APXVB4L20B_43-C-I20

Features

This antenna is an ideal choice for penta-band site upgrades for high traffic areas. It can be used for multiple bands such at LTE 700, Digital Dividend, CDMA, GSM, DCS, PCS, AWS, UMTS and LTE 2600.

- Penta-band cross-polarized (10 ports), 1x 698-960 / 4x 1710-2690 in a compact size
- Ultra broadband design from LTE 700 to LTE 2600
- High reliability - designed to last in a tower-top environment
- SRET field replaceable / ACU HW Version -2.02
- Compliant with AISG v2.0 and 3GPP

PRODUCT OVERVIEW	Frequency Range (MHz)	(1x) 698-960	(4x) 1710-2690			
	Array	R1	Y1	Y2	Y3	Y4
	Connector	1-2	3-4	5-6	7-8	9-10
		10 PORTS				
	Polarization	XPOL				
	Azimuth Beamwidth (avg)	65°	65°			
	Electrical Downtilt	2-12°	2-10°			
	Dimensions	1950 x 350 x 200 mm (76.8 x 13.8 x 7.9 in)				

ORDERING OPTIONS Select from the following ordering options

ANTENNA MODEL NUMBER	CONFIGURATION	MOUNTING HARDWARE	MOUNTING PIPE DIAMETER	SHIPPING WEIGHT
APXVB4L20B_43-C-I20	ACU-I20-B5 Internal RET Included	APM50-B1 Beam Tilt Kit Included	50-110 mm (2.0-4.3 in)	34 kg (74.9 lbs)

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ELECTRICAL SPECIFICATIONS

■ **R1**

Frequency Range		MHz	698-960		
		MHz	698-806	790-896	870-960
Polarization		---	±45°		
Gain	Over all Tilts	dBi	14.9 ± 0.3	15.4 ± 0.5	15.9 ± 0.4
	Max Gain	dBi	15.2	15.9	16.3
Azimuth Beamwidth (3 dB)		degrees	65.2° ± 1.7°	62.9° ± 3°	59.6° ± 1.7°
Elevation Beamwidth (3 dB)		degrees	11.8° ± 1.1°	10.5° ± 0.9°	9.4° ± 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	23.3	24.4	24.1
First Upper Side Lobe Suppression		dB	17.6	16.1	12.8
Cross Polar Discrimination Over Sector		dB	10.7	8.8	9.3
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	23.9	23.2	22.5
Maximum Effective Power Per Port		Watts	350 W		
Cross Polar Isolation		dB	26		
Interband Isolation		dB	26		

Specifications follow BASTA guidelines.

ELECTRICAL SPECIFICATIONS

■ **Y1**

Frequency Range		MHz	1710-2690			
		MHz	1710-1880	1920-2200	2300-2400	2500-2690
Polarization		---	±45°			
Gain	Over all Tilts	dBi	14.2 ± 0.6	15.3 ± 0.7	14.7 ± 0.8	14.7 ± 0.8
	Max Gain	dBi	14.8	16.0	15.5	15.5
Azimuth Beamwidth (3 dB)		degrees	65.6° ± 4.1°	64.3° ± 7.9°	67° ± 3.9°	64° ± 3.4°
Elevation Beamwidth (3 dB)		degrees	10° ± 0.9°	8.6° ± 0.7°	8° ± 0.5°	7.3° ± 0.5°
Electrical Downtilt		degrees	2-10°			
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	19.6	19.4	17.7	18.7
First Upper Side Lobe Suppression		dB	13.5	12.9	13.9	14.7
Cross Polar Discrimination Over Sector		dB	8.9	7.4	4.5	4.7
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	19.4	17.3	12.5	14.4
Maximum Effective Power Per Port		Watts	250 W			
Cross Polar Isolation		dB	26			
Interband Isolation		dB	26			

Specifications follow BASTA guidelines.

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ELECTRICAL SPECIFICATIONS — Y2

Frequency Range		MHz	1710-2690			
		MHz	1710-1880	1920-2200	2300-2400	2500-2690
Polarization		---	±45°			
Gain	Over all Tilts	dBi	14.8 ± 0.7	16.3 ± 0.8	15.5 ± 0.7	15.3 ± 0.9
	Max Gain	dBi	15.5	17.1	16.2	16.2
Azimuth Beamwidth (3 dB)		degrees	68° ± 4.1°	66.3° ± 5.6°	70.6° ± 3.5°	63.1° ± 4.2°
Elevation Beamwidth (3 dB)		degrees	9.8° ± 0.8°	8.6° ± 0.7°	7.8° ± 0.5°	7.3° ± 0.4°
Electrical Downtilt		degrees	2-10°			
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	20.8	19	19.7
First Upper Side Lobe Suppression		dB	12.8	13.1	12.8	14.6
Cross Polar Discrimination Over Sector		dB	9.6	6.6	6	5.2
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	18.5	14.4	10.3	12.8
Maximum Effective Power Per Port		Watts	250 W			
Cross Polar Isolation		dB	26			
Interband Isolation		dB	26			

Specifications follow BASTA guidelines.

