

6894508NF2

6-Band, 19-Port, 65°, XPOL, TDD Hybrid Panel Antenna, Fixed Tilt, 897 mm



- 6-band antenna, Dual polarisation, 19 connectors
- Fixed tilt on each band 2° / 2° / 2° / 2° / 2° / 2°

ACCESS PORT DESCRIPTION (CONNECTORS)						
The antenna has 19 colour-coded connectors located at the bottom face.						
Frequency Designation	R1	Y1	Y2	Y3	Y4	P1
Frequency Range	698-960 MHz	1710-2690 MHz	1710-2690 MHz	1710-2690 MHz	1710-2690 MHz	3300-3800 MHz
Polarisation	Xpol	Xpol	Xpol	Xpol	Xpol	Xpol
Horizontal Beamwidth	65°	65°	65°	65°	65°	65°
Electrical Downtilt Range	2°	2°	2°	2°	2°	2°
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	(1x) MQ5 Male (4 RF + 1 Calibration) & (1x) MQ4 Male (4 RF)

ELECTRICAL CHARACTERISTICS		R1		
Frequency Bands		698-960 MHz		
		698-806 MHz	790-894 MHz	880-960 MHz
Gain	at Mid Tilt	12.2 dBi	12.7 dBi	13.2 dBi
	Over All Tilts	12 ± 0.6 dBi	12.5 ± 0.6 dBi	13 ± 0.6 dBi
Input Impedance		50Ω		
VSWR		< 1.5		
Return loss		> 14 dB		
Polarisation		±45°		
Horizontal Beamwidth (-3 dB)		72° ± 4.8°	69° ± 3.9°	67° ± 4.1°
Vertical Beamwidth (-3 dB)		29° ± 2°	26° ± 2°	24° ± 2°
Electrical Downtilt Range		2°		
Cross-Polar Isolation		> 25 dB		
Interband Isolation		> 35 dB		
First Upper Sidelobe Suppression		> 15 dB	> 15 dB	> 15 dB
Front-to-Back Ratio (@ 180° ± 30°)		> 22 dB	> 23 dB	> 25 dB
Maximum Average Power Per Port (at 50° C ambient temperature)		300 W		
Intermodulation 3rd Order, 2 x 43 dBm carrier		< -153 dBc		
Grounding		DC Ground		

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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ELECTRICAL CHARACTERISTICS		Y1, 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	12.0 dBi	12.4 dBi	12.8 dBi	13.2 dBi	13.2 dBi
	Over All Tilts	11.8 ± 0.6 dBi	12.2 ± 0.5 dBi	12.6 ± 0.5 dBi	13 ± 0.5 dBi	13 ± 0.6 dBi
Input Impedance		50Ω				
VSWR		< 1.5				
Return loss		> 14 dB				
Polarisation		±45°				
Horizontal Beamwidth (-3 dB)		68° ± 4.9°	67° ± 4.7°	64° ± 5.1°	62° ± 5.5°	60° ± 5.2°
Vertical Beamwidth (-3 dB)		24° ± 1.5°	23° ± 1.5°	21° ± 1.5°	18° ± 1.5°	17° ± 1.5°
Electrical Downtilt Range		2°				
Cross-Polar Isolation		> 25 dB				
Interband Isolation		> 28 dB (Y1, Y2//Y3, Y4); > 35 dB (Y1, Y2//R1)				
First Upper Sidelobe Suppression		> 15 dB	> 15 dB	> 15 dB	> 15 dB	> 15 dB
Front-to-Back Ratio (@ 180° ± 30°)		> 23 dB	> 23 dB	> 24 dB	> 25 dB	> 25 dB
Maximum Average Power Per Port (at 50° C ambient temperature)		250 W				
Intermodulation 3rd Order, 2 x 43 dBm carrier		< -153 dBc				
Grounding		DC Ground				

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

ELECTRICAL CHARACTERISTICS		Y3, 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	12.2 dBi	12.6 dBi	13 dBi	13.4 dBi	13.4 dBi
	Over All Tilts	12 ± 0.6 dBi	12.4 ± 0.5 dBi	12.8 ± 0.5 dBi	13.2 ± 0.5 dBi	13.2 ± 0.6 dBi
Input Impedance		50Ω				
VSWR		< 1.5				
Return loss		> 14 dB				
Polarisation		±45°				
Horizontal Beamwidth (-3 dB)		67° ± 4.9°	65° ± 4.7°	63° ± 5.1°	59° ± 5.5°	59° ± 5.2°
Vertical Beamwidth (-3 dB)		24° ± 1.5°	23° ± 1.5°	21° ± 1.5°	18° ± 1.5°	17° ± 1.5°
Electrical Downtilt Range		2°				
Cross-Polar Isolation		> 25 dB				
Interband Isolation		> 28 dB (Y3, Y4//Y1, Y2); > 35 dB (Y3, Y4//R1)				
First Upper Sidelobe Suppression		> 15 dB	> 15 dB	> 15 dB	> 15 dB	> 15 dB
Front-to-Back Ratio (@ 180° ± 30°)		> 23 dB	> 23 dB	> 24 dB	> 25 dB	> 25 dB
Maximum Average Power Per Port (at 50° C ambient temperature)		250 W				
Intermodulation 3rd Order, 2 x 43 dBm carrier		< -153 dBc				
Grounding		DC Ground				

