



AW3871-E-F

Common Name 36 Port (4P/8P x 3) Multiband Tri-Sector

698-960MHz	12	eRET	14.4	65°
1710-2690MHz	24	eRET	17.8	65°
Frequency	Ports	Tilt	Gain	Beamwidth

PRODUCT INFORMATION

This antenna solution is being deployed on rooftops and macro pole applications globally. It is a multi-frequency solution that provides 4 ports per sector across 698-960MHz and 8 ports per sector across 1710-2690MHz (Mid-Band). The three sectors fit in a 14.2 Inch diameter canister to deliver a compact and aesthetically pleasing solution.

APPLICATION

Canisters support multiple antennas into one attractive package. These canisters deliver an elegant macro solution for pole-top, rooftop and streetworks applications. Alpha Wireless produces one of the smallest diameter canisters in the marketplace.

STANDARD & CERTIFICATIONS

Certification	BS EN ISO 9001:2015
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FEATURES

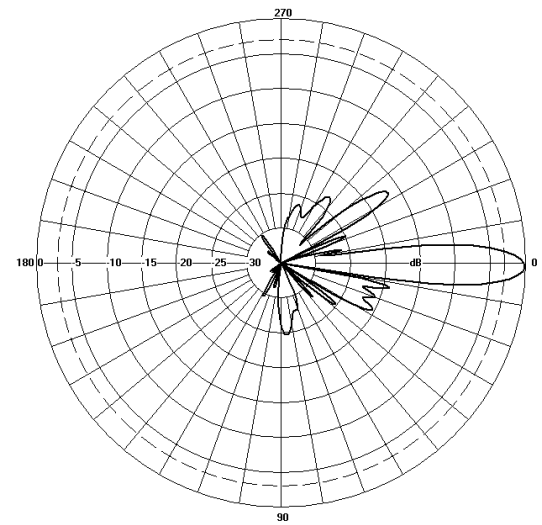
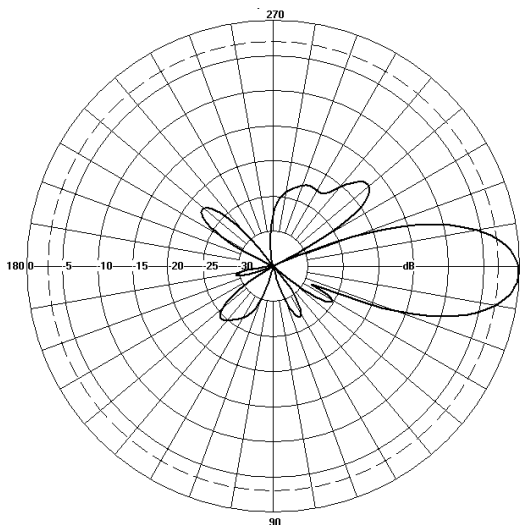
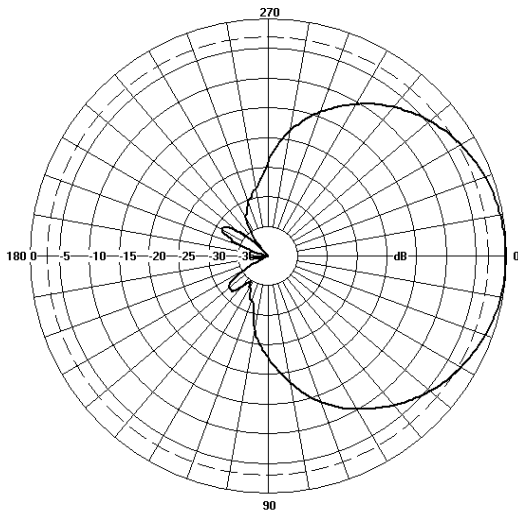
- Three sector canister with sectors orientated at 0°, 120° and 240° in the Azimuth Plane
- 698-960MHz x 4 Ports per sector
- 1710-2690MHz x 8 Ports per sector
- 698-960MHz tilt range T2° - T12°.
- 1710-2690MHz tilt range T2° - T12°.
- Low PIM performance to reduce interference.
- Flange mount design.

