



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 Band 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 |
|---------------|---------------------|



FEATURES

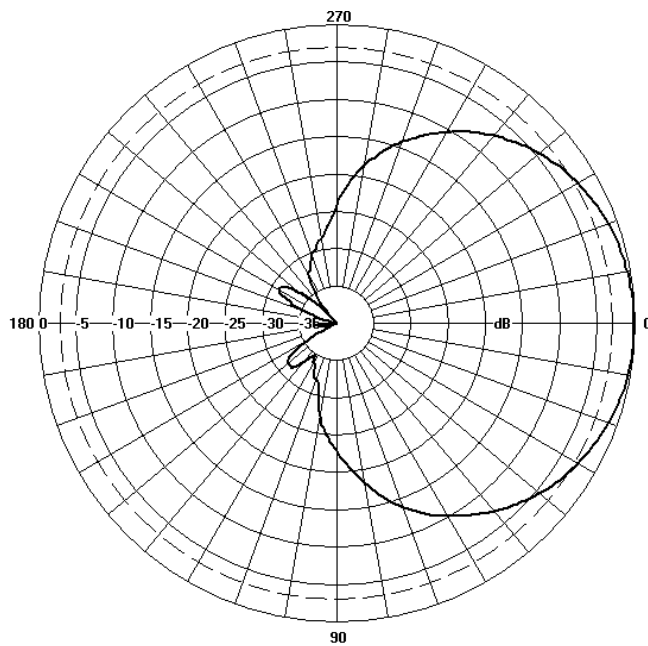
- Wide-band antenna that covers LTE Bands 42, 43 & 48 and 5G NR Band n78. Includes CBRS Band.
- 4x4 MIMO for maximum throughput.
- Enhanced tilt range of 0 to 10 degrees.
- Field replaceable RET motor.

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

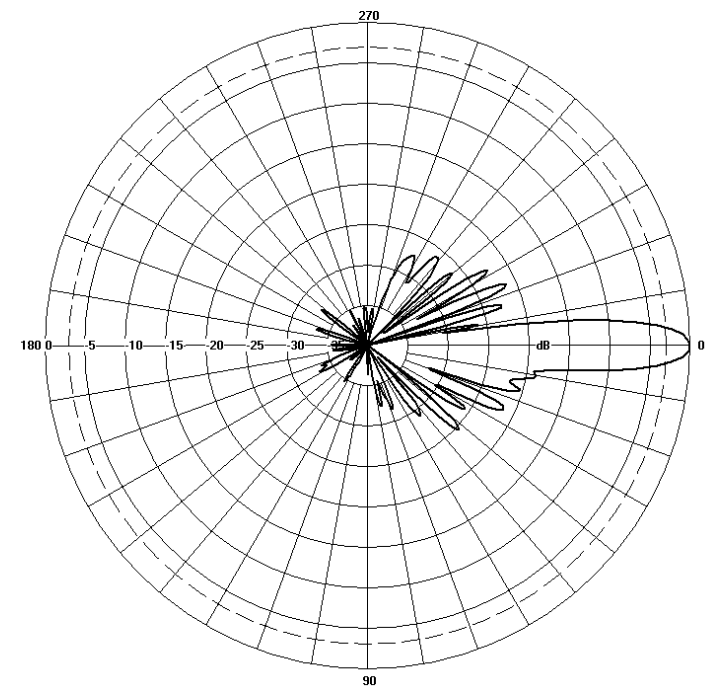
TECHNICAL SPECIFICATION

| 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

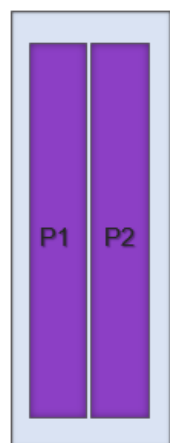
For radiation pattern files, please login at www.alphawireless.com

