



# DATASHEET

## AW3523-E-F

Common Name- 4 Port, 1M, B42, 43 & 48 - 45° - eRET

3300-3800MHz	4	eRET	18.5	45°
Frequency	Ports	Tilt	Gain	Beamwidth

### PRODUCT INFORMATION

This product was developed with a narrow azimuth in order to increase the number of sectors within a given area operating between 3300-3800MHz covering LTE Bands B42, 43 & 48 and 5G NR Band n78. This increases the capacity of the overall network. The product is available with enclosed Remote Electrical Tilt (eRET) function. Enclosed Remote Electrical tilt uses a AISG controller and motor to adjust the electrical tilt remotely.

### APPLICATION

Alpha Wireless sector antennas are the most commonly used solution for designing high quality wireless networks. The 45 degree azimuth patterns allows to increase capacity to 4 sectors without increasing the number of sites. The horizontally spaced array allows optimum MIMO performance with full 4x4 operation or receive diversity RF functions. Integrated remote electrical tilt antenna allow instant optimization to improve coverage and throughput.

### STANDARD & CERTIFICATIONS

Certification	BS EN ISO 9001:2015
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### FEATURES

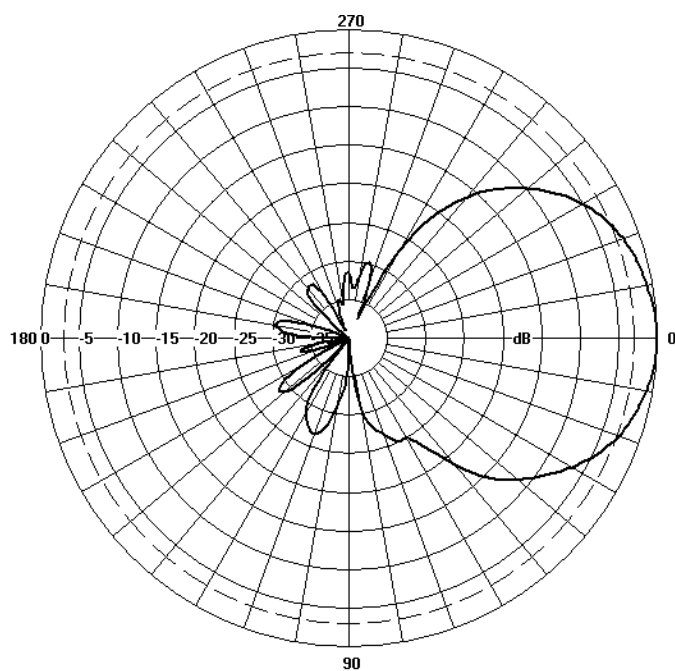
- Wide-band antenna that covers LTE Bands 42, 43 & 48 and 5G NR Band n78. Includes CBRS Band.
- 4x4 MIMO for maximum throughput
- Narrow Azimuth beam to increase site capacity
- Enhanced tilt range of 0 to 10 degrees

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

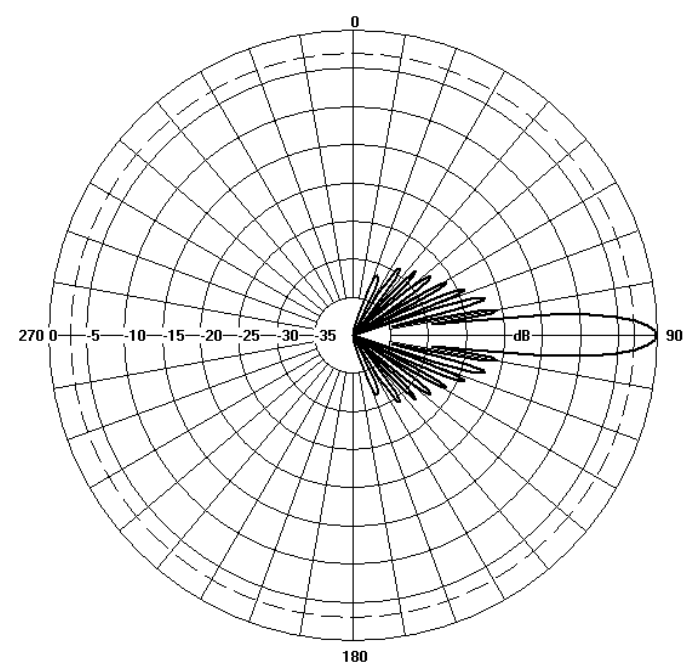
## TECHNICAL SPECIFICATION

Electrical Specifications			
Frequency Range		MHz	3300 - 3800MHz
Polarisation		Degree	+/-45° Slant Linear
Gain	Basta	dBi	18.1±0.5
	Max	dBi	18.6
Azimuth Beamwidth		Degree	45°
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>	16
Cross-Polar Discrimination (0°)		dB>	16
Maximum Effective Power Per Port		W	100

