

APXVBB4L20B_43-C-I20

Features

- 4 ports / 2 cross pol systems in low band (698-960 MHz)
- 8 ports / 4 cross pol systems in high band (1710-2690 MHz)
- Supporting 4x4 MIMO in low band and high band
- Integrated and field replaceable SRET
- ACU HW version: 2.02
- Compliant with AISG v2.0 and 3GPP



PRODUCT OVERVIEW	Frequency Range (MHz)	(2x) 698-960		(4x) 1710-2690			
	Array	■ R1	■ R2	■ Y1	■ Y2	■ Y3	■ Y4
	Connector	1-2	3-4	5-6	7-8	9-10	11-12
		12 PORTS					
	Polarization	XPOL					
	Azimuth Beamwidth (avg)	65°		65°			
	Electrical Downtilt	2-12°		2-12°			
	Dimensions	2088 x 499 x 199 mm (82.2 x 19.6 x 7.8 in)					

ORDERING OPTIONS

Select from the following ordering options

ANTENNA MODEL NUMBER	CONFIGURATION	MOUNTING HARDWARE	MOUNTING PIPE DIAMETER	SHIPPING WEIGHT
APXVBB4L20B_43-C-I20	ACU-I20-B6 Internal RET Included	APM50-B1 Beam Tilt Kit Included	50-110 mm (2.0-4.3 in)	52.5 kg (115.7 lbs)



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ELECTRICAL SPECIFICATIONS

■ R1

Frequency Range		MHz	698-960		
		MHz	698-806	790-894	880-960
Polarization		---	±45°		
Gain	Over all Tilts	dBi	15.2 ± 0.7	15.9 ± 0.3	15.8 ± 0.3
	Max Gain	dBi	15.9	16.2	16.1
Azimuth Beamwidth (3 dB)		degrees	63.4° ± 2.4°	64.5° ± 2.7°	67.8° ± 4°
Elevation Beamwidth (3 dB)		degrees	11.4° ± 1°	10.4° ± 0.5°	9.8° ± 0.4°
Electrical Downtilt		degrees	2-12°		
Impedance		Ohms	50Ω		
VSWR (Return Loss)		---	1.5:1 (-14 dB)		
Passive Intermodulation		dBc	-150 (3rd Order for 2x20 W Carriers)		
Front-to-Back Ratio, Total Power, ± 30°		dB	18.5	22.4	22.8
First Upper Side Lobe Suppression		dB	21.3	16.1	12.2
Cross Polar Discrimination Over Sector		dB	9.3	12.1	10.4
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	22.1	21.9	25.3
Maximum Effective Power Per Port		Watts	350 W		
Cross Polar Isolation		dB	26		
Interband Isolation		dB	26		

Specifications follow BASTA guidelines.

ELECTRICAL SPECIFICATIONS

■ R2

Frequency Range		MHz	698-960		
		MHz	698-806	790-894	880-960
Polarization		---	±45°		
Gain	Over all Tilts	dBi	15.1 ± 0.7	15.9 ± 0.3	15.7 ± 0.5
	Max Gain	dBi	15.8	16.2	16.2
Azimuth Beamwidth (3 dB)		degrees	60.7° ± 3.1°	63° ± 3.6°	67.3° ± 4.1°
Elevation Beamwidth (3 dB)		degrees	11.2° ± 0.8°	10.3° ± 0.5°	9.7° ± 0.4°
Electrical Downtilt		degrees	2-12°		
Impedance		Ohms	50Ω		
VSWR (Return Loss)		---	1.5:1 (-14 dB)		
Passive Intermodulation		dBc	-150 (3rd Order for 2x20 W Carriers)		
Front-to-Back Ratio, Total Power, ± 30°		dB	19.5	24.4	21.8
First Upper Side Lobe Suppression		dB	19.1	15.8	11.6
Cross Polar Discrimination Over Sector		dB	8.5	12.4	10.2
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	22.8	23	25
Maximum Effective Power Per Port		Watts	350 W		
Cross Polar Isolation		dB	26		
Interband Isolation		dB	26		

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ELECTRICAL SPECIFICATIONS

■ Y1

Frequency Range		MHz	1710-2690				
		MHz	1710-1880	1850-1990	1920-2170	2300-2400	2490-2690
Polarization		---	±45°				
Gain	Over all Tilts	dBi	14.4 ± 0.7	14.4 ± 0.5	14.8 ± 0.8	14.7 ± 0.5	15.2 ± 0.7
	Max Gain	dBi	15.1	14.9	15.6	15.2	15.9
Azimuth Beamwidth (3 dB)		degrees	60.3° ± 5.6°	60.1° ± 6.3°	55.1° ± 8.6°	57.2° ± 9°	53.6° ± 3.3°
Elevation Beamwidth (3 dB)		degrees	12.2° ± 0.9°	11.4° ± 1°	10.6° ± 1.1°	9.5° ± 1°	8.5° ± 0.5°
Electrical Downtilt		degrees	2-12°				
Impedance		Ohms	50Ω				
VSWR (Return Loss)		---	1.5:1 (-14 dB)				
Passive Intermodulation		dBc	-150 (3rd Order for 2x20 W Carriers)				
Front-to-Back Ratio, Total Power, ± 30°		dB	21	20.2	20.3	19.8	19.8
First Upper Side Lobe Suppression		dB	16.4	17.7	17.7	15	15.2
Cross Polar Discrimination Over Sector		dB	7.6	4.9	3.9	1.1	0.9
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	13.3	13.4	14.2	15.9	18.8
Maximum Effective Power Per Port		Watts	250 W				
Cross Polar Isolation		dB	26				
Interband Isolation		dB	26				

