PRODUCT DATASHEET

P4-BBUULL20-I0

12-Ports, X-Pol, Panel Antenna, 2.0m, 2x 694-960/2x 1695-2690/2x 1427-2690MHz, 65deg, Integrated RET

FEATURES / BENEFITS

This antenna provides a 12-port flexible platform for advanced use in low and high bands with the support of L-band (1.4GHz):

- 4 ports / 2 cross pol systems in low band (694-960 MHz)
- 4 ports / 2 cross pol systems in high band (1695-2690MHz)
- 4 ports / 2 cross pol systems in very wide high band (1427-2690 MHz).
- Integrated and field replaceable SRET.
  - ACU HW Version: 00001 / SRET (default) and MRET (configurable on site) support.
- Dual primary support for antenna sharing.
  - Both dynamic and static site sharing modes are offered as default factory setting (see ordering information for more details).
  - Site sharing mapping is reconfigurable remotely.
- Compliant with AISG V2.0 and 3GPP.
- Optimized radome for low windload.
  - Maximum windload, drag force: 925 N
  - Maximum windload, resultant: 1048 N

Technical features

ELECTRICAL SPECIFICATIONS

Electrical Specification Header		Low Band Arrays [R1] (694-960 MHz)		
Frequency Band	MHz	694-806	790-894	880-960
Gain Typical	dBi	15.3	15.4	15.2
Gain Over all Tilts	dBi	14.8 +/- 0.5	14.9 +/- 0.5	14.7 +/- 0.5
Azimuth Beamwidth 3dB	Deg	64.7 +/- 4.5	62.6 +/- 3	60.1 +/- 5.5
Elevation Beamwidth 3dB	Deg	10.3 +/- 1	9.5 +/- 0.5	8.7 +/- 0.5
Cross Polar Discrimination at Boresight	dB	14	17	19
Cross Polar Discrimination over Sector	dB	4	6	1
F/B at +/-30deg Total Power	dB	20		
First Upper Side Lobe Suppression	dB	14	15.9	14
Electrical Downtilt	Deg	2 to 12		
Cross Polar Isolation	dB	26		
Interband Isolation	dB	26		
VSWR	-	1.5		
Passive Intermodulation (3rd order, 2x43dBm)	dBc	-153		
Maximum Effective Power per Port	Watt	300		

ELECTRICAL SPECIFICATIONS

Electrical Specification Header		Low Band Arrays [R2] (694-960 MHz)		
Frequency Band	MHz	694-806	790-894	880-960
Gain Typical	dBi	15.2	15.3	15.3
Gain Over all Tilts	dBi	14.7 +/- 0.5	14.8 +/- 0.5	14.8 +/- 0.5
Azimuth Beamwidth 3dB	Deg	62.7 +/- 4	61.1 +/- 3	59.4 +/- 4.2
Elevation Beamwidth 3dB	Deg	10.1 +/- 1	9.5 +/- 0.5	8.8 +/- 0.5
Cross Polar Discrimination at Boresight	dB	15	18	18
Cross Polar Discrimination over Sector	dB	4	6	1
F/B at +/-30deg Total Power	dB	20	21	20
First Upper Side Lobe Suppression	dB	15	16	15
Electrical Downtilt	Deg	2 to 12		
Cross Polar Isolation	dB	26		
Interband Isolation	dB	26		
VSWR	-	1.5		
Passive Intermodulation (3rd order, 2x43dBm)	dBc	-153		
Maximum Effective Power per Port	Watt	300		

ELECTRICAL SPECIFICATIONS

Electrical Specification Header		High Band Arrays - Central Columns [Y2] (1695-2690 MHz)			
Frequency Band	MHz	1695 - 1880	1850 - 2200	2300 - 2490	2490 - 2690
Gain Typical	dBi	15.9	16.9	16.8	17.3
Gain Over all Tilts	dBi	15.4 +/- 0.5	16.2 +/- 0.7	16.3 +/- 0.5	16.8 +/- 0.5
Azimuth Beamwidth 3dB	Deg	65.6 +/- 10.8	65.4 +/- 5.5	55.5 +/- 4.7	55.6 +/- 4
Elevation Beamwidth 3dB	Deg	6.8 +/- 0.6	5.7 +/- 0.5	5.1 +/- 0.5	5 +/- 1
Cross Polar Discrimination at Boresight	dB	11	11	12	11
Cross Polar Discrimination over Sector	dB	5	4	5	2
F/B at +/-30deg Total Power	dB	23	26	25	22
First Upper Side Lobe Suppression	dB	16	16	19	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	300			

