



# GORE® Aerospace

HIGH SPEED DATA CABLES

For Civil  
Applications

## Reliable signal transmission in high-density, lightweight constructions

Engineered for demanding aerospace environments, GORE® Aerospace High Speed Data Cables are constructed with uniquely engineered fluoropolymers that deliver reliable signal transmission in a lightweight package. Whether your system architecture requires Ethernet, USB, HDMI, high-performance quad, dual gigabit, shielded twisted pair or fiber optic cables, GORE® Aerospace High Speed Data Cables maintain stable communication on avionics networks.

### WEIGHT SAVINGS WITH GORE CABLE TECHNOLOGY

GORE® Aerospace High Speed Data Cables can significantly reduce weight while maintaining reliable signal integrity. Jacket weight is reduced by as much as 37 percent when compared to ethylene tetrafluoroethylene (ETFE) materials and 50 percent when compared to fluorinated ethylene propylene (FEP). These lighter-weight materials also result in smaller cable diameters, which ultimately translate to significantly smaller, lighter, and higher-density cable bundles.

The excellent signal integrity of GORE® Aerospace High Speed Data Cables can enable utilization of smaller gauge cables in your system architecture. Because of their electrical performance and long transmission distances, these cables can reduce the need for additional signal amplification — further decreasing weight and power requirements.

### RELIABLE FLIGHT PERFORMANCE

GORE® Aerospace High Speed Data Cables deliver dependable signal integrity for data transmission in demanding aerospace environments. These cables maintain reliable performance in extreme temperatures ranging from -55°C to 200°C, including rapid changes in temperatures encountered during take-off and landing.

### EASIER INSTALLATION

GORE® Aerospace High Speed Data Cables facilitate easier installation. The small cable diameter increases flexibility with a tight bend radius, which makes initial routing easier.



### Benefits of GORE® Aerospace High Speed Cables

- Excellent signal integrity with stable performance in extreme conditions
- High-speed data transmission over longer distances, minimizing the need for additional signal amplification
- Improved installation with smaller, high-density cable bundles
- Easy routing in confined spaces due to small diameter and tight bend radius





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## GORE® AEROSPACE ETHERNET CABLES

GORE® Aerospace Ethernet Cables are engineered for the increasing data demands of modern airborne digital networks (Figure 1). They exceed Cat6a electrical requirements and deliver reliable signal integrity with sufficient margin for high-speed data transmission up to 10 gigabits over longer distances (Table 1). The unique design of these cables is 24 percent smaller and 25 percent lighter than standard Cat6a cables for greater flexibility and easier installation in challenging environments (Figures 2 and 3). Gore's engineered fluoropolymer materials enable this cable (26 AWG) to fit into a size 8 contact.

### TYPICAL APPLICATIONS

- Avionics networks
- Cabin management systems
- Digital video systems
- Ethernet backbone
- Flight management systems
- In-flight entertainment (IFE) systems

FIGURE 1: GORE® AEROSPACE ETHERNET CABLES



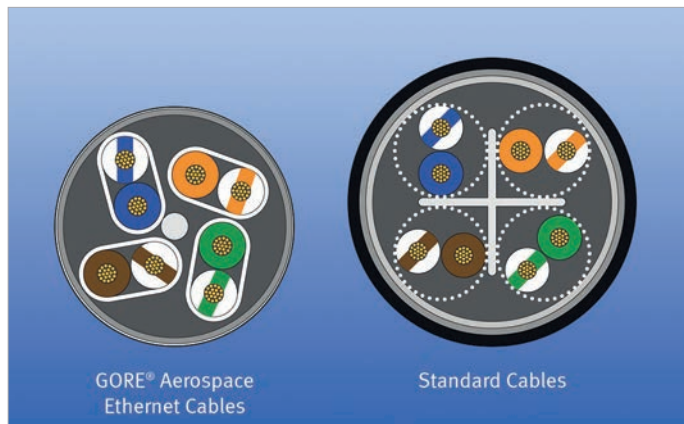
### STANDARDS COMPLIANCE

- ANSI/NEMA WC 27500 Performance Requirements: Environmental Testing, Jacket and Marking
- IEEE 802.3 1000BASE-T Gigabit Ethernet Cables: Ethernet Standard
- AS4373 Test Methods for Insulated Electric Wire
- FAR Part 25, Appendix F, Part I, BSS7230, and ABD0031 (AITM 2.0005): Flammability
- FAR Part 25, Appendix F, Part V, BSS7238, and ABD0031 (AITM 3.0008B): Smoke Density
- BSS7239 and ABD0031 (AITM 3.0005): Toxicity

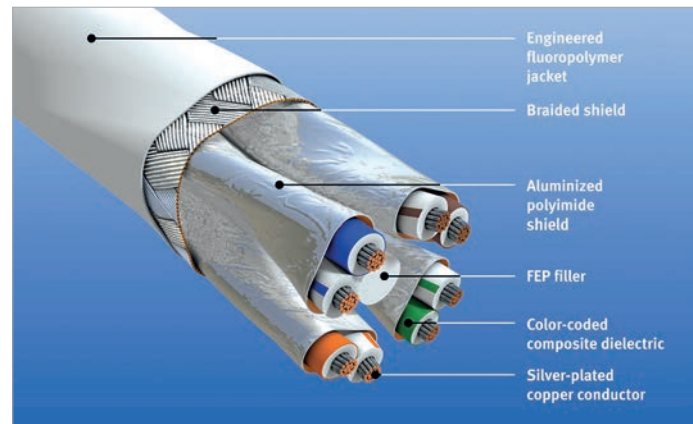
TABLE 1: CABLE PROPERTIES

	Property	Value
ELECTRICAL	Standard Impedance (ohms)	100 ±10
	Voltage Rating (V)	500
	Velocity of Propagation (nominal) (%)	80
	Time Delay (nominal) [ns/m (ns/ft)] 24 AWG	4.10 (1.25)
	Capacitance [pF/m (pF/ft)]	42.6 (13)
	Dielectric Withstanding Voltage (Vrms) Conductor-to-Conductor Conductor-to-Shield	1500 1000
MECHANICAL / ENVIRONMENTAL	Jacket Material	Engineered Fluoropolymer
	Jacket Color	White
	Conductor	Silver-Plated Copper
	Conductor Color-Coding	Solid Blue/White with Blue Stripe Solid Orange/White with Orange Stripe Solid Green/White with Green Stripe Solid Brown/White with Brown Stripe
	Dielectric Material	ePTFE/PTFE
	Temperature Range (°C)	-65 to 200

