Hybrid FDD/TDD Panel Antenna

4 Ports FDD (2x) 1710-2170 (65°) | 8T8R 2515-2675 MHz (90° Unit Beam)

HYBRID FDD/TDD | 1527 mm | INTEGRATED RET

APXVLLTM15AB_43-C-I20

Features

- Multiple individual beam control (Unit Beam)
- High-powered beam option (Broadcast Beam)
- Calibration port functionality for precise steering performance
- Integrated AISG compliant RET motor
- SRET field-replaceable / ACU HW version: 2:02
- Compliant with AISG v2.0 and 3GPP

PRODUCT OVERVIEW							
		FDD		TDD			
	Frequency Range (MHz)	(2x) 1710-2170		(8T8R) 2515-2675			
	Array	B1	B2	Y1			
	Connector	1-2	3-4	5-6	7-8	9-10	11-12
		4 PORTS		8 PORTS			
		4.3-10 Female		N-Type Female			
	Polarization	XPOL		XPOL			
	Azimuth Beamwidth (avg)	65°		90° Unit Beam			
	Electrical Downtilt	2-12°		2-12°			
	Dimensions	1527 x 560 x 180 mm (60.1 x 22.0 x 7.1 in)					

ORDERING OPTIONS Select from the following ordering options

ANTENNA MODEL NUMBER	CONFIGURATION	MOUNTING HARDWARE	MOUNTING PIPE DIAMETER	SHIPPING WEIGHT
APXVLLTM15AB_43-C-I20	ACU-I20-B3 Internal RET Included	APM50-B1 Beam Tilt Kit Included	50-110 mm (2.0-4.3 in)	39.3 kg (86.6 lbs)

APXVLLTM15AB_43-C-I20

ELECTRICAL SPECIFICATIONS			■ B1
Frequency Range		MHz	1710-2170
Polarization		---	±45°
Gain	Over all Tilts	dBi	16.9 ± 0.6
	Max Gain	dBi	17.5
Azimuth Beamwidth (3 dB)		degrees	69.4° ± 6.9°
Elevation Beamwidth (3 dB)		degrees	6.4° ± 0.7°
Electrical Downtilt		degrees	2-12°
Impedance		Ohms	50Ω
VSWR (Return Loss)		---	1.5:1 (-14 dB)
Passive Intermodulation		dBc	-150 (3rd Order for 2x20 W Carriers)
Front-to-Back Ratio, Total Power, ± 30°		dB	23.9
First Upper Side Lobe Suppression		dB	14.7
Cross-Pol Over Sector		dB	11.2
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	24
Maximum Effective Power Per Port		Watts	250 W
Cross Polar Isolation		dB	28
Interband Isolation		dB	28

ELECTRICAL SPECIFICATIONS			■ B2
Frequency Range		MHz	1710-2170
Polarization		---	±45°
Gain	Over all Tilts	dBi	16.8 ± 0.6
	Max Gain	dBi	17.4
Azimuth Beamwidth (3 dB)		degrees	70.3° ± 5.6°
Elevation Beamwidth (3 dB)		degrees	6.5° ± 0.8°
Electrical Downtilt		degrees	2-12°
Impedance		Ohms	50Ω
VSWR (Return Loss)		---	1.5:1 (-14 dB)
Passive Intermodulation		dBc	-150 (3rd Order for 2x20 W Carriers)
Front-to-Back Ratio, Total Power, ± 30°		dB	24.9
First Upper Side Lobe Suppression		dB	15.6
Cross-Pol Over Sector		dB	11.2
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	24.3
Maximum Effective Power Per Port		Watts	250 W
Cross Polar Isolation		dB	28
Interband Isolation		dB	28

APXVLLTM15AB_43-C-I20

ELECTRICAL SPECIFICATIONS		Y1 Cal. Board and S Parameter
Frequency Range	MHz	2515-2675
Coupling between Cal. Port to Input Port	dB	-26 ± 2
Coupling Amplitude Accuracy	dB	≤ 0.9
Coupling Phase Accuracy	degrees	≤ 7°
VSWR	---	≤ 1.5
Maximum Power	Watts	80 W
ISO Co-Polar at 2-6° Tilt	dB	≥ 19
ISO Co-Polar at 7-12° Tilt	dB	≥ 25
ISO Cross-Polar at 2-6° Tilt	dB	≥ 24
ISO Cross-Polar at 7-12° Tilt	dB	≥ 25

