DATASHEET

# AW3795-E-F

**Common Name-** 4 Port, 34", 33⁰ Azimuth, Dual Sector mechanically offset by 60⁰

| 3400 - 3800 MHz | 4 | eRET | 20.2 | 33⁰ |
|---|---|---|---|---|
| Frequency | Ports | Tilt | Gain | Beamwidth |

## PRODUCT INFORMATION

This product was developed to offer a narrow Azimuth Beam with two 2-port sectors. This antenna is Internally cascaded which means the 2 x RCU's are controlled by a single AISG 2.0 M/F Interface. The antenna has reduced Azimuth Sidelobes (<25dB). Each AW3795 houses two sectors 33⁰ Azimuth beamwidth. The two sectors are orientated mechanically so that there is a 60⁰ angle between the Azimuth Beam directions.

The AW3795-E-F has been developed for a six-sector site application. Each AW3795 houses two 2-port 33° Azimuth sectors in one radome. The two interior sectors are positioned at 60° to each other. Using three AW3795 with 120° Azimuth separation provides 360° Azimuth coverage with six sectors positioned every 60°, including n48 and n78.

## APPLICATION

Integrated remote electrical tilt allows instant optimization to improve coverage and throughput. The horizontally spaced array allows optimum MIMO performance with dual 2x2 operation or receive diversity RF functions. Superior SNIR enables higher modulation schemes for maximum throughput. The AW3795 has been developed for a six-sector site application. Each AW3795 houses two 33⁰ sectors with 60⁰ Azimuth separation. When combined with two other AW3795 units positioned at 120⁰ Azimuth separation, this results in 360⁰ Azimuth coverage with sectors positioned at every 60⁰.

## FEATURES

- Two 2x2 MIMO sectors - Azimuth Beam 60⁰ separated.
- Azimuth Beamswidths of 33⁰.
- Azimuth Sidelobes suppression is <25dB - reducing cochannel interference from adjacent sectors.
- Narrow Azimuth beam to increase site capacity.
- Enhanced tilt range of 0 to 10 degrees.

## STANDARD & CERTIFICATIONS

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

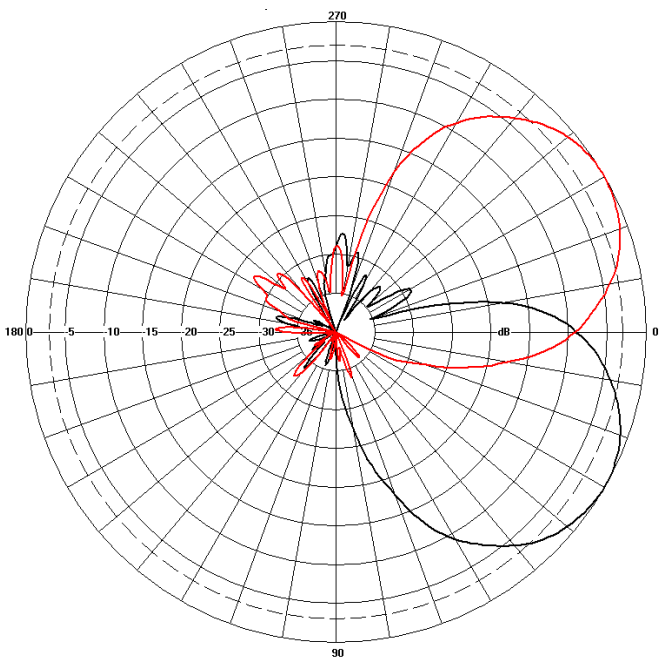
*The paramenters in this specification follow the definitions and recommendations per NGMN P-Basta, Release 9.6.*

