

5966388NG

5-Band, 10-Port, 65°, XPOL, Panel Antenna, Variable Tilt, 1497 mm

- Penta band antenna, dual polarisation, 10 connectors
- Independent tilt on each band 2-12° / 2-12° / 2-12° / 2-12° / 2-12°
- RET version, 3GPP/AISG2.0 with five integrated RCUs

ACCESS PORT DESCRIPTION (CONNECTORS)

The antenna has 10 colour-coded connectors located at the bottom face.

Frequency Designation	R1	R2	Y1	Y2	Y3
Frequency Range	698-960 MHz	698-960 MHz	1710-2690 MHz	1710-2690 MHz	1710-2690 MHz
Polarisation	Xpol	Xpol	Xpol	Xpol	Xpol
Horizontal Beamwidth	65°	65°	65°	65°	65°
Electrical Downtilt Range	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

ELECTRICAL CHARACTERISTICS

R1

Frequency Bands		698-960 MHz		
		698-824 MHz	806-896 MHz	880-960 MHz
Gain	At Mid Tilt	13.6 dBi	14.1 dBi	14.6 dBi
	Over All Tilts	13.6 ± 0.5 dBi	14.0 ± 0.5 dBi	14.5 ± 0.4 dBi
Input Impedance		50Ω		
VSWR		< 1.5		
Polarisation		±45°		
Horizontal Beamwidth (-3 dB)		68° ± 4.5°	65° ± 4.5°	60° ± 4.5°
Vertical Beamwidth (-3 dB)		15.9° ± 1.1°	14.4° ± 0.9°	13.7° ± 0.8°
Electrical Downtilt Range		2-12°		
Cross Polar Isolation		> 25 dB		
Interband Isolation		> 25 dB		
Port-to-Port Isolation		> 28 dB (R1,R2//Y1,Y2,Y3); > 25 dB (R1//R2)		
Upper Sidelobe Suppression	First Upper Lobe	> 15 dB	> 15 dB	> 15 dB
	Peak to 20°	> 15 dB	> 15 dB	> 15 dB
Front-to-Back Ratio (@ 180° ± 30°)		> 22 dB	> 24 dB	> 25 dB
Cross Polar Discrimination	Main Direction	> 18 dB	> 18 dB	> 18 dB
	Sector Edges	> 9.0 dB	> 7.0 dB	> 5.5 dB
Maximum Power (Per Port)		350 W (at 50°C ambient temperature)		
Intermodulation 3rd (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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5-Band, 10-Port, 65°, XPOL, Panel Antenna, Variable Tilt, 1497 mm

ELECTRICAL CHARACTERISTICS		R2		
Frequency Bands		698-960 MHz		
		698-824 MHz	806-896 MHz	880-960 MHz
Gain	At Mid Tilt	13.6 dBi	14.1 dBi	14.6 dBi
	Over All Tilts	13.6 ± 0.5 dBi	14.0 ± 0.5 dBi	14.5 ± 0.4 dBi
Input Impedance		50Ω		
VSWR		< 1.5		
Polarisation		±45°		
Horizontal Beamwidth (-3 dB)		68° ± 4.5°	65° ± 4.5°	60° ± 4.5°
Vertical Beamwidth (-3 dB)		15.9° ± 1.1°	14.4° ± 0.9°	13.7° ± 0.8°
Electrical Downtilt Range		2-12°		
Cross Polar Isolation		> 25 dB		
Interband Isolation		> 25 dB		
Port-to-Port Isolation		> 28 dB (R1,R2//Y1,Y2,Y3); > 25 dB (R1//R2)		
Upper Sidelobe Suppression	First Upper Lobe	> 15 dB	> 15 dB	> 15 dB
	Peak to 20°	> 15 dB	> 15 dB	> 15 dB
Front-to-Back Ratio (@ 180° ± 30°)		> 22 dB	> 24 dB	> 25 dB
Cross Polar Discrimination	Main Direction	> 18 dB	> 18 dB	> 18 dB
	Sector Edges	> 9.0 dB	> 7.0 dB	> 5.5 dB
Maximum Power (Per Port)		350 W (at 50°C ambient temperature)		
Intermodulation 3rd (2x43 dBm Carrier)		< -153 dBc		
Grounding		DC Ground		

