

## 6177788G

4-Band, 8-Port, 65°, XPOL, Panel Antenna, Variable Tilt, 1397 mm

- Quad band antenna, dual polarisation, 8 connectors
- Independent, continuously adjustable tilt on each band 0-10° / 0-10° / 0-10° / 0-10°
- RET version, 3GPP/AISG2.0 with four integrated RCUs



### ACCESS PORT DESCRIPTION (CONNECTORS)

The antenna has 8 colour-coded connectors located at the bottom face.

Frequency Designation	Y1	Y2	Y3	Y4
Frequency Range	1710-2690 MHz	1710-2690 MHz	1710-2690 MHz	1710-2690 MHz
Polarisation	Xpol	Xpol	Xpol	Xpol
Horizontal Beamwidth	65°	65°	65°	65°
Electrical Downtilt Range	0-10°	0-10°	0-10°	0-10°
Connector Type	(2x) 7/16-DIN Female	(2x) 7/16-DIN Female	(2x) 7/16-DIN Female	(2x) 7/16-DIN Female

ELECTRICAL CHARACTERISTICS		Y1				
Frequency Bands		1710-2690 MHz				
		1710-1880	1850-1990	1920-2170	2300-2400	2500-2690
Gain	At Mid Tilt	17.4 dBi	18.0 dBi	18.2 dBi	17.9 dBi	17.8 dBi
	Over All Tilts	17.2 ± 0.6 dBi	18.0 ± 0.5 dBi	18.2 ± 0.5 dBi	18.0 ± 0.4 dBi	17.8 ± 0.5 dBi
Input Impedance		50Ω				
VSWR		< 1.5				
Polarisation		±45°				
Horizontal Beamwidth (-3 dB)		68° ± 3.8°	65° ± 2.9°	68° ± 4.5°	67° ± 6.2°	64° ± 5.1°
Vertical Beamwidth (-3 dB)		6.9° ± 0.6°	6.4° ± 0.5°	5.9° ± 0.5°	5.3° ± 0.2°	4.9° ± 0.3°
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	> 17 dB	> 16 dB	> 19 dB	> 19 dB
	Peak to 20°	> 15 dB	> 15 dB	> 15 dB	> 15 dB	> 14 dB
Front-to-Back Ratio (@ 180° ± 30°)		> 25 dB	> 26 dB	> 26 dB	> 25 dB	> 26 dB
Cross Polar Discrimination	Main Direction	> 20 dB	> 22 dB	> 22 dB	> 19 dB	> 20 dB
	Sector Edges	> 12 dB	> 12 dB	> 10 dB	> 9 dB	> 9 dB
Maximum Power (Per Port)		200 W (at 50°C ambient temperature)				
Intermodulation 3rd Order (2x43 dBm Carrier)		< -153 dBc				
Grounding		DC Ground				



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	17.3 dBi	18.1 dBi	18.1 dBi	17.9 dBi	17.8 dBi
	Over All Tilts	17.2 ± 0.6 dBi	17.9 ± 0.5 dBi	18.0 ± 0.4 dBi	17.9 ± 0.4 dBi	17.7 ± 0.5 dBi
Input Impedance		50Ω				
VSWR		< 1.5				
Polarisation		±45°				
Horizontal Beamwidth (-3 dB)		67° ± 4.0°	64° ± 2.4°	67° ± 4.1°	66° ± 5.7°	64° ± 5.1°
Vertical Beamwidth (-3 dB)		6.9° ± 0.5°	6.4° ± 0.5°	5.9° ± 0.4°	5.4° ± 0.3°	4.8° ± 0.3°
Electrical Downtilt Range		0-10°				
Cross Polar Isolation		> 28 dB				
Interband Isolation		> 28 dB				
Port-to-Port Isolation		> 28 dB				
Upper Sidelobe Suppression	Typical	> 17 dB	> 17 dB	> 17 dB	> 19 dB	> 19 dB
	Peak to 20°	> 16 dB	> 15 dB	> 15 dB	> 15 dB	> 14 dB
Front-to-Back Ratio (@ 180° ± 30°)		≥ 25 dB	≥ 26 dB	> 26 dB	≥ 26 dB	≥ 26 dB
Cross Polar Discrimination	Main Direction	> 20 dB	> 22 dB	> 21 dB	> 19 dB	> 19 dB
	Sector Edges	> 12 dB	> 11 dB	> 10 dB	> 9 dB	> 9 dB
Maximum Power (Per Port)		200 W (at 50°C ambient temperature)				
Intermodulation 3rd (2x43 dBm Carrier)		< -153 dBc				
Grounding		DC Ground				

