DATASHEET
AW3843-E-F

Common Name- 8 Port (4P/4P)1.8M Multiband Panel with 33° Azimuth

Frequency	Ports	Tilt	Gain	Beamwidth
2300-2700MHz	4	eRET	20.2	33°
3400-3800MHz	4	eRET	20.2	33°

PRODUCT INFORMATION

This solution provides 4 ports covering 2300-2700MHz (B40, B41) and 4 ports operating between 3300-3800MHz covering LTE Bands B42, 43 & 48 and 5G NR Band n48 and n78. This antenna offer a narrow 33 degree Azimuth Beam and eRET control. Remote Electrical Tilt allows tilt optimisation to improve coverage and throughput.

APPLICATION

Alpha Wireless sector antennas are the most commonly used solution for designing high quality wireless networks.
This antenna is designed to have a narrow Azimuth Beamwidth with good Sidelobe suppression intended to target a specific sector with minimal interference.
Integrated remote electrical tilt allows instant optimization to improve coverage and throughput.

STANDARD & CERTIFICATIONS

Certification	BS EN ISO 9001:2015

RoHS COMPLIANT

CE

FEATURES

- Wide-band antenna that covers LTE Bands 42, 43 & 48 and 5G NR Band n48 and n78. Includes CBRS Band.
- Narrow Azimuth beam to increase site capacity
- 4x4 MIMO capable.
- Azimuth Sidelobes supression is >25dB - reducing cochannel interference from adjacent sectors.
- Enhanced tilt range of 0 to 10 degrees.
- Integrated variable electrical tilt (eRET).

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

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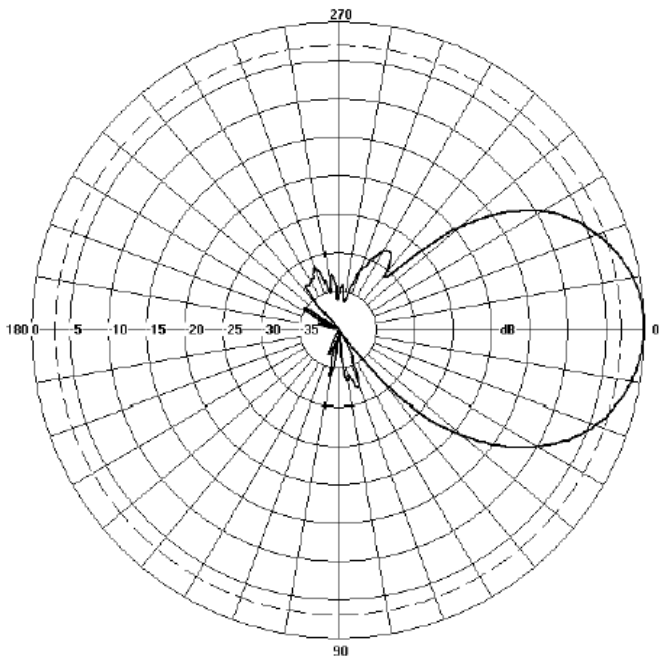
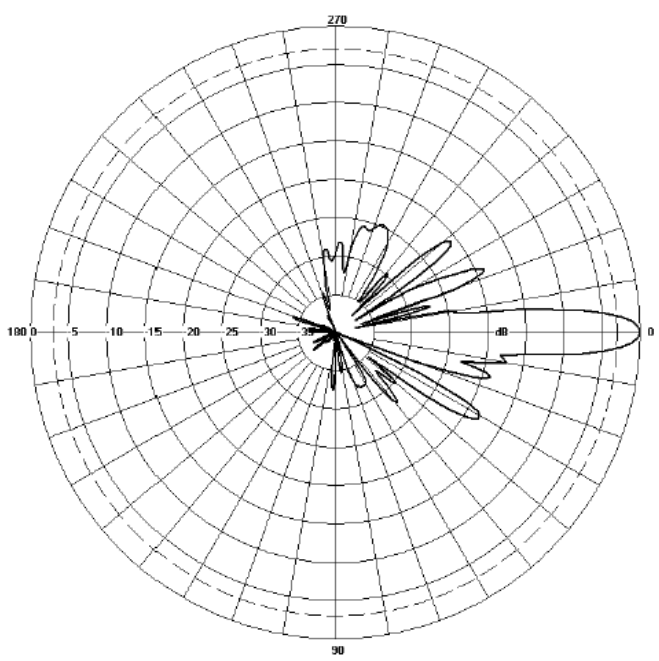
TECHNICAL SPECIFICATION

