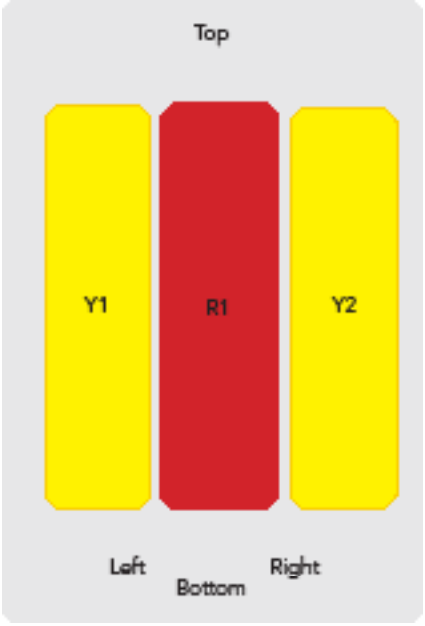
6876312E

6876312EN 6876312ENG

6-Port, 65°, XPOL, Panel Antenna, Variable Tilt, 1395 mm

- Tri band antenna, dual polarisation, 6 connectors
- Independent tilt on each band 2-12° / 2-12° / 2-12°
- MET and RET versions, 3GPP/AISG2.0, in multiple single RET (multiple device type1) or in Multi-RET (device type 17, with firmware above MD3.10).
- Our patented RET module to control all tilt angles, fully inserted inside the antenna (field replaceable)

PRODUCT OVERVIEW				
	Frequency Range (MHz)	698-960	1695-2690	1695-2690
	Array	R1	Y1	Y2
	Connector	1-2	3-4	5-6
	Polarization	XPOL	XPOL	XPOL
	Azimuth Beamwidth (avg)	65°	65°	65°
	Electrical Downtilt	2-12°	2-12°	2-12°
	Dimensions	1395 x 398 x 159 mm		



ORDERING OPTIONS Select from the different options listed below

SELECT ELECTRICAL DOWNTILT CONTROL & AISG PROTOCOL	SELECT CONNECTOR TYPE	ANTENNA MODEL NUMBER
Manual Electrical Tilt (MET)	4.3-10 Female	6876312EN
Remote Electrical Tilt (RET) AISG v2.0 / 3GPP	4.3-10 Female	6876312ENG

*Pre-commissioned configuration; Contact Amphenol for further details.

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ELECTRICAL SPECIFICATIONS Low Band — R1

Frequency Range		MHz	698-960			
		MHz	698-806	790-862	824-894	880-960
Polarization		---	± 45°			
Gain	Over all Tilts	dBi	13.4 ± 0.5	13.8 ± 0.2	13.8 ± 0.3	13.9 ± 0.6
Azimuth Beamwidth		degrees	69.0 ± 1.1	68.4 ± 1.8	68.4 ± 2.0	69.9 ± 4.1
Elevation Beamwidth		degrees	16.7 ± 1.1	14.6 ± 0.8	14.3 ± 0.7	13.5 ± 1.0
Electrical Downtilt		degrees	2-12			
Impedance		Ohms	50			
VSWR		---	< 1.5			
Passive Intermodulation 3rd Order for 2 x 20W Carriers		dBc	< -153			
Front-to-Back Ratio, Total Power, ±30°		dB	> 24.5	> 26.2	> 27.3	> 26.2
Upper Sidelobe Suppression, 0° to 20°		dB	> 26.9	> 20.4	> 20.3	> 16.8
Cross Polar Ratio	Main Direction (0°)	dB	> 19.5	> 17.3	> 15.7	> 12.5
	Sector Edges (60°)	dB	> 12.3	> 12.7	> 12.8	> 10.9
Maximum Effective Power Per Port		Watts	300			
Inter/Intra Band Isolation		dB	> 27			

Standard values based on NGMN-P-BASTA version 9.6 recommendation.

