

65°

1498 mm

INTEGRATED RET

SITE SHARING OPTIONAL

## APXVBLL15H2\_43-C-I20

APXVBLL15H2\_43-A-I20, APXVBLL15H2\_43-C-I20S, APXVBLL15H2\_43-A-I20S

### Features

- 4 ports / 2 cross pol systems in low band (690-960 MHz)
- 4 ports / 2 cross pol systems in high band (1695-2690 MHz)
- 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



PRODUCT OVERVIEW	Frequency Range (MHz)	(2x) 690-960		(2x) 1695-2690	
	Array	■ R1	■ R2	■ Y1	■ Y2
	Connector	1-2	3-4	5-6	7-8
		8 PORTS			
	Polarization	XPOL			
	Azimuth Beamwidth (avg)	65°		65°	
	Electrical Downtilt	2-12°		2-12°	
Dimensions	1498 x 469 x 205 mm (59 x 18.5 x 8.1 in)				

### ORDERING OPTIONS

Select from the following ordering options

ANTENNA MODEL NUMBER	CONFIGURATION	MOUNTING HARDWARE	MOUNTING PIPE DIAMETER	SHIPPING WEIGHT	MOUNTING HARDWARE WEIGHT
APXVBLL15H2_43-C-I20	ACU-I20-H12J Internal RET Included	APM50-H2 Beam Tilt Kit Included	50-125 mm (2.0-4.9 in)	35.8 kg (78.9 lbs)	5.5 kg (12.1 lbs)
APXVBLL15H2_43-A-I20	ACU-I20-H12J Internal RET Included	APM50-H2N Direct Pipe No Tilt Mounting Kit Included	50-125 mm (2.0-4.9 in)	34.3 kg (75.6 lbs)	4 kg (8.8 lbs)
APXVBLL15H2_43-C-I20S	ACU-X20H Internal RET for Site Sharing Included	APM50-H2 Beam Tilt Kit Included	50-125 mm (2.0-4.9 in)	35.9 kg (79.1 lbs)	5.5 kg (12.1 lbs)
APXVBLL15H2_43-A-I20S	ACU-X20H Internal RET for Site Sharing Included	APM50-H2N Direct Pipe No Tilt Mounting Kit Included	50-125 mm (2.0-4.9 in)	34.4 kg (75.8 lbs)	4 kg (8.8 lbs)



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## APXVBBLL15H2\_43-C-I20

APXVBBLL15H2\_43-A-I20, APXVBBLL15H2\_43-C-I20S, APXVBBLL15H2\_43-A-I20S

### ELECTRICAL SPECIFICATIONS

■ R1

Frequency Range		MHz	690-960		
		MHz	690-806	790-894	880-960
Polarization		---	±45°		
Gain	Over all Tilts	dBi	14.3 ± 0.7	14.8 ± 0.5	14.8 ± 0.4
	Max Gain	dBi	15.0	15.3	15.2
Azimuth Beamwidth (3 dB)		degrees	61° ± 4.9°	58.1° ± 5.2°	57.8° ± 7°
Elevation Beamwidth (3 dB)		degrees	14.6° ± 1.1°	13.6° ± 1.0°	12.9° ± 0.9°
Electrical Downtilt		degrees	2-12°		
Impedance		Ohms	50Ω		
VSWR (Return Loss)		---	1.5:1 (-14 dB)		
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	-153		
Front-to-Back Ratio, Total Power, ± 30°		dB	18.1	20.9	21.1
First Upper Side Lobe Suppression		dB	13.9	14.8	13.7
Cross Polar Discrimination Over Sector		dB	10.1	9	6
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	22.7	23	22.8
Maximum Effective Power Per Port		Watts	250 W		
Cross Polar Isolation		dB	26		
Interband Isolation		dB	26		

Specifications follow BASTA guidelines.

### ELECTRICAL SPECIFICATIONS

■ R2

Frequency Range		MHz	690-960		
		MHz	690-806	790-894	880-960
Polarization		---	±45°		
Gain	Over all Tilts	dBi	14.4 ± 0.6	14.8 ± 0.5	14.8 ± 0.4
	Max Gain	dBi	15.0	15.3	15.2
Azimuth Beamwidth (3 dB)		degrees	63.3° ± 6.6°	59.5° ± 5.9°	60.6° ± 7.7°
Elevation Beamwidth (3 dB)		degrees	14.6° ± 1.0°	13.5° ± 0.9°	12.9° ± 0.8°
Electrical Downtilt		degrees	2-12°		
Impedance		Ohms	50Ω		
VSWR (Return Loss)		---	1.5:1 (-14 dB)		
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	-153		
Front-to-Back Ratio, Total Power, ± 30°		dB	19.5	21.2	20.7
First Upper Side Lobe Suppression		dB	14.3	15.4	14.3
Cross Polar Discrimination Over Sector		dB	10.6	9.9	5.8
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	22.7	24.6	25.7
Maximum Effective Power Per Port		Watts	250 W		
Cross Polar Isolation		dB	26		
Interband Isolation		dB	26		