Electrical Specifications				
Frequency Range		MHz	2300 - 2700	3400 - 3800
Polarisation		Degree	+/- 45° Slant Linear	
Gain	Basta	dBi	19.7±0.5	19.7±0.5
	Max	dBi	20.2	20.2
Azimuth Beamwidth		Degree	33°	33°
Elevation Beamwidth		Degree	7.0° (+/- 1°)	6.8° (+/- 1°)
Electrical Downtilt		Degree	T0° - T10°	T0° - T10°
Electrical Downtilt Deviation		Degree<	1°	1°
Impedance		Ohms	50	50
VSWR		<	1.5	1.5
Return Loss		dB>	14	14
Isolation		dB>	25	25
Front to Back Ratio: Total Power +/-30°		dB>	30	30
Upper Sidelobe Suppression, Peak to 20°		dB>	18	18
Cross-Polar Discrimination		dB>	16	16
Maximum Effective Power Per Port		W	150	100

Representative Pattern Files





Azimuth	Elevation

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

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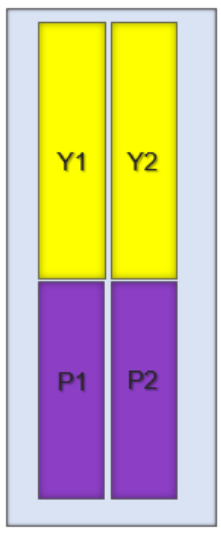
TECHNICAL SPECIFICATION

Mechanical Specifications

Dimensions	mm (in)	1898 (74.7) x 470 (18.5) x 115 (4.5) - LxWxH
Packing Size (LxWxD)	mm (in)	1915 (75.4) x 570 (22.5) x 260 (10.3)
Net Weight (antenna)	kg (lb)	25 (55.1)
Net Weight (mount)	kg (lb)	4.5 (9.9)
Shipping Weight	kg (lb)	37.5 (82.6)
Connector Type (Female)	-	4.3-10
Connector Quantity	-	8 (4 x 2.5GHz , 4 x 3.5GHz)
Connector Position	-	Bottom
Windload Frontal (at Rated Wind Speed: 150km/h)	N (lbf)	707 (158.9)
Windload Lateral (at Rated Wind Speed: 150km/h)	N (lbf)	136 (30)
Survival Wind Speed	km/h (mph)	200 (125)
Radome Material	-	Pultruded Fiberglass
Radome Colour	-	Light Gray
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
Y1	2300 – 2700	1 – 2	1
Y2	2300 – 2700	3 – 4	2
P1	3400 – 3800	5 – 6	3
P2	3400 – 3800	7 – 8	4

Configuration	
2300-2700 MHz	One RET for each array: Y1, Y2
3400-3800 MHz	One RET for each array: P1, P2
Total Quantity	Four 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	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

ALPHA WIRELESS

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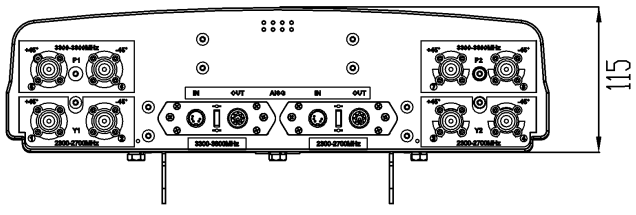
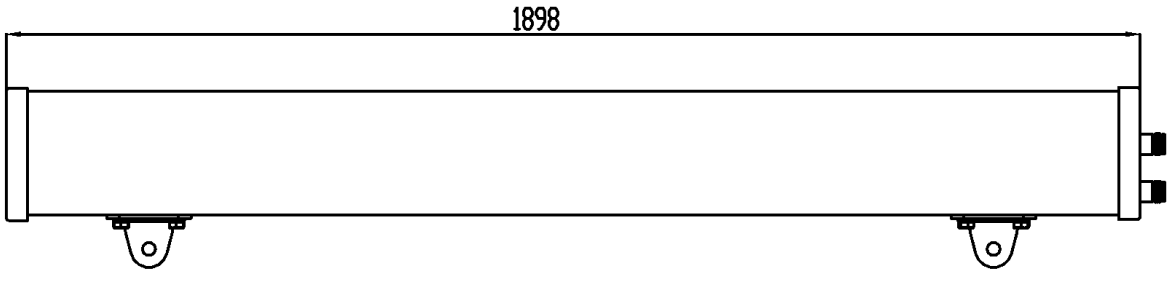
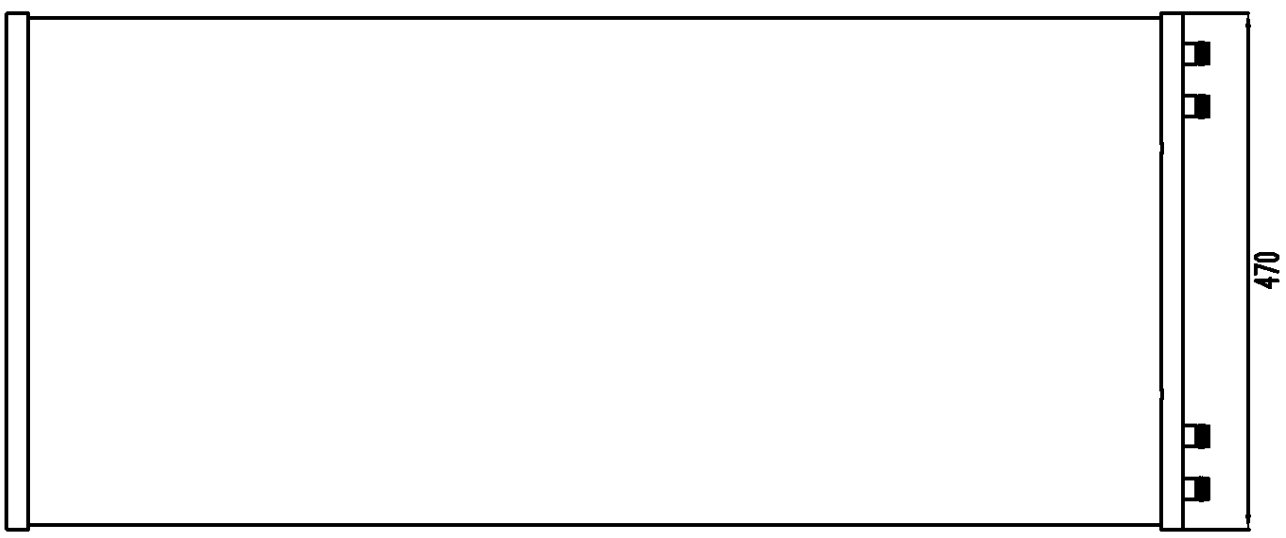
TECHNICAL SPECIFICATION