ELECTRICAL SPECIFICATIONS Ultra Wide Band — Y1

Frequency Range		MHz	1695-2690				
		MHz	1695-1880	1850-1990	1920-2180	2300-2500	2490-2690
Polarization		---	± 45°				
Gain	Over all Tilts	dBi	16.9 ± 0.6	16.7 ± 0.5	16.9 ± 0.5	16.3 ± 1.2	17.2 ± 0.7
Azimuth Beamwidth		degrees	62.2 ± 8.9	64.2 ± 6.5	67.5 ± 3.7	65.1 ± 2.7	60.2 ± 3.0
Elevation Beamwidth		degrees	7.2 ± 0.4	6.6 ± 0.4	6.1 ± 0.6	5.4 ± 0.2	5.0 ± 0.2
Electrical Downtilt		degrees	2-12				
Impedance		Ohms	50				
VSWR		---	< 1.5				
Passive Intermodulation 3rd Order for 2 x 20W Carriers		dBc	< -153				
Front-to-Back Ratio, Total Power, ±30°		dB	> 27.9	> 27.7	> 28.3	> 26.3	> 26.6
Upper Sidelobe Suppression, 0° to 20°		dB	> 17.2	> 17.4	> 16.7	> 17.3	> 15.2
Cross Polar Ratio	Main Direction (0°)	dB	> 20.6	> 20.1	> 21.7	> 19.5	> 18.7
	Sector Edges (60°)	dB	> 8.0	> 9.7	> 9.7	> 8.0	> 7.2
Maximum Effective Power Per Port		Watts	250				
Inter/Intra Band Isolation		dB	> 27				

Standard values based on NGMN-P-BASTA version 9.6 recommendation.

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ELECTRICAL SPECIFICATIONS Ultra Wide Band — **Y2**

Frequency Range		MHz	1695-2690				
		MHz	1695-1880	1850-1990	1920-2180	2300-2500	2490-2690
Polarization		---	± 45°				
Gain	Over all Tilts	dBi	16.8 ± 0.5	16.7 ± 0.4	16.9 ± 0.5	16.5 ± 1.5	17.3 ± 0.9
Azimuth Beamwidth		degrees	61.6 ± 12.5	65.7 ± 6.9	68.0 ± 3.3	65.5 ± 3.0	60.4 ± 4.3
Elevation Beamwidth		degrees	7.2 ± 0.4	6.7 ± 0.4	6.1 ± 0.6	5.3 ± 0.2	5.0 ± 0.3
Electrical Downtilt		degrees	2-12				
Impedance		Ohms	50				
VSWR		---	< 1.5				
Passive Intermodulation 3rd Order for 2 x 20W Carriers		dBc	< -153				
Front-to-Back Ratio, Total Power, ±30°		dB	> 27.9	> 27.7	> 28.3	> 26.3	> 26.6
Upper Sidelobe Suppression, 0° to 20°		dB	> 17.1	> 17.4	> 16.4	> 16.1	> 16.0
Cross Polar Ratio	Main Direction (0°)	dB	> 21.0	> 22.5	> 23.4	> 19.1	> 18.2
	Sector Edges (60°)	dB	> 9.1	> 11.6	> 12.3	> 8.3	> 7.0
Maximum Effective Power Per Port		Watts	250				
Inter/Intra Band Isolation		dB	> 27				

Standard values based on NGMN-P-BASTA version 9.6 recommendation.

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ELECTRICAL DOWNTILT CONTROL

For multiband antennas, electrical downtilt for each band can be controlled separately.

Manual Electrical Tilt (MET) Control	The manual tilt 'override' function is always available
Remote Electrical Tilt (RET) Control	The remote control of the electrical tilt is managed by single RET unit inserted in the bottom of the antenna. *See details below and refer to the ordering options to see which actuators are available with this particular antenna.* A single actuator individually controls the tilt of each band (no need for daisy chain cables between the bands). This module does not add any additional length to the antenna.

RET ACTUATOR

Amphenol's **RET-READY** antennas are delivered with the RET Actuator already installed and pre-commissioned with all antenna parameters. Every RET device is factory configured and calibrated so the antenna is ready to be used once delivered to the site which means that there is no need for further installation of RET devices.

