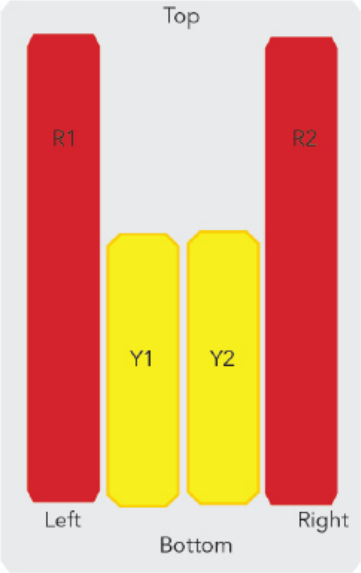
5667312ENGv

8-Port, 65°, XPOL, Panel Antenna, Variable Tilt, 2100 mm

- Octa band antenna, Dual polarisation, 8 connectors
- Independent tilt on each band 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 controlling all tilt angles, fully inserted inside the antenna (field replaceable)

PRODUCT OVERVIEW					
	Frequency Range (MHz)	698-960	698-960	1710-2690	1710-2690
	Array	R1	R2	Y1	Y2
	Connector	1-2	3-4	5-6	7-8
	Polarization	XPOL	XPOL	XPOL	XPOL
	Azimuth Beamwidth (avg)	65°	65°	65°	65°
	Electrical Downtilt	2-12° (Step 1°)	2-12° (Step 1°)	2-12° (Step 1°)	2-12° (Step 1°)
	Dimensions	2100 x 450 x 165 mm			



ORDERING OPTIONS Select from the different options listed below

SELECT ELECTRICAL DOWNTILT CONTROL & AISG PROTOCOL	SELECT ACTUATOR	SELECT CONNECTOR TYPE	ANTENNA MODEL NUMBER
Manual Electrical Tilt (MET)	---	4.3-10 Female	5667312ENv
		7/16 DIN Female	5667312Ev
Remote Electrical Tilt (RET) AISG v2.0 / 3GPP	Multi-Device Control Unit (MDCU)	4.3-10 Female	5667312ENGv
		7/16 DIN Female	5667312EGv

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ELECTRICAL SPECIFICATIONS Ultra Low Band — R1

Frequency Range		MHz	698-960	
		MHz	698-803	880-960
Polarization		---	± 45°	
Gain	Over all Tilts	dBi	14.3 ± 0.4	14.8 ± 0.4
Azimuth Beamwidth		degrees	76.1 ± 4.8	66.4 ± 3.6
Elevation Beamwidth		degrees	12.3 ± 0.6	10.2 ± 0.6
Electrical Downtilt		degrees	2-12° (Step 1°)	
Impedance		Ohms	50	
VSWR		---	< 1.5	
Passive Intermodulation 3rd Order for 2 x 20W Carriers		dBc	≤ -150	
Front-to-Back Ratio, Total Power, ±30°		dB	> 20	> 22
First Upper Sidelobe Suppression		dB	> 15	
Cross Polar Ratio	Main Direction (0°)	dB	> 18.6	> 16.9
Efficiency		dB	-1.3	
Efficiency Average		%	74	
Maximum Effective Power Per Port		Watts	300	
Intra/Cross Polar Band Isolation		dB	> 25	

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

ELECTRICAL SPECIFICATIONS Ultra Low Band — R2

Frequency Range		MHz	698-960	
		MHz	698-803	880-960
Polarization		---	± 45°	
Gain	Over all Tilts	dBi	14.3 ± 0.4	14.8 ± 0.4
Azimuth Beamwidth		degrees	76.1 ± 4.8	66.4 ± 3.6
Elevation Beamwidth		degrees	12.3 ± 0.6	10.2 ± 0.6
Electrical Downtilt		degrees	2-12° (Step 1°)	
Impedance		Ohms	50	
VSWR		---	< 1.5	
Passive Intermodulation 3rd Order for 2 x 20W Carriers		dBc	≤ -150	
Front-to-Back Ratio, Total Power, ±30°		dB	> 20	> 22
First Upper Sidelobe Suppression		dB	> 15	
Cross Polar Ratio	Main Direction (0°)	dB	> 18.6	> 16.9
Efficiency		dB	-1.3	
Efficiency Average		%	74	
Maximum Effective Power Per Port		Watts	300	
Intra/Cross Polar Band Isolation		dB	> 25	

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

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ELECTRICAL SPECIFICATIONS Ultra Wide Band — Y1

