RADIO FREQUENCY SYSTEMS
The Clear Choice®

RFS

RF X-TREME™ Cross Polarized Triple Band Antenna, 698-2360MHz, 65deg, 13.6/16.3/17.2dBi, 4ft, VET, RET

The new RF X-TREME base station antenna design provides the highest gain and cross polar discrimination combined with the best vertical pattern control of any triple band antenna for its size. It is an ideal choice for site upgrades and new deployments where three frequency bands, or MIMO/4 RX diversity, is used to add capacity and increase coverage. Only 12 inches wide and 4 feet high, it maintains the size of a dual band antenna, while adding a third antenna path with no compromise in RF performance. It can be used for 2G, 3G and 4G technologies. This multi-band antenna features superior pattern symmetry and a phase shifter for each radiating dipole providing exceptional patterns at all tilt settings. It is supplied with an integrated and field replaceable AISG 2.0 antenna control unit (ACU) for remote electrical tilt (RET) compatibility.

FEATURES / BENEFITS

➡ Cross polarization — triple band version with 6 ports (2x 698-894 MHz and 4x 1695-2360 MHz)

➡ Pair shifting of dipoles minimized — reduces quantization lobe interference issues (Low Band has only top two dipoles shifted in pairs and High Band has no dipoles shifted in pairs)

➡ Superior X-Pol Discrimination — Improves Rx diversity

➡ High suppression of upper sidelobes — reduces cell interference

➡ Enhanced tilt range from 2-10 degrees for 698-894MHz and 0-10 degrees for 1695-2360MHz — ideal for applications in dense areas

➡ Variable electrical downtilt — provides enhanced precision in controlling intercell interference

➡ High reliability — designed to last in a tower top environment

➡ Design incorporates low windload and low weight — minimizes tower loading

➡ Quick and easy to install — reduces installation time and costs

➡ Includes two 0.5m AISG Jumpers

RF X-TREME FWW Series

Technical Features

ELECTRICAL SPECIFICATIONS

Frequency Range	MHz	698-806	806-894	1695-1880	1850-1990	1920-2180	2305-2360
Gain	dBi (dBd)	13.1 (11.0)	13.6 (11.5)	15.9 (13.8)	16.3 (14.2)	16.6 (14.5)	17.2 (15.1)
Horizontal Beamwidth	deg	73	71	67	67	65	56
Vertical Beamwidth	deg	20.5	17.2	9.8	9.1	8.7	8.0
Electrical Downtilt Range	deg	2-10	2-10	0-10	0-10	0-10	0-10
1st Upper Sidelobe Suppression	dB	18					
Front-To-Back Ratio	dB	>24	>32	>27	>26	>26	>29
Polarization		Dual pol +/-45°					
VSWR		< 1.5:1					
Isolation between Ports	dB	>30 typ.					
3rd Order IMP @ 2 x 43 dBm	dBc	>153					
Cross Polar Discrimination (XPD) 0°	dB	>10	>10	>10	>9.0	>8.7	>7.5
Impedance	Ohms	50.0					
Maximum Power Input	W	500.0	500.0	300.0	300.0	300.0	300.0

MECHANICAL SPECIFICATIONS

Lightning Protection		Direct Ground
Connector Type/Location		(6) 7-16 Long Neck Female/Bottom
Dimensions - HxWxD	mm (in)	1220 x 300 x 200 (48 x 11.8 x 7.9)
Weight w/o Mtg Hardware	kg (lb)	20 (44)
Survival/Rated Wind Speed	km/h (mph]	240 (150) / 150 (93.2)
Applied Wind Load Standard		DIN 1055-4
Wind Load @ Rated Wind, Front	N (lbf)	275 (62) 275
Wind Load @ Rated Wind, Max.	N (lbf)	340 (77) null
Wind Load @ Rated Wind, Side	N (lbf)	340 (77)
Wind Load @ Rated Wind, Rear	N (lbf)	312 (71)

TESTING AND ENVIRONMENTAL

Operation temperature	°C (°F)	-40 to 60 (-40 to 140)

MATERIAL

APXVFWW12X-C-NA20	REV: D	REV DATE: 21.10.2015	www.rfsworld.com

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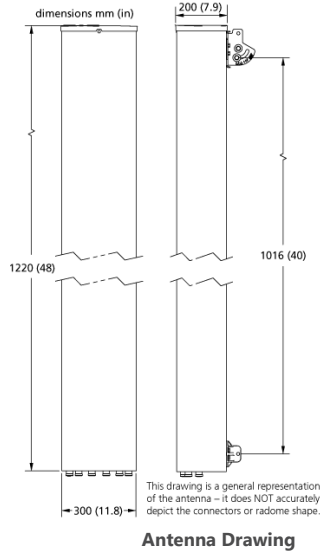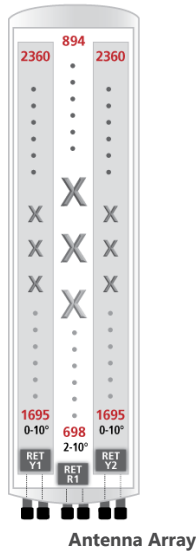## RF X-TREME™ Cross Polarized Triple Band Antenna, 698-2360MHz, 65deg, 13.6/16.3/17.2dBi, 4ft, VET, RET

Radome Material/Color		ASA/Light Grey RAL7035
Mounting Hardware Material		Diecasted Aluminum and Galvanized Steel

ORDERING INFORMATION		
Shipping Weight	kg (lb)	27 (59.5)
Packing Dimensions	mm (in)	1410 x 384 x 379 (55.5 x 15.1 x 14.9)
Mounting Hardware		APM40-2
Mounting Pipe Diameter	mm (in)	60 - 120 (2.36 - 4.72)
Mounting Hardware Weight	kg (lb)	3.4 (7.5)

Antenna Array

Antenna Drawing

This drawing is a general representation of the antenna – it does NOT accurately depict the connectors or radome shape.

External Document Links

APM40 Series Datasheet

APM40 Series Installation Instructions

Notes

For additional mounting information please click "External Document Links" below.