

5978378

6-Band, 12-Port, 65°, XPOL, Panel Antenna, Variable Tilt, 1997 mm

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

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	698-960 MHz	698-960 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) 7/16 DIN Female	(2x) 7/16 DIN Female	(2x) 7/16 DIN Female	(2x) 7/16 DIN Female	(2x) 7/16 DIN Female	(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	5978378Nv
		7/16 DIN Female	5978378v
Remote Electrical Tilt (RET) AISG v2.0 / 3GPP	Multi-Device Control Unit (MDCU)	4.3-10 Female	5978378NGv
		7/16 DIN Female	5978378Gv



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ELECTRICAL CHARACTERISTICS		R1, R2		
Frequency Bands		698-960 MHz		
		698-806 MHz	790-894 MHz	880-960 MHz
Gain	At Mid Tilt	14.8 dBi	15.1 dBi	15.4 dBi
	Over All Tilts	14.6 ± 0.5 dBi	14.9 ± 0.5 dBi	15.2 ± 0.5 dBi
Input Impedance		50Ω		
VSWR		< 1.5		
Return Loss		> 14 dB		
Polarisation		± 45°		
Horizontal Beamwidth		68° ± 6.5°	63° ± 5.5°	60° ± 6.5°
Vertical Beamwidth		10.8° ± 1.1°	10.2° ± 0.9°	9.3° ± 0.9°
Electrical Downtilt Range		2-12°		
Cross-Polar Isolation		> 25 dB		
Port to Port Isolation		> 25 dB		
First Upper Sidelobe Suppression		> 15 dB	> 15 dB	> 15 dB
Front-to-Back Ratio, ± 30°		> 24 dB	> 24 dB	> 25 dB
Cross Polar Discrimination at Boresight		> 17 dB	> 17 dB	> 17 dB
Maximum Average Power Per Port (at 50° C ambient temperature)		250 W		
Intermodulation 3rd Order, 2 x 43 dBm carrier		< -150 dBc		
Grounding		DC Ground		

Standard values based on NGMN-P-BASTA version 12.0 recommendation.

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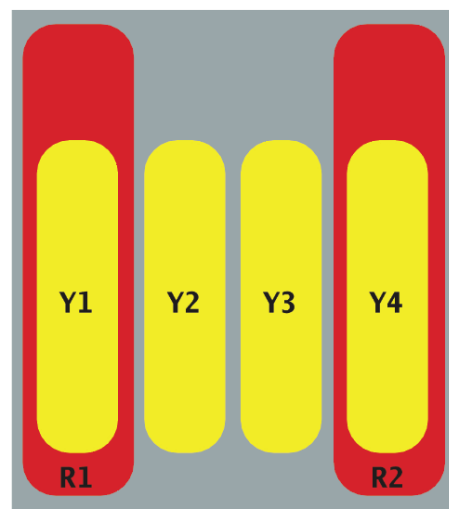
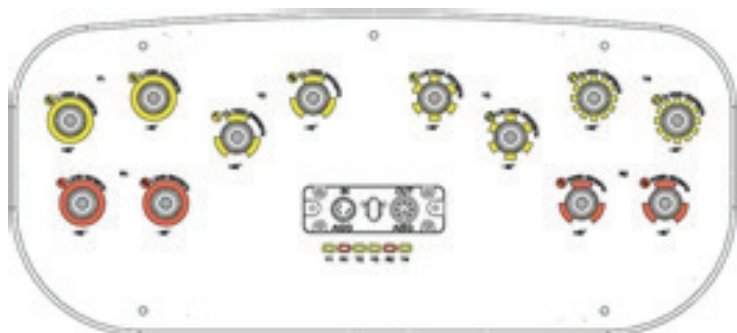
ELECTRICAL CHARACTERISTICS		Y1, Y2, Y3, Y4				
Frequency Bands		1695-2690 MHz				
		1695-1880 MHz	1850-1990 MHz	1920-2170 MHz	2300-2400 MHz	2490-2690 MHz
Gain	At Mid Tilt	17.1 dBi	17.3 dBi	17.7 dBi	17.9 dBi	18.1 dBi
	Over All Tilts	16.9 ± 0.6 dBi	17.1 ± 0.5 dBi	17.5 ± 0.5 dBi	17.7 ± 0.5 dBi	17.9 ± 0.5 dBi
Input Impedance		50Ω				
VSWR		< 1.5				
Return Loss		> 14 dB				
Polarisation		±45°				
Horizontal Beamwidth		62° ± 8.0°	65° ± 6.0°	63° ± 6.0°	61° ± 6.5°	58° ± 7.5°
Vertical Beamwidth		6.2° ± 0.6°	5.6° ± 0.5°	5.2° ± 0.5°	4.8° ± 0.4°	4.4° ± 0.6°
Electrical Downtilt Range		2-12°				
Cross-Polar Isolation		> 26 dB				
Port-to-Port Isolation		> 26 dB				
First Upper Sidelobe Suppression		> 15 dB	> 15 dB	> 15 dB	> 15 dB	> 15 dB
Front-to-Back Ratio, ± 30°		> 24 dB	> 24 dB	> 24 dB	> 25 dB	> 25 dB
Cross Polar Discrimination at Boresight		> 17 dB	> 17 dB	> 18 dB	> 18 dB	> 18 dB
Maximum Average Power Per Port (at 50° C ambient temperature)		200 W				
Intermodulation 3rd (2x43 dBm Carrier)		< -150 dBc				
Grounding		DC Ground				