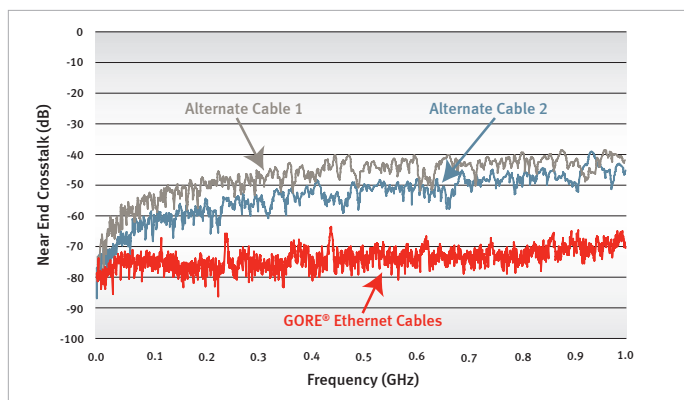
**FIGURE 2: SMALLER CAT6A CABLE DIAMETER**



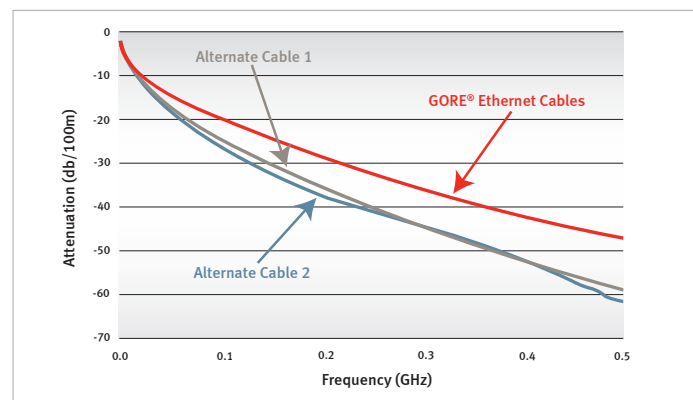
**FIGURE 3: HIGH-DENSITY CONSTRUCTION**



**FIGURE 4: ATTENUATION COMPARISON**



**FIGURE 5: NEXT COMPARISON**



**RELIABLE SIGNAL INTEGRITY**

Gore compared its Cat6a cable with several alternative cables. Results showed that GORE® Aerospace Ethernet Cables provided enhanced electrical performance with lower signal attenuation by as much as 10 dB/100 m at 500 MHz (Figure 4). Results also showed that GORE® Aerospace Ethernet Cables can reduce near-end crosstalk (NEXT) by as much as 10 dB at 500 MHz compared to alternative cable designs (Figure 5).

**ORDERING INFORMATION**

GORE® Aerospace Ethernet Cables are available through several global distributors in a variety of standard sizes (Table 2). Visit [gore.com/cable-distributors](http://gore.com/cable-distributors) for the list of distributors.

Gore also offers custom cables and terminated assemblies. For more information, please contact a Gore representative.

**TABLE 2: PRODUCT SPECIFICATIONS**

Part Number	AWG Size	Maximum Outer Diameter mm (in)	Minimum Bend Radius mm (in)	Nominal Weight kg/km (lbs/1000 ft)	Typical Attenuation <sup>a</sup>		
					100 MHz	200 MHz	500 MHz
RCN9034-24	24 (19/36)	6.6 (0.26)	13.7 (0.54)	62 (48)	19.1	27.6	45.3
RCN9047-26	26 (19/38)	5.6 (0.22)	10.2 (0.44)	48 (32)	19.1	27.6	45.3

<sup>a</sup> Typical attenuation values are based on maximum recommended Cat6a use length.



# GORE<sup>®</sup> Aerospace

HIGH SPEED DATA CABLES

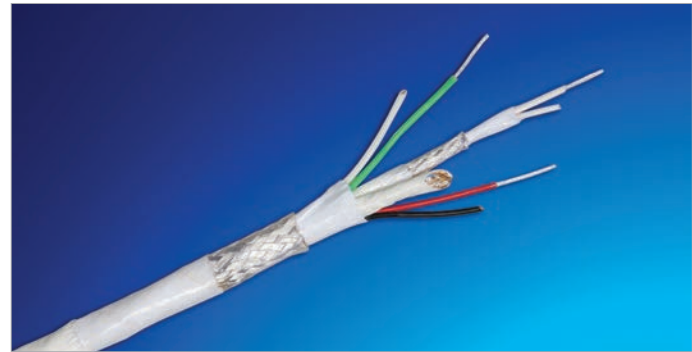
## GORE<sup>®</sup> AEROSPACE USB 3.1 CABLES

GORE<sup>®</sup> Aerospace USB 3.1 Cables provide reliable signal integrity for high-speed data transmission up to 10 gigabits over longer distances (Figure 6). They support power management from 9-32V systems to ensure passengers can charge their devices quickly and easily. These cables carry more data greater than 5 meters for faster IFE content uploads and downloads (Table 3). In addition, they have a unique construction that provides durable protection to withstand the most challenging aerospace environments for long service life (Figure 7).

