PRODUCT DATASHEET

APXVHHRRTM15AB_43-C-I20

Hybrid FDD/TDD Antenna, X-Pol, 1.5m, 8-ports FDD 2x 698-803/2x 1710-2170MHz, 65deg, 8T8R 2515-2675MHz, 65deg unit beam, Integrated RET

FEATURES / BENEFITS

- Multiple Individual Beam Control (Unit Beam)
- High Powered Beam Option (Broadcast Beam)
- Calibration Port functionality for precise steering performance
- Integrated AISG compliant RET Motor
- SRET -Field replaceable / ACU HW Version: 2.02
- Compliant with AISG V2.0 and 3GPP

Technical features

ELECTRICAL SPECIFICATIONS

Electrical Specification Header		Low Band Array (698-803 MHz) [R1]
Frequency Band	MHz	698-803
Gain Typical	dBi	13.3
Gain Over all Tilts	dBi	12.7 +/- 0.6
Azimuth Beamwidth 3dB	Deg	78.2 +/- 4.8
Elevation Beamwidth 3dB	Deg	15.9 +/- 1.6
Cross Polar Discrimination at Boresight	dB	18.9
Cross Polar Discrimination over Sector	dB	7
F/B at +/-30deg Total Power	dB	18.6
First Upper Side Lobe Suppression	dB	10.5
Electrical Downtilt	Deg	0 to 14
Cross Polar Isolation	dB	25
Interband Isolation	dB	25
VSWR	-	1.5
Passive Intermodulation (3rd Order, 2 x 43dBm)	dBc	-153
Maximum Effective Power per Port	Watt	350

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ELECTRICAL SPECIFICATIONS

Electrical Specification Header		Low Band Array (698-803 MHz) [R2]
Frequency Band	MHz	698-803
Gain Typical	dBi	13.6
Gain Over all Tilts	dBi	13 +/- 0.6
Azimuth Beamwidth 3dB	Deg	77.7 +/- 5.5
Elevation Beamwidth 3dB	Deg	16 +/- 1.8
Cross Polar Discrimination at Boresight	dB	19.5
Cross Polar Discrimination over Sector	dB	8.2
F/B at +/-30deg Total Power	dB	18.3
First Upper Side Lobe Suppression	dB	10.1
Electrical Downtilt	Deg	0 to 14
Cross Polar Isolation	dB	25
Interband Isolation	dB	25
VSWR	-	1.5
Passive Intermodulation (3rd Order, 2 x 43dBm)	dBc	-153
Maximum Effective Power per Port	Watt	350

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ELECTRICAL SPECIFICATIONS

Electrical Specification Header		High Band Array (1710-2170 MHz) [B1]		
Frequency Band	MHz	1710-1880	1850-1990	1920-2170
Gain Typical	dBi	16.4	16.9	17.2
Gain Over all Tilts	dBi	15.8 +/- 0.6	16.5 +/- 0.4	16.7 +/- 0.5
Azimuth Beamwidth 3dB	Deg	57.8 +/- 4.5	53.3 +/- 2.4	52.1 +/- 3.7
Elevation Beamwidth 3dB	Deg	8.1 +/- 0.6	7.5 +/- 0.5	7.1 +/- 0.5
Cross Polar Discrimination at Boresight	dB	20.9	23.1	23.1
Cross Polar Discrimination over Sector	dB	7.6	8.2	7.5
F/B at +/-30deg Total Power	dB	25	26.3	26.2
First Upper Side Lobe Suppression	dB	18.1	19.8	19.2
Electrical Downtilt	Deg	2 to 12		
Cross Polar Isolation	dB	25		
Interband Isolation	dB	25		
VSWR	-	1.5		
Passive Intermodulation (3rd Order, 2 x 43dBm)	dBc	-153		
Maximum Effective Power per Port	Watt	250		

