Amphenol ANTENNA SOLUTIONS

6-Port Antenna

698-960 | 1710-2690 | 1710-2690 MHz

65° | 1997 mm

6878308NG

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

- Tri band antenna, dual polarisation, 6 connectors
- Independent, continuously adjustable tilt on each band 2-12° / 2-12° / 2-12°
- RET version, 3GPP/AISG2.0 with six integrated RCUs

ACCESS PORT DESCRIPTION (CONNECTORS)			
The antenna has 6 colour-coded connectors located at the bottom face.			
Frequency Designation	R1	Y1	Y2
Frequency Range	698-960 MHz	1710-2690 MHz	1710-2690 MHz
Polarisation	Xpol	Xpol	Xpol
Horizontal Beamwidth	65°	65°	65°
Electrical Downtilt Range	2-12°	2-12°	2-12°
Connector Type	4.3/10 Female	4.3/10 Female	4.3/10 Female

ELECTRICAL CHARACTERISTICS		R1	
Frequency Bands		698-960 MHz	
		690-803 MHz	880-960 MHz
Gain	at Mid Tilt	15.0 dBi	15.8 dBi
	Over All Tilts	14.8 ± 0.3 dBi	15.6 ± 0.6 dBi
Input Impedance		50 Ω	
VSWR		< 1.5	
Return loss		> 14 dB	
Polarisation		± 45°	
Horizontal Beamwidth		68° ± 2.5°	63° ± 2.5°
Vertical Beamwidth		11.0° ± 1.0°	9.2° ± 0.8°
Electrical Downtilt Range		2-12°	
Tilt Accuracy		< 1°	< 1°
Cross-Polar Isolation		> 27 dB	
Port-to-Port Isolation		> 28 dB	
Upper Sidelobe Suppression	First Upper Lobe	≥ 16 dB	≥ 16 dB
	Peak to 20°	>15 dB	>15 dB
Front-to-Back Ratio ± 30°		≥ 23 dB	≥ 25 dB
Cross Polar Ratio	Main Direction (0°)	≥ 17 dB	≥ 17 dB
	Sector Edges (±60°)	≥ 8 dB	≥ 6 dB
Maximum Average Power Per Port		300 W (at 50°C ambient temperature)	
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		
Frequency Bands		1710-2690 MHz		
		1710-1880 MHz	1920-2170 MHz	2500-2690 MHz
Gain	At Mid Tilt	17.2 dBi	17.7 dBi	18.2 dBi
	Over All Tilts	17.3 ± 0.3 dBi	17.5 ± 0.5 dBi	18.3 ± 0.3 dBi
Input Impedance		50 Ω		
VSWR		< 1.5		
Return loss		> 14 dB		
Polarisation		± 45°		
Horizontal Beamwidth		64° ± 6.5°	64° ± 4.5°	62° ± 5.9°
Vertical Beamwidth		6.2° ± 0.6°	5.5° ± 0.5°	4.7° ± 0.6°
Electrical Downtilt Range		2-12°		
Tilt Accuracy		< 1°	< 1°	< 1°
Cross Polar Isolation		> 27 dB		
Port-to-Port Isolation		> 28 dB		
Upper Sidelobe Suppression	First Upper Lobe	> 16 dB	> 16 dB	> 17 dB
	Peak to 20°	> 15 dB	> 15 dB	> 14 dB
Front-to-Back Ratio, ± 30°		> 24 dB	> 25 dB	> 25 dB
Cross Polar Discrimination	Main Direction	> 17 dB	> 17 dB	> 17 dB
	Sector Edges	> 6.0 dB	> 7.0 dB	> 4.0 dB
Maximum Average Power Per Port		250 W (at 50°C ambient temperature)		
Intermodulation 3rd (2x43 dBm Carrier)		≤ -150 dBc		
Grounding		DC Ground		

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

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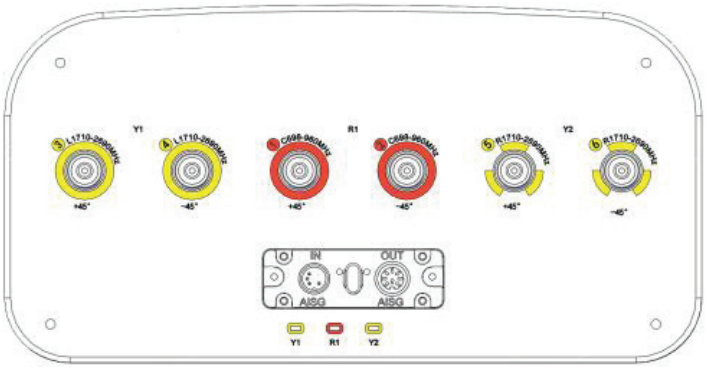
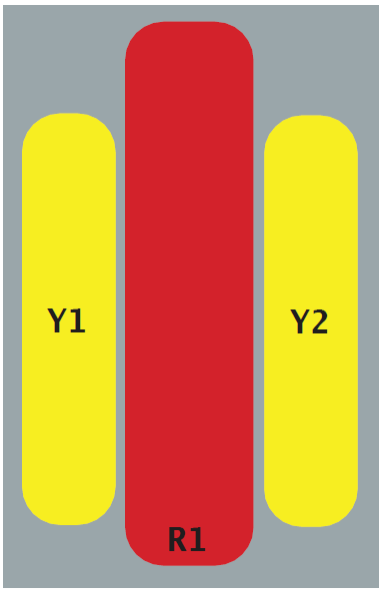
INTEGRATED RET PROPERTIES	
Protocols	Compliant With AISGV2.0 And 3GPP
Power Supply	10-30VDC
Power Consumption	< 2W (standby); < 10W (In Motion)
Hardware Interface	RS485 And Power
Safety Standard	Compliant to EN 60950/UL 60950/RoHS, CE
Remote Control	Can manage from OMC, BTS/Node B
Adjustment Time (Full 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 Temperature	-40° to +70° C (-40° to +158° F)
Storage Temperature	-55° to +75° C (-67° to +167° F)
Protection Class	IP65
Weight	≤ 500 g
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	4.3/10 Female
Y1	1710-2690	3-4	4.3/10 Female
Y2	1710-2690	5-6	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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MECHANICAL CHARACTERISTICS		
Dimensions (Height x Width x Depth)		1997 x 350 x 178 mm (78.6 x 13.8 x 7.0 in)
Weight (excluding mounting accessory)		21.5 kg (47.3 lbs)
Weight with brackets		25.5 kg (56.2 lbs)
Radome Material		Fiberglass
Maximum Wind Speed		200 km/h (124.3 mph)
Wind Load at 150 km/h	Frontal	405 N (91.0 lbf)
	Rear	430 N (96.6 lbf)
	Lateral	260 N (58.4 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-Ø115 mm (Ø2.0-Ø4.5 mm)	0-12°

PACKAGING

Carton Box
2.217 x 0.425 x 0.253 m
(87.2 x 16.7 x 9.9 in)