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ELECTRICAL SPECIFICATIONS

■ Y2

Frequency Range		MHz	1710-2690				
		MHz	1710-1880	1850-1990	1920-2170	2300-2400	2490-2690
Polarization		---	±45°				
Gain	Over all Tilts	dBi	14.4 ± 0.6	14.4 ± 0.4	14.7 ± 0.8	14.8 ± 0.5	15.1 ± 0.5
	Max Gain	dBi	15.0	14.8	15.5	15.3	15.6
Azimuth Beamwidth (3 dB)		degrees	58.6° ± 5.1°	58.9° ± 4.5°	55.3° ± 7.5°	56.5° ± 8.4°	55.9° ± 4.6°
Elevation Beamwidth (3 dB)		degrees	11.6° ± 1.1°	10.7° ± 0.9°	9.9° ± 1.4°	8.5° ± 0.7°	7.9° ± 0.7°
Electrical Downtilt		degrees	2-12°				
Impedance		Ohms	50Ω				
VSWR (Return Loss)		---	1.5:1 (-14 dB)				
Passive Intermodulation		dBc	-150 (3rd Order for 2x20 W Carriers)				
Front-to-Back Ratio, Total Power, ± 30°		dB	21.1	19.9	20.2	21.1	20.3
First Upper Side Lobe Suppression		dB	15.1	17.1	19.3	16.3	16.2
Cross Polar Discrimination Over Sector		dB	9.2	6.3	5.5	1.1	0.8
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	14.7	15.4	14.4	16.2	19.1
Maximum Effective Power Per Port		Watts	250 W				
Cross Polar Isolation		dB	26				
Interband Isolation		dB	26				

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ELECTRICAL SPECIFICATIONS

■ Y3

Frequency Range		MHz	1710-2690				
		MHz	1710-1880	1850-1990	1920-2170	2300-2400	2490-2690
Polarization		---	±45°				
Gain	Over all Tilts	dBi	14.1 ± 0.7	14 ± 0.9	14.5 ± 1.1	14.8 ± 0.6	15.1 ± 0.6
	Max Gain	dBi	14.8	14.9	15.6	15.4	15.7
Azimuth Beamwidth (3 dB)		degrees	61° ± 4.7°	57.2° ± 6.7°	53.3° ± 7.3°	57.2° ± 8.7°	55.1° ± 4.8°
Elevation Beamwidth (3 dB)		degrees	12.2° ± 1.3°	11.3° ± 1°	10.5° ± 1.2°	9.4° ± 0.8°	8.4° ± 0.8°
Electrical Downtilt		degrees	2-12°				
Impedance		Ohms	50Ω				
VSWR (Return Loss)		---	1.5:1 (-14 dB)				
Passive Intermodulation		dBc	-150 (3rd Order for 2x20 W Carriers)				
Front-to-Back Ratio, Total Power, ± 30°		dB	21.2	19.8	19.8	20	19.7
First Upper Side Lobe Suppression		dB	15.9	17.3	18.3	17.3	14.9
Cross Polar Discrimination Over Sector		dB	6.9	4.4	3.8	0.8	0.8
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	13	15.2	15.6	16.5	18.5
Maximum Effective Power Per Port		Watts	250 W				
Cross Polar Isolation		dB	26				
Interband Isolation		dB	26				

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ELECTRICAL SPECIFICATIONS

■ Y4

Frequency Range		MHz	1710-2690				
		MHz	1710-1880	1850-1990	1920-2170	2300-2400	2490-2690
Polarization		---	±45°				
Gain	Over all Tilts	dBi	14.4 ± 0.8	14.5 ± 0.6	14.8 ± 0.8	14.8 ± 0.6	15 ± 0.5
	Max Gain	dBi	15.2	15.1	15.6	15.4	15.5
Azimuth Beamwidth (3 dB)		degrees	59° ± 5.2°	58° ± 7.1°	55° ± 8.3°	57.9° ± 6.4°	55.5° ± 5°
Elevation Beamwidth (3 dB)		degrees	11.5° ± 0.9°	10.6° ± 1.1°	9.8° ± 1.2°	8.4° ± 0.7°	7.8° ± 0.8°
Electrical Downtilt		degrees	2-12°				
Impedance		Ohms	50Ω				
VSWR (Return Loss)		---	1.5:1 (-14 dB)				
Passive Intermodulation		dBc	-150 (3rd Order for 2x20 W Carriers)				
Front-to-Back Ratio, Total Power, ± 30°		dB	21.4	20.7	20.3	20.7	20
First Upper Side Lobe Suppression		dB	13.6	16.4	17.9	16.3	16
Cross Polar Discrimination Over Sector		dB	6.8	5.8	5.8	1.4	0.7
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	15.2	14.7	15	18.1	19.5
Maximum Effective Power Per Port		Watts	250 W				
Cross Polar Isolation		dB	26				
Interband Isolation		dB	26				

