

6177408NG

6177408G

3-Band, 6-Port, 65°, XPOL, Panel Antenna, Variable Tilt, 1397 mm

- Tri band antenna, dual polarisation, 6 connectors
- Independent, continuously adjustable tilt on each band 0-10° / 0-10° / 0-10°
- RET version, 3GPP/AISG2.0 with three integrated RCUs

ACCESS PORT DESCRIPTION (CONNECTORS)

The antenna has 6 colour-coded connectors located at the bottom face.

Frequency Designation	Y1	Y2	Y3
Frequency Range	1710-2690 MHz	1710-2690 MHz	1710-2690 MHz
Polarisation	Xpol	Xpol	Xpol
Horizontal Beamwidth	65°	65°	65°
Electrical Downtilt Range	0-10°	0-10°	0-10°
Connector Type	(2x) 4.3-10 Female or (2x) 7/16 DIN Female	(2x) 4.3-10 Female or (2x) 7/16 DIN Female	(2x) 4.3-10 Female or (2x) 7/16 DIN Female

ORDERING OPTIONS Select from the different options listed below

SELECT ELECTRICAL DOWNTILT CONTROL & AISG PROTOCOL	SELECT ACTUATOR	SELECT CONNECTOR TYPE	ANTENNA MODEL NUMBER
Manual Electrical Tilt (MET)	---	4.3-10 Female	6177408N
		7/16-DIN Female	6177408
Remote Electrical Tilt (RET) AISG v2.0 / 3GPP	Multi-Device Control Unit (MDCU)	4.3-10 Female	6177408NG
		7/16-DIN Female	6177408G

ELECTRICAL CHARACTERISTICS

		Y1, Y3				
		1710-2690 MHz				
Frequency Bands		1710-1880	1850-1990	1920-2170	2300-2400	2500-2690
Gain	At Mid Tilt	17.4 dBi	17.5 dBi	17.9 dBi	18.2 dBi	18.2 dBi
	Over All Tilts	17.4 ± 0.6 dBi	17.5 ± 0.5 dBi	17.8 ± 0.5 dBi	18.1 ± 0.6 dBi	18.2 ± 0.6 dBi
Input Impedance		50Ω				
VSWR		< 1.5				
Polarisation		±45°				
Horizontal Beamwidth (-3 dB)		68° ± 4.8°	65° ± 4.8°	63° ± 4.8°	62° ± 5.0°	61° ± 5.8°
Vertical Beamwidth (-3 dB)		7.0° ± 0.5°	6.6° ± 0.5°	6.0° ± 0.5°	5.5° ± 0.5°	5.0° ± 0.4°
Electrical Downtilt Range		0-10°				
Cross Polar Isolation		> 28 dB				
Interband Isolation		> 28 dB				
Port-to-Port Isolation		> 28 dB				
Upper Sidelobe Suppression	Typical	> 16 dB	> 16 dB	> 16 dB	> 16 dB	> 16 dB
	Peak to 20°	> 15 dB	> 15 dB	> 15 dB	> 15 dB	> 15 dB
Front-to-Back Ratio (@ 180° ± 30°)		> 25 dB	> 25 dB	> 25 dB	> 25 dB	> 25 dB
Horizontal Beam Port-to-Port Tracking		< 1.8 dB	< 2 dB	< 2 dB	< 2 dB	< 2.3 dB
Tilt Accuracy		< 0.7°	< 0.6°	< 0.6°	< 0.6°	< 0.6°
Cross Polar Discrimination	Main Direction	> 19 dB	> 20 dB	> 20 dB	> 20 dB	> 19 dB
	Sector Edges	> 8 dB	> 10 dB	> 10 dB	> 7 dB	> 8 dB
Maximum Power (Per Port)		250 W (at 50°C ambient temperature)				
Intermodulation 3rd (2x43 dBm Carrier)		< -153 dBc				
Grounding		DC Ground				

Standard values based on NGMN-P-BASTA version 10.0 recommendation.

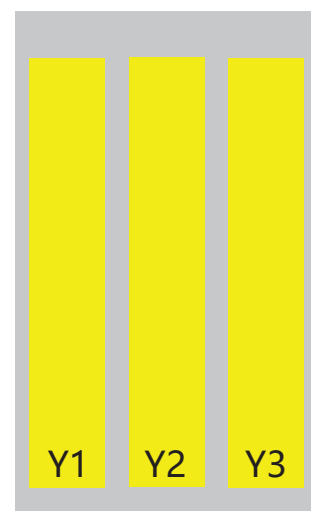
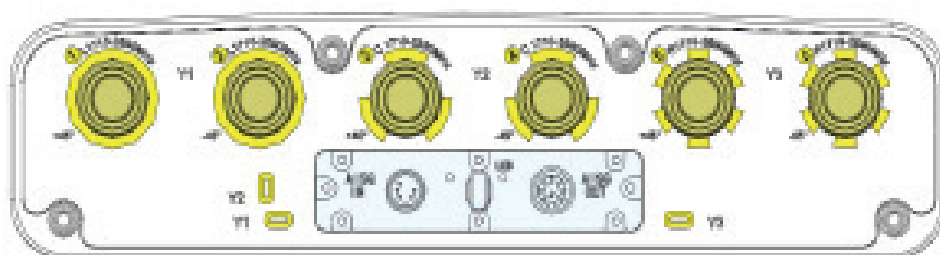
Several patents pending regarding this product. Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.

