PRODUCT DATASHEET

APXVBB34L20AB_43-C-I20

12-Ports, X-Pol, Hybrid Beam Antenna, 2.0m, 2x 698-960MHz, 65deg, 4x 1710-2690MHz, 33deg, Integrated RET, Site Sharing Optional

FEATURES / BENEFITS

- Hybrid twin beam antenna
- 4 ports / 2 cross pol systems in low band (698-960MHz), 65deg
- 4 ports + 4 ports, each 33deg. beam based on 2 cross pol systems (1710-2690 MHz), separated by 60deg
- Integrated and field replaceable SRET
- ACU HW Version: 2.02
- Compliant with AISG V2.0 and 3GPP

Technical features

ELECTRICAL SPECIFICATIONS

Electrical Specification Header		LOW BAND ARRAY (698-960 MHZ) [R1]		
Frequency Band	MHz	698-806	790-894	880-960
Gain Typical	dBi	14.5	14.7	14.7
Gain Over all Tilts	dBi	14 +/- 0.5	14.3 +/- 0.4	14.1 +/- 0.6
Azimuth Beamwidth 3dB	Deg	71.8 +/- 9.3	65.2 +/- 7.8	59 +/- 7.8
Elevation Beamwidth 3dB	Deg	11.1 +/- 1	10 +/- 0.5	9.3 +/- 0.5
Cross Polar Discrimination at Boresight	dB	20.9	25.6	18.2
Cross Polar Discrimination over Sector	dB	9.2	9.1	5
F/B at +/-30deg Total Power	dB	18.4	18.8	21
First Upper Side Lobe Suppression	dB	16.7	15.7	13.6
Electrical Downtilt	Deg	2 to 12		
Cross Polar Isolation	dB	26		
Interband Isolation	dB	26		
VSWR	-	1.5		
Passive Intermodulation (3rd Order, 2 x 43dBm)	dBc	-150		
Maximum Effective Power per Port	Watt	350		

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ELECTRICAL SPECIFICATIONS

Electrical Specification Header		LOW BAND ARRAY (698-960 MHZ) [R2]		
Frequency Band	MHz	698-806	790-894	880-960
Gain Typical	dBi	14.8	14.8	14.8
Gain Over all Tilts	dBi	14.3 +/- 0.5	14.4 +/- 0.4	14.2 +/- 0.6
Azimuth Beamwidth 3dB	Deg	72.6 +/- 8.4	67.4 +/- 7.5	60.8 +/- 6.4
Elevation Beamwidth 3dB	Deg	11.2 +/- 1	10 +/- 0.6	9.3 +/- 0.4
Cross Polar Discrimination at Boresight	dB	24.6	22.2	17.8
Cross Polar Discrimination over Sector	dB	12.6	10	6.3
F/B at +/-30deg Total Power	dB	20.6	19.8	18.7
First Upper Side Lobe Suppression	dB	17.8	16.5	13.7
Electrical Downtilt	Deg	2 to 12		
Cross Polar Isolation	dB	26		
Interband Isolation	dB	26		
VSWR	-	1.5		
Passive Intermodulation (3rd Order, 2 x 43dBm)	dBc	-150		
Maximum Effective Power per Port	Watt	350		

ELECTRICAL SPECIFICATIONS

Electrical Specification Header		HIGH BAND ARRAY (1710-2690 MHZ) [Y1]				
Frequency Band	MHz	1710-1880	1850-1990	1920-2170	2300-2400	2490-2690
Gain Typical	dBi	17.5	18.1	18.4	18.7	18.2
Gain Over all Tilts	dBi	16.9 +/- 0.6	17.7 +/- 0.4	17.9 +/- 0.5	18 +/- 0.7	17.6 +/- 0.6
Azimuth Beamwidth 3dB	Deg	33.5 +/- 3.1	29.8 +/- 2.4	28.3 +/- 2.8	24.9 +/- 1.3	26.2 +/- 2.6
Elevation Beamwidth 3dB	Deg	9.8 +/- 0.5	9.1 +/- 0.5	8.8 +/- 0.5	8.3 +/- 0.4	7.7 +/- 0.6
Beam Center	Deg	+/-30	+/-28	+/-25	+/-24	+/-23
F/B at +/-30deg Total Power	dB	23.7	24.2	22.9	20	20.6
First Upper Side Lobe Suppression	dB	15.2	16.3	17.8	20.2	17.3
Electrical Downtilt	Deg	2 to 12				
Cross Polar Isolation	dB	26				
Interband Isolation	dB	26				
Beam Isolation	dB	14				
VSWR	-	1.5				
Passive Intermodulation (3rd Order, 2 x 43dBm)	dBc	-150				
Maximum Effective Power per Port	Watt	250				

