DATASHEET

AW3913-E-F-ZB

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

Frequency	Ports	Tilt	Gain	Beamwidth
1695-2690MHz	6	eRET	14.0	65°
3300-4200MHz	12	eRET	13.8	65°

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

RoHS COMPLIANT

CE

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.

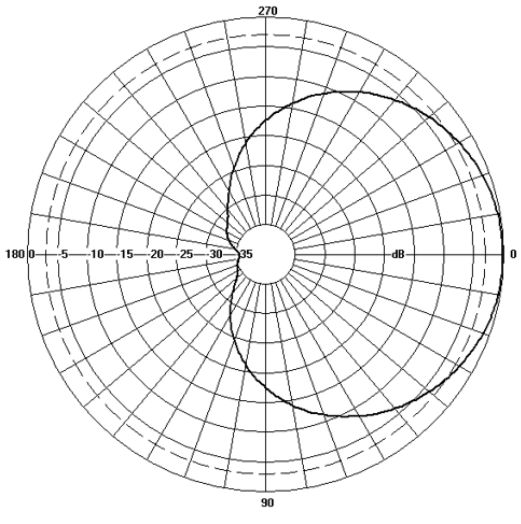
ALPHA WIRELESS

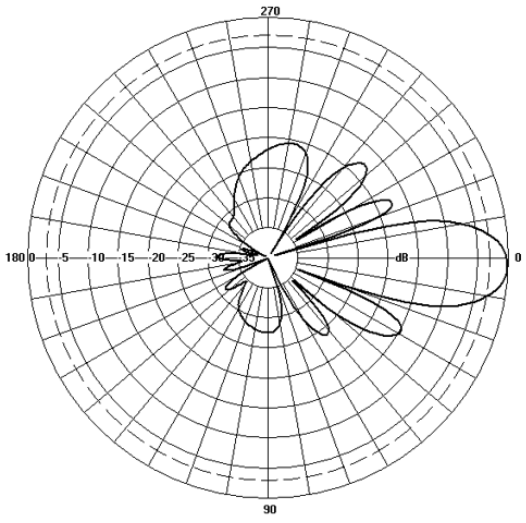
AW3913-E-F-ZB

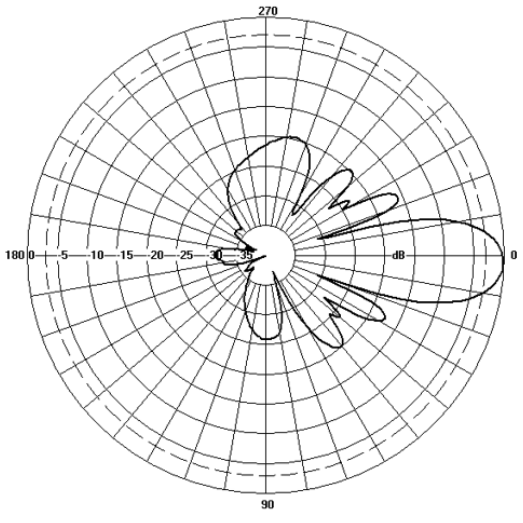
TECHNICAL SPECIFICATION

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	12.9±0.5	13.2±0.5	13.5±0.5	13.2±0.5	12.9±0.5	13.3±0.5
	Max	dBi	13.4	13.7	14.0	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°
Elevation Beamwidth		Degree	19.9°±1.5°	17.4°±1.4°	14.5°±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

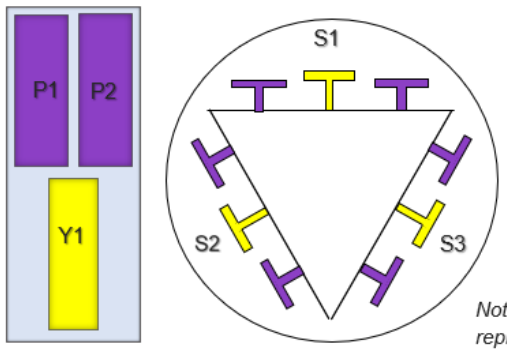
AW3913-E-F-ZB

TECHNICAL SPECIFICATION

Mechanical Specifications

Dimensions	mm (in)	900 (35.4) x 273 (10.7)
Volume	ft^3 (l)	7.44 (210)
Packing Size (LxWxD)	mm (in)	1025 (40.3) x 380 (15.0) x 380 (15.0)
Net Weight (antenna)	kg (lb)	10 (22)
Shipping Weight	kg (lb)	12 (26.4)
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	199 (45)
Windload Lateral (at Rated Wind Speed: 150km/h)	N	199 (45)
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