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



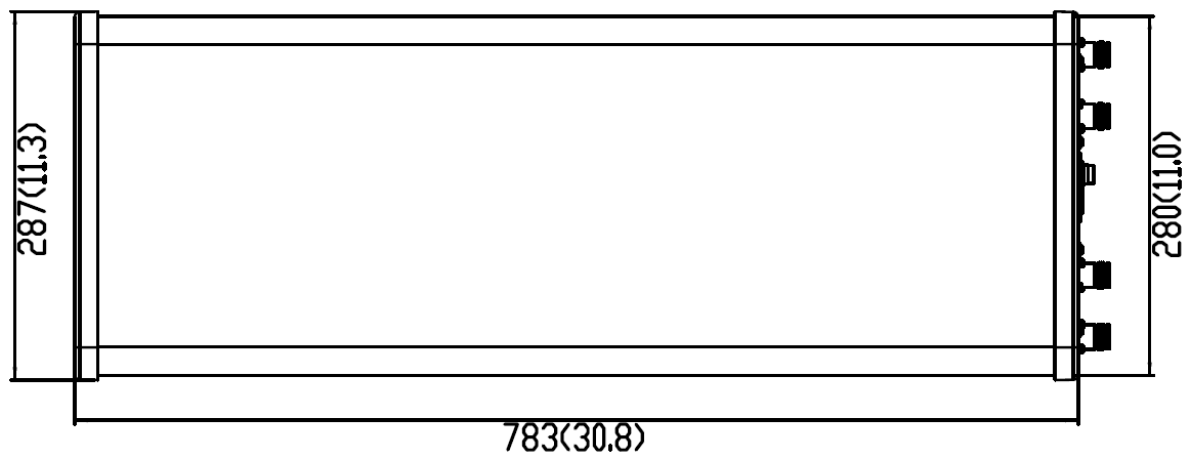
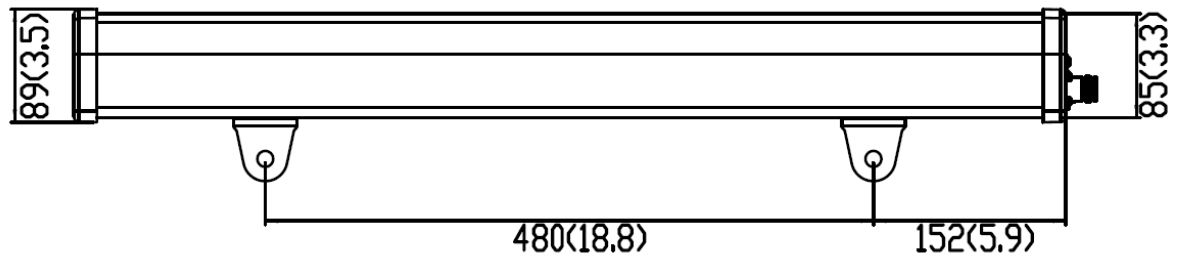
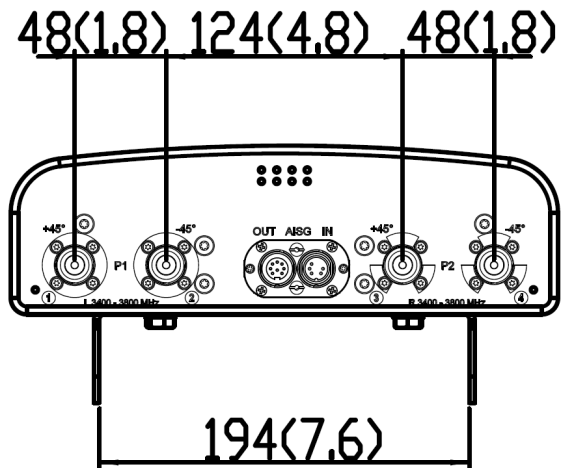
Note: Coloured box sizes do not represent antenna sizes.

| 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

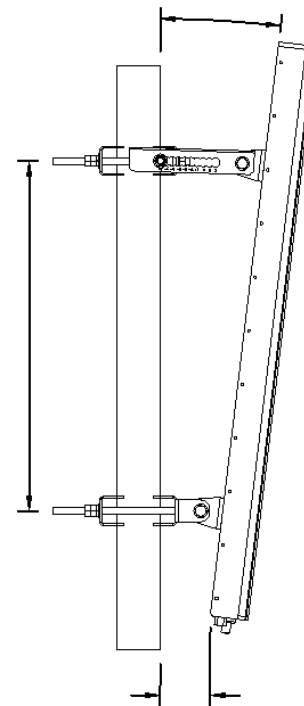
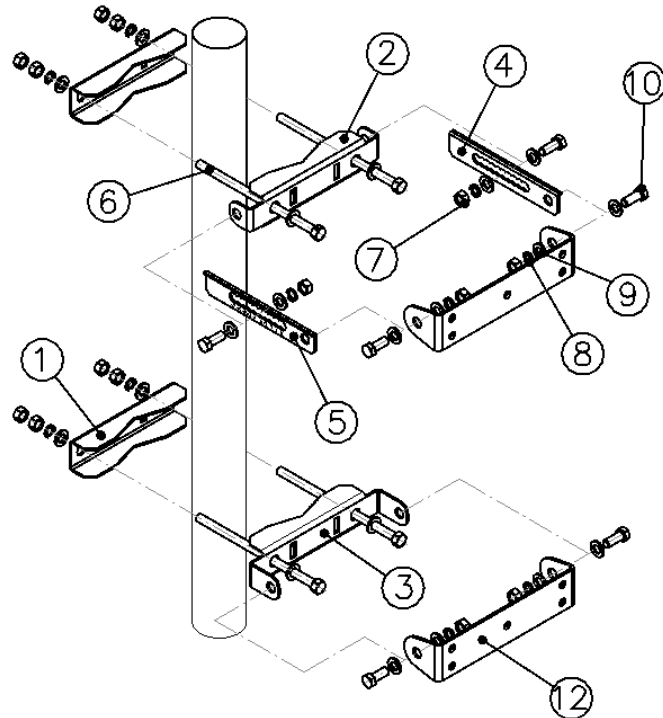
All measurements are in mm (in)



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

Description

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

Order Code - Accessories

AW1012-2-FM-FM

Description

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

AW1012-2-FM-NM

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

AW1014-2-FM-TM

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

PADC 1000

Portable AISG Controller

SADC 2000

Site AISG Controller

AW0326-3-PM-PF

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

AW0326-10-PM-PF

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

AW0326-25-PM-PF

AISG Jumper Cable Lengths 25 metres (82')

AW0326-50-PM-PF

AISG Jumper Cable Lengths 50 metres (164')

Enquiries

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