

PRODUCT DATASHEET

**APXVBBLL20H2\_43-C-I20, -A-I20, -C-I20S, -A-I20S**

8-ports, X-Pol, Panel Antenna, 2.0m, 2x 690-960/2x 1695-2690MHz, 65deg, Integrated RET, Site Sharing Optional



**FEATURES / BENEFITS**

- 4 ports / 2 cross pol systems in low band (690-960MHz)
- 4 ports / 2 cross pol systems in high band (1695-2690MHz)
- Supports 4x4 MIMO in low band and high band
- Integrated and field replaceable SRET
- Optional with Site Sharing feature (Model name Suffix -C-I20S, -A-I20S)
- Optional with Direct Pipe no tilt mounting hardware (Model name Suffix -A-I20, -A-I20S)
- Compliant with AISG V2.0 and 3GPP
- Optimized radome for low windload.

**Technical features**

**ELECTRICAL SPECIFICATIONS**

Electrical Specification Header		LOW BAND ARRAY (690-960 MHZ) [R1]		
Frequency Band	MHz	690 - 806	790 - 894	880 - 960
Gain Typical	dBi	16	16.3	16.1
Gain Over all Tilts	dBi	15.4 +/- 0.6	15.8 +/- 0.5	15.6 +/- 0.5
Azimuth Beamwidth 3dB	Deg	63.8 +/- 5.9	62.3 +/- 6.6	63.6 +/- 8.8
Elevation Beamwidth 3dB	Deg	10.6 +/- 0.5	10.1 +/- 0.6	9.9 +/- 0.5
Cross Polar Discrimination at Boresight	dB	23.0	27.6	24.7
Cross Polar Discrimination over Sector	dB	12.5	10.1	8.6
F/B at +/-30deg Total Power	dB	18.2	21.1	21.2
First Upper Side Lobe Suppression	dB	15.1	15.2	14.7
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		

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Site Sharing Optional



**ELECTRICAL SPECIFICATIONS**

Electrical Specification Header		LOW BAND ARRAY (690-960 MHz) [R2]		
Frequency Band	MHz	690 - 806	790 - 894	880 - 960
Gain Typical	dBi	15.8	16.1	16
Gain Over all Tilts	dBi	15.3 +/- 0.5	15.7 +/- 0.4	15.6 +/- 0.4
Azimuth Beamwidth 3dB	Deg	64.8 +/- 7.2	62.2 +/- 5.1	63.3 +/- 7.3
Elevation Beamwidth 3dB	Deg	10.5 +/- 0.5	10 +/- 0.5	9.7 +/- 0.5
Cross Polar Discrimination at Boresight	dB	22.8	27.6	25.8
Cross Polar Discrimination over Sector	dB	11.4	10.9	8.6
F/B at +/-30deg Total Power	dB	18.5	21.3	20.9
First Upper Side Lobe Suppression	dB	15.9	15.3	16.1
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		

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**ELECTRICAL SPECIFICATIONS**

Electrical Specification Header		High Band Array (1695-2690 MHz) [Y1]				
<b>Frequency Band</b>	MHz	1695 - 1880	1850 - 1990	1920 - 2170	2300 - 2400	2490 - 2690
<b>Gain Typical</b>	dBi	17	17.6	17.9	17.6	17.7
<b>Gain Over all Tilts</b>	dBi	16.4 +/- 0.6	17.2 +/- 0.4	17.3 +/- 0.6	17 +/- 0.6	17.2 +/- 0.5
<b>Azimuth Beamwidth 3dB</b>	Deg	67.4 +/- 4.2	62.8 +/- 4.1	61.8 +/- 4.8	60.7 +/- 7.3	60.6 +/- 5.6
<b>Elevation Beamwidth 3dB</b>	Deg	6.5 +/- 0.4	6.1 +/- 0.2	5.8 +/- 0.4	5.2 +/- 0.3	4.8 +/- 0.3
<b>Cross Polar Discrimination at Boresight</b>	dB	16.9	26.5	22.1	18.8	21.4
<b>Cross Polar Discrimination over Sector</b>	dB	2.9	6	4.4	3.1	0.7
<b>F/B at +/-30deg Total Power</b>	dB	24.6	23.5	24.2	25.3	25.8
<b>First Upper Side Lobe Suppression</b>	dB	15.4	15.6	15.1	17.1	18.5
<b>Electrical Downtilt</b>	Deg	2 to 12				
<b>Cross Polar Isolation</b>	dB	26				
<b>Interband Isolation</b>	dB	28				
<b>VSWR</b>	-	1.5				
<b>Passive Intermodulation (3rd Order, 2 x 43dBm)</b>	dBc	-153				
<b>Maximum Effective Power per Port</b>	Watt	250				