### TYPICAL APPLICATIONS

- Content loading
- Data transfer
- Digital video systems
- In-flight entertainment (IFE) systems
- Portable electronic devices
- Power remote devices

FIGURE 6: GORE<sup>®</sup> AEROSPACE USB 3.1 CABLES



### STANDARDS COMPLIANCE

- ANSI/NEMA WC 27500 Performance Requirements: Environmental Testing, Jacket and Marking
- CS/FAR Part 25, Section 25.853(a), Change 5/Amdt.25-72 (DOT/FAA/AR-00/12, Chapter 4)
- FAR Part 25, Appendix F, Part I, BSS7230, and ABD0031 (AITM 2.0005): Flammability
- FAR Part 25, Appendix F, Part V, BSS7238, and ABD0031 (AITM 3.0008B): Smoke Density
- BSS7239 and ABD0031 (AITM 3.0005): Toxicity

TABLE 3: CABLE PROPERTIES<sup>a</sup>

	Property	Value
ELECTRICAL	Standard Impedance (ohms) High-Speed Pairs Low-Speed Pair	90 ± 5 90 ± 10
	Voltage Rating (V)	< 50
	Capacitance [pF/m (pF/ft)] <sup>b</sup>	50 (15)
	Test Voltage (DC) Conductor-to-Conductor Conductor-to-Shield	1500
	Skew <sup>b</sup> (ps/m) (within pair)	< 15
MECHANICAL / ENVIRONMENTAL	Jacket Material	Engineered Fluoropolymer
	Jacket Color	White
	Conductor	Silver-Plated Copper
	Conductor Color-Coding	High-Speed Pairs: Blue/Yellow, Orange/Violet Low-Speed Pair: White/Green Power: Red, Black
	Dielectric Material	ePTFE/PTFE
	Temperature Range (°C)	-65 to 200

<sup>a</sup> Testing performed on prototypes. Commercialized performance may vary.

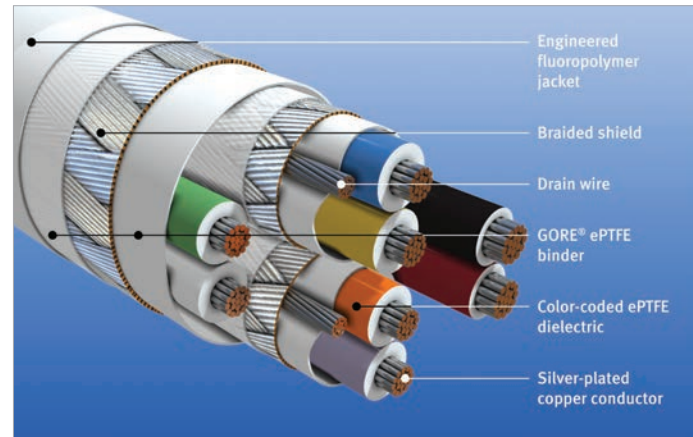
<sup>b</sup> Shielded twisted pairs only.

## ORDERING INFORMATION

GORE® Aerospace USB 3.1 Cables are available through several global distributors in a variety of standard sizes (Table 4). Visit [gore.com/cable-distributors](http://gore.com/cable-distributors) for the list of distributors.

Gore also offers custom cables and terminated assemblies. For more information, please contact a Gore representative.

**FIGURE 7: LONG-LASTING CONSTRUCTION**



**TABLE 4: PRODUCT SPECIFICATIONS**

Part Number	AWG Size <sup>a</sup>	Nominal Outer Diameter mm (in)	Minimum Bend Radius mm (in)	Nominal Weight kg/km (lbs/1000 ft)	Typical Attenuation dB/1 m (dB/3.28 ft)
GSC-03-84761-26D	26 (19/38)	5.8 (0.228)	Static (<20 bends): 15 (0.59) Dynamic: 60 (2.36)	57.0 (38.0)	1.0 @ 625 MHz 1.4 @ 1250 MHz 2.1 @ 2500 MHz 3.1 @ 5000 MHz 4.1 @ 7500 MHz

<sup>a</sup> Additional gauge sizes available upon request.





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## GORE<sup>®</sup> Aerospace HDMI 2.0 Cables

GORE<sup>®</sup> Aerospace HDMI 2.0 Cables enable a higher resolution up to 4K at 50/60 (2160p), which is four times the clarity of 1080p/60 video resolution allowing passengers to experience IFE in even higher definition (Figure 8). They also deliver excellent signal integrity for high-speed data transmission up to 18 Gigabit per second (Gbps) over longer distances (Table 5). In addition, these lightweight cable bundles have a smaller diameter that increases flexibility with a tighter bend radius making them easier to route in small areas of an aircraft (Figure 9).

### TYPICAL APPLICATIONS

- Electronic flight bag (EFB)
- Flight management systems
- In-flight entertainment (IFE) systems
- Portable electronic devices
- Weather mapping

FIGURE 8: GORE<sup>®</sup> AEROSPACE HDMI 2.0 CABLES



### STANDARDS COMPLIANCE

- ANSI/NEMA WC 27500 Performance Requirements: Environmental Testing, Jacket and Marking
- AS4373 Test Methods for Insulated Electric Wire
- FAR Part 25, Appendix F, Part I, BSS7230, and ABD0031 (AITM 2.0005): Flammability
- FAR Part 25, Appendix F, Part V, BSS7238, and ABD0031 (AITM 3.0008B): Smoke Density
- BSS7239 and ABD0031 (AITM 3.0005): Toxicity