APXVBB34L20AB_43-C-I20

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ELECTRICAL SPECIFICATIONS

Electrical Specification Header		HIGH BAND ARRAY (1710-2690 MHZ) [Y2]				
Frequency Band	MHz	1710-1880	1850-1990	1920-2170	2300-2400	2490-2690
Gain Typical	dBi	17.2	18	18.5	18.5	18
Gain Over all Tilts	dBi	16.5 +/- 0.7	17.5 +/- 0.5	17.8 +/- 0.7	17.6 +/- 0.9	17.3 +/- 0.7
Azimuth Beamwidth 3dB	Deg	33.6 +/- 2.9	30.3 +/- 2.4	28.5 +/- 2.8	25.2 +/- 2.4	25.7 +/- 2.4
Elevation Beamwidth 3dB	Deg	9.9 +/- 0.7	9.5 +/- 0.4	9.2 +/- 0.6	8.4 +/- 0.3	7.7 +/- 0.5
Beam Center	Deg	+/-30	+/-28	+/-25	+/-24	+/-23
F/B at +/-30deg Total Power	dB	23.3	25.6	24.8	20	20.1
First Upper Side Lobe Suppression	dB	14.4	17.4	17.6	21.5	18
Electrical Downtilt	Deg	2 to 12				
Cross Polar Isolation	dB	26				
Interband Isolation	dB	26				
Beam Isolation	dB	14				
VSWR	-	1.5				
Passive Intermodulation (3rd Order, 2 x 43dBm)	dBc	-150				
Maximum Effective Power per Port	Watt	250				

ELECTRICAL SPECIFICATIONS

Electrical Specification Header		HIGH BAND ARRAY (1710-2690 MHZ) [Y3]				
Frequency Band	MHz	1710-1880	1850-1990	1920-2170	2300-2400	2490-2690
Gain Typical	dBi	17.4	17.9	18.6	18.6	18
Gain Over all Tilts	dBi	16.8 +/- 0.6	17.5 +/- 0.4	17.9 +/- 0.7	17.8 +/- 0.8	17.4 +/- 0.6
Azimuth Beamwidth 3dB	Deg	34.3 +/- 2.7	30 +/- 2.6	28.1 +/- 2.6	24.9 +/- 1.4	26.4 +/- 2
Elevation Beamwidth 3dB	Deg	9.8 +/- 0.5	9.2 +/- 0.6	8.9 +/- 0.5	8.4 +/- 0.6	7.8 +/- 0.5
Beam Center	Deg	+/-30	+/-28	+/-25	+/-24	+/-23
F/B at +/-30deg Total Power	dB	23.5	23.9	23.9	20.3	20.2
First Upper Side Lobe Suppression	dB	14.6	16.4	18.2	20.5	20.8
Electrical Downtilt	Deg	2 to 12				
Cross Polar Isolation	dB	26				
Interband Isolation	dB	26				
Beam Isolation	dB	14				
VSWR	-	1.5				
Passive Intermodulation (3rd Order, 2 x 43dBm)	dBc	-150				
Maximum Effective Power per Port	Watt	250				

