



AW3940-E-C

Common Name 48 Port (8P/8P x 3) Multiband Tri-Sector with Mount Plate for external AAU's

698-960MHz	24	FT	12	65°
1710-2690MHz	24	eRET	17.5	65°
Frequency	Ports	Tilt	Gain	Beamwidth

PRODUCT INFORMATION

This antenna solution is for deployment on rooftops and mini-macro pole applications globally. It is a multi-frequency solution that provides 8 ports per sector across 698-960MHz and 8 ports per sector across 1710-2690MHz (Mid-Band). The three sectors fit in a 16 Inch (406mm) diameter canister to deliver a compact and aesthetically pleasing solution.

The internal structure and Top Mount Plate have been designed to accommodate three externally mounted Active Antenna Units (AAU's) weighing not more than 100Kg. The AAU's will require a separate mount bracket which will mount onto the Top Plate so the AAU's will sit atop the Tri-Sector Canister. Power and Fibre cables can be routed through the Top Mount Plate through the internal structure and down to the cabinet at the base.

APPLICATION

Canisters support multiple antennas into one attractive package. These canisters deliver an elegant mini-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

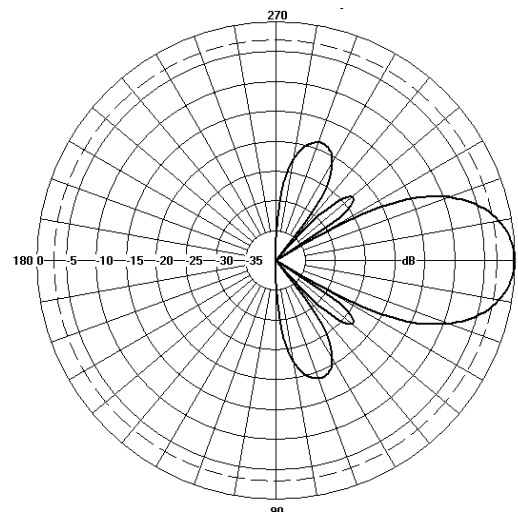
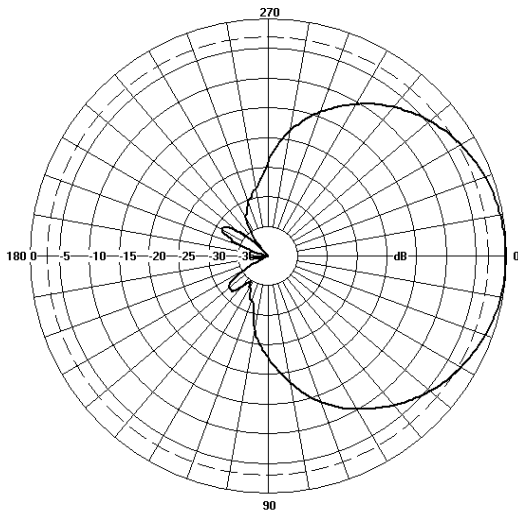
- Three sector canister with sectors orientated at 0°, 120° and 240° in the Azimuth Plane
- 698-960MHz x 8 Ports per sector
- 1710-2690MHz x 8 Ports per sector
- 698-960MHz fixed tilt T6°.
- 1710-2690MHz tilt range T2° - T12°.
- Low PIM performance to reduce interference.
- Flange mount design.
- Structure and Top Mount Plate design to accommodate three external Active Antenna Units.