ELECTRICAL SPECIFICATIONS

Electrical Specification Header		High Band Arrays - Central Columns [Y3] (1695-2690 MHz)			
Frequency Band	MHz	1695 - 1880	1850 - 2200	2300 - 2490	2490 - 2690
Gain Typical	dBi	16	16.8	17	17.3
Gain Over all Tilts	dBi	15.5 +/- 0.5	16.3 +/- 0.5	16.5 +/- 0.5	16.8 +/- 0.5
Azimuth Beamwidth 3dB	Deg	64.1 +/- 8.5	63.2 +/- 6.3	53.7 +/- 4.9	54.5 +/- 5
Elevation Beamwidth 3dB	Deg	6.8 +/- 0.5	5.7 +/- 0.5	5.1 +/- 0.5	5.1 +/- 0.5
Cross Polar Discrimination at Boresight	dB	11	12	12	11
Cross Polar Discrimination over Sector	dB	5	5	6	1
F/B at +/-30deg Total Power	dB	24	26	23	22
First Upper Side Lobe Suppression	dB	16	17	19	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	300			

ELECTRICAL SPECIFICATIONS

Electrical Specification Header		High Band Arrays - Side Columns [Y1] (1427-2690 MHz)				
Frequency Band	MHz	1427 - 1518	1695 - 1880	1850 - 2200	2300 - 2490	2490 - 2690
Gain Typical	dBi	14.8	17	18.2	18.3	18.1
Gain Over all Tilts	dBi	14.3 +/- 0.5	16 +/- 1	17.2 +/- 1	17.8 +/- 0.5	18 +/- 0.1
Azimuth Beamwidth 3dB	Deg	77.4 +/- 5.4	67.7 +/- 7	57.2 +/- 6.4	50.6 +/- 4	49.8 +/- 6.6
Elevation Beamwidth 3dB	Deg	9.1 +/- 0.5	7 +/- 0.1	6.2 +/- 0.5	5 +/- 0.1	4.9 +/- 0.5
Cross Polar Discrimination at Boresight	dB	17	16	15.2	17	20
Cross Polar Discrimination over Sector	dB	8	7.6	2	1	0.7
F/B at +/-30deg Total Power	dB	21	22	24.3	23	23.3
First Upper Side Lobe Suppression	dB	17	15	19	19	19
Electrical Downtilt	Deg	2 to 12				
Cross Polar Isolation	dB	26				
Interband Isolation	dB	26				
VSWR	-	1.5				
Passive Intermodulation (3rd order, 2x43dBm)	dBc	-153				
Maximum Effective Power per Port	Watt	300				

ELECTRICAL SPECIFICATIONS

Electrical Specification Header		High Band Arrays - Side Columns [Y4] (1427-2690 MHz)				
Frequency Band	MHz	1427 - 1518	1695 - 1880	1850 - 2200	2300 - 2490	2490 - 2690
Gain Typical	dBi	14.6	17.1	18.3	18.2	18.6
Gain Over all Tilts	dBi	14.1 +/- 0.5	16.1 +/- 1	17.3 +/- 1	17.7 +/- 0.5	18 +/- 0.6
Azimuth Beamwidth 3dB	Deg	77.6 +/- 5.7	65.7 +/- 6	57.2 +/- 6.9	51.4 +/- 5	50.9 +/- 6.3
Elevation Beamwidth 3dB	Deg	9.1 +/- 0.5	6.9 +/- 0.5	6.2 +/- 0.5	5 +/- 0.1	4.9 +/- 0.5
Cross Polar Discrimination at Boresight	dB	17	16	16	19	19
Cross Polar Discrimination over Sector	dB	8	8	1	1	1
F/B at +/-30deg Total Power	dB	22	23	25	23	23
First Upper Side Lobe Suppression	dB	16	14	17	20.1	18
Electrical Downtilt	Deg	2 to 12				
Cross Polar Isolation	dB	26				
Interband Isolation	dB	26				
VSWR	-	1.5				
Passive Intermodulation (3rd order, 2x43dBm)	dBc	-153				
Maximum Effective Power per Port	Watt	300				