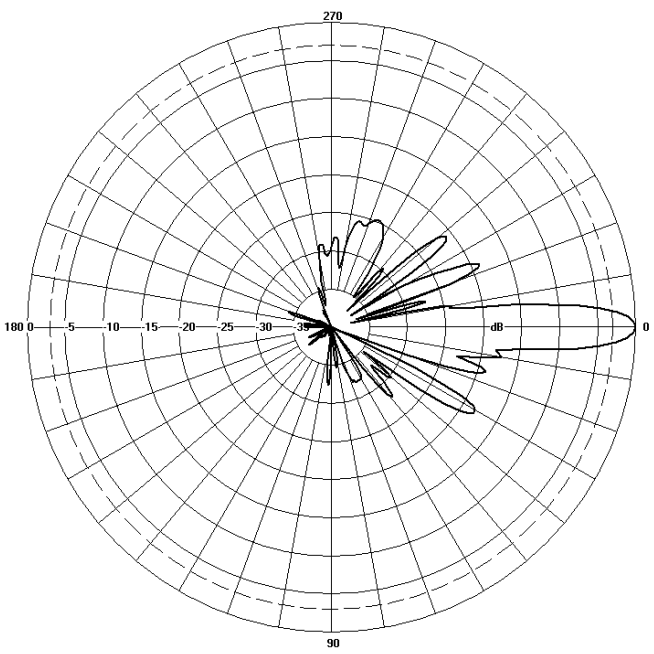
# AW3795-E-F

## TECHNICAL SPECIFICATION

| Electrical Specifications | | | |
|---|---|---|---|
| Frequency Range | | MHz | 3400 - 3800 |
| Polarisation | | Degree | +/- 45º Slant Linear |
| Gain | Basta | dBi | 19.7±0.5 |
| | Max | dBi | 20.2 |
| Azimuth Beamwidth | | Degree | 33º (+/- 3º) |
| Azimuth Beam Squint | | Degree< | 3º |
| Elevation Beamwidth | | Degree | 6.5 (+/- 0.5º) |
| Electrical Downtilt | | Degree | T0º - T10º |
| Electrical Downtilt Deviation | | Degree< | 1º |
| 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> | 18 |
| Cross-Polar Discrimination (0°) | | dB> | 16 |
| Maximum Effective Power Per Port | | W | 100 |
| Azimuth Sidelobes, Peak to 80° | | dB> | 25 |

## Representative Pattern Files




| Azimuth | Elevation |
|---|---|

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

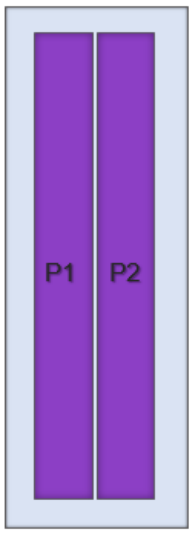
# AW3795-E-F

## TECHNICAL SPECIFICATION

### Mechanical Specifications

| | | |
|---|---|---|
| Dimensions | mm (in) | 855.5 (33.7) x 322 (12.7) x 115 (4.5) - (LxWxD) |
| Packing Size (LxWxD) | mm (in) | 980 (38.6) x 380 (15) x 220 (8.7) |
| Net Weight (antenna) | kg (lb) | 9.5 (21) |
| Net Weight (mount) | kg (lb) | 3.1 (6.8) |
| Shipping Weight | kg (lb) | 12.6 (27.8) |
| Connector Type (Female) | - | 4.3-10 |
| Connector Quantity | - | 4 |
| Connector Position | - | Bottom |
| Windload Frontal (at Rated Wind Speed: 150km/h) | N (lbf) | 278 (62) |
| Windload Lateral (at Rated Wind Speed: 150km/h) | N (lbf) | 116 (26) |
| Survival Wind Speed | km/h (mph) | 200 (125) |
| Radome Material | - | ASA Capped ABS |
| 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.*

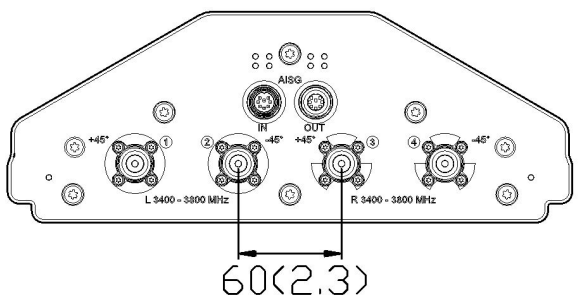
| Array | Frequency MHz | Ports | RET ID |
|---|---|---|---|
| P1 | 3400 – 3800 | 1 – 2 | 1 |
| P2 | 3400 – 3800 | 3 – 4 | 1 |

