ 0.7	+ 0.9	+ 2.3	+ 0.7
@ 30 ° Elevation:	- 1.1	+ 0.4	+ 1.6	+ 3.0	+ 1.9	+ 2.2	+ 3.4	+ 1.7
@ 60 - 90 ° Elevation:	> + 2.4	> + 1.4	> + 4.9	> + 3.9	> + 5.6	> + 2.5	> + 6.9	> + 1.9
BEAM WIDTH (3dB):	100 Deg.	135 Deg.	100 Deg.	140 Deg.	92 Deg.	140 Deg.	90 Deg.	130 Deg.
AXIAL RATIO:	1.0 dB		1.0 dB		1.5 dB		2.0 dB	
LIGHTNING PROTECTION:	DC GROUNDING							

LNA OPTION

	33 dB Gain
LNA NOISE FIGURE:	3.0 dB
LNA P1dB Out:	+13 dBm
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA
REJECTION @ (-50/+50) MHz	-40 dB / -40 dB
@ (-100/+100) MHz	< -65 dB
POWER HANDLING	200 Watts CW (WITHOUT LNA), 1 Watt CW (WITH LNA)

MECHANICAL:

SIZE:	DIAMETER: 3.50 in. [88.9 mm] HEIGHT: 0.660 in. [16.76 mm]
WEIGHT:	7.1oz. (201g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100

SIZE:	POLRAIZATION:	LNA:
1: 2" SQ.	R: RHCP	A: WITH LNA
1.9: 1.9" SQ.	L: LHCP	A: WITH LNA/LIMITER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		
4: MINI ARINC		

QUANTITY REQD		DESCRIPTION	PART NO	FINISH	ITEM NO
4	–	MOUNTING SCREWS: 10-32, 3/4"	MS24693C274		5
1	1	GASKET	3G15P1001-3G	–	1
–2	–1	PARTS LIST			

P/N: 3GNSS16X-P-XTB-3

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG., N: No Mag.	M: MCX; MM: MMCX	-2: LUSTER LESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N: N, NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T: TNC, TB: TNC-Bulkhead	-4: LUSTER LESS BLACK #37038 PER FED-STD-595B

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ⌀ ⌀F.005. MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH Feb-17-09 | CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

3.5" Dia., Bottom Connector
THURAYA Or IRIDIUM/GPS
INMARSAT/GLONASS/ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3GNSS16X-P-XX-X | REV –

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

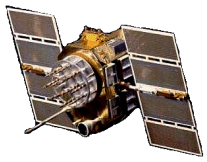
New Thuraya or Inmarsat/IRIDIUM/GPS Antenna

P/N: 3GNSS16X-P-MX-X, *with better Gain*

3.5" Diameter, Flat, Front/Back Magnetic Mount Configurations

2.6in Dia. Version is also available

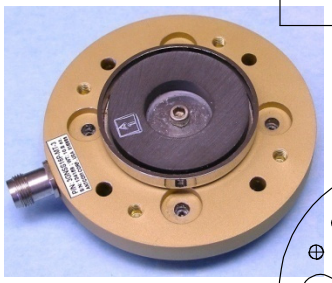
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

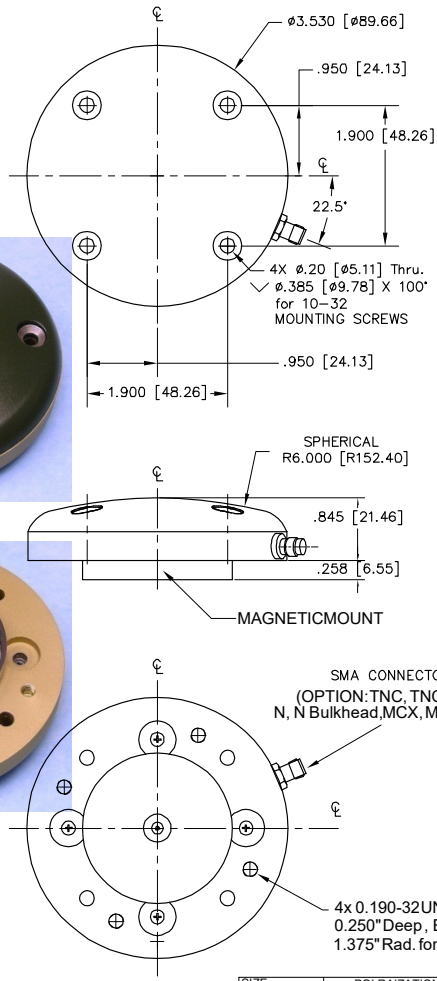


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SPECIFICATIONS

ELECTRICAL:

	Rx Inmarsat OmniStar, L6 Galileo, B1 Compass (RHCP) or Rx-Thuraya (LHCP)		L1 GPS, E1, E2 Galileo, L1 IRNSS (RHCP)		IRIDIUM, L1 GLONASS (RHCP)		Tx Inmarsat (RHCP) or Tx-Thuraya (LHCP)	
FREQUENCY:	(1542.5± 17.5) MHz		(1575± 17) MHz		(1609 -1626) MHz		(1642.5± 17.5) MHz	
RADIATION PATTERN:	HEMISPHERICAL							
VSWR:	< 2.0:1		< 2.0:1		< 2.0:1		< 2.0:1	
IMPEDANCE:	50 ohms		50 ohms		50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.3	+ 0.8	+ 5.9	+ 4.6	+ 6.4	+ 3.9	+ 8.0	+ 4.1
@ 10 ° Elevation:	- 3.9	- 5.0	- 1.0	- 1.5	- 0.7	- 2.3	+ 1.0	- 2.4
@ 20 ° Elevation:	- 2.3	- 1.2	+ 0.5	+ 1.4	+ 0.7	+ 0.9	+ 2.3	+ 0.7
@ 30 ° Elevation:	- 1.1	+ 0.4	+ 1.6	+ 3.0	+ 1.9	+ 2.2	+ 3.4	+ 1.7
@ 60 - 90 ° Elevation	> + 2.4	> + 1.4	> + 4.9	> + 3.9	> + 5.6	> + 2.5	> + 6.9	> + 1.9
BEAM WIDTH (3dB):	100 Deg.	135 Deg.	100 Deg.	140 Deg.	92 Deg.	140 Deg.	90 Deg.	130 Deg.
AXIAL RATIO:	1.0 dB		1.0 dB		1.5 dB		2.0 dB	
LIGHTNING PROTECTION:	DC GROUNDING							

LNA OPTION

	33 dB Gain
LNA NOISE FIGURE:	3.0 dB
LNA P1dB Out:	+13 dBm
LNA DC POWER:	2.5V/20mA,3V/29mA,3.3V/35mA,(2.5-24)V/<50mA
REJECTION @ (-50/+50) MHz	-40 dB / -40 dB
@ (-100/+100) MHz	< -65 dB
POWER HANDLING	200 Watts CW (WITHOUT LNA), 1 Watt CW (WITH LNA)

MECHANICAL:

SIZE:	DIAMETER: 3.53 in. [89.7 mm] HEIGHT: 0.845 in. [21.46 mm]
WEIGHT:	10.8 oz. (306g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100

SIZE:	POLRAIZATION:	LNA:
1: 2" SQ.	R: RHCP	A: WITH LNA
1.9: 1.9" SQ.	L: LHCP	A: WITH LNA/LIMITER
2: 2.6" DIA.		P: WITHOUT LNA
3: 3.5" DIA.		
4: MINI ARINC		

P/N: 3GNSS16X-P-MT-3

QUANTITY REQD		DESCRIPTION	PART NO	FINISH	ITEM NO
4	–	MOUNTING SCREWS: 10–32, 3/4"	MS24693C274		5
1	1	ADHESIVE Rubber Cover (Item 541G3i)	Magnet–Cover–3i	–	1
–2	–1	PARTS LIST			

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
M: MAG.; N: No Mag.	M: MCX; MM: MMCX	-2: LUSTER LESS GRAY #36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N: N, NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T: TNC, TB: TNC-Bulkhead	-4: LUSTER LESS BLACK #37038 PER FED-STD-595B

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ⌀ ⌀F.005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH Feb-17-09 | CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

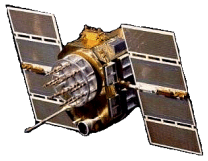
3.5" Dia., Magnetic Mount
THURAYA Or IRIDIUM/GPS
INMARSAT/GLONASS/ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3GNSS16X-P-MX-X- | REV

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

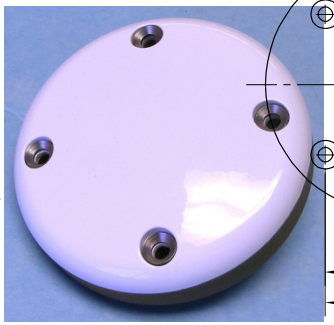
New 2-Ports, (Active L1/L2 GPS) & (LHCP-Thuraya/Tx-Globalstar) Antenna
P/N: 3G1216RL-XXX-X
3.5" Diameter, Flat, Back Mount, Bottom Connector Configuration
2.6in Dia. & Arinc-743 Versions are also available

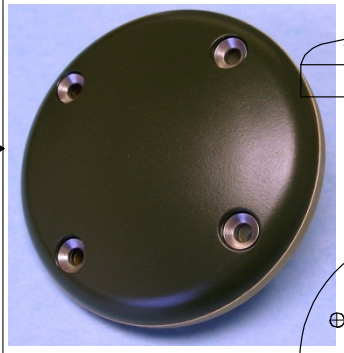


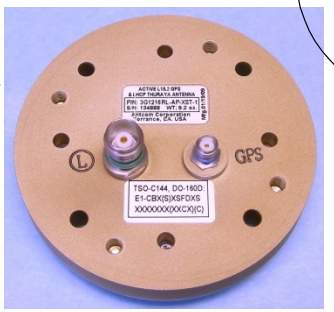
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

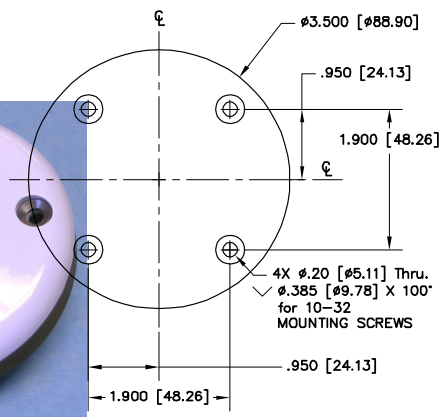
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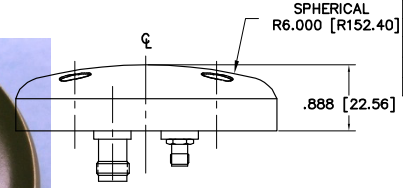
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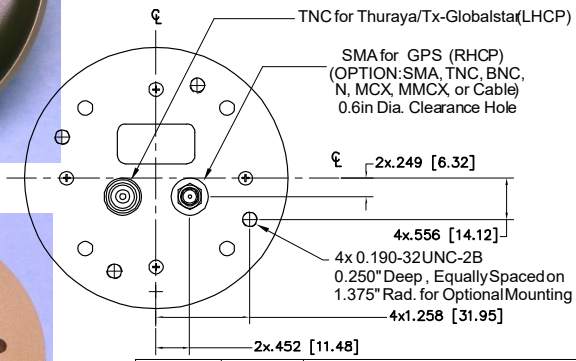












SPECIFICATIONS

ELECTRICAL:

	L1/L2 GPS				THURAYA		Tx-Globals tar
					Rx L-BAN D	Tx L-BA ND	
FREQUENCY(MHz):	L1: (1575.42 ±15)		L2: (1227.60 ±15)		(1542.50 ±17.5)	(1642.50 ±17.5)	(1609-1626)
ANTENNAGAIN @ Fc (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	Free Space	Free Space
@ 90 ° (ZENITH):	+ 5.5	+ 4.5	+ 3.3	+ 4.9	+ 3.1	+ 3.4	+ 4.3
@ 10 ° Elevation	- 1.2	- 1.4	- 3.8	- 3.6	- 3.7	- 3.1	- 2.2
@ 20 ° Elevation	+ 0.3	+ 1.4	- 2.0	- 0.1	- 2.0	- 1.1	- 0.6
@ 30 ° Elevation	+ 1.8	+ 2.2	- 0.5	- 1.8	- 1.3	0.0	+ 0.8
@ 60 - 90 ° Elevation:	> 4.8	> 3.8	> 2.7	> 3.0	> 2.0	>+2.6	>+3.5
BEAMWIDTH (3dB):	106 Deg.	130 Deg.	106 Deg.	75 Deg.	106 Deg.	106 Deg.	106 Deg.
POLARIZATION:	RHCP				LHCP		
RADIATION PATTERN:	HEMISPHERICAL						
VSWR:	< 1.5:1						
IMPEDANCE:	50 ohms						
AXIALRATIO:	2 dB						
LIGHTNINGPROTECTION:	DC GROUNDING						