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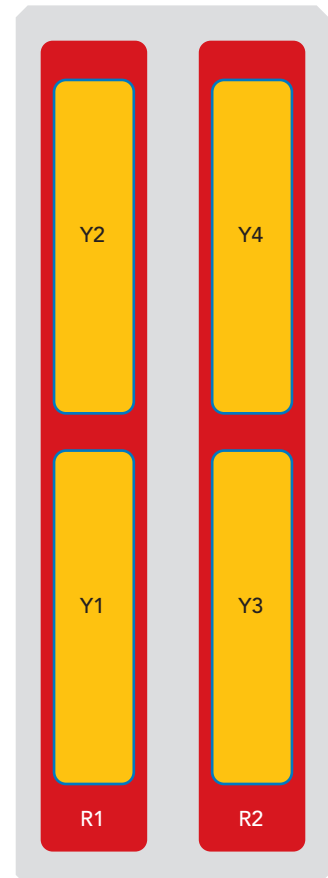
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BOTTOM VIEW - LABELING



ARRAY LAYOUT

ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE	RET	AISG RET UID
■ R1	698-960 MHz	1-2	(2x) 4.3-10 Female	R1	RFxxxxxxxxxx-R1
■ R2	698-960 MHz	3-4	(2x) 4.3-10 Female	R2	RFxxxxxxxxxx-R2
■ Y1	1710-2690 MHz	5-6	(2x) 4.3-10 Female	Y1	RFxxxxxxxxxx-Y1
■ Y2	1710-2690 MHz	7-8	(2x) 4.3-10 Female	Y2	RFxxxxxxxxxx-Y2
■ Y3	1710-2690 MHz	9-10	(2x) 4.3-10 Female	Y3	RFxxxxxxxxxx-Y3
■ Y4	1710-2690 MHz	11-12	(2x) 4.3-10 Female	Y3	RFxxxxxxxxxx-Y4



The illustration is not shown to scale.

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MECHANICAL SPECIFICATIONS

Length	mm (in)	2088 (82.2)
Width	mm (in)	499 (19.6)
Depth	mm (in)	199 (7.8)
Net Weight - Antenna Only	kg (lbs)	40.5 (89.3)
Net Weight - Mounting Hardware Only	kg (lbs)	4.5 (9.9)
Wind Load Rated at 150 km/h (93 mph)	Front	N (lbf) 1241 (279)
	Side	N (lbf) 570 (128)
	Rear	N (lbf) 1669 (375)
Survival Wind Speed / Rated Wind Speed	km/h (mph)	200 (150)
Connector Type	--	(12x) 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) 2340 x 595 x 295 (92.1 x 23.4 x 11.6)
	Shipping Weight	kg (lbs) 52.5 (115.7)

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 50-110 mm (2.0-4.3 in) <i>Shipped with antenna</i>	APM50-B1	4.5 kg (9.9 lbs)

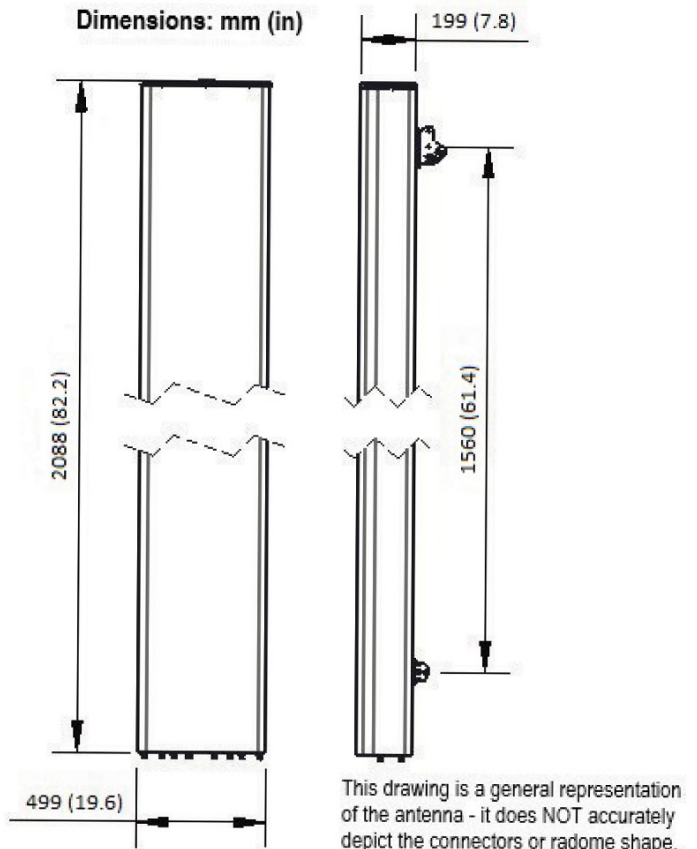
INSTALLATION

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](#)