



AW3796-E-F

Common Name 39 Port,(12P/24+3P), 2.8M eRET, Tri-sector Antenna

1710-2690MHz	12	eRET	17.8	65°
3400-3800MHz	24+3	eRET	16.0	90°
Frequency	Ports	Tilt	Gain	Beamwidth

PRODUCT INFORMATION

The Alpha Wireless **AW3796** is a multiband Tri-Sector Canister that provides 39 ports in a 2.8 meter length. This antenna offers 2 ports per sector across mid band (1710 – 2690 MHz) and 8 ports per sectors that enables beamforming across (3400 – 3800 MHz). The sectors are equally spaced with 120 degree separation at 0, 120 and 240 degrees azimuth. This antenna provides remote electrical tilt (eRET) of the elevation beam that can be independently controlled for each band and sector. The AW3797 offers a compact macro type solution in one of the slimmest Tri-Sector form factors in the market. This aesthetically pleasing solution enables network operators to locate antennas closer to users due to favourable planning views compared to other antenna solutions. This antenna can be mounted on monopoles of 360mm diameter or on rooftops.



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. This canister is now 5G capable with the addition of 3.5GHz Beamforming sectors.

STANDARD & CERTIFICATIONS

Certification	BS EN ISO 9001:2015
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FEATURES

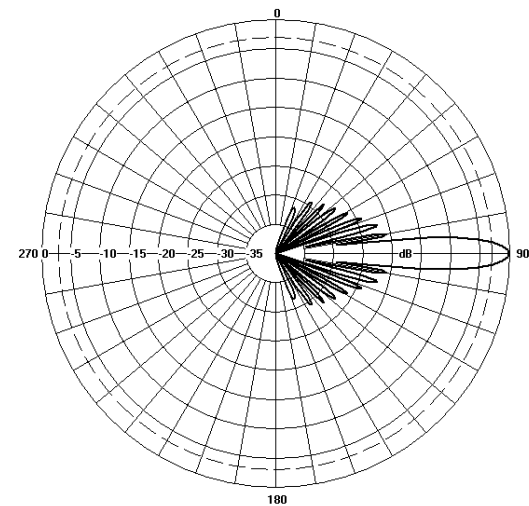
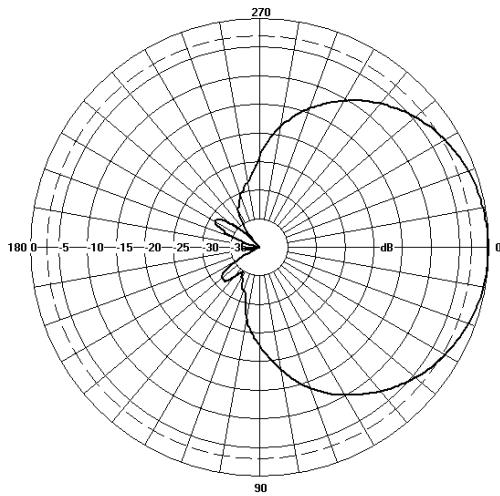
- Three sector canister with sectors orientated at 0°, 120° and 240° in the Azimuth Plane.
- 1710-2690MHz x 4 Ports per sector
- 3400-3800MHz x 8 Ports per sector with Beamforming capability.
- Beamforming sectors have half lambda spacing between Radiator Columns.
- 1710-2690MHz tilt range T0° - T10°.
- 3400-3800MHz tilt range T0° - T10°.
- 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						
Frequency Range	MHz	1710-1920	1920-2170	2170-2500	2500-2690	
Polarisation	Degree	±45° Slant Linear				
Gain	Basta	dBi	16.8±0.5	17.1±0.5	17.2±0.5	17.3±0.5
	Max	dBi	17.3	17.6	17.7	17.8
Azimuth Beamwidth	Degree	69°	64°	62°	60°	
Azimuth Beam Squint	Degree<	3°				
Elevation Beamwidth	Degree	6.5°	6.2°	6.1°	6.0°	
Electrical Downtilt	Degree	T0° - T10°	T0° - T10°	T0° - T10°	T0° - T10°	
Electrical Downtilt Deviation	Degree<	1°				
Impedance	Ohms	50				
VSWR	<	1.5				
Return Loss	dB>	14				
Isolation	dB>	25				
Passive Intermodulation	dBc<	-150				
Upper Sidelobe Suppression, Peak to 20°	dB>	16				
Cross-Polar Discrimination	dB>	15				
Max Power Per Port	W	250	250	250	250	

