



# DATASHEET

## AW3165-E-F

Common Name- 4 Port, 1.1M, 2.5GHz 65° Panel eRET

|              |       |      |      |           |
|--------------|-------|------|------|-----------|
| 2300-2700MHz | 4     | eRET | 17.0 | 65°       |
| Frequency    | Ports | Tilt | Gain | Beamwidth |

### PRODUCT INFORMATION

This antenna has 4 ports covering 2300-2700MHz (B38, B40 & B41). It was developed for fixed wireless applications requiring variable electrical tilt.

### 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

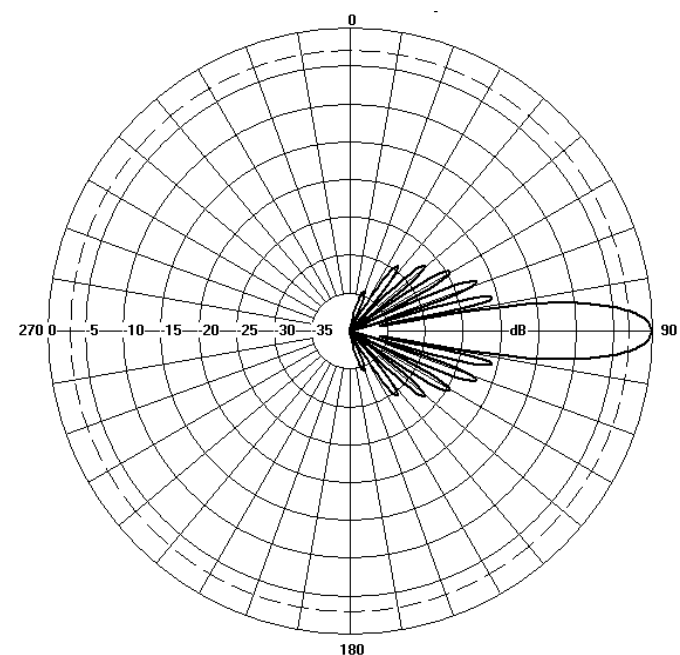
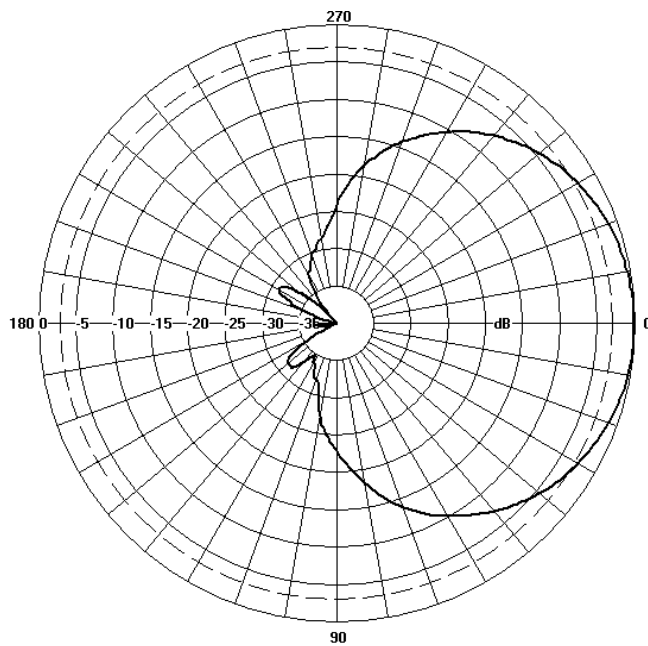
- Wide-band antenna for 3GPP bands 38, 40 & 41
- 4x4 MIMO for maximum throughput
- Enhanced tilt range of 0 to 10 degrees
- Manufactured in Ireland

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

## TECHNICAL SPECIFICATION

| Electrical Specifications               |       |         |                      |
|---|-------|---------|----------------------|
| Frequency Range                         |       | MHz     | 2300 - 2700MHz       |
| Polarisation                            |       | Degree  | +/- 45° Slant Linear |
| Gain                                    | Basta | dBi     | 16.8±0.5             |
|   | Max   | dBi     | 17.3                 |
| 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>     | 25                   |
| Front to Back Ratio: Total Power +/-30° |       | dB>     | 30                   |
| Upper Sidelobe Suppression, Peak to 20° |       | dB>     | 17                   |
| Cross-Polar Discrimination (0°)         |       | dB>     | 16                   |
| Maximum Effective Power Per Port        |       | W       | 150                  |