ELECTRICAL CHARACTERISTICS		Y1				
Frequency Bands		1710-2690 MHz				
		1710-1880 MHz	1850-1990 MHz	1920-2170 MHz	2300-2400 MHz	2490-2690 MHz
Gain	At Mid Tilt	17.1 dBi	17.3 dBi	17.5 dBi	17.7 dBi	17.2 dBi
	Over All Tilts	17.1 ± 0.7 dBi	17.3 ± 0.5 dBi	17.5 ± 0.6 dBi	17.7 ± 0.5 dBi	17.1 ± 0.6 dBi
Input Impedance		50Ω				
VSWR		< 1.5				
Polarisation		±45°				
Horizontal Beamwidth (-3 dB)		68° ± 4.6°	64° ± 3.2°	67° ± 3.5°	61° ± 4.4°	60° ± 5.2°
Vertical Beamwidth (-3 dB)		7.1° ± 0.5°	6.6° ± 0.8°	6.2° ± 0.8°	5.7° ± 0.5°	5.3° ± 0.5°
Electrical Downtilt Range		2-12°				
Cross Polar Isolation		> 25 dB				
Interband Isolation		> 25 dB				
Port-to-Port Isolation		> 28 dB				
Upper Sidelobe Suppression	First Upper Lobe	> 15 dB	> 15 dB	> 15 dB	> 15 dB	> 15 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
Cross Polar Discrimination	Main Direction	> 18 dB	> 19 dB	> 19 dB	> 18 dB	> 18 dB
	Sector Edges	> 10 dB	> 9 dB	> 9 dB	> 7.5 dB	> 5.2 dB
Maximum Power (Per Port)		250 W (at 50°C ambient temperature)				
Intermodulation 3rd (2x43 dBm Carrier)		< -153 dBc				
Grounding		DC Ground				

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ELECTRICAL CHARACTERISTICS		Y2				
Frequency Bands		1710-2690 MHz				
		1710-1880 MHz	1850-1990 MHz	1920-2170 MHz	2300-2400 MHz	2490-2690 MHz
Gain	At Mid Tilt	17.2 dBi	17.5 dBi	17.8 dBi	17.8 dBi	17.4 dBi
	Over All Tilts	17.2 ± 0.7 dBi	17.5 ± 0.5 dBi	17.8 ± 0.6 dBi	17.8 ± 0.5 dBi	17.4 ± 0.6 dBi
Input Impedance		50Ω				
VSWR		< 1.5				
Polarisation		±45°				
Horizontal Beamwidth (-3 dB)		68° ± 4.6°	64° ± 3.2°	67° ± 3.5°	61° ± 4.4°	60° ± 5.2°
Vertical Beamwidth (-3 dB)		7.1° ± 0.5°	6.6° ± 0.8°	6.2° ± 0.8°	5.7° ± 0.5°	5.2° ± 0.5°
Electrical Downtilt Range		2-12°				
Cross Polar Isolation		> 28 dB				
Interband Isolation		> 25 dB				
Port-to-Port Isolation		> 28 dB				
Upper Sidelobe Suppression	First Upper Lobe	> 15 dB	> 15 dB	> 15 dB	> 15 dB	> 15 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
Cross Polar Discrimination	Main Direction	> 18 dB	> 19 dB	> 19 dB	> 18 dB	> 18 dB
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Maximum Power (Per Port)		250 W (at 50°C ambient temperature)				
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Grounding		DC Ground				

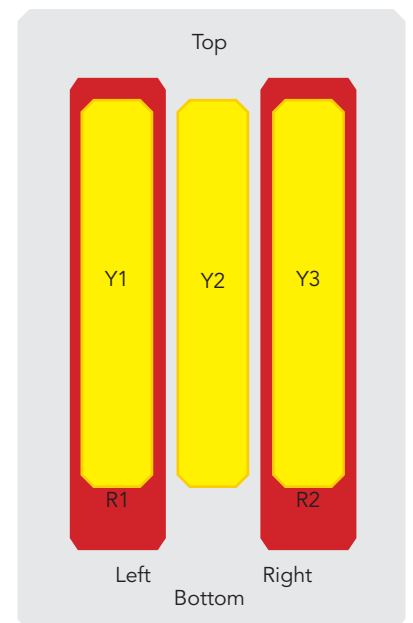
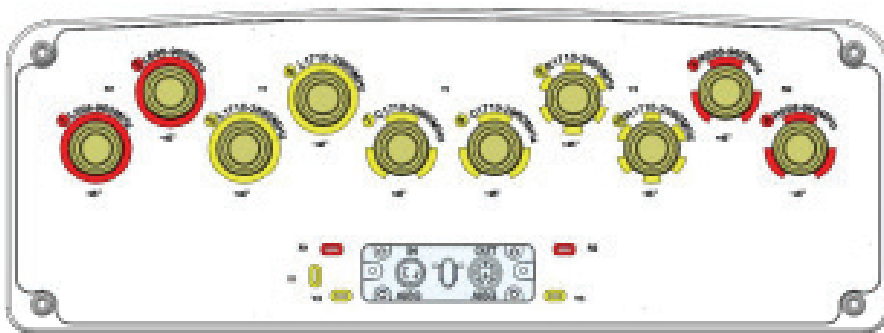
ELECTRICAL CHARACTERISTICS		Y3				
Frequency Bands		1710-2690 MHz				
		1710-1880 MHz	1850-1990 MHz	1920-2170 MHz	2300-2400 MHz	2490-2690 MHz
Gain	At Mid Tilt	17.1 dBi	17.3 dBi	17.5 dBi	17.7 dBi	17.2 dBi
	Over All Tilts	17.1 ± 0.7 dBi	17.3 ± 0.5 dBi	17.5 ± 0.6 dBi	17.7 ± 0.5 dBi	17.1 ± 0.6 dBi
Input Impedance		50Ω				
VSWR		< 1.5				
Polarisation		±45°				
Horizontal Beamwidth (-3 dB)		68° ± 4.6°	64° ± 3.2°	67° ± 3.5°	61° ± 4.4°	60° ± 5.2°
Vertical Beamwidth (-3 dB)		7.1° ± 0.5°	6.6° ± 0.8°	6.2° ± 0.8°	5.7° ± 0.5°	5.3° ± 0.5°
Electrical Downtilt Range		2-12°				
Cross Polar Isolation		> 25 dB				
Interband Isolation		> 25 dB				
Port-to-Port Isolation		> 28 dB				
Upper Sidelobe Suppression	First Upper Lobe	> 15 dB	> 15 dB	> 15 dB	> 15 dB	> 15 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
Cross Polar Discrimination	Main Direction	> 18 dB	> 19 dB	> 19 dB	> 18 dB	> 18 dB
	Sector Edges	> 10 dB	> 9 dB	> 9 dB	> 7.5 dB	> 5.2 dB
Maximum Power (Per Port)		250 W (at 50°C ambient temperature)				
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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
Remote Control	Can manage from OMC, BTS/Node B
Safety Standard	Compliant to EN 60950/UL 60950/ RoHS, CE
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 Pin3: RS485B; Pin5: RS485A; Pin6: 10-30V; Pin7: DC Return Female connector: 8 PINS; Male connector: 5 PINS