## Representative Pattern Files



Azimuth



Elevation

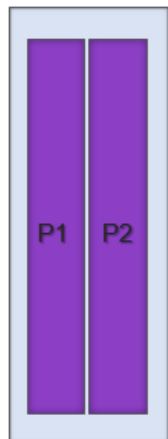
For radiation pattern files, please login at [www.alphawireless.com](http://www.alphawireless.com)

## TECHNICAL SPECIFICATION

## Mechanical Specifications

Dimensions	mm (in)	1002(39.4) x 412(16.2) x 107(4.2) - (LxWxD)
Packing Size (LxWxD)	mm (in)	1100 (43.3) x 460 (18.1) x 178 (7)
Net Weight (antenna)	kg (lb)	16(35.2)
Net Weight (mount)	kg (lb)	2(4.4)
Shipping Weight	kg (lb)	20(44)
Connector Type (Female)	-	4.3-10
Connector Quantity	-	4
Connector Position	-	Bottom
Windload Frontal (at Rated Wind Speed: 150km/h)	N (lbf)	430 (97)
Windload Lateral (at Rated Wind Speed: 150km/h)	N (lbf)	130 (30)
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



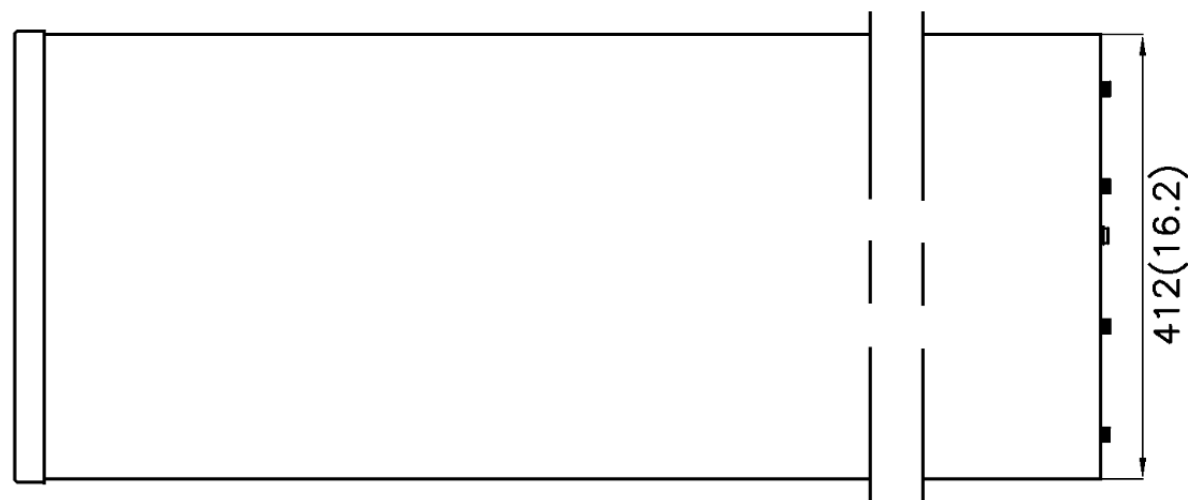
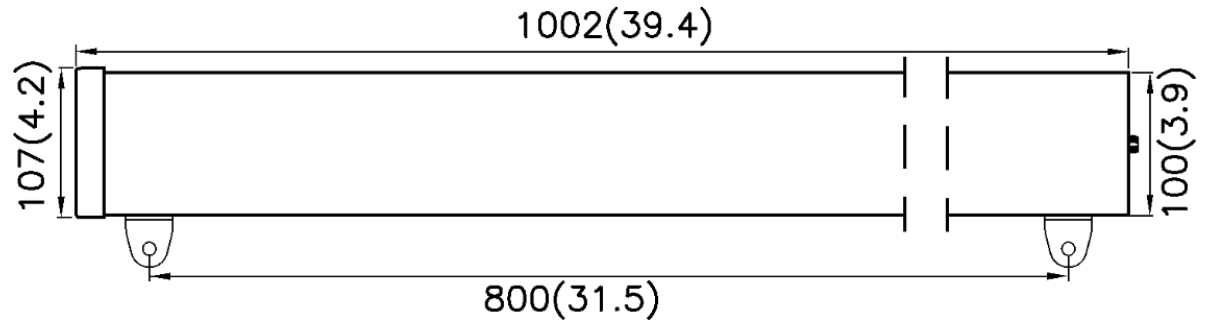
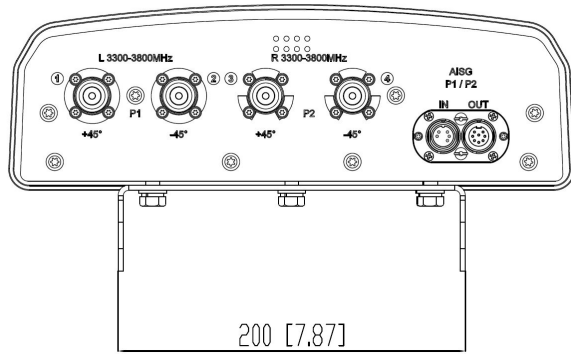
Note: Coloured box sizes do not represent antenna sizes.