Representative Pattern Files



Azimuth

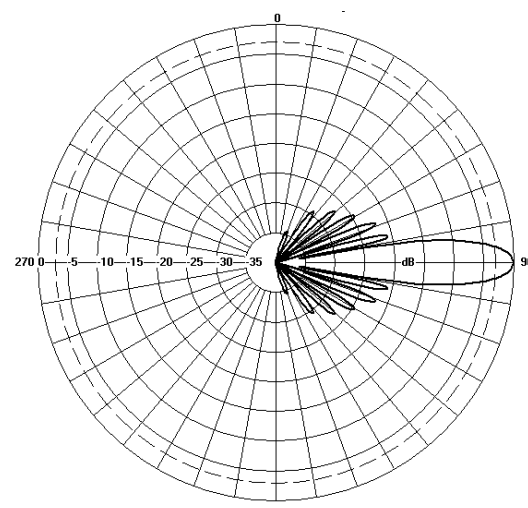
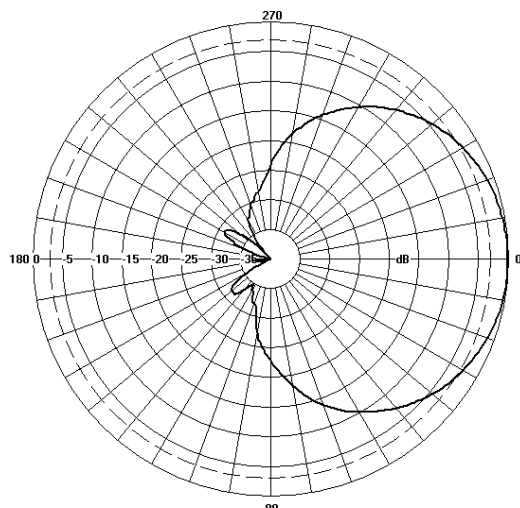
Elevation

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

TECHNICAL SPECIFICATION

Electrical Specifications		3400 - 3800MHz Beamforming	
Frequency Range	MHz	3400 - 3800MHz	
Polarisation	Degree	±45° Slant Linear	
Gain			
Single Column	dBi	15.5 ±1	
Broadcast Beam	dBi	16.5 ±1	
Service Beam	dBi	20 ±1	
Calibration Network			
Coupling Factor	dB	26 ±2	
Max Amp Deviation	dB <	0.7	
Max Phase Deviation	dB <	5	
Azimuth Beamwidth			
Single Column	3dB BW	90° ±15	
Broadcast Beam	3dB BW	65° or 90°	
Service Beam	3dB BW	30° ±1.5	
Azimuth Beam Squint	Degree <	5°	
Elevation Beamwidth	Degree	6.5° ±1	
Electrical Downtilt	Degree	T0° - T10°	
Electrical Downtilt Deviation	Degree <	1°	
Impedance	Ohms	50	
VSWR	<	1.5	
Return Loss	dB >	14	
Isolation	dB >	25	
Upper Sidelobe Suppression, Peak to 20°	dB >	16	
Cross-Polar Discrimination	dB >	14	
Max Power Per Port	W	150	

Radiation Pattern Files



Azimuth

Elevation

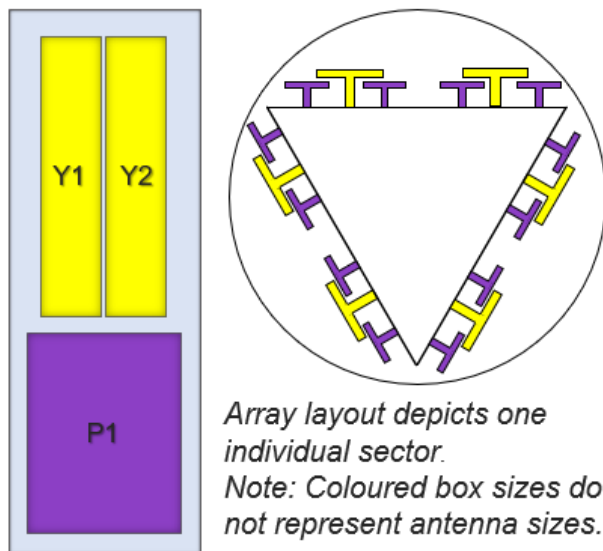
For radiation pattern files, please login at www.alphawireless.com

TECHNICAL SPECIFICATION

Mechanical Specifications

Dimensions	mm (in)	2753 (108.3) x 360 (14.2) - (L x Ø)
Packing Size (LxWxD)	mm (in)	2910 (114) x 500 (20) x 590 (23)
Net Weight (antenna)	kg (lb)	90 (198)
Shipping Weight	kg (lb)	139 (306)
Connector Type (Female)	-	4.3-10
Connector Position	-	Bottom
Connector Quantity	-	39 (12P Mid-Band, 24P 3.5GHz, 3P Calibration)
Windload Frontal (at Rated Wind Speed: 150km/h)	N (lbf)	895 (202)
Windload Lateral (at Rated Wind Speed: 150km/h)	N (lbf)	895 (202)
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