ELECTRICAL SPECIFICATIONS — Y3

Frequency Range		MHz	1710-2690			
		MHz	1710-1880	1920-2200	2300-2400	2500-2690
Polarization		---	±45°			
Gain	Over all Tilts	dBi	14.3 ± 0.6	15.4 ± 0.7	14.7 ± 0.8	14.9 ± 1
	Max Gain	dBi	14.9	16.1	15.5	15.9
Azimuth Beamwidth (3 dB)		degrees	65.7° ± 5.2°	64.7° ± 6.5°	67.9° ± 3.3°	62.7° ± 4.8°
Elevation Beamwidth (3 dB)		degrees	10° ± 0.7°	8.6° ± 0.6°	8° ± 0.6°	7.3° ± 0.5°
Electrical Downtilt		degrees	2-10°			
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	19.7	19.9	18.1	18.4
First Upper Side Lobe Suppression		dB	12.5	11.2	12.7	12.3
Cross Polar Discrimination Over Sector		dB	10.4	7.1	5.7	5.3
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	18.3	17	14.4	14.8
Maximum Effective Power Per Port		Watts	250 W			
Cross Polar Isolation		dB	26			
Interband Isolation		dB	26			

Specifications follow BASTA guidelines.

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ELECTRICAL SPECIFICATIONS — **Y4**

Frequency Range		MHz	1710-2690			
		MHz	1710-1880	1920-2200	2300-2400	2500-2690
Polarization		---	±45°			
Gain	Over all Tilts	dBi	14.6 ± 0.6	16.2 ± 0.8	15.3 ± 0.7	15.2 ± 1
	Max Gain	dBi	15.2	17.0	16.0	16.2
Azimuth Beamwidth (3 dB)		degrees	68° ± 4.1°	65.9° ± 5.7°	70.2° ± 3.5°	62.7° ± 5.2°
Elevation Beamwidth (3 dB)		degrees	9.8° ± 0.8°	8.6° ± 0.7°	7.8° ± 0.6°	7.2° ± 0.3°
Electrical Downtilt		degrees	2-10°			
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	19.1	21.3	19.1	19.2
First Upper Side Lobe Suppression		dB	11.7	10.6	10.3	11.6
Cross Polar Discrimination Over Sector		dB	9.7	7	5.9	5.8
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	17.6	14.2	10.2	12.9
Maximum Effective Power Per Port		Watts	250 W			
Cross Polar Isolation		dB	26			
Interband Isolation		dB	26			

Specifications follow BASTA guidelines.