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ELECTRICAL SPECIFICATIONS

Electrical Specification Header		High Band Array (1710-2170 MHz) [B2]		
Frequency Band	MHz	1710-1880	1850-1990	1920-2170
Gain Typical	dBi	16.5	16.9	17.1
Gain Over all Tilts	dBi	15.9 +/- 0.6	16.5 +/- 0.4	16.7 +/- 0.4
Azimuth Beamwidth 3dB	Deg	57 +/- 5.5	53.4 +/- 1.8	52.5 +/- 3
Elevation Beamwidth 3dB	Deg	7.9 +/- 0.6	7.4 +/- 0.3	7 +/- 0.5
Cross Polar Discrimination at Boresight	dB	20.8	23	22.5
Cross Polar Discrimination over Sector	dB	7	7.6	6.3
F/B at +/-30deg Total Power	dB	25	26.5	26
First Upper Side Lobe Suppression	dB	14.5	14.9	15.1
Electrical Downtilt	Deg	2 to 12		
Cross Polar Isolation	dB	25		
Interband Isolation	dB	25		
VSWR	-	1.5		
Passive Intermodulation (3rd Order, 2 x 43dBm)	dBc	-153		
Maximum Effective Power per Port	Watt	250		

ELECTRICAL SPECIFICATIONS

Electrical Specification Header		CAL. BOARD AND S PARAMETER (2515-2675 MHZ) [Y1]
Frequency Band	MHz	2515-2675
Coupling between cal. Port to input port	dB	-26+/-2
Coupling amplitude accuracy	dB	≤0.9
Coupling phase accuracy	deg	≤7
VSWR	-	≤1.5
Maximum Power	Watt	80
ISO co-polor @ 2-6 deg tilt	dB	≥19
ISO co-polor @ 7-12 deg tilt	dB	≥25
ISO cross-polor @ 2-6 deg tilt	dB	≥24
ISO cross-polor @ 7-12 deg tilt	dB	≥25

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ELECTRICAL SPECIFICATIONS

Electrical Specification Header		RADIATION PARAMETER - UNIT BEAM (2515-2675 MHZ) [Y1]
Frequency Band	MHz	2515-2675
Gain Typical	dBi	15.3
Gain Over all Tilts	dBi	14.6 +/- 0.7
Azimuth Beamwidth 3dB	Deg	68.4 +/- 13.5
Elevation Beamwidth 3dB	Deg	9 +/- 0.7
Cross Polar Discrimination at Boresight	dB	17.4
Cross Polar Discrimination over Sector	dB	9.4
F/B at +/-30deg Total Power	dB	24
First Upper Side Lobe Suppression	dB	11.7
Electrical Downtilt	Deg	2 to 12
VSWR	-	1.5

ELECTRICAL SPECIFICATIONS

Electrical Specification Header		RADIATION PARAMETER - BROAD CASTING BEAM (2515-2675 MHZ) [Y1]
Frequency Band	MHz	2515-2675
Gain Typical	dBi	16.6
Gain Over all Tilts	dBi	15.7 +/- 0.9
Azimuth Beamwidth 3dB	Deg	50 +/- 4.5
Elevation Beamwidth 3dB	Deg	9.5 +/- 0.7
F/B at +/-30deg Total Power	dB	23.8
First Upper Side Lobe Suppression	dB	16.2
Electrical Downtilt	Deg	2 to 12
VSWR	-	1.5

ELECTRICAL SPECIFICATIONS

Electrical Specification Header		RADIATION PARAMETER - WORKING BEAM (2515-2675 MHZ) [Y1]
Frequency Band	MHz	2515-2675
Gain Typical	dBi	20.8
Gain Over all Tilts	dBi	20.2 +/- 0.6
Azimuth Beamwidth 3dB	Deg	20.8 +/- 1.1
Elevation Beamwidth 3dB	Deg	9.4 +/- 0.6
F/B at +/-30deg Total Power	dB	28.1
First Upper Side Lobe Suppression	dB	20
Electrical Downtilt	Deg	2 to 12
VSWR	-	1.5

