



DATASHEET

AW3876-E-F

Common Name- 8 Port, 1M, C-Band Beamforming Panel

3300-4200MHz	8 + 1	eRET	15.5	90°
Frequency	Ports	Tilt	Gain	Beamwidth

PRODUCT INFORMATION

The AW3876-E-F is an eight port ultra-wide band beamforming panel antenna covering the entire C-band spectrum 3300 – 4200 MHz. The antenna has four arrays with 90° azimuth beamwidth and 0.5 lambda spacing that are optimized for 8T8R beamforming and soft split applications in 5G NR band n77.

APPLICATION

Alpha Wireless 8T8R beamforming antennas are designed for high performance LTE networks. The beams are optimized to provide coverage directly to the user and improves data throughput at the cell edge without additional bandwidth. The 90° with 0.5 lambda spacing provides the best option for soft split and extended coverage at the cell edge.

STANDARD & CERTIFICATIONS

Certification	BS EN ISO 9001:2015
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FEATURES

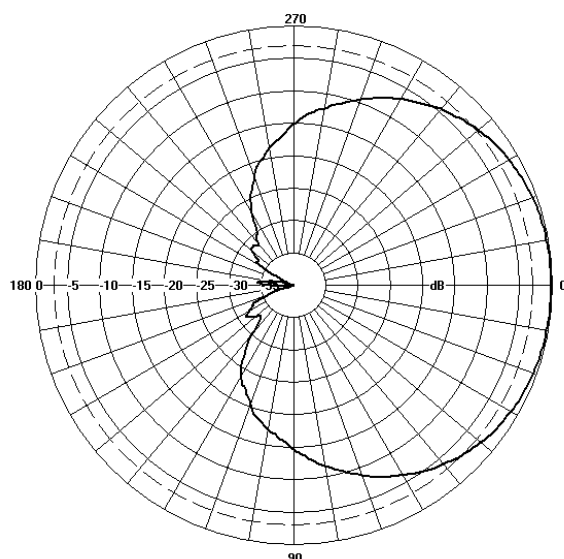
- 8T8R beamforming across C-band 3300 - 4200 MHz
- Supports 2x2, 4x4 and 8x8 MIMO without beamforming
- 90° antenna designed for soft split applications
- Half-wavelength column spacing for optimal beamforming and scan range
- AISG 2.0 compatible

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

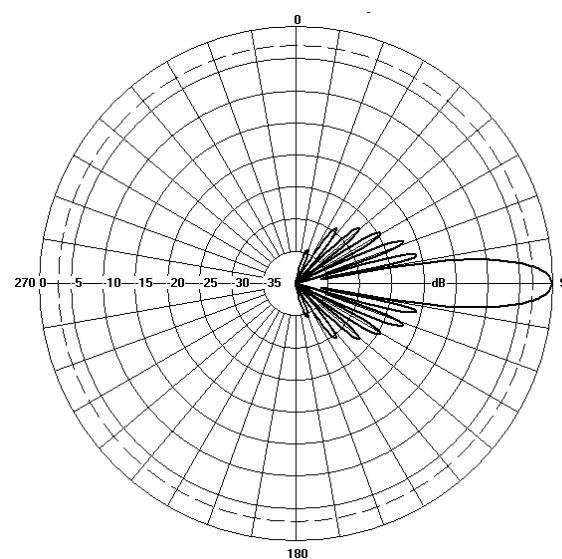
TECHNICAL SPECIFICATION

Electrical Specifications			
Frequency Range	MHz		3300 - 4200MHz
Polarisation	Degree		+/- 45° Slant Linear
Gain	Basta	dBi	15.0±0.5
	Max	dBi	15.5
	Single Column	dBi	15.5 +/- 1
	Broadcast Beam	dBi	16.5 +/- 1
	Service Beam	dBi	20 +/- 0.5
Calibration Network	Coupling Factor	dB	26 +/- 1
	Max amp deviation	dB <	0.7
	Max phase deviation	Degree <	5
Azimuth Beamwidth			
	Single Column	3dB BW	90° +/- 15°
	Broadcast Beam	3dB BW	85°
	Service Beam	3dB BW	30°
Azimuth Beam Squint	Degree <		5°
Elevation Beamwidth	Degree		7°
Electrical Downtilt	Degree		T0° - T10°
Electrical Downtilt Deviation	Degree <		1°
Impedance	Ohms		50
VSWR	<		1.5
Return Loss	dB >		14
Isolation	dB >		25
Front to Back Ratio: Total Power +/-30°	dB >		26
Upper Sidelobe Suppression, Peak to 20°	dB >		16
Cross-Polar Discrimination	dB >		15
Maximum Effective Power Per Port	W		150

