

APXVBBL20H_43-C-I20

Features

- 4 ports / 2 cross pol systems in low band (690-960 MHz)
- 2 ports / 1 cross pol system in very wide high band (1695-2690 MHz)
- Integrated and field replaceable SRET
- ACU HW version: HRLS200608H1.00
- Compliant with AISG v2.0 and 3GPP



PRODUCT OVERVIEW	Frequency Range (MHz)	(2x) 690-960		(1x) 1695-2690
	Array	■ R1	■ R2	■ Y1
	Connector	1-2	3-4	5-6
		6 PORTS		
	Polarization	XPOL		
	Azimuth Beamwidth (avg)	65°		65°
	Electrical Downtilt	2-12°		2-12°
	Dimensions	1998 x 468 x 168 mm (78.7 x 18.4 x 6.6 in)		

ORDERING OPTIONS

Select from the following ordering options

ANTENNA MODEL NUMBER	CONFIGURATION	MOUNTING HARDWARE	MOUNTING PIPE DIAMETER	SHIPPING WEIGHT
APXVBBL20H_43-C-I20	ACU-I20-H12I Internal RET Included	APM50-H2 Beam Tilt Kit Included	50-125 mm (2.0-4.9 in)	37.5 kg (82.7 lbs)

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ELECTRICAL SPECIFICATIONS

■ R1

Frequency Range	MHz	690-960			
	MHz	690-806	790-894	880-960	
Polarization	---	±45°			
Gain	Over all Tilts	dBi	15.3 ± 0.7	15.9 ± 0.4	16.1 ± 0.3
	Max Gain	dBi	16.0	16.3	16.4
Azimuth Beamwidth (3 dB)	degrees	66.3° ± 7.0°	62.2° ± 4.2°	60.5° ± 7.5°	
Elevation Beamwidth (3 dB)	degrees	11.6° ± 1.1°	10.4° ± 0.6°	9.6° ± 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 2x20 W Carriers)			
Front-to-Back Ratio, Total Power, ± 30°	dB	20.6	23.7	23.9	
First Upper Side Lobe Suppression	dB	18.4	19.2	20.8	
Cross Polar Discrimination Over Sector	dB	9.9	10.4	9.7	
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)	dB	17.9	23.0	23.7	
Maximum Effective Power Per Port	Watts	250 W			
Cross Polar Isolation	dB	25			
Interband Isolation	dB	25			

Specifications follow BASTA guidelines.

ELECTRICAL SPECIFICATIONS

■ R2

Frequency Range	MHz	690-960			
	MHz	690-806	790-894	880-960	
Polarization	---	±45°			
Gain	Over all Tilts	dBi	15.3 ± 0.5	15.8 ± 0.4	16.0 ± 0.3
	Max Gain	dBi	15.8	16.2	16.3
Azimuth Beamwidth (3 dB)	degrees	68.1° ± 7.4°	63.7° ± 3.9°	63° ± 7.6°	
Elevation Beamwidth (3 dB)	degrees	11.5° ± 0.9°	10.4° ± 0.6°	9.5° ± 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 2x20 W Carriers)			
Front-to-Back Ratio, Total Power, ± 30°	dB	20.1	23.5	23.4	
First Upper Side Lobe Suppression	dB	18.8	18.2	20.4	
Cross Polar Discrimination Over Sector	dB	9.5	11.4	10.3	
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)	dB	18.1	22.0	25.5	
Maximum Effective Power Per Port	Watts	250 W			
Cross Polar Isolation	dB	25			
Interband Isolation	dB	25			

Specifications follow BASTA guidelines.

Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.

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ELECTRICAL SPECIFICATIONS

■ Y1

Frequency Range		MHz	1695-2690				
		MHz	1695-1880	1850-1990	1920-2170	2300-2400	2490-2690
Polarization		---	±45°				
Gain	Over all Tilts	dBi	16.2 ± 0.4	16.7 ± 0.5	17.3 ± 0.8	17.7 ± 0.5	17.7 ± 0.8
	Max Gain	dBi	16.6	17.2	18.1	18.2	18.5
Azimuth Beamwidth (3 dB)		degrees	72.5° ± 4.1°	66.8° ± 7.2°	59.4° ± 11.8°	59.5° ± 5.5°	65.5° ± 3.2°
Elevation Beamwidth (3 dB)		degrees	6.7° ± 0.5°	6.1° ± 0.4°	5.8° ± 0.4°	5.0° ± 0.2°	4.7° ± 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	25.9	28.7	28.7	28.4	26.5
First Upper Side Lobe Suppression		dB	13	14	13.9	12	13.7
Cross Polar Discrimination Over Sector		dB	14	13.2	11.2	5.6	0.7
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	20.7	19	19.6	18.3	14.7
Maximum Effective Power Per Port		Watts	200 W				
Cross Polar Isolation		dB	26				
Interband Isolation		dB	28				

Specifications follow BASTA guidelines.