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**ELECTRICAL SPECIFICATIONS**

Electrical Specification Header		High Band Array (1695-2690 MHz) [Y2]				
Frequency Band	MHz	1695 - 1880	1850 - 1990	1920 - 2170	2300 - 2400	2490 - 2690
Gain Typical	dBi	16.9	17.4	17.6	17.4	17.5
Gain Over all Tilts	dBi	16.2 +/- 0.7	16.9 +/- 0.5	17.1 +/- 0.5	16.7 +/- 0.7	17 +/- 0.5
Azimuth Beamwidth 3dB	Deg	67.3 +/- 5.1	63.6 +/- 5.2	62.1 +/- 3.9	61.1 +/- 8.4	60.2 +/- 6.6
Elevation Beamwidth 3dB	Deg	6.5 +/- 0.3	6 +/- 0.2	5.7 +/- 0.4	5.2 +/- 0.3	4.8 +/- 0.3
Cross Polar Discrimination at Boresight	dB	18	22.9	20.8	16.6	21.2
Cross Polar Discrimination over Sector	dB	3	6.5	4.7	2.5	0.6
F/B at +/-30deg Total Power	dB	26.6	26.9	26.1	25.4	25.3
First Upper Side Lobe Suppression	dB	14.6	15.1	15	16.6	20.2
Electrical Downtilt	Deg	2 to 12				
Cross Polar Isolation	dB	26				
Interband Isolation	dB	28				
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)	1998 x 469 x 205 (78.7 x 18.5 x 8.1)
Weight (Antenna Only)	kg (lb)	26 (57.3)
Packing size- HxWxD	mm (in)	2198 x 544 x 315 (86.5 x 21.4 x 12.4)
Connector type		8 x 4.3-10 female/bottom + 2x AISG connectors (1 male, 1 female), (Site Sharing) 4x AISG connectors (2 male, 2 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 )

PRODUCT DATASHEET

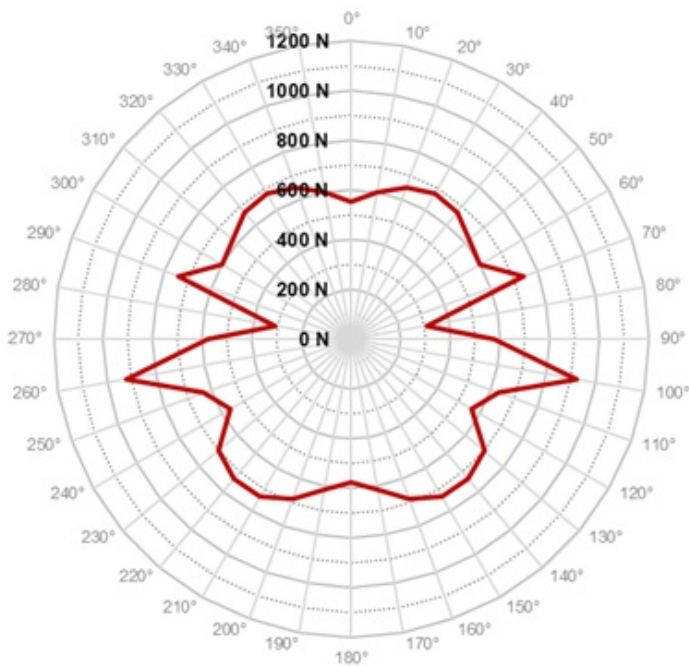
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**ORDERING INFORMATION**