Representative Pattern Files



Azimuth



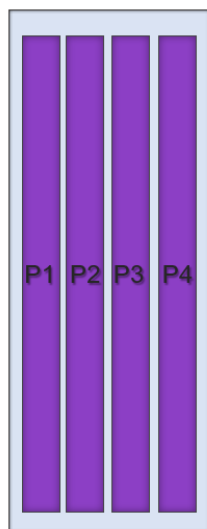
Elevation

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

TECHNICAL SPECIFICATION

Mechanical Specifications		
Dimensions	mm (in)	1040 (41) x 320 (12.6) x 105 (4.1) - (LxWxH)
Packing Size (LxWxD)	mm (in)	1100 (43.3) x 380 (15) x 210 (8.3)
Net Weight (antenna)	kg (lb)	11.1 (25.5)
Net Weight (mount)	kg (lb)	3 (6.6)
Shipping Weight	kg (lb)	15 (33.1)
Connector Type	-	4.3-10
Connector Quantity	-	9 (8 x input ports, 1 x calibration port)
Connector Position	-	Bottom
Windload Frontal (at Rated Wind Speed: 150km/h)	N (lbf)	350 (79)
Windload Lateral (at Rated Wind Speed: 150km/h)	N (lbf)	130 (30)
Survival Wind Speed	km/h (mph)	200 (125)
Radome Material	-	ASA
Radome Colour	RAL	7035 (light grey)
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



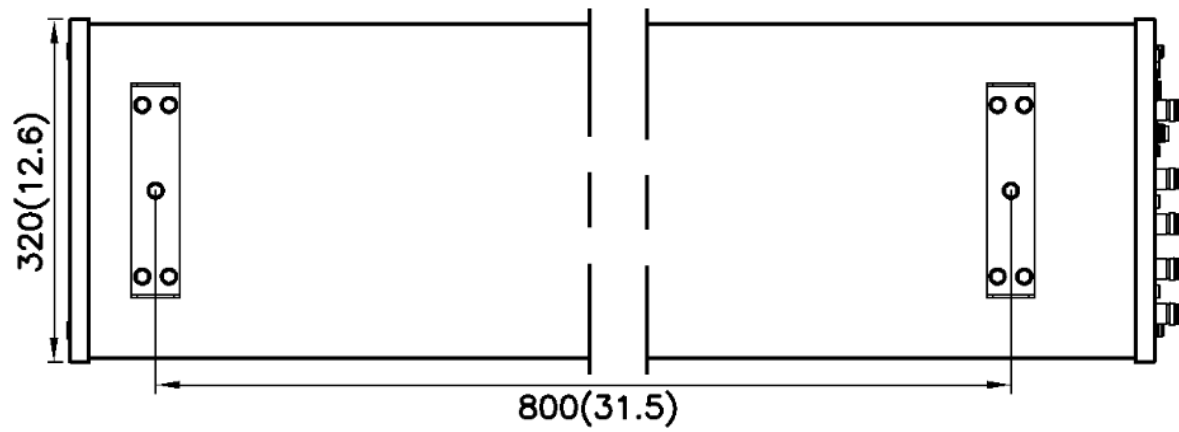
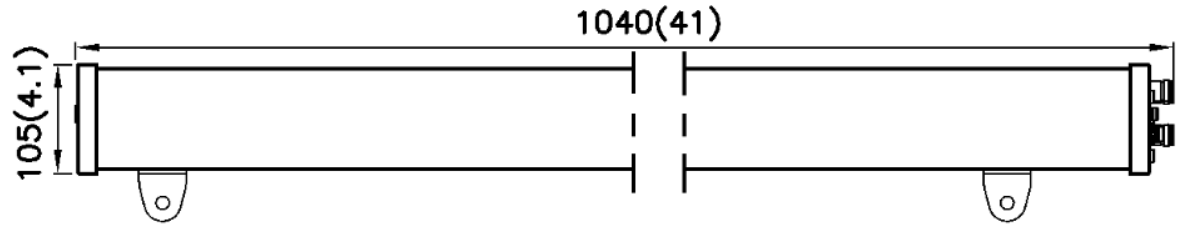
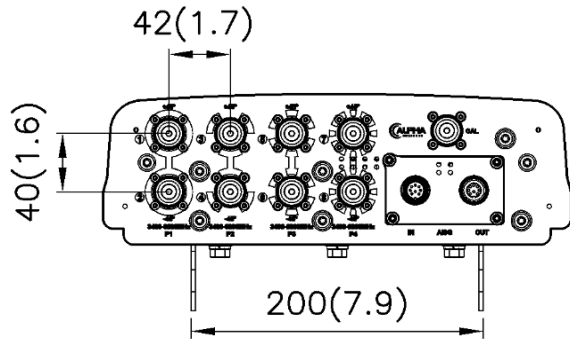
Note: Coloured box sizes do not represent antenna sizes.

