DATASHEET

AW3874-E-F

Common Name 8 Port, (4P/4P), 40", Multi-band Panel 65⁰

Frequency	Ports	Tilt	Gain	Beamwidth
896-960MHz	4	eRET	12.4	65°
3300-3800MHz	4	eRET	18.0	65°

PRODUCT INFORMATION

This antenna has four Low Band ports and four high band ports operating between 3300-3800MHz covering LTE Bands B42, 43 & 48 and 5G NR Band n48 and n78. Remote Electrical tilt allows tilt optimisation to improve coverage and throughput. Designed for compact, aesthetically pleasing applications.

APPLICATION

Alpha Wireless panel antennas provide wireless network operators the highest performance and quality. Panel antennas are generally used in sectorized applications. These antennas are designed for optimal radiation patterns improving overall network performance. A horizontally spaced array provides enhance MIMO performance with full 4x4 operation or receive diversity RF functions.

STANDARD & CERTIFICATIONS

Certification	BS EN ISO 9001:2015

FEATURES

- Wide-band antenna that covers LTE Bands 42, 43 & 48 and 5G NR Band n48 and n78. Includes CBRS Band.
- Wide-band antenna
- 4x4 MIMO for maximum throughput
- Remote Electrical Tilt controlling High and Low Band
- RET is AISG 2.0 compatible.

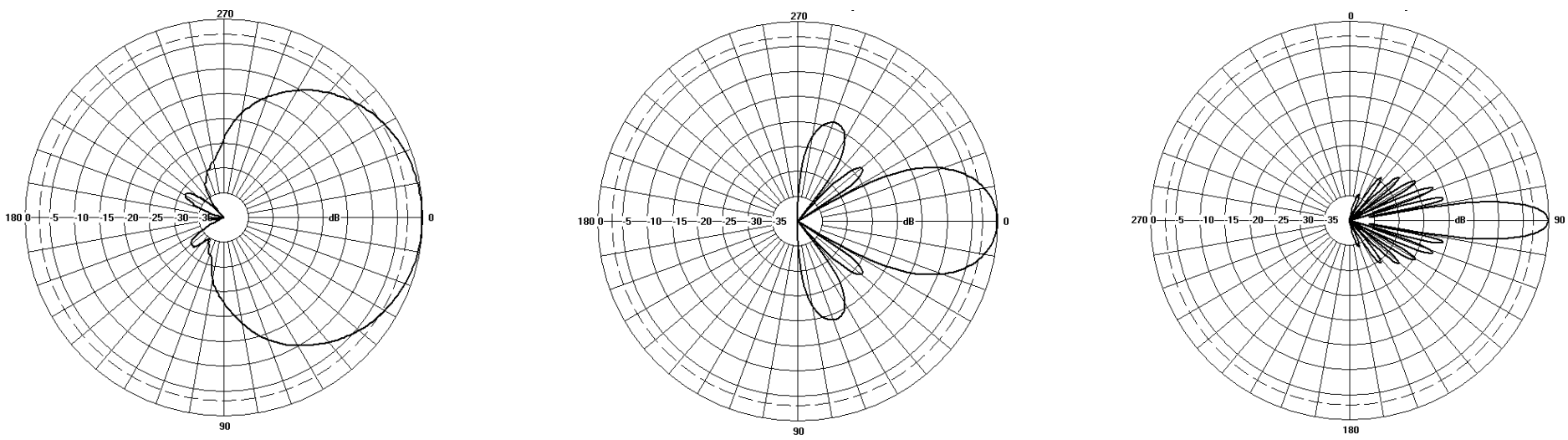
The parameters in this specification follow the definitions and recommendations per NGMN P-Basta, Release 9.6.

AW3874-E-F

TECHNICAL SPECIFICATION

Electrical Specifications								
Frequency Range		MHz	896-918	918-940	940-960	3300-3400	3400-3600	3600-3800
Polarisation		Degree	+/- 45° Slant Linear					
Gain	Basta	dBi	11.9±0.5	11.9±0.5	11.9±0.5	17.3±0.5	17.4±0.5	17.5±0.5
	Max	dBi	12.4	12.4	12.4	17.8	17.9	18.0
Azimuth Beamwidth		Degree	65°	65°	65°	67°	68°	69°
Elevation Beamwidth		Degree	23⁰	23⁰	23⁰	7.0°	6.9°	6.8°
Electrical Downtilt		Degree	T2°-T10°	T2°-T10°	T2°-T10°	T0°-T10°	T0°-T10°	T0°-T10°
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
Front to Back Ratio: Total Power +/-30°		dB>	22	22	22	25	25	25
Passive Intermodulation		dBc<	150	150	150	N/A	N/A	N/A
Upper Sidelobe Suppression, Peak to 20°		dB>	N/A	N/A	N/A	16	16	16
Cross-Polar Discrimination (0°)		dB>	15	15	15	15	15	15
Maximum Effective Power Per Port		W	300	300	300	150	150	150

