



DATASHEET

AW3161-E-F-V2

Common Name- 4 Port, 31", 3.5GHz 65° Panel with eRET Tilt

3300 -3800MHz	4	eRET	17.9	65°
Frequency	Ports	Tilt	Gain	Beamwidth

PRODUCT INFORMATION

The AW3161 antenna operates between 3300-3800MHz covering LTE Bands B42, 43 & 48 and 5G NR Bands n48 and n78. It was developed for 4x4 fixed wireless applications requiring variable electrical tilt. Electrical tilt allows optimisation of the elevation beam for throughput and coverage. Remote Electrical Tilt (RET) enables electrical tilt adjustment at site using a hand-held controller or remotely over an IP Network.

APPLICATION

Alpha Wireless panel antennas provide wireless network operators the highest performance and quality. Panel antennas are generally used in sectorized applications. These antennas are designed for optimal radiation patterns improving overall network performance. A horizontally spaced array provides enhance MIMO performance with full 4x4 operation or receive diversity RF functions.

STANDARD & CERTIFICATIONS

Certification	BS EN ISO 9001:2015
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FEATURES

- Wide-band antenna that covers LTE Bands 42, 43 & 48 and 5G NR Bands n48 and n78. Includes CBRS Band.
- 4x4 MIMO for maximum throughput.
- Enhanced tilt range of 0 to 10 degrees.
- Field replaceable RET motor.



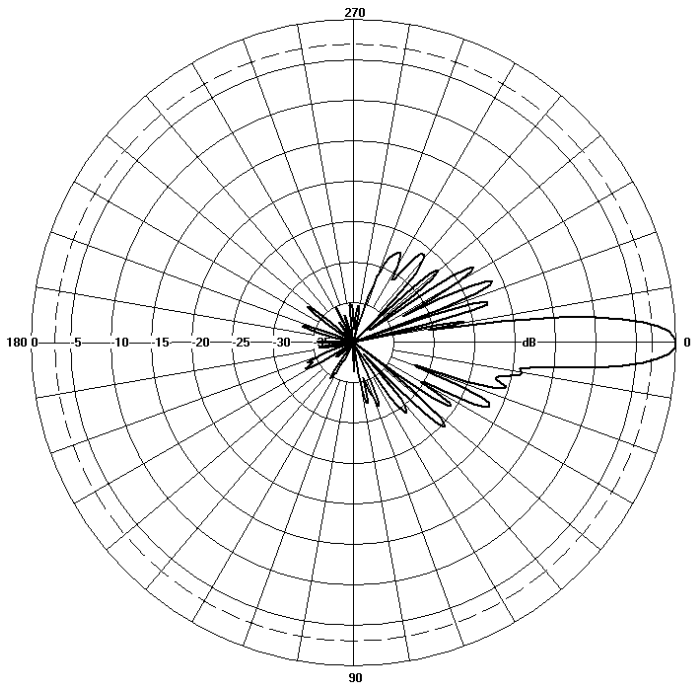
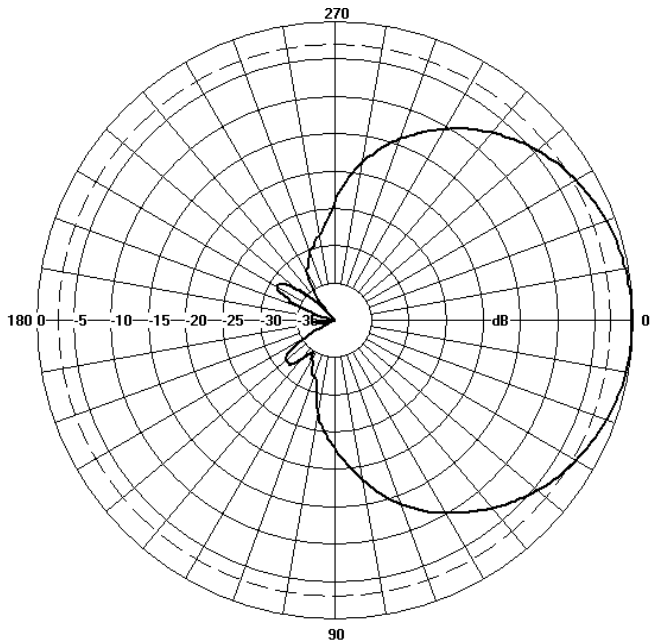
The parameters in this specification follow the definitions and recommendations per NGMN P-Basta, Release 9.6.



