

5980308NG

6-Band, 12-Port, 65°, XPOL, Panel Antenna, Variable Tilt, 2750 mm

- Hexa band antenna, Dual polarisation, 12 connectors
- Independent, continuously adjustable tilt on each band 2-12° / 2-12° / 2-12° / 2-12° / 2-12° / 2-12°
- RET version, 3GPP/AISG2.0 with six integrated RCU

ACCESS PORT DESCRIPTION (CONNECTORS)

The antenna has 12 colour-coded connectors located at the bottom face.

Frequency Designation	R1	R2	Y1	Y2	Y3	Y4
Frequency Range	690-960 MHz	690-960 MHz	1695-2690 MHz	1695-2690 MHz	1695-2690 MHz	1695-2690 MHz
Polarisation	Xpol	Xpol	Xpol	Xpol	Xpol	Xpol
Horizontal Beamwidth	65°	65°	65°	65°	65°	65°
Electrical Downtilt Range	2-12°	2-12°	2-12°	2-12°	2-12°	2-12°
Connector Type	(2x) 4.3-10 Female	(2x) 4.3-10 Female	(2x) 4.3-10 Female	(2x) 4.3-10 Female	(2x) 4.3-10 Female	(2x) 4.3-10 Female

ELECTRICAL CHARACTERISTICS

		R1 / R2			
Frequency Bands		690-960 MHz			
		690-806 MHz	790-894 MHz	880-960 MHz	
Gain	at Mid Tilt	15.7 dBi	16.2 dBi	16.7 dBi	
	Over All Tilts	15.5 ± 0.6 dBi	16.0 ± 0.6 dBi	16.5 ± 0.6 dBi	
Input Impedance		50Ω			
VSWR		< 1.5			
Polarisation		±45°			
Horizontal Beamwidth (-3 dB)		64° ± 6.5°	60° ± 5.5°	56° ± 5.5°	
Vertical Beamwidth (-3 dB)		8.8° ± 0.7°	7.8° ± 0.7°	7.2° ± 0.8°	
Electrical Downtilt Range		2-12°			
Inter Band Isolation		> 26 dB			
Cross-Polar Isolation		> 26 dB			
Port-to-Port Isolation		> 26 dB (R1//R2), > 28dB (R1//Y1, Y2, Y3, Y4)			
Upper Sidelobe Suppression	First Upper Lobe	> 16 dB	> 16 dB	> 16 dB	
	Peak to 20°	> 15 dB	> 15 dB	> 15 dB	
Front-to-Back Ratio (@ 180° ± 30°)		> 23 dB	> 24 dB	> 25 dB	
Cross Polar Ratio	Main Direction (0°)	> 17 dB	> 17 dB	> 18 dB	
	Sector Edges (±60°)	> 7 dB	> 8 dB	> 6.5 dB	
Maximum Average Power Per Port (at 50° C ambient temperature)		350 W			
Intermodulation 3rd Order, 2 x 43 dBm carrier		< -150 dBc			

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ELECTRICAL CHARACTERISTICS		Y1 / Y3				
Frequency Bands		1695-2690 MHz				
		1695-1880 MHz	1850-1990 MHz	1920-2170 MHz	2300-2400 MHz	2490-2690 MHz
Gain	at Mid Tilt	16.6 dBi	17.0 dBi	17.4 dBi	17.4 dBi	17.2 dBi
	Over All Tilts	16.4 ± 0.5 dBi	16.8 ± 0.5 dBi	17.2 ± 0.5 dBi	17.2 ± 0.5 dBi	17.0 ± 0.5
Input Impedance		50Ω				
VSWR		< 1.5				
Polarisation		±45°				
Horizontal Beamwidth (-3 dB)		67° ± 6.5°	62° ± 6.5°	60° ± 6.5°	59° ± 5.0°	62° ± 6.5°
Vertical Beamwidth (-3 dB)		7.4° ± 0.5°	6.8° ± 0.4°	6.1° ± 0.5°	5.7° ± 0.5°	5.2° ± 0.6°
Electrical Downtilt Range		2-12°				
Inter Band Isolation		> 26 dB				
Cross-Polar Isolation		> 26 dB				
Port-to-Port Isolation		> 28 dB				
Upper Sidelobe Suppression	First Upper Lobe	> 16 dB	> 16 dB	> 16 dB	> 15 dB	> 15 dB
	Peak to 20°	> 14 dB	> 14 dB	> 14 dB	> 14 dB	> 14 dB
Front-to-Back Ratio (@ 180° ± 30°)		≥ 25 dB	≥ 25 dB	> 25 dB	≥ 26 dB	≥ 26 dB
Cross Polar Ratio	Main Direction (0°)	> 16 dB	> 16 dB	> 17 dB	> 18 dB	> 18 dB
	Sector Edges (±60°)	> 6 dB	> 6 dB	> 6 dB	> 6.5 dB	> 4.5 dB
Maximum Average Power Per Port (at 50° C ambient temperature)		250 W				
Intermodulation 3rd Order, 2 x 43 dBm carrier		< -150 dBc				

