

APXVBBLL15H2_43-C-I20, -A-I20, -C-I20S, -A-I20S

8-Ports, X-Pol, Panel Antenna, 1.5m, 2x 690-960/2x 1695-2690MHz, 65deg, Integrated RET



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	15	15.3	15.2
Gain Over all Tilts	dBi	14.3 +/- 0.7	14.8 +/- 0.5	14.8 +/- 0.4
Azimuth Beamwidth 3dB	Deg	61 +/- 4.9	58.1 +/- 5.2	57.8 +/- 7
Elevation Beamwidth 3dB	Deg	14.6 +/- 1.1	13.6 +/- 1	12.9 +/- 0.9
Cross Polar Discrimination at Boresight	dB	22.7	23	22.8
Cross Polar Discrimination over Sector	dB	10.1	9	6
F/B at +/-30deg Total Power	dB	18.1	20.9	21.1
First Upper Side Lobe Suppression	dB	13.9	14.8	13.7
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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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	15.3	15.2
Gain Over all Tilts	dBi	14.4 +/- 0.6	14.8 +/- 0.5	14.8 +/- 0.4
Azimuth Beamwidth 3dB	Deg	63.3 +/- 6.6	59.5 +/- 5.9	60.6 +/- 7.7
Elevation Beamwidth 3dB	Deg	14.6 +/- 1	13.5 +/- 0.9	12.9 +/- 0.8
Cross Polar Discrimination at Boresight	dB	22.7	24.6	25.7
Cross Polar Discrimination over Sector	dB	10.6	9.9	5.8
F/B at +/-30deg Total Power	dB	19.5	21.2	20.7
First Upper Side Lobe Suppression	dB	14.3	15.4	14.3
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 (1695-2690 MHz) [Y1]				
Frequency Band	MHz	1695 - 1880	1850 - 1990	1920 - 2170	2300 - 2400	2490 - 2690
Gain Typical	dBi	17.1	17.6	18	17.8	18
Gain Over all Tilts	dBi	16.5 +/- 0.6	17.2 +/- 0.4	17.5 +/- 0.5	17.3 +/- 0.5	17.5 +/- 0.5
Azimuth Beamwidth 3dB	Deg	68.7 +/- 4.9	64 +/- 5.5	61.6 +/- 4.1	62.2 +/- 6.4	60.9 +/- 6.3
Elevation Beamwidth 3dB	Deg	6.5 +/- 0.4	6.2 +/- 0.3	5.8 +/- 0.5	5.3 +/- 0.2	4.9 +/- 0.3
Cross Polar Discrimination at Boresight	dB	18.8	25.8	21.7	17.8	20.9
Cross Polar Discrimination over Sector	dB	4.4	7.6	4.9	3.5	0.3
F/B at +/-30deg Total Power	dB	24.9	26.4	25.5	25	25.4
First Upper Side Lobe Suppression	dB	15.1	16.3	16.2	19.4	18.2
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

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	17.2	17.8	17.8	17.7	18.1
Gain Over all Tilts	dBi	16.6 +/- 0.6	17.3 +/- 0.5	17.4 +/- 0.4	17.2 +/- 0.5	17.6 +/- 0.5
Azimuth Beamwidth 3dB	Deg	67.5 +/- 3.1	64 +/- 4.1	61.9 +/- 3.5	61.2 +/- 6.6	61.3 +/- 6.1
Elevation Beamwidth 3dB	Deg	6.6 +/- 0.4	6.1 +/- 0.3	5.8 +/- 0.5	5.2 +/- 0.3	4.8 +/- 0.3
Cross Polar Discrimination at Boresight	dB	17.5	24	22.7	17.9	20
Cross Polar Discrimination over Sector	dB	5.7	8.2	5.2	2.3	0.5
F/B at +/-30deg Total Power	dB	25.5	27.3	26	26	25.2
First Upper Side Lobe Suppression	dB	16.4	16.7	16.6	22	20.4
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)	1498 x 469 x 205 (59 x 18.5 x 8.1)
Weight (Antenna Only)	kg (lb)	25.5 (56.2)
Packing size- HxWxD	mm (in)	1678 x 544 x 315 (66.1 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)

