

## APXVAA24X\_43-U-A20

### APXVAA24X\_43-V-A20

### Features

This antenna provides a 4-Port multi-band flexible platform for use in deployment scenarios encompassing 600MHz, 700MHz, and 800MHz applications

- MIMO 4x4 in low-band
- Integrated and field replaceable RET
- ACU model number: ACU-A20-SR
- Compliant with AISG v2.0 and 3GPP
- Mechanical downtilt kit included
- Optional with Direct Pipe No Tilt mounting hardware (Model name suffix -V-A20)



<b>PRODUCT OVERVIEW</b>	Frequency Range (MHz)	(2x) 617-894	
	Array	■ R1	■ R2
	Connector	1-2	3-4
		4 PORTS	
	Polarization	XPOL	
	Azimuth Beamwidth (avg)	65°	
	Electrical Downtilt	2-12°	
	Dimensions	2436 x 609 x 215 mm (95.9 x 24.0 x 8.5 in)	

### ORDERING OPTIONS

Select from the following ordering options

ANTENNA MODEL NUMBER	CONFIGURATION	MOUNTING HARDWARE	MOUNTING PIPE DIAMETER	SHIPPING WEIGHT	MOUNTING HARDWARE WEIGHT
APXVAA24X_43-U-A20	ACU-A20-SR Field Replacable RET, included (1)	APM40-5E Beam Tilt Kit, included	60-120 mm (2.4-4.7 in)	61.9 kg (136.5 lbs)	11.5 kg (25.3 lbs)
APXVAA24X_43-V-A20	ACU-A20-SR Field Replacable RET, included (1)	APM40-1E Direct Pipe No Tilt Kit included	60-120 mm (2.4-4.7 in)	59.4 kg (131 lbs)	5.8 kg (13 lbs)



Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.

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#### ELECTRICAL SPECIFICATIONS

■ R1 ■ R2

Frequency Range		MHz	(2x) 617-894			
		MHz	617-698	698-746	746-806	806-894
Polarization		---	±45°			
Gain	Over all Tilts	dBi	15.4 ± 0.5	15.7 ± 0.5	15.6 ± 0.6	15.9 ± 0.5
	Max Gain	dBi	15.9	16.2	16.2	16.4
Azimuth Beamwidth (3 dB)		degrees	67° ± 3°	63° ± 4°	62° ± 3°	62° ± 2°
Elevation Beamwidth (3 dB)		degrees	10.1° ± 0.5°	9.2° ± 0.4°	8.5° ± 0.3°	7.9° ± 0.4°
Electrical Downtilt		degrees	2-12°			
Impedance		Ohms	50Ω			
VSWR (Return Loss)		---	1.5:1 (-14 dB)			
Passive Intermodulation		dBc	-153 (3rd Order for 2x20 W Carriers)			
Front-to-Back Ratio, Total Power, ± 30°		dB	19	19	20	22
Front-to-Back at 180° Copolar		dB	28	29	32	34
Upper Side Lobe Suppression, Peak to +20°		dB	18	18	18	17
First Upper Side Lobe		dB	19	19	18	17
Cross-Pol Over Sector		dB	8	6	5	6
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	17	18	19	20
Maximum Effective Power Per Port		Watts	400 W			
Cross-Polar Isolation		dB	25			