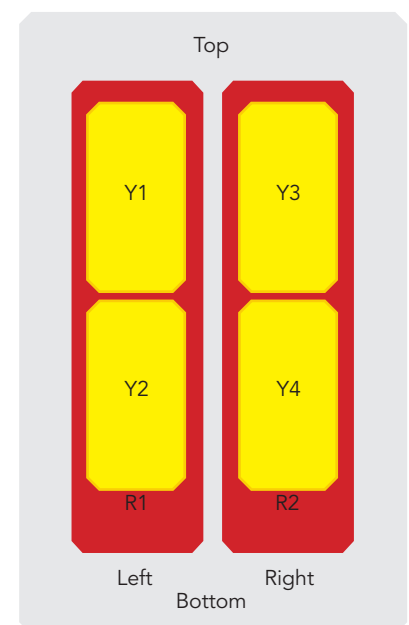
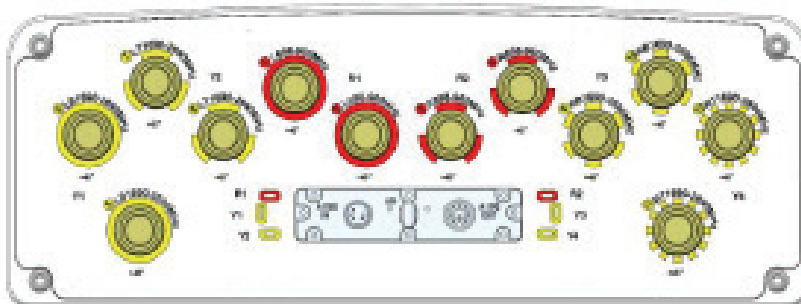
ELECTRICAL CHARACTERISTICS		Y2 / Y4				
Frequency Bands		1695-2690 MHz				
		1695-1880 MHz	1850-1990 MHz	1920-2170 MHz	2300-2400 MHz	2490-2690 MHz
Gain	at Mid Tilt	16.2 dBi	16.7 dBi	17.1 dBi	17.1 dBi	16.9 dBi
	Over All Tilts	16.0 ± 0.6 dBi	16.5 ± 0.5 dBi	16.9 ± 0.5 dBi	16.9 ± 0.5 dBi	16.7 ± 0.6
Input Impedance		50Ω				
VSWR		< 1.5				
Polarisation		±45°				
Horizontal Beamwidth (-3 dB)		65° ± 6.5°	62° ± 6.1°	59° ± 6.5°	59° ± 6.0°	62° ± 6.5°
Vertical Beamwidth (-3 dB)		7.4° ± 0.5°	6.8° ± 0.4°	6.1° ± 0.5°	5.7° ± 0.5°	5.2° ± 0.6°
Electrical Downtilt Range		2-12°				
Inter Band Isolation		> 26 dB				
Cross-Polar Isolation		> 26 dB				
Port-to-Port Isolation		> 28 dB				
Upper Sidelobe Suppression	First Upper Lobe	> 16 dB	> 16 dB	> 16 dB	> 15 dB	> 15 dB
	Peak to 20°	> 14 dB	> 14 dB	> 14 dB	> 14 dB	> 14 dB
Front-to-Back Ratio (@ 180° ± 30°)		≥ 25 dB	≥ 25 dB	> 25 dB	≥ 26 dB	≥ 26 dB
Cross Polar Ratio	Main Direction (0°)	> 16 dB	> 16 dB	> 17 dB	> 18 dB	> 18 dB
	Sector Edges (±60°)	> 6 dB	> 6 dB	> 6 dB	> 6.5 dB	> 4.5 dB
Maximum Average Power Per Port (at 50° C ambient temperature)		250 W				
Intermodulation 3rd Order, 2 x 43 dBm carrier		< -150 dBc				

