



DATASHEET

AW3829-E-F

Common Name- 4 Port, 33", eRET, Internally cascaded Panel

3700-4200MHz	4	eRET	20.0	33°
Frequency	Ports	Tilt	Gain	Beamwidth

PRODUCT INFORMATION

This product was developed to offer a narrow Azimuth Beam with four port functionality and RET control. This antenna is Internally cascaded which means the 2 x RCU's are controlled by a single AISG 2.0 M/F Interface. The antenna has reduced Azimuth Sidelobes (<25dB) making it the ideal antenna for 6 sectored high capacity sites. This four port antenna supports MIMO 4x4 applications.

APPLICATION

Integrated remote electrical tilt allows instant optimization to improve coverage and throughput. The horizontally spaced array allows optimum MIMO performance with full 4x4 operation or receive diversity RF functions. Superior SNIR enables higher modulation schemes for maximum throughput.

STANDARD & CERTIFICATIONS

Certification	BS EN ISO 9001:2015
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FEATURES

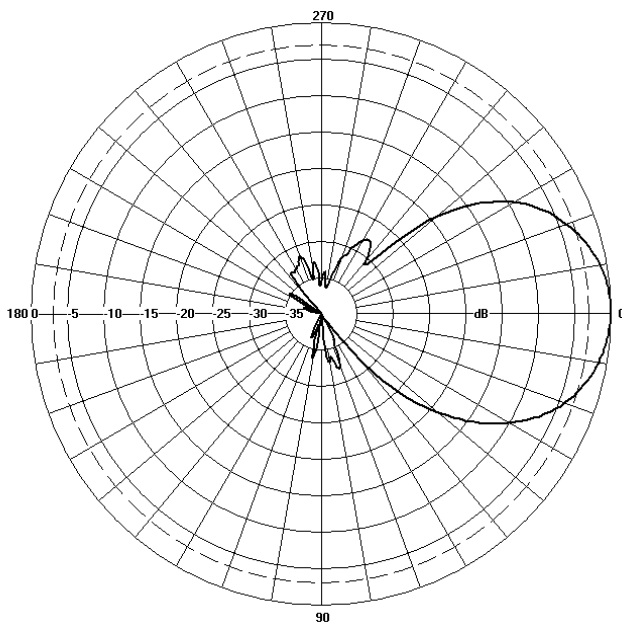
- Wide Band antenna.
- 4x4 MIMO for maximum throughput
- Azimuth Sidelobes suppression is >25dB - reducing cochannel interference from adjacent sectors.
- Enhanced tilt range of 0 to 10 degrees
- Narrow Azimuth beam to increase site capacity.
- Mounting bracket with variable tilt (included).

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

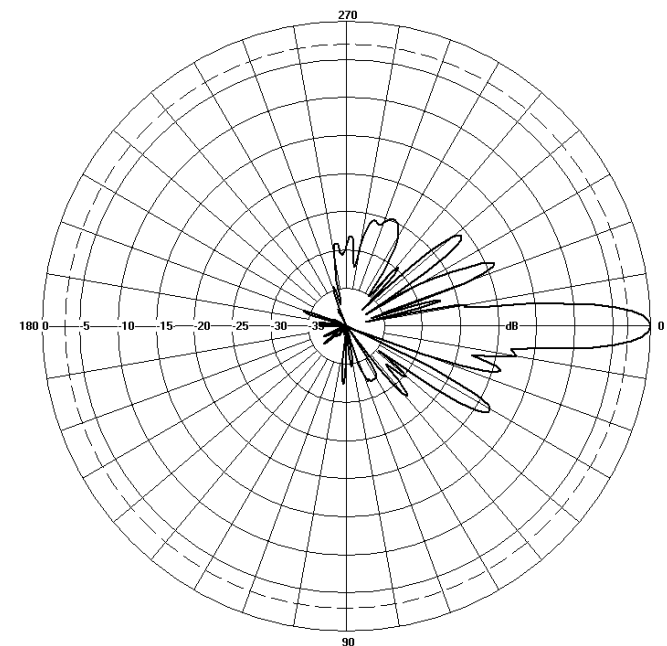
TECHNICAL SPECIFICATION

Electrical Specifications				
Frequency Range		MHz	3700 - 4000	4000 - 4200
Polarisation		Degree	+/- 45° Slant Linear	
Gain	Basta	dBi	19.3±0.5	19.5±0.5
	Max	dBi	19.8	20.0
Azimuth Beamwidth		Degree	33° (+/- 3°)	
Azimuth Beam Squint		Degree<	3°	
Elevation Beamwidth		Degree	6.5° (+/- 0.5°)	6.5° (+/- 0.5°)
Electrical Downtilt		Degree	T0° - T10°	
Electrical Downtilt Deviation		Degree<	1°	
Impedance		Ohms	50	
VSWR		<	1.43	
Return Loss		dB>	15	
Isolation		dB>	25	
Front to Back Ratio: Total Power +/-30°		dB>	30	
Upper Sidelobe Suppression, Peak to 20°		dB>	18	
Cross-Polar Discrimination		dB>	16	
Maximum Effective Power Per Port		W	100	