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### ELECTRICAL SPECIFICATIONS

■ Y1

Frequency Range		MHz	1695-2690				
		MHz	1695-1880	1850-1990	1920-2170	2300-2400	2490-2690
Polarization		---	±45°				
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
	Max Gain	dBi	17.1	17.6	18.0	17.8	18.0
Azimuth Beamwidth (3 dB)		degrees	68.7° ± 4.9°	64° ± 5.5°	61.6° ± 4.1°	62.2° ± 6.4°	60.9° ± 6.3°
Elevation Beamwidth (3 dB)		degrees	6.5° ± 0.4°	6.2° ± 0.3°	5.8° ± 0.5°	5.3° ± 0.2°	4.9° ± 0.3°
Electrical Downtilt		degrees	2-12°				
Impedance		Ohms	50Ω				
VSWR (Return Loss)		---	1.5:1 (-14 dB)				
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	-153				
Front-to-Back Ratio, Total Power, ± 30°		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
Cross Polar Discrimination Over Sector		dB	4.4	7.6	4.9	3.5	0.3
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	18.8	25.8	21.7	17.8	20.9
Maximum Effective Power Per Port		Watts	250 W				
Cross Polar Isolation		dB	26				
Interband Isolation		dB	28				

Specifications follow BASTA guidelines.

### ELECTRICAL SPECIFICATIONS

■ Y2

Frequency Range		MHz	1695-2690				
		MHz	1695-1880	1850-1990	1920-2170	2300-2400	2490-2690
Polarization		---	±45°				
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
	Max Gain	dBi	17.2	17.8	17.8	17.7	18.1
Azimuth Beamwidth (3 dB)		degrees	67.5° ± 3.1°	64° ± 4.1°	61.9° ± 3.5°	61.2° ± 6.6°	61.3° ± 6.1°
Elevation Beamwidth (3 dB)		degrees	6.6° ± 0.4°	6.1° ± 0.3°	5.8° ± 0.5°	5.2° ± 0.3°	4.8° ± 0.3°
Electrical Downtilt		degrees	2-12°				
Impedance		Ohms	50Ω				
VSWR (Return Loss)		---	1.5:1 (-14 dB)				
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	-153				
Front-to-Back Ratio, Total Power, ± 30°		dB	25.5	27.3	26	26	25.2
First Upper Side Lobe Suppression		dB	16.4	16.7	16.6	22	20.4
Cross Polar Discrimination Over Sector		dB	5.7	8.2	5.2	2.3	0.5
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	17.5	24	22.7	17.9	20
Maximum Effective Power Per Port		Watts	250 W				
Cross Polar Isolation		dB	26				
Interband Isolation		dB	28				

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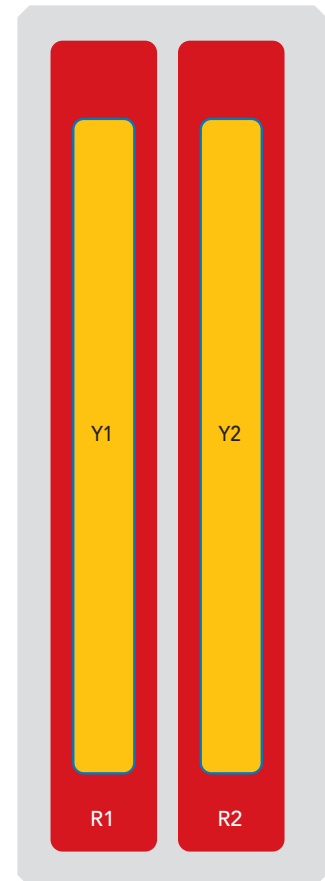
## BOTTOM VIEW - LABELING



## ARRAY LAYOUT

ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE	RET	AISG RET UID
<span style="color: red;">■</span> R1	690-960 MHz	1-2	(2x) 4.3-10 Female	R1	RFxxxxxxxxxx-R1
<span style="color: red;">■</span> R2	690-960 MHz	3-4	(2x) 4.3-10 Female	R2	RFxxxxxxxxxx-R2
<span style="color: yellow;">■</span> Y1	1695-2690 MHz	5-6	(2x) 4.3-10 Female	Y1	RFxxxxxxxxxx-Y1
<span style="color: yellow;">■</span> Y2	1695-2690 MHz	7-8	(2x) 4.3-10 Female	Y2	RFxxxxxxxxxx-Y2

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



The illustration is not shown to scale.