APXVBB34L20AB_43-C-I20

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ELECTRICAL SPECIFICATIONS

Electrical Specification Header		HIGH BAND ARRAY (1710-2690 MHZ) [Y4]				
Frequency Band	MHz	1710-1880	1850-1990	1920-2170	2300-2400	2490-2690
Gain Typical	dBi	17	17.8	18.5	18.5	17.7
Gain Over all Tilts	dBi	16.3 +/- 0.7	17.3 +/- 0.5	17.7 +/- 0.8	17.5 +/- 1	17.1 +/- 0.6
Azimuth Beamwidth 3dB	Deg	33.9 +/- 2.6	30.4 +/- 2.1	28.4 +/- 2.6	25.4 +/- 2.5	25.9 +/- 2.3
Elevation Beamwidth 3dB	Deg	10.1 +/- 0.5	9.6 +/- 0.5	9.2 +/- 0.6	8.5 +/- 0.6	7.9 +/- 0.5
Beam Center	Deg	+/-30	+/-28	+/-25	+/-24	+/-23
F/B at +/-30deg Total Power	dB	23.5	26.3	24.5	22.4	20.7
First Upper Side Lobe Suppression	dB	15.6	19	19.1	17.6	20.4
Electrical Downtilt	Deg	2 to 12				
Cross Polar Isolation	dB	26				
Interband Isolation	dB	26				
Beam Isolation	dB	14				
VSWR	-	1.5				
Passive Intermodulation (3rd Order, 2 x 43dBm)	dBc	-150				
Maximum Effective Power per Port	Watt	250				

ELECTRICAL SPECIFICATIONS

Impedance	Ohm	50
Polarization	Deg	±45°

MECHANICAL SPECIFICATIONS

Dimensions - H x W x D	mm (in)	2090 x 499 x 199 (82.3 x 19.6 x 7.8)
Weight (Antenna Only)	kg (lb)	37 (81.6)
Weight (Mounting Hardware only)	kg (lb)	4.5 (9.9)
Packing size- HxWxD	mm (in)	2340 x 560 x 275 (92.1 x 22 x 10.8)
Shipping Weight	kg (lb)	48 (105.8)
Connector type		12 x 4.3-10 female/bottom + 2 AISG connectors (1 male, 1 female)
Radome Material / Color		Fiberglass / Light Grey RAL7035

TESTING AND ENVIRONMENTAL

Temperature Range	°C (°F)	-40 to 60 (-40 to 140)
Lightning protection		Direct grounded
Survival/Rated Wind Velocity	km/h	200 (150)
Wind Load @Rated Wind Front	N	692
Wind Load @Rated Wind Side	N	597
Wind Load @Rated Wind Rear	N	802

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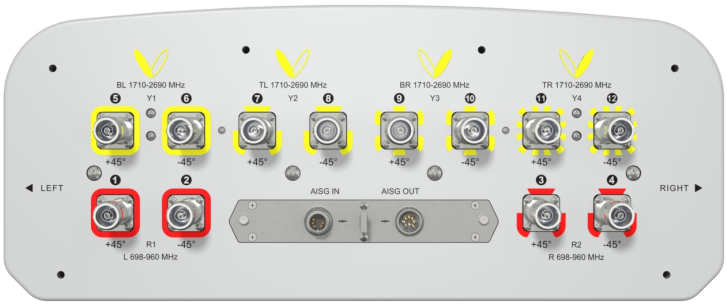
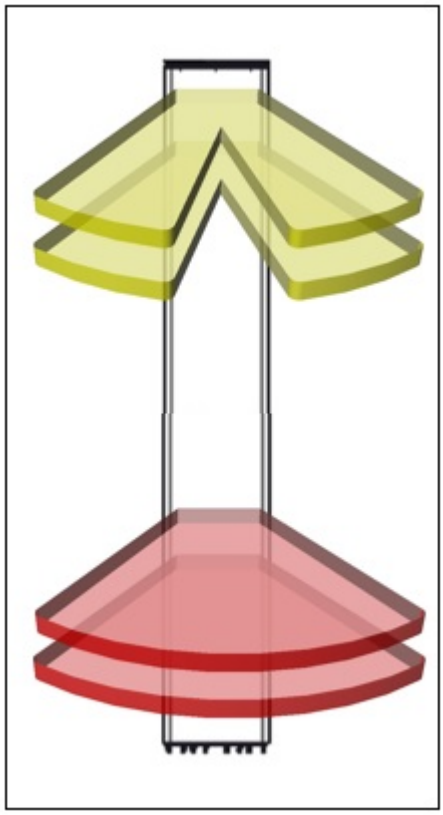
ORDERING INFORMATION