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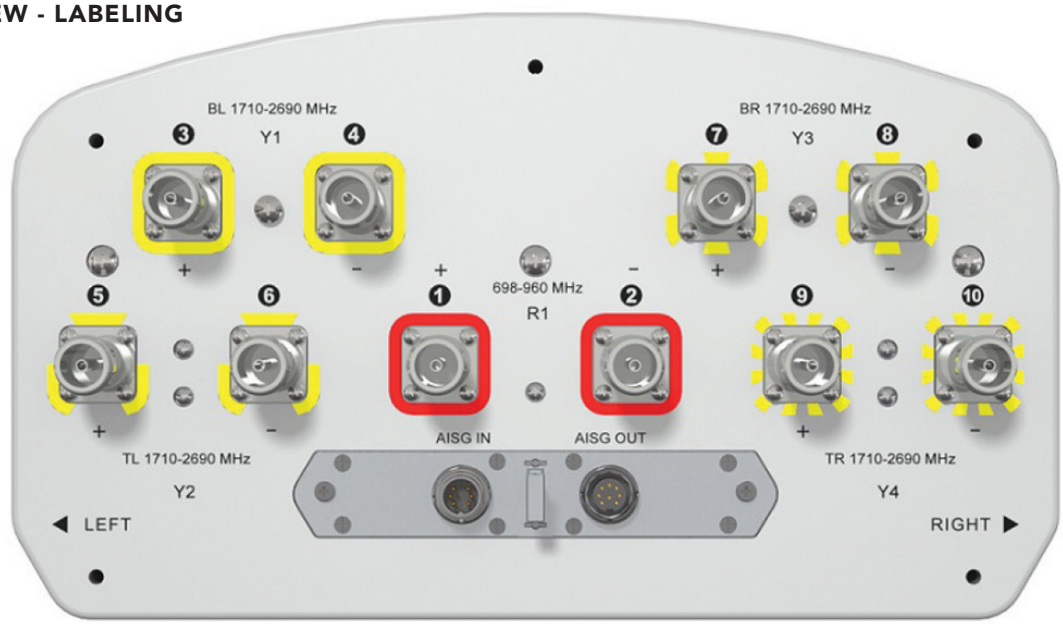
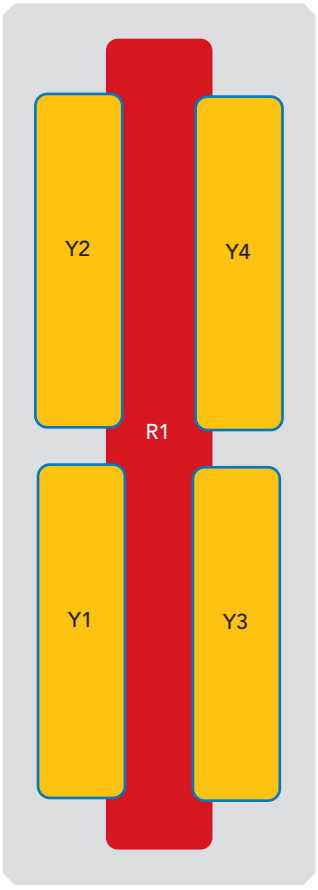
BOTTOM VIEW - LABELING



ARRAY LAYOUT

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



The illustration is not shown to scale.

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MECHANICAL SPECIFICATIONS

Length		mm (in)	1950 (76.8)
Width		mm (in)	350 (13.8)
Depth		mm (in)	200 (7.9)
Net Weight - Antenna Only		kg (lbs)	25 (55.1)
Net Weight - Mounting Hardware Only		kg (lbs)	4.5 (9.9)
Wind Load Rated at 150 km/h (93 mph)	Front	N (lbf)	842 (189)
	Side	N (lbf)	413 (93)
	Rear	N (lbf)	1025 (230)
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)	2200 x 445 x 295 (86.6 x 17.5 x 11.6)
	Shipping Weight	kg (lbs)	34 (74.9)

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.

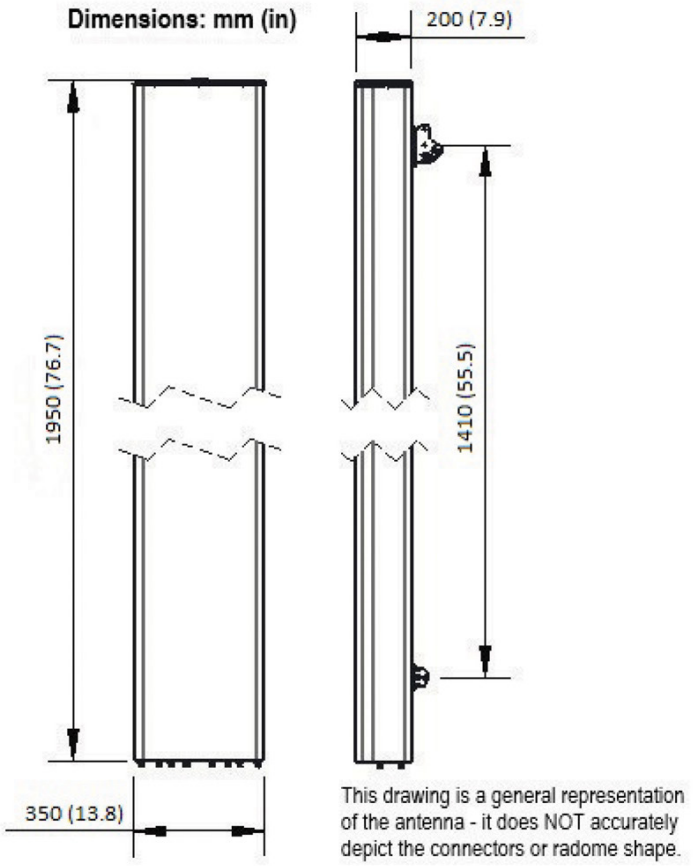
ITEM	MODEL NUMBER	WEIGHT
Beam Tilt Mounting Bracket Kit for Pole Diameter 50-110 mm (2.0-4.3 in) *Shipped with antenna*	APM50-B1	4.5 kg (9.9 lbs)

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