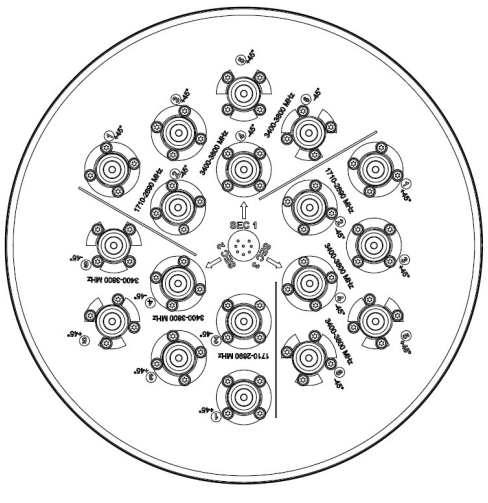
Note: Coloured box sizes do not represent antenna sizes.

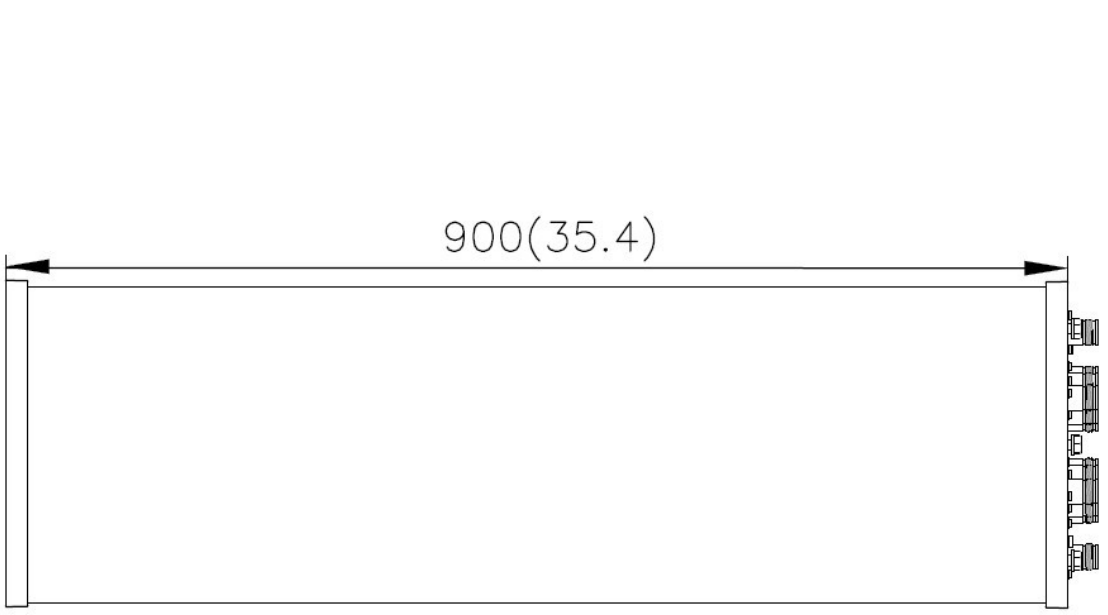
Sector	Array	Frequency MHz	Ports	Motor ID	AISG Serial Number Format
S1	P1	3300 – 4200	3 – 4	1	ASxxxxxxxxxxS1P1
S1	P2	3300 – 4200	5 – 6		
S1	Y1	1695 – 2690	1 – 2	2	ASxxxxxxxxxxS1Y1
S2	P1	3300 – 4200	3 – 4	1	ASxxxxxxxxxxS2P1
S2	P2	3300 – 4200	5 – 6		
S2	Y1	1695 – 2690	1 – 2	2	ASxxxxxxxxxxS2Y1
S3	P1	3300 – 4200	3 – 4	1	ASxxxxxxxxxxS3P1
S3	P2	3300 – 4200	5 – 6		
S3	Y1	1695 – 2690	1 – 2	2	ASxxxxxxxxxxS3Y1

