

## APXVTM15AB\_43-C-I20

### Features

- Multiple individual beam control (Unit Beam)
- High-powered beam option (Broadcast Beam)
- Calibration port functionality for precise steering performance
- Integrated and field-replaceable SRET
- ACU HW version: 2.02
- Compliant with AISG v2.0 and 3GPP



PRODUCT OVERVIEW		TDD 8T8R
	Frequency Range (MHz)	2300-2690
	Array	■ Y1
	Connector	(8x) 4.3-10 Female
	Polarization	XPOL
	Azimuth Beamwidth (avg)	90° Unit Beam
	Electrical Downtilt	2-12°
	Dimensions	1498 x 350 x 200 mm (59.0 x 13.8 x 7.9 in)

### ORDERING OPTIONS

Select from the following ordering options

ANTENNA MODEL NUMBER	CONFIGURATION	MOUNTING HARDWARE	MOUNTING PIPE DIAMETER	SHIPPING WEIGHT
APXVTM15AB_43-C-I20	ACU-I20-B1 Integrated RET Included	APM50-B1 Beam Tilt Kit Included	50-110 mm (2.0-4.3 in)	29 kg (63.9 lbs)

## APXVTM15AB\_43-C-I20

■ Y1

### ELECTRICAL SPECIFICATIONS

#### Cal. Board and S Parameter

Frequency Range	MHz	2300-2690	
	MHz	2300-2490	2490-2690
Coupling between Cal. Port to Input Port	dB	$-26 \pm 2$	
Coupling Amplitude Accuracy	dB	$\leq 0.9$	
Coupling Phase Accuracy	degrees	$\leq 7^\circ$	
VSWR	---	$\leq 1.5$	
Maximum Power	Watts	50 W	
ISO Co-Polar at 2-6° Tilt	dB	$\geq 19$	
ISO Co-Polar at 7-12° Tilt	dB	$\geq 25$	
ISO Cross-Polar at 2-6° Tilt	dB	$\geq 24$	
ISO Cross-Polar at 7-12° Tilt	dB	$\geq 25$	

Specifications follow BASTA guidelines.

■ Y1

### ELECTRICAL SPECIFICATIONS

#### Radiation Parameter - Unit Beam

Frequency Range		MHz	2300-2690	
		MHz	2300-2490	2490-2690
Polarization		---	±45°	
Gain	Over all Tilts	dB	16.8 ± 0.5	16.7 ± 0.5
	Max Gain	dB	17.3	17.2
Azimuth Beamwidth (3 dB)		degrees	95° ± 6.1°	91.2° ± 9.6°
Elevation Beamwidth (3 dB)		degrees	5° ± 0.1°	4.1° ± 0.5°
Electrical Downtilt		degrees	2-12°	
Impedance		Ohms	50Ω	
VSWR (Return Loss)		---	1.5:1 (-14 dB)	
Front-to-Back Ratio, Total Power, ± 30°		dB	17	17
First Upper Side Lobe Suppression		dB	22	20
Cross-Pol Discrimination Over Sector		dB	9	9
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	16	15

Specifications follow BASTA guidelines.

## APXVTM15AB\_43-C-I20

Y1

### ELECTRICAL SPECIFICATIONS

#### Radiation Parameter - Broadcasting Beam

Frequency Range		MHz	2300-2690	
		MHz	2300-2490	2490-2690
Polarization		---	$\pm 45^\circ$	
Gain	Over all Tilts	dBi	$17.9 \pm 0.6$	$17.7 \pm 1.4$
	Max Gain	dBi	18.5	19.1
Azimuth Beamwidth (3 dB)		degrees	$67.8^\circ \pm 3^\circ$	$59.6^\circ \pm 5.2^\circ$
Elevation Beamwidth (3 dB)		degrees	$4.8^\circ \pm 0.2^\circ$	$4.3^\circ \pm 0.4^\circ$
Electrical Downtilt		degrees	2-12°	
Impedance		Ohms	50Ω	
VSWR (Return Loss)		---	1.5:1 (-14 dB)	
Front-to-Back Ratio, Total Power, $\pm 30^\circ$		dB	22	21.6
First Upper Side Lobe Suppression		dB	18.8	13.3
Cross-Pol Discrimination Over Sector		dB	7.6	8
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	28.5	14

Specifications follow BASTA guidelines.

