

APXVAA4L24_43-U-NA20

Features

- MIMO 4x4 in low-band and mid-band x2 (L/CL and CR/R)
- Integrated and field replaceable RET
- ACU model number: x3 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		(4x) 1695-2690			
	Array	■ R1	■ R2	■ Y1	■ Y2	■ Y3	■ Y4
	Connector	1-2	3-4	5-6	7-8	9-10	11-12
		4 PORTS		8 PORTS			
	Polarization	XPOL		XPOL			
	Azimuth Beamwidth (avg)	65°		65°			
	Electrical Downtilt	2-12°		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
APXVAA4L24_43-U-NA20	ACU-A20-SR Field Replacable RET, included (3)	APM40-5E Beam tilt kit, included	60-120 mm (2.4-4.7 in)	86.7 kg (191.1 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	15.1 ± 0.6	15.2 ± 0.7	15.4 ± 0.6
	Max Gain	dBi	15.7	15.9	16.0
Azimuth Beamwidth (3 dB)		degrees	70° ± 3°	68° ± 3°	65° ± 4°
Elevation Beamwidth (3 dB)		degrees	9.9° ± 0.7°	8.6° ± 0.7°	7.6° ± 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	19	20	20
Front-to-Back at 180° Copolar		dB	28	28	28
Upper Side Lobe Suppression, Peak to +20°		dB	15	15	16
First Upper Side Lobe		dB	15	15	16
Cross-Pol Over Sector		dB	10	7	5
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	22	21	21
Maximum Effective Power Per Port		Watts	400 W		
Inter-Band Isolation		dB	25		

ELECTRICAL SPECIFICATIONS

■ Y1 ■ Y2 ■ Y3 ■ Y4

Frequency Range		MHz	(4x) 1695-2690				
		MHz	1695-1880	1850-1990	1920-2200	2200-2500	2500-2690
Polarization		---	±45°				
Gain	Over all Tilts	dBi	16.9 ± 1.0	17.8 ± 0.8	18.8 ± 1.0	18.1 ± 1.1	17.7 ± 1.4
	Max Gain	dBi	17.9	18.6	19.8	19.2	19.1
Azimuth Beamwidth (3 dB)		degrees	67° ± 7°	65° ± 9°	61° ± 10°	59° ± 6°	58° ± 8°
Elevation Beamwidth (3 dB)		degrees	5.6° ± 0.5°	5.3° ± 0.4°	4.8° ± 0.6°	4.5° ± 0.3°	4.4° ± 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	25	25	26	23	23
Front-to-Back at 180° Copolar		dB	32	32	32	31	30
Upper Side Lobe Suppression, Peak to +20°		dB	14	15	14	13	11
First Upper Side Lobe		dB	15	15	16	17	17
Cross-Pol Over Sector		dB	5	6	6	2	1
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	23	21	20	20	19
Maximum Effective Power Per Port		Watts	250 W				
Inter-Band Isolation		dB	25				

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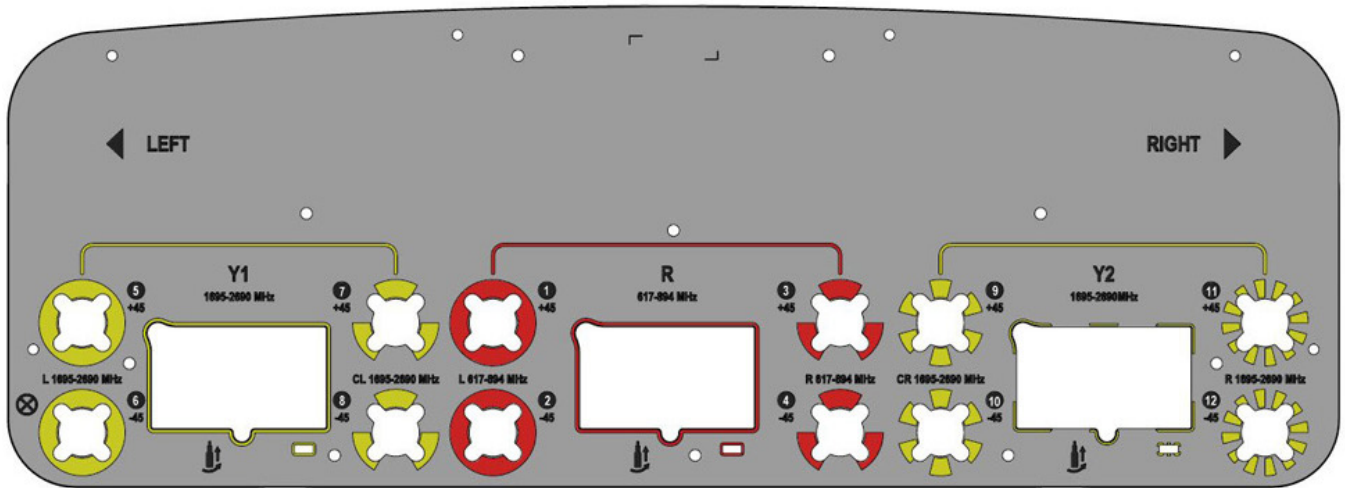
RET ACTUATOR

