

6890308NGv

4-Band, 8-Port, 65°, XPOL, Panel Antenna, Variable Tilt, 2697 mm

- Quad band antenna, dual polarisation, 8 connectors
- Independent, continuously adjustable tilt on each band 2-12° / 2-12° / 2-12° / 2-12°
- 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	R1	Y1	Y2	Y3
Frequency Range	698-960 MHz	1710-2690 MHz	1710-2690 MHz	1710-2690 MHz
Polarisation	Xpol	Xpol	Xpol	Xpol
Horizontal Beamwidth	65°	65°	65°	65°
Electrical Downtilt Range	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

ELECTRICAL CHARACTERISTICS

ELECTRICAL CHARACTERISTICS		R1		
Frequency Bands		698-960 MHz		
		698-806 MHz	790-894 MHz	880-960 MHz
Gain	at Mid Tilt	15.7 dBi	16.4 dBi	17.0 dBi
	Over All Tilts	15.5 ± 0.4 dBi	16.1 ± 0.5 dBi	16.8 ± 0.2 dBi
Input Impedance		50Ω		
VSWR		< 1.5		
Polarisation		±45°		
Horizontal Beamwidth (-3 dB)		68° ± 3.9°	68° ± 4.5°	66° ± 4.1°
Vertical Beamwidth (-3 dB)		9.3° ± 1.1°	8.1° ± 0.7°	7.6° ± 0.9°
Electrical Downtilt Range		2-12°		
Cross-Polar Isolation		> 26 dB		
Port-to-Port Isolation		> 28 dB		
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	> 25 dB	> 25 dB
Cross Polar Ratio	Main Direction (0°)	> 17 dB	> 18 dB	> 17 dB
	Sector Edges (±60°)	> 7.0 dB	> 8.0 dB	> 6.5 dB
Maximum Average Power Per Port		350 W (at 50°C ambient temperature)		
Intermodulation 3rd Order, 2 x 43 dBm carrier		< -150 dBc		

Standard values based on NGMN-P-BASTA version 10.0 recommendation.



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ELECTRICAL CHARACTERISTICS		Y1				
Frequency Bands		1710-2690 MHz				
		1710-1880	1850-1990	1920-2170	2300-2400	2500-2690
Gain	At Mid Tilt	16.8 dBi	17.0 dBi	17.3 dBi	17.5 dBi	17.5 dBi
	Over All Tilts	16.6 ± 0.6 dBi	16.9 ± 0.5 dBi	17.2 ± 0.6 dBi	17.4 ± 0.6 dBi	17.5 ± 0.5 dBi
Input Impedance		50Ω				
VSWR		< 1.5				
Polarisation		±45°				
Horizontal Beamwidth (-3 dB)		65° ± 5.0°	67° ± 6.1°	65° ± 5.0°	57° ± 6.0°	60° ± 6.5°
Vertical Beamwidth (-3 dB)		7.0° ± 0.7°	6.8° ± 0.5°	6.0° ± 0.6°	5.8° ± 0.4°	5.0° ± 0.5°
Electrical Downtilt Range		2-12°				
Cross Polar Isolation		> 26 dB				
Port-to-Port Isolation		> 28 dB				
Upper Sidelobe Suppression	Typical	> 16 dB	> 16 dB	> 16 dB	> 16 dB	> 16 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 Discrimination	Main Direction	> 16 dB	> 16 dB	> 16 dB	> 17 dB	> 17 dB
	Sector Edges	> 6.0 dB	> 8.0 dB	> 8.0 dB	> 5.0 dB	> 4.5 dB
Maximum Average Power Per Port		250 W (at 50°C ambient temperature)				
Intermodulation 3rd (2x43 dBm Carrier)		< -150 dBc				

Standard values based on NGMN-P-BASTA version 10.0 recommendation.

ELECTRICAL CHARACTERISTICS		Y2				
Frequency Bands		1710-2690 MHz				
		1710-1880	1850-1990	1920-2170	2300-2400	2500-2690
Gain	At Mid Tilt	16.9 dBi	17.2 dBi	17.5 dBi	17.7 dBi	17.7 dBi
	Over All Tilts	16.8 ± 0.6 dBi	17.1 ± 0.5 dBi	17.3 ± 0.5 dBi	17.6 ± 0.6 dBi	17.6 ± 0.6 dBi
Input Impedance		50Ω				
VSWR		< 1.5				
Polarisation		±45°				
Horizontal Beamwidth (-3 dB)		65° ± 5.0°	69° ± 5.1°	65° ± 5.0°	64° ± 5.1°	59° ± 5.9°
Vertical Beamwidth (-3 dB)		7.0° ± 0.7°	6.8° ± 0.5°	6.0° ± 0.6°	5.8° ± 0.4°	5.0° ± 0.5°
Electrical Downtilt Range		2-12°				
Cross Polar Isolation		> 26 dB				
Port-to-Port Isolation		> 28 dB				
Upper Sidelobe Suppression	Typical	> 16 dB	> 16 dB	> 16 dB	> 16 dB	> 16 dB
	Peak to 20°	> 15 dB	> 15 dB	> 15 dB	> 14 dB	> 14 dB
Front-to-Back Ratio (@ 180° ± 30°)		> 25 dB	> 25 dB	> 25 dB	> 26 dB	> 26 dB
Cross Polar Discrimination	Main Direction	> 16 dB	> 16 dB	> 16 dB	> 17 dB	> 17 dB
	Sector Edges	> 7.0 dB	> 8.0 dB	> 8.0 dB	> 6.0 dB	> 4.0 dB
Maximum Average Power Per Port		250 W (at 50°C ambient temperature)				
Intermodulation 3rd (2x43 dBm Carrier)		< -150 dBc				

Standard values based on NGMN-P-BASTA version 10.0 recommendation.