Order No.	Configuration	Mounting Hardware	Mounting Pipe Diameter	Shipping Weight
APXVBB34L20AB_43-C-I20	Internal RET(ACU-I20-B6)	APM50-B1	50-110mm	48.0 kg
APXVBB34L20AB_43-C-I20S (Material Code: 50016713)	Internal RET(ACU-X20-B6) Dynamic Site Sharing mode	APM50-B1	50-110mm	48.0 kg
APXVBB34L20AB_43-C-I20S (Material Code: 50016715)	Internal RET(ACU-X20-B6) Dynamic Site Sharing mode	APM50-B1	50-110mm	48.0 kg





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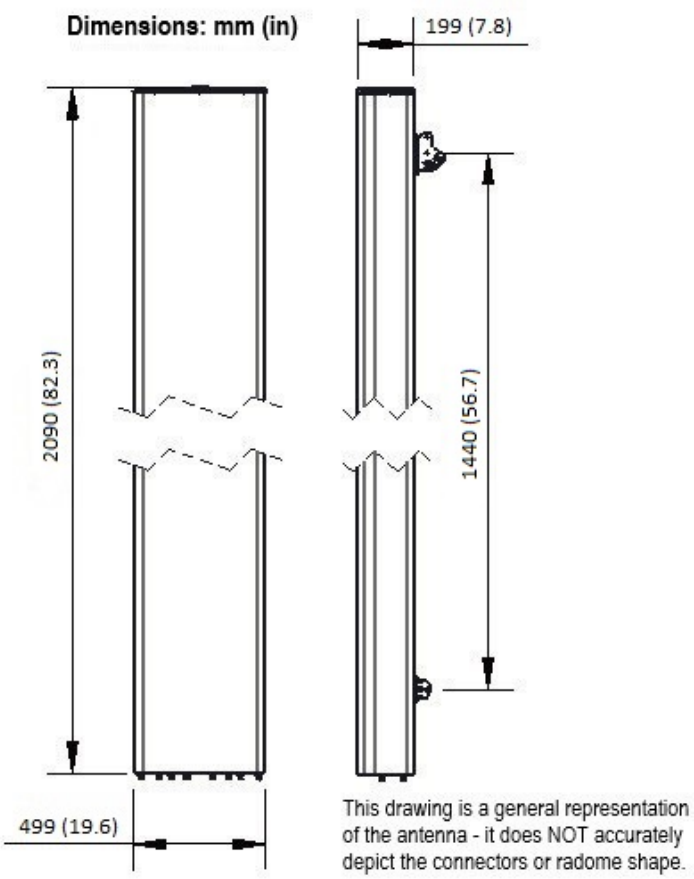

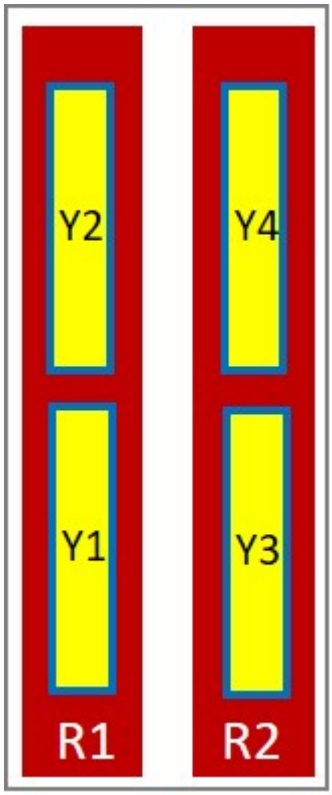

External Document Links

APM50_Series_Installation_Instructions

Notes

- All electrical parameters are compliant with BASTA NGMN 11.1 requirements.
- For additional mounting information please click "External Document Links".
- **Radiating patterns:** Request pattern files