Number of RET-READY Actuators		One per antenna
Input Voltage		+10 to +30 V
Power Consumption	Idle State	0.5 W
	Operating	4 W typical / 10 W maximum
Protocol		3GPP/AISG 2.0
Tilt Change Duration		Less than 15 seconds, typical (may vary dependent on antenna type and outdoor temperature)
Precision		± 0.5°
Tilt Change Capability		50,000 minimum
RET Interface		1 pair of AISG Male and Female (type IEC60130-9)
Field Replaceable Unit		Yes

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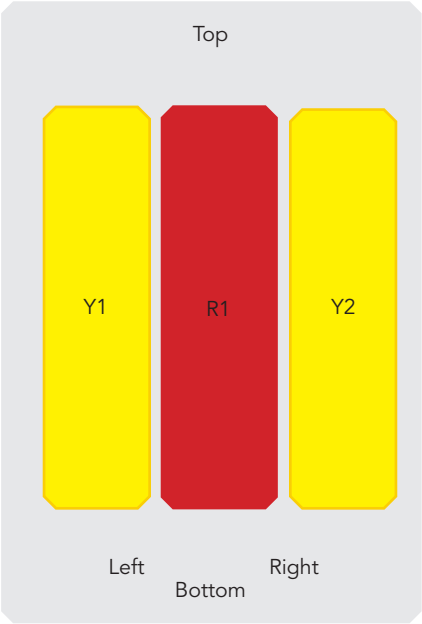
ARRAY LAYOUT	ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE
	R1	698-960	1-2	4.3-10 Female Long Neck
	Y1	1695-2690	3-4	4.3-10 Female Long Neck
	Y2	1695-2690	5-6	4.3-10 Female Long Neck

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



MECHANICAL SPECIFICATIONS

Length		mm (in)	1395 (54.9)
Width		mm (in)	398 (15.6)
Depth		mm (in)	159 (6.2)
Net Weight - Antenna Only		kg (lbs)	18 (39.7)
Mechanical Distance Between Mounting Points		mm (in)	TBD
Windload (EN 1991-1-4:2005 using Wind Tunnel Coefficients)	Calculation	km/h (mph)	150 (93.2)
	Frontal	N (lbf)	550 (123.6)
	Lateral	N (lbf)	345 (77.5)
	Rearside	N (lbf)	550 (123.6)
Operational Wind Speed		km/h (mph)	160 (99.4)
Survival Wind Speed		km/h (mph)	200 (124)
Radome Color		---	Gray RAL7035
Radome Material		---	FRB
Lightning Protection		---	Direct Ground

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ENVIRONMENTAL SPECIFICATIONS

ETSI EN300019-2-4 for Vibration	Sinusoidal	---	IEC60068-2-6
	Random	---	IEC60068-2-64
	Shock	---	IEC60068-2-29
ETSI EN300019-2-4 for Environmental Conditions (Temperature Change, Damp Heat Cycling, Salt Mist)		---	IEC60068-2-52
Operating Temperature		° C (° F)	-40° to +60° (-40° to +140°)
Product Environmental Compliance		---	Product is RoHs Compliant

ACCESSORIES All accessories are ordered separately unless otherwise indicated

ITEM	MODEL NUMBER	WEIGHT
Brackets for pole Ø48 to Ø115 mm (Ø1.9 to Ø4.5 in) ***delivered as standard***	0900181/00	3.4 kg (7.5 lbs)
Kit to add mechanical tilt (0° to 10°) to above brackets ***optional***	0900397/00	3.0 kg (6.6 lbs)

Wall mounting brackets are available upon request

INSTALLATION Please read all installation notes before installing this product.

- Always attach the antenna by all mounting points.
- Do not install the antenna with the connectors facing upwards.
- Do not cut the tethered transparent cap(s) that cover the antenna's tilt adjustment indicators.
- In order to operate the RET control, the transparent caps covering the tilt adjustment indicators must be engaged and locked.