

5980488

6-Band, 12-Port, 65°, 33°, XPOL, Hybrid Split Beam Panel Sector Antenna, Variable Tilt, 2197 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 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	1710-2690 MHz	1710-2690 MHz	1710-2690 MHz	1710-2690 MHz
Polarisation	Xpol	Xpol	Xpol	Xpol	Xpol	Xpol
Horizontal Beamwidth	65°	65°	33°	33°	33°	33°
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	5980488Nv
		7/16 DIN Female	5980488v
Remote Electrical Tilt (RET) AISG v2.0 / 3GPP	Multi-Device Control Unit (MDCU)	4.3-10 Female	5980488NGv
		7/16 DIN Female	5980488Gv

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ELECTRICAL CHARACTERISTICS		R1, R2		
Frequency Bands		698-960 MHz		
		698-803 MHz	824-880 MHz	880-960 MHz
Gain	at Mid Tilt	14.8 dBi	15.3 dBi	15.6 dBi
	Over All Tilts	14.7 ± 0.6 dBi	15.2 ± 0.6 dBi	15.5 ± 0.6 dBi
Input Impedance		50 Ω		
VSWR		< 1.5		
Return Loss		> 14 dB		
Polarisation		± 45°		
Horizontal Beamwidth		67° ± 6°	65° ± 6°	61° ± 6°
Vertical Beamwidth		10.7° ± 1.1°	9.2° ± 0.9°	8.8° ± 0.9°
Electrical Downtilt Range		2-12°		
Intraband Isolation		≥ 25 dB		
Interband Isolation		≥ 25 dB		
First Upper Sidelobe Suppression		≥ 15 dB	≥ 15 dB	≥ 15 dB
Front-to-Back Ratio Co-Pol, ±30°		≥ 22 dB	≥ 23 dB	≥ 24 dB
Cross Polar Ratio	Main Direction (0°)	≥ 15 dB	≥ 15 dB	≥ 15 dB
	Sector Edges (±60°)	≥ 8 dB	≥ 8 dB	≥ 8 dB
Maximum Power (Per Port)		300 W (Typical) (at 50° C ambient temperature)		
Grounding		DC Ground		
Intermodulation 3rd Order for 2 x 43 dBm Carrier		< -150 dBc		

Standard values based on NGMN-P-BASTA version 11.1 recommendation.

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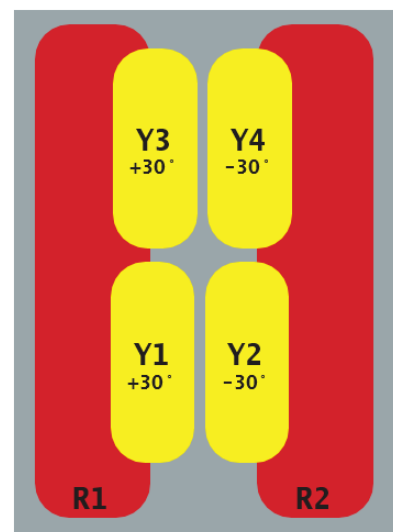
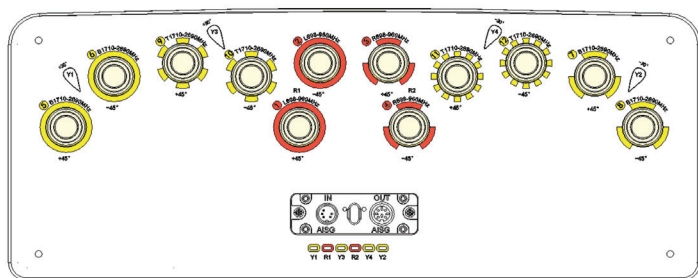
ELECTRICAL CHARACTERISTICS		Y1, Y2, Y3, Y4			
Frequency Bands		1710-2690 MHz			
		1710-1880 MHz	1920-2170 MHz	2300-2490 MHz	2490-2690 MHz
Gain	At Mid Tilt	17.5 dBi	18.1 dBi	18.6 dBi	18.7 dBi
	Over All Tilts	17.4 ± 0.6 dBi	18.0 ± 0.6	18.5 ± 0.6	18.6 ± 0.6 dBi
Input Impedance		50 Ω			
VSWR		< 1.5			
Return Loss		> 14 dB			
Polarisation		± 45°			
Horizontal Beamwidth		35° ± 3°	31° ± 3°	27° ± 3°	25° ± 2°
Vertical Beamwidth		9.8° ± 1.0°	8.7° ± 0.9°	7.6° ± 0.7°	6.9° ± 0.7°
Azimuth Beam Pointing		Y1 & Y3: +30°; Y2 & Y4: -30° ± 3°			
Electrical Downtilt Range		2-12°			
Intraband (same beam) Isolation		≥ 25 dB			
Interband Isolation		> 25 dB			
First Upper Sidelobe Suppression		> 15 dB	> 15 dB	> 15 dB	> 15 dB
Front-to-Back Ratio Co-Pol, ±30°		> 25 dB	> 25 dB	> 25 dB	> 25 dB
Cross Polar Discrimination at Boresight		> 15 dB	> 15 dB	> 15 dB	> 15 dB
Maximum Power (Per Port)		200 W (at 50°C ambient temperature)			
Intermodulation 3rd (2x43 dBm Carrier)		< -150 dBc			
Grounding		DC Ground			