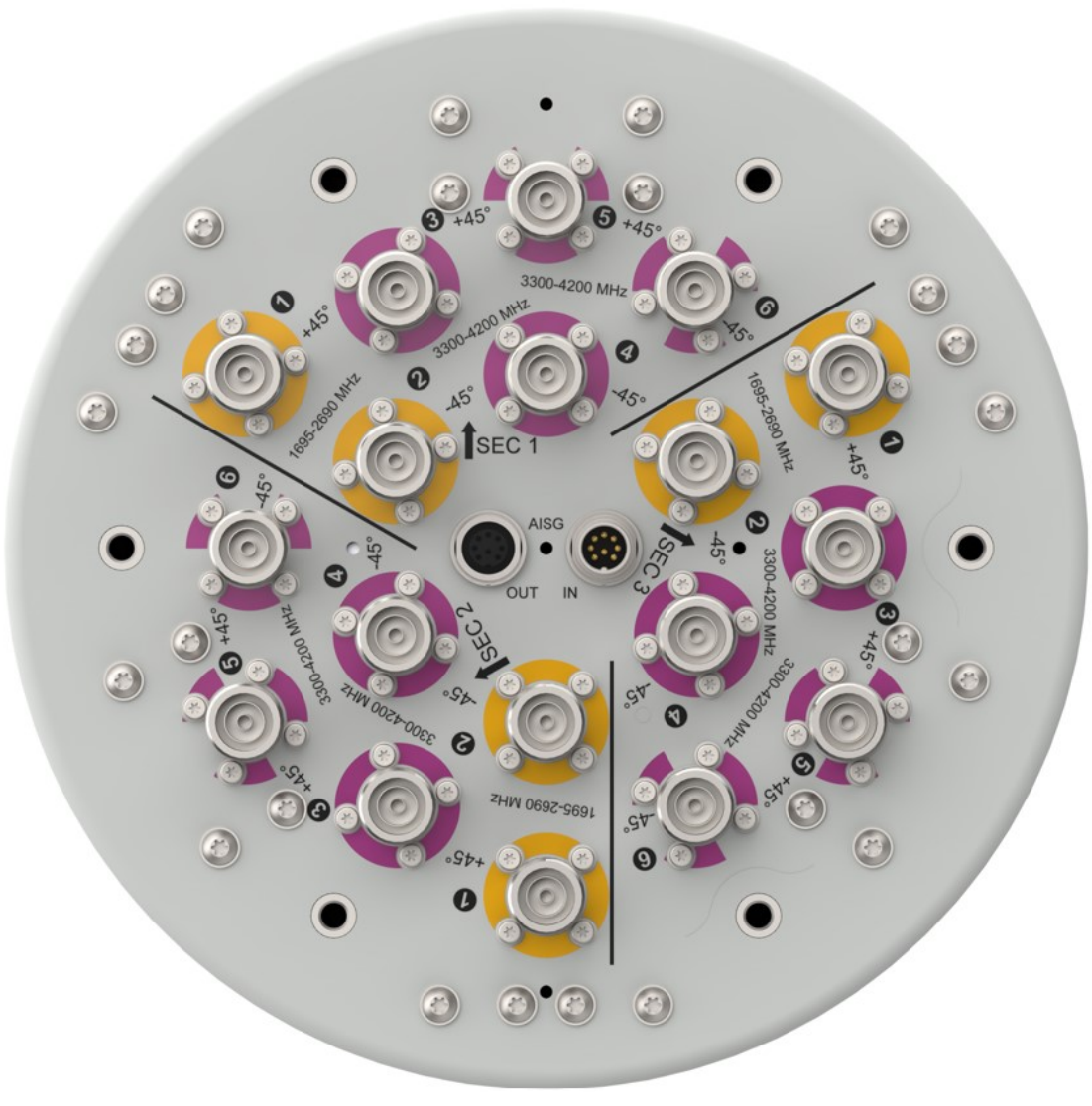
Configuration	
3300 - 4200 MHz	One RET per two arrays: P1, P2
1695 – 2690 MHz	One RET per array: Y1
Total Quantity	Six RET Motor Controllers
Location and Interface	
RET Controller Location	Inside antenna radome housing
RET Interface	Male AISG 8 Pin DIN connector.
RET Interface Quantity	Single Male AISG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

