



DATASHEET

AW3828-E-F

Common Name- 4 Port, 34", 65° C-Band Panel eRET

| | | | | |
|--------------|-------|------|------|-----------|
| 3300-4200MHz | 4 | eRET | 17.7 | 65° |
| Frequency | Ports | Tilt | Gain | Beamwidth |

PRODUCT INFORMATION

This solution was developed for fixed wireless applications to cover 3300-4200MHz. It offers variable electrical tilt (eRET) that allows tilt optimisation to improve coverage and throughput. This four port antenna supports MIMO 4x4 applications.

Panel antennas are the most used solution to provide directive coverage in a wireless network. These panel antennas offer multiple ports and frequency bands and are designed to deliver high gain across the sector. They are commonly available with 33°, 45°, 60°, 90°, and 120° beamwidths. Alpha Wireless provides a wide array of sector panel solutions that meet the needs of the most intricate deployment requirements, including support for n48 and n78 frequency bands.

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

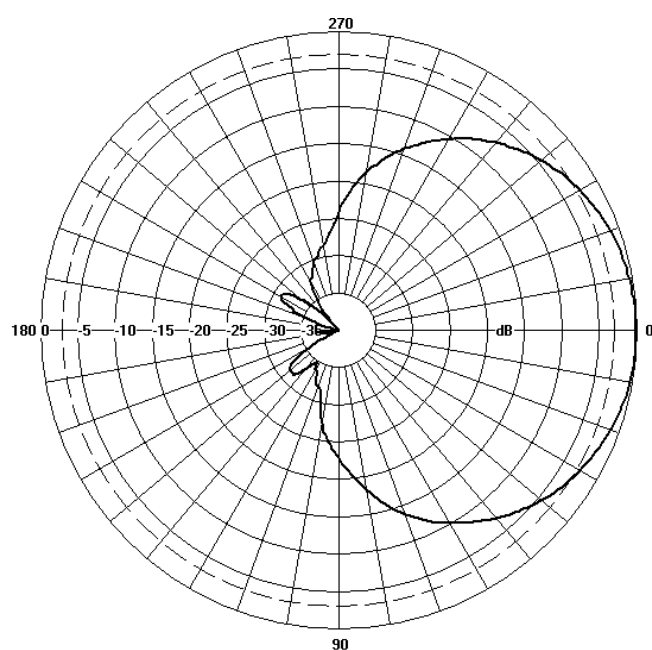
- Wide Band antenna covers n48, n77 and n78
- 4x4 MIMO for maximum throughput
- Enhanced tilt range of 0 to 10 degrees
- Remote electrical variable tilt function (eRET)
- Mounting bracket with variable tilt (included).

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

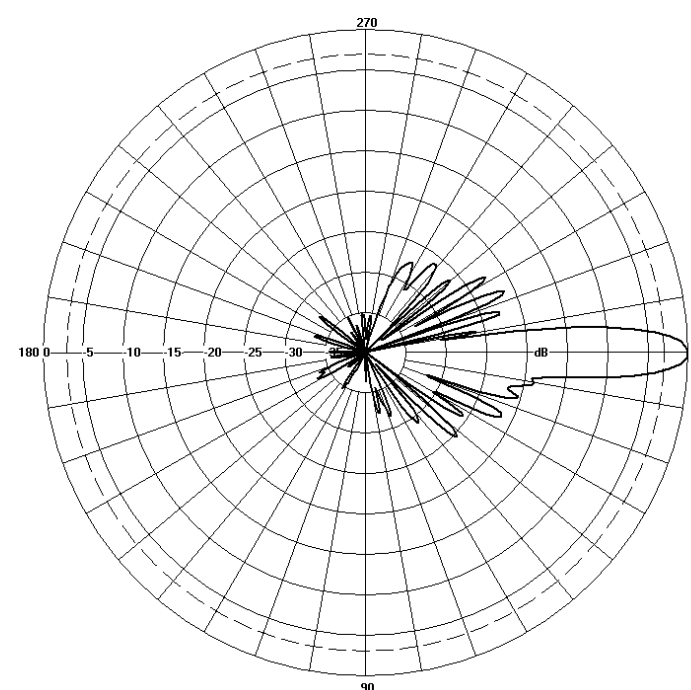
TECHNICAL SPECIFICATION

| Electrical Specifications | | | | |
|---|-------|---------|----------------------|-------------|
| Frequency Range | | MHz | 3300 - 3800 | 3800 - 4200 |
| Polarisation | | Degree | +/- 45° Slant Linear | |
| Gain | Basta | dBi | 17.0±0.5 | 17.2±0.5 |
| | Max | dBi | 17.5 | 17.7 |
| Azimuth Beamwidth | | Degree | 65° | |
| Azimuth Beam Squint | | Degree< | 3° | |
| Elevation Beamwidth | | Degree | 7° | 7° |
| Electrical Downtilt | | Degree | T0° - T10° | |
| Electrical Downtilt Deviation | | Degree< | 1° | |
| Impedance | | Ohms | 50 | |
| VSWR | | < | 1.5 | |
| Return Loss | | dB> | 14 | |
| Isolation | | dB> | 25 | |
| Front to Back Ratio: Total Power +/-30° | | dB> | 25 | |
| Upper Sidelobe Suppression, Peak to 20° | | dB> | 18 | |
| Cross-Polar Discrimination | | dB> | 16 | |
| Maximum Effective Power Per Port | | W | 150 | |

