



RFS Optimizer® Antennas

Dual Band Variable Electrical Tilt Antenna from RFS – completely redesigned antenna platform for premium network performance



Dual Band Antennas 790-960/1710-2200MHz - 1.3, 2.1 & 2.7m - VET

Designed for applications requiring a minimum number of antennas at a cell site and reduced tower loading, wireless technology leader Radio Frequency Systems is pleased to introduce its new Dual Band antennas. These antennas take advantage of the rugged construction of our popular CELLite series and our new H Series of high band antennas that feature both high RF performance and energy efficiency.

Technological Advances in Design

The re-designed antenna platform delivers outstanding performance, reliability and value, for a truly one-of-a-kind product in today's demanding marketplace.

Striking the perfect balance between efficiency and performance, this innovative design model will be the new standard for future RFS base station antenna products.

- **New Dipole Design** delivers superior matching across the entire band
- **Improved Antenna Radiating Geometry** improves front-to-back ratio and cross polarization discrimination and minimizes the contact between elements to eliminate intermodulation
- **High Performance Phase Shifter Network** provides precise control of the USLS suppression and pattern shape across the entire tilt range

Key Product Specifications

- Frequency range – 790-960/1710-2200MHz
- Tilt – 0° to 10°
- Horizontal Beamwidth – 65°
- Gain – From 15.5-19dBi
- Length – 1.3m (4.3ft), 2.1m (6.9ft), 2.7m (8.9ft)

Exclusive Features

- Wideband frequency performance – enables future growth and increases flexibility ^{Note 1}
- Rugged construction – high reliability
- High gain – provides better coverage
- Excellent upper sidelobe suppression – allows strong mechanical tilt
- Low PIM – no system down-time, high call quality and reduced number of dropped calls

Note 1: Multiband application – Digital Dividend, CDMA, GSM900, GSM1800, PCS, UMTS, DVB-SH

Each of the dual band variants is available with integrated antenna control units (ACU) for remote tilt control functionality. Pre-fitting the ACUs streamlines installation and reduces the possibility of on-site error. Furthermore, the RFS ACUs are fully compatible with the antenna interface standards group (AISG) versions 1.1 and 2.0 communications protocol.

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Product Specifications

	APXV9RxxB Series	
Frequency Range, MHz	790-960	1710-2200
Horizontal Beamwidth, deg	65	
Electrical Down Tilt Option	Manual Variable or RET	
Electrical Downtilt, deg	0-10	
Upper Sidelobe Suppression, dB	>18	
Front-To-Back Ratio, dB	> 25	
Polarization	Dual pol +/-45°	
VSWR	< 1.5:1	
Isolation between Ports, dB	> 28 @ 790-824MHz > 30 @ 824-2200MHz	
Impedance, Ohms	50	
Maximum Power Input, W	500 @ 790-960MHz 300 @ 1710-2200MHz	
Lightning Protection	Direct Ground	
Connector Type	(4) 7-16 DIN Long Neck Female	
Connector Location	Bottom	

Mounting Hardware Information

Model Number Suffix	Mounting Information
-C	APM40-2 (Downtilt Kit)
-C-A20	APM40-2 + Tested and Installed Antenna Control Unit

RFS Migration Table

Previous RFS Model Number	NEW! RFS Model Number
APX13GV-15DWVB-C	APXV9R13B-C
APX15GV-15DWVB-C	APXV9R20B-C
No Product Available	APXV9R26B-C

Ordering Information

Model Number	Gain, dBi (dBd)		Length m, (ft)
	Low Band	High Band	
APXV9R13B-C	15.5 (13.4)	19.0 (16.9)	1.3 (4.3)
APXV9R13B-C-A20	15.5 (13.4)	19.0 (16.9)	1.3 (4.3)
APXV9R20B-C	16.2 (14.1)	19.0 (16.9)	2.1 (6.9)
APXV9R20B-C-A20	16.2 (14.1)	19.0 (16.9)	2.1 (6.9)
APXV9R26B-C	17.0 (14.9)	19.0 (16.9)	2.7 (8.9)
APXV9R26B-C-A20	17.0 (14.9)	19.0 (16.9)	2.7 (8.9)

Quality Assurance

To guarantee quality and reliability, this antenna series has been put through the rigorous RFS Accelerated Life Testing or "HALT" process ensuring product quality in extreme environmental conditions such as severe icing, concentrated salt air conditions and heavy moisture and rain.

All antennas are 100% tested for PIM, isolation and VSWR prior to shipment to our customers.

RFS: An Eye on the environment

As an ISO 9001, ISO 14001 and RoHS compliant organization, RFS is committed to globally fulfilling the most demanding international environmental directives and integrating green initiatives in all aspects of its business.



Product Innovation

- ⊕ Streamlined production process
- ⊕ Reduced soldering points
- ⊕ Lightweight design
- Overall lower CO² emissions

Product life cycle management

- ⊕ Packaging for lower footprint
- ⊕ Careful materials selection and end-of-life recycling

Industrial operations

- ⊕ Water, cardboard, wood, solvents recycling
- ⊕ Energy efficiency optimization

⊕ Visit our on-line e-catalog dataXpress for the latest and most complete data specification

RADIO FREQUENCY SYSTEMS
The Clear Choice®