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

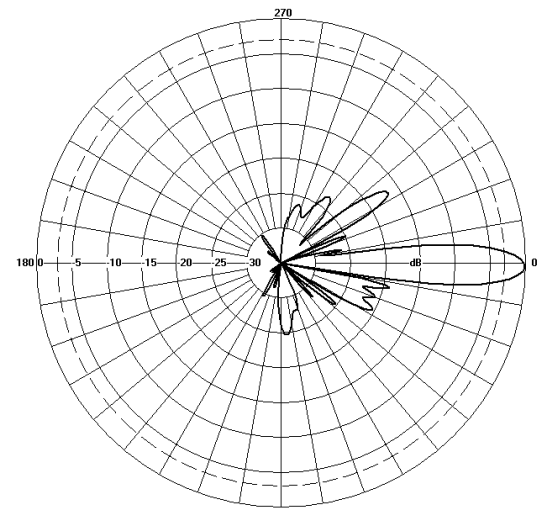
TECHNICAL SPECIFICATION

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	11.4±0.5	11.5±0.5	11.6±0.5	16.8±0.5	17.1±0.5	17.3±0.5
	Max	dBi	11.9	12.0	12.1	17.3	17.6	17.8
Azimuth Beamwidth	Degree	78°	76°	73°	61°	62°	62°	
Azimuth Beam Squint	Degree<	5°			5°			
Elevation Beamwidth	Degree	26°	25°	23°	7.5°	6.7°	5.7°	
Electrical Downtilt	Degree	T6°			T2° - T12°			
Electrical Downtilt Deviation	Degree<	FT	FT	FT	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>	N/A	N/A	N/A	16	16	16	
Cross-Polar Discrimination	dB>	15	15	15	15	15	15	
Max Power Per Port	W	300			250			

Representative Pattern Files



LB



MB

Azimuth

Elevation

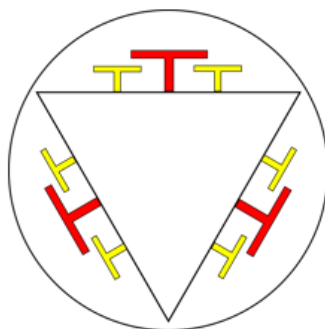
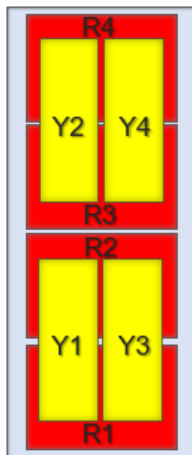
For radiation pattern files, please login at www.alphawireless.com

TECHNICAL SPECIFICATION

Mechanical Specifications

Dimensions	mm (in)	4250 (167.3) x 406 (16) - (L x Ø)
Packing Size (LxWxD)	mm (in)	4500 (177.2) x 500 (20) x 590 (23)
Net Weight (antenna)	kg (lb)	150 (331)
Shipping Weight	kg (lb)	200 (441)
Connector Type (Female)	-	MLOC
Connector Position	-	Bottom
Connector Quantity	-	48 (24P Low band, 24P Mid band)
Windload Frontal (at Rated Wind Speed: 150km/h)	N (lbf)	1550 (348)
Windload Lateral (at Rated Wind Speed: 150km/h)	N (lbf)	1550 (348)
Survival Wind Speed	km/h (mph)	200 (125)
Radome Material	-	UV Stabilised ASA capped ABS
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)
Environmental Protection	-	