TABLE 5: CABLE PROPERTIES

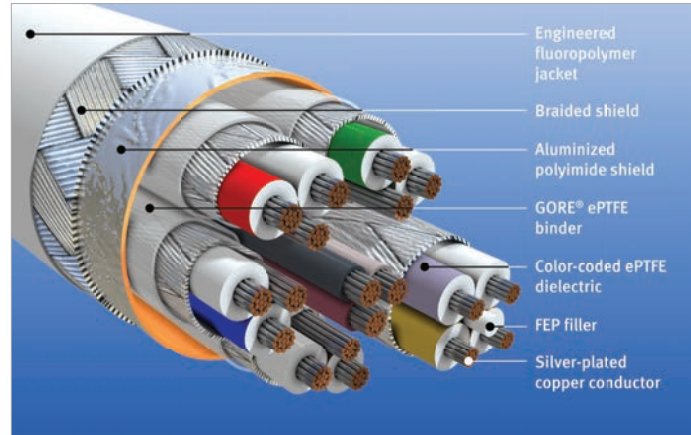
	Property	Value
ELECTRICAL	Standard Impedance (ohms)	100 ± 10
	Voltage Rating (V)	150
	Capacitance [pF/m (pF/ft)] <sup>a</sup>	16
MECHANICAL / ENVIRONMENTAL	Jacket Material	Engineered Fluoropolymer
	Jacket Color	White
	Conductor	High-Speed Pairs: Silver-Plated Copper Alloy Quad/Triad: Silver-Plated Copper
	Conductor Color-Coding	High-Speed Pairs: Blue/White, Red/White, Green/White, Brown/White Quad: White, Orange, Yellow, Purple Triad: Red, Black, Brown
	Dielectric Material	ePTFE/PTFE
	Temperature Range (°C)	-65 to 200

<sup>a</sup> Twisted quad only.

## ORDERING INFORMATION

GORE® Aerospace HDMI 2.0 Cables are available through several global distributors in a variety of standard sizes (Table 6). Visit [gore.com/cable-distributors](http://gore.com/cable-distributors) for the list of distributors.

Gore also offers custom cables and terminated assemblies. For more information, please contact a Gore representative.



**TABLE 6: PRODUCT SPECIFICATIONS**

Part Number	AWG Size <sup>a,b</sup>	Nominal Outer Diameter mm (in)	Minimum Bend Radius mm (in)	Nominal Weight kg/km (lbs/1000 ft)	Typical Attenuation <sup>c</sup> dB/5 m (dB/16.4 ft)
RCN9092	26 (19/38)	6.9 (0.272)	13.8 (0.544)	57.0 (38.0)	5.0 @ 825 MHz 12.0 @ 2475 MHz 20.0 @ 4125 MHz 25.0 @ 5100 MHz

<sup>a</sup> Additional gauge sizes available upon request.

<sup>b</sup> Size 24 AWG can increase use length up to 7 meters.

<sup>c</sup> Typical attenuation values are based on maximum recommended use length.



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## GORE® AEROSPACE QUAD CABLES

GORE® Aerospace Quad Cables provide outstanding electrical and mechanical performance compared to standard quad cables — making them an ideal solution for a variety of high-speed data protocols (Figure 10). For Cat5e requirements, they maintain reliable signal transmission up to 70 meters for size 24 AWG and 50 meters for size 26 AWG (Table 7). In addition, the unique design of these cables offers significant size and weight savings when compared to conventional constructions such as twisted pair or standard quad cables (Figure 11). This size 26 AWG quad design is approximately 40 percent smaller than the common dual twisted pair constructions and has saved as much as 11.5 pounds per aircraft (Figure 12).

### TYPICAL APPLICATIONS

- Box-to-box systems
- Digital visual interface (DVI)
- Ethernet networks
- High-definition serial digital interface (HD-SDI)

FIGURE 10: GORE® AEROSPACE QUAD CABLES



### STANDARDS COMPLIANCE

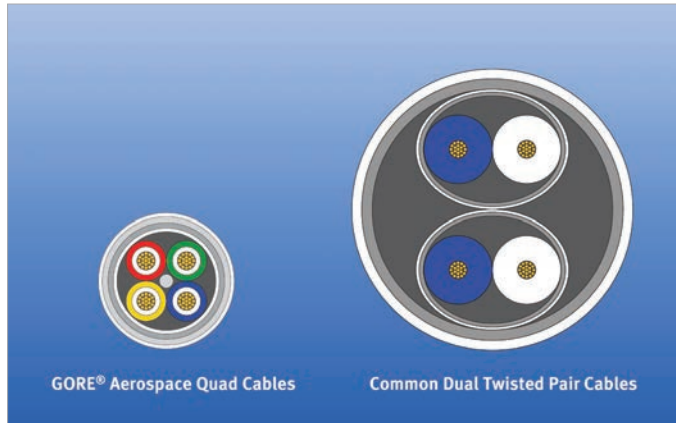
- ANSI/NEMA WC 27500 Performance Requirements: Environmental Testing, Jacket and Marking
- IEEE 802.3 1000BASE-T Gigabit Ethernet Cables: Ethernet Standard
- AS4373 Test Methods for Insulated Electric Wire
- FAR Part 25, Appendix F, Part I, BSS7230, and ABD0031 (AITM 2.0005): Flammability
- FAR Part 25, Appendix F, Part V, BSS7238, and ABD0031 (AITM 3.0008B): Smoke Density
- BSS7239 and ABD0031 (AITM 3.0005): Toxicity

TABLE 7: CABLE PROPERTIES

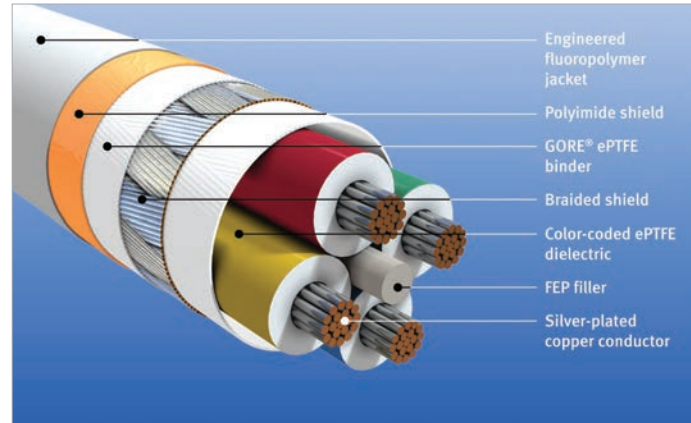
	Property	Value
ELECTRICAL	Standard Impedance (ohms)	100 ± 5
	Voltage Rating (V)	< 50
	Velocity of Propagation (nominal) (%)	> 70
	Near-End Crosstalk (NEXT)	
	dB min @ 10 MHz	50
	dB min @ 100 MHz	35
	Capacitance [pF/m (pF/ft)]	50 (15)
	Test Voltage (DC)	
	Conductor-to-Conductor	2500
	Conductor-to-Shield	
MECHANICAL / ENVIRONMENTAL	Jacket Material	Engineered Fluoropolymer
	Jacket Color	White
	Conductor	Silver-Plated Copper Alloy
	Conductor Color-Coding	Blue, Red, Green, Yellow
	Dielectric Material	ePTFE/PTFE
	Temperature Range (°C)	-65 to 200