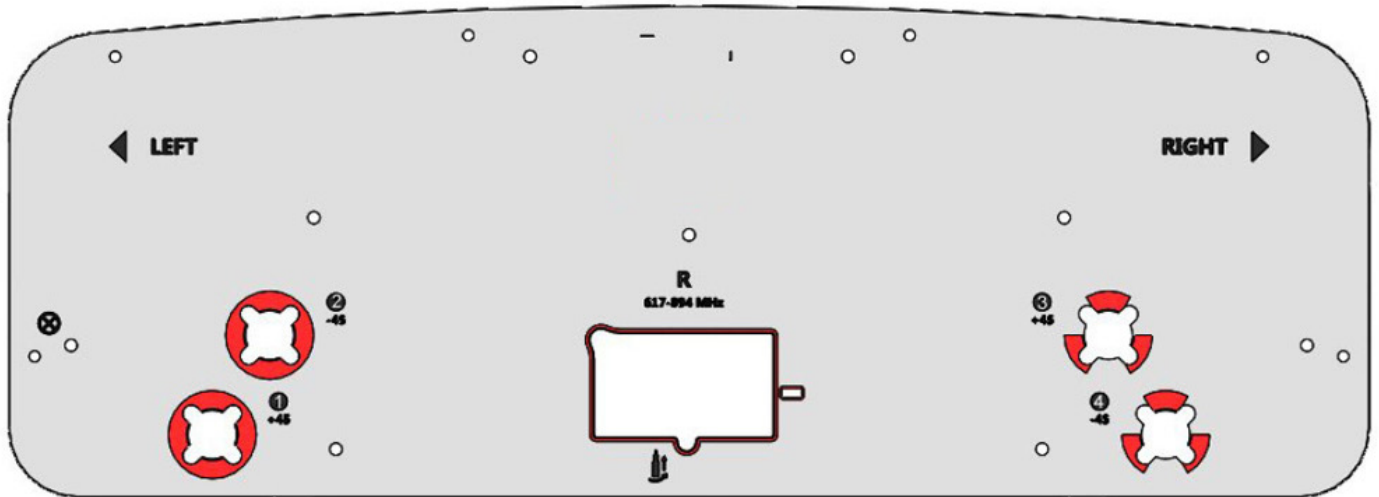
#### RET ACTUATOR

Frequency		MHz	617-894
Model Number		---	ACU-A20-SR
Number of RET Actuators		---	1
RET ID		---	R1
Input Voltage		Vdc	10-30V
Power Consumption	Idle State, maximum	Watts	0.5W @ 10V, 1.5W @ 30V
	Normal Conditions, maximum	Watts	4W @ 10V, 9W @ 30V
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 pair AISG Male and Female
Field Replaceable Unit		---	Yes
Location		---	Semi-internal

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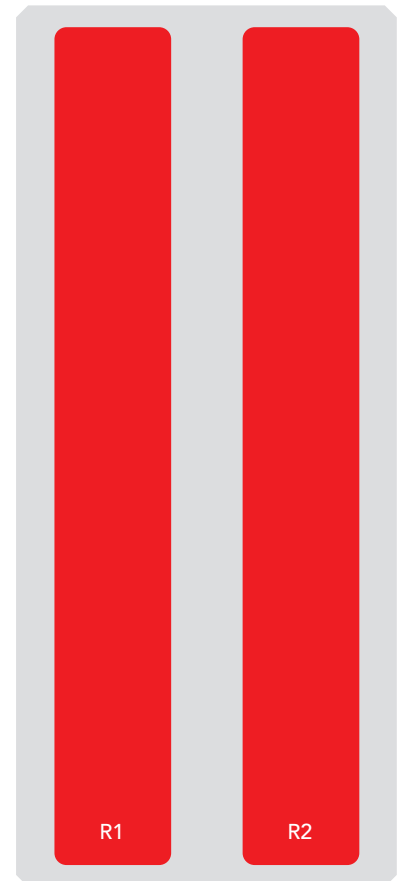
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BOTTOM VIEW - LABELING



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		



The illustration is not shown to scale.

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#### MECHANICAL SPECIFICATIONS

Length	mm (in)	2436 (95.9)
Width	mm (in)	609 (24.0)
Depth	mm (in)	215 (8.5)
Net Weight - Antenna Only	kg (lbs)	42.7 (94.1)
Wind Load Rated at 150 km/h (93 mph)	Front	N (lbf) 1428 (321)
	Side	N (lbf) 434 (98)
	Rear	N (lbf) 1544 (347)
Survival Wind Speed	km/h (mph)	240 (150)
Connector Type	---	(4x) 4.3-10 Female at Bottom, (2x) AISG Connectors (1 Male, 1 Female)
Radome Color	---	Light Grey RAL7035
Radome Material	---	Fiberglass
Lightning Protection	---	DC Grounded
<b>Shipping</b>	Packing Size (Length x Width x Depth)	mm (in) 2610 x 735 x 285 (102.8 x 28.9 x 11.2)

#### 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 for Pole Diameter 60-120 mm (2.4-4.7 in) <i>Refer to ordering options</i>	APM40-5E	11.5 kg (25.3 lbs)
Direct Pipe No Tilt Bracket Kit for Pole Diameter 60-120 mm (2.4-4.7 in) <i>Refer to ordering options</i>	APM40-1E	5.8 kg (13 lbs)

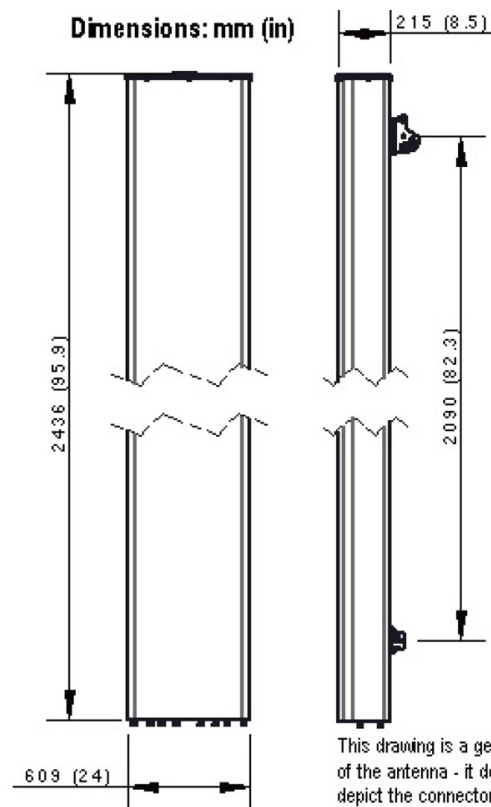
**INSTALLATION** Please read all installation notes before installing product.

	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](#)

[Manual Overdrive Instructions](#)



**NOTES**

Specifications follow BASTA guidelines.

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

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