PRODUCT DATASHEET

APXVHHRRTM20AB_43-C-I20

Hybrid FDD/TDD Antenna, X-Pol, 2.0m, 8-ports FDD 2x 698-803/2x 1710-2170MHz, 65deg, 8T8R 2515-2675MHz, 65deg unit beam, Integrated RET

FEATURES / BENEFITS

- 4 ports / 2 cross pol systems in low band (698-803MHz)
- 4 ports / 2 cross pol systems in high band (1710-2170MHz)
- 8 ports / 4 cross pol systems in high band (2515-2675MHz)
- 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 (698-803 MHz) [R1]
Frequency Band	MHz	698 - 803
Gain Typical	dBi	15.2
Gain Over all Tilts	dBi	14.8 +/- 0.4
Azimuth Beamwidth 3dB	Deg	76 +/- 4.5
Elevation Beamwidth 3dB	Deg	11.1 +/- 0.7
Cross Polar Discrimination at Boresight	dB	20.6
Cross Polar Discrimination over Sector	dB	9.4
F/B at +/-30deg Total Power	dB	21.2
First Upper Side Lobe Suppression	dB	14.6
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	-153
Maximum Effective Power per Port	Watt	350

APXVHHRRTM20AB_43-C-I20

Hybrid FDD/TDD Antenna, X-Pol, 2.0m, 8-ports FDD 2x 698-803/2x 1710-2170MHz, 65deg, 8T8R 2515-2675MHz, 65deg unit beam, Integrated RET

ELECTRICAL SPECIFICATIONS

Electrical Specification Header		Low Band Array (698-803 MHz) [R2]
Frequency Band	MHz	698 - 803
Gain Typical	dBi	15.1
Gain Over all Tilts	dBi	14.7 +/- 0.4
Azimuth Beamwidth 3dB	Deg	74.8 +/- 3.8
Elevation Beamwidth 3dB	Deg	11.2 +/- 0.8
Cross Polar Discrimination at Boresight	dB	24.9
Cross Polar Discrimination over Sector	dB	10.1
F/B at +/-30deg Total Power	dB	22.2
First Upper Side Lobe Suppression	dB	17
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	-153
Maximum Effective Power per Port	Watt	350

APXVHHRRTM20AB_43-C-I20

Hybrid FDD/TDD Antenna, X-Pol, 2.0m, 8-ports FDD 2x 698-803/2x 1710-2170MHz, 65deg, 8T8R 2515-2675MHz, 65deg unit beam, Integrated RET

ELECTRICAL SPECIFICATIONS

Electrical Specification Header		High Band Array (1710-2170 MHz) [B1]		
Frequency Band	MHz	1710-1880	1850-1990	1920-2170
Gain Typical	dBi	17.8	18	18.2
Gain Over all Tilts	dBi	17.2 +/- 0.6	17.5 +/- 0.5	17.6 +/- 0.6
Azimuth Beamwidth 3dB	Deg	52.8 +/- 4.1	48.5 +/- 2.5	48.3 +/- 3.4
Elevation Beamwidth 3dB	Deg	5.9 +/- 0.5	5.4 +/- 0.4	5.2 +/- 0.4
Cross Polar Discrimination at Boresight	dB	15.7	16.7	15.7
Cross Polar Discrimination over Sector	dB	0.9	1	0.7
F/B at +/-30deg Total Power	dB	24	24.1	24.1
First Upper Side Lobe Suppression	dB	11.3	12.1	15.7
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	-153		
Maximum Effective Power per Port	Watt	250		

APXVHHRRTM20AB_43-C-I20

Hybrid FDD/TDD Antenna, X-Pol, 2.0m, 8-ports FDD 2x 698-803/2x 1710-2170MHz, 65deg, 8T8R 2515-2675MHz, 65deg unit beam, Integrated RET