AW3913-E-F-ZB

Mechanical Illustration





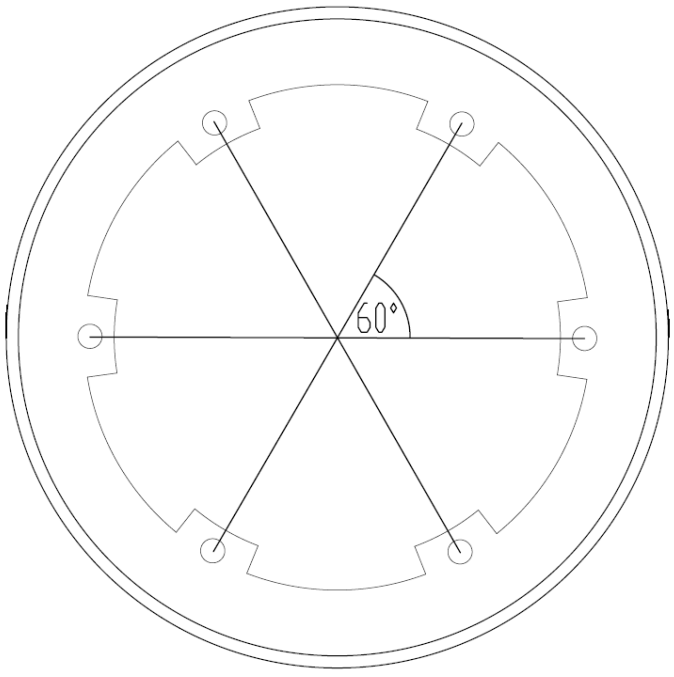


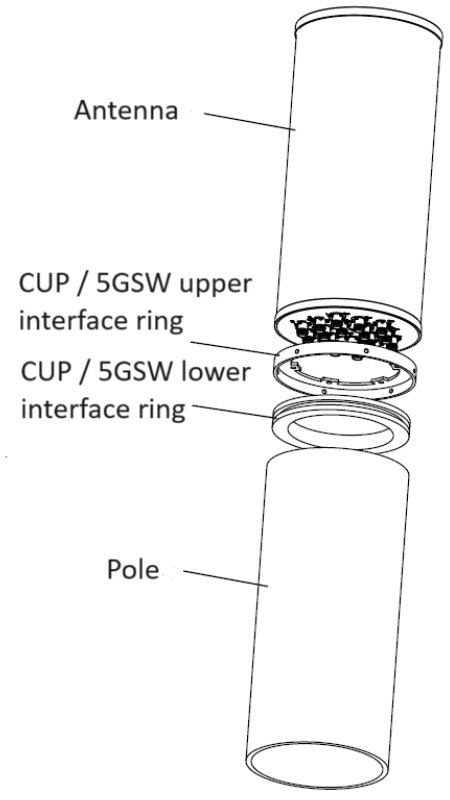
AW3913-E-F-ZB

TECHNICAL SPECIFICATION

Mounting Bracket Kit

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	Description
AW3913-E-F-ZB	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")

Enquiries

Global Headquarters
Ashgrove Business Centre,
Ballybrittas, Portlaoise,
R32 DT0A, IRELAND
sales@alphawireless.com
+353 57 86 33847

North America
7301 W. 129th Street, Suite 150,
Overland Park,
KS 66213, USA
sales@alphawireless.com
+1 913 279 0008

Australia
3/76 Regentville Rd,
Jamisontown,
NSW 2750, AUSTRALIA
sales@alphawireless.com
+ 61 2 4504 8212