Representative Pattern Files



Azimuth



Elevation

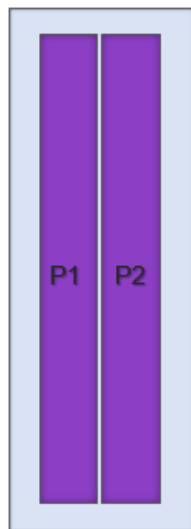
For radiation pattern files, please login at www.alphawireless.com

TECHNICAL SPECIFICATION

Mechanical Specifications

| | | |
|---|------------|--|
| Dimensions | mm (in) | 850 (33.5) x 280 (11) x 85 (3.3) - (LxWxD) |
| Packing Size (LxWxD) | mm (in) | 1012 (39.8) x 337 (13.2) 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) | 220 (50) |
| Windload Lateral (at Rated Wind Speed: 150km/h) | N (lbf) | 80 (18) |
| Survival Wind Speed | km/h (mph) | 241.4 (150) |
| Radome Material | - | ASA |
| Radome Colour | RAL | 7035 |
| 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.

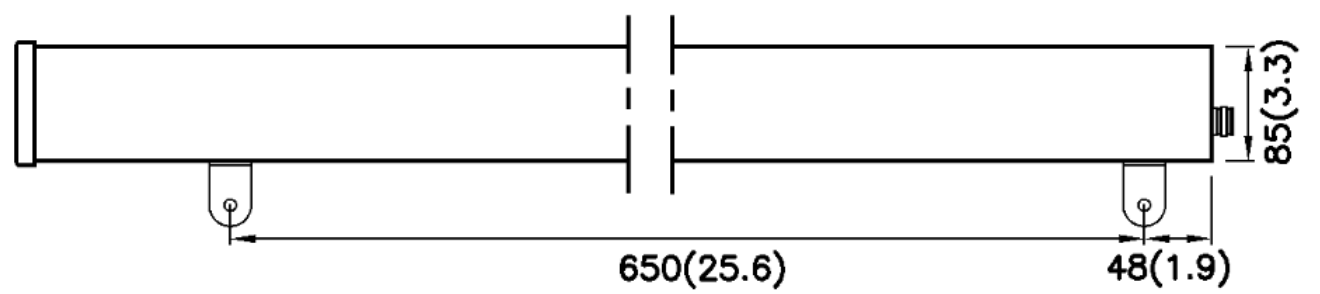
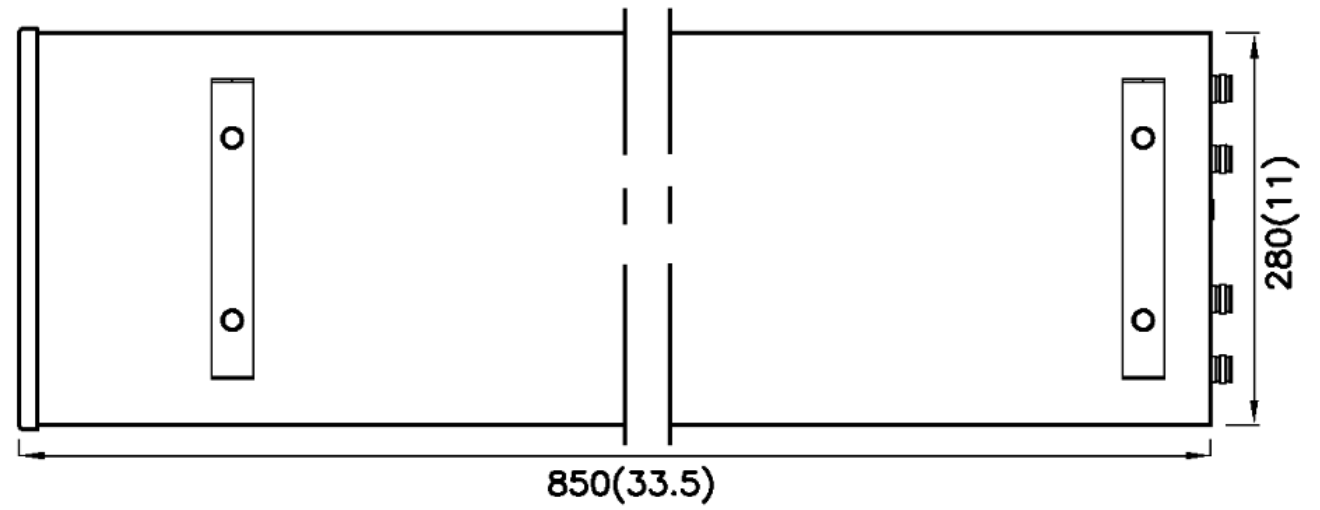
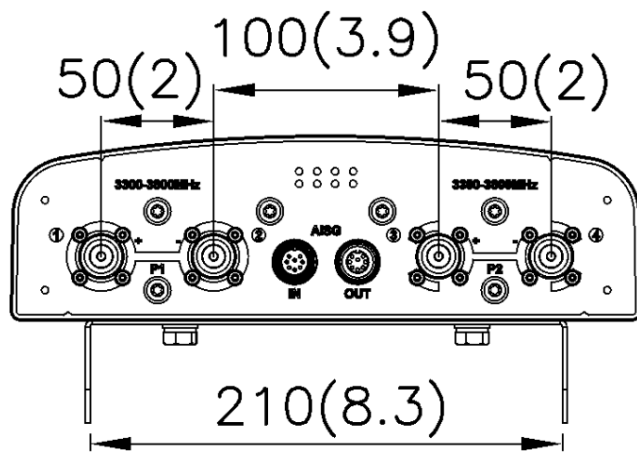
| Array | Frequency MHz | Ports | RET ID |
|-------|---------------|-------|--------|
| P1 | 3300 - 4200 | 1 - 2 | 1 |
| P2 | 3300 - 4200 | 3 - 4 | 1 |

