



AW4055-E-F

Common Name - 18 (6/12) Port Small Cell Tri-Sector with eRET - 65°

| | | | | |
|--------------|-------|------|------|-----------|
| 1695-2690MHz | 6 | eRET | 17.0 | 65° |
| 3300-4200MHz | 12 | eRET | 13.8 | 65° |
| Frequency | Ports | Tilt | Gain | Beamwidth |

PRODUCT INFORMATION

This antenna has six Mid-band ports and twelve 3.5GHz (C-band) ports in a three foot high canister housing. The antenna is made up of three sectors orientated at 0°, 120° and 240° degrees azimuth. Each sector has two Mid-band ports and four 3.5GHz ports designed for 65° Azimuth Beamwidth.

Electrical Tilt allows optimisation of the Elevation Beam for throughput and coverage. Remote Electrical Tilt (RET) enables electrical tilt adjustment remotely over an IP Network or locally at the site using a hand held controller.

APPLICATION

Alpha Wireless multi-band small cell provides 3-sector coverage whilst in an ultra-compact radome design. This very special antenna provides 3G to 5G ports for ultimate data throughput. The antenna is designed to be installed in an urban environment where low visual impact is required. There are a number of mounting options available making deployments on lamp posts, utility poles, walls and other vertical structures possible.

STANDARD & CERTIFICATIONS

| | |
|---------------|---------------------|
| Certification | BS EN ISO 9001:2015 |
|---------------|---------------------|



FEATURES

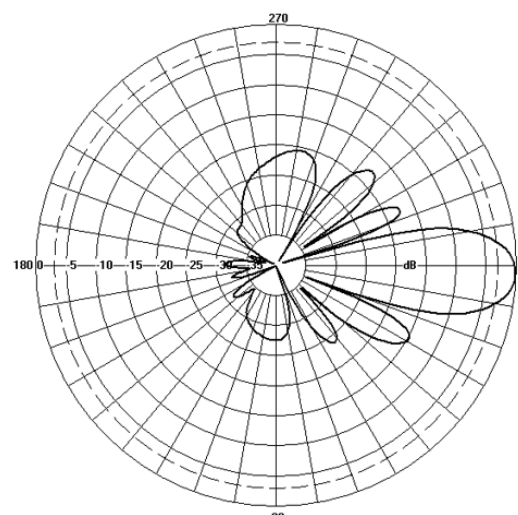
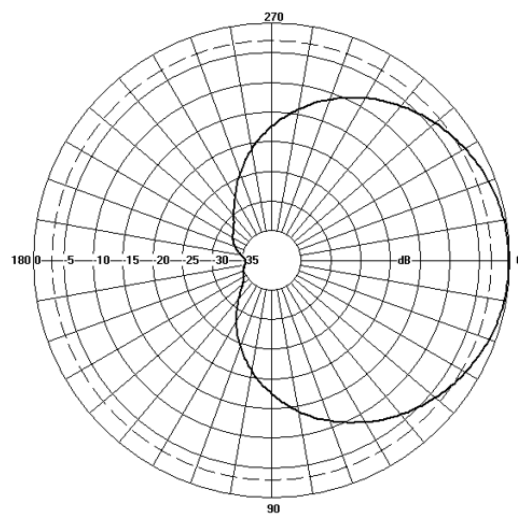
- Compact design - Low visual impact.
- 65° Azimuth Beamwidth on each of the three sectors.
- Total of six Mid-band ports and twelve 3.5GHz ports.
- Two Mid band ports per sector and four 3.5GHz ports per sector.
- High Band extends up to 4200MHz
- 1696-2690MHz eRET Tilt range of T2-T10.
- 3300-4200MHz eRET Tilt range of T2-T12.
- Three sectors orientated at 0, 120 and 240 degrees azimuth.
- Independent remote electrical tilt control across all three sectors.