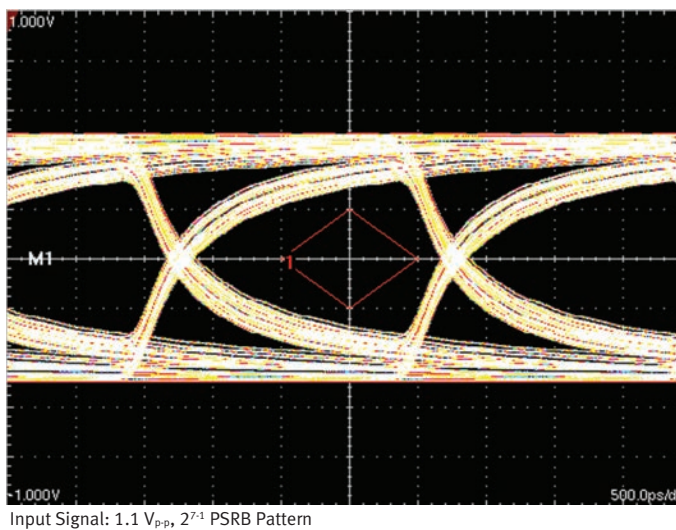
**FIGURE 11: SMALLER QUAD CABLE DESIGN**



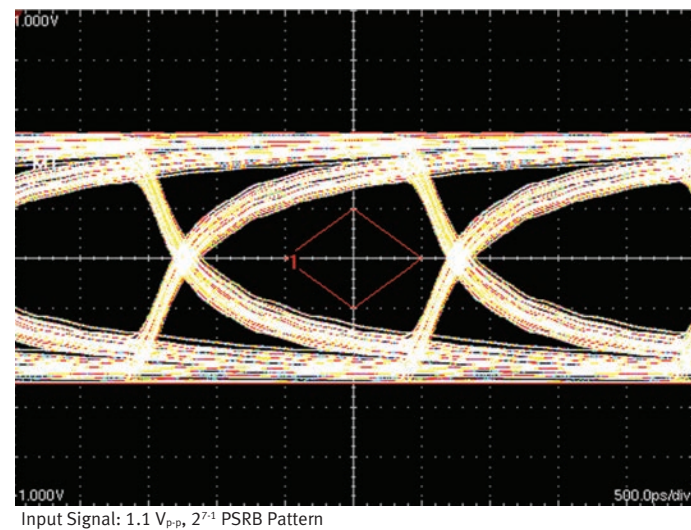
**FIGURE 12: LIGHTWEIGHT CONSTRUCTION**



**FIGURE 13: EYE PATTERN OF A 24 AWG**



**FIGURE 14: EYE PATTERN OF A 24 AWG WITH FLEXURE**



**SIGNAL INTEGRITY WITH FLEXURE**

To ensure signal integrity with flexure of GORE® Aerospace Quad Cables, the eye pattern of a 50-ft cable transmitting 500 Mbps of data was evaluated before and during flexure. The diamond-shaped eye mask indicates the minimum receiver sensitivity. Results showed that GORE® Aerospace Quad Cables passed the test with margin, indicating greater transmission length is possible (Figures 13 and 14).

**ORDERING INFORMATION**

GORE® Aerospace Quad Cables are available through several global distributors in a variety of standard sizes (Table 8). Visit [gore.com/cable-distributors](http://gore.com/cable-distributors) for the list of distributors. Gore also offers custom cables and terminated assemblies. For more information, please contact a Gore representative.

**TABLE 8: PRODUCT SPECIFICATIONS**

Part Number	AWG Size	Nominal Outer Diameter mm (in)	Minimum Bend Radius mm (in)	Nominal Weight kg/km (lbs/1000 ft)	Typical Attenuation <sup>a</sup> 24 AWG: dB/70 m (dB/230 ft) 26 AWG: dB/50 m (dB/164 ft)
GSC-03-84608-00	24 (19/36)	4.0 (0.157)	20 (0.787)	33.0 (22.0)	6.5 @ 10 MHz 22.0 @ 100 MHz
GSC-03-84820-00	26 (19/38)	3.2 (0.125)	15 (0.590)	23.0 (15.0)	6.5 @ 10 MHz 22.0 @ 100 MHz

<sup>a</sup> Typical attenuation values are based on maximum recommended Cat5e use length.



# GORE® Aerospace

HIGH SPEED DATA CABLES

## GORE® AEROSPACE DUAL GIGABIT CABLES

For applications with limited system architecture design, GORE® Aerospace Dual Gigabit Cables can be reliably used as a hybrid between an Ethernet Cat6a cable and two quad cables (Figure 15). They maintain reliable signal transmission for Cat6a requirements up to 10 gigabits for 65 meters. When used as a dual quad cable, they maintain reliable signal transmission at gigabit plus speeds up to 50 meters for each quad cable (Table 9). They are designed to fit most high-speed aerospace connectors, including size 8 contacts for 38999, ARINC and others, as well as Quadrax connectors. In addition, these cables improve installation because they are significantly smaller, lighter weight and highly flexible with a tighter bend radius which makes initial routing easier (Figure 16).

