

APXV4ALL24-U-J20

APXV4ALL24-V-J20

Features

- Narrow 499 mm radome for reduced windloading and easier zoning
- MIMO 2x2 in low-band and 4x4 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
- Optional with Direct Pipe No Tilt mounting hardware (Model name suffix -V-J20)



PRODUCT OVERVIEW	Frequency Range (MHz)	(1x) 617-894	(2x) 1695-2690	
	Array	<div><div></div> R1</div>	<div><div></div> Y1</div>	<div><div></div> Y2</div>
	Connector	1-2	3-4	5-6
		2 PORTS	4 PORTS	
	Polarization	XPOL	XPOL	
	Azimuth Beamwidth (avg)	45°	45°	
	Electrical Downtilt	2-12°	2-12°	
	Dimensions	2432 x 499 x 215 mm (95.7 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	MOUNTING HARDWARE WEIGHT
APXV4ALL24-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)	45 kg (99 lbs)	8.5 kg (19 lbs)
APXV4ALL24-V-J20	ACU-X20-N2 Field Replaceable RET Included	APM40-1E Direct Pipe No Tilt and APM40-E10T (included)	60-120 mm (2.4-4.7 in)	42.8 kg (94 lbs)	6.3 kg (14 lbs)



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ELECTRICAL SPECIFICATIONS

■ R1

Frequency Range		MHz	(1x) 617-894		
		MHz	617-698	698-806	806-894
Polarization		---	±45°		
Gain	Over all Tilts	dBi	17.2 ± 0.7	17.9 ± 0.5	18.0 ± 0.5
	Max Gain	dBi	17.9	18.4	18.5
Azimuth Beamwidth (3 dB)		degrees	48° ± 3°	45° ± 3°	39° ± 3°
Elevation Beamwidth (3 dB)		degrees	10.4° ± 1°	9.4° ± 1°	8.4° ± 1°
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	22	25	25
Front-to-Back at 180° Copolar		dB	25	30	30
Upper Side Lobe Suppression, Peak to +20°		dB	17	16	15
First Upper Side Lobe		dB	19	18	17
Cross-Pol Over 10 dB HWB		dB	10	10	9
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	20	20	20
Maximum Effective Power Per Port		Watts	300 W		
Cross Polar Isolation		dB	25	25	25

Specifications follow BASTA guidelines.

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ELECTRICAL SPECIFICATIONS

■ Y1 ■ Y2

Frequency Range		MHz	(2x) 1695-2690			
		MHz	1695-1880	1850-1990	1995-2200	2200-2690
Polarization		---	±45°			
Gain	Over all Tilts	dBi	19 ± 0.4	19.2 ± 0.4	19.6 ± 0.6	19.6 ± 0.5
	Max Gain	dBi	19.4	19.6	20.2	20.1
Azimuth Beamwidth (3 dB)		degrees	45° ± 4°	45° ± 4°	43° ± 2°	36° ± 4°
Elevation Beamwidth (3 dB)		degrees	6.1° ± 0.5°	5.7° ± 0.5°	5.3° ± 0.5°	4.8° ± 0.6°
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	23	23	23	23
Front-to-Back at 180° Copolar		dB	30	30	30	30
Upper Side Lobe Suppression, Peak to +20°		dB	15	15	15	14
First Upper Side Lobe		dB	16	17	17	16
Cross-Pol Over 10 dB HWB		dB	7	9	8	7
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	17	17	15	14
Maximum Effective Power Per Port		Watts	200 W			
Cross Polar Isolation		dB	25	25	25	25

Specifications follow BASTA guidelines.

