

## APXVAR18\_43-C-NA20

### Features

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

- 16-inch width and 68-inch length for easier zoning
- Rear-fed connectors for roof-top installations
- Field replaceable (integrated) AISG RET platform for reduced environmental exposure and long lasting quality
- Superior elevation pattern performance across the entire electrical downtilt range
- ACU model number: x2 ACU-A20-SR, ACU HW 05
- Includes 0.5m AISG jumper for optional daisy-chaining



<b>PRODUCT OVERVIEW</b>	Frequency Range (MHz)	(1x) 617-746	(1x) 1695-2200
	Array	■ R1	■ B1
	Connector	1-2	3-4
		2 PORTS	2 PORTS
	Polarization	XPOL	XPOL
	Azimuth Beamwidth (avg)	65°	65°
	Electrical Downtilt	5-19°	2-12°
	Dimensions	1726 x 405 x 228 mm (68.0 x 16.0 x 9.0 in)	

### ORDERING OPTIONS Select from the following ordering options

ANTENNA MODEL NUMBER	CONFIGURATION	MOUNTING HARDWARE	MOUNTING PIPE DIAMETER	SHIPPING WEIGHT
APXVAR18_43-C-NA20	Field Replacable RET, included (2)	APM40-2 Beam Tilt Kit and APM40-E10, included	60-120 mm (2.4-4.7 in)	30.5 kg (67.2 lbs)



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## APXVAR18\_43-C-NA20

### ELECTRICAL SPECIFICATIONS

■ R1

Frequency Range		MHz	(1x) 617-746	
		MHz	617-698	698-746
Polarization		---	±45°	
Gain	Over all Tilts	dBi	14.1 ± 0.6	14.4 ± 0.6
	Max Gain	dBi	14.7	15.0
Azimuth Beamwidth (3 dB)		degrees	66.1° ± 1.3°	63.8° ± 1.7°
Elevation Beamwidth (3 dB)		degrees	15.5° ± 1.2°	14.1° ± 1.0°
Electrical Downtilt		degrees	5-19°	
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	23.9	24.4
Upper Side Lobe Suppression, 0° to +20°		dB	14.7	16.2
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	19.8	23.3
Cross Polar Discrimination (XPD) at ± 60°		dB	8.8	8.4
Maximum Effective Power Per Port		Watts	250 W	
Cross-Polar Isolation		dB	25	

### ELECTRICAL SPECIFICATIONS

■ B1

Frequency Range		MHz	(1x) 1695-2200		
		MHz	1695-1880	1850-1990	1920-2200
Polarization		---	±45°		
Gain	Over all Tilts	dBi	17.5 ± 0.3	17.6 ± 0.5	18.2 ± 0.7
	Max Gain	dBi	17.8	18.1	18.9
Azimuth Beamwidth (3 dB)		degrees	66.7° ± 3.2°	69.1° ± 2.2°	64.3° ± 6.2°
Elevation Beamwidth (3 dB)		degrees	5.8° ± 0.2°	5.5° ± 0.2°	5.1° ± 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 2x20 W Carriers)		
Front-to-Back Ratio, Total Power, ± 30°		dB	25.6	24.9	26.5
Upper Side Lobe Suppression, 0° to +20°		dB	17.3	17.5	16.6
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	24.5	27.4	20.5
Cross Polar Discrimination (XPD) at ± 60°		dB	8.8	10	2.8
Maximum Effective Power Per Port		Watts	250 W		
Cross-Polar Isolation		dB	25		

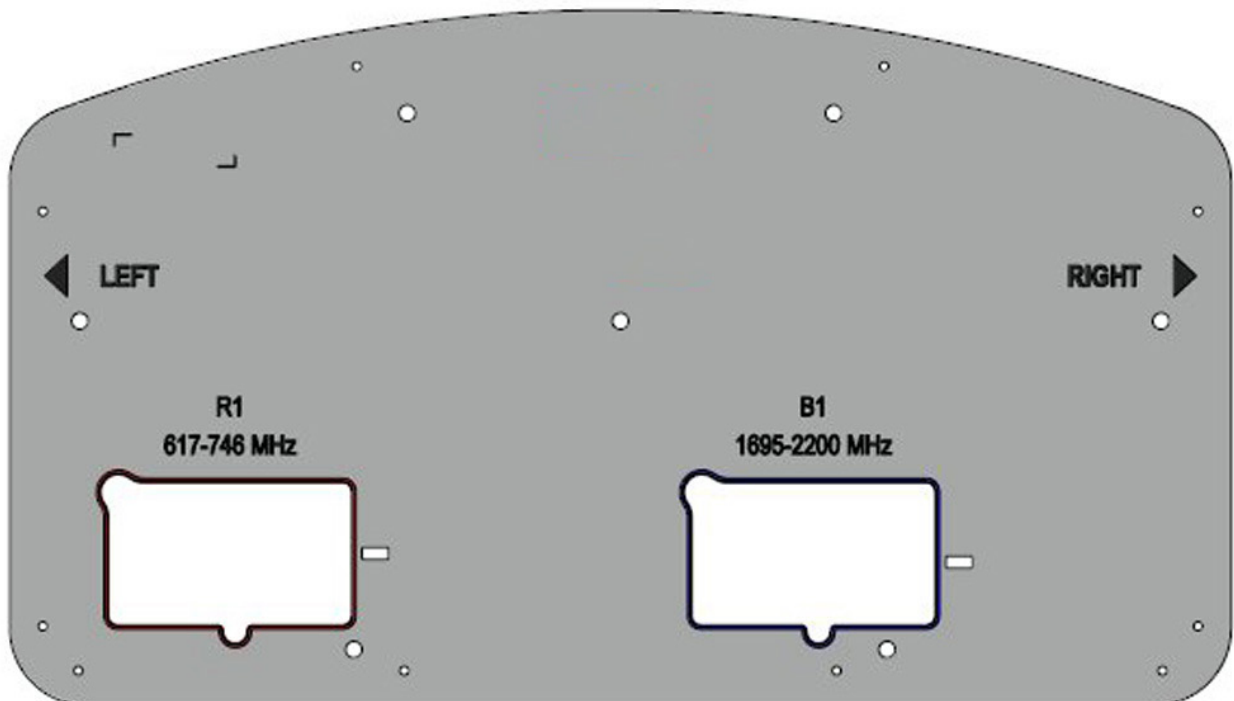
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### RET ACTUATOR

