

APXVBB3L15H_43-C-I20

Features

- 4 ports / 2 cross pol systems in low band (690-960 MHz)
- 6 ports / 3 cross pol systems in 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		(3x) 1695-2690		
	Array	■ R1	■ R2	■ Y1	■ Y2	■ Y3
	Connector	1-2	3-4	5-6	7-8	9-10
		10 PORTS				
	Polarization	XPOL				
	Azimuth Beamwidth (avg)	65°		65°		
	Electrical Downtilt	2-12°		2-12°		
	Dimensions	1498 x 468 x 168 mm (59.0 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
APXVBB3L15H_43-C-I20	ACU-I20-H12I Internal RET Included	APM50-H2 Beam Tilt Kit Included	50-125 mm (2.0-4.9 in)	36 kg (79.4 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	13.7 ± 0.8	14.4 ± 0.8	14.7 ± 0.6
	Max Gain	dBi	14.5	15.2	15.3
Azimuth Beamwidth (3 dB)	degrees	62.4° ± 5.3°	56.9° ± 3.4°	54.9° ± 7.2°	
Elevation Beamwidth (3 dB)	degrees	15.6° ± 1.3°	14° ± 0.9°	12.6° ± 1.0°	
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	21.2	21.7	22.6	
First Upper Side Lobe Suppression	dB	16.4	18.3	17.9	
Cross Polar Discrimination Over Sector	dB	11.9	11	11.2	
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)	dB	21.3	23.5	21.3	
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	13.9 ± 0.8	14.4 ± 0.8	14.9 ± 0.7
	Max Gain	dBi	14.7	15.2	15.6
Azimuth Beamwidth (3 dB)	degrees	62.3° ± 6°	56.3° ± 3.4°	53.7° ± 5.4°	
Elevation Beamwidth (3 dB)	degrees	15° ± 1.3°	13.6° ± 0.7°	12.2° ± 0.9°	
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	20.5	22.4	23.8	
First Upper Side Lobe Suppression	dB	14	17.8	17.3	
Cross Polar Discrimination Over Sector	dB	10.2	10.3	9.6	
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)	dB	17.6	20.9	21.9	
Maximum Effective Power Per Port	Watts	250 W			
Cross Polar Isolation	dB	25			
Interband Isolation	dB	25			

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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	16.1 ± 0.7	17.1 ± 0.4	17.5 ± 0.7	17.5 ± 0.6	17.6 ± 0.5
	Max Gain	dBi	16.8	17.5	18.2	18.1	18.1
Azimuth Beamwidth (3 dB)		degrees	62.8° ± 7.7°	58.6° ± 3.9°	56.7° ± 3.8°	52.7° ± 4.1°	54.2° ± 3.8°
Elevation Beamwidth (3 dB)		degrees	7.5° ± 0.7°	6.6° ± 0.5°	6.1° ± 0.6°	5.4° ± 0.3°	4.8° ± 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	24.4	26.2	26.1	25.2	25.2
First Upper Side Lobe Suppression		dB	19	17.6	16.2	13.8	14.1
Cross Polar Discrimination Over Sector		dB	4.7	6.8	5.8	2	0.5
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	20.3	21.4	22	20.6	22.3
Maximum Effective Power Per Port		Watts	200 W				
Cross Polar Isolation		dB	26				
Interband Isolation		dB	28				

Specifications follow BASTA guidelines.

ELECTRICAL SPECIFICATIONS

■ Y2

Frequency Range		MHz	1695-2690				
		MHz	1695-1880	1850-1990	1920-2170	2300-2400	2490-2690
Polarization		---	±45°				
Gain	Over all Tilts	dBi	16.1 ± 0.4	16.5 ± 0.4	17.1 ± 0.7	17.6 ± 0.5	17.8 ± 0.7
	Max Gain	dBi	16.5	16.9	17.8	18.1	18.5
Azimuth Beamwidth (3 dB)		degrees	69.8° ± 4.8°	68.6° ± 4.1°	64° ± 6.1°	57° ± 2.3°	59.3° ± 5.6°
Elevation Beamwidth (3 dB)		degrees	6.6° ± 0.4°	6.1° ± 0.3°	5.9° ± 0.4°	5.2° ± 0.3°	4.9° ± 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	24.5	23.2	23.7	27	27.2
First Upper Side Lobe Suppression		dB	16.1	17.7	14.3	16.3	17.5
Cross Polar Discrimination Over Sector		dB	13.6	12.2	9	4.9	1.5
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	18.4	21.3	22.4	19.8	17.5
Maximum Effective Power Per Port		Watts	200 W				
Cross Polar Isolation		dB	26				
Interband Isolation		dB	28				