ELECTRICAL SPECIFICATIONS

Electrical Specification Header		High Band Array (1710-2170 MHz) [B2]		
Frequency Band	MHz	1710-1880	1850-1990	1920-2170
Gain Typical	dBi	18	18.2	18.1
Gain Over all Tilts	dBi	17.3 +/- 0.7	17.7 +/- 0.5	17.7 +/- 0.4
Azimuth Beamwidth 3dB	Deg	54.3 +/- 4.9	49 +/- 3.7	48.5 +/- 3.6
Elevation Beamwidth 3dB	Deg	5.9 +/- 0.4	5.5 +/- 0.4	5.1 +/- 0.4
Cross Polar Discrimination at Boresight	dB	15.7	17.4	15.5
Cross Polar Discrimination over Sector	dB	0.9	0.9	1
F/B at +/-30deg Total Power	dB	24.7	23.9	23.9
First Upper Side Lobe Suppression	dB	12.7	14.3	13
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	-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

APXVHHRRTM20AB_43-C-I20

Hybrid FDD/TDD Antenna, X-Pol, 2.0m, 8-ports FDD 2x 698-803/2x 1710-2170MHz, 65deg, 8T8R 2515-2675MHz, 65deg unit beam, Integrated RET

ELECTRICAL SPECIFICATIONS

Electrical Specification Header		RADIATION PARAMETER - UNIT BEAM (2515-2675 MHZ) [Y1]
Frequency Band	MHz	2515 - 2675
Gain Typical	dBi	16.1
Gain Over all Tilts	dBi	15.6 +/- 0.5
Azimuth Beamwidth 3dB	Deg	66.7 +/- 13.9
Elevation Beamwidth 3dB	Deg	6.5 +/- 0.6
Cross Polar Discrimination at Boresight	dB	20.9
Cross Polar Discrimination over Sector	dB	5.6
F/B at +/-30deg Total Power	dB	19.3
First Upper Side Lobe Suppression	dB	16.2
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	18
Gain Over all Tilts	dBi	17.3 +/- 0.7
Azimuth Beamwidth 3dB	Deg	48.4 +/- 7.9
Elevation Beamwidth 3dB	Deg	6.6 +/- 0.5
F/B at +/-30deg Total Power	dB	21.2
First Upper Side Lobe Suppression	dB	17.4

ELECTRICAL SPECIFICATIONS

Electrical Specification Header		RADIATION PARAMETER - WORKING BEAM (2515-2675 MHZ) [Y1]
Frequency Band	MHz	2515-2675
Gain Typical	dBi	21.3
Gain Over all Tilts	dBi	21 +/- 0.3
Azimuth Beamwidth 3dB	Deg	20.2 +/- 1.2
Elevation Beamwidth 3dB	Deg	6.7 +/- 0.4
F/B at +/-30deg Total Power	dB	23.5
First Upper Side Lobe Suppression	dB	17.4

ELECTRICAL SPECIFICATIONS

Impedance	Ohm	50
Polarization	Deg	±45°

APXVHHRRTM20AB_43-C-I20

Hybrid FDD/TDD Antenna, X-Pol, 2.0m, 8-ports FDD 2x 698-803/2x 1710-2170MHz, 65deg, 8T8R 2515-2675MHz, 65deg unit beam, Integrated RET

MECHANICAL SPECIFICATIONS

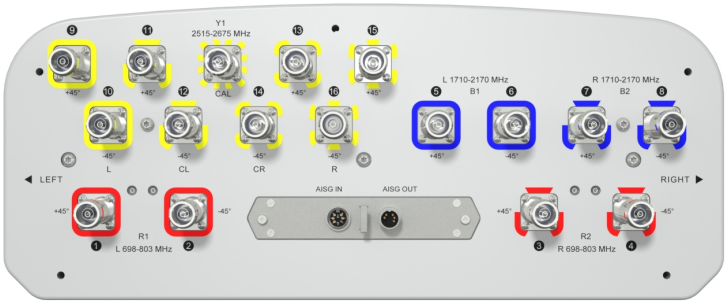
Dimensions - H x W x D	mm (in)	2090 x 560 x 180 (82.2 x 22 x 7.1)
Weight (Antenna Only)	kg (lb)	41 (90.4)
Weight (Mounting Hardware only)	kg (lb)	4.5 (9.9)
Packing size- HxWxD	mm (in)	2340 x 655 x 285 (92.1 x 25.8 x 11.2)
Shipping Weight	kg (lb)	51.5 (113.5)
Connector type		8x 4.3-10 female + 8x N type 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	1263
Wind Load @Rated Wind Side	N	348
Wind Load @Rated Wind Rear	N	1278