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ELECTRICAL CHARACTERISTICS		Y2				
Frequency Bands		1710-2690 MHz				
		1710-1880	1850-1990	1920-2170	2300-2400	2500-2690
Gain	At Mid Tilt	17.5 dBi	17.6 dBi	18.0 dBi	18.2 dBi	18.2 dBi
	Over All Tilts	17.4 ± 0.6 dBi	17.5 ± 0.5 dBi	17.9 ± 0.5 dBi	18.1 ± 0.6 dBi	18.2 ± 0.6 dBi
Input Impedance		50Ω				
VSWR		< 1.5				
Polarisation		±45°				
Horizontal Beamwidth (-3 dB)		66° ± 5.0°	63° ± 5.5°	64° ± 5.8°	61° ± 5.8°	60° ± 5.8°
Vertical Beamwidth (-3 dB)		6.9° ± 0.5°	6.5° ± 0.5°	6.1° ± 0.5°	5.3° ± 0.5°	4.9° ± 0.4°
Electrical Downtilt Range		0-10°				
Cross Polar Isolation		> 28 dB				
Interband Isolation		> 28 dB				
Port-to-Port Isolation		> 28 dB				
Upper Sidelobe Suppression	Typical	> 16 dB	> 16 dB	> 16 dB	> 16 dB	> 16 dB
	Peak to 20°	> 15 dB	> 15 dB	> 15 dB	> 15 dB	> 15 dB
Front-to-Back Ratio (@ 180° ± 30°)		> 25 dB	> 26 dB	> 26 dB	> 26 dB	> 26 dB
Horizontal Beam Port-to-Port Tracking		< 1.8 dB	< 2 dB	< 2 dB	< 2 dB	< 2.3 dB
Tilt Accuracy		< 0.7°	< 0.6°	< 0.6°	< 0.6°	< 0.6°
Cross Polar Discrimination	Main Direction	> 19 dB	> 22 dB	> 22 dB	> 19 dB	> 18 dB
	Sector Edges	> 8 dB	> 9 dB	> 10 dB	> 7 dB	> 7 dB
Maximum Power (Per Port)		250 W (at 50°C ambient temperature)				
Intermodulation 3rd (2x43 dBm Carrier)		< -153 dBc				
Grounding		DC Ground				



ARRAY LAYOUT	ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE
	Y1	1710-2690	1-2	4.3-10 Female or 7/16 DIN Female
	Y2	1710-2690	3-4	4.3-10 Female or 7/16 DIN Female
	Y3	1710-2690	5-6	4.3-10 Female or 7/16 DIN Female

Diagram shown at right depicts the view from the front of the antenna. The illustration is not shown to scale.

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INTEGRATED RET PROPERTIES	
Protocol	Compliant with 3GPP/AISGv2.0
Power Supply	10-30VDC
Adjustment Time (Full Range)	≤ 90 sec (typical, depending on antenna type)
Power Consumption	< 1 W (Idle); < 10 W (In Motion)
Accuracy	≤ 0.5°
Hardware Interface	RS485 and Power
Safety Standard	Compliant to EN 60950/UL 60950/ RoHS, CE
Adjustment Cycles	> 10,000
Torque Max	≥ 160 mN.m
Remote Control	Can manage from OMC, BTS/NodeB
Lightning Protection Rating	IEC 61000-4-5 Current Pulse Profile, 8/20 μs 10 Repetitions Min. @ 8 kA
Connectors	(2x) 8-Pin Circle Connector According to IEC 60130-9 and AISG Daisy Chain In: Male; Daisy Chain Out: Female Pin3: RS485+; Pin5: RS485-; Pin6: 10-30V; Pin7: GND Female connector: 8 Pins, Male connector: 5 Pins

MECHANICAL CHARACTERISTICS		PACKAGING
Dimensions (Height x Width x Depth)	1397 x 377 x 87 mm (55.0 x 14.8 x 3.4 in)	Carton Box 1.577 x 0.472 x 0.207 m (62.1 x 18.6 x 8.1 in)
Weight (excluding mounting accessory)	15 kg (32.4 lbs)	
Shipping weight	18 kg (39.6 lbs)	
Radome Material	UPVC	
Maximum Wind Speed	200 km/h (124.3 mph)	
Wind Load at 150 km/h	Frontal	
	Rear	545 N (122.5 lbf)
	Lateral	140 N (31.4 lbf)
MOUNTING KIT OPTIONS	POLE DIAMETER	MECHANICAL TILT
All mounting bracket kits are ordered separately unless otherwise indicated.		
Mounting and Downtilt Bracket Kit (Included)	Ø50-Ø125 mm (Ø2.0-Ø4.9 mm)	0-16°

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