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### MECHANICAL SPECIFICATIONS

Length	mm (in)	1498 (59.0)
Width	mm (in)	469 (18.5)
Depth	mm (in)	205 (8.1)
Net Weight - Antenna Only	kg (lbs)	25.5 (56.2)
Wind Load Rated at 150 km/h (93 mph)	Frontal, Resultant	N (lbf) 416 (94)
	Side, Resultant	N (lbf) 431 (97)
	Rear, Resultant	N (lbf) 433 (97)
	Maximum, Resultant	N (lbf) 691 (155)
	Maximum, Drag Force	N (lbf) 549 (123)
Survival Wind Speed / Rated Wind Speed	km/h (mph)	200 (150)
Connector Type	--	(8x) 4.3-10 Female, (2x) AISG Connectors (1 Male, 1 Female) at Bottom Site Sharing: (4x) AISG Connectors (2 Male, 2 Female) at Bottom
Radome Color	---	Light Grey RAL7035
Radome Material	---	Fiberglass
Lightning Protection	---	Direct Ground
<b>Shipping</b>	Packing Size (Length x Width x Depth)	mm (in) 1678 x 544 x 315 (66.1 x 21.4 x 12.4)

### ENVIRONMENTAL SPECIFICATIONS

Environmental Standard	---	ETS 300 019
Operating Temperature	degrees	-40° to +60° C (-40° to +140° F)
Product Environmental Compliance	---	Product is RoHS Compliant

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### ACCESSORIES

Accessories may be ordered separately unless otherwise indicated.

ITEM	MODEL NUMBER	WEIGHT
Beam Tilt Mounting Bracket Kit for Pole Diameter 50-125 mm (2.0-4.9 in) <i>Refer to ordering options</i>	APM50-H2	5.5 kg (12.1 lbs)
Direct Pipe No Tilt Bracket Kit for Pole Diameter 50-125 mm (2.0-4.9 in) <i>Refer to ordering options</i>	APM50-H2N	4.0 kg (8.8 lbs)

### INSTALLATION

Please read all installation notes before installing product.

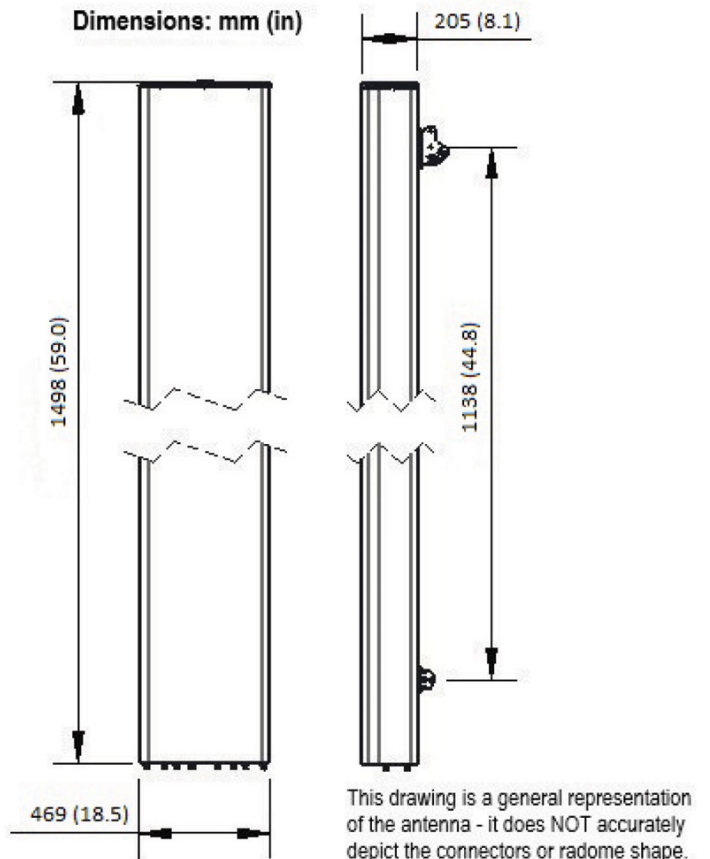


Always attach the antenna using all mounting points.

Do not install antenna with the connectors facing upwards.

### EXTERNAL DOCUMENT LINKS

[APM50 Mounting Kit Series Installation Instructions](#)



### NOTES

Specifications follow BASTA guidelines.

For additional mounting information, please check **External Document Links**.

For Radiating Patterns: [Request pattern files](#)