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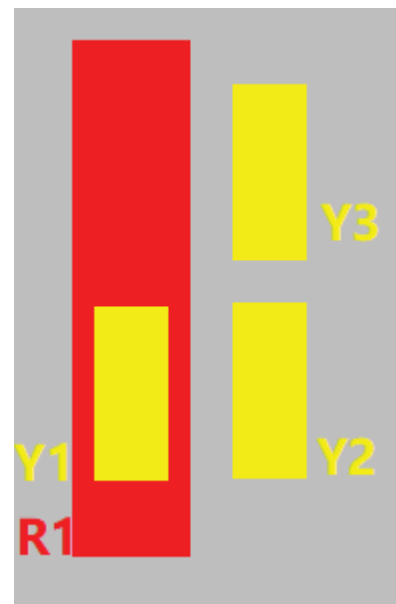
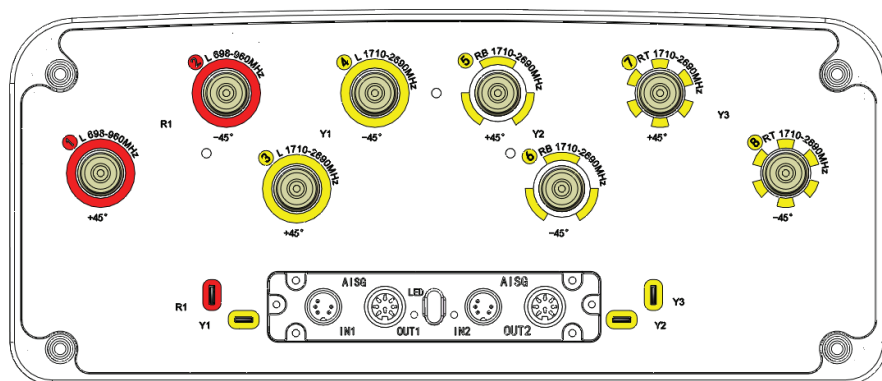
ELECTRICAL CHARACTERISTICS		Y3				
Frequency Bands		1710-2690 MHz				
		1710-1880	1850-1990	1920-2170	2300-2400	2500-2690
Gain	At Mid Tilt	16.6 dBi	16.9 dBi	17.2 dBi	17.4 dBi	17.5 dBi
	Over All Tilts	16.5 ± 0.5 dBi	16.8 ± 0.5 dBi	17.1 ± 0.5 dBi	17.3 ± 0.5 dBi	17.5 ± 0.5 dBi
Input Impedance		50Ω				
VSWR		< 1.5				
Polarisation		±45°				
Horizontal Beamwidth (-3 dB)		65° ± 5.0°	69° ± 5.1°	65° ± 5.0°	64° ± 5.1°	59° ± 5.9°
Vertical Beamwidth (-3 dB)		7.0° ± 0.7°	6.8° ± 0.5°	6.0° ± 0.5°	5.8° ± 0.4°	5.0° ± 0.5°
Electrical Downtilt Range		2-12°				
Tilt Accuracy		< 0.5°	< 0.5°	< 0.5°	< 0.6°	< 0.6°
Cross Polar Isolation		> 26 dB				
Port-to-Port Isolation		> 28 dB				
Upper Sidelobe Suppression	Typical	> 16 dB	> 16 dB	> 16 dB	> 16 dB	> 16 dB
	Peak to 20°	> 15 dB	> 15 dB	> 15 dB	> 14 dB	> 14 dB
Front-to-Back Ratio (@ 180° ± 30°)		> 25 dB	> 25 dB	> 25 dB	> 26 dB	> 26 dB
Cross Polar Discrimination	Main Direction	> 16 dB	> 16 dB	> 16 dB	> 17 dB	> 17 dB
	Sector Edges	> 7.0 dB	> 8.0 dB	> 8.0 dB	> 6.0 dB	> 4.0 dB
Maximum Average Power Per Port		250 W (at 50°C ambient temperature)				
Intermodulation 3rd (2x43 dBm Carrier)		< -150 dBc				

Standard values based on NGMN-P-BASTA version 10.0 recommendation.

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	4 x 8 Pins Connector According To IEC60130-9 AND AISG 2x Daisy Chain In : Male 2 x Daisy Chain Out : Female Pin3:RS485B; Pin5:RS485A; Pin6:10~30V; Pin7: DC return Female connector: 8 PINs ,Male connector: 4 PINs

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ENVIRONMENTAL CHARACTERISTICS

Operating Temperature	-40° to +55° C (-40° to 131° F)
Environmental Standard	RoHS 2011/65/EU and ISO Certification 901/2015 & 14001/2015
Lightning Protection	DC Ground

MECHANICAL CHARACTERISTICS

Dimensions (Height x Width x Depth)	2697 x 377 x 157 mm (106.1 x 14.8 x 6.1 in)	
Weight (excluding mounting accessory)	35 kg (77.1 lbs)	
Weight with brackets	41 kg (90.3 lbs)	
Radome Material	Fiberglass	
Maximum Wind Speed	200 km/h (124.3 mph)	
Wind Load at 150 km/h	Front	1050 N (236.0 lbf)
	Lateral	370 N (83.1 lbf)
	Rear	1160 N (260.7 lbf)

PACKAGING

Carton Box
2.897 x 0.472 x 0.277 m
(114.0 x 18.5 x 10.9 in)

MOUNTING KIT OPTIONS	POLE DIAMETER	MECHANICAL TILT
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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°

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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