ELECTRICAL SPECIFICATIONS

Impedance	Ohm	50
Polarization	Deg	±45°

MECHANICAL SPECIFICATIONS

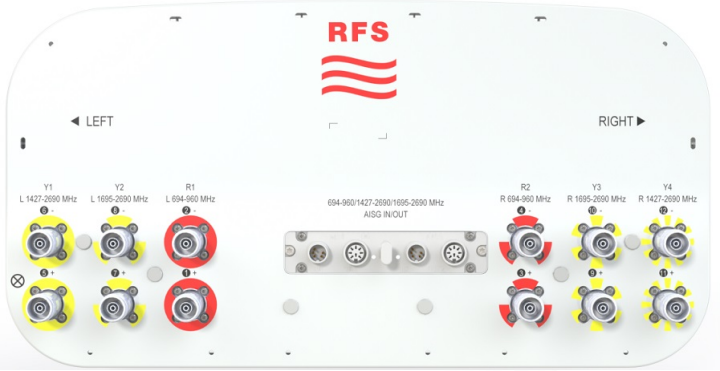
Dimensions - H x W x D	mm (in)	2042 x 499 x 257 (80.4 x 19.6 x 10.1)
Weight (Antenna Only)	kg (lb)	46 (101.4)
Weight (Mounting Hardware only)	kg (lb)	3.3 (7.3)
Packing size- HxWxD	mm (in)	2250 x 560 x 455 (88.6 x 22 x 17.9)
Shipping Weight	kg (lb)	58 (127.9)
Connector type		12 x 4.3-10 Female at bottom + 4 AISG connectors (2 male, 2 female for site sharing support)
Radome Material / Color		ASA / Light Grey RAL7035

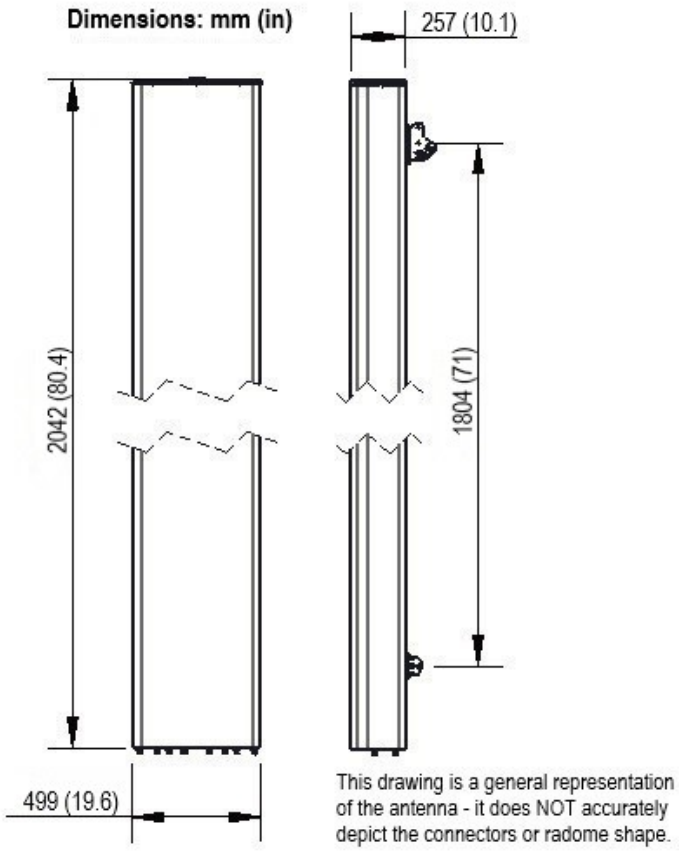
TESTING AND ENVIRONMENTAL

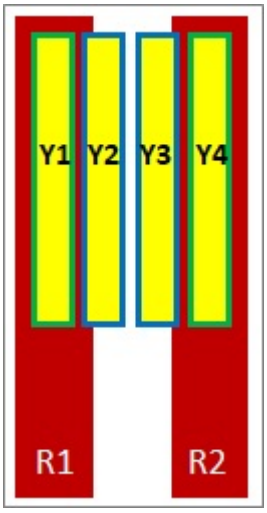
Temperature Range	°C (°F)	-40 to 60 (-40 to 140)
Grounding type		Direct Ground
Survival/Rated Wind Velocity	km/h	200 (150)
Wind Load @Rated Wind Front	N	549
Wind Load @Rated Wind Side	N	479
Wind Load @Rated Wind Rear	N	576

ORDERING INFORMATION

Order No.	Configuration	Mounting Hardware	Mounting Pipe Diameter	Shipping Weight
P4-BBUULL20-I0 (Material Code: 50015861)	Internal RET (ACU-X20), Dynamic Site Sharing mode	APM40-2	60-120mm	58 kg
P4-BBUULL20-I0 (Material Code: 50016492)	Internal RET (ACU-X20), Static Site Sharing mode	APM40-2	60-120mm	58 kg







External Document Links

APM40_Series_Installation_Instructions

User Manual - Dual Primary for Site Sharing - Dynamic vs Static

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