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	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 AISG Male and One AISG Female	
Field Replaceable Unit		---	Yes	
Location		---	Semi-internal	




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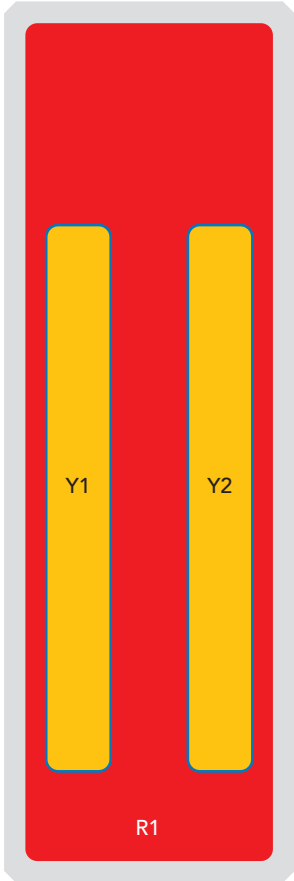
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BOTTOM VIEW - LABELING



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
 Y1	1695-2690 MHz	3-4	(2x) 4.3-10 Female	Y1	RFxxxxxxxxxx-2Y1
 Y2	1695-2690 MHz	5-6	(2x) 4.3-10 Female		



The illustration is not shown to scale.

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MECHANICAL SPECIFICATIONS

Length		mm (in)	2432 (95.7)
Width		mm (in)	499 (19.7)
Depth		mm (in)	215 (8.5)
Net Weight - Antenna Only		kg (lbs)	29 (64)
Wind Load Rated at 150 km/h (93 mph)	Frontal, Resultant	N (lbf)	816 (183)
	Lateral, Resultant	N (lbf)	701 (158)
	Rear, Resultant	N (lbf)	969 (218)
	Maximum, Resultant	N (lbf)	1627 (366)
	Maximum, Drag Force	N (lbf)	1439 (324)
Survival Wind Speed		km/h (mph)	240 (150)
Connector Type		--	(6x) 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)	2642 x 560 x 285 (104 x 22.0 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 and Interface Bracket for Pole Diameter 60-120 mm (2.4-4.7 in) <i>Refer to ordering options</i>	APM40-5E and APM40-E10T	8.5 kg (19 lbs)
Direct Pipe No Tilt Bracket Kit and Interface Bracket for Pole Diameter 60-120 mm (2.4-4.7 in) <i>Refer to ordering options</i>	APM40-1E and APM40-E10T	6.3 kg (14 lbs)

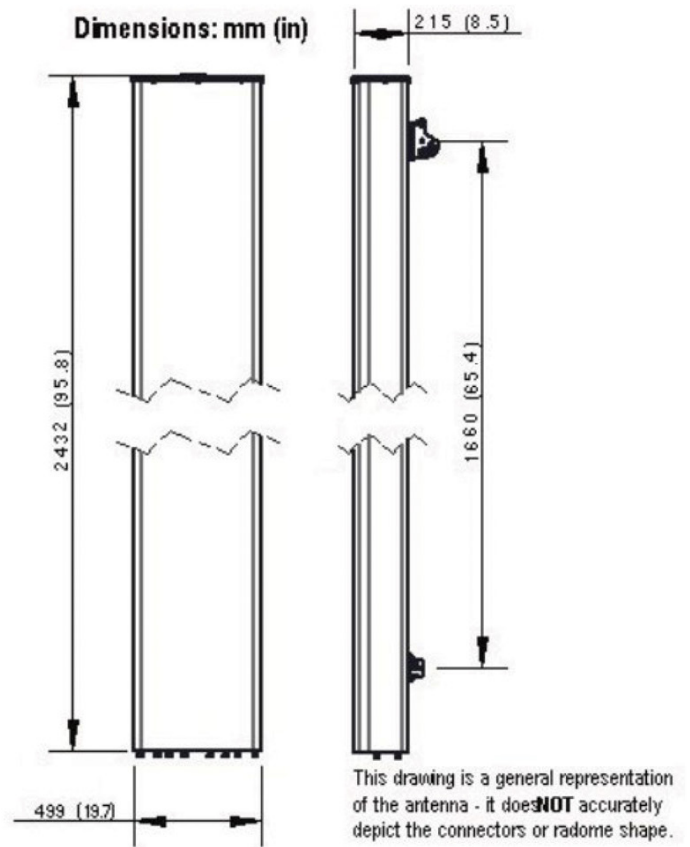
INSTALLATION

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](#)