

APXVBBLL15B_43-C-I20

APXVBBLL15B_43-A-I20

Features

- 4 ports / 2 cross pol systems in low band (698-960 MHz)
- 4 ports / 2 cross pol systems in high band (1710-2690 MHz)
- Supporting 4x4 MIMO
- Integrated and field replaceable SRET
- ACU HW version: 2.02
- Optional with Direct Pipe No Tilt mounting hardware (Model name suffix -A-I20)
- Compliant with AISG v2.0 and 3GPP



PRODUCT OVERVIEW	Frequency Range (MHz)	(2x) 698-960		(2x) 1710-2690	
	Array	■ R1	■ R2	■ Y1	■ Y2
	Connector	1-2	3-4	5-6	7-8
		8 PORTS			
	Polarization	XPOL			
	Azimuth Beamwidth (avg)	65°		65°	
	Electrical Downtilt	2-15°		2-12°	
	Dimensions	1588 x 499 x 199 mm (62.5 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	MOUNTING HARDWARE WEIGHT
APXVBBLL15B_43-C-I20	ACU-I20-B4 Internal RET Included	APM50-B1 Beam Tilt Kit Included	50-110 mm (2.0-4.3 in)	37.0 kg (81.6 lbs)	4.5 kg (9.9 lbs)
APXVBBLL15B_43-A-I20	ACU-I20-B4 Internal RET Included	APM50-B1N Direct Pipe No Tilt Mounting Kit Included	50-110 mm (2.0-4.3 in)	35.9 kg (79.1 lbs)	3.4 kg (7.5 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	13.6 ± 1.0	14.4 ± 0.4	14.7 ± 0.3
	Max Gain	dBi	14.6	14.8	15.0
Azimuth Beamwidth (3 dB)		degrees	62° ± 5.1°	60.7° ± 2.8°	62° ± 3.1°
Elevation Beamwidth (3 dB)		degrees	16.5° ± 1.5°	14.9° ± 0.8°	13.8° ± 0.9°
Electrical Downtilt		degrees	2-15°		
Impedance		Ohms	50Ω		
VSWR (Return Loss)		---	1.5:1 (-14 dB)		
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	-150		
Front-to-Back Ratio, Total Power, ± 30°		dB	19.3	22.1	22.7
First Upper Side Lobe Suppression		dB	17.8	19.5	17.7
Cross Polar Discrimination Over Sector		dB	6.5	11	7.8
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	16.8	18.6	20.5
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	13.8 ± 0.8	14.5 ± 0.3	14.8 ± 0.2
	Max Gain	dBi	14.6	14.8	15.0
Azimuth Beamwidth (3 dB)		degrees	62.6° ± 4.7°	62.1° ± 3.7°	62.4° ± 2.5°
Elevation Beamwidth (3 dB)		degrees	16.2° ± 1.4°	14.8° ± 0.9°	13.6° ± 0.8°
Electrical Downtilt		degrees	2-15°		
Impedance		Ohms	50Ω		
VSWR (Return Loss)		---	1.5:1 (-14 dB)		
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	-150		
Front-to-Back Ratio, Total Power, ± 30°		dB	18.8	21.5	23.5
First Upper Side Lobe Suppression		dB	16.7	17.8	16.2
Cross Polar Discrimination Over Sector		dB	6.9	10.8	7.6
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	16.6	18.4	22.5
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	16.9 ± 0.4	17.2 ± 0.3	17.5 ± 0.6	17.7 ± 0.4	18.5 ± 0.4
	Max Gain	dBi	17.3	17.5	18.1	18.1	18.9
Azimuth Beamwidth (3 dB)		degrees	57.4° ± 3.5°	60.2° ± 3.7°	58.4° ± 6.4°	61.2° ± 7.2°	52.8° ± 5.1°
Elevation Beamwidth (3 dB)		degrees	6.8° ± 0.5°	6.3° ± 0.3°	5.8° ± 0.6°	5.1° ± 0.2°	4.7° ± 0.4°
Electrical Downtilt		degrees	2-12°				
Impedance		Ohms	50Ω				
VSWR (Return Loss)		---	1.5:1 (-14 dB)				
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	-150				
Front-to-Back Ratio, Total Power, ± 30°		dB	22.7	22.7	22.7	19.1	21.5
First Upper Side Lobe Suppression		dB	20.5	20.6	20.4	17.8	15.9
Cross Polar Discrimination Over Sector		dB	8.7	6.4	5.1	1.8	0.9
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	14.4	16	15.6	17.4	22.1
Maximum Effective Power Per Port		Watts	250 W				
Cross Polar Isolation		dB	26				
Interband Isolation		dB	26				

Specifications follow BASTA guidelines.

