Amphenol ANTENNA SOLUTIONS

6-Port Antenna

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

65° | 957 mm

6874388G

6874388NG

3-Band, 6-Port, 65°, XPOL, Panel Antenna, Variable Tilt, 957 mm

- Tri band antenna, dual polarisation, 6 connectors
- Independent, continuously adjustable tilt on each band 2-12° / 2-12° / 2-12°
- Available with 4.3-10 or 7/16-DIN Connectors
- RET version, 3GPP/AISG2.0 with three integrated RCUs

ORDERING OPTIONS	MODEL NUMBER
Antenna with 4.3-10 Female Connectors	6874388NG
Antenna with 7/16-DIN Female Connectors	6874388G

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	(2x) 4.3-10 or 7/16-DIN Female	(2x) 4.3-10 or 7/16-DIN Female	(2x) 4.3-10 or 7/16-DIN Female

ELECTRICAL CHARACTERISTICS		R1		
Frequency Bands		698-960 MHz		
		698-806 MHz	790-894 MHz	880-960 MHz
Gain	at Mid Tilt	12.5 dBi	13.0 dBi	13.5 dBi
	Over All Tilts	12.5 ± 0.5 dBi	13.0 ± 0.5 dBi	13.5 ± 0.5 dBi
Input Impedance		50Ω		
VSWR		< 1.5		
Polarisation		±45°		
Horizontal Beamwidth (-3 dB)		67° ± 5.5°	65° ± 4.5°	65° ± 4.5°
Vertical Beamwidth (-3 dB)		26° ± 3.1°	24° ± 3.0°	22° ± 3.6°
Electrical Downtilt Range		2-12°		
Cross-Polar Isolation		> 25 dB		
Interband Isolation		> 26 dB		
Port-to-Port Isolation		> 25 dB		
Upper Sidelobe Suppresson	First Upper Lobe	> 15 dB	> 15 dB	> 15 dB
	Peak to 20°	> 14 dB	> 14 dB	> 14 dB
Front-to-Back Ratio (@ 180° ± 30°)		> 25 dB	> 25 dB	> 25 dB
Cross Polar Ratio	Main Direction (0°)	> 19 dB	> 18 dB	> 17 dB
	Sector Edges (±60°)	> 8.0 dB	> 8.0 dB	> 8.0 dB
Maximum Power (Per Port)		300 W (at 50° C ambient temperature)		
Intermodulation 3rd Order for 2 x 43 dBm Carrier		< -150 dBc		

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.

6874388G

6874388NG

3-Band, 6-Port, 65°, XPOL, Panel Antenna, Variable Tilt, 957 mm

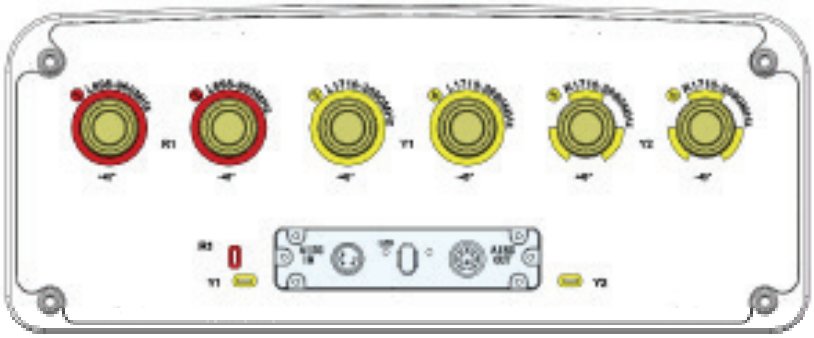
ELECTRICAL CHARACTERISTICS		Y1				
Frequency Bands		1710-2690 MHz				
		1710-1880	1850-1990	1920-2170	2300-2400	2490-2690
Gain	At Mid Tilt	14.5 dBi	14.7 dBi	15.1 dBi	15.4 dBi	15.5 dBi
	Over All Tilts	14.3 ± 0.6 dBi	14.5 ± 0.6 dBi	14.9 ± 0.6 dBi	15.2 ± 0.5 dBi	15.5 ± 0.8 dBi
Input Impedance		50Ω				
VSWR		< 1.5				
Polarisation		±45°				
Horizontal Beamwidth (-3 dB)		66° ± 4.8°	63° ± 4.6°	61° ± 4.5°	62° ± 4.2°	64° ± 6.0°
Vertical Beamwidth (-3 dB)		14.0° ± 1.5°	13.0° ± 1.5°	12.5° ± 1.5°	11.5° ± 1.5°	11.0° ± 1.5°
Electrical Downtilt Range		2-12°				
Cross Polar Isolation		> 25 dB				
Interband Isolation		> 26 dB				
Port-to-Port Isolation		> 25 dB				
Upper Sidelobe Suppression	First Upper Lobe	> 15 dB	> 15 dB	> 15 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	> 25 dB	> 25 dB
Cross Polar Discrimination	Main Direction	> 18 dB	> 17 dB	> 17 dB	> 17 dB	> 17 dB
	Sector Edges	> 9 dB	> 9 dB	> 8 dB	> 8 dB	> 5 dB
Maximum Power (Per Port)		250 W (at 50°C ambient temperature)				
Intermodulation 3rd (2x43 dBm Carrier)		< -150 dBc				
Grounding		DC Ground				