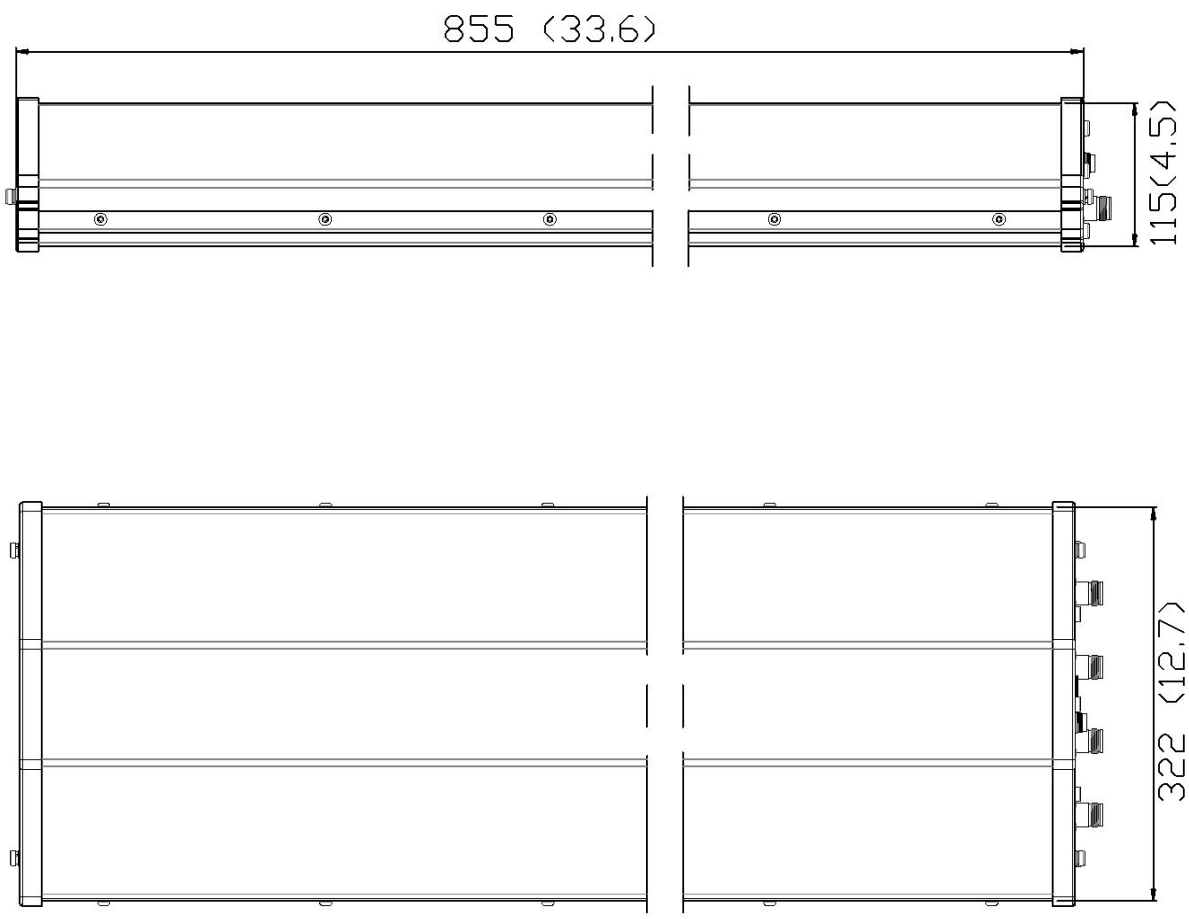
| **Configuration** | |
|---|---|
| 3400-3800 MHz | One RET for both arrays : P1, P2 |
| **Total Quantity** | One RET Motor Controller |
| **Location and Interface** | |
| RET Controller Location | Inside antenna radome housing |
| RET Interface | Pair of AISG 8 Pin DIN connectors, one male, one female |
| 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 |

# AW3795-E-F

## Mechanical Illustration

**All measurements are in mm (in)**



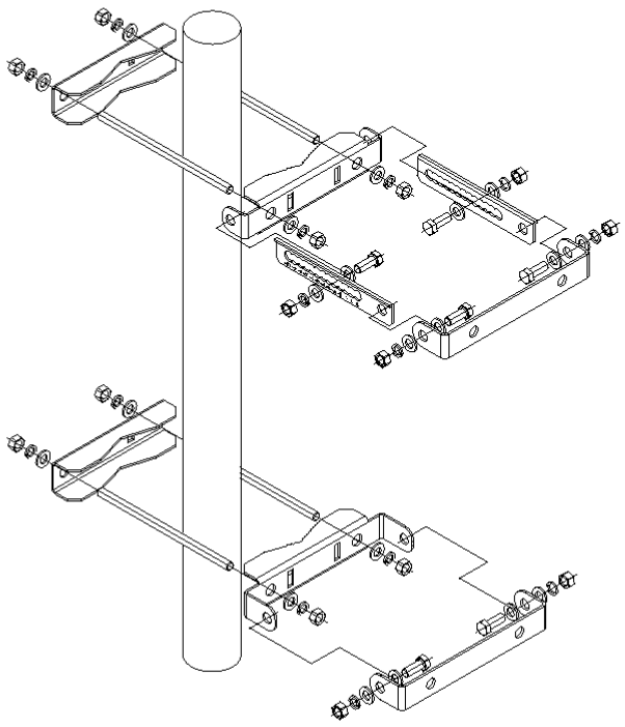



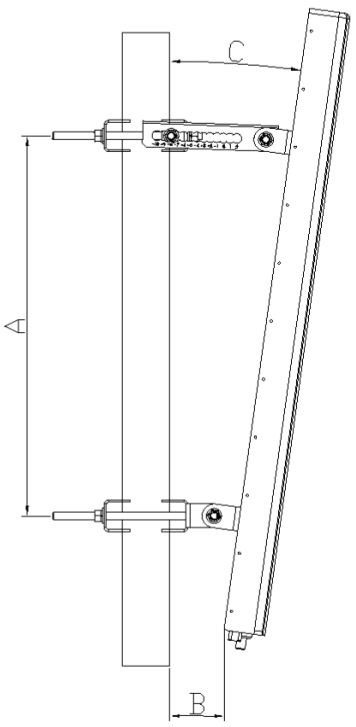

# AW3795-E-F

## TECHNICAL SPECIFICATION

### Mounting Bracket Kit

**CL-V-105 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 | Description |
|---|---|
| AW3795-E-F | Enclosed Remote Electrical Tilt (eRET) with 4.3-10 Connectors |
| **Order Code - Accessories** | **Description** |
| AW1012-2-FM-FM | 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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