



FEATURES / BENEFITS

- 2 ports / 1 cross pol system in low band (698-960MHz)
- 2 cross pol systems in high band (1695-2690MHz), diplexed, resulting in 4 ports 1695-2200MHz and 4 ports 2490-2690MHz
- Supporting 4x4 MIMO in high band
- Integrated & 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	15.8	16.6	17
Gain Over all Tilts	dBi	15.3 +/- 0.5	16.1 +/- 0.5	16.5 +/- 0.5
Azimuth Beamwidth 3dB	Deg	69 +/- 1.5	67.8 +/- 1	67.5 +/- 1.5
Elevation Beamwidth 3dB	Deg	11.8 +/- 1	10.5 +/- 0.5	9.1 +/- 0.5
Cross Polar Discrimination at Boresight	dB	30	28.8	27
Cross Polar Discrimination over Sector	dB	12	11	12
F/B at +/-30deg Total Power	dB	23	24.4	24
First Upper Side Lobe Suppression	dB	19	16	15
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		



ELECTRICAL SPECIFICATIONS

Electrical Specification Header		High Band Array (1695-2200 MHz) [B1]		
Frequency Band	MHz	1695-1880	1850-1990	1920-2200
Gain Typical	dBi	17.6	17.6	17.7
Gain Over all Tilts	dBi	17.1 +/- 0.5	17.1 +/- 0.5	17.2 +/- 0.5
Azimuth Beamwidth 3dB	Deg	61.4 +/- 4.5	64.5 +/- 3.5	64.7 +/- 6.7
Elevation Beamwidth 3dB	Deg	6.3 +/- 0.5	6 +/- 0	5.5 +/- 0.5
Cross Polar Discrimination at Boresight	dB	18	17	17
Cross Polar Discrimination over Sector	dB	9	7	6
F/B at +/-30deg Total Power	dB	21	23	24
First Upper Side Lobe Suppression	dB	14	14	14
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		High Band Array (1695-2200 MHz) [B2]		
Frequency Band	MHz	1695-1880	1850-1990	1920-2200
Gain Typical	dBi	17.6	17.6	17.7
Gain Over all Tilts	dBi	17.1 +/- 0.5	17.1 +/- 0.5	17.2 +/- 0.5
Azimuth Beamwidth 3dB	Deg	61.3 +/- 4.5	65.1 +/- 3.8	65.6 +/- 6.4
Elevation Beamwidth 3dB	Deg	6.4 +/- 0.5	6 +/- 0.1	5.6 +/- 0.5
Cross Polar Discrimination at Boresight	dB	18	18	17
Cross Polar Discrimination over Sector	dB	7	7	6
F/B at +/-30deg Total Power	dB	22	22	23
First Upper Side Lobe Suppression	dB	16	16	15
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		High Band Array (2490-2690 MHz) [Y1]
Frequency Band	MHz	2490-2690
Gain Typical	dBi	18.4
Gain Over all Tilts	dBi	17.4 +/- 1
Azimuth Beamwidth 3dB	Deg	59.9 +/- 4
Elevation Beamwidth 3dB	Deg	4.7 +/- 0.5
Cross Polar Discrimination at Boresight	dB	18
Cross Polar Discrimination over Sector	dB	1
F/B at +/-30deg Total Power	dB	24
First Upper Side Lobe Suppression	dB	18.9
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		High Band Array (2490-2690 MHz) [Y1/Y2]
Frequency Band	MHz	2490-2690
Gain Typical	dBi	18.4
Gain Over all Tilts	dBi	17.4 +/- 1
Azimuth Beamwidth 3dB	Deg	59.5 +/- 4
Elevation Beamwidth 3dB	Deg	4.8 +/- 0.5
Cross Polar Discrimination at Boresight	dB	19
Cross Polar Discrimination over Sector	dB	2
F/B at +/-30deg Total Power	dB	25
First Upper Side Lobe Suppression	dB	18
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