## Representative Pattern Files



Azimuth

Elevation

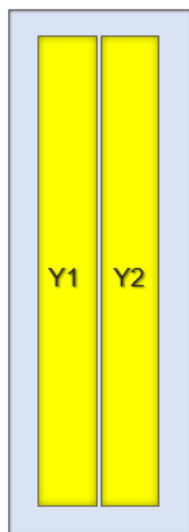
For radiation pattern files, please login at [www.alphawireless.com](http://www.alphawireless.com)

## TECHNICAL SPECIFICATION

## Mechanical Specifications

|   |            |   |
|---|------------|---|
| Dimensions                                      | mm (in)    | 1050 (41.3) x 280 (11) x 85 (3.3) - (LxWxH) |
| Packing Size (LxWxD)                            | mm (in)    | 1320 (52) x 240 (9.4) x 178 (7)             |
| Net Weight (antenna)                            | kg (lb)    | 9 (19.8)                                    |
| Net Weight (mount)                              | kg (lb)    | 1.5 (3.4)                                   |
| Shipping Weight                                 | kg (lb)    | 10.5 (23.21)                                |
| Connector Type (Female)                         | -          | 4.3-10                                      |
| Connector Quantity                              | -          | 4   |
| Connector Position                              | -          | Bottom                                      |
| Windload Frontal (at Rated Wind Speed: 150km/h) | N (lbf)    | 320 (72)                                    |
| Windload Lateral (at Rated Wind Speed: 150km/h) | N (lbf)    | 120 (27)                                    |
| Survival Wind Speed                             | km/h (mph) | 200 (125)                                   |
| Radome Material                                 | -          | UV-Stabilised PVC                           |
| 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



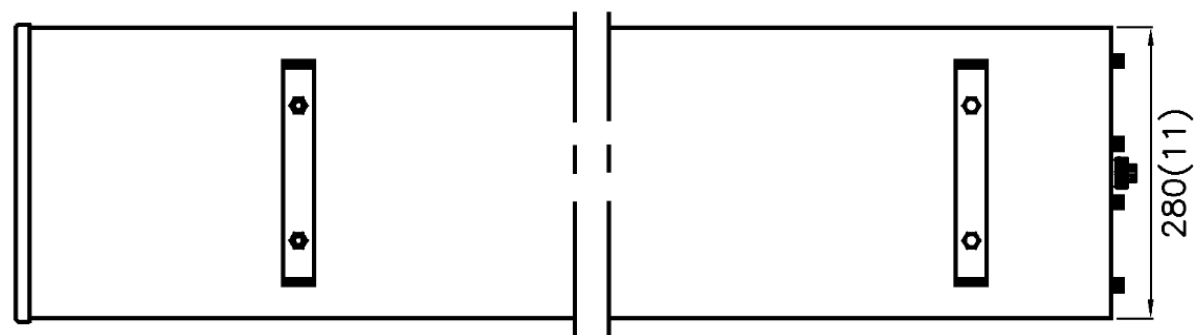
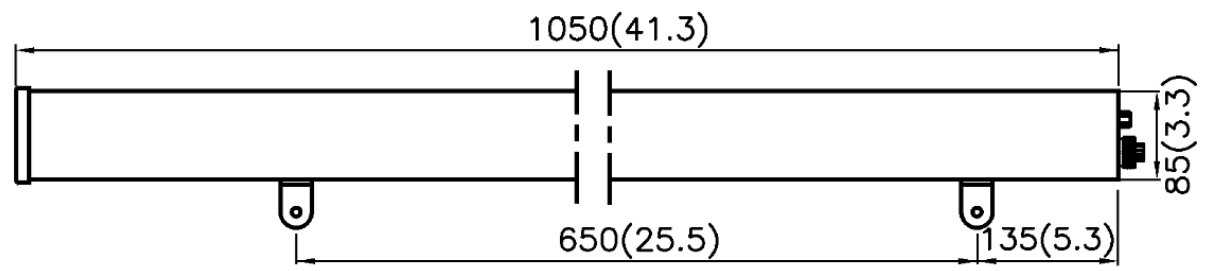
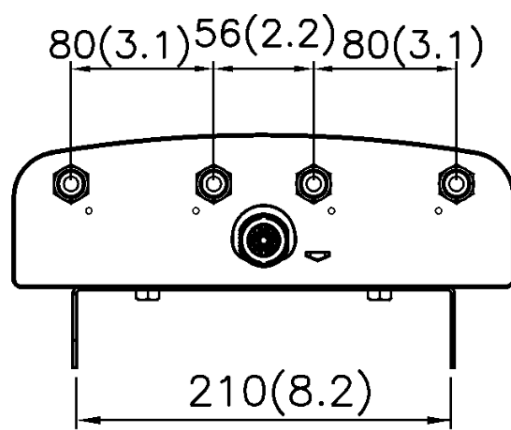
Note: Coloured box sizes do not represent antenna sizes.

