

APXVAALL12N_43-U-NA20

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: 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	2-18°		2-12°	
	Dimensions	1219 x 499 x 215 mm (48.0 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
APXVAALL12N_43-U-NA20	ACU-A20-SR Field Replacable RET, included (2)	APM40-2 Beam Tilt Kit and APM40-E10, included	60-120 mm (2.4-4.7 in)	30 kg (66 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	12.4 ± 0.6	13.4 ± 0.5	13.7 ± 0.6
	Max Gain	dBi	13.0	13.9	14.3
Azimuth Beamwidth (3 dB)		degrees	70° ± 8°	63° ± 6°	57° ± 6°
Elevation Beamwidth (3 dB)		degrees	19.1° ± 0.8°	17.4° ± 1.3°	15.2° ± 1.0°
Electrical Downtilt		degrees	2-18°		
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	18	20	21
Front-to-Back at 180° Copolar		dB	26	24	29
Upper Side Lobe Suppression, Peak to +20°		dB	22	22	17
First Upper Side Lobe		dB	14	15	16
Cross-Pol Over Sector		dB	8	7	6
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	20	21	17
Maximum Effective Power Per Port		Watts	300 W		
Cross Polar Isolation		dB	25	25	25
Interband Isolation		dB	19	19	19

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	15.2 ± 1.0	15.9 ± 0.7	16.3 ± 0.8	16.7 ± 0.7
	Max Gain	dBi	16.2	16.6	17.1	17.4
Azimuth Beamwidth (3 dB)		degrees	69° ± 8°	64° ± 8°	61° ± 5°	57° ± 7°
Elevation Beamwidth (3 dB)		degrees	9.5° ± 0.9°	8.7° ± 0.5°	7.7° ± 0.7°	6.5° ± 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 2x20 W Carriers)			
Front-to-Back Ratio, Total Power, ± 30°		dB	23	22	23	21
Front-to-Back at 180° Copolar		dB	29	28	29	27
Upper Side Lobe Suppression, Peak to +20°		dB	16	17	16	14
First Upper Side Lobe		dB	19	19	16	17
Cross-Pol Over Sector		dB	5	6	5	3
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	15	21	17	19
Maximum Effective Power Per Port		Watts	250 W			
Cross Polar Isolation		dB	25	25	25	25
Interband Isolation		dB	23	23	23	23

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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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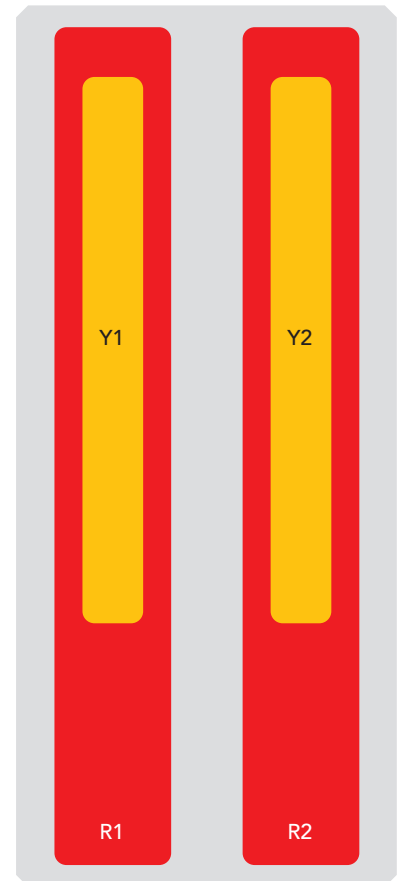
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BOTTOM VIEW - LABELING



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)	1219 (48.0)
Width		mm (in)	499 (19.7)
Depth		mm (in)	215 (8.5)
Net Weight - Antenna Only		kg (lbs)	22 (49)
Net Weight - Mounting Hardware Only		kg (lbs)	4.5 (10)
Wind Load Rated at 150 km/h (93 mph)	Front	N (lbf)	407 (91)
	Side	N (lbf)	382 (86)
	Rear	N (lbf)	473 (106)
	Maximum	N (lbf)	793 (178)
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)	1430 x 560 x 265 (56.3 x 22.0 x 10.4)
	Shipping Weight	kg (lbs)	30 (66)

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.

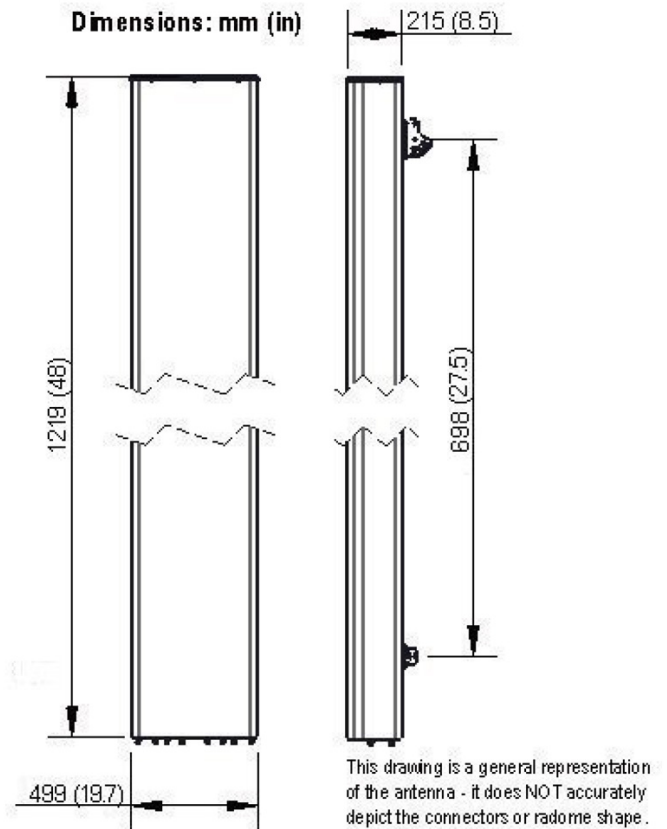
ITEM	MODEL NUMBER	WEIGHT
Beam Tilt Mounting Bracket Kit and Interface Bracket for Pole Diameter 60-120 mm (2.4-4.7 in) <i>Shipped with antenna</i>	APM40-2 and APM40-E10	4.5 kg (10 lbs)

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](#)