Impedance	Ohm	50
Polarization	Deg	±45°

MECHANICAL SPECIFICATIONS

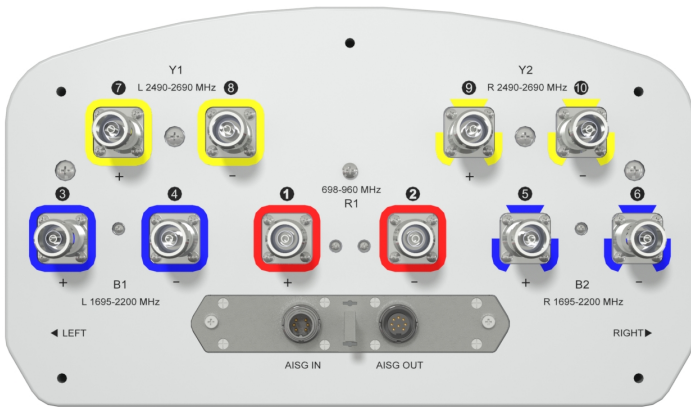
Dimensions - H x W x D	mm (in)	1960 x 350 x 200 (77.2 x 13.8 x 7.9)
Weight (Antenna Only)	kg (lb)	27.8 (61.3)
Weight (Mounting Hardware only)	kg (lb)	4.5 (9)
Packing size- HxWxD	mm (in)	2240 x 425 x 275 (88.2 x 16.7 x 10.8)
Shipping Weight	kg (lb)	40.8 (89.9)
Connector type		10 x 4.3-10 female/bottom + 2 AISG connectors (1 male, 1 female)
Radome Material / Color		Fiber Glass / Light Grey RAL7035

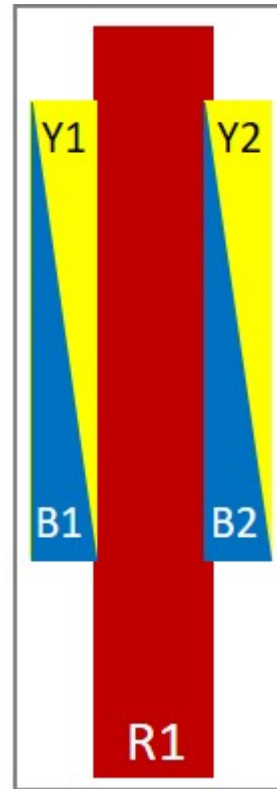
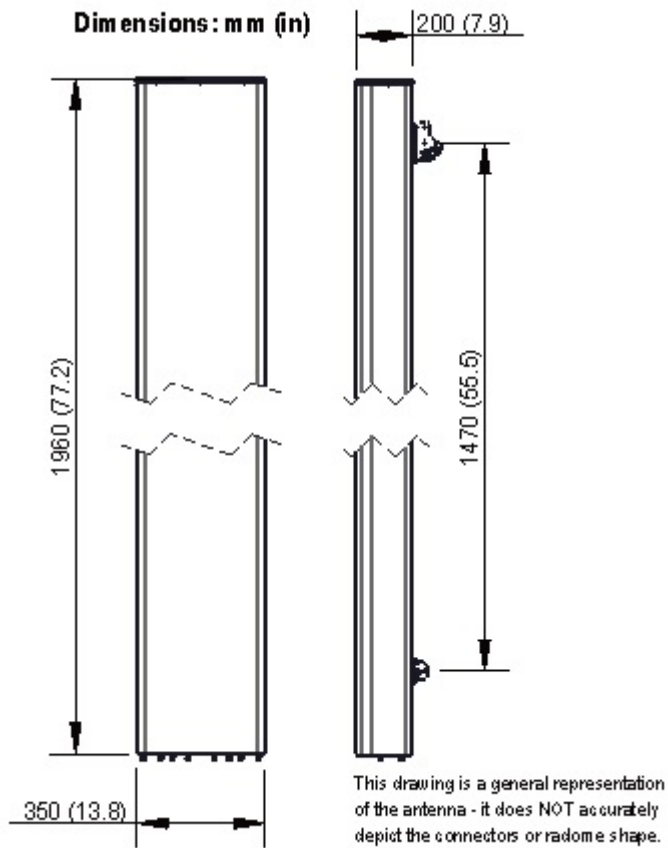
TESTING AND ENVIRONMENTAL

Temperature Range	°C (°F)	-40 to 60 (-40 to 140)
Lightning protection		Direct Ground
Survival/Rated Wind Velocity	km/h	200 (150)
Wind Load @Rated Wind Front	N	880
Wind Load @Rated Wind Side	N	456
Wind Load @Rated Wind Rear	N	498

ORDERING INFORMATION

Order No.	Configuration	Mounting Hardware	Mounting Pipe Diameter	Shipping Weight
P1-BRRMM20-N0	Internal RET(ACU-I20-B5)	APM50-B1	50-110mm	40.8 kg





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](#)