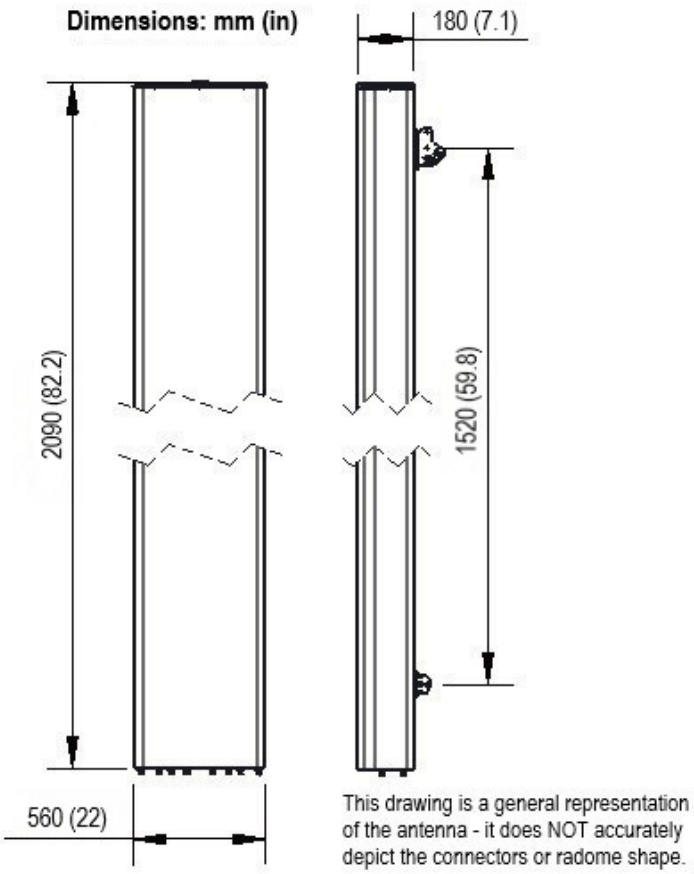
ORDERING INFORMATION

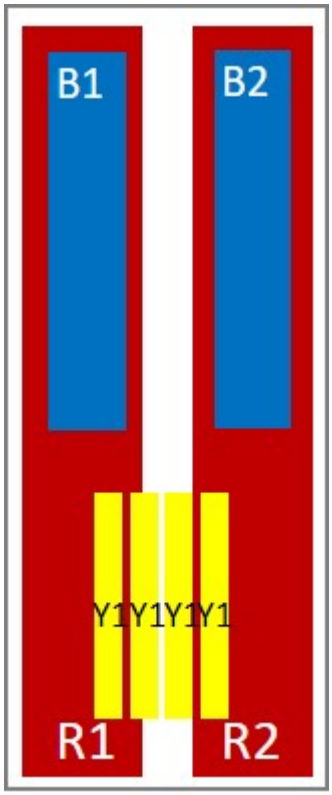
Order No.	Configuration	Mounting Hardware	Mounting pipe Diameter	Shipping Weight
APXVHHRRTM20AB_43-C-I20	Internal RET(ACU-I20-B5)	APM50-B1	50-110mm	51.5 kg



APXVHHRRTM20AB_43-C-I20

Hybrid FDD/TDD Antenna, X-Pol, 2.0m, 8-ports FDD 2x 698-803/2x 1710-2170MHz, 65deg, 8T8R 2515-2675MHz, 65deg unit beam, Integrated RET





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