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ELECTRICAL SPECIFICATIONS

■ Y3

Frequency Range		MHz	1695-2690				
		MHz	1695-1880	1850-1990	1920-2170	2300-2400	2490-2690
Polarization		---	±45°				
Gain	Over all Tilts	dBi	16 ± 0.6	17 ± 0.4	17.4 ± 0.8	17.5 ± 0.6	17.7 ± 0.6
	Max Gain	dBi	17.2	17.4	18.2	18.1	18.3
Azimuth Beamwidth (3 dB)		degrees	62.8° ± 8.2°	58.8° ± 4.8°	57.2° ± 4°	52.5° ± 4°	53.8° ± 4.2°
Elevation Beamwidth (3 dB)		degrees	7.6° ± 0.6°	6.6° ± 0.5°	6.1° ± 0.6°	5.4° ± 0.3°	4.9° ± 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	23.1	25.3	26.1	25.9	24.8
First Upper Side Lobe Suppression		dB	18.3	17.3	16.6	13.6	14.4
Cross Polar Discrimination Over Sector		dB	4.2	7.2	6.1	1.1	0.6
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	19.4	19.6	21.3	20.1	21.5
Maximum Effective Power Per Port		Watts	200 W				
Cross Polar Isolation		dB	26				
Interband Isolation		dB	28				

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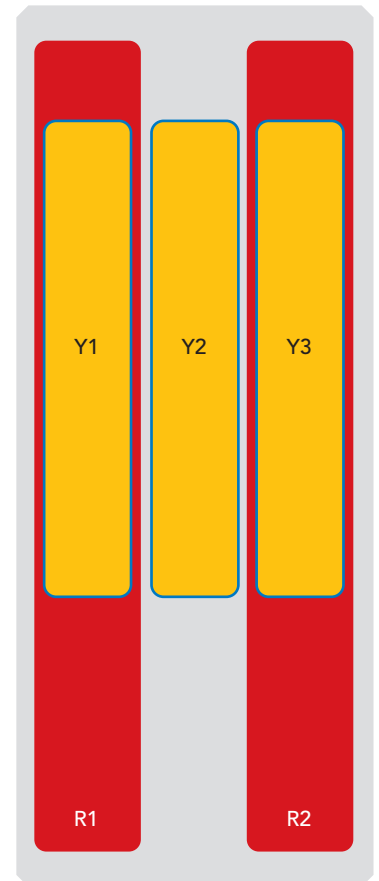
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BOTTOM VIEW - LABELING



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
■ Y2	1695-2690 MHz	7-8	(2x) 4.3-10 Female	Y2	RFxxxxxxxxxx-Y2
■ Y3	1695-2690 MHz	9-10	(2x) 4.3-10 Female	Y3	RFxxxxxxxxxx-Y3



The illustration is not shown to scale.

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MECHANICAL SPECIFICATIONS

Length	mm (in)	1498 (59.0)
Width	mm (in)	468 (18.4)
Depth	mm (in)	168 (6.6)
Net Weight - Antenna Only	kg (lbs)	24.5 (54)
Net Weight - Mounting Hardware Only	kg (lbs)	5.5 (12.1)
Wind Load Rated at 150 km/h (93 mph)	Front	N (lbf) 645 (145)
	Side	N (lbf) 285 (64)
	Rear	N (lbf) 720 (162)
Survival Wind Speed / Rated Wind Speed	km/h (mph)	200 (150)
Connector Type	--	(10x) 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) 1698 x 544 x 278 (66.9 x 21.4 x 10.9)
	Shipping Weight	kg (lbs) 36 (79.4)

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

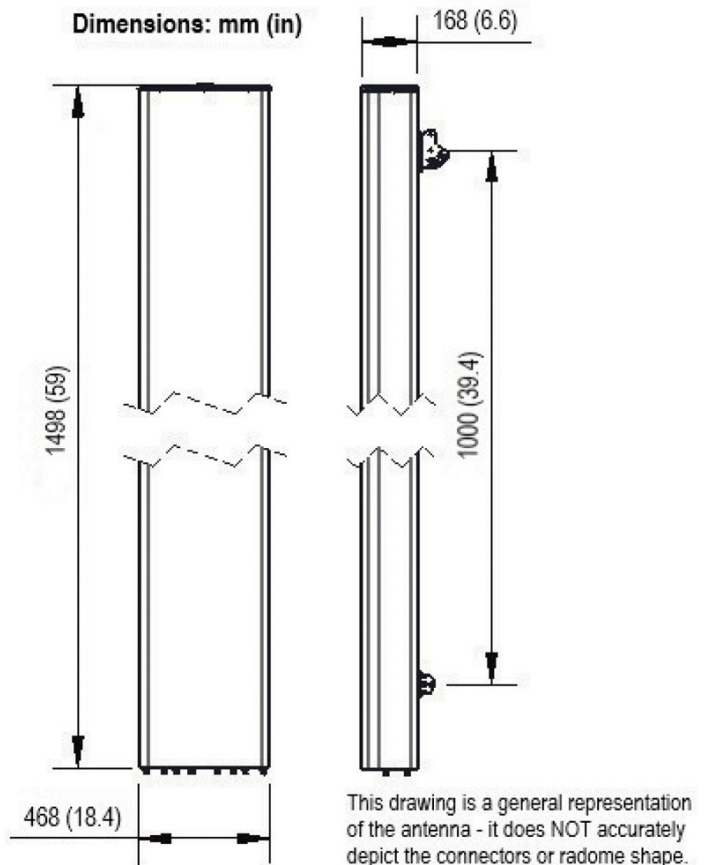
Please read all installation notes before installing product.



- 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](#)