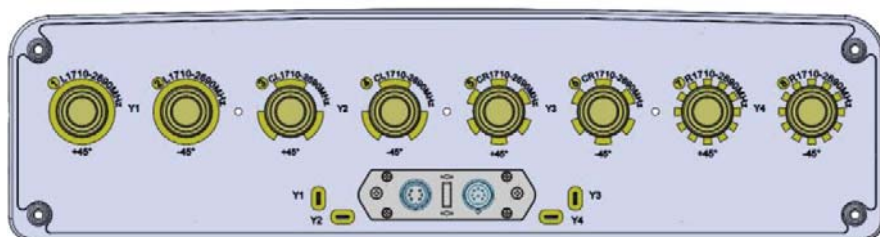
ELECTRICAL CHARACTERISTICS		Y3				
Frequency Bands		1710-2690 MHz				
		1710-1880	1850-1990	1920-2170	2300-2400	2500-2690
Gain	At Mid Tilt	17.4 dBi	18.0 dBi	18.2 dBi	17.9 dBi	17.8 dBi
	Over All Tilts	17.2 ± 0.6 dBi	17.9 ± 0.5 dBi	18.0 ± 0.4 dBi	17.9 ± 0.4 dBi	17.7 ± 0.5 dBi
Input Impedance		50Ω				
VSWR		< 1.5				
Polarisation		±45°				
Horizontal Beamwidth (-3 dB)		67° ± 4.5°	65° ± 2.3°	67° ± 5.2°	66° ± 5.3°	62° ± 4.9°
Vertical Beamwidth (-3 dB)		6.9° ± 0.6°	6.3° ± 0.5°	5.8° ± 0.5°	5.4° ± 0.3°	4.9° ± 0.3°
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	> 17 dB	> 17 dB	> 18 dB	> 18 dB
	Peak to 20°	> 16 dB	> 16 dB	> 15 dB	> 15 dB	> 14 dB
Front-to-Back Ratio (@ 180° ± 30°)		≥ 25 dB	≥ 26 dB	> 25 dB	≥ 25 dB	≥ 25 dB
Cross Polar Discrimination	Main Direction	> 21 dB	> 20 dB	> 20 dB	> 18 dB	> 19 dB
	Sector Edges	> 12 dB	> 11 dB	> 9.5 dB	> 9.0 dB	> 9.0 dB
Maximum Power (Per Port)		200 W (at 50°C ambient temperature)				
Intermodulation 3rd (2x43 dBm Carrier)		< -153 dBc				
Grounding		DC Ground				

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ELECTRICAL CHARACTERISTICS		Y4				
Frequency Bands		1710-2690 MHz				
		1710-1880	1850-1990	1920-2170	2300-2400	2500-2690
Gain	At Mid Tilt	17.2 dBi	17.8 dBi	18.0 dBi	17.9 dBi	17.7 dBi
	Over All Tilts	17.2 ± 0.6 dBi	17.9 ± 0.5 dBi	18.0 ± 0.4 dBi	17.9 ± 0.4 dBi	17.7 ± 0.5 dBi
Input Impedance		50Ω				
VSWR		< 1.5				
Polarisation		±45°				
Horizontal Beamwidth (-3 dB)		67° ± 4.5°	65° ± 2.3°	67° ± 5.2°	66° ± 5.3°	62° ± 4.9°
Vertical Beamwidth (-3 dB)		6.9° ± 0.6°	6.3° ± 0.5°	5.8° ± 0.5°	5.4° ± 0.3°	4.9° ± 0.3°
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	> 17 dB	> 17 dB	> 18 dB	> 18 dB
	Peak to 20°	> 16 dB	> 16 dB	> 15 dB	> 15 dB	> 14 dB
Front-to-Back Ratio (@ 180° ± 30°)		≥ 25 dB	≥ 26 dB	> 25 dB	≥ 25 dB	≥ 25 dB
Cross Polar Discrimination	Main Direction	> 18 dB	> 18 dB	> 18 dB	> 18 dB	> 19 dB
	Sector Edges	> 12 dB	> 11 dB	> 9.5 dB	> 9 dB	> 9 dB
Maximum Power (Per Port)		200 W (at 50°C ambient temperature)				
Intermodulation 3rd (2x43 dBm Carrier)		< -153 dBc				
Grounding		DC Ground				



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INTEGRATED RET PROPERTIES		PACKAGING
Power Supply	10-30VDC Compliant with 3GPP/AISGv2.0	<b>Carton Box</b> 1.747 x 0.582 x 0.227 m
Power Consumption	≤ 2W (Idle), ≤ 10W (In Motion)	
Hardware Interface	RS485 and Power	
Logical Interface	HEX Coded Commands Based on HDLC Protocol	
Protocol Supported	AISG v2.0	
Adjustment Time (Full Range)	< 4Min	
Adjustment Cycles	> 10,000	
Torque Max	≥ 160 mN.m	
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 Pin 3: RS485+; Pin 5: RS485-; Pin 6: 10~30V; Pin 7: GND	
MECHANICAL CHARACTERISTICS		
Dimensions (Height x Width x Depth)	1397 x 565 x 145 mm	
Weight (excluding mounting accessory)	23 kg	
Radome Material, Colour	Fiberglass, Light Grey	
Connector Type	(8x) 7/16-DIN Female	
Maximum Wind Speed	200 km/h	
MOUNTING KIT OPTIONS		POLE DIAMETER
		WEIGHT
All mounting bracket kits are ordered separately unless otherwise indicated.		
Mounting Bracket Kit (Included)	Ø50-Ø125 mm	6 kg