

## APXVAALL18\_43-U-NA20

### Features

- MIMO 4x4 in low-band and mid-band
- Integrated and field replaceable RET
- ACU model number: x2 ACU-A20-SR, ACU HW 05
- Compliant with AISG v2.0 and 3GPP
- AISG jumper cable included
- 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	1830 x 610 x 215 mm (72.0 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
APXVAALL18_43-U-NA20	ACU-A20-SR Field Replacable RET, included (2)	APM40-5E Beam tilt kit and APM40-E10T, included	60-120 mm (2.4-4.7 in)	60 kg (132 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	13.4 ± 0.7	14.2 ± 0.7	14.2 ± 0.8
	Max Gain	dBi	14.1	14.9	15.0
Azimuth Beamwidth (3 dB)		degrees	65° ± 2°	65° ± 3°	62° ± 5°
Elevation Beamwidth (3 dB)		degrees	14.4° ± 1.0°	12.5° ± 1.0°	10.7° ± 0.8°
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	16	17	21
Front-to-Back at 180° Copolar		dB	25	28	28
Upper Side Lobe Suppression, Peak to +20°		dB	20	15	14
First Upper Side Lobe		dB	15	15	14
Cross-Pol Over Sector		dB	4	4	4
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	18	18	15
Maximum Effective Power Per Port		Watts	400 W		
Cross-Polar Isolation		dB	25		

### ELECTRICAL SPECIFICATIONS

■ Y1 ■ Y2

Frequency Range		MHz	(2x) 1695-2690			
		MHz	1695-1780	1850-1990	1995-2200	2200-2690
Polarization		---	±45°			
Gain	Over all Tilts	dBi	17.0 ± 0.6	17.4 ± 0.6	17.8 ± 0.5	17.5 ± 0.6
	Max Gain	dBi	17.6	18.0	18.3	18.1
Azimuth Beamwidth (3 dB)		degrees	66° ± 5°	64° ± 5°	62° ± 8°	58° ± 6°
Elevation Beamwidth (3 dB)		degrees	6.0° ± 0.2°	5.5° ± 0.5°	5.0° ± 0.3°	4.5° ± 0.5°
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	22	21	21	19
Front-to-Back at 180° Copolar		dB	29	26	25	21
Upper Side Lobe Suppression, Peak to +20°		dB	14	15	14	12
First Upper Side Lobe		dB	14	16	17	16
Cross-Pol Over Sector		dB	7	8	9	2
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	21	18	16	18
Maximum Effective Power Per Port		Watts	300 W			
Cross-Polar Isolation		dB	25			

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### RET ACTUATOR

Frequency	MHz	617-894	1695-2690
Model Number	---	ACU-A20-SR	ACU-A20-SR
Number of RET Actuators	---	1	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 pair AISG Male and Female	Two pair AISG Male and Female
Field Replaceable Unit	---	Yes	
Location	---	Semi-internal	

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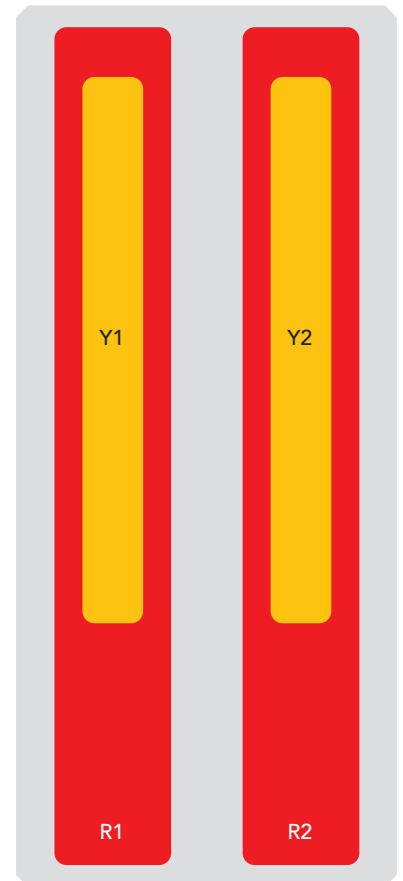
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## BOTTOM VIEW - LABELING



### ARRAY LAYOUT

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



The illustration is not shown to scale.

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### MECHANICAL SPECIFICATIONS

Length	mm (in)	1830 (72.0)
Width	mm (in)	610 (24.0)
Depth	mm (in)	215 (8.5)
Net Weight - Antenna Only	kg (lbs)	42 (93)
Net Weight - Mounting Hardware Only	kg (lbs)	8.5 (19.0)
Wind Load Rated at 150 km/h (93 mph)	Front	N (lbf) 1072 (241)
	Side	N (lbf) 326 (73)
	Rear	N (lbf) 1160 (261)
Survival Wind Speed	km/h (mph)	240 (150)
Connector Type	---	(8x) 4.3-10 Female at Bottom
Radome Color	---	Light Grey RAL7035
Radome Material	---	Fiberglass
Lightning Protection	---	Direct Ground
<b>Shipping</b>	Packing Size (Length x Width x Depth)	mm (in) 2000 x 735 x 285 (78.7 x 28.9 x 11.2)
	Shipping Weight	kg (lbs) 60 (132)

### 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	8.5 kg (19 lbs)

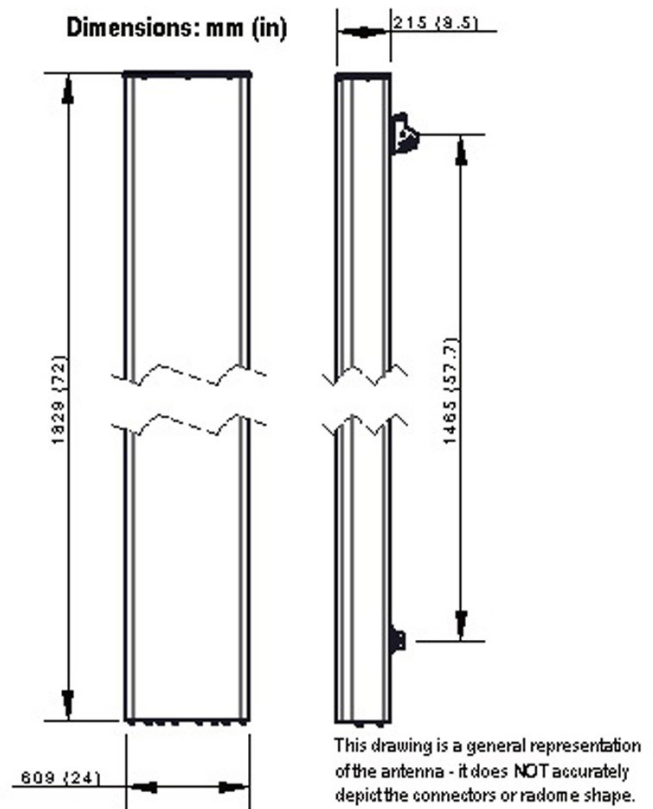
### INSTALLATION

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](#)