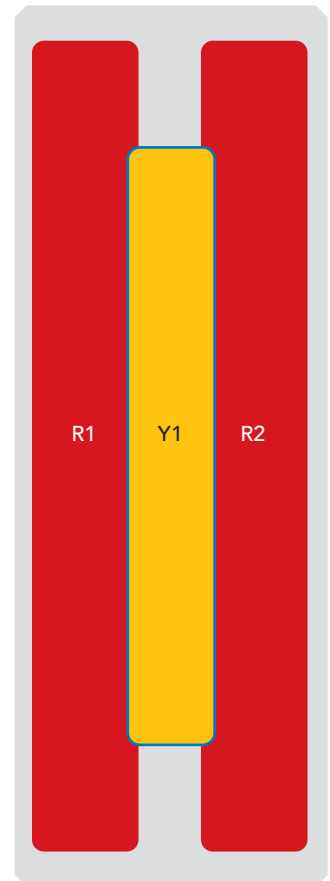
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BOTTOM VIEW - LABELING



ARRAY LAYOUT

ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE	RET	AISG RET UID
■ R1	690-960 MHz	1-2	(2x) 4.3-10 Female	R1	RFxxxxxxxxxx-R1
■ R2	690-960 MHz	3-4	(2x) 4.3-10 Female	R2	RFxxxxxxxxxx-R2
■ Y1	1695-2690 MHz	5-6	(2x) 4.3-10 Female	Y1	RFxxxxxxxxxx-Y1



The illustration is not shown to scale.

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MECHANICAL SPECIFICATIONS

Length	mm (in)	1998 (78.7)
Width	mm (in)	468 (18.4)
Depth	mm (in)	168 (6.6)
Net Weight - Antenna Only	kg (lbs)	27 (59.5)
Net Weight - Mounting Hardware Only	kg (lbs)	5.5 (12.1)
Wind Load Rated at 150 km/h (93 mph)	Front	N (lbf) 860 (193)
	Side	N (lbf) 320 (72)
	Rear	N (lbf) 960 (216)
Survival Wind Speed / Rated Wind Speed	km/h (mph)	200 (150)
Connector Type	--	(6x) 4.3-10 Female, (2x) AISG Connectors (1 Male, 1 Female) at Bottom
Radome Color	---	Light Grey RAL7035
Radome Material	---	Fiberglass
Lightning Protection	---	Direct Ground
Shipping	Packing Size (Length x Width x Depth)	mm (in) 2198 x 544 x 278 (86.5 x 21.4 x 10.9)
	Shipping Weight	kg (lbs) 37.5 (82.7)

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 50-125 mm (2.0-4.9 in) <i>Shipped with antenna</i>	APM50-H2	5.5 kg (12.1 lbs)

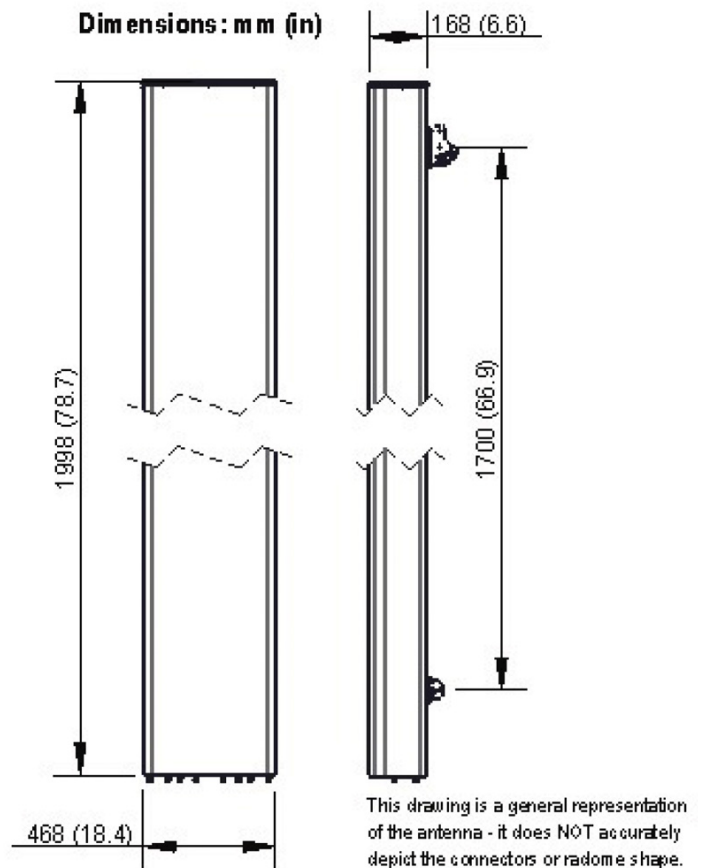
INSTALLATION

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

[APM50 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](#)