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

TECHNICAL SPECIFICATION

Electrical Specifications		Low Band			Mid Band			
Frequency Range	MHz	698-790	790-890	890-960	1710-1920	1920-2170	2300-2690	
Polarisation	Degree	±45° Slant Linear						
Gain	Basta	dBi	13.5±0.5	13.8±0.5	13.9±0.5	16.8±0.5	17.1±0.5	17.3±0.5
	Max	dBi	14.0	14.3	14.4	17.3	17.6	17.8
Azimuth Beamwidth	Degree	78°	76°	73°	61°	62°	62°	
Azimuth Beam Squint	Degree<	3°			3°			
Elevation Beamwidth	Degree	18.1°	16.4°	14.6°	7.5°	6.7°	5.7°	
Electrical Downtilt	Degree	T2° - T12°			T2° - T12°			
Electrical Downtilt Deviation	Degree<	1°	1°	1°	1°	1°	1°	
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	
Upper Sidelobe Suppression, Peak to 20°	dB>	16	16	16	16	16	16	
Cross-Polar Discrimination	dB>	15	15	15	15	15	15	
Max Power Per Port	W	300			250			

Representative Pattern Files



Azimuth

Elevation

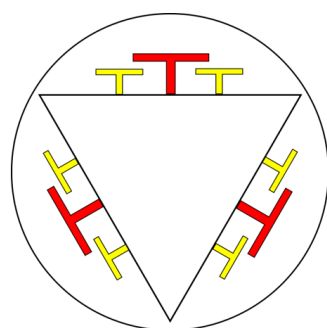
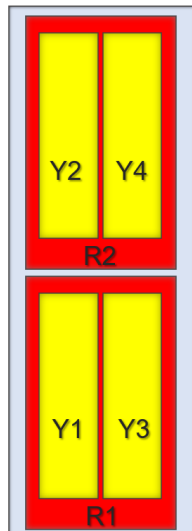
For radiation pattern files, please login at www.alphawireless.com

TECHNICAL SPECIFICATION

Mechanical Specifications

Dimensions	mm (in)	3400 (134) x 360 (14.2) - (L x Ø)
Packing Size (LxWxD)	mm (in)	3650 (143) x 500 (20) x 590 (23)
Net Weight (antenna)	kg (lb)	100 (220)
Shipping Weight	kg (lb)	150 (330)
Connector Type (Female)	-	4.3-10
Connector Position	-	Bottom
Connector Quantity	-	36 (12P Low band, 24P Mid band)
Windload Frontal (at Rated Wind Speed: 150km/h)	N (lbf)	1087 (245)
Windload Lateral (at Rated Wind Speed: 150km/h)	N (lbf)	1087 (245)
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



