

1980308NGv

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

- Hex 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°
- Available with 4.3-10 connectors
- 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	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°	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		698-960 MHz			
		698-824 MHz	806-896 MHz	880-960 MHz	
Gain	at Mid Tilt	14.8 dBi	15.0 dBi	15.8 dBi	
	Over All Tilts	14.9 ± 0.6 dBi	15.1 ± 0.5 dBi	15.9 ± 0.4 dBi	
Input Impedance		50Ω			
VSWR		< 1.5			
Polarisation		±45°			
Horizontal Beamwidth (-3 dB)		65° ± 5.0°	59° ± 5.5°	60° ± 6.0°	
Vertical Beamwidth (-3 dB)		9.5° ± 1.3°	7.8° ± 1.1°	7.5° ± 0.6°	
Electrical Downtilt Range		2-12°			
Cross-Polar Isolation		25 dB			
Port-to-Port Isolation		> 26 dB (R1//R2), > 28 dB (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°)		22 dB	24 dB	25 dB	
Cross Polar Ratio	Main Direction (0°)	17 dB	17 dB	18 dB	
	Sector Edges (±60°)	7.0 dB	8.0 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			

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



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ELECTRICAL CHARACTERISTICS		Y1/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	16.9 dBi	17.1 dBi	17.2 dBi	17.5 dBi	17.3 dBi
	Over All Tilts	16.2 ± 0.6 dBi	16.8 ± 0.5 dBi	16.9 ± 0.6 dBi	17.2 ± 0.6 dBi	17.0 ± 0.7 dBi
Input Impedance		50Ω				
VSWR		< 1.5				
Polarisation		±45°				
Horizontal Beamwidth (-3 dB)		60° ± 5.0°	65° ± 6.5°	66° ± 6.5°	59° ± 6.0°	61° ± 5.0°
Vertical Beamwidth (-3 dB)		7.0° ± 0.5°	6.8° ± 0.4°	6.0° ± 0.5°	5.7° ± 0.5°	5.0° ± 0.5°
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	> 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°)	> 7.0 dB	> 8.0 dB	> 8.0 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				

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

ELECTRICAL CHARACTERISTICS		Y2/Y4				
Frequency Bands		1710-2690 MHz				
		1710-1880 MHz	1850-1990 MHz	1920-2170 MHz	2300-2400 MHz	2490-2690 MHz
Gain	at Mid Tilt	16.5 dBi	17.0 dBi	17.2 dBi	17.4 dBi	17.2 dBi
	Over All Tilts	16.4 ± 0.5 dBi	16.6 ± 0.6 dBi	16.9 ± 0.5 dBi	17.2 ± 0.6 dBi	16.9 ± 0.5 dBi
Input Impedance		50Ω				
VSWR		< 1.5				
Polarisation		±45°				
Horizontal Beamwidth (-3 dB)		60° ± 5.0°	65° ± 6.5°	65° ± 6.5°	60° ± 5.0°	61° ± 5.0°
Vertical Beamwidth (-3 dB)		7.0° ± 0.5°	6.8° ± 0.4°	6.0° ± 0.5°	5.7° ± 0.5°	5.0° ± 0.5°
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	> 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°)	> 7.0 dB	> 8.0 dB	> 8.0 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				