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

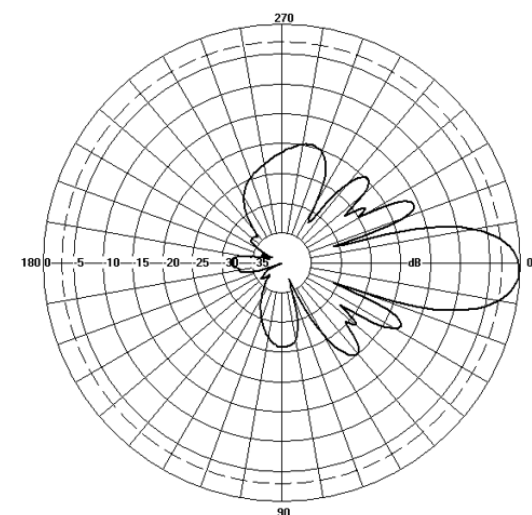
TECHNICAL SPECIFICATION

| Electrical Specifications | | | | | | | | |
|----------------------------------|-------|---------|----------------------|------------|------------|------------|------------|------------|
| Frequency Range | | MHz | 1695-1995 | 1920-2300 | 2300-2690 | 3300-3500 | 3500-3800 | 3800-4200 |
| Polarisation | | Degree | +/- 45° Slant Linear | | | | | |
| Gain | Basta | dBi | 15.9±0.5 | 16.2±0.5 | 16.5±0.5 | 13.2±0.5 | 12.9±0.5 | 13.3±0.5 |
| | Max | dBi | 16.4 | 16.7 | 17.0 | 13.7 | 13.4 | 13.8 |
| Azimuth Beamwidth | | Degree | 68.2° ±1.8° | 70.4°±3.0° | 71.8°±2.8° | 65.3°±2.2° | 60.9°±4.6° | 55.3°±2.2° |
| Azimuth Beam Squint | | Degree< | | | | | | |
| Elevation Beamwidth | | Degree | 9.5°±1.5° | 8.4°±1.4° | 7.5°±1.6° | 17.6°±0.8° | 16.4°±0.9° | 15.2°±0.6° |
| Electrical Downtilt | | Degree | T2° - T10° | T2° - T10° | T2° - T10° | T2° - T12° | T2° - T12° | T2° - T12° |
| Electrical Downtilt Deviation | | Degree< | 2° | 2° | 2° | 2° | 2° | 2° |
| Impedance | | Ohms | 50 | | | | | |
| VSWR | | < | 1.5 | | | | | |
| Return Loss | | dB> | 14 | | | | | |
| Isolation | | dB> | 25 | 25 | 25 | 25 | 25 | 25 |
| Passive Intermodulation | | dBc< | -150 | -150 | -150 | -150 | -150 | -150 |
| Cross-Polar Discrimination (0°) | | dB> | 17 | 17 | 17 | 17 | 17 | 17 |
| Maximum Effective Power Per Port | | W | 100 | 100 | 100 | 50 | 50 | 50 |

Representative Pattern Files



1695 - 2690MHz



3300 - 4200MHz

Azimuth

Elevation

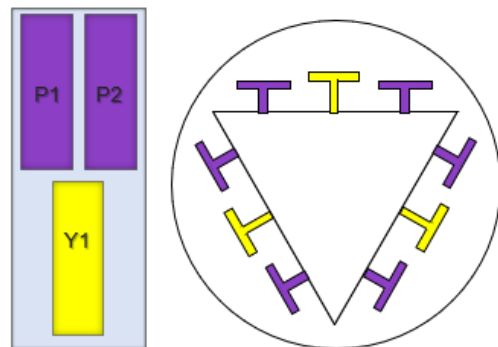
For radiation pattern files, please login at www.alphawireless.com