Array	Frequency MHz	Ports	RET ID
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

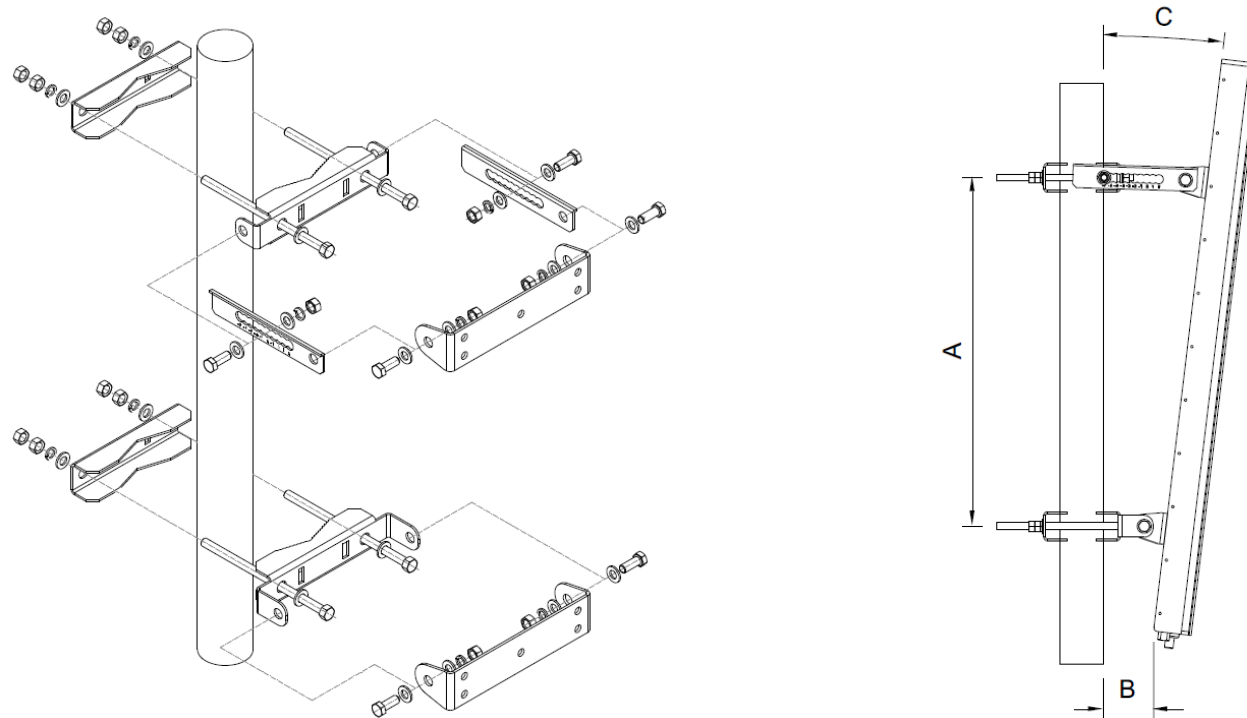
All measurements are in mm (in)



## TECHNICAL SPECIFICATION

### Mounting Bracket Kit

CL-V-110 Mounting Kit for Panel (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

AW3523-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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