### TYPICAL APPLICATIONS

- Avionics networks
- Cabin management systems
- Digital video systems
- Ethernet backbone
- Flight management systems
- In-flight entertainment (IFE) systems

**TABLE 9: CABLE PROPERTIES**

	Property	Value
ELECTRICAL	Standard Impedance (ohms)	100 ±10
	Voltage Rating (V)	500
	Velocity of Propagation (nominal) (%)	80
	Time Delay (nominal) [ns/m (ns/ft)] 24 AWG	4.10 (1.25)
	Capacitance [pF/m (pF/ft)]	42.6 (13)
	Dielectric Withstanding Voltage (Vrms) Conductor-to-Conductor Conductor-to-Shield	1500 1000
MECHANICAL / ENVIRONMENTAL	Jacket Material	Engineered Fluoropolymer
	Jacket Color	White
	Conductor	Silver-Plated Copper
	Conductor Color-Coding	Solid Blue/White with Blue Stripe Solid Orange/White with Orange Stripe Solid Green/White with Green Stripe Solid Brown/White with Brown Stripe
	Dielectric Material	ePTFE/PTFE
	Temperature Range (°C)	-65 to 200

**FIGURE 15: GORE® AEROSPACE DUAL GIGABIT CABLES**



### STANDARDS COMPLIANCE

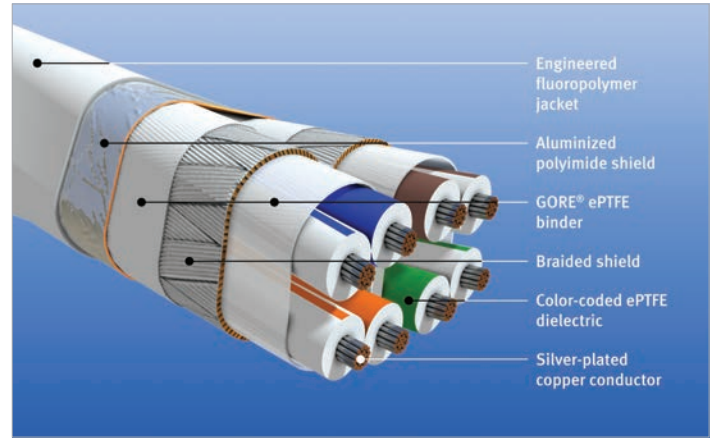
- ANSI/NEMA WC 27500 Performance Requirements: Environmental Testing, Jacket and Marking
- IEEE 802.3 1000BASE-T Gigabit Ethernet Cables: Ethernet Standard
- AS4373 Test Methods for Insulated Electric Wire
- FAR Part 25, Appendix F, Part I, BSS7230, and ABD0031 (AITM 2.0005): Flammability
- FAR Part 25, Appendix F, Part V, BSS7238, and ABD0031 (AITM 3.0008B): Smoke Density
- BSS7239 and ABD0031 (AITM 3.0005): Toxicity

**ORDERING INFORMATION**

GORE® Aerospace Dual Gigabit Cables are available through several global distributors in a variety of standard sizes (Table 10). Visit [gore.com/cable-distributors](http://gore.com/cable-distributors) for the list of distributors.

Gore also offers custom cables and terminated assemblies. For more information, please contact a Gore representative.

**FIGURE 16: HIGHLY FLEXIBLE CONSTRUCTION**



**TABLE 10: PRODUCT SPECIFICATIONS**

Part Number	AWG Size	Nominal Outer Diameter mm (in)	Minimum Bend Radius mm (in)	Nominal Weight kg/km (lbs/1000 ft)	Typical Attenuation <sup>a</sup> dB/65 m (dB/213 ft)		
					100 MHz	200 MHz	500 MHz
RCN9088-26	26 (19/38)	5.6 (0.22)	10.2 (0.44)	47 (32)	19.1	27.6	45.3

<sup>a</sup> Typical attenuation values are based on maximum recommended Cat6a use length.



# GORE® Aerospace

HIGH SPEED DATA CABLES

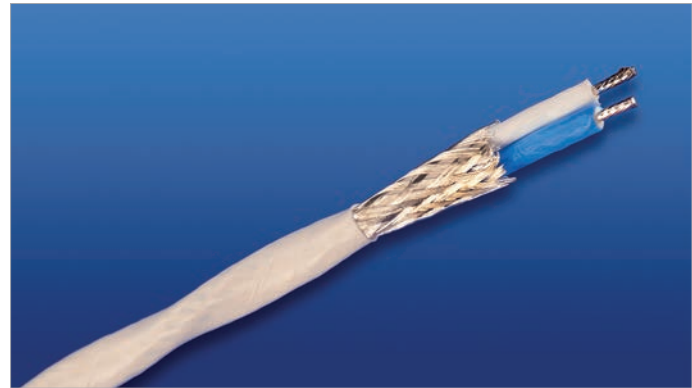
## GORE® SHIELDED TWISTED PAIR CABLES

Well-suited for aerospace harness applications, GORE® Shielded Twisted Pair Cables are highly flexible and easy to route in confined spaces (Figure 17). These cables provide excellent signal integrity while reducing weight by as much as 35 percent when compared to standard cables (Figures 18 and 19). In addition, the combination of materials in this construction supports a wide temperature range to meet the most demanding aerospace environments (Table 11).

### TYPICAL APPLICATIONS

- Avionics electronics
- Cabin management systems
- Digital video systems
- Ethernet networks
- Serial buses

FIGURE 17: GORE® SHIELDED TWISTED PAIR CABLES



### STANDARDS COMPLIANCE

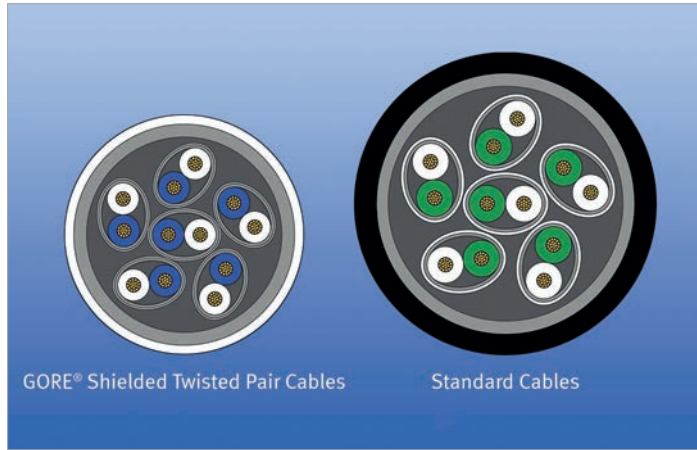
- ANSI/NEMA WC 27500 Performance Requirements: Environmental Testing, Jacket and Marking
- FAR Part 25, Appendix F, Part I, BSS7230, and ABD0031 (AITM 2.0005): Flammability
- FAR Part 25, Appendix F, Part V, BSS7238, and ABD0031 (AITM 3.0008B): Smoke Density
- BSS7239 and ABD0031 (AITM 3.0005): Toxicity