LNA OPTION

LNA GAIN:	33 dB
LNA NOISE FIGURE:	3.0 dB
LNA P1dB Out:	+13 dBm
LNA DC POWER:	2.5V/20mA,3V/29mA,3.3V/35mA,(2.5-24)V/<50mA
REJECTION@ (-50/+50)MHz	-40 dB / -40 dB
@ (-100/+100)MHz	< -65 dB
POWERHANDLING	200 Watts CW (WITHOUTLNA) , 1 Watt CW (WITH LNA)

MECHANICAL:

SIZE:	DIAMETER: 3.50 in.[88.90 mm] HEIGHT: 0.888 in. [22.56 mm]
WEIGHT:	9.2 oz. (261g)
FINISH:	SKYDROLRESISTANTPOLYURETHANEENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUMALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROLRESISTANCE,AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLYSEALED

FEDERAL& MILITARYSPECIFICATIONS

DESIGNTO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCETEST PROCEDURE ATP-GPS-L1L2-100

SIZE:	FREQ. BAND:	POLARIZATION:	LNA:
1: 2" SQ.	1216	RR: RHPC/RHCP(L1L2 GPS/Inmarsat/Iridum)	A: WITH LNA
1.9: 1.9" SQ.	1216	RL: RHCP/LHCP(L1L2 GPS/THuraya/Tx-Globalsar)	AL: WITH LNA/LIMITER
2: 2.6" DIA.	1616	LR: LHCP/LHCP(Thuraya/Tx-GLobalstar)/(Inmarsat/Iridium)	P: WITHOUTLNA
3: 3.5" DIA.			
4: MINI ARINC			

P/N: 3G1216RL-AP-XST-1

CABLE'SLENGTH	L-Band/GPSConnector:	COLOR
X: NO CABLE	S: SMA; B: BNC	-1: GLOSSWHITE#17925PER FED-STD-595B
M: MAG., N: No Mag.	M: MCX; MM: MMCX	-2: LUSTERLESSGRAY#36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVEDRAB GREEN#34031 PER FED-STD-595B
R: RIGHTANGLECON.	T: TNC; TB: TNC-Bulkhead	-4: LUSTERLESSBLACK#37038 PER FED-STD-595B

QUANTITY REQD		DESCRIPTION	PART NO	FINISH	ITEM NO
		PARTS LIST			
4		MONTING SCREWS: 10-32, 1", Item 579	J507C1032R16	-	3
4		WASHER, CUSTOM C'SINK	3G15P1001-6		2
1		GASKET	3G15P1001-3G	-	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XXX ±.010 .XXXX ±.010, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON ℄ ø.005 125/ MACHINED SURFACES
DO NOT SCALE DRAWING
DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Feb-22-09
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

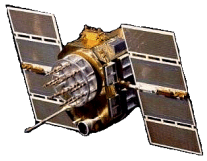
3.5" Dia., (L1/L2 GPS) & (Thuraya/Tx-Globalstar) ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3G1216RL-AP-XXX-X | REV -

SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

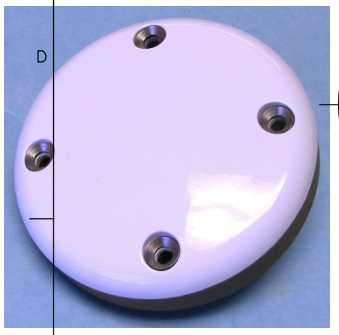
New 2-Ports, (RHCP-Inmarsat/Iridium/GPS) & (LHCP-Thuraya/Tx-GLobalstar) Antenna
P/N: 3GNSS1616RL-PP-XXX-X
3.5" Diameter, Flat, Back Mount, Bottom Connector Configuration
2.6in Dia. & Arinc-743 Versions are also available

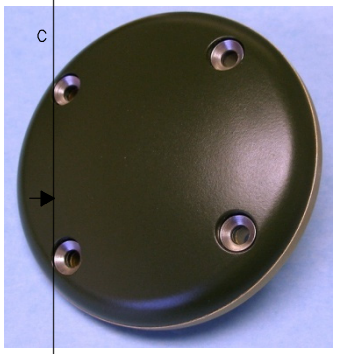


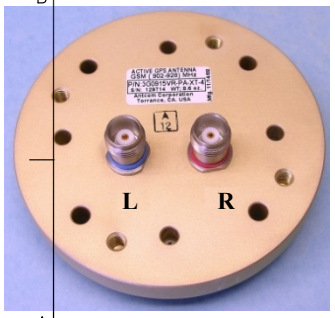
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

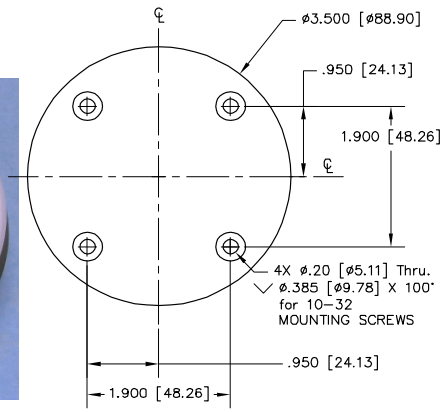
ANTCOM CORPORATION . 367 Van Ness Way, #602 . Torrance, CA 90501 . Tel: (310) 782-1076 . Fax: (310) 782-1086 . E-mail: antennas@antcom.com . http://www.antcom.com

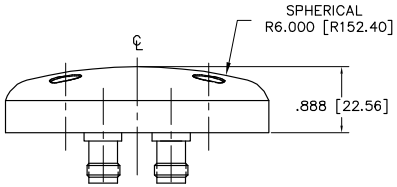
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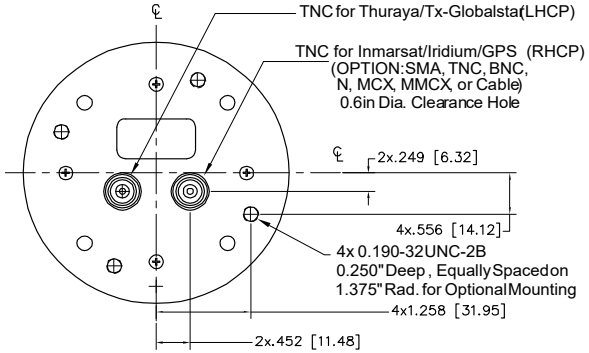












SPECIFICATIONS

ELECTRICAL:

	Rx Inmarsat OmniStar, L6 Galileo, B1 Compass (RHCP) & Rx-Thuraya (LHCP)		L1 GPS, E1, E2 Galileo, L1 IRNSS (RHCP)		IRIDIUM, L1 GLONASS (RHCP) & Tx-Globalstar (LHCP)		Tx Inmarsat (RHCP) & Tx-Thuraya (LHCP)	
FREQUENCY:	(1542.5± 17.5) MHz		(1575± 17) MHz		(1609 -1626) MHz		(1642.5± 17.5) MHz	
RADIATION PATTERN:	HEMISPHERICAL							
VSWR:	< 2.0:1		< 2.0:1		< 2.0:1		< 2.0:1	
IMPEDANCE:	50 ohms		50 ohms		50 ohms		50 ohms	
ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 3.3	+ 0.8	+ 5.9	+ 4.6	+ 6.4	+ 3.9	+ 8.0	+ 4.1
@ 10 ° Elevation:	- 3.9	- 5.0	- 1.0	- 1.5	- 0.7	- 2.3	+ 1.0	- 2.4
@ 20 ° Elevation:	- 2.3	- 1.2	+ 0.5	+ 1.4	+ 0.7	+ 0.9	+ 2.3	+ 0.7
@ 30 ° Elevation:	- 1.1	+ 0.4	+ 1.6	+ 3.0	+ 1.9	+ 2.2	+ 3.4	+ 1.7
@ 60 - 90 ° Elevation:	> + 2.4	> + 1.4	> + 4.9	> + 3.9	> + 5.6	> + 2.5	> + 6.9	> + 1.9
BEAM WIDTH (3dB):	100 Deg.	135 Deg.	100 Deg.	140 Deg.	92 Deg.	140 Deg.	90 Deg.	130 Deg.
AXIAL RATIO:	1.0 dB		1.0 dB		1.5 dB		2.0 dB	
LIGHTNING PROTECTION:	DC GROUNDING							

LNA OPTION

	33 dB Gain
LNA NOISE FIGURE:	3.0 dB
LNA P1dB Out:	+13 dBm
LNA DC POWER:	2.5V/20mA,3V/29mA,3.3V/35mA,(2.5-24)V/<50mA
REJECTION@ (-50/+50)MHz	-40 dB / -40 dB
@ (-100/+100)MHz	< -65 dB
POWER HANDLING	200 Watts CW (WITHOUT LNA) , 1 Watt CW (WITH LNA)

MECHANICAL:

SIZE:	DIAMETER:3.50 in.[88.9 mm] HEIGHT:0.888in.[22.56 mm]
WEIGHT:	10oz. (283g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME,IMPACT, ABRASION,UV, SOLVENT, SKYDROL RESISTANCE,AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION:TNC, TNC Bulkhead,N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144,DO-160D,D0-228, MIL-C-5541, MIL-E-5400,MIL-I-45208A,MIL-STD-810,AND SAE J1455

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100

SIZE	Frequency:	POLRAIZATION:	GPS LNA OPTION
1: 2" SQ.	1516: (L1 GPS) & (Thuraya/Tx-Globalstar)	RL: RHCP/LHCP	A: WITH LNA
1.9: 1.9" SQ.			A: WITH LNA/LIMITER
2: 2.6" DIA.	1616: (Inmarsat/Iridium) & (Thuraya/Tx-Globalstar)	RL: RHCP/LHCP	P: WITHOUT LNA
3: 3.5" DIA.			
4: MINI ARINC			

QUANTITY REQD		DESCRIPTION	PART NO	FINISH	ITEM NO
		PARTS LIST			
4		MONTING SCREWS: 10–32, 1", Item 579	J507C1032R16		5
1		GASKET	3G15P1001–3G	–	1

P/N: 3GNSS1616RL-PP-XTT-3

CABLE'S LENGTH	CONNECTOR	COLOR
X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE#17925 PER FED-STD-595B
M: MAG., N: No Mag.	M: MCX; MM: MMCX	-2: LUSTER LESS GRAY#36320 PER FED-STD-595B
#: CABLE LENGTH (IN)	N: N, NB: N-Bulkhead	-3: OLIVE DRAB GREEN#34031 PER FED-STD-595B
R: RIGHT ANGLE CON.	T: TNC, TB: TNC-Bulkhead	-4: LUSTER LESS BLACK#37038 PER FED-STD-595B

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64 DECIMALS .XX± .015 .XXX± .005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Feb–17–09
CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

3.5" Dia., Bottom Connector (Inmarsat/Iridium/GPS) & (Thuraya/Tx–Globalstar) Antenna

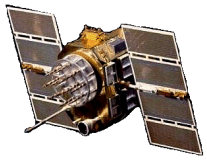
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SCALE 1/1 | SHEET 1 OF 1

ZONE	REV	DESCRIPTION	DATE	APPROVED

NMO Connector Option is Now Available for Some Antennas

Active L1/L2 GPS & Active XM Antenna

P/N: 3G121523RL-AA-XTT-1: 3.5” Diameter, Conformal Configurations



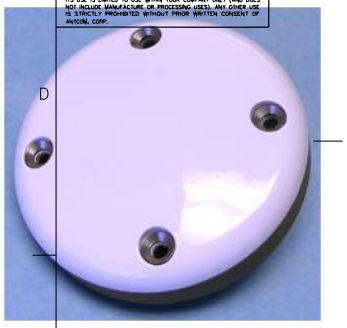
ISO 9001:2008/FAA Approved Facility Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