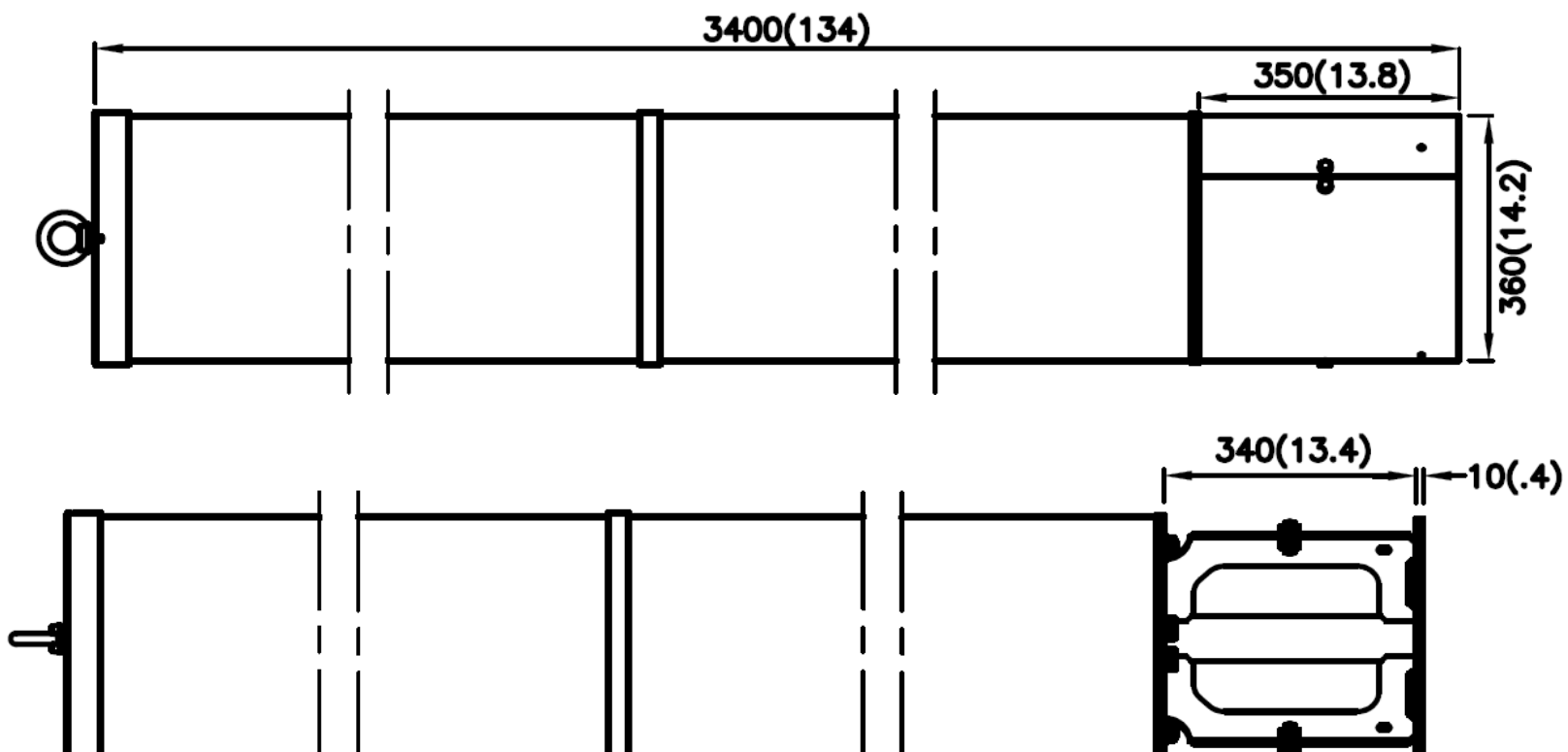
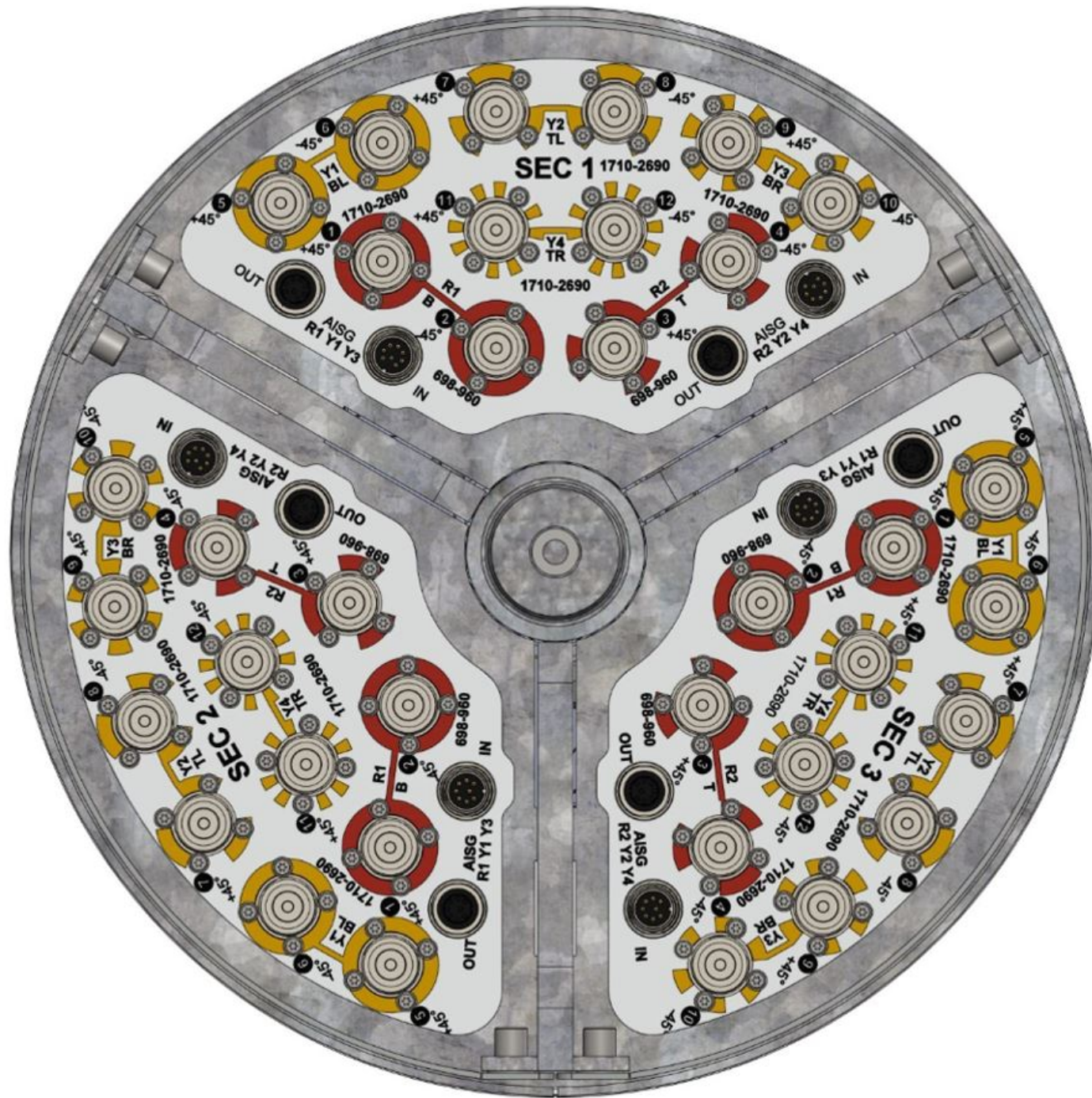
Array layout depicts one individual sector.
Note: Coloured box sizes do not represent antenna sizes.