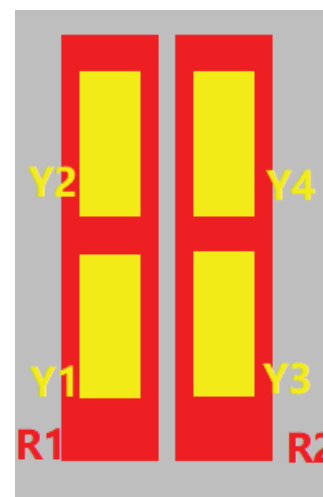
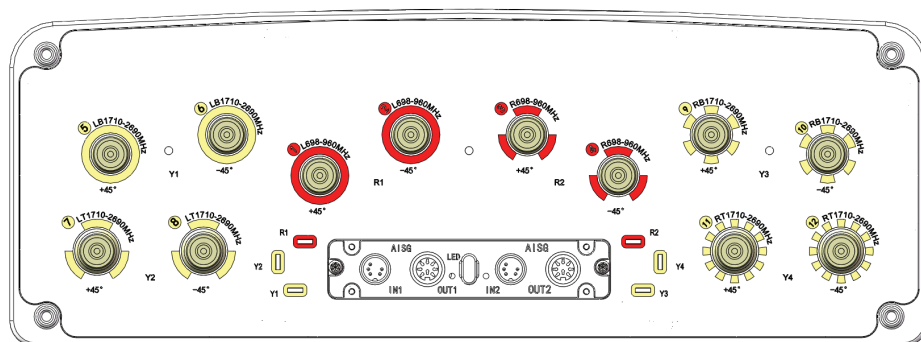
Standard values based on NGMN-P-BASTA version 10.0 recommendation.

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	4 x 8 Pins Connector According To IEC60130-9 AND AISG 2x Daisy Chain In: Male 2x Daisy Chain Out: Female Pin3:RS485B; Pin5:RS485A; Pin6:10~30V; Pin7: DC return Female connector: 8 PINs, Male connector: 4 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
	Y4	1710-2690	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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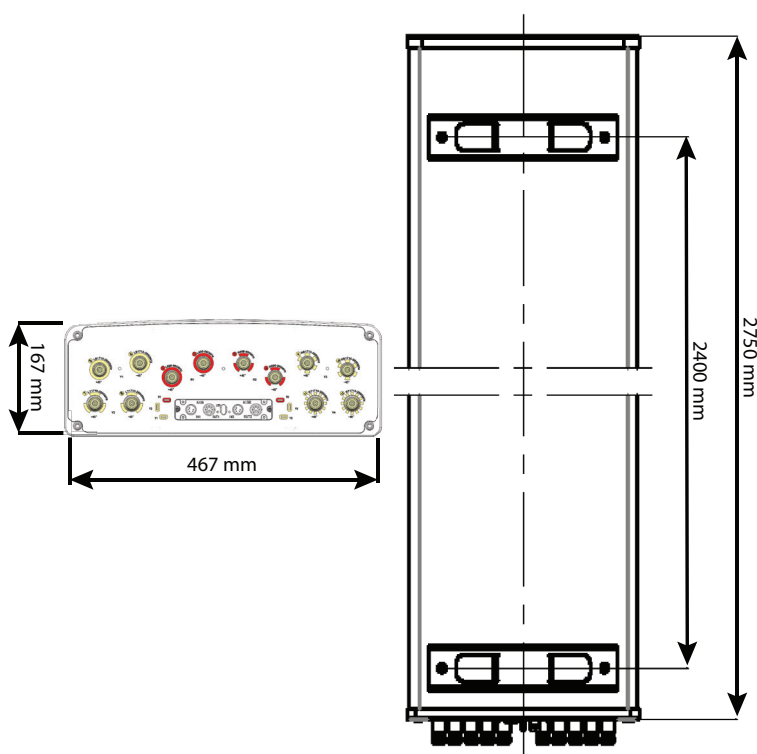
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ENVIRONMENTAL CHARACTERISTICS		
Operating Temperature	-40° to +55° C (-40° to 131° F)	
Environmental Standard	RoHS 2011/65/EU and ISO Certification 901/2015 & 14001/2015	
Lightning Protection	DC Ground	
MECHANICAL CHARACTERISTICS		
Dimensions (Height x Width x Depth)	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	Front	1190 N (267.5 lbf)
	Lateral	440 N (98.9 lbf)
	Rear	1330 N (298.9 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°

PACKAGING

Carton Box
2.95 x 0.562 x 0.287 m
(116.1 x 22.1 x 11.3 in)



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