TABLE 11: CABLE PROPERTIES

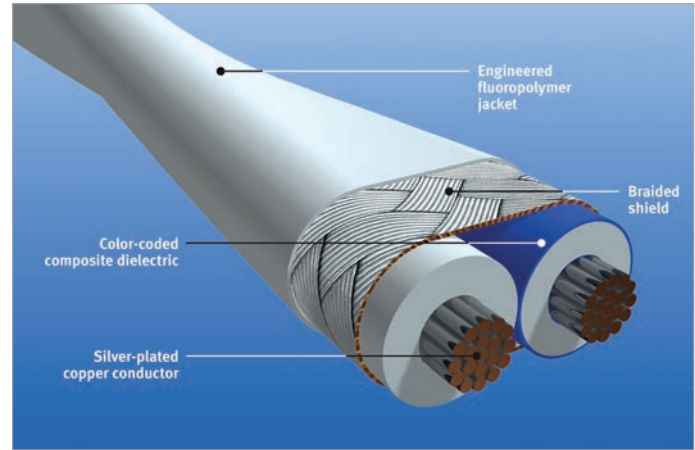
	Property	Value
ELECTRICAL	Standard Impedance <sup>a</sup> (ohms)	100 ±10
	Voltage Rating (V)	500
	Velocity of Propagation (nominal) (%)	80
	Time Delay (nominal) [ns/m (ns/ft)] 24 AWG	4.07 (1.24)
	Capacitance [pF/m (pF/ft)]	42.6 (13)
	Dielectric Withstanding Voltage (Vrms) Conductor-to-Conductor Conductor-to-Shield	1500 1000
MECHANICAL / ENVIRONMENTAL	Jacket Material	Engineered Fluoropolymer
	Jacket Color	White
	Conductor	Silver-Plated Copper
	Conductor Color-Coding	White and Blue
	Dielectric Material	ePTFE/PTFE
	Temperature Range (°C)	-55 to 200

<sup>a</sup> Contact Gore for other impedance options

**FIGURE 18: SMALLER, LIGHTER CABLE DESIGN**



**FIGURE 19: DURABLE CONSTRUCTION**



**ORDERING INFORMATION**

GORE® Shielded Twisted Pair Cables are available through several global distributors in a variety of standard sizes (Table 12). Visit [gore.com/cable-distributors](http://gore.com/cable-distributors) for the list of distributors.

Gore also offers custom cables and terminated assemblies. For more information, please contact a Gore representative.

**TABLE 12: PRODUCT SPECIFICATIONS**

Part Number	AWG Size	Nominal Outer Diameter Major mm (in)	Nominal Outer Diameter Minor mm (in)	Minimum Bend Radius mm (in)	Nominal Weight kg/km (lbs/1000 ft)	Typical Attenuation dB/30 m (dB/100 ft)			
						100 MHz	200 MHz	500 MHz	1 GHz
DXN2600	20 (19/32)	5.0 (0.20)	3.68 (0.15)	25 (0.98)	31.7 (21.3)	4.8	6.8	11.3	16.4
DXN2601	22 (19/34)	3.81 (0.15)	2.79 (0.11)	19.1 (0.75)	23.2 (15.6)	6.6	9.8	15.7	23.5
DXN2602	24 (19/36)	3.23 (0.13)	2.3 (0.09)	16.2 (0.64)	16.8 (11.3)	7.6	10.7	17.3	25.0
DXN2603	26 (19/38)	2.52 (0.10)	2.1 (0.08)	12.6 (0.49)	12.8 (8.6)	9.4	13.8	21.5	31.2
DXN2604	28 (19/40)	1.98 (0.08)	1.8 (0.07)	9.9 (0.39)	8.6 (5.8)	13.2	19.2	32.0	46.8
DXN2605	30 (19/42)	1.78 (0.07)	1.52 (0.06)	8.9 (0.35)	7.1 (4.8)	20.9	23.6	38.3	56.9





# GORE® Aerospace

HIGH SPEED DATA CABLES

## GORE® AEROSPACE FIBER OPTIC CABLES

Gore has packaged the standard fiber optic cable in a unique construction that improves all aspects of performance to meet the civil industry's ever-increasing data needs (Figure 20).

GORE® Aerospace Fiber Optic Cables withstand the challenging environments they encounter throughout an aircraft's service life. These cables deliver excellent signal integrity for high-speed data transmission in wide temperature ranges (Table 13). In addition, The unique dual buffering system in the construction of these cables resists crushing, kinking and abrasion while maintaining reliable signal integrity before and after installation (Figure 21). The combination of materials in this construction also increases fiber movement under compression that improves termination with standard aerospace connectors.