TECHNICAL SPECIFICATION

Mechanical Specifications

| | | |
|-------------------------------------------------|----------------------|------------------------------------|
| Dimensions | mm (in) | 1300 (51.2) x 273 (10.7) |
| Packing Size (LxWxD) | mm (in) | 1450(57) x 380 (15.0) x 380 (15.0) |
| Net Weight (antenna) | kg (lb) | 16.5 (34.6) |
| Shipping Weight | kg (lb) | 21 (46.3) |
| Connector Type (Female) | - | 4.3-10 |
| Connector Position | - | Bottom |
| Connector Quantity | - | 18 (6P Mid-Band, 12P High-Band) |
| Windload Frontal (at Rated Wind Speed: 150km/h) | N | 274(61.5) |
| Windload Lateral (at Rated Wind Speed: 150km/h) | N | 274 (61.5) |
| Survival Wind Speed | km/h (mph) | 200 (125) |
| Radome Material | - | UV Stabilised ABS capped ASA |
| Radome Colour | RAL | 7035 (light grey) |
| Product Compliance Environmental | - | RoHS |
| Lightning Protection | - | DC Grounded |
| Cold Temperature Survival | Celsius (Fahrenheit) | -40 (-40) |
| Hot Temperature Survival | Celsius (Fahrenheit) | 70 (158) |