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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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	< 2 W (Idle); < 10 W (In Motion)
Accuracy	≤ 0.5°
Hardware Interface	Pin3: RS485B; Pin5: RS485A; Pin6: 10-30V; Pin7: DC Return
Safety Standard	Compliant to EN 60950/UL 60950/ RoHS, CE
Adjustment Cycles	> 20,000
Torque Max	≥ 160 mN.m
Protection Class	IP65
Lightning Protection Rating	IEC 61000-4-5 Current Pulse Profile, 8/20 μs 10 Repetitions Min. @ 8 kA IEC61312-1 B Protection against lightning electromagnetic impulse 10/350 μs, 200 @ 0.6kA
Connectors	(2x) 8-Pin Circle Connector According to IEC 60130-9 and AISG Daisy Chain In: Male; Daisy Chain Out: Female



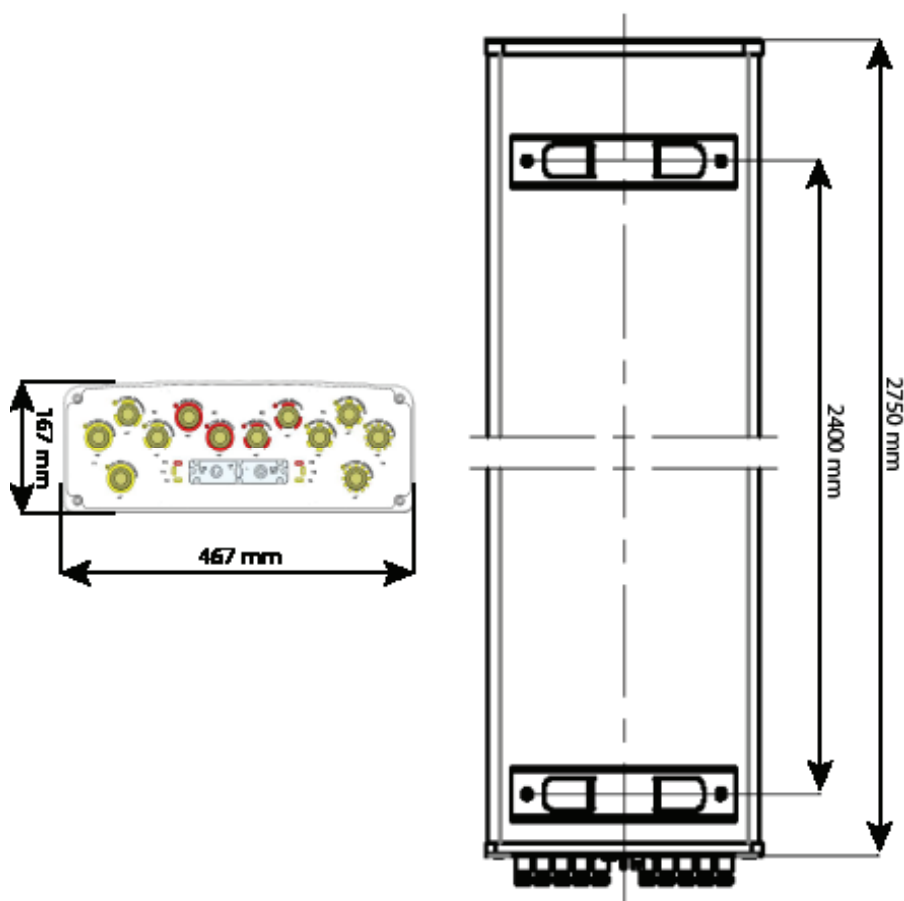
ARRAY LAYOUT	ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE
	■ R1	690-960	1-2	4.3-10 Female
	■ R2	690-960	3-4	4.3-10 Female
	■ Y1	1695-2690	5-6	4.3-10 Female
	■ Y2	1695-2690	7-8	4.3-10 Female
	■ Y3	1695-2690	9-10	4.3-10 Female
	■ Y4	1695-2690	11-12	4.3-10 Female

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

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ENVIRONMENTAL CHARACTERISTICS		PACKAGING	
Lightning Protection		DC Ground	
MECHANICAL CHARACTERISTICS		Carton Box 2.95 x 0.562 x 0.287 m (116.1 x 22.1 x 11.3 in)	
Dimensions (Height x Width x Depth)		2750 x 467 x 167 mm (108.3 x 18.4 x 6.6 in)	
Weight (excluding mounting accessory)		47 kg (103.6 lbs)	
Weight with brackets		53 kg (116.8 lbs)	
Radome Material		Fiberglass	
Maximum Wind Speed		200 km/h (124.3 mph)	
Wind Load at 150 km/h	Frontal	1185 N (266.3 lbf)	
	Rear	1325 N (297.8 lbf)	
	Lateral	440 N (98.9 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)	0-10°



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