Representative Pattern Files



Azimuth



Elevation

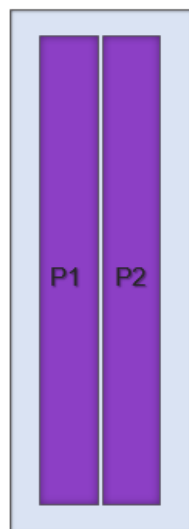
For radiation pattern files, please login at www.alphawireless.com

TECHNICAL SPECIFICATION

Mechanical Specifications

Dimensions	mm (in)	840 (32.7) x 322 (12.7) x 107 (4.2) (LxWxD)
Packing Size (LxWxD)	mm (in)	980 (38.6) x 380 (15) x 220 (8.7)
Net Weight (antenna)	kg (lb)	9.5 (21)
Net Weight (mount)	kg (lb)	3.1 (6.8)
Shipping Weight	kg (lb)	12.6 (27.8)
Connector Type (Female)	-	4.3-10
Connector Quantity	-	4
Connector Position	-	Bottom
Windload Frontal (at Rated Wind Speed: 150km/h)	N (lbf)	278 (62)
Windload Lateral (at Rated Wind Speed: 150km/h)	N (lbf)	116 (26)
Survival Wind Speed	km/h (mph)	200 (125)
Radome Material	-	UV-Stabilised PVC
Radome Colour	RAL	7035
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.

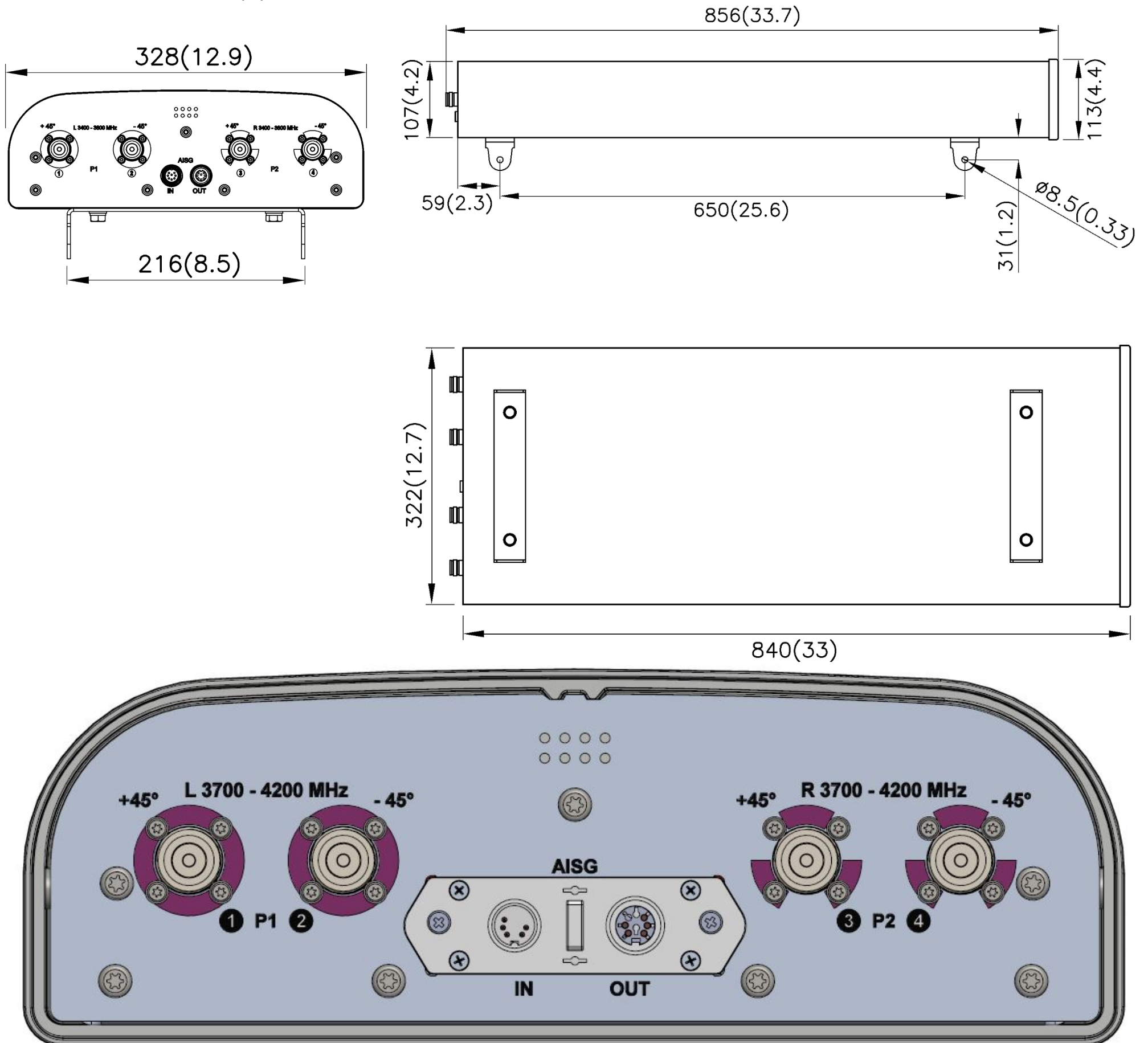
Array	Frequency MHz	Ports	RET ID
P1	3700 - 4200	1 - 2	1
P2	3700 - 4200	3 - 4	1

