Amphenol ANTENNA SOLUTIONS

8-Port Antenna

3300-3800 MHz

65° | 950 mm

8106512E

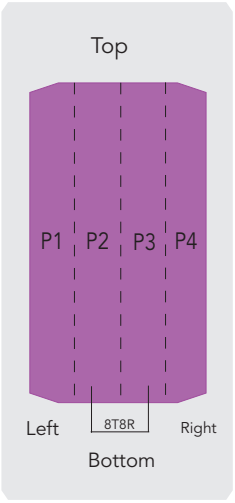
8106512EMG

8-Port, 65°, XPOL, Panel Antenna, Variable Tilt, 950 mm

- Wide band antenna, Dual polarisation, 8 connectors
- Independent tilt on each band 2-12° / 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 controlling all tilt angles (field replaceable)

PRODUCT OVERVIEW

Frequency Range (MHz)	3300-3800	3300-3800	3300-3800	3300-3800
Array	P1	P2	P3	P4
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°	2-12°	2-12°	2-12°
Dimensions	950 x 220 x 110 mm			



Array Configuration

ORDERING OPTIONS Select from the different options listed below

SELECT ELECTRICAL DOWNTILT CONTROL & AISG PROTOCOL	SELECT CONNECTOR TYPE	ANTENNA MODEL NUMBER
Remote Electrical Tilt (RET) AISG v2.0 / 3GPP	MQ4 / MQ5	8106512EMG

8106512E
8106512EMG

8-Port, 65°, XPOL, Panel Antenna, Variable Tilt, 950 mm

ELECTRICAL SPECIFICATIONS Ultra Wide Band — **P1, P2, P3, P4**

General Electrical Properties	General parameters		Frequency range	MHz	3300-3800
			Polarization	---	± 45°
			Electrical Downtilt	degrees	2-12
			Electrical downtilt tolerance	degrees	± 0.5
			Impedance	Ohms	50
			Passive Intermodulation 3rd Order for 2 x 2 W Carriers	dBc	< -140
			Lightning Protection	---	DC Ground
	Calibration and electrical parameters		Coupling factor between calibration port and each antenna port	dB	-26 ± 2
			Max. amplitude tolerance from calibration port to input ports	dB	≤ 0.9
			Max. phase tolerance from calibration port to input ports	degrees	≤ 7
			Ports VSWR	---	< 1.5
			Return Loss	dB	> 14
			Max. Average Input Power per RF Port	Watts	200
			Co-polarization isolation between ports	dB	≥ 25
			Cross-polarization isolation between ports	dB	≥ 25
Beamforming Electrical Properties	Radiation parameters	Single column beam	Azimuth Beam width	degrees	80 ± 10
			Gain	dBi	16 ± 1
			±60° Gain roll-off at sector edge	dB	6.3 ± 0.5
			Vertical 3dB beam width	degrees	6 ± 1
			Cross polar ratio (0°)	dB	≥ 17
			Cross polar ratio (±60°)	dB	≥ 6
			Vertical Sidelobe suppression from first side lobe above main beam	dB	≥ 17.0
			Front to back ratio Co-pol,±30°	dB	≥ 25
		65° Broadcast Beam	Horizontal beamwidth	degrees	63 ± 6
			Gain of broadcasting pattern (Typ.)	dBi	17.5 ± 1.0
			±60° Gain roll-off at sector edge	dB	7.3 ± 0.5
			Vertical beamwidth	degrees	6 ± 1
			Cross polar ratio (0°)	dB	≥ 17
			Cross polar ratio (±60°)	dB	≥ 6
			Front to back ratio	dB	≥ 25
			Vertical Sidelobe suppression from first side lobe above main beam	dB	≥ 17.0
		Service beam	0° direct beam gain	dBi	22 ± 1
			0° direction beam horizontal 3dB beam width	degrees	23 ± 3
			0° direct beam sidelobe suppression	dB	≥ 17
			±30° direction beam gain	dBi	21 ± 1
			±30° direct beam horizontal 3dB beam width	degrees	25 ± 3
			±30° direct beam horizontal sidelobe suppression	dB	≥ 10
			0° direction beam cross polar ratio	dB	≥ 17
			0° direction beam front to back ratio	dB	≥ 25
Soft Split Electrical Properties	Radiation parameters	Multi-beam	Horizontal 3dB Beamwidth	degrees	30 ± 3
			Gain over All Tilts	dBi	20.5 ± 1
			Cross-Polar Discrimination at Beampeak	dB	≥ 16
			Horizontal Sidelobe	dB	≥ 15

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.

8106512E

8106512EMG

8-Port, 65°, XPOL, Panel Antenna, Variable Tilt, 950 mm

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

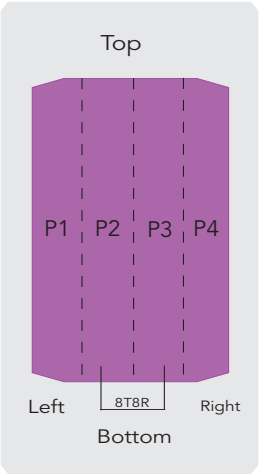
8106512E

8106512EMG

8-Port, 65°, XPOL, Panel Antenna, Variable Tilt, 950 mm

ARRAY LAYOUT	ARRAY	FREQUENCY	CONNECTOR TYPE
	P1	3300-3800	MQ4 / MQ5
	P2	3300-3800	
	P3	3300-3800	
	P4	3300-3800	

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)	950 (37.4)
Width		mm (in)	220 (8.6)
Depth		mm (in)	110 (4.2)
Net Weight of Antenna	Without Bracket	kg (lbs)	< 13 (28.6)
	With Bracket	kg (lbs)	< 16 (35.2)
Operational Wind Speed		km/h (mph)	150 (93.2)
Survival Wind Speed		km/h (mph)	200 (124.2)
Radome Color		---	Gray RAL7035
Reflector Material		---	Aluminium
Radiator Material		---	Aluminium / Low loss circuit board
Radome Material		---	Fiberglass
Lightning Protection		---	Direct Ground
Shipping	Shipping Dimensions (Length x Width x Depth)	mm (in)	1150 x 320 x 270 (42.5 x 15.2 x 10.6)
	Shipping Weight	kg (lbs)	< 23 (50.7)
	Shipping Volume	m^3 (ft^3)	0.11 (3.8)

8106512E

8106512EMG

8-Port, 65°, XPOL, Panel Antenna, Variable Tilt, 950 mm

ENVIRONMENTAL SPECIFICATIONS

Environmental Standard	---	ETS 300 019
Operating Temperature	° C (° F)	-20° to +55° (-68° to 131°)
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***	IA00181	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)

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.