

APXVBB4L15B_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	2-15°		2-12°			
	Dimensions	1590 x 499 x 199 mm (62.6 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
APXVBB4L15B_43-C-I20	ACU-I20-B6 Internal RET Included	APM50-B1 Beam Tilt Kit Included	50-110 mm (2.0-4.3 in)	42.5 kg (93.7 lbs)



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.

APXVBB4L15B_43-C-I20

ELECTRICAL SPECIFICATIONS

■ R1

Frequency Range		MHz	698-960		
		MHz	698-806	790-894	880-960
Polarization		---	±45°		
Gain	Over all Tilts	dBi	13.5 ± 1.1	14.5 ± 0.5	14.6 ± 0.5
	Max Gain	dBi	14.6	15.0	15.1
Azimuth Beamwidth (3 dB)		degrees	63.8° ± 5.1°	62° ± 2.6°	62.4° ± 4.1°
Elevation Beamwidth (3 dB)		degrees	16.1° ± 1.5°	14.4° ± 0.6°	13.5° ± 1°
Electrical Downtilt		degrees	2-15°		
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	20	20.9	20
First Upper Side Lobe Suppression		dB	15	18.2	14
Cross Polar Discrimination Over Sector		dB	8.9	11	11
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	18.9	19	23
Maximum Effective Power Per Port		Watts	350 W		
Cross Polar Isolation		dB	25		
Interband Isolation		dB	25		

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	13.5 ± 1	14.4 ± 0.5	14.7 ± 0.5
	Max Gain	dBi	14.5	14.9	15.2
Azimuth Beamwidth (3 dB)		degrees	62.7° ± 5.7°	62.1° ± 3°	62° ± 2.7°
Elevation Beamwidth (3 dB)		degrees	16.1° ± 1.3°	14.6° ± 1°	13.6° ± 1°
Electrical Downtilt		degrees	2-15°		
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	20	22	21
First Upper Side Lobe Suppression		dB	18.8	18.7	16
Cross Polar Discrimination Over Sector		dB	9	12	9.1
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	18	20	22.6
Maximum Effective Power Per Port		Watts	350 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.

APXVBB4L15B_43-C-I20

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 ± 0.4	14.1 ± 0.1	15 ± 1	15.2 ± 0.7	15.9 ± 0.5
	Max Gain	dBi	14.4	14.2	16	15.9	16.4
Azimuth Beamwidth (3 dB)		degrees	56.2° ± 6°	57.9° ± 5.1°	54° ± 7.9°	56.6° ± 8.8°	51.8° ± 4°
Elevation Beamwidth (3 dB)		degrees	15.5° ± 1.5°	14.7° ± 1.5°	13.5° ± 1.5°	12.1° ± 1°	11.1° ± 1°
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	18.7	17.4	18	19	18
First Upper Side Lobe Suppression		dB	16.1	17	18	13	12
Cross Polar Discrimination Over Sector		dB	9	6	3	1	1
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	12.7	13.8	11	11	16.4
Maximum Effective Power Per Port		Watts	250 W				
Cross Polar Isolation		dB	25				
Interband Isolation		dB	25				

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	14.2 ± 0.5	14.3 ± 0.5	14.6 ± 0.6	15 ± 1	16.4 ± 0.5
	Max Gain	dBi	14.7	14.8	15.2	16	16.9
Azimuth Beamwidth (3 dB)		degrees	58.5° ± 5.9°	62.2° ± 5.3°	58.5° ± 8.9°	58.8° ± 10.2°	55.1° ± 6.1°
Elevation Beamwidth (3 dB)		degrees	12.7° ± 1°	11.8° ± 1°	11° ± 1°	9.7° ± 1°	9.1° ± 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	19	18.6	18	19.1	21
First Upper Side Lobe Suppression		dB	19	19.6	21.5	20.1	18
Cross Polar Discrimination Over Sector		dB	8.4	7.9	6	1	1
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	12.2	15.6	14	14	19.6
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.

APXVBB4L15B_43-C-I20

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	13.9 ± 1	14 ± 0.7	14.8 ± 1	15.2 ± 1	16.1 ± 0.5
	Max Gain	dBi	14.9	14.7	15.8	16.2	16.6
Azimuth Beamwidth (3 dB)		degrees	59.2° ± 6.2°	60.2° ± 6°	58.1° ± 7.7°	54.5° ± 7.6°	51.2° ± 4.4°
Elevation Beamwidth (3 dB)		degrees	15.7° ± 1.5°	14.8° ± 1°	13.6° ± 1.5°	12.3° ± 1.4°	11° ± 1°
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	19.4	18	18	18.2	18
First Upper Side Lobe Suppression		dB	14.6	15.3	17	13.6	11.8
Cross Polar Discrimination Over Sector		dB	6.9	4.5	2	1	1
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	13	17.7	13	11.6	17.9
Maximum Effective Power Per Port		Watts	250 W				
Cross Polar Isolation		dB	25				
Interband Isolation		dB	25				

Specifications follow BASTA guidelines.