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	16.9 ± 0.4	17.2 ± 0.3	17.5 ± 0.5	17.8 ± 0.4	18.5 ± 0.5
	Max Gain	dBi	17.3	17.5	18	18.2	19
Azimuth Beamwidth (3 dB)		degrees	56.7° ± 3.8°	58.5° ± 3°	58° ± 5.8°	59.5° ± 4.4°	52.4° ± 4.6°
Elevation Beamwidth (3 dB)		degrees	6.9° ± 0.5°	6.3° ± 0.4°	5.9° ± 0.6°	5.1° ± 0.2°	4.7° ± 0.4°
Electrical Downtilt		degrees	2-12°				
Impedance		Ohms	50Ω				
VSWR (Return Loss)		---	1.5:1 (-14 dB)				
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	-150				
Front-to-Back Ratio, Total Power, ± 30°		dB	22.3	22.7	22.6	19.4	20.7
First Upper Side Lobe Suppression		dB	19.3	21.5	20.1	15.1	13.9
Cross Polar Discrimination Over Sector		dB	8.3	5.2	5.6	1.1	0.8
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	13.7	15.9	14.2	15.4	21.7
Maximum Effective Power Per Port		Watts	250 W				
Cross Polar Isolation		dB	26				
Interband Isolation		dB	26				

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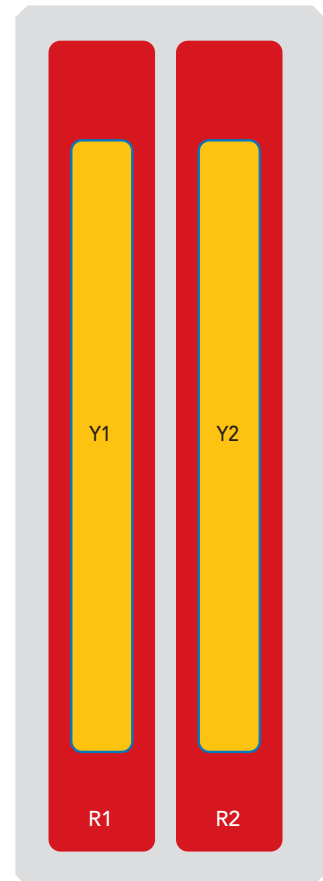
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BOTTOM VIEW - LABELING



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



The illustration is not shown to scale.

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MECHANICAL SPECIFICATIONS

Length	mm (in)	1588 (62.5)
Width	mm (in)	499 (19.6)
Depth	mm (in)	199 (7.8)
Net Weight - Antenna Only	kg (lbs)	27 (59.5)
Wind Load Rated at 150 km/h (93 mph)	Front	N (lbf) 534 (120)
	Side	N (lbf) 424 (95)
	Rear	N (lbf) 634 (143)
Survival Wind Speed / Rated Wind Speed	km/h (mph)	200 (150)
Connector Type	--	(8x) 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) 1840 x 595 x 295 (72.4 x 23.4 x 11.6)

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>Refer to ordering options</i>	APM50-B1	4.5 kg (9.9 lbs)
Direct Pipe No Tilt Bracket Kit for Pole Diameter 50-110 mm (2.0-4.3 in) <i>Refer to ordering options</i>	APM50-B1N	3.4 kg (7.5 lbs)

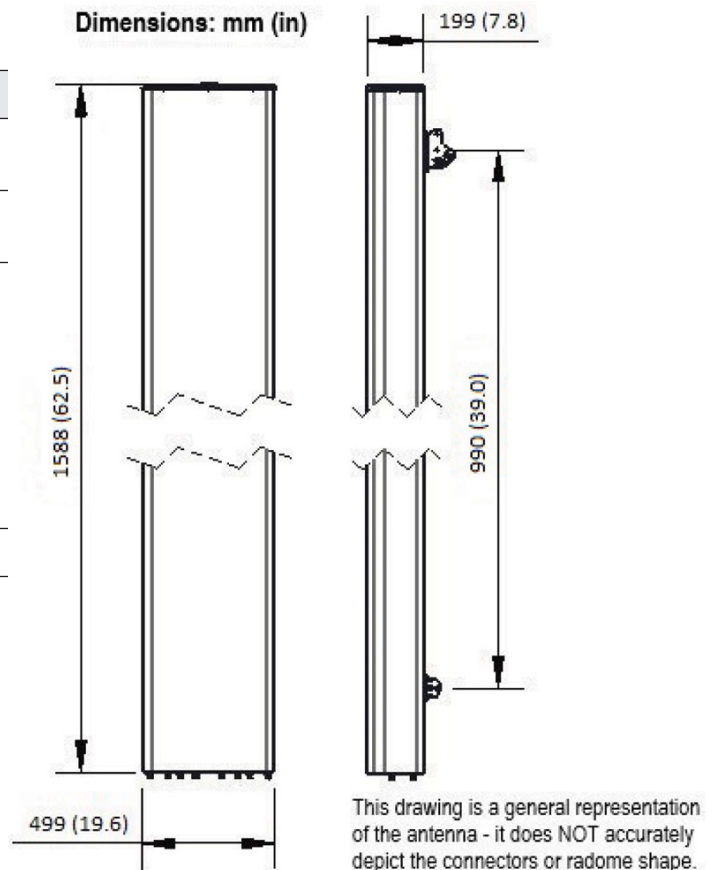
INSTALLATION Please read all installation notes before installing product.



- 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](#)