Representative Pattern Files



Azimuth	Elevation

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

ALPHA WIRELESS

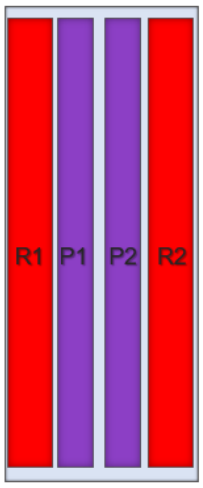
AW3874-E-F

TECHNICAL SPECIFICATION

Mechanical Specifications

Dimensions	mm (in)	1000 (39.4) x 480 (18.9) x 115 (4.5)
Packing Size (LxWxD)	mm (in)	1200 (47.2) x 530 (20.9) x 275 (10.8)
Net Weight (antenna)	kg (lb)	11.1 (25.5)
Net Weight (mount)	kg (lb)	3.1 (6.8)
Shipping Weight	kg (lb)	15 (33.1)
Connector Type (Female)	-	4.3-10 (4P Low Band, 4P High Band)
Connector Position	-	Bottom
Connector Quantity	-	8 (4P Mid band, 4P High Band)
Windload Frontal (at Rated Wind Speed: 150km/h)	N	495 (112)
Windload Lateral (at Rated Wind Speed: 150km/h)	N	181 (41)
Survival Wind Speed	km/h (mph)	200 (125)
Radome Material	-	Fibreglass
Radome Colour	-	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.

Array	Frequency MHz	Ports	RET ID
R1	896 – 960	1 – 2	1
R2	896 – 960	3 – 4	1
P1	3300 – 3800	5 – 6	2
P2	3300 – 3800	7 – 8	2

Configuration	
896 - 960 MHz	One RET for both arrays: R1, R2
3300-3800 MHz	One RET for both arrays: P1, P2
Total Quantity	Two 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

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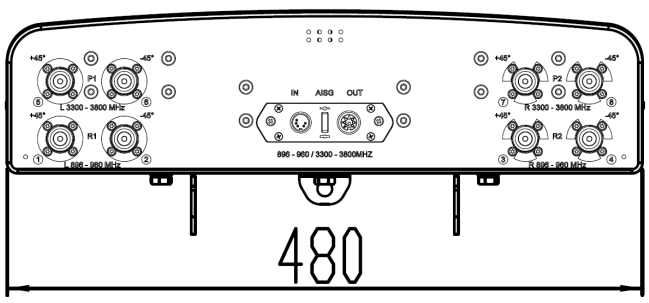
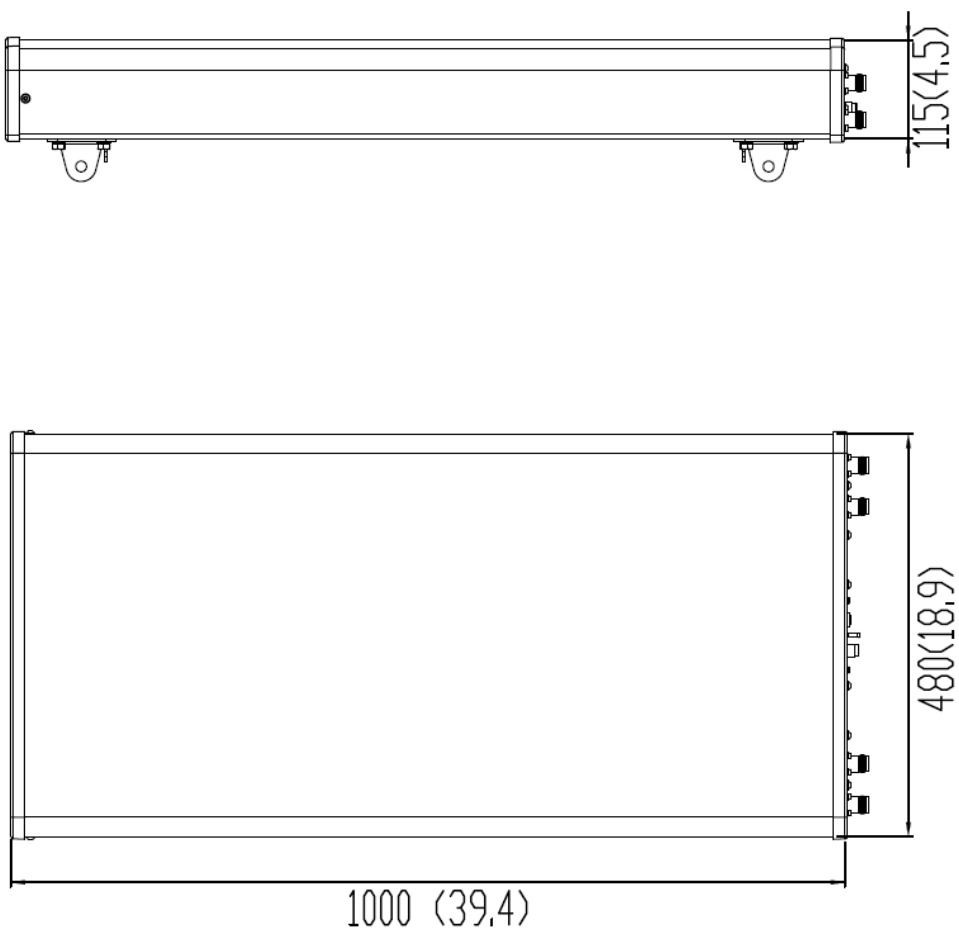
Mechanical Illustration