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	14.3 ± 0.5	14.4 ± 0.5	14.6 ± 0.5	14.9 ± 1	16.3 ± 0.5
	Max Gain	dBi	14.8	14.9	15.1	15.9	16.8
Azimuth Beamwidth (3 dB)		degrees	56.3° ± 3.8°	57.1° ± 5°	57° ± 8.4°	58.7° ± 8.1°	53.1° ± 5.5°
Elevation Beamwidth (3 dB)		degrees	12.7° ± 1°	11.9° ± 1°	11° ± 1.1°	9.8° ± 0.9°	9.1° ± 1°
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	19.4	19	18.6	20
First Upper Side Lobe Suppression		dB	20	20	19	19.5	16.7
Cross Polar Discrimination Over Sector		dB	6.9	8	6	3	1
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	14	15	14.9	15	17.6
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.

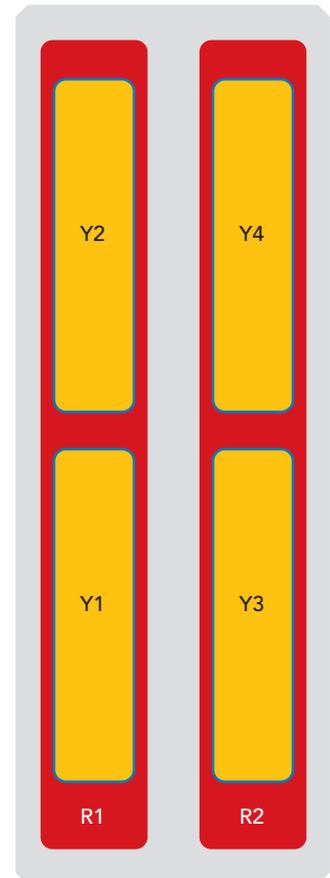
APXVBB4L15B_43-C-I20

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.

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.

APXVBB4L15B_43-C-I20

MECHANICAL SPECIFICATIONS

Length	mm (in)	1590 (62.6)
Width	mm (in)	499 (19.6)
Depth	mm (in)	199 (7.8)
Net Weight - Antenna Only	kg (lbs)	32.4 (71.4)
Net Weight - Mounting Hardware Only	kg (lbs)	4.5 (9.9)
Wind Load Rated at 150 km/h (93 mph)	Front	N (lbf) 974 (219)
	Side	N (lbf) 332 (75)
	Rear	N (lbf) 1018 (229)
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) 1840 x 595 x 295 (72.4 x 23.4 x 11.6)
	Shipping Weight	kg (lbs) 42.5 (93.7)

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

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.

APXVBB4L15B_43-C-I20

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)

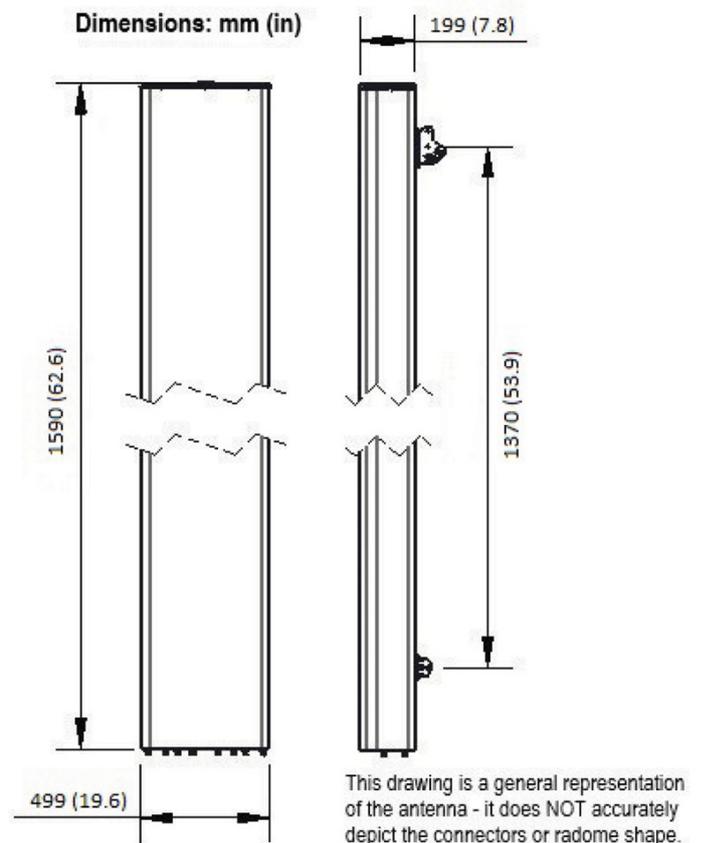
INSTALLATION

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](#)