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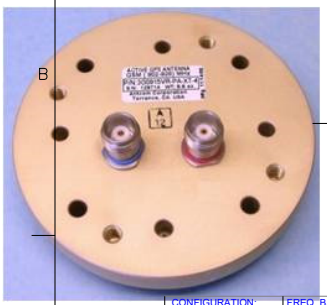
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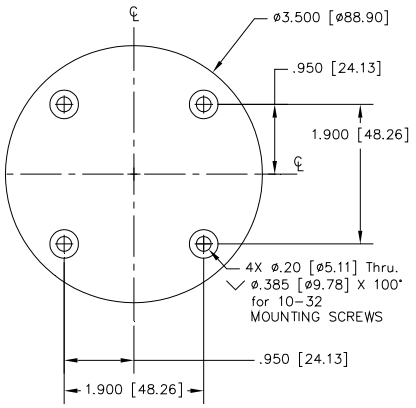
REVISIONS

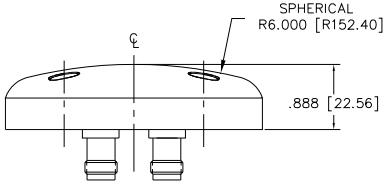
ZONE	REV	DESCRIPTION	DATE	APPROVED

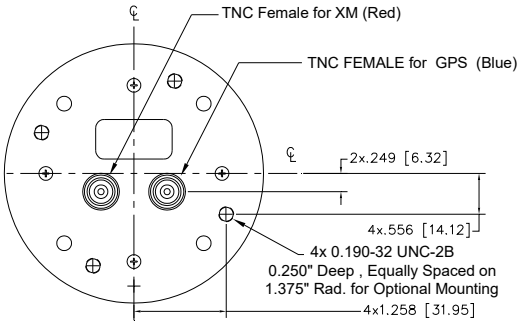












SPECIFICATIONS

ELECTRICAL:

FREQUENCY:	L1: (1575.42 ±12) MHz		L2: (1227.60 ±12) MHz		XM: (2338.75 +/- 10) MHz
RADIATION PATTERN:	HEMISPHERICAL				
POLARIZATION:	RHCP		RHCP		LHCP
VSWR:	< 2.0:1		< 2.0:1		< 2.0:1
IMPEDANCE:	50 ohms		50 ohms		50 ohms
ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.	4 ft G.P.
@ 90 ° (ZENITH):	+ 5.0	+ 3.1	+ 0.7	+ 4.5	+ 4.6
@ 10 ° Elevation:	- 2.1	- 1.9	- 5.8	- 3.5	- 1.1
@ 20 ° Elevation:	- 0.6	+ 0.6	- 4.3	- 0.8	+2.2
@ 30 ° Elevation:	+ 0.9	+ 1.7	- 3.4	+ 1.4	+2.2
@ 60 - 90 ° Elevation:	> 4.0	> 2.4	> - 0.9	> 2.2	—
BEAM WIDTH (3dB):	103 Deg.	143 Deg.	94 Deg.	74 Deg.	—
AXIAL RATIO:	2 dB		2 dB		2 dB
LIGHTNING PROTECTION:	DC GROUNDING				
LNA GAIN:	33 dB		35 dB		33 dB
LNA NOISE FIGURE:	2 dB		2 dB		2 dB
LNA P1dB Out:	+13 dBm		+13 dBm		+13 dBm
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA				
POWER HANDLING:	1 Watt CW, Optional: 10 Watts 1 microsec Pulse (-AL-)				

MECHANICAL:

SIZE:	DIAMETER: 3.50 in.[88.90 mm] HEIGHT: 0.888 in. [23 mm]
WEIGHT:	9.2 oz. (261g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	TNC FEMALE (OPTION: SMA, TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, SMP, BNC, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

FAA TSO-C144, DO-160D, D0-228, MIL-C-5541,
MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100

CONFIGURATION:	FREQ. BAND:	GPS/WSI LNA:	CABLE'S LENGTH:	GPS/IRIDIUM/WSI CON.:	COLOR:
1: 2" SQ. (FLAT)	1625: Tx/Rx	A: WITH LNA	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	25: Rx ONLY	P: WITHOUT LNA	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	16: Tx ONLY		#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)	151623: L1L2 GPS/XM (SIRIUS)		R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)	121523: L1/L2 GPS/IRIDIUM/XM				
5S: (HELIX ROD)	151615: GPS/IRIDIUM/WSI				
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

P/N: 3G121523RL-AA-XTT-1

QUANTITY REQD		DESCRIPTION	PART NO	FINISH	ITEM NO
		PARTS LIST			
4		MONTING SCREWS: 10-32, 1", Item 579	J507C1032R16	–	3
4		WASHER, CUSTOM C'SINK	3G15P1001-6		2
1		GASKET	3G15P1001-3G	–	1

2. MOUNTING SCREWS & ADHESIVE GASKET ARE SUPPLIED BY ANTCOM
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]

NOTES: UNLESS OTHERWISE SPECIFIED:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .015 .XXX± .010, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON ℄ Ø.005
MACHINED SURFACES 125

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Oct-24-11
CAD FILE NO
DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE CALIFORNIA

3.5” Dia., Active L1L2-GPS & Active XM ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 3G121523RL-AA-XTT-1 | REV
SCALE 1/1 | SHEET 1 OF 1

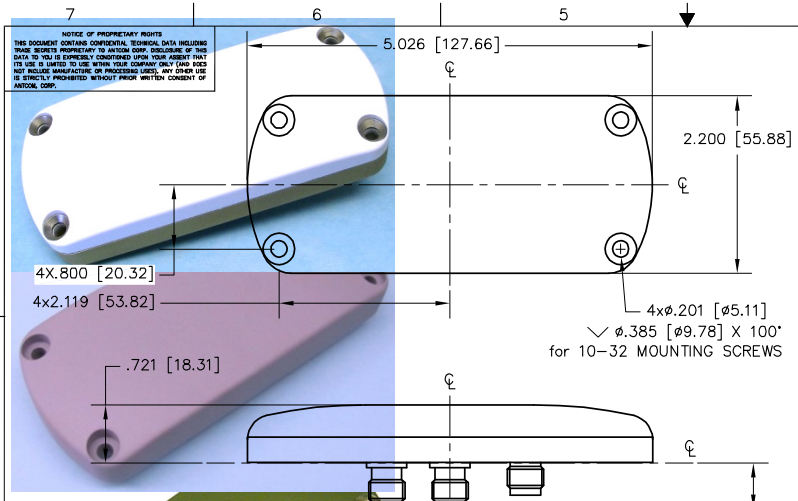
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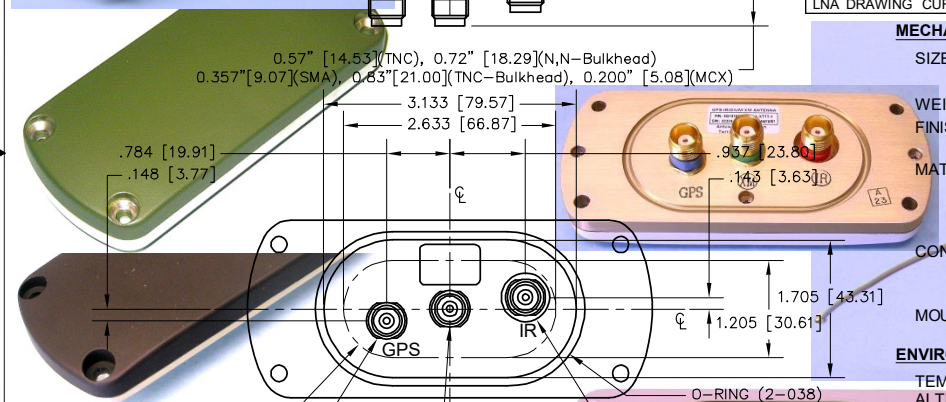
NMO Connector Option is Now Available for Some Antennas

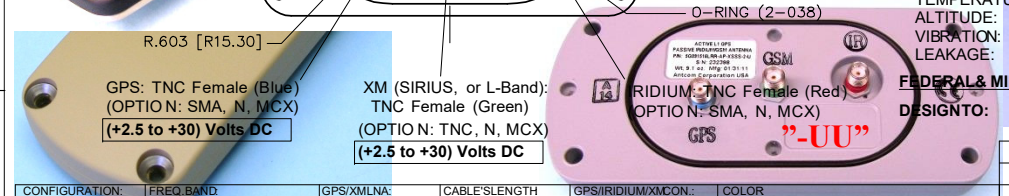
GPS/IRIDIUM/XM or SIRIUS Antenna
(5.03"x2.08"x0.69"), Flat/Pipe mount, P/N: 5G151623RRX-AA-XTTT-X

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SPECIFICATIONS

ELECTRICAL:

	L1 GPS/L-Band		IRIDIUM		XM, OR SIRIUS RADIO	
FREQUENCY:	(1575.42 ±12) MHz,		(1610.0 - 1626.5) MHz		(2338.75 +/- 10) MHz	
RADIATION PATTERN:	(1555.00 ±17) MHz		HEMISPHERICAL		HEMISPHERICAL	
POLARIZATION:	RHCP		RHCP		LHCP (XM), RHCP (SIRIUS)	
VSWR:	< 1.5:1		< 1.5:1		< 1.5:1	
GAIN (dB):	F.S	4 ft G.P.	F.S	4 ft G.P.	F.S	4 ft G.P.
@ 90° (Zenith):	+ 4.6	+ 2.9	+4.9	+4.2	+3.7	+1.8
@ 10° Elevation (Ave):	- 2.5	- 1.8	-2.4	-1.3	-3.2	-1.8
@ 20° Elevation (Ave):	- 1.1	+ 0.7	-0.8	+1.4	-1.6	+0.9
@ 30° Elevation (Ave):	+ 0.5	+ 1.7	+0.8	+2.3	-0.2	+0.2
@ 45° Elevation (Ave):	> 3.6	> 2.1	+2.8	+2.2	+1.3	+0.6
@ 70° Elevation (Ave):	> 3.6	> 2.1	+4.6	+3.5	+3.2	+0.6
AXIAL RATIO @ Zenith:	2 dB		2 dB		2 dB	
POWER HANDLING:	1 Watt				1 Watt	
DC GROUNDING :	YES (LIGHTNING PROTECTION)					
FILTER (REJ. @1616 MHz):					57 dB	
REJECTION @ (-50/+50) MHz	-45 dB / -70 dB					
@ (-100/+100) MHz	< -65 dB					
LNA GAIN:	34 dB (P1dBout = +13 dBm)				(35 +/- 1) dB	
LNA NOISE FIGURE:	2.4 dB				2.8 dB	
LNA VOLTAGE:	(+2.5 to +30) Volts DC FROM Rx RF CON.				(+2.5 to +30) Volts DC FROM Rx RF CON.	
LNA DRAWING CURRENT :	< 30 mA				< 38 mA	

MECHANICAL:

SIZE: WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in [127.66mm], HEIGHT:0.721 in. [18.31mm]

WEIGHT: < 8.0 oz. (226 g)

FINISH: SKYDROLRESISTANTPOLYURETHANEENAMEL BASE IRIDITEPER MIL-C-5441

MATERIAL: 6061-T6ALUMINUMALLOYBASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,ANDSKYDROLRESISTANCE, FIRE RETARDANT

CONNECTOR: GPS: TNC-F (Blue) IRIDIUM: TNC-F (Red), XM: TNC-F (Green) (OPTION:SMA, TNC,TNC Bulkhead,N, N Bulkhead, MCX, MMCX, or Cable)

MOUNTING: FLAT FIXED MOUNT; O-RING& 4 x 10-32 MOUNTINGSCREWSPROVIDED

ENVIRONMENTAL:

TEMPERATURE: -67 °F TO +185 °F [-55 °C TO +85 °C]

ALTITUDE: 70,000ft.