Array Layout and RET Information

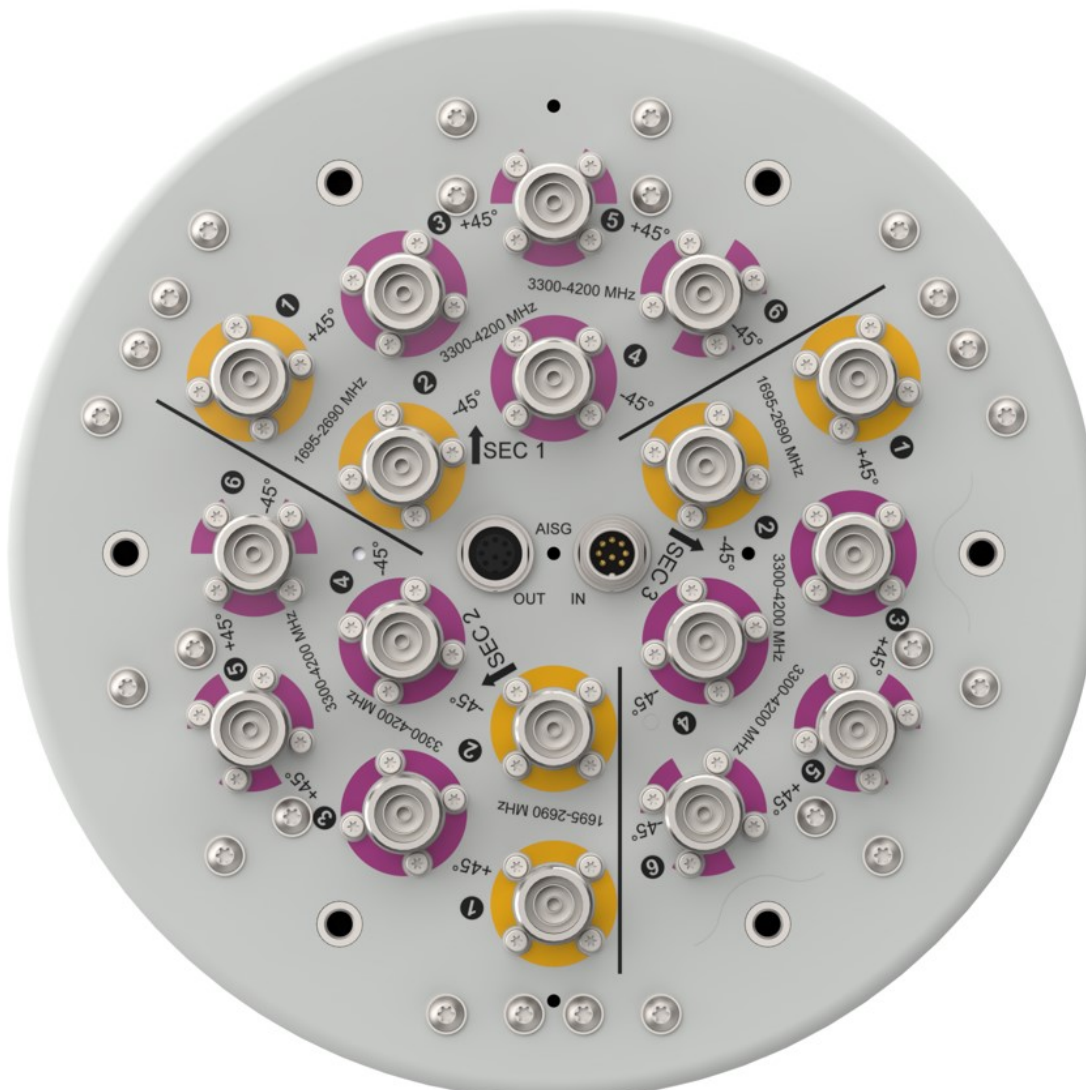
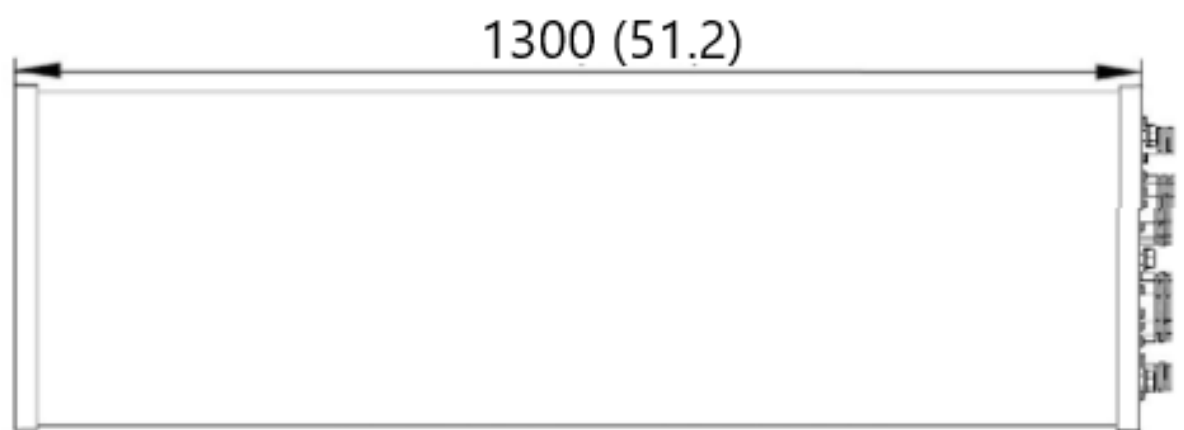
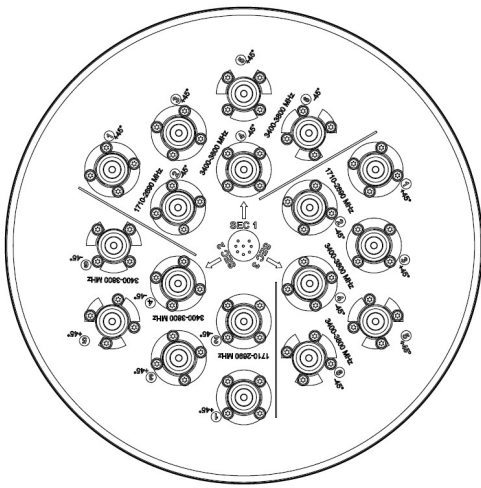


Note: Coloured box sizes do not represent antenna sizes.

| Array | Frequency MHz | Ports | RET ID |
|-------|---------------|-------|--------|
| Y1 | 1695 - 2690 | 1 - 2 | 1 |
| P1 | 3300 - 4200 | 3 - 4 | 2 |
| P2 | 3300 - 4200 | 5 - 6 | 2 |

| Configuration | |
|-------------------------------|-------------------------------------------------|
| 1695 - 2690 MHz | One RET per array: Y1 |
| 3300 - 4200 MHz | One RET per two arrays: P1, P2 |
| Total Quantity | Six RET Motor Controllers |
| Location and Interface | |
| RET Controller Location | Inside antenna radome housing |
| RET Interface | Male AISG 8 Pin DIN connector. |
| RET Interface Quantity | Single Male AISG 8 Pin DIN connector |
| 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