TECHNICAL SPECIFICATION

Electrical Specifications			
Frequency Range		MHz	3300-3800MHz
Polarisation		Degree	+/- 45° Slant Linear
Gain	Basta	dBi	17.4±0.5
	Max	dBi	17.9
Azimuth Beamwidth		Degree	65°
Azimuth Beam Squint		Degree<	3°
Elevation Beamwidth		Degree	7°
Electrical Downtilt		Degree	T0° - T10°
Electrical Downtilt Deviation		Degree<	1°
Impedance		Ohms	50
VSWR		<	1.5
Return Loss		dB>	14
Isolation		dB>	28
Front to Back Ratio: Total Power +/-30°		dB>	30
Upper Sidelobe Suppression, Peak to 20°		dB>	18
Cross-Polar Discrimination (0°)		dB>	18
Maximum Effective Power Per Port		W	150

Representative Pattern Files



Azimuth

Elevation

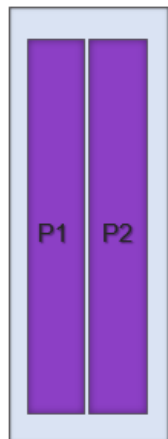
For radiation pattern files, please login at www.alphawireless.com

TECHNICAL SPECIFICATION

Mechanical Specifications

Dimensions	mm (in)	783 (30.8) x 280 (11) x 85 (3.3) - (LxWxD)
Packing Size (LxWxD)	mm (in)	950 (37.4) x 340 (13.4) x 175 (6.9)
Net Weight (antenna)	kg (lb)	9 (19.8)
Net Weight (mount)	kg (lb)	1.5 (3.4)
Shipping Weight	kg (lb)	10.5 (23.2)
Connector Type (Female)	-	4.3-10
Connector Quantity	-	4
Connector Position	-	Bottom
Windload Frontal (at Rated Wind Speed: 150km/h)	N (lbf)	230 (52)
Windload Lateral (at Rated Wind Speed: 150km/h)	N (lbf)	70 (15.7)
Survival Wind Speed	km/h (mph)	200 (125)
Radome Material	-	ASA/ASA+PC/FRP
Radome Colour	RAL	7035 (light grey)
Product Compliance Environmental	-	RoHS
Lightning Protection	-	DC Grounded
Cold Temperature Survival	°C (°F)	-40 (-40)
Hot Temperature Survival	°C (°F)	70 (158)

Array Layout and RET Information



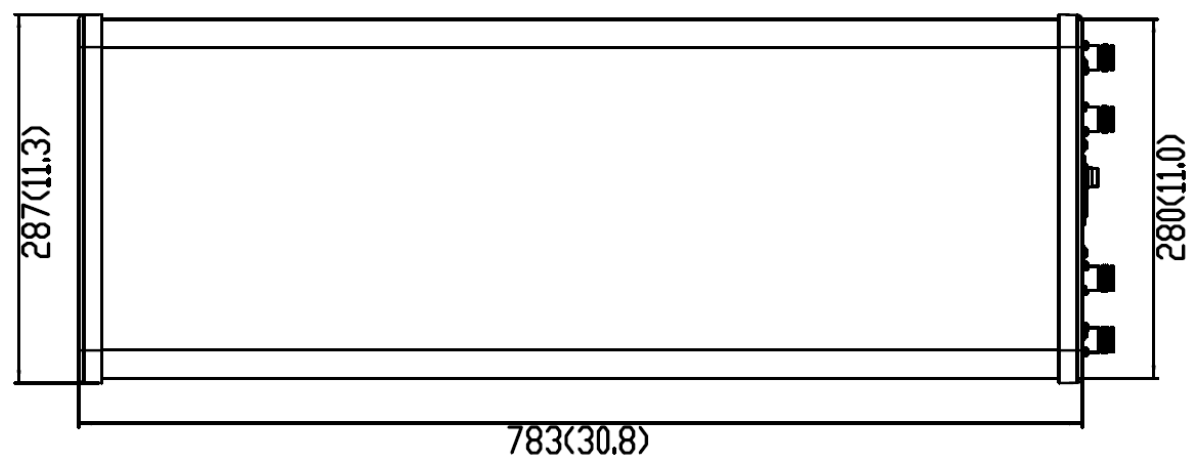
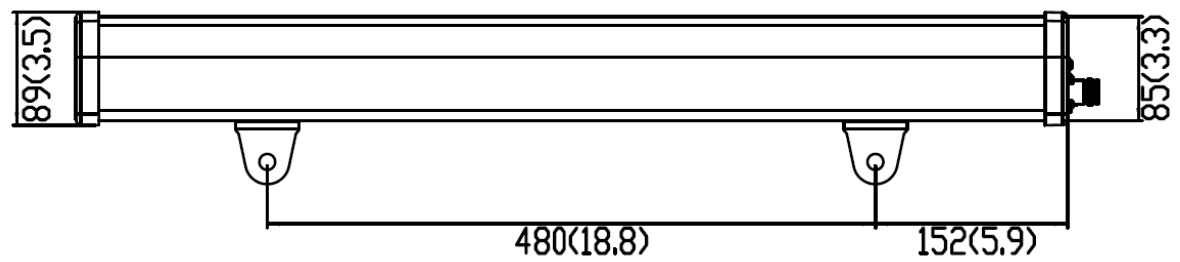
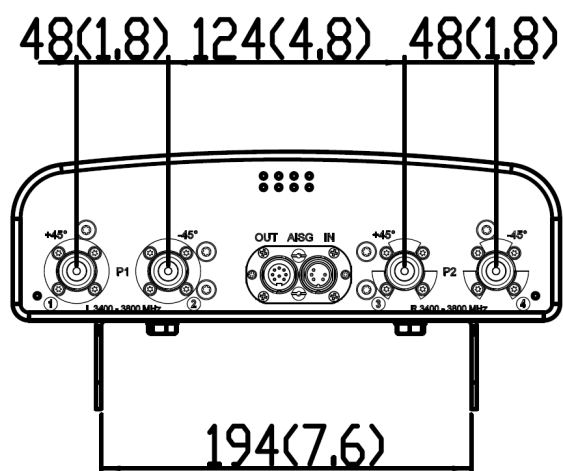
Note: Coloured box sizes do not represent antenna sizes.