VIBRATION: > 30 G's

LEAKAGE: HERMETICALLYSEALED

FEDERAL& MILITARYSPECIFICATIONS

DESIGNTO: FAA TSO-C144,DO-160D,D0-228,MIL-C-5541, MIL-E-5400,MIL-I-45208A,MIL-STD-810,AND SAE J1455

CONFIGURATION:	FREQ BAND	GPS/XMLNA:	CABLE'SLENGTH	GPS/IRIDIUM/XMCON.:	COLOR
1: 2" SQ. (FLAT)		R: SIRIUS	X: NO CABLE	S: SMA;P: PINS	-1: GLOSSWHITE#17925PER FED-STD-595B
1.9: 1.9"SQ. (FLAT)	1516: GPS/IRIDIUM	L: XM	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESSGRAY#36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	151623:GPS/IRIDIUM/XM OR SIRIUS)		#: CABLE LENGTH(IN)	N: N; NB: N-Bulkhead	-3: OLIVEDRAB GREEN#34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)	151615:GPS/IRIDIUM/L-Band		R: RIGHTANGLECON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESSBLACK#37038 PER FED-STD-595B
4: MINI ARINC (FLAT)					
5G: (5.0x2.2)inRect.					
5B: (HELIXBLADE)					
3D: (HELIXHANDHELD)					

P/N: 5G1516XXRRX-AA-XTTT-1

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
	PARTS LIST				
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	–	–	5
					3
1	O-RING	2-038-N756-75	–	–	1

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ALL SCREWS ARE SUPPLIED BY ANTCOM CORPORATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .030, .XXX± .015, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ ±.005
MACHINED SURFACES 125
DO NOT SCALE DRAWING

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH July-22-05
CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA
FLAT FIXED MOUNT
GPS/IRIDIUM/XM (SIRIUS, or L-Band)
ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 5G1516XXRRX-AA-XTTT-1 | REV –
SCALE 1/1 | SHEET 1 OF 1

ZONE	REV	DESCRIPTION	DATE	APPROVED

NMO Connector Option is Now Available for Some Antennas

Iridium/GPS/GSM Antenna
(5.03"x2.08"x0.69"), Flat/Pipe mount, P/N: 5GXX1X16LRR-AP-XXXX-X
P/N: 5G091516LRR-AP-XTTT-1 (GSM/L1-GPS/Iridium with all TNC Connectors)
P/N: 5G091216LRR-AP-XTTT-1 (GSM/L1/L2-GPS/Iridium with all TNC Connectors)

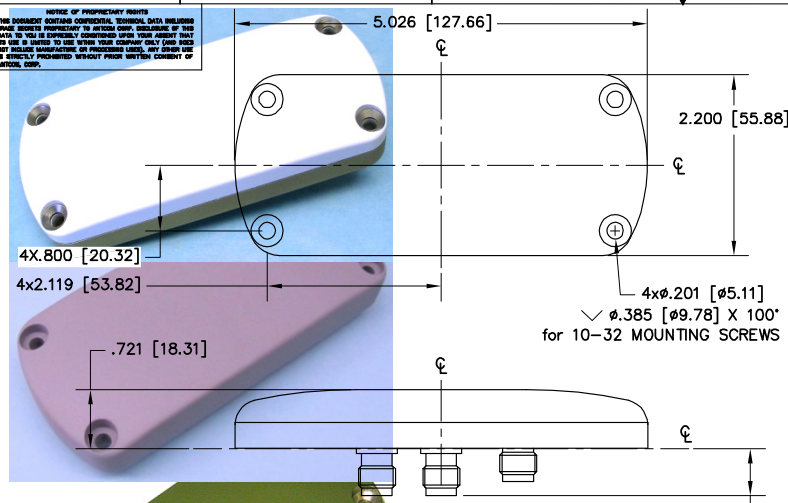
ISO 9001:2008/FAA Approved Facility

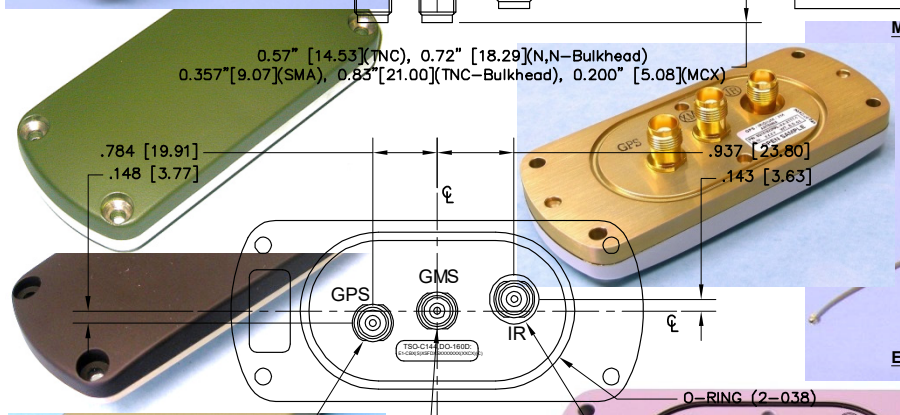
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

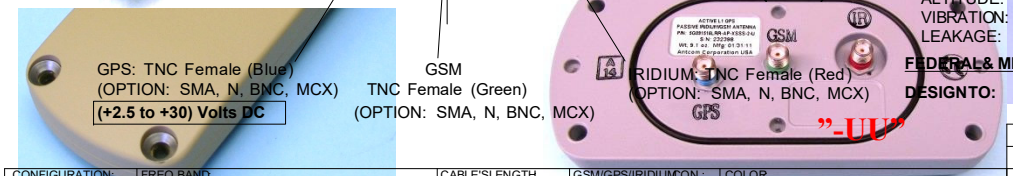
FAA Approved TSO Antennas

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SPECIFICATIONS

ELECTRICAL:

	GPS (L1 or L1/L2, See P/N in Bottom Table)				IRIDIUM		GSM
FREQUENCY:	L1: (1575.4 ±13)		L2: (1227.6 ±13) MHz		(1610.0 - 1626.5) MHz		(See Bottom Table)
RADIATION PATTERN:	HEMISPHERICAL				HEMISPHERICAL		Verticle / Horizontal
POLARIZATION:	RHCP				RHCP		OMNI
VSWR:	< 1.5:1				< 1.5:1		< 2:1
GAIN (dB):	F.S.	4 ft G.P	F.S.	4 ft G.P	4 ft G.P.	F.S	
@ 90° (Zenith):	+ 4.6	+ 2.9	+ 1.8	+ 5.3	+4.9	+5.0	
@ 10° Elevation:	- 2.5	- 1.8	- 4.2	- 2.3	-1.0	-2.5	
@ 20° Elevation:	- 1.1	+ 0.7	- 2.9	+ 0.4	+1.5	-0.5	
@ 30° Elevation:	+ 0.5	+ 1.7	- 2.0	+ 2.3	+2.4	+1.0	
@ 60° to 90°Elevation:	> 3.6	> 2.1	> 0.9	> 3.2	>+3.3	>+2.7	
BEAM WIDTH (3dB):	103 °	146 °	108 °	74 °	129 °	98 °-106 °	
AXIAL RATIO @ Zenith:	2 dB				2 dB		
POWER HANDLING:	1 Watt				30 W		
LIGHTNING PROTECTION:	DC GROUNDING				DC GROUNDING		
FILTER:	2 2-POL						
LNA GAIN:	(33.0+/-1.0) dB				N/A		
LNA P 1dB Out:	+16 dBm				N/A		
LNA NOISE FIGURE:	2.9 dB (Filter loss is Included)				N/A		
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (30 TO 50) mA				N/A		

MECHANICAL:

SIZE:	WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in [127.66mm], HEIGHT: 0.721in. [18.31mm]
WEIGHT:	< 8.0 oz. (226 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	GPS: TNC-F (Blue) IRIDIUM: TNC-F (Red) XM: TNC-F (Green) (OPTION: SMA, TNC, TNC Bulkhead, N, N Bulkhead, BNC, MCX, MMCX, or Cable)
MOUNTING:	FLAT FIXED MOUNT; O-RING & 4 x 10-32 MOUNTING SCREWS PROVIDED

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

CONFIGURATION:	FREQ. BAND:	CABLE'S LENGTH	GSM/GPS/IRIDIUM CON.:	COLOR
5G: (5.0x2.2)inRect.	08: CELLULAR (824-894 MHz (US/Canada)	X: NO CABLE	S: SMA; P: PINS	-1: GLOSSWHITE#17925 PER FED-STD-595B
	09: GSM (876-960) MHz (Europe/Asia/Africa/M-East)	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY#36320 PER FED-STD-595B
	18: DCS (1710-1880) MHz (Europe/Asia/Africa/M-East)	#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN#34031 PER FED-STD-595B
	19: PCS (1850-1990) MHz (US/Canada)	R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK#37038 PER FED-STD-595B
3B: BLADE	Q4: QUAD BAND (All 4 bands above)		B: BNC Female	-5: TAN #: FS 23446 or 33446, FED-STD-595
	15: L1 GPS (1575+/-12) MHz			
	12: L1/L2 GPS (1575+/-12) (1227+/-12) MHz			

Example P/N: 5G091516LRR-AP-XTTT-1

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
PARTS LIST					
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	-	-	5
					3
1	O-RING	2-038-N756-75	-	-	1

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ALL SCREWS ARE SUPPLIED BY ANTCOM CORPORATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .030, .XXX± .010, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ℄ ⌀.005. MACHINED SURFACES 125/. DO NOT SCALE DRAWING

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH July-12-09 | CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

FLAT FIXED MOUNT GSM/GPS/IRIDIUM ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 5GXX1X16LRR-AP-XXXX-X | REV -

SCALE 1/1 | SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

GPS+GSM+Iridium or GPS+Dual Iridium Antenna

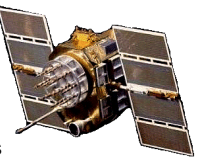
P/N: 5G091516LRR-AP-**GTTT-1-TLSC** (GSM/L1-GPS/Iridium with all TNC Connectors)

P/N: 5G091216LRR-AP-**GTTT-1-TLSC** (GSM/L1/L2-GPS/Iridium with all TNC Connectors

(Heavy Duty Suction Cup Mount Configuration, Other Mounting Options are Available)

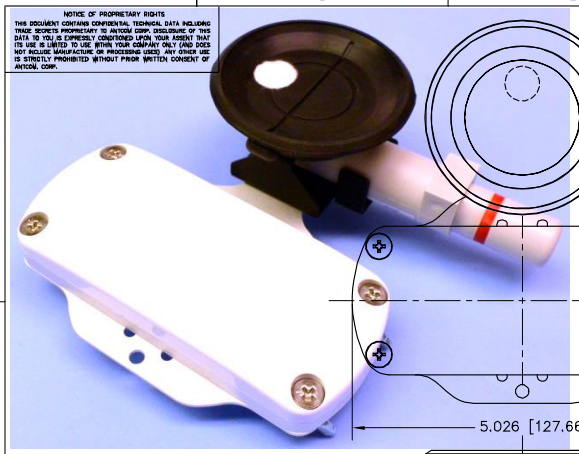
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

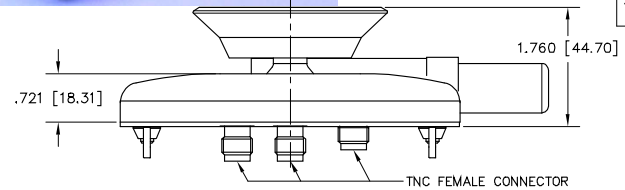
FAA Approved TSO Antennas

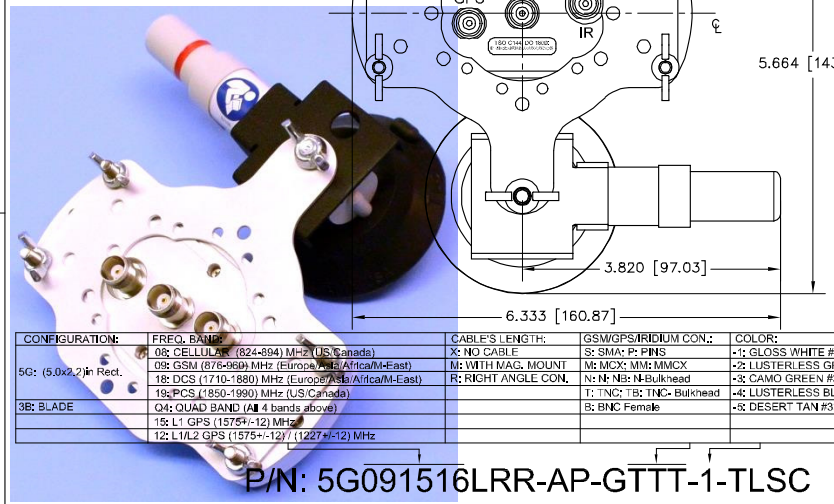


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SPECIFICATIONS

ELECTRICAL:

	GPS (L1 or L1/L2, See P/N in Bottom Table)				IRIDIUM		GSM
FREQUENCY:	L1: (1575.4 ±13)		L2: (1227.6 ±13) MHz		(1610.0 - 1626.5) MHz		(See Bottom Table)
RADIATION PATTERN:	HEMISPHERICAL				HEMISPHERICAL		Verticle / Horizontal
POLARIZATION:	RHCP				RHCP		OMNI
VSWR:	< 1.5:1				< 1.5:1		< 2:1
GAIN (dB):	F.S.	4 ft G.P	F.S.	4 ft G.P	4 ft G.P.	F.S	
@ 90° (Zenith):	+ 4.6	+ 2.9	+ 1.8	+ 5.3	+4.9	+5.0	
@ 10° Elevation:	- 2.5	- 1.8	- 4.2	- 2.3	-1.0	-2.5	
@ 20° Elevation:	- 1.1	+ 0.7	- 2.9	+ 0.4	+1.5	-0.5	
@ 30° Elevation:	+ 0.5	+ 1.7	- 2.0	+ 2.3	+2.4	+1.0	
@ 60° to 90°Elevation:	> 3.6	> 2.1	> 0.9	> 3.2	>+3.3	>+2.7	
BEAM WIDTH (3dB):	103 °	146 °	108 °	74 °	129 °	98 °-106 °	
AXIAL RATIO @ Zenith:	2 dB				2 dB		
POWER HANDLING:	1 Watt				30 W		
LIGHTNING PROTECTION:	DC GROUNDING				DC GROUNDING		
FILTER:	2 2-POL						
LNA GAIN:	(33.0+/-1.0) dB				N/A		
LNA P 1dB Out:	+16 dBm				N/A		
LNA NOISE FIGURE:	2.9 dB (Filter loss is Included)				N/A		
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (30 TO 50) mA				N/A		

MECHANICAL:

SIZE:	WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in [127.66 mm], HEIGHT: 0.721 in. [18.31 mm]
WEIGHT:	< 8.0 oz. (226 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	GPS: TNC FEMALE (OPTION: SMA, TNC Bulkhead, N, N Bulkhead, BNC, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

CONFIGURATION:	FREQ. BAND:	CABLE'S LENGTH:	GSM/GPS/IRIDIUM CON.:	COLOR:
5G: (5.0x2.2)in Rect.	08: CELLULAR (824-894) MHz (US/Canada)	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
	09: GSM (876-960) MHz (Europe/Asia/Africa/M-East)	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	18: DCS (1710-1880) MHz (Europe/Asia/Africa/M-East)	R: RIGHT ANGLE CON.	N: N; NB: N-Bulkhead	-3: CAMO GREEN #34094 PER FED-STD-595B
	19: PCS (1850-1990) MHz (US/Canada)		T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
3B: BLADE	Q4: QUAD BAND (All 4 bands above)		B: BNC Female	-5: DESERT TAN #33446 PER FED-STD-595B
	15: L1 GPS (1575+/-12) MHz			
	12: L1/L2 GPS (1575+/-12)/ (1227+/-12) MHz			

P/N: 5G091516LRR-AP-GTTT-1-TLSC

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
	PARTS LIST				
4	WING NUT, 10-32	591-10WNut	-	-	5
1	WING NUT, 1/4-20	591-14WNut	-	-	4
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	-	-	3
1	VACUUM PUMP SUCTION CUP	489-Alan	-	-	2
1	ANTENNA MOUNTING PLATE	482-New	-	-	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .030, .XXX± .015, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON ℄ Ø.005 M
MACHINED SURFACES 125/
DO NOT SCALE DRAWING

	ORIGINAL	UPDATED
DRAWN	S. HUYNH July-12-09	S. HUYNH Nov-06-15
DESIGNED	S. HUYNH July-12-09	P. TRAN Nov-06-15
APPROVED		S. HUYNH Nov-06-15

ANTCOM CORP. TORRANCE CALIFORNIA

HEAVY DUTY SUCTION CUP MOUNT GSM/GPS/IRIDIUM ANTENNA

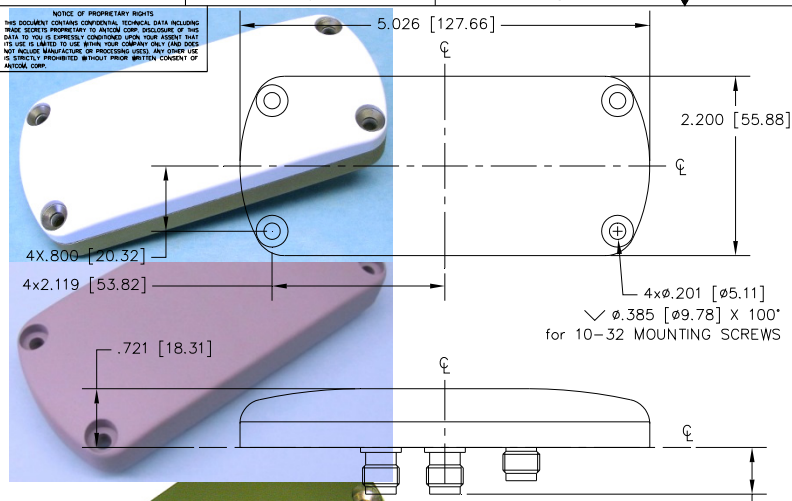
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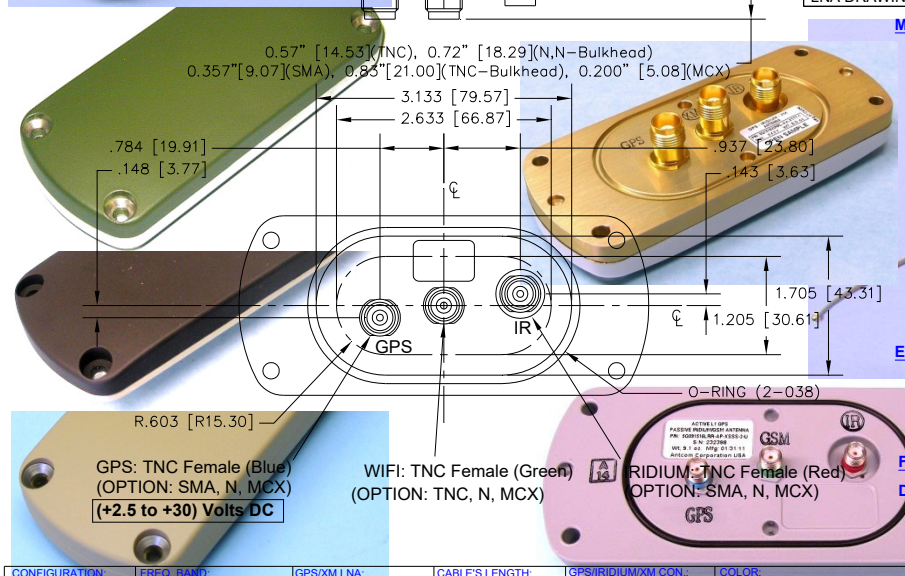
SCALE 1/1 SHEET 1 OF 1

NMO Connector Option is Now Available for Some Antennas

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SPECIFICATIONS

ELECTRICAL:

	L1 GPS/L-Band		IRIDIUM		WIFI	
FREQUENCY:	(1575.42 ±12) MHz,		(1610.0 - 1626.5) MHz		(2400-2500) MHz	
RADIATION PATTERN:	(1555.00 ±17) MHz		HEMISPHERICAL		VERTICAL	
POLARIZATION:	RHCP		RHCP		LHCP	
VSWR:	< 1.5:1		< 1.5:1		< 2:1	
GAIN (dB):	F.S	4 ft G.P.	F.S	4 ft G.P.	F.S	4 ft G.P.
@ 90° (Zenith):	+ 4.6	+ 2.9	+4.9	+4.2	+3.7	+1.8
@ 10° Elevation (Ave):	- 2.5	- 1.8	-2.4	-1.3	-3.2	-1.8
@ 20° Elevation (Ave):	- 1.1	+ 0.7	-0.8	+1.4	-1.6	+0.9
@ 30° Elevation (Ave):	+ 0.5	+ 1.7	+0.8	+2.3	-0.2	+0.2
@ 45° Elevation (Ave):	> 3.6	> 2.1	+2.8	+2.2	+1.3	+0.6
@ 70° Elevation (Ave):	> 3.6	> 2.1	+4.6	+3.5	+3.2	+0.6
AXIAL RATIO @ Zenith:	2 dB		2 dB			
POWER HANDLING:	1 Watt					
DC GROUNDING:	YES (LIGHTNING PROTECTION)					
FILTER (REJ. @1616 MHz):						
REJECTION @ (-50/+50) MHz	-45 dB / -40 dB					
@ (-100/+100) MHz	< -65 dB					
LNA GAIN:	22 dB (P1dBout = +13 dBm)					
LNA NOISE FIGURE:	2.2 dB					
LNA VOLTAGE:	(+2.5 to +24) Volts DC FROM Rx RF CON.					
LNA DRAWING CURRENT:	< 30 mA					

MECHANICAL:

SIZE:	WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in [127.66 mm], HEIGHT: 0.721 in. [18.31 mm]
WEIGHT:	< 8.0 oz. (226 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	GPS: TNC-F (Blue). IRIDIUM: TNC-F (Red), WIFI: TNC-F (Green) (OPTION: SMA, TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)
MOUNTING:	FLAT FIXED MOUNT; O-RING & 4 x 10-32 MOUNTING SCREWS PROVIDED

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

CONFIGURATION:	FREQ. BAND:	GPS/XM LNA:	CABLE'S LENGTH:	GPS/IRIDIUM/XM CON.:	COLOR:
1: 2" SQ. (FLAT)		R: GPS/IRRIDIUM	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)	1516: GPS/IRIDIUM	L: WIFI	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	151615: GPS/IRIDIUM/L-Band	A2: WITH LNA	#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)	151624: GPS/IRIDIUM/WI-FI	P: WITHOUT LNA	R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)		A: 33dB			
5G: (5.0x2.2)in Rect.					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

P/N: 5G151624RRL-A2P-XTTT-1

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
4	MOUNTING SCREW: (10-32, 1")	MS24693C276	-	-	5
					3
1	O-RING	2-038-N756-75	-	-	1

PARTS LIST

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ALL SCREWS ARE SUPPLIED BY ANTCOM CORPORATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .030, .XXX± .015, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ¢ .2" .005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH Mar-08-12 | CAD FILE NO

ANTCOM CORP. TORRANCE CALIFORNIA

FLAT FIXED MOUNT
GPS/IRIDIUM/WIFI
ANTENNA

SIZE D | CAGE NO 3CVE1 | DRAWING NO 5G151624RRL-A2P-XTTT-X | REV —

SCALE 1/1 | SHEET 1 OF 1

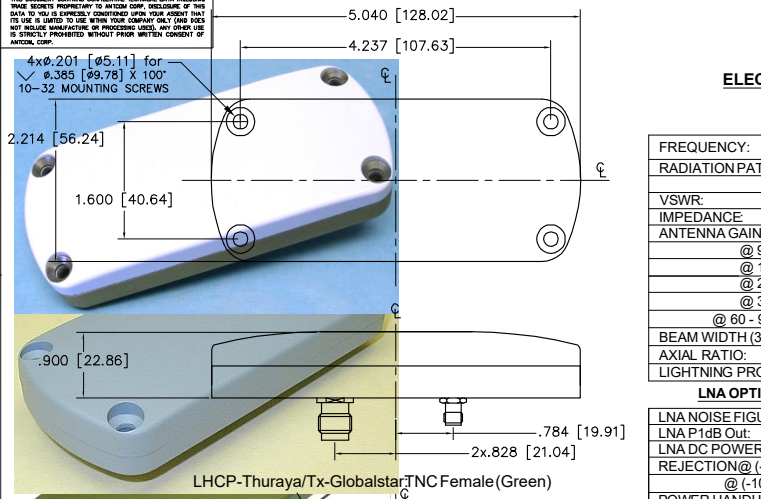
ORIGINAL DOCUMENT WHEN STAMP IS RED

NMO Connector Option is Now Available for Some Antennas

New 3-Ports (Active L1/L2 GPS), (RHCP-Inmarsat/Iridium) & (LHCP-Thuraya/Tx-Globalstar) Antenna, P/N: 5G1216RL-AP-XSTT-1 (5.04"x2.2"x0.9"), Flat, Top/Pipe Mount, Bottom Connector Configuration

ANTCOM CORPORATION . 367 Van Ness Way, #602 . Torrance, CA 90501 . Tel: (310) 782-1076 . Fax: (310) 782-1086 . E-mail: antennas@antcom.com . http://www.antcom.com