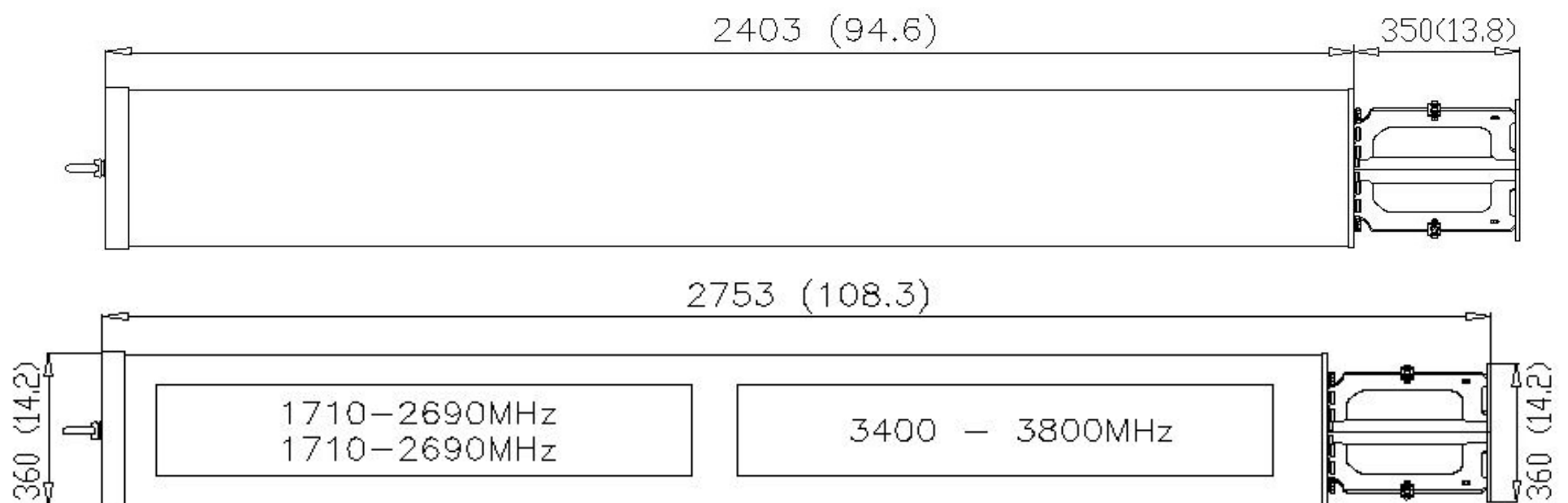


Array	Frequency MHz	Ports	RET ID
Y1	1710 - 2690	1 - 2	1
Y2	1710 - 2690	3 - 4	2
P1	3400 - 3800	5 - 12	3

Configuration	
1710-2690 MHz	One RET per array: Y1,Y2 x 3 Sectors
3400-3800 MHz	One RET per array: P1 x 3 Sectors
Total Quantity	Nine 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

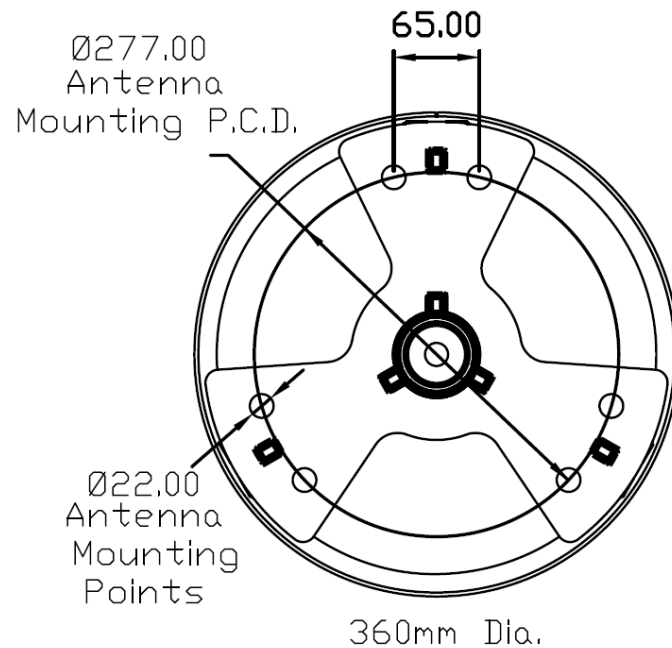
Mechanical Illustration



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
N/A	Galvanized Steel	N/A

Ordering Info

Order Code - Antenna

AW3796-E-F

Order Code - Accessories

AW1012-2-FM-FM

AW1012-2-FM-NM

AW1014-2-FM-TM

PADC 1000

SADC 2000

AW0326-3-PM-PF

AW0326-10-PM-PF

AW0326-25-PM-PF

AW0326-50-PM-PF

Description

Enclosed Remote Electrical Tilt (eRET) with 4.3-10 connectors.

Description

RF Jumper Cable, connector types 4.3-10 (m) / 4.3-10 (m), length 2 metres (6'6")

RF Jumper Cable, connector types 4.3-10 (m) / N-Type (m), length 2 metres (6'6")

RF Jumper Cable, connector types 4.3-10 (m) / Nex10 (m), length 2 metres (6'6")

Portable AISG Controller

Site AISG Controller

AISG Jumper Cable Lengths 3 metres (9' 10")

AISG Jumper Cable Lengths 10 metres (32' 9")

AISG Jumper Cable Lengths 25 metres (82')

AISG Jumper Cable Lengths 50 metres (164')

Enquiries

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