

# Dual Broadband Antenna

65° 1.4 m X-polarized MET Antenna

824-960/1710-2170 MHz

Part Number:  
7750.00

Horizontal Beamwidth: 65°

Gain: 14.2/17.5 dBi/12.1/15.4 dBd

Electrical Downtilt: Adjustable  
Connector Type: 7/16 DIN female

The Powerwave broadband antenna design is based on a patented stacked aperture-coupled patch technology, which provides high isolation performance and a wide VSWR bandwidth. The antennas have superior radiation patterns due to a unique reflector design that provides a very small variation of the -3dB horizontal beam width over the frequency band as well as a high front-to-back ratio. Powerwave broadband antennas come with manually adjustable electrical tilt (MET) for tuning flexibility of tilt angles. This design ensures the highest possible cross-polar discrimination value.

Available with Powerwave's pre-mounted RET solution and upgradeable in field.



## Key Benefits

- Excellent broad- and multi-band capabilities
- Polarization purity maximizes diversity gain
- Excellent pattern performance and high gain over frequency
- Guaranteed passive intermodulation performance
- Light, slim and robust design

ANTENNA  
SYSTEMS

BASE STATION  
SYSTEMS

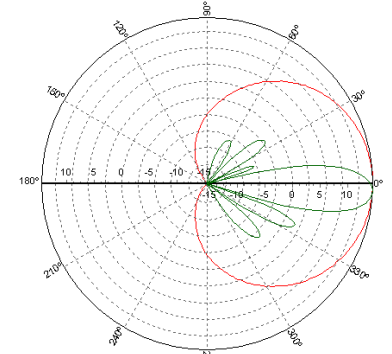
COVERAGE  
SYSTEMS

## Dual Broadband Antenna

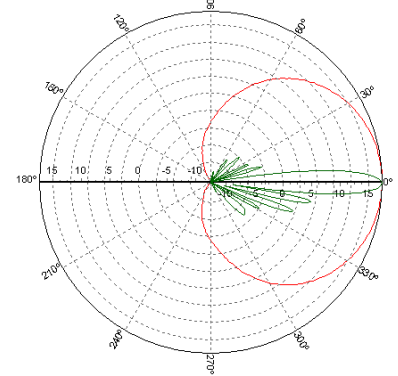
### Electrical Specifications

Frequency band (MHz)	824-960	1710-2170
Gain, $\pm 0.5$ dB (dBi)/(dBd)	14.2/12.1	17.5/15.4
Polarization	Dual linear $\pm 45^\circ$	
Nominal Impedance (Ohm)	50	
VSWR	1.5:1	1.5:1
VSWR		1.5:1
Isolation between inputs (dB)	30	
Isolation between inputs (dB)		30
Inter band isolation (dB)	40	
Horizontal -3 dB beamwidth	$69 \pm 6^\circ$	$63 \pm 7^\circ$
Tracking, Horizontal plane, $\pm 60^\circ$ (dB)	<1.0	
Tracking, Horizontal plane, $\pm 60^\circ$ (dB)		<2.0
Electrical downtilt range (adjustable)	$2^\circ$ to $12^\circ$	$0^\circ$ to $8^\circ$
Vertical -3 dB beamwidth	$14.3 \pm 2.0^\circ$	$6.6 \pm 1^\circ$
Sidelobe suppression,	> 18,17,16,16,15,15	> 18,18,16,15,14
Vertical 1 st upper (dB)	x=2, 4, 6, 8,10,12° MET	x=0, 2, 4, 6, 8° MET
Vertical beam squint	$1.5^\circ$	$0.8^\circ$
First null-fill (dB)	<-25	<-25
Front-to-back ratio (dB)	>27	>27
Front-to-back ratio, total power (dB)	>24	>24
IM3, @2x43dBm (dBc)	<-153	
IM3, @2x43dBm (dBc)		<-153
Average IM7, 2Tx@43dBm (dBc)		<-160
Power Handling, Average per input (W)	300	250
Power Handling, Average total (W)	600	500

All specifications are subject to change without notice.  
Contact factory for complete performance data.



Typical 800 MHz Horizontal and Vertical



Typical 1900 MHz Horizontal and Vertical

### Mechanical Specifications

Connector Type	7/16 DIN female
Connector Position	Bottom
Dimensions, HxWxD	1408mm x 280mm x 125mm (4'7"x11"x5")
Weight Including Brackets	15.8 kg (35 lbs)
Wind Load, Frontal, 42m/s Cd=1	435N (98 lbf)
Survival Wind Speed	70m/s (156 mph)
Lightning Protection	DC grounded
Radome Material	GRP
Radome Color	Grey (RAL 7035 on all visible plastic part)
Mounting	Pre-mounted Standard Brackets
Packing Size	1550mm x 355mm x 255mm (61"x14"x10")

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