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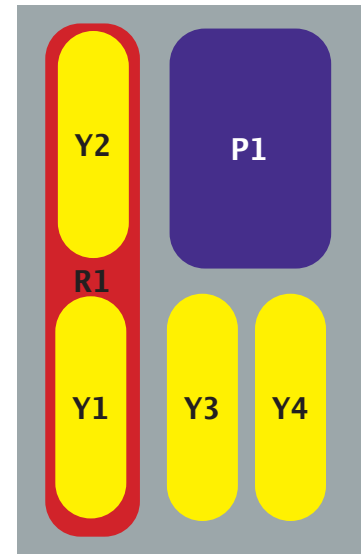
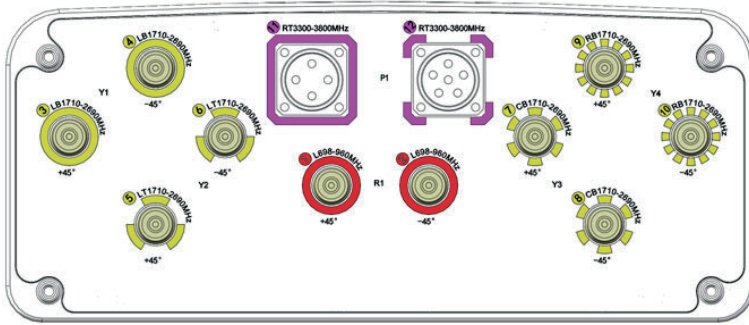
ELECTRICAL CHARACTERISTICS		P1
Frequency Bands		3300-3800 MHz
Input Impedance		50Ω
VSWR		< 1.5
Return loss		> 14 dB
Polarisation		±45°
Electrical Downtilt Range		2°
Single Column Width	Gain	10.5 dBi
	Horizontal Beamwidth (dB)	78°
	Vertical Beamwidth (3dB)	13°
	Cross-Polar Discrimination (0°)	≥ 16 dB
	First Upper Sidelobe Suppression	≥ 15 dB
	Front-to-Back Ratio	≥ 22 dB
65° Broadcast Beam	Gain (Typical)	12 dBi
	Horizontal Beamwidth (dB)	65°
	Vertical Beamwidth (dB)	13°
	Cross-Polar Discrimination (0°)	≥ 16 dB
	First Upper Sidelobe Suppression	≥ 15 dB
	Front-to-Back Ratio	≥ 22 dB
0° Direct Service Beam	Gain	16 dBi
	Horizontal Beamwidth (dB)	22°
	Vertical Beamwidth (3dB)	13°
	Cross-Polar Ratio	≥ 16 dB
	Azimuth Sidelobe Suppression (Typical)	≥ 12 dB
	Front-to-Back Ratio	≥ 23 dB
Calibration and Electrical Parameter	Coupling Factor Between Calibration and Each Antenna Port	-26 ± 2 dB
	Maximum Amp / Phase Deviation	1 dB/ 8°
	Maximum Power Per Port	40 W
Isolation	Co-Polar Isolation Between Ports	20 dB
	Cross-Polar Isolation Between Ports	25 dB
Intermodulation 3rd Order, 2 x 43 dBm carrier		< -143 dBc
Grounding		DC Ground

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ARRAY LAYOUT	ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE
	■ R1	698-960	1-2	4.3-10 Female
	■ Y1	1710-2690	3-4	4.3-10 Female
	■ Y2	1710-2690	5-6	4.3-10 Female
	■ Y3	1710-2690	7-8	4.3-10 Female
	■ Y4	1710-2690	9-10	4.3-10 Female
■ P1	3300-3800	11-12	[MQ5 Male (4 RF + 1 Calibration) & MQ4 Male (4 RF)]	

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)	897 x 397 x 157 mm (35.3 x 15.6 x 6.2 in)	
Weight (excluding mounting accessory)	20 kg (44.1 lbs)	
Weight with brackets	24.5 kg (54.0 lbs)	
Radome Material	Fiberglass	
Maximum Wind Speed	200 km/h (124.3 mph)	
Wind Load at 150 km/h	Frontal	330 N (74.2 lbf)
	Rear	365 N (82.1 lbf)
	Lateral	160 N (36.0 lbf)
Operating Temperature	-40° to +60° C (-40° to 140° F)	
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)	0-20°

Carton Box
1.097 x 0.492 x 0.277 m
(43.2 x 19.4 x 10.9 in)