Order No.	Configuration	Mounting Hardware	Mounting pipe Diameter	Shipping Weight kg(lb)	Mounting Hardware Weight kg(lb)
APXVBBLL20H2_43-C-I20	Internal RET(ACU-I20-H12J)	APM50-H2	50-125mm	39.8 (87.7)	5.5 (12.1)
APXVBBLL20H2_43-A-I20	Internal RET(ACU-I20-H12J)	APM50-H2N (Direct Pipe no tilt)	50-125mm	38.3 (84.4)	4.0 (8.8)
APXVBBLL20H2_43-C-I20S	Internal Site Sharing RET(ACU-X20H)	APM50-H2	50-125mm	39.9 (88.0)	5.5 (12.1)
APXVBBLL20H2_43-A-I20S	Internal Site Sharing RET(ACU-X20H)	APM50-H2N (Direct Pipe no tilt)	50-125mm	38.4 (84.6)	4.0 (8.8)



Rated Wind Speed, Km/h	150
Wind Load Frontal, Resultant, N	554
Wind Load Side, Resultant, N	576
Wind Load Rear, Resultant, N	578
Maximum Wind Load, Resultant, N	922
Maximum Wind Load, Drag Force, N	733

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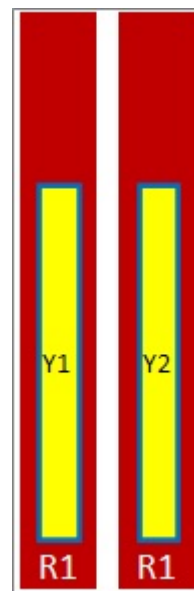
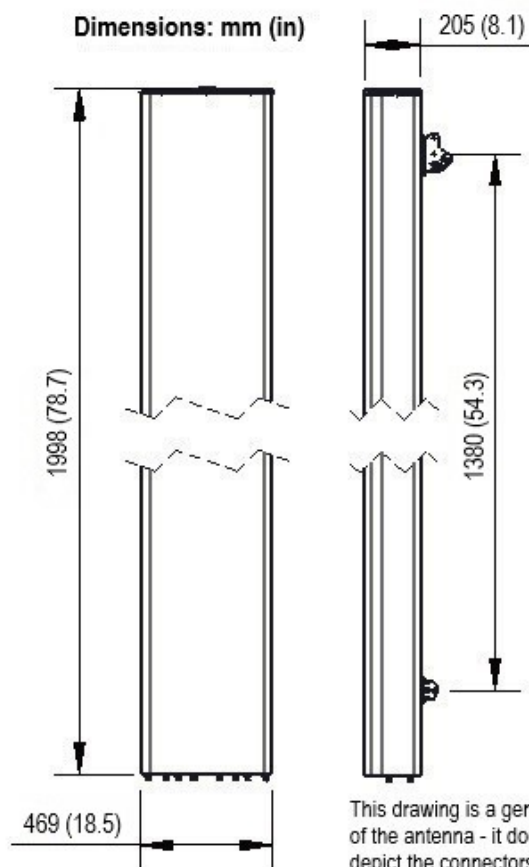


Port	Array	Frequency	RET	AISG RET UID
1	R1	690-960 MHz	R1	RFxxxxxxxxxxx-R1
2				
3	R2	690-960 MHz	R2	RFxxxxxxxxxxx-R2
4				
5	Y1	1695-2690 MHz	Y1	RFxxxxxxxxxxx-Y1
6				
7	Y2	1695-2690 MHz	Y2	RFxxxxxxxxxxx-Y2
8				

NOTE: RET motors will tilt one at a time, not simultaneously



Dimensions: mm (in)



External Document Links  
[APM50\\_Series\\_Installation\\_Instructions](#)

Notes

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- All electrical parameters are compliant with NGMN P-BASTA 12 requirements.
- For additional mounting information please click "External Document Links".

- **Radiating patterns:** [Request pattern files](#)