Array	Frequency MHz	Ports	RET ID
P1	3300 - 3800	1 - 2	1
P2	3300 - 3800	3 - 4	1

Configuration	
3300-3800 MHz	One RET for both arrays : P1, P2
Total Quantity	One RET Motor Controller
Location and Interface	
RET Controller Location	Inside antenna radome housing
RET Interface	Pair of AISG 8 Pin DIN connectors, one male, one female
RET Interface Quantity	One pair of AISG 8 Pin DIN connectors
RET Interface Location	On connector plate located at bottom of antenna
Electrical	
Input Voltage	10 - 30V
Power Idle Mode	< 1W
Power Active Mode	< 10W
Protocol	3GPP / AISG 2.0

Mechanical Illustration

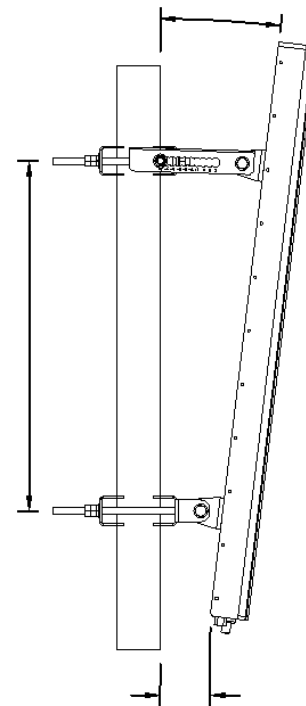
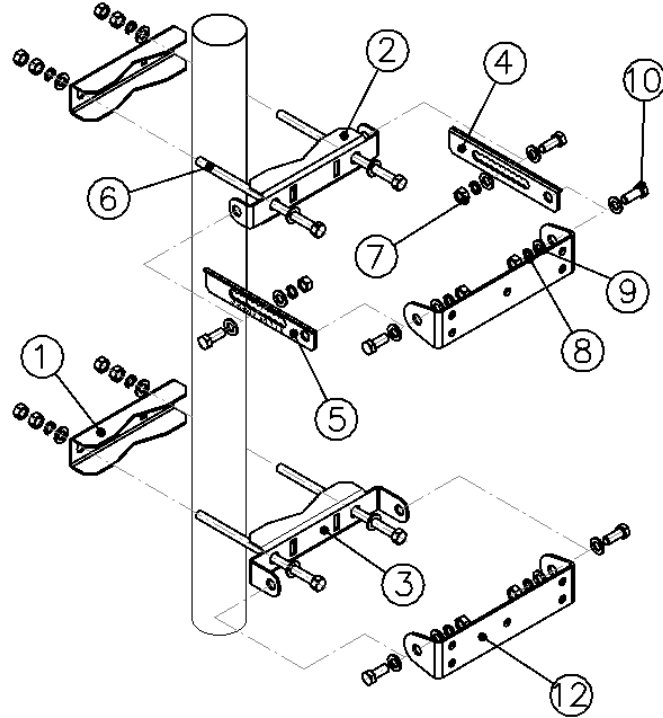
All measurements are in mm (in)



TECHNICAL SPECIFICATION

Mounting Bracket Kit

CL-V-186 Mount Kit for Panel (Mount Kit included with antenna)



Mounting Kit Tilt Range	Mounting Kit Material	Mounting Kit Pole Diameter
+2° to -10°	Stainless Steel / Galvanised Steel	50mm-115mm (2" to 4.5")

Ordering Info

Order Code - Antenna

AW3161-E-F-V2

Order Code - Accessories

AW1012-2-FM-FM

AW1012-2-FM-NM

AW1014-2-FM-TM

PADC 1000

SADC 2000

AW0326-3-PM-PF

AW0326-10-PM-PF

AW0326-25-PM-PF

AW0326-50-PM-PF

Description

Enclosed Remote Electrical Tilt (eRET) with 4.3-10 Connectors

Description

RF Jumper Cable, connector types 4.3-10 (m) / 4.3-10 (m), length 2 metres (6'6")

RF Jumper Cable, connector types 4.3-10 (m) / N-Type (m), length 2 metres (6'6")

RF Jumper Cable, connector types 4.3-10 (m) / Nex10 (m), length 2 metres (6'6")

Portable AISG Controller

Site AISG Controller

AISG Jumper Cable Lengths 3 metres (9' 10")

AISG Jumper Cable Lengths 10 metres (32' 9")

AISG Jumper Cable Lengths 25 metres (82')

AISG Jumper Cable Lengths 50 metres (164')

Enquiries

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