| Array | Frequency MHz | Ports | RET ID |
|-------|---------------|-------|--------|
| Y1    | 2300 - 2700   | 1 - 2 | 1      |
| Y2    | 2300 - 2700   | 3 - 4 | 1      |

|                               |   |
|-------------------------------|---|
| <b>Configuration</b>          |   |
| 2300-2700MHz                  | One RET for both arrays : Y1, Y2                        |
| <b>Total Quantity</b>         | One RET Motor Controller                                |
| <b>Location and Interface</b> |   |
| 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         |
| <b>Electrical</b>             |   |
| Input Voltage                 | 10 - 30V  |
| Power Idle Mode               | < 1W  |
| Power Active Mode             | < 10W   |
| Protocol                      | 3GPP / AISG 2.0   |

Mechanical Illustration

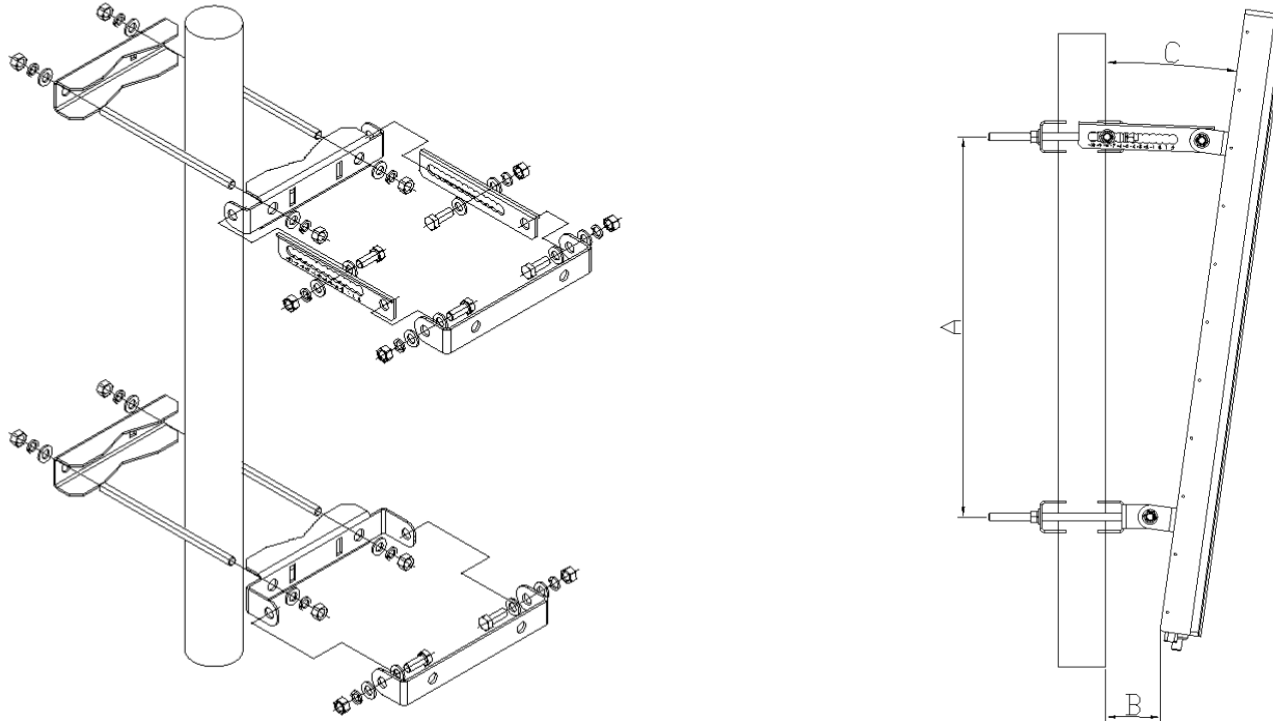
All measurements are in mm (in)



## TECHNICAL SPECIFICATION

### Mounting Bracket Kit

CL-V-105 M12 Dual Port Mounting Kit for Panel (Mount Kit included with antenna)



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

### Ordering Info

#### Order Code - Antenna

AW3165-E-F

#### 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')

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