| | |
|-------------------------------|---|
| Configuration | |
| 3300-4200 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 |

TECHNICAL SPECIFICATION

Mechanical Illustration

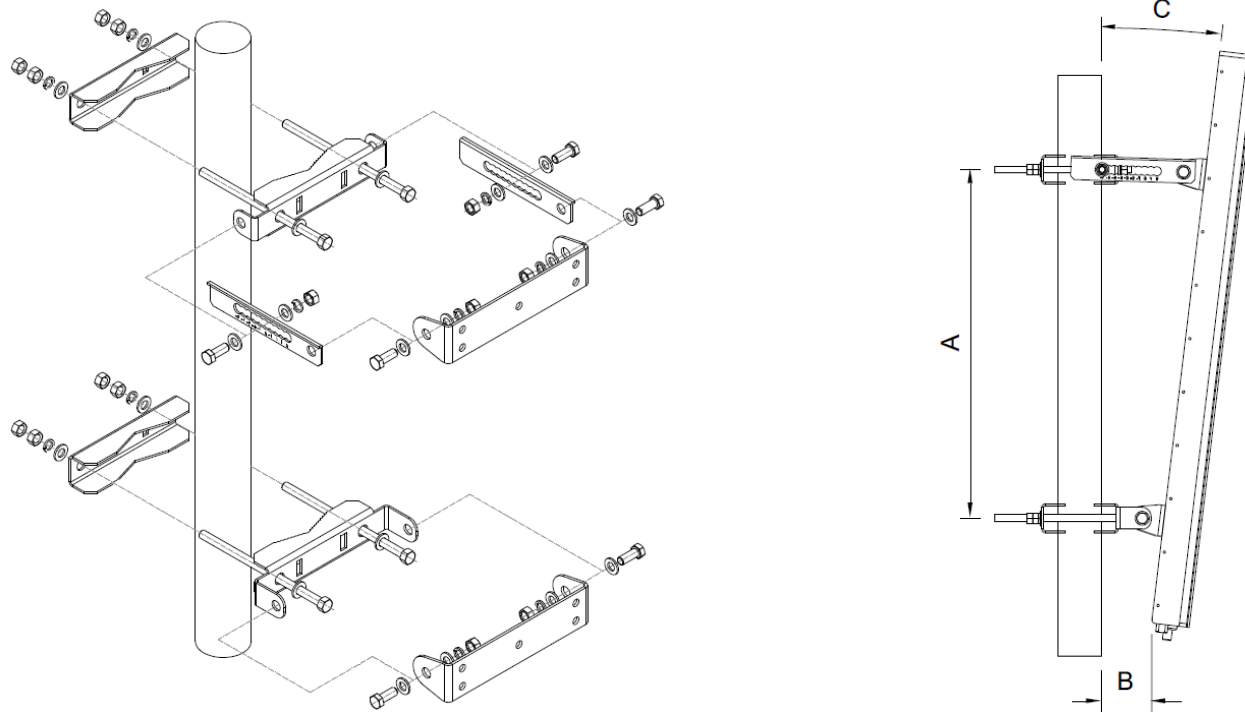
All measurements are in mm (in)



TECHNICAL SPECIFICATION

Mounting Bracket Kit

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



| Mounting Kit Tilt Range | Mounting Kit Material | Mounting Kit Pole Diameter |
|-------------------------|-----------------------|----------------------------|
| +1° to -7° | Stainless Steel | 50mm-115mm (2" to 4.5") |

Ordering Info

Order Code - Antenna

AW3828-E-F

Description

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

Order Code - Antenna

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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