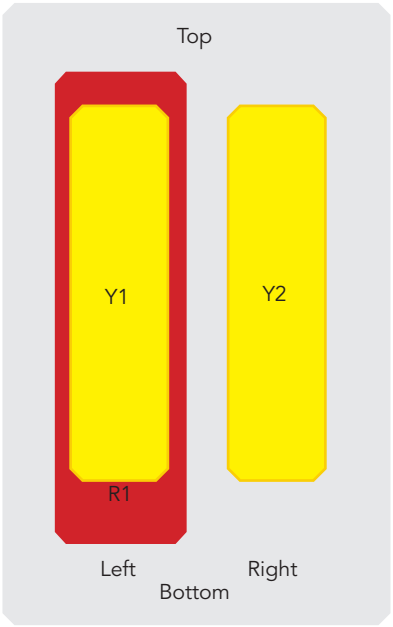
ELECTRICAL CHARACTERISTICS		Y2				
Frequency Bands		1710-2690 MHz				
		1710-1880	1850-1990	1920-2170	2300-2400	2490-2690
Gain	At Mid Tilt	14.5 dBi	14.7 dBi	15.1 dBi	15.4 dBi	15.6 dBi
	Over All Tilts	14.5 ± 0.6 dBi	14.7 ± 0.6 dBi	15.1 ± 0.6 dBi	15.4 ± 0.5 dBi	15.6 ± 0.6 dBi
Input Impedance		50Ω				
VSWR		< 1.5				
Polarisation		±45°				
Horizontal Beamwidth (-3 dB)		67° ± 4.4°	65° ± 4.5°	64° ± 4.6°	62° ± 4.5°	64° ± 6.0°
Vertical Beamwidth (-3 dB)		14.0° ± 1.5°	13.0° ± 1.5°	12.5° ± 1.5°	11.5° ± 1.5°	11.0° ± 1.5°
Electrical Downtilt Range		2-12°				
Cross Polar Isolation		> 26 dB				
Interband Isolation		> 26 dB				
Port-to-Port Isolation		> 26 dB				
Upper Sidelobe Suppression	First Upper Lobe	> 15 dB	> 15 dB	> 15 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	≥ 25 dB	≥ 25 dB
Cross Polar Discrimination	Main Direction	> 22 dB	> 20 dB	> 20 dB	> 18 dB	> 18 dB
	Sector Edges	> 10 dB	> 9.4 dB	> 9.0 dB	> 8.1 dB	> 7.4 dB
Maximum Power (Per Port)		250 W (at 50°C ambient temperature)				
Intermodulation 3rd (2x43 dBm Carrier)		< -150 dBc				
Grounding		DC Ground				

6874388G

6874388NG

3-Band, 6-Port, 65°, XPOL, Panel Antenna, Variable Tilt, 957 mm





ARRAY LAYOUT	ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE
	R1	698-960	1-2	4.3-10 Female or 7/16-DIN Female
	Y1	1710-2690	3-4	4.3-10 Female or 7/16-DIN Female
	Y2	1710-2690	5-6	4.3-10 Female or 7/16-DIN Female

Diagram shown at right depicts the view from the front of the antenna. The illustration is not shown to scale.

INTEGRATED RET PROPERTIES	
Power Supply	10-30VDC
Power Consumption	< 1W (Idle), < 10W (In Motion)
Hardware Interface	RS485 and Power
Protocol Supported	Compliant with 3GPP/AISGv2.0
Adjustment Time (Full Range)	≤ 90 s (typical, depending on Antenna type)
Angular Accuracy	≤ 0.5°
Adjustment Cycles	> 10,000
Torque Max	≥ 160 mN.m
Safety Standard	Compliant to EN 60950/UL 60950/RoHS, CE
Protection Class	IP65
Lightning Protection Rating	IEC 61000-4-5 Current Pulse Profile, 8/20 µs 10 Repetitions Min. @ 8 kA
Connectors	(2x) 8-Pin Circle Connector According to IEC 60130-9 and AISG Daisy Chain In: Male; Daisy Chain Out: Female Pin 3: RS485+; Pin 5: RS485-; Pin 6: 10~30V; Pin 7: GND

6874388G

6874388NG

3-Band, 6-Port, 65°, XPOL, Panel Antenna, Variable Tilt, 957 mm

MECHANICAL CHARACTERISTICS		
Dimensions (Height x Width x Depth)		957 x 377 x 157 mm
Weight (excluding mounting accessory)	With 7/16 Connectors	14.5 kg
	With 4.3-10 Connectors	14 kg
Radome Material, Colour		Fiberglass
Connector Type		(6x) 4.3-10 Female or 7/16-DIN Female
Maximum Wind Speed		200 km/h
Wind Loads (at 150 km/h)	Frontal	450 N
	Rear	570 N

MOUNTING KIT OPTIONS	POLE DIAMETER	MECHANICAL TILT
All mounting bracket kits are ordered separately unless otherwise indicated.		
Mounting Bracket Kit (Included)	Ø50-Ø125 mm	0-16°

PACKAGING
Carton Box 1.137 x 0.472 x 0.277 m