Y1

### ELECTRICAL SPECIFICATIONS

#### Radiation Parameter - Working Beam

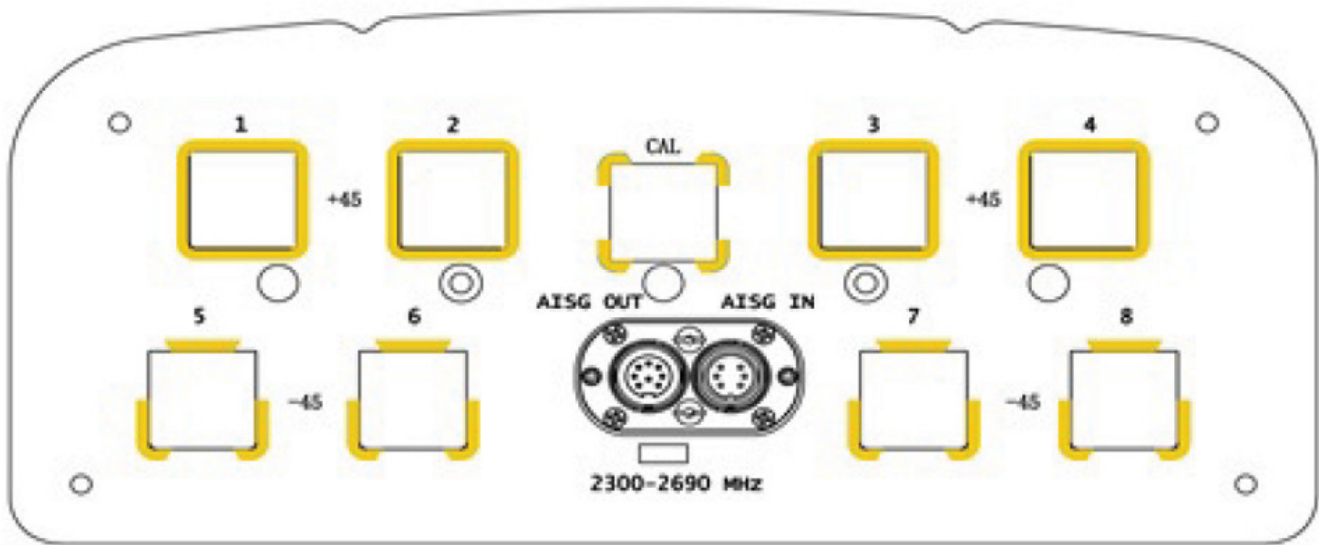
Frequency Range		MHz	2300-2690	
		MHz	2300-2490	2490-2690
Polarization		---	$\pm 45^\circ$	
Gain	Over all Tilts	dBi	$20.1 \pm 0.7$	$21.7 \pm 0.8$
	Max Gain	dBi	20.8	22.5
Azimuth Beamwidth (3 dB)		degrees	$23.1^\circ \pm 0.7^\circ$	$20.9^\circ \pm 0.7^\circ$
Elevation Beamwidth (3 dB)		degrees	$4.8^\circ \pm 0.1^\circ$	$4.4^\circ \pm 0.3^\circ$
Electrical Downtilt		degrees	2-12°	
Impedance		Ohms	50Ω	
VSWR (Return Loss)		---	1.5:1 (-14 dB)	
Front-to-Back Ratio, Total Power, $\pm 30^\circ$		dB	26.6	26.5
First Upper Side Lobe Suppression		dB	23.4	17.3
Cross-Pol Discrimination Over Sector		dB	1.8	1.9
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	21.3	17.5

Specifications follow BASTA guidelines.

Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.

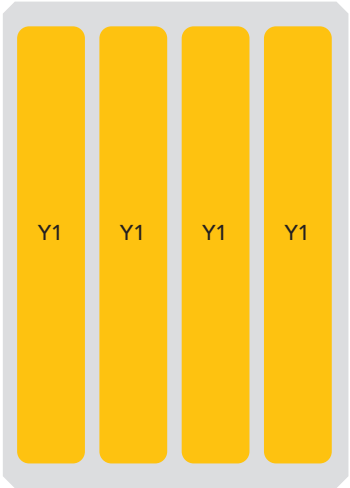
# APXVTM15AB\_43-C-I20

## BOTTOM VIEW - LABELING



## ARRAY LAYOUT

ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE	RET	AISG RET UID
Y1	2300-2690 MHz	1-2	(2x) 4.3-10 Female	Y1	RFxxxxxxxxxx-Y1
	2300-2690 MHz	3-4	(2x) 4.3-10 Female		
	2300-2690 MHz	5-6	(2x) 4.3-10 Female		
	2300-2690 MHz	7-8	(2x) 4.3-10 Female		



The illustration is not shown to scale.

