

# Triple Broadband Antenna

65° 1.4 m MET Antenna

824-960/2x1710-2170 MHz

Part Number:  
7780.00

Horizontal Beamwidth: 65°  
Gain: 14.5 / 14.8 dBi

Electrical Downtilt: Adjustable  
Connector Type: 7/16 female

The triple band solution from Powerwave offers a flexible antenna option for operators seeking excellent RF-performance as well as fast and successful roll-out of their next-generation networks. Designed to overcome UMTS deployment challenges, such as space and installation issues as well as those of co-siting in demanding radio environments, these antennas include the Powerwave patented Manually-adjustable Electrical Tilt (MET) function, which offers operators flexibility in tuning antenna systems as well as logistical advantages. The Powerwave Triband antenna design is based on a patented stacked aperture-coupled patch technology for GSM 900-, GSM1800- and UMTS 2100 MHz-bands. Finally, the advanced reflector and element structure in combination with a superior feeding network minimizes the weight and maximizes the overall performance of the antenna.



## Mechanical Specifications

Connector type (6 pcs)	7/16 female
Connector position	Bottom
Dimensions, HxWxD	1400 x 280 x 125mm ( 4' 7"x 11"x 5")
Weight, excluding brackets	15kg ( 33lbs )
Weight, including brackets	3.5kg
Wind load, frontal, 150 km/h, Cd=1, (N)	428
Operating wind speed (m/s)	55
Survival wind speed (m/s)	70
Weatherproofing	According to T1102
Radome material	GRP
Radome colour	RAL 7035 on all visible plastic parts
Packing size HxWxD (mm)	1650 x 355 x 200mm ( 5' 5"x1' 2"x 8")
Shipping weight including bracket kit	20kg (44lbs)
Mounting	Pre-mounted standard brackets

ANTENNA  
SYSTEMS

BASE STATION  
SYSTEMS

COVERAGE  
SYSTEMS

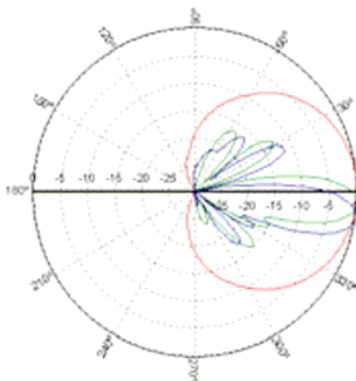
## Triple Broadband Antenna

### Electrical Specifications

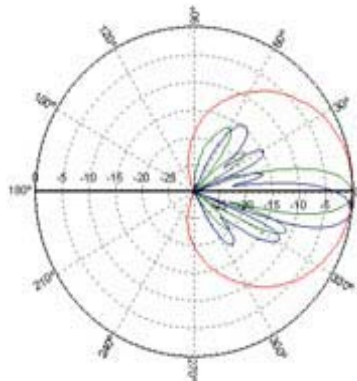
Frequency band, MHz	824-960	1710-1880	1900-2170
Gain $\pm 0.5$ (dBi)	14.5	14.4	14.8
Polarization	dual linear $\pm 45^\circ$	dual linear $\pm 45^\circ$	dual linear $\pm 45^\circ$
Nominal impedance (W)	50	50	50
VSWR, 824-960 MHz	1.5:1		
VSWR, 1710-1880 MHz		1.5:1	
VSWR, 1900-2025MHz			1.5:1
VSWR, 2110-2170MHz			1.5:1
Isolation between inputs (dB), 824-960 MHz	30		
Isolation between inputs (dB), 1710-1880 MHz		30	
Isolation between inputs (dB), 1900-2025 MHz			>30
Isolation between inputs (dB), 2110-2170 MHz			>30
Inter band isolation, all bands (dB)		38	
Horizontal -3dB beam width	$68^\circ \pm 5^\circ$	$65^\circ \pm 5^\circ$	$62^\circ \pm 5^\circ$
Tracking, Horizontal plane, 824-896 MHz, $\pm 60^\circ$	<2.0dB		
Tracking, Horizontal plane, 880-960 MHz, $\pm 60^\circ$	<2.0dB		
Tracking, Horizontal plane, 1710-1880 MHz, $\pm 60^\circ$		<1.5dB	
Tracking, Horizontal plane, 1900-2025 MHz, $\pm 60^\circ$			<1.5dB
Tracking, Horizontal plane, 2110-2170 MHz, $\pm 60^\circ$			<1.5dB
Electrical down tilt range (adjustable)	$2^\circ$ to $12^\circ$	$0^\circ$ to $12^\circ$	$0^\circ$ to $12^\circ$
Vertical Beam width -3dB MHz	$14^\circ \pm 2^\circ$	$14^\circ \pm 1^\circ$	$13^\circ \pm 1^\circ$
Side lobe suppression, Vertical 1st upper (dB)	>17, 16, 15, 14 X= 2, 4, 8, 12° MET	>17, 16, 15, 14 X=0, 4, 8, 12° MET	>17, 16, 15, 14 X=0, 4, 8, 12° MET
Side lobe suppression, Vertical Upper (dB)	>10	>10	>10
Vertical beam squint	$1^\circ$	$1^\circ$	$1^\circ$
Front-to-back Ratio (dB)	>28	>30	>30
Front-to-back Ratio, Total Power (dB)	>25	>25	>25
Cross-polar discrimination (XPD) $\pm 60^\circ$ (dB)	>11	>11	>10
IM3, 2Tx@43dBm (dBm) (dBc)	-153		
IM3, 2Tx@43dBm (dBm) (dBc)		-153	
IM7, 2Tx@43dBm (dBm) (dBc)			-160
Power Handling, Average per input (W)	300	250	250
Power Handling, Average total (W)	600	500	500

All specifications are subject to change without notice. Contact your Powerwave representative for complete performance data.

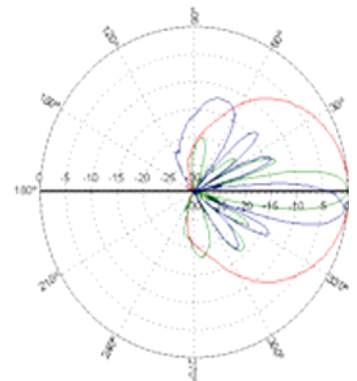
900MHz



1800MHz



2100MHz



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COVERAGE AND CAPACITY

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