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SPECIFICATIONS

ELECTRICAL:

	L1/L2 GPS		Rx Inmarsat OmniStar, L6 Galileo, B1 Compass(RHCP)	IRIDIUM L1 GLONASS(RHCP)	Tx Inmarsat (RHCP)
	L2	L1	& Rx-Thuraya (LHCP)	& Tx-Globalstar(LHCP)	& Tx-Thuraya (LHCP)
FREQUENCY:	(1227.60 ±15) MHz	(1575.42 ±15) MHz	(1542.5 ± 17.5) MHz	(1609 -1626) MHz	(1642.5 ± 17.5) MHz
RADIATION PATTERN:	HEMISPHERICAL				
VSWR:	< 2.0:1				
IMPEDANCE:	50 ohms				

ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 1.8	+ 5.3	+ 4.6	+ 2.9	+ 3.3	+ 0.8	+ 6.4	+ 3.9	+ 8.0	+ 4.1
@ 10 ° Elevation:	- 4.2	- 2.3	- 2.5	- 1.8	- 3.9	- 5.0	- 0.7	- 2.3	+ 1.0	- 2.4
@ 20 ° Elevation:	- 2.9	+ 0.4	- 1.1	+ 0.7	- 2.3	- 1.2	+ 0.7	+ 0.9	+ 2.3	+ 0.7
@ 30 ° Elevation:	- 2.0	+ 2.3	+ 0.5	+ 1.7	- 1.1	+ 0.4	+ 1.9	+ 2.2	+ 3.4	+ 1.7
@ 60 - 90 ° Elevation:	> + 0.9	> + 3.2	> + 3.6	> + 2.1	> + 2.4	> + 1.4	> + 5.6	> + 2.5	> + 6.9	> + 1.9
BEAM WIDTH (3dB):	108 Deg.	120 Deg.	103 Deg.	146 Deg.	100 Deg.	135 Deg.	92 Deg.	140 Deg.	90 Deg.	130 Deg.
AXIAL RATIO:	2.0 dB		2.0 dB		1.0 dB		1.5 dB		2.0 dB	
LIGHTNING PROTECTION:	DC GROUNDING									

LNA OPTION:

	33 dB Gain	
LNA NOISE FIGURE:	3.0 dB	
LNA P1dB Out:	+13 dBm	
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA	
REJECTION@ (-50/+50) MHz	-40 dB / -40 dB	
@ (-100/+100) MHz	< -65 dB	
POWER HANDLING:	1 Watt CW (WITH LNA)	200 Watts CW

MECHANICAL:

SIZE:	WIDTH: 2.214 in. [56.24 mm], LENGTH: 5.040 in [128.02 mm], HEIGHT: 0.900 in. [22.86 mm]
WEIGHT:	10.4 oz. (295g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE ATP-GPS-L1L2-100

QUANTITY REQD	DESCRIPTION	PART NO	FINISH	ITEM NO
4	MONTING SCREWS: 10-32, 100° Flat Head, 1"	J507C1032R16		2
1	O-RING	2-038-N756-75	-	1

PARTS LIST

CONFIGURATION:	FREQ. BAND:	GPS LNA:	CABLE'S LENGTH:	GPS/Inmarsat/Thuraya Connnector:	COLOR
1: 2" SQ. (FLAT)	1516: L1 GPS & (Inmarsat/Iridium) & (Thuraya/Tx-Globalstar)	A: WITH LNA	X: NO CABLE	S: SMA	-1: GLOSS WHITE #17925 PER FED-STD-595B
1.9: 1.9" SQ. (FLAT)		P: WITHOUT LNA	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
2: 2.6" DIA. (FLAT)	1216: L1/L2 GPS & (Inmarsat/Iridium) & (Thuraya/Tx-Globalstar)		#: CABLE LENGTH (IN)	N: N; NB: N-Bulkhead	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
3: 3.5" DIA. (FLAT)		A2: WITH 20dB LNA	R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
4: MINI ARINC (FLAT)				B: BNC FEMALE	
53: (HELIX ROD)					
5B: (HELIX BLADE)					
3D: (HELIX HANDHELD)					

P/N: 5G1216RL-AP-XSTT-1

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ALL SCREWS ARE SUPPLIED BY ANTCOM CORPORATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .016, .XXX± .005, ANGLES ± 1°. TOLERANCE SYM PER ANSI Y14.5. REMOVE ALL BURRS. BREAK EXTERNAL EDGES .005 TO .015. FILLETS R .005 TO R .030. SCREW THREADS PER MIL-S-8879. DIA'S ON A COMMON ⌀ .005. MACHINED SURFACES 125. DO NOT SCALE DRAWING.

DRAWN | CHECKED | ENGINEER | APPROVED S. HUYNH Feb-17-09 | CAD FILE NO

ANTCOM CORP. TORRANCE, CALIFORNIA

Combined Avionics GPS & (RHCP-Inmarsat/Iridium) & (LHCP-Thuraya/Tx-Globalstar) Antenna

SIZE D | CAGE NO 3CVE1 | DRAWING NO 5G1216RL-AP-XSTT-1 | REV —

SCALE 1/1 | SHEET 1 OF 1

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

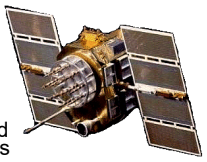
NMO Connector Option is Now Available for Some Antennas

New 4-Ports, Active L1 GPS & Dual Iridium & Wi-Fi Antenna
P/N: S5GIR151625RRL-APP-XST3-1
(5.04"x2.2"x0.9"), Flat, Top Mount, Bottom Connector Configuration

ISO 9001:2008/FAA Approved Facility

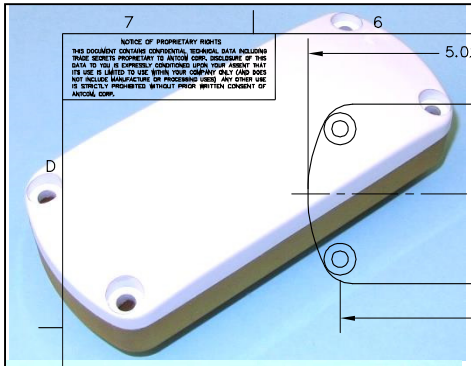
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

FAA Approved TSO Antennas

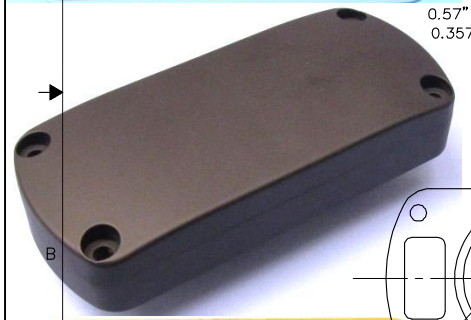


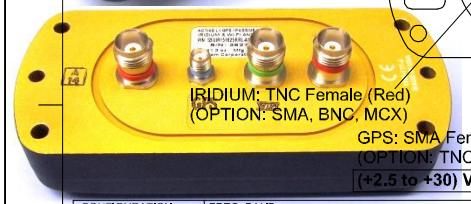
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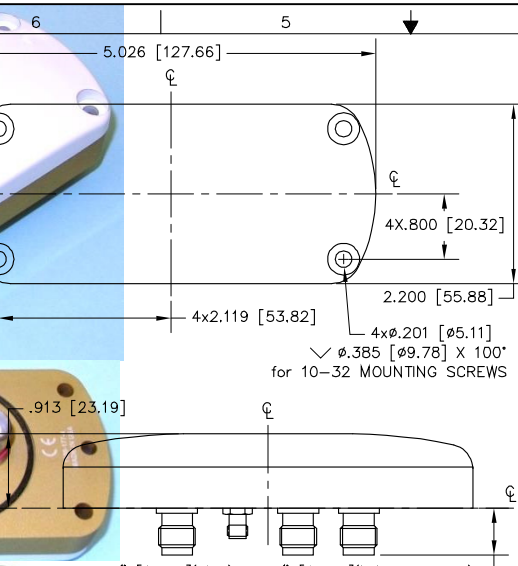
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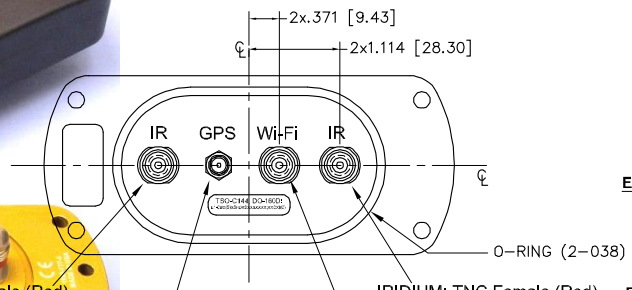












IRIDIUM: TNC Female (Red)
(OPTION: SMA, BNC, MCX)

GPS: SMA Female (Blue)
(OPTION: TNC, BNC, MCX)

(+2.5 to +30) Volts DC

Wi-Fi
TNC Female (Green)
(OPTION: SMA, BNC, MCX)

IRIDIUM: TNC Female (Red)
(OPTION: SMA, BNC, MCX)

SPECIFICATIONS

ELECTRICAL:

	GPS (L1 or L1/L2, See P/N in Bottom Table)				DUAL IRIDIUM	Wi-Fi
FREQUENCY:	L1: (1575.4 ±13)		L2: (1227.6 ±13) MHz		(1610.0 - 1626.5) MHz	(See Bottom Table)
RADIATION PATTERN:	HEMISPHERICAL				HEMISPHERICAL	Verticle / Horizontal
POLARIZATION:	RHCP				RHCP	OMNI
VSWR:	< 2:1				< 2:1	< 2:1
GAIN (dB):	F.S.	4 ft G.P	F.S.	4 ft G.P	F.S	GAIN (dB):
@ 90° (Zenith):	+ 4.6	+ 2.9	+ 1.8	+ 5.3	0.0	
@ 10° Elevation:	- 2.5	- 1.8	- 4.2	- 2.3	- 7.5	
@ 20° Elevation:	- 1.1	+ 0.7	- 2.9	+ 0.4	- 5.5	
@ 30° Elevation:	+ 0.5	+ 1.7	- 2.0	+ 2.3	- 4.0	
@ 60° to 90°Elevation:	> 3.6	> 2.1	> 0.9	> 3.2	- 2.3	
BEAM WIDTH (3dB):	103 °	146 °	108 °	74 °	98 °-106 °	
AXIAL RATIO @ Zenith:	2 dB				2 dB	
POWER HANDLING:	1 Watt				30 W	
LIGHTNING PROTECTION:	DC GROUNDING				DC GROUNDING	
FILTER:	2 2-POL					
LNA GAIN:	(33.0+/-1.0) dB				N/A	
LNA P 1dB Out:	+16 dBm				N/A	
LNA NOISE FIGURE:	2.9 dB (Filter loss is Included)				N/A	
VOLTAGE/CURRENT:	(+2.8 TO +28) Volts DC / (30 TO 50) mA				N/A	

MECHANICAL:

SIZE:	WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in [127.66 mm] HEIGHT: 0.913 in. [23 mm]
WEIGHT:	< 10 oz. (283 g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5541F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT,AND SKYDROL RESISTANCE, FIRE RETARDANT
CONNECTOR:	GPS: SMA-F (Blue). IRIDIUM: TNC-F (Red), Wi-Fi: TNC-F (Green) (OPTION: SMA, TNC, TNC Bulkhead, BNC, MCX, MMCX, or Cable)
MOUNTING:	FLAT FIXED MOUNT; O-RING & 4 x 10-32 MOUNTING SCREWS PROVIDED

ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541,MIL-S-901D/MIL-STD-167
MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

CONFIGURATION:	FREQ. BAND:	CABLE'S LENGTH:	GPS/IRIDIUM/Wi-Fi CON.:	COLOR:
5G: (5.0x2.2)in Rect.	08: CELLULAR (824-894) MHz (US/Canada)	X: NO CABLE	S: SMA; P: PINS	-1: GLOSS WHITE #17925 PER FED-STD-595B
	09: GSM (876-960) MHz (Europe/Asia/Africa/M-East)	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
	18: DCS (1710-1880) MHz (Europe/Asia/Africa/M-East)	#: CABLE LENGTH (IN)		-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
	19: PCS (1850-1990) MHz (US/Canada)	R: RIGHT ANGLE CON.	T: TNC; TB: TNC- Bulkhead	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
3B: BLADE	Q4: QUAD BAND (All 4 bands above)		B: BNC Female	-5: TAN #: FS 23448 or 33446, FED-STD-595
	15: L1 GPS (1575+/-12) MHz			
	12: L1/L2 GPS (1575+/-12) / (1227+/-12) MHz			
	18: IRIDIUM: 25: 2.4-2.5GHz Wi-Fi; 55: 5.5 GHz Wi-Fi			