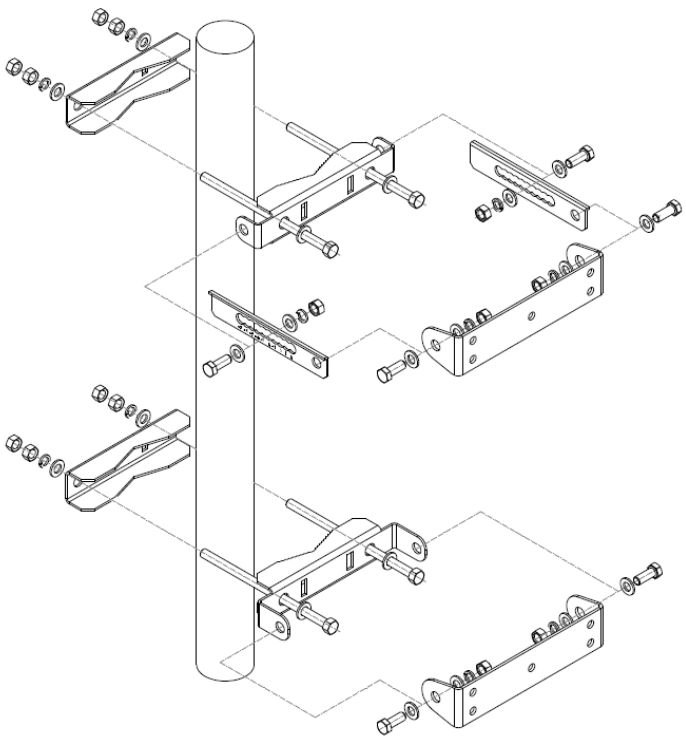
ALPHA WIRELESS

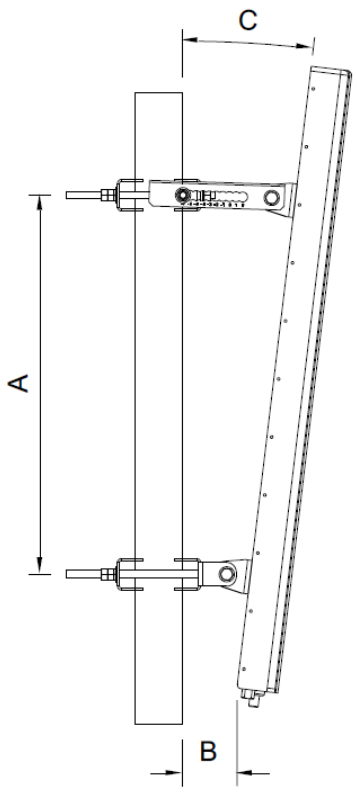
AW3874-E-F

TECHNICAL SPECIFICATION

Mounting Bracket Kit

CL-V-110 Mount Kit (Mount Kit included with antenna)





Mounting Kit Tilt Range	Mounting Kit Material	Mounting Kit Pole Diameter
+1° to -7°	Stainless Steel	50mm-115mm (2" to 4.5")

Ordering Info

Order Code - Antenna	Description
AW3874-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')

Enquiries

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