Array	Frequency MHz	Ports	RET ID
R1	698 – 960	1 – 2	1
R2	698 – 960	3 – 4	2
Y1	1710 – 2690	5 – 6	3
Y2	1710 – 2690	7 – 8	4
Y3	1710 – 2690	9 – 10	5
Y4	1710 – 2690	11 – 12	6

Configuration	
698-960 MHz	One RET per array: R1, R2 x 3 Sectors
1710-2690 MHz	One RET per array: Y1, Y2, Y3, Y4 x 3 Sectors
Total Quantity	Eighteen RET Motor Controllers
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	Three pairs of AISG 8 Pin DIN connectors, one per sector
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

TECHNICAL SPECIFICATION

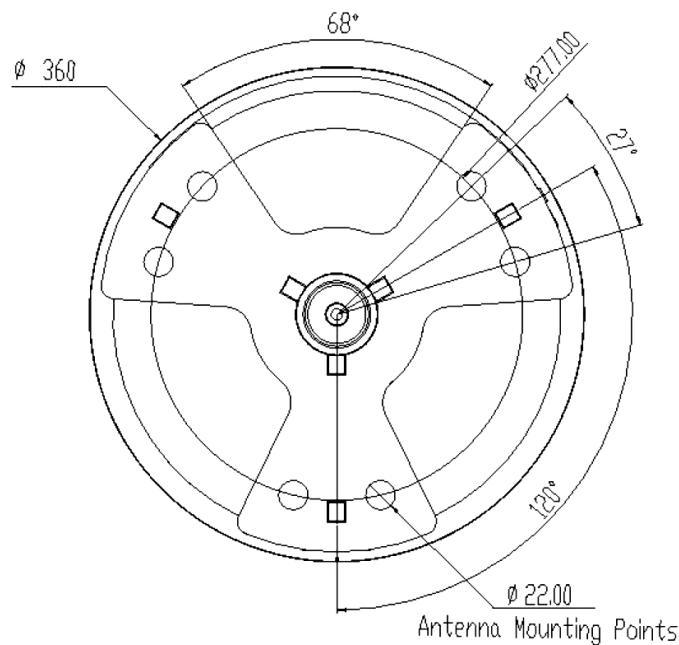
Mechanical Illustration



TECHNICAL SPECIFICATION

Mounting Bracket Kit

360mm Canister Flange Mount (Note: M18 Mounting Holes fit both 330mm and 360mm diameter canisters)



Mounting Kit Tilt Range	Mounting Kit Material	Mounting Kit Pole Diameter
0	Stainless Steel	152mm-254mm (6" to 10")

Ordering Info

Order Code - Antenna	Description
AW3871-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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