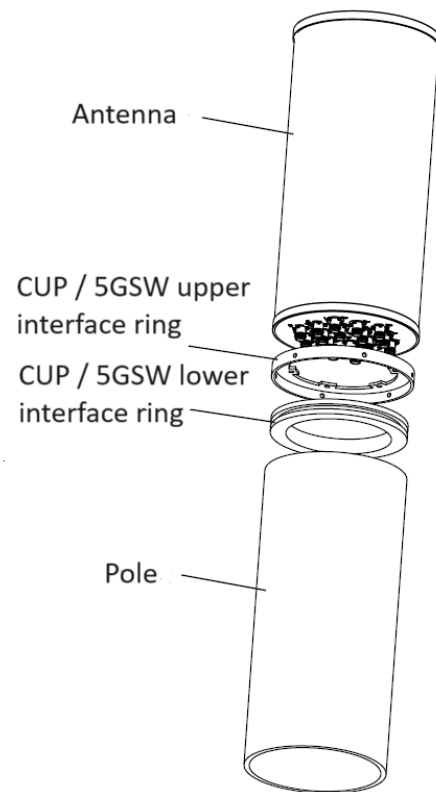
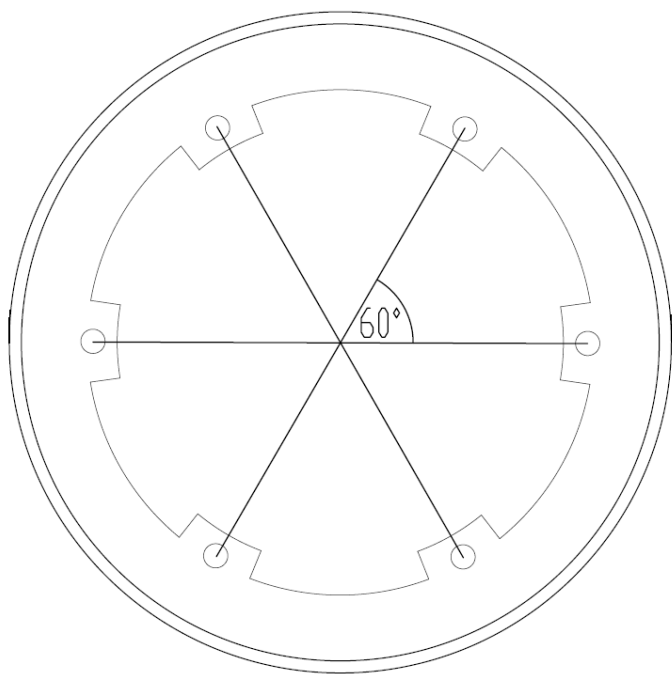


TECHNICAL SPECIFICATION

Mounting Bracket Kit

Note: The AW4055-E-F is not supplied with a mounting bracket.
CL-V-190 is an example of a Mounting Bracket that may be used with the antenna.
Mount brackets can be designed for particular application, e.g. Top of Pole Mount, Side of Pole Mount, depending on customer requirements

CL-V-190 (For Illustration only. Upper and Lower mount interface rings are not included with antenna)



| Mounting Kit Tilt Range | Mounting Kit Material | Mounting Kit Pole Diameter |
|-------------------------|------------------------------------|----------------------------|
| N/A | Mild Steel with Zinc Plated Finish | 273mm |

Ordering Info

Order Code - Antenna

AW4055-E-F

Order Code - Accessories

AW1012-2-FM-FM

AW1012-2-FM-NM

AW1014-2-FM-TM

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")

Enquiries

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