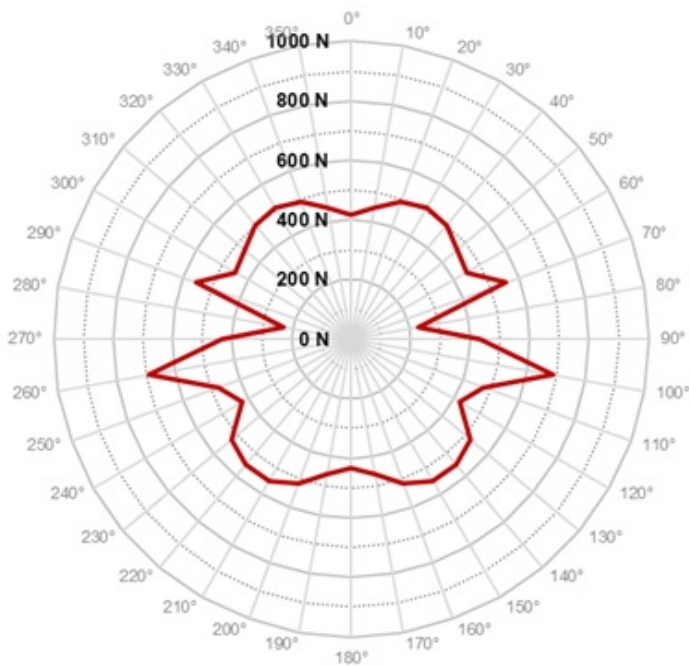
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ORDERING INFORMATION

Order No.	Configuration	Mounting Hardware	Mounting pipe Diameter	Shipping Weight kg(lb)	Mounting Hardware Weight kg(lb)
APXVBBLL15H2_43-C-I20	Internal RET(ACU-I20-H12J)	APM50-H2	50-125mm	35.8 (78.9)	5.5 (12.1)
APXVBBLL15H2_43-A-I20	Internal RET(ACU-I20-H12J)	APM50-H2N (Direct Pipe no tilt)	50-125mm	34.3 (75.6)	4.0 (8.8)
APXVBBLL15H2_43-C-I20S	Internal Site Sharing RET(ACU-X20H)	APM50-H2	50-125mm	35.9 (79.1)	5.5 (12.1)
APXVBBLL15H2_43-A-I20S	Internal Site Sharing RET(ACU-X20H)	APM50-H2N (Direct Pipe no tilt)	50-125mm	34.4 (75.8)	4.0 (8.8)



Rated Wind Speed, Km/h	150
Wind Load Frontal, Resultant, N	416
Wind Load Side, Resultant, N	431
Wind Load Rear, Resultant, N	433
Maximum Wind Load, Resultant, N	691
Maximum Wind Load, Drag Force, N	549

PRODUCT DATASHEET

APXVBBLL15H2_43-C-I20, -A-I20, -C-I20S, -A-I20S

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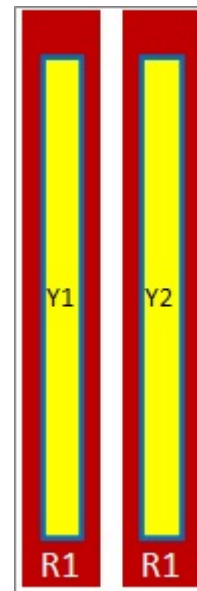
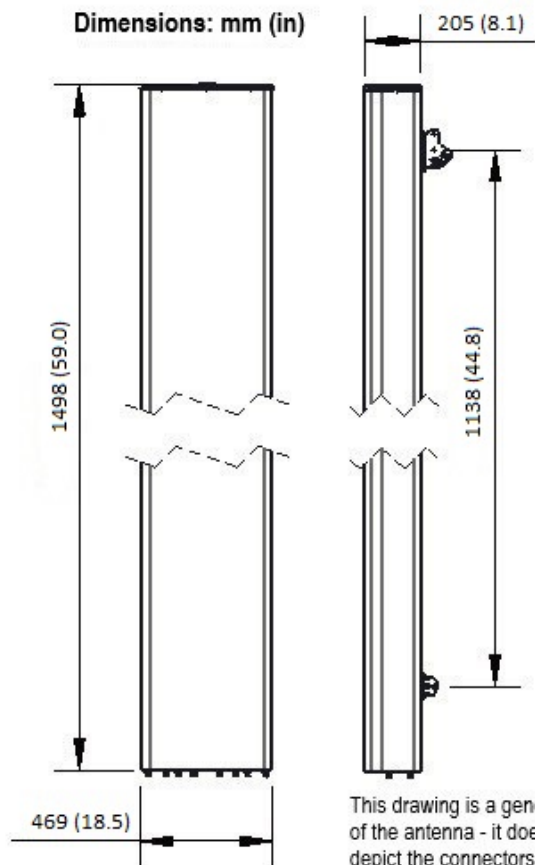


Port	Array	Frequency	RET	AISG RET UID
1	R1	690-960 MHz	R1	RFxxxxxxxxxxx-R1
2				
3	R2	690-960 MHz	R2	RFxxxxxxxxxxx-R2
4				
5	Y1	1695-2690 MHz	Y1	RFxxxxxxxxxxx-Y1
6				
7	Y2	1695-2690 MHz	Y2	RFxxxxxxxxxxx-Y2
8				

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



Dimensions: mm (in)



External Document Links
[APM50_Series_Installation_Instructions](#)

Notes



- 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](#)