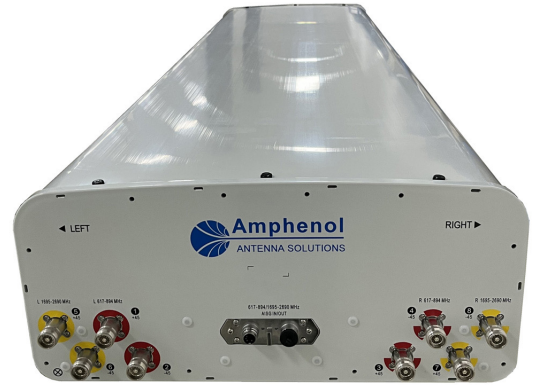


APXVAALL18M-U-J20

Features

- Narrow 499 mm radome for reduced windloading and easier zoning
- MIMO 4x4 in low-band and mid-band
- Integrated and field replaceable RET
- ACU model number: ACU-X20-N2
- Ships in VSRET mode
- Compliant with AISG v2.0 and 3GPP
- Mechanical downtilt kit included



PRODUCT OVERVIEW	Frequency Range (MHz)	(2x) 617-894		(2x) 1695-2690	
	Array	■ R1	■ R2	■ Y1	■ Y2
	Connector	1-2	3-4	5-6	7-8
		4 PORTS		4 PORTS	
	Polarization	XPOL		XPOL	
	Azimuth Beamwidth (avg)	65°		65°	
	Electrical Downtilt	2-12°		2-12°	
	Dimensions	1823 x 499 x 215 mm (71.8 x 19.7 x 8.5 in)			

ORDERING OPTIONS

Select from the following ordering options

ANTENNA MODEL NUMBER	CONFIGURATION	MOUNTING HARDWARE	MOUNTING PIPE DIAMETER	SHIPPING WEIGHT
APXVAALL18M-U-J20	ACU-X20-N2 Field Replaceable RET Included	APM40-5E Beam Tilt Kit and APM40-E10T Included	60-120 mm (2.4-4.7 in)	41.7 kg (92 lbs)



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ELECTRICAL SPECIFICATIONS

■ R1 ■ R2

Frequency Range		MHz	(2x) 617-894		
		MHz	617-698	698-806	806-894
Polarization		---	±45°		
Gain	Over all Tilts	dBi	13.5 ± 0.8	14.6 ± 0.5	14.7 ± 0.7
	Max Gain	dBi	14.3	15.1	15.4
Azimuth Beamwidth (3 dB)		degrees	71° ± 6°	66° ± 6°	61° ± 6°
Elevation Beamwidth (3 dB)		degrees	14.5° ± 1.1°	13.9° ± 0.9°	11.5° ± 0.7°
Electrical Downtilt		degrees	2-12°		
Impedance		Ohms	50Ω		
VSWR (Return Loss)		---	1.5:1 (-14 dB)		
Passive Intermodulation		dBc	-153 (3rd Order for 2x40 W Carriers)		
Front-to-Back Ratio, Total Power, ± 30°		dB	20	21	23
Front-to-Back at 180° Copolar		dB	27	26	32
Upper Side Lobe Suppression, Peak to +20°		dB	20	20	17
First Upper Side Lobe		dB	18	19	18
Cross-Pol Over Sector		dB	7	7	5
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	15	20	17
Maximum Effective Power Per Port		Watts	300 W		
Cross Polar Isolation		dB	25	25	25
Interband Isolation		dB	22	22	22

ELECTRICAL SPECIFICATIONS

■ Y1 ■ Y2

Frequency Range		MHz	(2x) 1695-2690			
		MHz	1695-1880	1850-1990	1920-2200	2200-2690
Polarization		---	±45°			
Gain	Over all Tilts	dBi	16.7 ± 0.9	17.5 ± 0.7	18.1 ± 0.7	17.8 ± 0.9
	Max Gain	dBi	17.6	18.2	18.8	18.7
Azimuth Beamwidth (3 dB)		degrees	68° ± 6°	63° ± 9°	58° ± 5°	55° ± 7°
Elevation Beamwidth (3 dB)		degrees	5.7° ± 0.4°	5.4° ± 0.3°	4.8° ± 0.3°	4.4° ± 0.3°
Electrical Downtilt		degrees	2-12°			
Impedance		Ohms	50Ω			
VSWR (Return Loss)		---	1.5:1 (-14 dB)			
Passive Intermodulation		dBc	-153 (3rd Order for 2x40 W Carriers)			
Front-to-Back Ratio, Total Power, ± 30°		dB	23	23	22	23
Front-to-Back at 180° Copolar		dB	29	29	29	30
Upper Side Lobe Suppression, Peak to +20°		dB	13	15	16	14
First Upper Side Lobe		dB	19	20	20	18
Cross-Pol Over Sector		dB	6	8	7	4
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	16	18	15	18
Maximum Effective Power Per Port		Watts	250 W			
Cross Polar Isolation		dB	25	25	25	25
Interband Isolation		dB	25	25	25	25

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RET ACTUATOR

Frequency	MHz	617-894	1695-2690
Model Number	---	ACU-X20-N2	
Number of RET Actuators	---	1	
RET ID	---	R1	Y1
Input Voltage	Vdc	10-30V	
Power Consumption	Idle State, maximum	Watts	
	Normal Conditions, maximum	Watts	
Protocol	---	3GPP / AISG v2.0	
Tilt Change Duration	---	Less than 15 seconds, typical (may vary depending on antenna type and outdoor temperature)	
Precision	degrees	± 0.1°	
Tilt Change Capability	---	18,000 minimum	
RET Interface	---	One AISG Male and One AISG Female	
Field Replaceable Unit	---	Yes	
Location	---	Semi-internal	