Frequency	MHz	617-746	1695-2200
Model Number	---	ACU-A20-SR	ACU-A20-SR
Number of RET Actuators	---	1	1
RET ID	---	R1	B1
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	One pair AISG Male and Female
Field Replaceable Unit	---	Yes	
Location	---	Semi-internal	

### BOTTOM VIEW - LABELING



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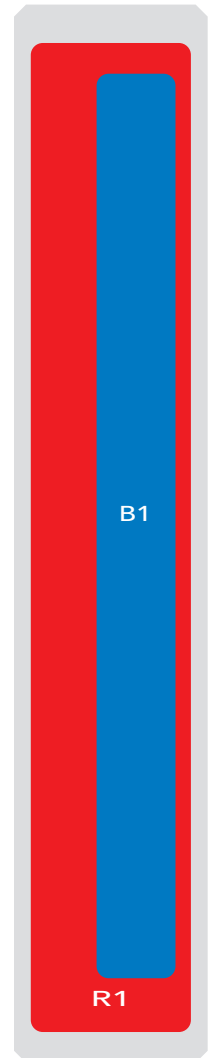
# APXVAR18\_43-C-NA20

## BACK VIEW CONNECTOR CLOSE-UP



## ARRAY LAYOUT

ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE	RET	AISG RET UID
<span style="color: red;">■</span> R1	617-746 MHz	1-2	(2x) 4.3-10 Female	R1	RFxxxxxxxxxx-2R1
<span style="color: blue;">■</span> B1	1695-2200 MHz	3-4	(2x) 4.3-10 Female	B1	RFxxxxxxxxxx-2B1



The illustration is not shown to scale.

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### MECHANICAL SPECIFICATIONS

Length		mm (in)	1726 (68.0)
Width		mm (in)	405 (16.0)
Depth		mm (in)	228 (9.0)
Net Weight - Antenna Only		kg (lbs)	21.5 (47.4)
Net Weight - Mounting Hardware Only		kg (lbs)	4.0 (8.8)
Wind Load Rated at 150 km/h (93 mph)	Front	N (lbf)	890 (200)
	Side	N (lbf)	448 (101)
	Rear	N (lbf)	862 (194)
Survival Wind Speed		km/h (mph)	240 (150)
Connector Type		---	(4x) 4.3-10 Female on Back, (4x) AISG Connectors (2 Male, 2 Female)
Adjustment Mechanism		---	Integrated RET Solution AISG Compliant (Field Replaceable)
Radome Color		---	Light Grey RAL7035
Radome Material		---	ASA
Lightning Protection		---	IEC 61000-4-5, DC Ground
<b>Shipping</b>	Packing Size (Length x Width x Depth)	mm (in)	1920 x 505 x 330 (75.6 x 19.9 x 13.0)
	Shipping Weight	kg (lbs)	30.5 (67.2)

### 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 and Interface Bracket for Pole Diameter 60-120 mm (2.4-4.7 in) <i>Shipped with antenna</i>	APM40-2 and APM40-E10	4.0 kg (8.8 lbs)

### INSTALLATION

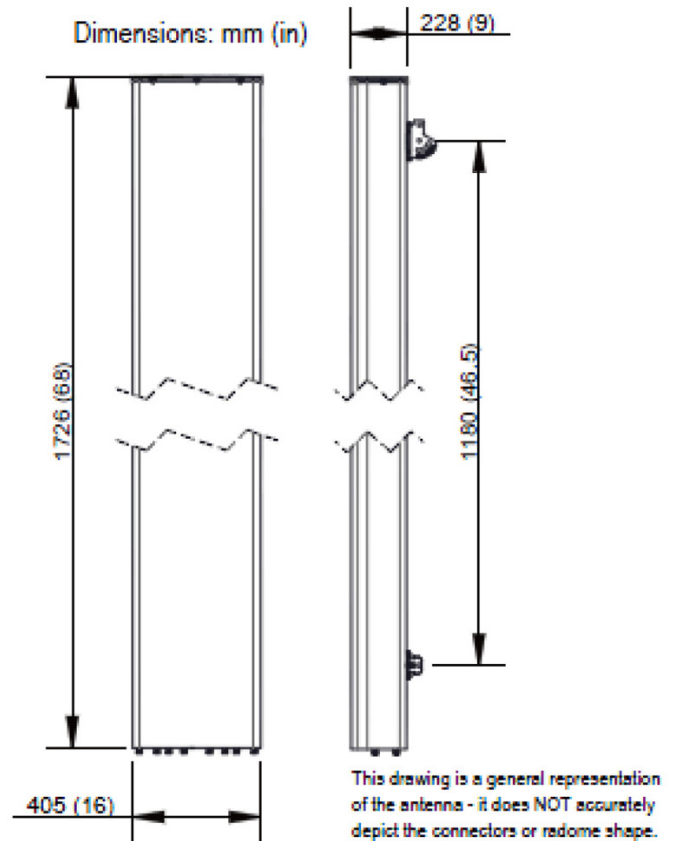
Please read all installation notes before installing product.



- 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](#)