Frequency Range		MHz	1710-2690			
		MHz	1710-1880	1920-2170	2300-2400	2500-2690
Polarization		---	± 45°			
Gain	Over all Tilts	dBi	15.3 ± 0.6	16.1 ± 0.6	16.4 ± 0.4	16.5 ± 0.3
Azimuth Beamwidth		degrees	72.4 ± 4.7	68.2 ± 3.2	62.4 ± 5.2	61.0 ± 5.0
Elevation Beamwidth		degrees	7.3 ± 0.3	6.5 ± 0.6	5.5 ± 0.3	5.1 ± 0.3
Electrical Downtilt		degrees	2-12° (Step 1°)			
Impedance		Ohms	50			
VSWR		---	< 1.5			
Passive Intermodulation 3rd Order for 2 x 20W Carriers		dBc	< -150			
Front-to-Back Ratio, Total Power, ±30°		dB	> 22			
First Upper Sidelobe Suppression		dB	> 15			
Cross Polar Ratio	Main Direction (0°)	dB	> 18.8	> 17.4	> 17.0	> 18.2
Efficiency		dB	-1.35	-1.4	-1.45	-1.5
Efficiency Average		%	73	72	71	70
Maximum Effective Power Per Port		Watts	250			
Intra/Cross Polar Band Isolation		dB	> 25			

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

ELECTRICAL SPECIFICATIONS Ultra Wide Band — Y2

Frequency Range		MHz	1710-2690			
		MHz	1710-1880	1920-2170	2300-2400	2500-2690
Polarization		---	± 45°			
Gain	Over all Tilts	dBi	15.8 ± 0.6	16.4 ± 0.6	17.0 ± 0.4	17.0 ± 0.3
Azimuth Beamwidth		degrees	72.2 ± 4.7	68.0 ± 3.2	62.0 ± 5.2	61.1 ± 5.0
Elevation Beamwidth		degrees	7.4 ± 0.4	6.7 ± 0.7	5.6 ± 0.2	5.4 ± 0.2
Electrical Downtilt		degrees	2-12° (Step 1°)			
Impedance		Ohms	50			
VSWR		---	< 1.5			
Passive Intermodulation 3rd Order for 2 x 20W Carriers		dBc	< -150			
Front-to-Back Ratio, Total Power, ±30°		dB	> 22			
First Upper Sidelobe Suppression		dB	> 15			
Cross Polar Ratio	Main Direction (0°)	dB	> 15.5	> 16.8	> 17.2	> 15.8
Efficiency		dB	-1.35	-1.4	-1.45	-1.5
Efficiency Average		%	73	72	71	70
Maximum Effective Power Per Port		Watts	250			
Intra/Cross Polar Band Isolation		dB	> 25			

Standard values based on NGMN-P-BASTA version 12.0 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 MET is a separate kit provided on the bottom of the antenna. This kit has colored knobs with a respective array identification indicated within it. This knob can be rotated to set an electrical downtilt as per the requirement. The tilt information of the respective arrays can be observed with an indicator provided near the knob.
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
Remote Control		Capable of Controling from OMC or BTS/ NodeB or External Tools

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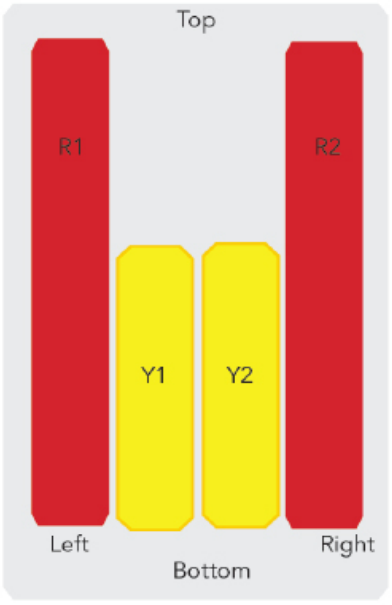

ARRAY LAYOUT	ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE
	R1	698-960	1-2	4.3-10 Female
	R2	698-960	3-4	4.3-10 Female
	Y1	1710-2690	5-6	4.3-10 Female
	Y2	1710-2690	7-8	4.3-10 Female

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)	2100 (82.6)
Width		mm (in)	450 (17.7)
Depth		mm (in)	165 (6.4)
Net Weight - Antenna Only		kg (lbs)	34 (88.1)
Mechanical Distance Between Mounting Points		mm (in)	1700 (66.9)
Windload (EN 1991-1-4:2005 using Wind Tunnel Coefficients)	Calculation	km/h (mph)	150 (93.2)
	Frontal	N (lbf)	1100 (247.2)
	Lateral	N (lbf)	690 (155.1)
	Rearside	N (lbf)	1250 (281.0)
Operational Wind Speed		km/h (mph)	160 (99.4)
Survival Wind Speed		km/h (mph)	200 (124)
Radome Color		---	Gray RAL7035
Radome Material		---	Outdoor Fibreglass
Lightning Protection		---	Direct Ground
Shipping	Shipping Dimensions (Length x Width x Depth)	mm (in)	2220 x 550 x 280 (87.4 x 21.7 x 11.0)
	Shipping Weight	kg (lbs)	54 (119.0)

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ENVIRONMENTAL SPECIFICATIONS

Environmental	---	ETS 300 019
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) with mechanical tilt (0° to 10°)	IA00483	5.0 kg (11.0 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.

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