Array Layout and RET Information



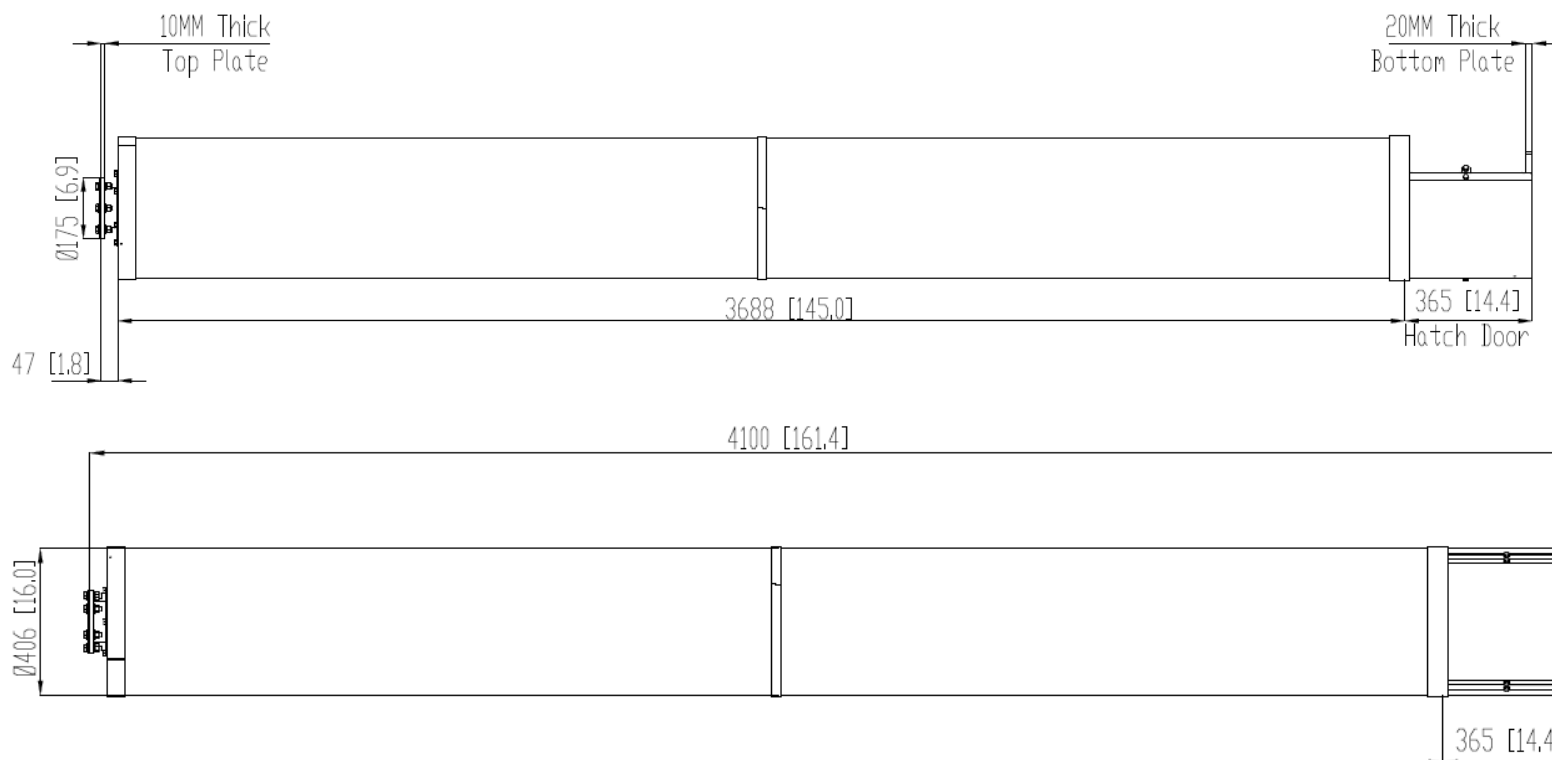
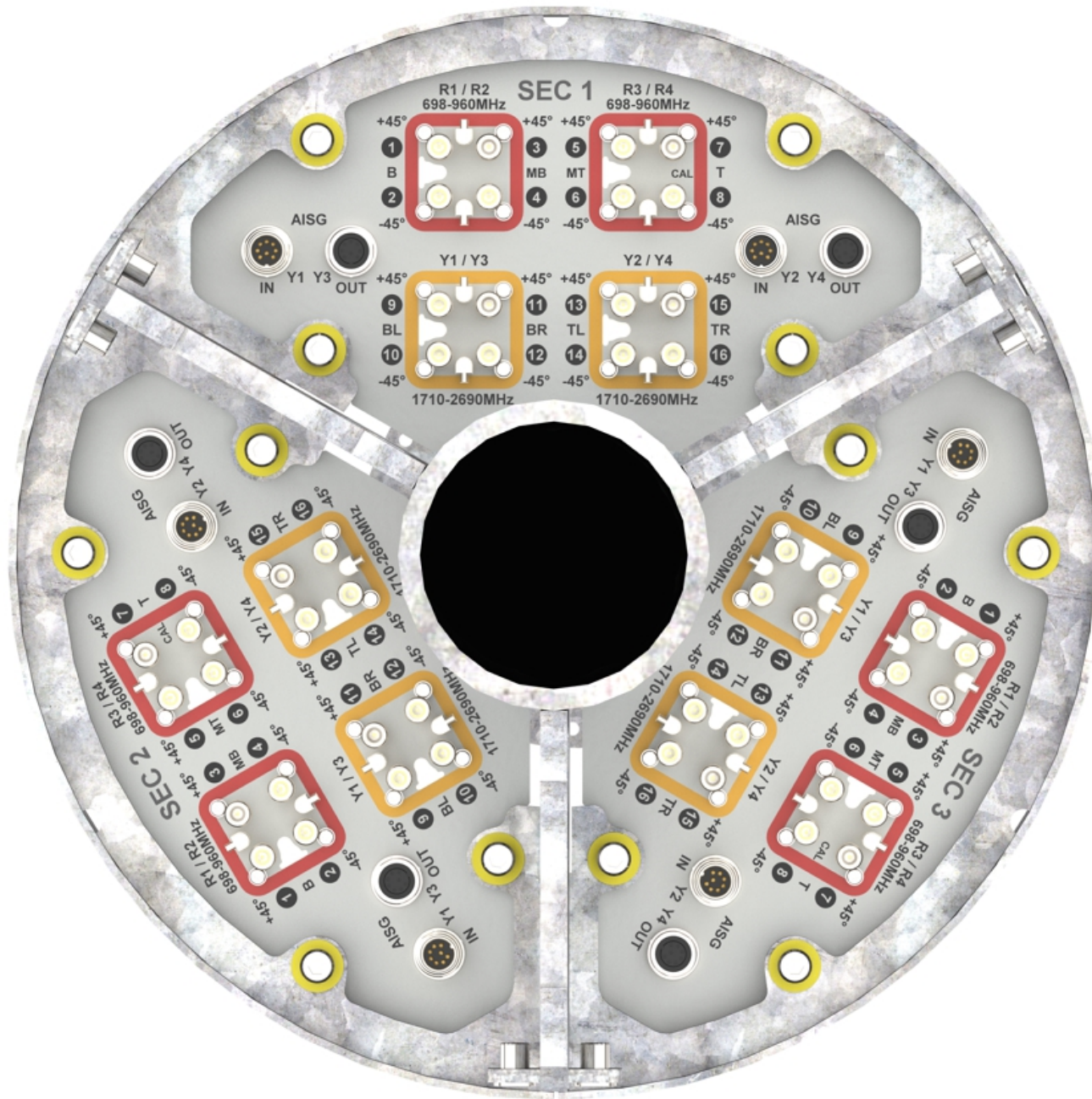
Array layout depicts one individual sector.
Note: Coloured box sizes do not represent antenna sizes.

Array	Frequency MHz	Ports	RET ID
R1	698 – 960	1 – 2	N/A
R2	698 – 960	3 – 4	N/A
R3	698 – 960	5 – 6	N/A
R4	698 – 960	7 – 8	N/A
Y1	1710 – 2690	9 – 10	1
Y3	1710 – 2690	11 – 12	2
Y2	1710 – 2690	13 – 14	3
Y4	1710 – 2690	15 – 16	4

Configuration	
698-960 MHz	Fixed Tilt
1710-2690 MHz	One RET per array: Y1, Y2, Y3, Y4 x 3 Sectors
Total Quantity	Twelve 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	Six pairs of AISG 8 Pin DIN connectors, two 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

Ordering Info	
Order Code - Antenna	Description
AW3940-E-C	Enclosed Remote Electrical Tilt (eRET) with MLOC Cluster Connectors
Order Code - Accessories	Description
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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