Example P/N: 5G151625RRL-APP-XST3-1

NOTES: UNLESS OTHERWISE SPECIFIED:
1. DIMENSIONS IN BRACKETS ARE IN MILLIMETERS [mm]
2. ALL SCREWS ARE SUPPLIED BY ANTCOM CORPORATION

QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH	ITEM NO
	PARTS LIST				
4	MOUNTING SCREW: (10-32, 1.5")	MS24693C280	-	-	5
					3
1	O-RING	2-038-N756-75	-	-	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE: FRACTIONS ± 1/64 DECIMALS .XXX ±.030 .XXXX ±.015 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS BREAK EXTERNAL EDGES .005 TO .015 FILLETS R .005 TO R .030 SCREW THREADS PER MIL-S-8879 DIA'S ON A COMMON Ø .005
MACHINED SURFACES 125/

DRAWN
CHECKED
ENGINEER
APPROVED S. HUYNH Aug-12-11
CAD FILE NO
DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

FLAT FIXED MOUNT
GPS/Dual-IRIDIUM/Wi-Fi
ANTENNA

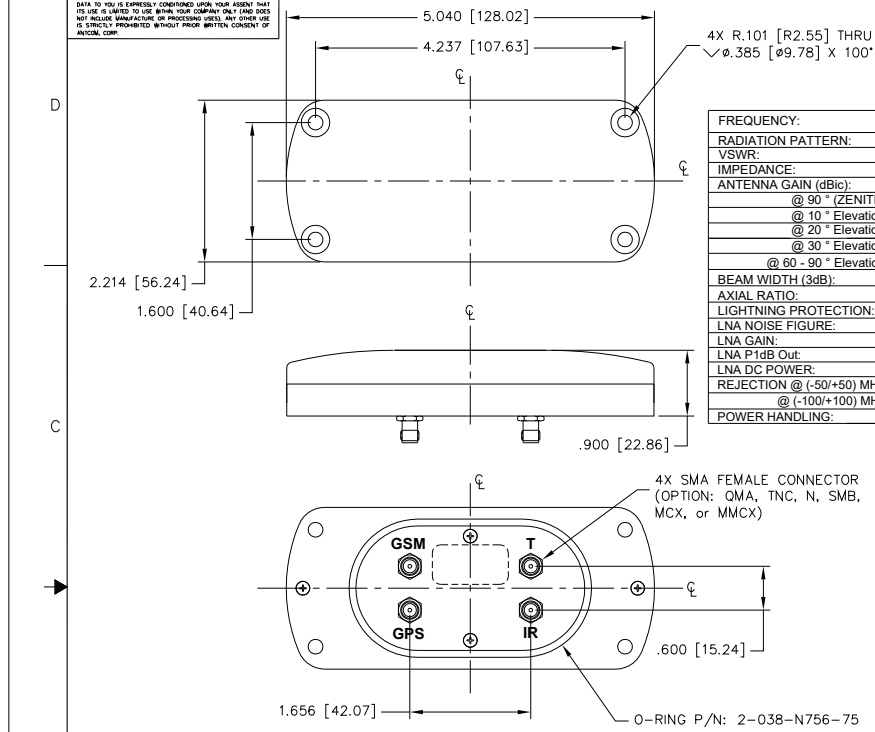
SIZE D | CAGE NO 3CVE1 | DRAWING NO 5G151625RRL-APP-XST3-1 | REV —
SCALE 1/1 | SHEET 1 OF 1

ZONE	REV	DESCRIPTION	DATE	APPROVED
		REVISIONS		

NMO Connector Option is Now Available for Some Antennas

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SPECIFICATIONS

ELECTRICAL:

	L1/L2 GPS		Rx Inmarsat OmniStar, L6 Galileo, B1 Compass (RHCP)	IRIDIUM, L1 GLONASS (RHCP)	Tx Inmarsat (RHCP)	GSM
	L2	L1	& Rx-Thuraya (LHCP)	& Tx-Globalstar (LHCP)	& Tx-Thuraya (LHCP)	Verticle / Horizontal
FREQUENCY:	(1227.60 ±15) MHz	(1575.42 ±15) MHz	(1542.5 ± 17.5) MHz	(1609 -1626) MHz	(1642.5 ± 17.5) MHz	(876-960) MHz
RADIATION PATTERN:	HEMISPHERICAL					OMNI
VSWR:	< 2.0:1					
IMPEDANCE:	50 ohms					

ANTENNA GAIN (dBic):	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.	Free Space	4 ft G.P.
@ 90 ° (ZENITH):	+ 1.8	+ 5.3	+ 4.6	+ 2.9	+ 3.3	+ 0.8	+ 6.4	+ 3.9	+ 8.0	+ 4.1
@ 10 ° Elevation:	- 4.2	- 2.3	- 2.5	- 1.8	- 3.9	- 5.0	- 0.7	- 2.3	+ 1.0	- 2.4
@ 20 ° Elevation:	- 2.9	+ 0.4	- 1.1	+ 0.7	- 2.3	- 1.2	+ 0.7	+ 0.9	+ 2.3	+ 0.7
@ 30 ° Elevation:	- 2.0	+ 2.3	+ 0.5	+ 1.7	- 1.1	+ 0.4	+ 1.9	+ 2.2	+ 3.4	+ 1.7
@ 60 - 90 ° Elevation:	> + 0.9	> + 3.2	> + 3.6	> + 2.1	> + 2.4	> + 1.4	> + 5.6	> + 2.5	> + 6.9	> + 1.9
BEAM WIDTH (3dB):	108 Deg.	120 Deg.	103 Deg.	146 Deg.	100 Deg.	135 Deg.	92 Deg.	140 Deg.	90 Deg.	130 Deg.
AXIAL RATIO:	2.0 dB		2.0 dB		1.0 dB		1.5 dB		2.0 dB	
LIGHTNING PROTECTION:	DC GROUNDING									
LNA NOISE FIGURE:	33 dB Gain									
LNA GAIN:	3.0 dB									
LNA P1dB Out:	+13 dBm									
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA									
REJECTION @ (-50/+50) MHz	-40 dB / -40 dB									
@ (-100/+100) MHz	< -65 dB									
POWER HANDLING:	1 Watt CW (WITH LNA)				200 Watts CW					

MECHANICAL:

SIZE:	WIDTH: 2.214 in. [56.24 mm], LENGTH: 5.040 in [128.02 mm], HEIGHT: 0.900in. [22.86 mm]
WEIGHT:	10.4 oz. (295g)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441F
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE COMPOSITE RADOME, IMPACT, ABRASION, UV, SOLVENT, SKYDROL RESISTANCE, AND FIRE RETARDANT
CONNECTOR:	SMA FEMALE (OPTION: TNC, TNC Bulkhead, N, N Bulkhead, MCX, MMCX, or Cable)

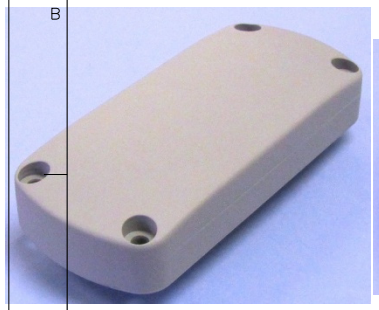
ENVIRONMENTAL:

TEMPERATURE:	-67 °F TO +185 °F [-55 °C TO +85 °C]
ALTITUDE:	70,000 ft.
VIBRATION:	> 30 G's
LEAKAGE:	HERMETICALLY SEALED

FEDERAL & MILITARY SPECIFICATIONS:

DESIGN TO: FAA TSO-C144, DO-160D, D0-228, MIL-C-5541, MIL-E-5400, MIL-I-45208A, MIL-STD-810, AND SAE J1455

ACCEPTANCE TEST PROCEDURE: ATP-GPS-L1L2-100





FREQ. BAND :		GPS LNA :	CABLE'S LENGTH :	CONNECTOR :	COLOR:
08: CELLULAR (824-894) MHz (US/Canada)	1516: L1 GPS & (Inmarsat/Iridium)	A: WITH LNA	X: NO CABLE	S: SMA; Q:QMA	-1: GLOSS WHITE #17925 PER FED-STD-595B
09: GSM (876-960) MHz (Europe/Asia/Africa/M-East)	& (Thuraya/Tx-Globalstar)	P: WITHOUT LNA	M: WITH MAG. MOUNT	M: MCX; MM: MMCX	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
18: DCS (1710-1880) MHz (Europe/Asia/Africa/M-East)	L1L2TIR: L1/L2 GPS & (Inmarsat/	A2: WITH 20dB LNA	#: CABLE LENGTH (IN)	N: N; T: TNC	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
19: PCS (1850-1990) MHz (US/Canada)	Iridium) & (Thuraya/Tx-Globalstar)		R: RIGHT ANGLE CON.	SMB:SMB	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
Q4: QUAD BAND (All 4 bands above)					-5: DESERT TAN #33446 PER FED-STD-595B

P/N: 5G09L1L2TIR-PAP2-XS4-2

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	FINISH
4		MONTING SCREWS: 10-32, 100° Flat Head, 1"	J507C1032R16	
1		O-RING	2-038-N756-75	–

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE: FRACTIONS ± 1/64, DECIMALS .XX± .010, .XXX± .005, ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS
BREAK EXTERNAL EDGES .005 TO .015
FILLETS R .005 TO R .030
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON ℄ ∅F.005 M
MACHINED SURFACES 125

ORIGINALLY DRAWN	S. HUYNH	Feb-17-09
ORIGINALLY DESIGNED	S. HUYNH	Feb-17-09
UPDATED	S. HUYNH	Feb-06-13
UPDATE DRAWN	P. TRAN	Feb-06-13
APPROVED	S. HUYNH	Feb-06-13

DO NOT SCALE DRAWING

ANTCOM CORP. TORRANCE, CALIFORNIA

Combined Avionics GPS, GSM (RHCP-Inmarsat/Iridium) & (LHCP-Thuraya/Tx-Globalstar) Antenna

SIZE D | CAGE NO 3CVE1 | DRAWING NO 5G09L1L2TIR-PAP2-XS4-2 | REV –
SCALE 1/1 | SHEET 1 OF 1

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

NMO Connector Option is Now Available for Some Antennas

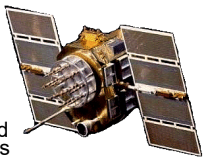
Active L1L2 GPS /Passive Dual Iridium /4G Antenna

P/N: 5BGL1L2IR24G-AP3-XT4-2

Other Frequencies, Connectors and Color Options are Available

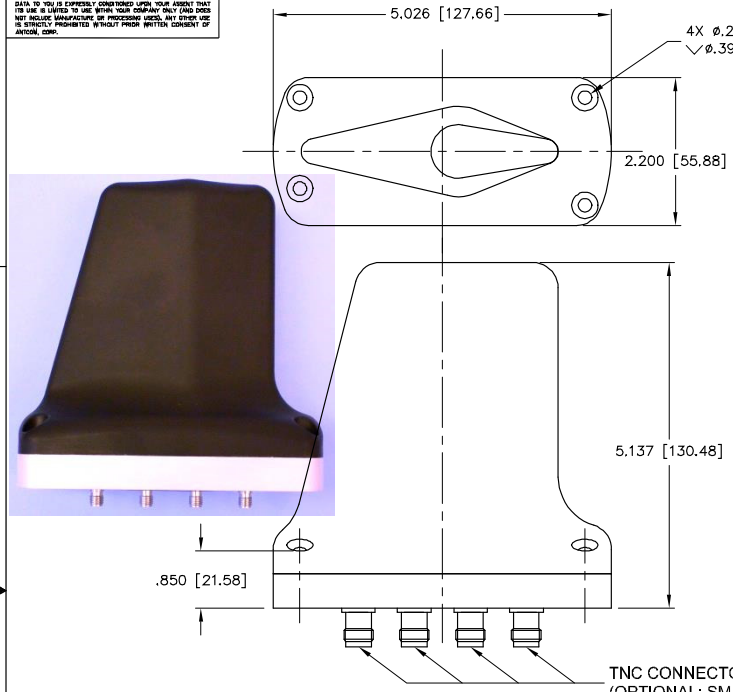
Antenna Mounts: http://www.antcom.com/documents/catalogs/PeripheralAntennaProducts2.pdf