Frequency	MHz	617-894	1695-2690
Model Number	---	ACU-A20-SR	ACU-A20-SR
Number of RET Actuators	---	1	2
RET ID	---	R1	Y1 and Y2
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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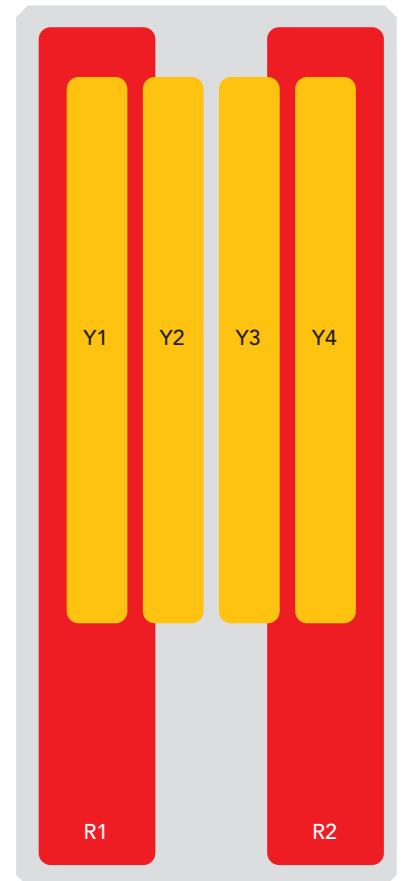
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BOTTOM VIEW - LABELING



ARRAY LAYOUT

ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE	RET	AISG RET UID
R1	617-894 MHz	1-2	(2x) 4.3-10 Female	R1	RFxxxxxxxxxx-2R1
R2	617-894 MHz	3-4	(2x) 4.3-10 Female		
Y1	1695-2690 MHz	5-6	(2x) 4.3-10 Female	Y1	RFxxxxxxxxxx-2Y1
Y2	1695-2700 MHz	7-8	(2x) 4.3-10 Female		
Y3	1695-2690 MHz	9-10	(2x) 4.3-10 Female	Y2	RFxxxxxxxxxx-2Y2
Y4	1695-2690 MHz	11-12	(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)	65 (143.3)
Net Weight - Mounting Hardware Only	kg (lbs)	11.5 (25.3)
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	---	(12x) 4.3-10 Female at Bottom, (6x) AISG Connectors (3 Male, 3 Female)
Radome Color	---	Light Grey RAL7035
Radome Material	---	Fiberglass
Lightning Protection	---	Direct Ground
Shipping	Packing Size (Length x Width x Depth)	mm (in) 2565 x 735 x 390 (101.0 x 29.0 x 15.4)
	Shipping Weight	kg (lbs) 86.7 (191.1)

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>Shipped with antenna</i>	APM40-5E	11.5 kg (25.3 lbs)
1.0 meter AISG System Cable (v2.0) <i>Shipped with antenna</i>	CA010-7	0.17 kg (0.37 lbs)

INSTALLATION

Please read all installation notes before installing product.



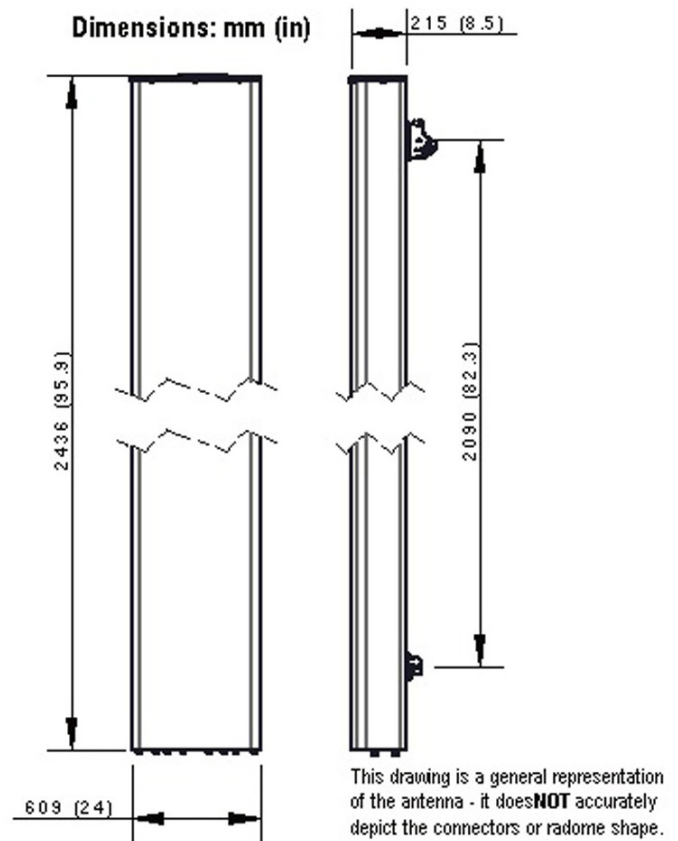
- Always attach the antenna using all mounting points.
- Do not install antenna with the connectors facing upwards.

EXTERNAL DOCUMENT LINKS

[APM40 Mounting Kit Series Installation Instructions](#)

[CAxxx-7 AISG Cable Series](#)

[Manual Overdrive Instructions](#)



NOTES

Specifications follow BASTA guidelines.

A one-meter AISG cable CA010-7 comes in the box. For additional cable information please check **External Document Links**.

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

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