### TYPICAL APPLICATIONS

- Avionics networks
- Cabin management systems
- Digital video systems
- Ethernet backbone
- Flight management systems
- In-flight entertainment (IFE) systems
- Transceivers
- Weather radar systems

FIGURE 20: GORE® AEROSPACE FIBER OPTIC CABLES

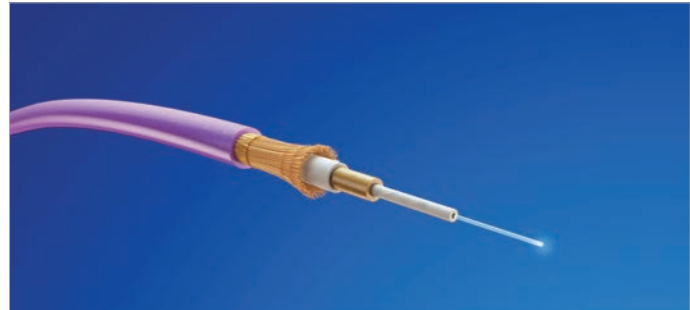
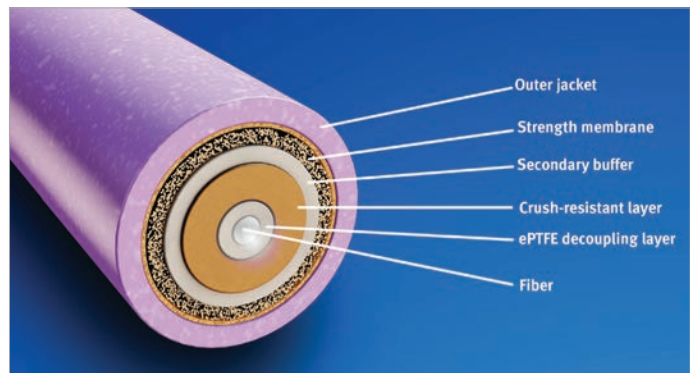


FIGURE 21: ROBUST CONSTRUCTION



### STANDARDS COMPLIANCE

- ANSI/NEMA WC 27500 Performance Requirements: Environmental Testing, Jacket and Marking
- EN4641-301
- ARINC 802 Performance and Environmental Requirements
- FAR Part 25, Appendix F, Part I, BSS7230, and ABD0031 (AITM 2.0005): Flammability
- FAR Part 25, Appendix F, Part V, BSS7238, and ABD0031 (AITM 3.0008B): Smoke Density
- BSS7239 and ABD0031 (AITM 3.0005): Toxicity

TABLE 13: CABLE PROPERTIES

	Property	Value
ELECTRICAL	Maximum Optical Loss at 850 nm (dB/km)	4.0
	Maximum Optical Loss at 1310 nm (dB/km)	3.0
MECHANICAL / ENVIRONMENTAL	Jacket Material	Engineered Fluoropolymer
	Core Type	Multi-mode
	Coating Type	High-temperature Acrylate
	Dielectric Material	ePTFE/PTFE
	Temperature Range (°C)	-60 to 135

## ADDED DURABILITY

Gore evaluated the durability of its cable compared to a leading alternative cable using the EN-4641-301 test method. Results showed that GORE® Aerospace Fiber Optic Cables provided reliable mechanical performance with greater crush resistance for extended service life (Figures 22 and 23). The enhanced durability of these cables allows for lower force to move the fiber under compression while still maintaining excellent signal transmission.

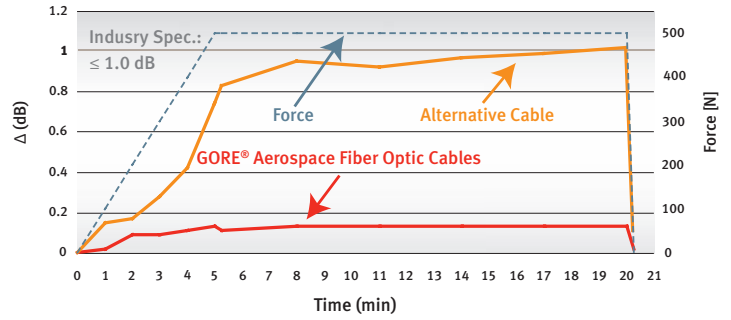
With an exceptional balance of properties, GORE® Aerospace Fiber Optic Cables deliver improved reliability and extended service life in a more robust construction without sacrificing size or weight.

## ORDERING INFORMATION

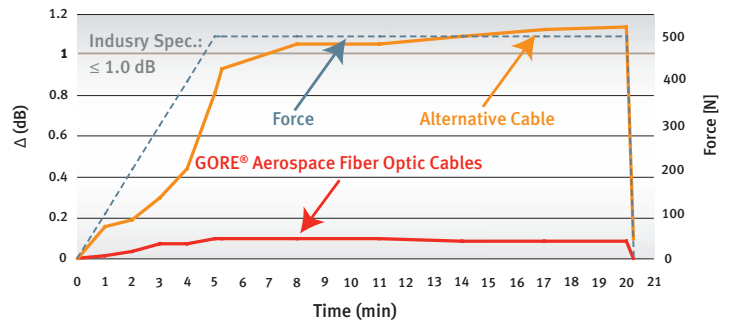
GORE® Aerospace Fiber Optic Cables are available through several global distributors in a variety of standard sizes (Table 14). Visit [gore.com/cable-distributors](http://gore.com/cable-distributors) for the list of distributors.

Gore also offers custom cables and terminated assemblies. For more information, please contact a Gore representative.

**FIGURE 22: GREATER CRUSH RESISTANCE AT 850 NM**



**FIGURE 23: GREATER CRUSH RESISTANCE AT 1300 NM**



**TABLE 14: PRODUCT SPECIFICATIONS**

Part Number	Core/Cladding/Coating <sup>a</sup>	Jacket Color	Nominal Outer Diameter mm (in)	Minimum Bend Radius mm (in)	Nominal Weight (g/m)	Tensile Strength (N max)
GSC-13-84639-04	50/125/245	Yellow	1.8 (0.07)	18.0 (0.71)	4.0	200
GSC-13-84639-07	50/125/245	Purple	1.8 (0.07)	18.0 (0.71)	4.0	200
GSC-13-84640-04	62.5/125/245	Yellow	1.8 (0.07)	18.0 (0.71)	4.0	200
GSC-13-84640-07	62.5/125/245	Purple	1.8 (0.07)	18.0 (0.71)	4.0	200

<sup>a</sup>Contact a Gore representative for a bend-insensitive fiber option or specific fiber glass type.