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INTEGRATED RET PROPERTIES	
Protocols	Compliant With AISGV2.0 And 3GPP
Supply Voltage, VDC	10–30VDC
Power Consumption	< 2W (standby); < 10W (motor activated)
Safety Standard	Compliant to EN 60950/UL 60950/ RoHs (Restriction of Hazardous Substances), CE
Lightning Protection Rating	IEC 61000-4-5 Current Pulse Profile Line to Ground 8/20 μ s @ 8kA $\geq \pm 5$ Repetitions Line to line , 8/20 μ s @ 3kA $\geq \pm 5$ Repetitions
Connectors	2 x 8 Pin Circle Connector According to IEC 60130-9 and AISG Daisy Chain In: Male; Daisy Chain Out: Female Pin3: RS485B; Pin5: RS485A; Pin6: 10-30 V; Pin7: DC Return Female Connector: 8 PINs; Male Connector: 4 PINs



ARRAY LAYOUT	ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE
	■ R1	698-960	1-2	7/16 DIN Female
	■ R2	698-960	3-4	7/16 DIN Female
	■ Y1	1695-2690	5-6	7/16 DIN Female
	■ Y2	1695-2690	7-8	7/16 DIN Female
	■ Y3	1695-2690	9-10	7/16 DIN Female
■ Y4	1695-2690	11-12	7/16 DIN Female	

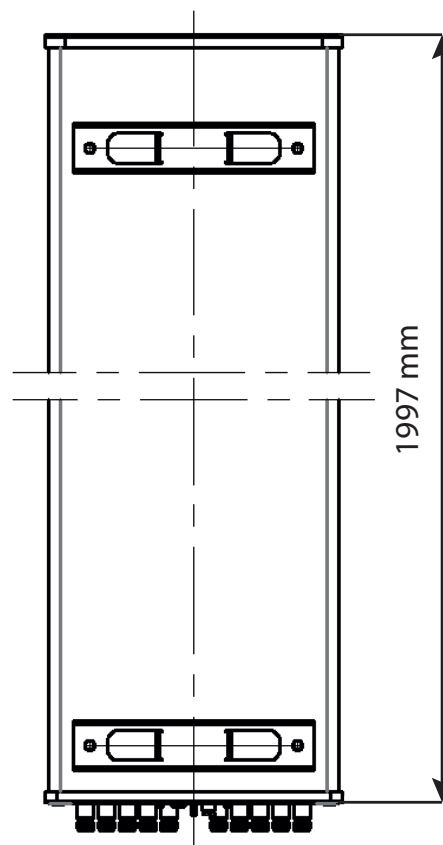
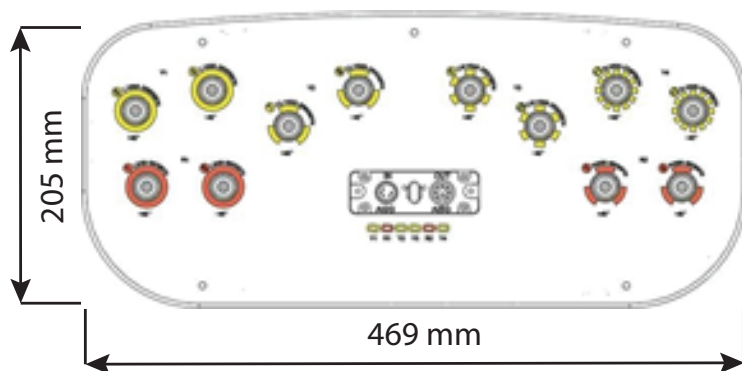
Diagram shown at right depicts the view from the front of the antenna. The illustration is not shown to scale.

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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MECHANICAL CHARACTERISTICS		PACKAGING
Dimensions (Height x Width x Depth)	1997 x 469 x 205 mm (78.6 x 18.5 x 8.1 in)	Carton Box 2.197 x 0.544 x 0.315 m (86.5 x 21.4 x 12.4 in)
Weight (excluding mounting accessory)	28 kg (61.7 lbs)	
Weight with mounting accessory	33.5 kg (73.9 lbs)	
Radome Material	Fiberglass (UV Resistant)	
Radome Colour	Grey	
Maximum Wind Speed	200 km/h (124.3 mph)	
Operating Temperature	-40°C to +60°C	
Wind Load at 150 km/h	Frontal	865 N (194.5 lbf)
	Rear	970 N (218.1 lbf)
	Lateral	470 N (105.7 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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