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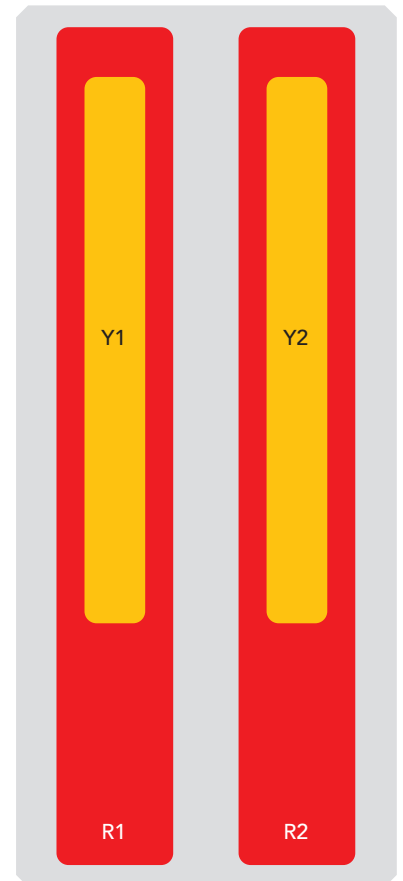
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BOTTOM VIEW - LABELING



ARRAY LAYOUT

ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE	RET	AISG RET UID
R1	617-894 MHz	1-2	(2x) 4.3-10 Female	R1	RFxxxxxxxxxx-2R1
R2	617-894 MHz	3-4	(2x) 4.3-10 Female		
Y1	1695-2690 MHz	5-6	(2x) 4.3-10 Female	Y1	RFxxxxxxxxxx-2Y1
Y2	1695-2700 MHz	7-8	(2x) 4.3-10 Female		



The illustration is not shown to scale.

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MECHANICAL SPECIFICATIONS

Length		mm (in)	1823 (71.8)
Width		mm (in)	499 (19.7)
Depth		mm (in)	215 (8.5)
Net Weight - Antenna Only		kg (lbs)	28.3 (62.4)
Net Weight - Mounting Hardware Only		kg (lbs)	8.8 (19.4)
Wind Load Rated at 150 km/h (93 mph)	Front	N (lbf)	609 (137)
	Side	N (lbf)	572 (129)
	Rear	N (lbf)	707 (159)
	Maximum	N (lbf)	1186 (267)
Survival Wind Speed		km/h (mph)	240 (150)
Connector Type		--	(8x) 4.3-10 Female at Bottom
Radome Color		---	Light Grey RAL7035
Radome Material		---	ASA
Lightning Protection		---	Direct Ground
Shipping	Packing Size (Length x Width x Depth)	mm (in)	2030 x 560 x 285 (79.9 x 22.0 x 11.2)
	Shipping Weight	kg (lbs)	41.7 (92)

ENVIRONMENTAL SPECIFICATIONS

Environmental Standard		---	ETS 300 019
Operating Temperature		degrees	-40° to +60° C (-40° to +140° F)
Product Environmental Compliance		---	Product is RoHS Compliant

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ACCESSORIES Accessories may be ordered separately unless otherwise indicated.

ITEM	MODEL NUMBER	WEIGHT
Beam Tilt Mounting Bracket Kit and Interface Bracket for Pole Diameter 60-120 mm (2.4-4.7 in) <i>Shipped with antenna</i>	APM40-5E and APM40-E10T	8.8 kg (19.4 lbs)

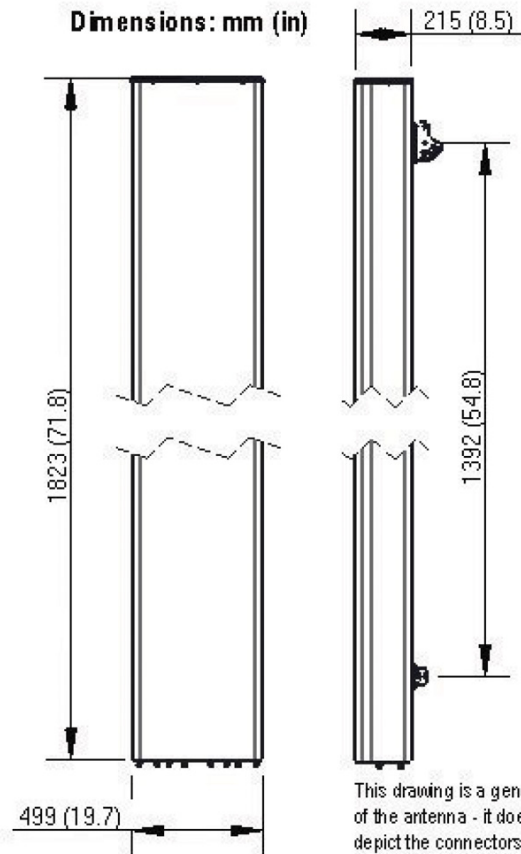
INSTALLATION Please read all installation notes before installing product.



- Always attach the antenna using all mounting points.
- Do not install antenna with the connectors facing upwards.

EXTERNAL DOCUMENT LINKS

[APM40 Mounting Kit Series Installation Instructions](#)



NOTES

Specifications follow BASTA guidelines.

For additional mounting information, please check **External Document Links**.

For Radiating Patterns: [Request pattern files](#)