## APXVTM15AB\_43-C-I20

### MECHANICAL SPECIFICATIONS

Length		mm (in)	1498 (59.0)
Width		mm (in)	350 (13.8)
Depth		mm (in)	200 (7.9)
Net Weight - Antenna Only		kg (lbs)	19 (41.9)
Net Weight - Mounting Hardware Only		kg (lbs)	4.5 (9.9)
Wind Load  Rated at 150 km/h (93 mph)	Front	N (lbf)	333 (75)
	Side	N (lbf)	318 (71)
	Rear	N (lbf)	386 (87)
Survival Wind Speed / Rated Wind Speed		km/h (mph)	200 (150)
Connector Type		--	(8x) 4.3-10 Female, (1x) 4.3-10 Female Calibration Port, (2x) AISG Connectors (1 Male, 1 Female) at Bottom
Radome Color		---	Light Grey RAL7035
Radome Material		---	Fiberglass
Lightning Protection		---	DC Ground
<b>Shipping</b>	Packing Size (Length x Width x Depth)	mm (in)	1750 x 445 x 295 (69.0 x 17.5 x 11.6)
	Shipping Weight	kg (lbs)	29 (63.9)

### ENVIRONMENTAL SPECIFICATIONS

Environmental Standard	---	ETSI 300-019-2-4 Class 4.1E
Operating Temperature	degrees	-40° to +60° C (-40° to +140° F)
Product Environmental Compliance	---	Product is RoHS Compliant

## APXVTM15AB\_43-C-I20

### ACCESSORIES

Accessories may be ordered separately unless otherwise indicated.

ITEM	MODEL NUMBER	WEIGHT
Beam Tilt Mounting Bracket Kit for Pole Diameter 50-110 mm (2.0-4.3 in) <i>Shipped with antenna</i>	APM50-B1	4.5 kg (9.9 lbs)

### INSTALLATION

Please read all installation notes before installing product.

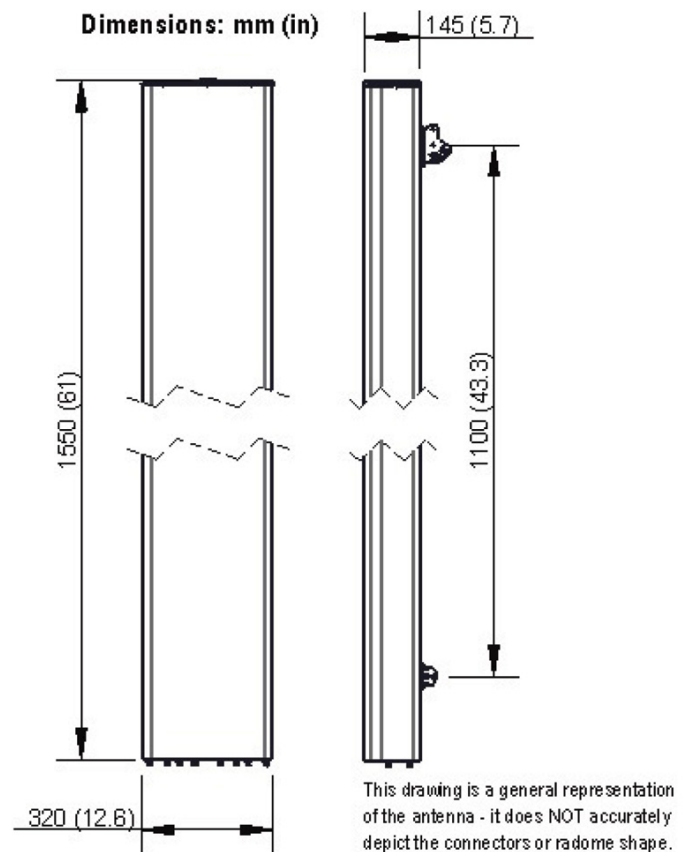


Always attach the antenna using all mounting points.

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](#)