Mechanical Illustration

All measurements are in mm (in)







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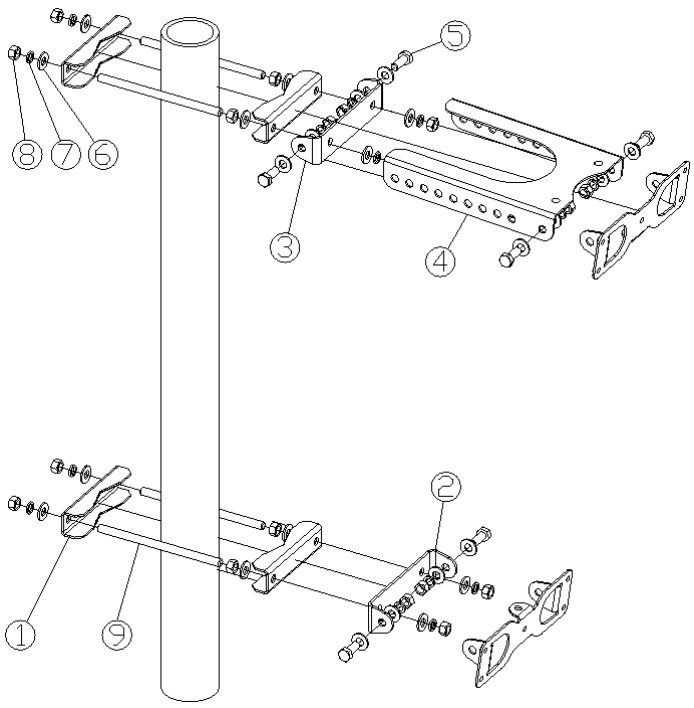
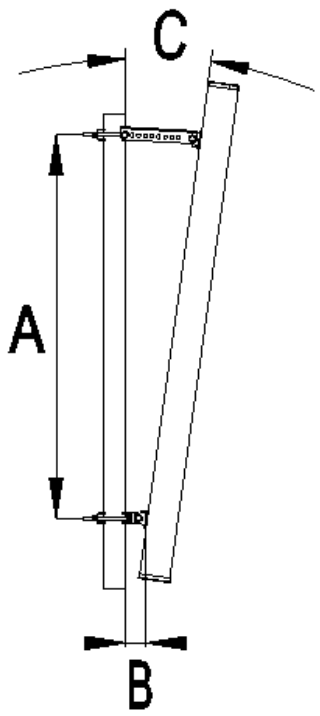
TECHNICAL SPECIFICATION

Mounting Bracket Kit

CL-V-171 Mount Kit for Panel





Mounting Kit Tilt Range	Mounting Kit Material	Mounting Kit Pole Diameter
0° to -8°	Stainless Steel	75mm-115mm (2" to 4.5")

Ordering Info

Order Code - Antenna	Description
AW3843-E-F	Enclosed Remote Electrical Tilt (eRET) with 4.3-10 Connectors
Description	**Order Code - Antenna**
AW1012-2-FM-FM	RF Jumper 1/2" cable, 4.3-10 (m) / 4.3-10 (m), length 2 metres (6'6
AW1012-2-FM-NM	RF Jumper 1/2" cable, 4.3-10 (m) / N-Type (m), length 2 metres (6'6")
AW1014-2-FM-TM	RF Jumper 1/4" cable, 4.3-10 (m) / Nex10 (m), length 2 metres (6'6")
AW1038-2-FM-TM	RF Jumper 3/8" cable, 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")
AW0326-50-PM-PF	AISG Jumper Cable Lengths 25 metres (82')

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