Standard values based on NGMN-P-BASTA version 11.1 recommendation.

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INTEGRATED RET PROPERTIES	
Protocols	Compliant With AISGV2.0 And 3GPP
Power Supply	10-30VDC
Power Consumption	< 2W (standby); < 10W (motor activated)
Angular Accuracy for Shaft Turn	≤ 0.5°
Hardware Interface	RS485 And Power
Safety Standard	Compliant to EN 60950/UL 60950/RoHS, CE
Remote Control	Can manage from OMC, BTS/Node B
Adjustment Time (Full Range)	≤ 90 sec (typical, depending on Antenna type)
Adjustment Cycles	> 20,000
Torque Max	≥ 160 mN.m
Lightning Protection Rating	IEC 61000-4-5 Current Pulse Profile, 8/20 μs 10 Repetitions Min. @ 8kA
Daisy Chaining Method	Ready for daisy-chaining
Housing Material	Aluminum
Housing Color	Aluminum Silver
Humidity	Up to 95%
Operating / Storage Temperature	-40° to +70° C (-40° to +158° F)
Protection Class	IP65
Connectors	2 x 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



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	1710-2690	5-6	7/16 DIN Female
	Y2	1710-2690	7-8	7/16 DIN Female
	Y3	1710-2690	9-10	7/16 DIN Female
	Y4	1710-2690	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		
Dimensions (Height x Width x Depth)		2197 x 497 x 197 mm (86.5 x 19.6 x 7.8 in)
Weight (excluding mounting accessory)		35.1 kg (77.4 lbs)
Weight with mounting accessory		40.6 kg (89.5 lbs)
Radome Material		Fiberglass (UV Resistant)
Radome Colour		Grey
Maximum Wind Speed		200 km/h (124.2 mph)
Operating / Storage Temperature		-40° to +60° C (-40° to 140° F)
Wind Load at 150 km/h (93.2 mph)	Frontal	1010 N (227.1 lbf)
	Rear	1130 N (254.0 lbf)
	Lateral	495 N (111.3 lbf)
MOUNTING KIT OPTIONS		POLE DIAMETER
All mounting bracket kits are ordered separately unless otherwise indicated.		
Mounting Bracket Kit (Included)		Ø50-Ø125 mm (Ø2.0-Ø4.9 mm)
		MECHANICAL TILT
		0-10°

PACKAGING

Carton Box
2.397 x 0.592 x 0.317 m
(94.4 x 23.3 x 12.5 in)