ARRAY LAYOUT	ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE
	■ R1	698-960	1-2	4.3-10 Female
	■ R2	698-960	3-4	4.3-10 Female
	■ Y1	1710-2690	5-6	4.3-10 Female
	■ Y2	1710-2690	7-8	4.3-10 Female
	■ Y3	1710-2690	9-10	4.3-10 Female

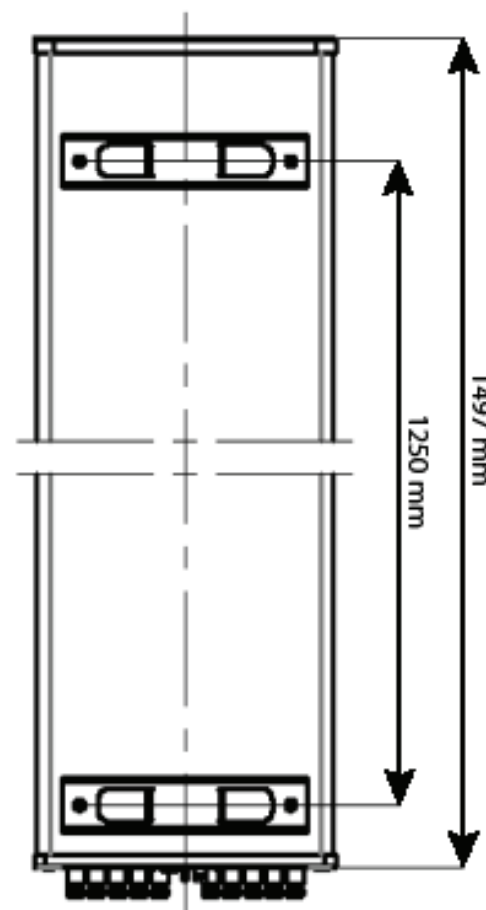
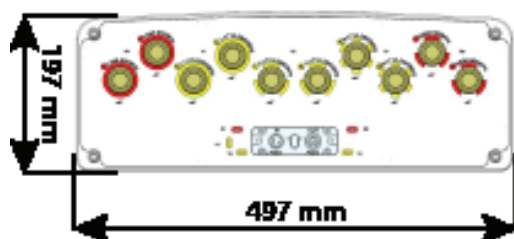
Diagram shown at right depicts the view from the front of the antenna. The illustration is not shown to scale.

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MECHANICAL CHARACTERISTICS		PACKAGING
Dimensions (Height x Width x Depth)	1497 x 497 x 197 mm (58.9 x 19.6 x 7.8 in)	Carton Box 1.697 x 0.592 x 0.317 m (66.8 x 23.3 x 12.5 in)
Weight (excluding mounting accessory)	27.5 kg (60.6 lbs)	
Radome Material	Fiberglass	
Maximum Wind Speed	200 km/h (124.3 mph)	
Wind Load at 150 km/h	Frontal	
	Rear	770 N (173.1 lbf)
	Lateral	290 N (65.1 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)	0-12°



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