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ELECTRICAL SPECIFICATIONS

Impedance	Ohm	50
Polarization	Deg	±45°

MECHANICAL SPECIFICATIONS

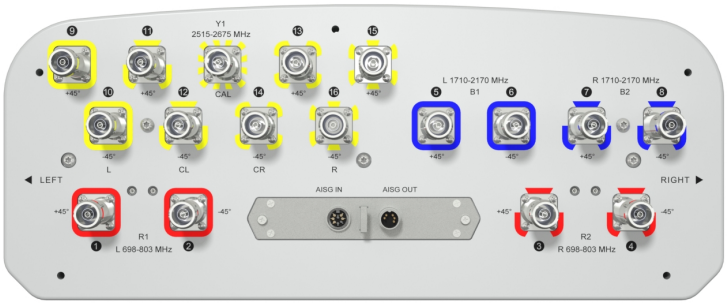
Dimensions - H x W x D	mm (in)	1595 x 499 x 199 (62.8 x 19.6 x 7.8)
Weight (Antenna Only)	kg (lb)	30.7 (67.7)
Weight (Mounting Hardware only)	kg (lb)	4.5 (9.9)
Packing size- HxWxD	mm (in)	1840 x 595 x 295 (72.4 x 23.4 x 11.6)
Shipping Weight	kg (lb)	41.2 (90.8)
Connector type		8x 4.3-10 female + 8x N type connectors + 1 Cal. connector + 2 AISG connectors (1 male, 1 female)
Radome Material / Color		Fiber Glass / Light Grey RAL7035

TESTING AND ENVIRONMENTAL

Temperature Range	°C (°F)	-40 to 60 (-40 to 140)
Lightning protection		DC Ground
Survival/Rated Wind Velocity	km/h	200 (150)
Wind Load @Rated Wind Front	N	1093
Wind Load @Rated Wind Side	N	301
Wind Load @Rated Wind Rear	N	1187

ORDERING INFORMATION

Order No.	Configuration	Mounting Hardware	Mounting pipe Diameter	Shipping Weight
APXVHHRRTM15AB_43-C-I20	Internal RET(ACU-I20-B5)	APM50-B1	50-110mm	41.2 kg



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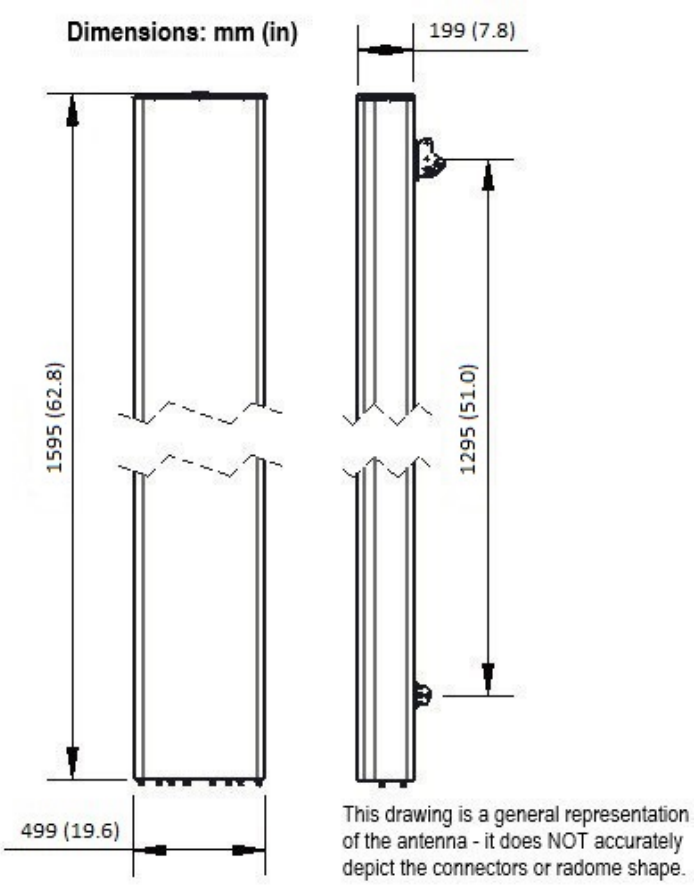

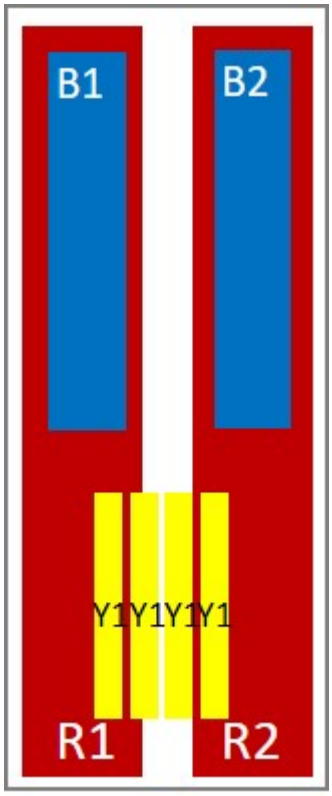

External Document Links

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