Configuration	
3700-4200 MHz	One RET for both arrays : P1, P2
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

TECHNICAL SPECIFICATION

Mechanical Illustration

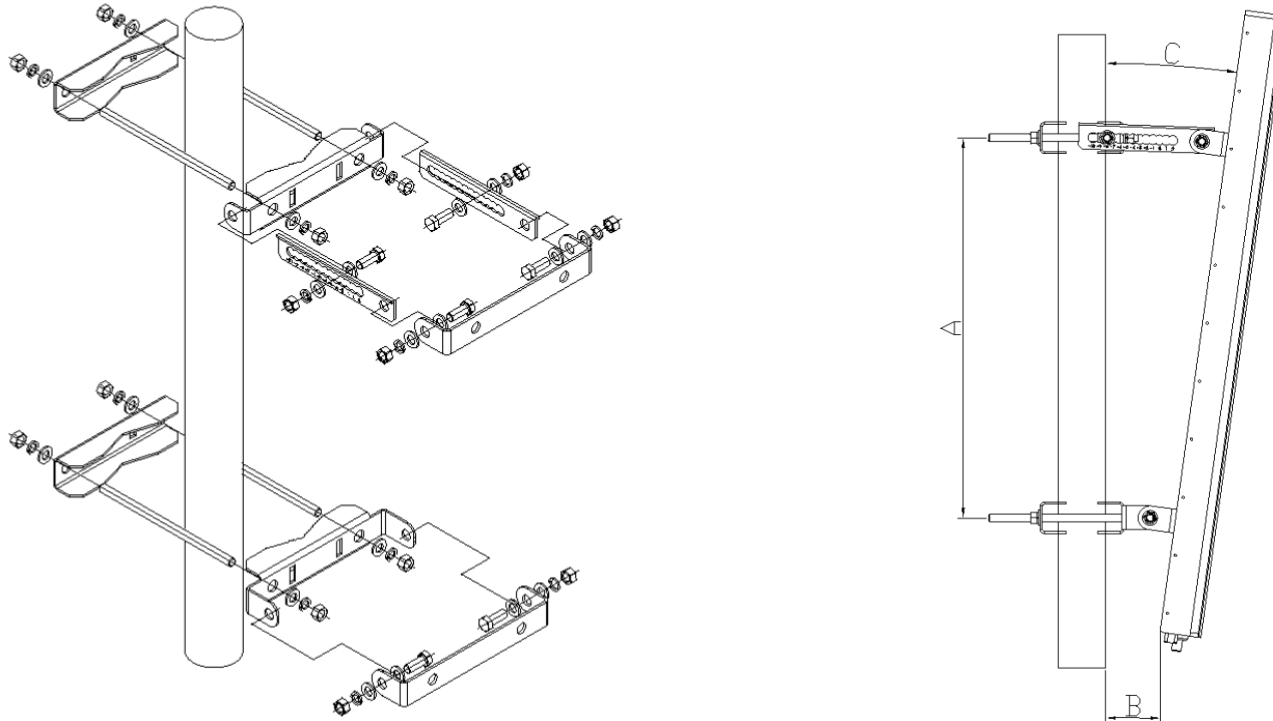
All measurements are in mm (in)



TECHNICAL SPECIFICATION

Mounting Bracket Kit

CL-V-105 Mount Kit (Mount Kit included with antenna)



Mounting Kit Tilt Range	Mounting Kit Material	Mounting Kit Pole Diameter
+2° to -10°	Stainless Steel	50mm-115mm (2" to 4.5")

Ordering Info

Order Code - Antenna

AW3829-E-F

Description

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

Order Code - Antenna

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')

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