Array	Frequency MHz	Ports	RET ID
P1	3300-4200	1 - 2	1
P2	3300-4200	3 - 4	1
P3	3300-4200	5 - 6	1
P4	3300-4200	7 - 8	1

Configuration	
3300-4200MHz	One RET for each array : P1, P2, P3, P4
Total Quantity	One RET Motor Controller
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

Mechanical Illustration

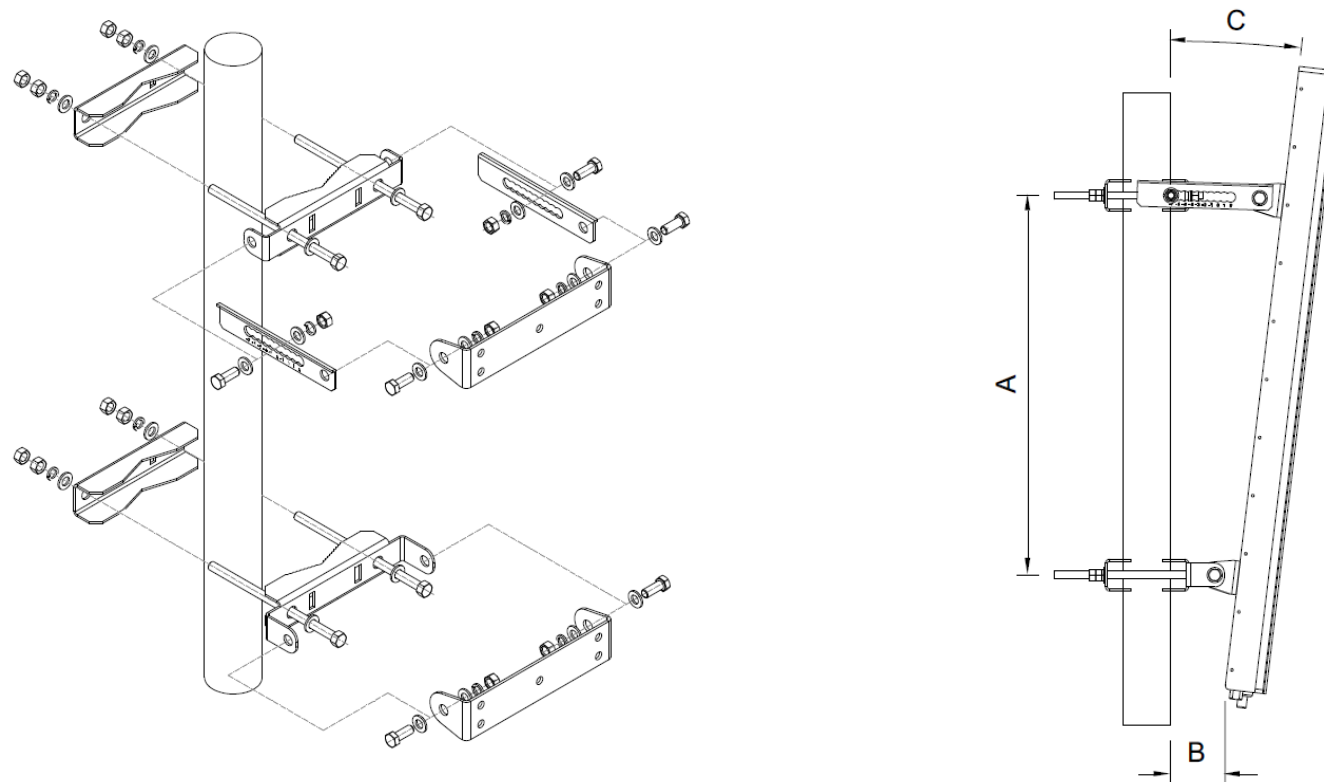
All measurements are in mm (in)



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

AW3876-E-F

Description

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

Order Code - Accessories

AW1012-2-FM-FM

Description

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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