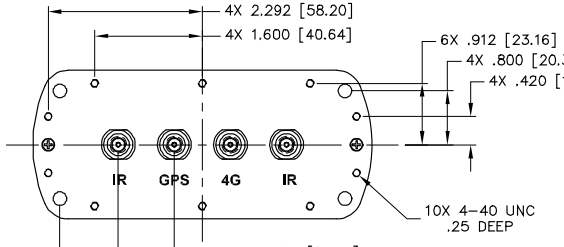
FAA Approved
TSO Antennas

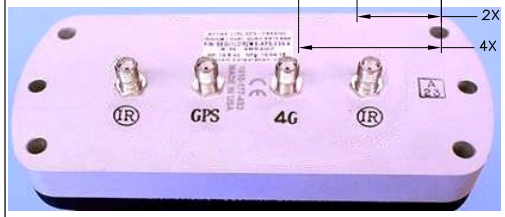


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SPECIFICATIONS

ELECTRICAL:

	GPS						IRIDIUM	4G		802.11a, WiFi, ISM
FREQUENCY (MHz):	L1 GPS: (1575 ± 17)			L2 GPS (1227.60 ±15)			(1610-1626)	Cellular, GSM, ISM, WLAN, RFID	PCS, 802.11b, 802.11g, WiFi, Bluetooth, Hotspot	
								UHF (810-960)	L/S-BAND (1610-1850-2400-2500) S-BAND (2400-2500)	C-BAND (4400-5850)
RADIATION PATTERN:	HEMISPHERICAL							OMNIDIRECTIONAL		
POLARIZATION:	RHCP			RHCP			RHCP	VERTICAL		
VSWR:	< 2:1			< 2:1			< 2:1	2.0:1		
IMPEDANCE:	50 ohms			50 ohms			50 ohms	50 ohms		
ANTENNA GAIN:	Free Space	16 in G.P.	4 ft G.P.	Free Space	16 in G.P.	4 ft G.P.	F.S./G.P.	> 3 dB On Ground Plane		
@ 90 ° (ZENITH):	+ 4.7	+ 0.4	+ 3.5	+ 3.3	+ 1.5	+ 4.9	+0.1/+1.1			
@ 10 ° Elevation:	- 1.8	- 3.2	- 2.0	- 3.8	- 4.0	- 3.6	-1.6/-0.6			
@ 20 ° Elevation:	- 0.3	- 1.0	+ 0.8	- 2.0	- 2.0	- 0.1	-0.8/+1.2			
@ 30 ° Elevation:	+ 1.4	+ 0.9	+ 1.8	+ 0.5	0.0	- 1.8	-0.7/+1.1			
@ 60 - 90 ° Elevation:	> 3.9	+3.4/+0.4	> 2.8	> 2.7	+2.4/+1.5	> 3.0	-0.7/0.0			
BEAM WIDTH (3dB):	114 Deg.	118 Deg.	139 Deg.	106 Deg.	111 Deg.	75 Deg.	180/162 Deg.			
LIGHTNING PROTECTION:	DC GROUNDING									
LNA GAIN:	33 dB			35 dB						
LNA NOISE FIGURE:	3.0 dB			3.0 dB						
LNA P1dB Out:	+13 dBm			+13 dBm						
LNA DC POWER:	2.5V/20mA, 3V/29mA, 3.3V/35mA, (2.5-24)V/<50mA									
REJECTION @ (-50/+50) MHz	-41 dB / -59 dB			-40 dB / -40 dB						
@ (-100/+100) MHz	< -65 dB			< -65 dB						
POWER HANDLING:	1 Watt CW, 2000 Peak 1 Microsec Pulse (-AL-)									

MECHANICAL:

SIZE:	WIDTH: 2.20 in. [55.88 mm], LENGTH: 5.026 in. [127.66 mm], HEIGHT: 5.137 in. [130.48 mm]
WEIGHT:	2.26 lbs.. (1.03 kg)
FINISH:	SKYDROL RESISTANT POLYURETHANE ENAMEL BASE IRIDITE PER MIL-C-5441F
COLOR:	LUSTERLESS GRAY #36320 PER FED-STD-595B GLOSS WHITE #17925 PER FED-STD-595B OLIVE DRAB GREEN #34031 PER FED-STD-595B LUSTERLESS BLACK #37038 PER FED-STD-595B
MATERIAL:	6061-T6 ALUMINUM ALLOY BASE THERMOSET PLASTIC RADOME, UV, ABRASION AND SKYDROL RESISTANCE
CONNECTOR:	TNC FEMALE CONNECTORS (OPTIONAL: SMA, N, BNC)

ENVIRONMENTAL:

TEMPERATURE:	-67°F TO +185°F [-55°C TO +85°C]
ALTITUDE:	70,000 ft.
VIBRATION:	10 G's
LEAKAGE:	HERMETICALLY SEAL

FEDERAL & MILITARY SPECIFICATIONS:

TSO-C129A/C144, DO-160D, D0-228, MIL-C-5541F, MIL-STD-461E/F, MIL-E-5400, MIL-I-45208A, MIL-STD-810, MIL-S-901D, MIL-STD-167-1A, SAE J1455

P/N: 5BGL1L2IR24G-AP3-XT4-2

CONNECTOR:	COLOR:
DGO: DGO	-1: GLOSS WHITE #17925 PER FED-STD-595B
S: SMA, Q: QMA	-2: LUSTERLESS GRAY #36320 PER FED-STD-595B
N: N, T: TNC	-3: OLIVE DRAB GREEN #34031 PER FED-STD-595B
	-4: LUSTERLESS BLACK #37038 PER FED-STD-595B
	-5: DESERT TAN #33446 PER FED-STD-595B
	-UU: TEFLON COATED FOR UNDERWATER APPLICATION

ZONE	REV	DESCRIPTION	DATE	APPROVED
		REVISIONS		

ITEM NO	QUANTITY REQD	DESCRIPTION	PART NO	MATERIAL	FINISH
2					
1	4	SCREW, MOUNTING (10-32, 1.5"L)	93085A837	–	–

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE
FRACTIONS ± 1/64 DECIMALS .XXX ±.010 .XXXX ±.005 ANGLES ± 1°
TOLERANCE SYM PER ANSI Y14.5
REMOVE ALL BURRS AND BREAK EXTERNAL EDGES .005 TO .015
FILLET & RDM 1.0 R .010
SCREW THREADS PER MIL-S-8879
DIA'S ON A COMMON Ø .005 TIR
MACHINED SURFACES 125
DO NOT SCALE DRAWING

ORIGINALLY DRAWN	S. HUYNH	July-31-13
ORIGINALLY DESIGNED	S. HUYNH	July-31-13
UPDATED	S. HUYNH	Aug-03-16
UPDATE DRAWN	P. TRAN	Aug-03-16
APPROVED	S. HUYNH	Aug-03-16

ANTCOM CORP. TORRANCE CALIFORNIA

L1L2 GPS / Dual Iridium / 4G ANTENNA

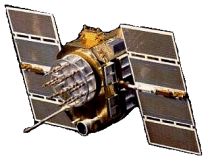
SIZE D | CAGE NO 3CVE1 | DRAWING NO 5BGL1L2IR24G-AP3-XT4-2 | REV –

SCALE 1/1 SHEET 1 OF 1


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ISO 9001:2008/FAA Certified
Made in USA
Leading Manufacturer & Rapid Customization of High End
VHF, UHF, L, S, C, X, Ku-Band,
GPS, Glonass, GNSS, CRPA, Compass, Iridium, Inmarsat,
Thuraya, Globalstar, XM, GSM, Wi-Fi, and 5G-LTE
Antennas
for Satellite, Avionic, Ground, and Marine Applications
http://www.antcom.com; Sales@antcom.com; 367 Van Ness Way, Torrance, CA 90501, USA

Antcom's Antennas Have Been Used

on below Satellite, Airborne, Ground, and Marine Platforms



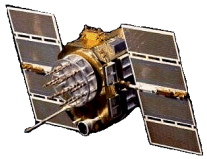
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Antcom's Qualification/Certification/Mil Standards



ISO 9001:2008/FAA Approved Facility

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1) ISO 9001-2008: Registered through SGS
2) TSO C-144 Certifications: http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/0/54BF1C4C90AABF3C86257130005CA5A8?OpenDocument
   TSO C-169a Certifications: http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/0/586D3ACA4F64F88286257BC90062E1D2?OpenDocument
3) Environmental: RTCA/DO-160D, TSO C144, DO-228, MIL-STD-810; SAE J1455 (Automotive), MIL-STD-1472F (DoD)
4) Lightning: DO-160F, Direct Effects , Section 23
5) Electrical: RTCA/DO-160D, TSO C144, DO-228/DO-254, Mil-STD-461F, MIL-STD-810, MIL-HDBK-5400
6) CE: EMC Directive 89/336/EEC (European Union) & 47CFR, Part 15, Subpart B (FCC)
7) EMI, EMC / Emission: DO-160D, DO-228, MIL-STD-810G, MIL-STD-464C / EN 55022: 2006 / U.S. 47 CFR PART 15, SUBPART B
8) Immunity: EUROPEAN STANDARD EN 55024: 1998, Amendment A2: 2003
9) Pick/Place, Soldering, Circuit Boards: IPC JSTD-001D, IPC-A-610D, ESD-STD-20.20, JESD-625a, IPC-A-610C Class 3
10) Printed Circuit Board (PCB): IPC-A-600G.
11) Connectors / Adapters / Cables: Mil-PRF-39012 / 55339, IPC-A-620A, IPC JSTD-001D
12) Stainless Steel Material for Screws: MIL-STD-889B, DFARS 252-225-7014/DFARS 225.872-1, and MS Standards.
13) Aluminum Material: MIL-STD-889B, Al6061-T6 per ASTM-B-221.
14) Chem Film / Anodizing: Mil-C-5541F Type I Class 3 for Yellow, Type II Class 3 for Clear (ROHS) / MIL-A-8625F Type II Class II
15) Painting / Identification: FED-STD-595B, MIL-PRF-85582E, MIL-PRF-85285E / MIL-STD-130N-1
16) Inspection / FAI / Safety: MIL-I-45208A / (AS/EN/SJAC 9102) / RCC-324-01
17) Hazardous / REACH Compliance: NAS411-1, SVHC Candidate List Published by European Chemical Agency (ECHA) on Oct-28-2008 Regarding Regulation (EC) No 1907/2006 Concerning REACH



Certificate US08/5275

The management system of

Antcom Corp

367 Van Ness Way Suite 602,
Torrance, CA, 90501, United States

has been assessed and certified as meeting the requirements of

ISO 9001:2008

For the following activities

Design, Manufacture, and Testing of Antennas and RF/Microwave Components.

Further clarifications regarding the scope of this certificate and the applicability of ISO 9001:2008 requirements may be obtained by consulting the organization

This certificate is valid from 4 November 2014 until 4 November 2017 and remains valid subject to satisfactory surveillance audits.
Recertification audit due a minimum of 60 days before the expiration date.
Issue 5 : 3 November 2014.
Certified since 4 November 2008.

Authorized by

John Woodman
Senior Vice President SSC, North America
SGS Systems & Services Certification, a Division of SGS North America, Inc.
201 Route 17 North, Rutherford, NJ 07070, USA
t (201) 508-3000 f (201) 935-4555 www.us.sgs.com

The certification information can be verified on the web site of Certification and Accreditation
This certificate remains the property of SGS and shall be returned upon request

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Year of Incorporation: Oct-02-1996 (California Corp)
TAX ID: 33-0731772
Business License: BUS-0114500
Sale Permit: SR AS 97-286780
DUNS: 008912367 (3A1)
Cage Code: 3CVE1
ITAR: Registered
NAICS: 334220
SIC: 3663
HTS: 8529104000
ECCN: 7A994 (GPS)
5A991.g (Com)



CE Test Reports:
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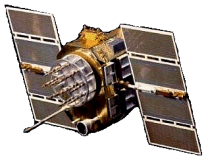
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NGS (NOAA) Government Calibration Test Report for GPS/GNSS Antennas: http://www.ngs.noaa.gov/ANTCAL/

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Accounting: acct@antcom.com; Purchasing: purchasing@antcom.com, Facility: facility@antcom.com , Corporate Contact: Doug.Reid@antcom.com, Sean@antcom.com

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