ELECTRICAL SPECIFICATIONS			Y1 Radiation Parameter - Unit Beam
Frequency Range		MHz	2515-2675
Polarization		---	±45°
Gain	Over all Tilts	dBi	15.5 ± 0.6
	Max Gain	dBi	16.1
Azimuth Beamwidth (3 dB)		degrees	71.3° ± 7.7°
Elevation Beamwidth (3 dB)		degrees	5.3° ± 0.2°
Electrical Downtilt		degrees	2-12°
Impedance		Ohms	50Ω
VSWR (Return Loss)		---	1.5:1 (-14 dB)
Front-to-Back Ratio, Total Power, ± 30°		dB	20.7
First Upper Side Lobe Suppression		dB	14.4
Cross-Pol Discrimination Over Sector		7.6	7.6
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	17.5

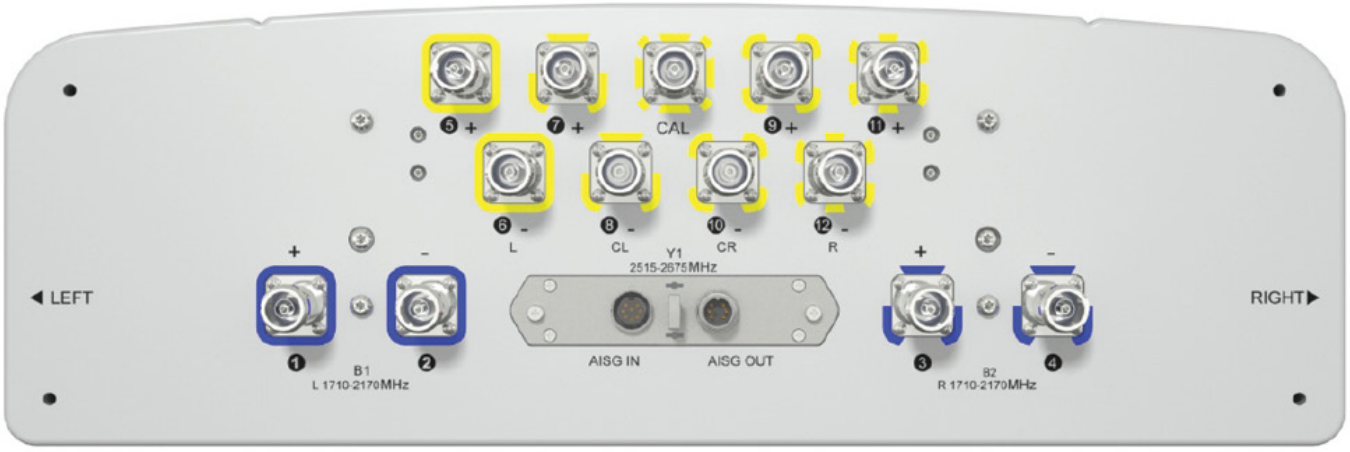
APXVLLTM15AB_43-C-I20

ELECTRICAL SPECIFICATIONS			Y1 Radiation Parameter - Broadcasting Beam
Frequency Range		MHz	2515-2675
Gain	Over all Tilts	dBi	16.9 ± 1.2
	Max Gain	dBi	18.1
Azimuth Beamwidth (3 dB)		degrees	52.6° ± 4.4°
Elevation Beamwidth (3 dB)		degrees	5.4° ± 0.3°
Front-to-Back Ratio, Total Power, ± 30°		dB	22.1
First Upper Side Lobe Suppression		dB	13.4

ELECTRICAL SPECIFICATIONS			Y1 Radiation Parameter - Working Beam
Frequency Range		MHz	2515-2675
Gain	Over all Tilts	dBi	21.2 ± 0.7
	Max Gain	dBi	21.9
Azimuth Beamwidth (3 dB)		degrees	19.8° ± 1°
Elevation Beamwidth (3 dB)		degrees	5.4° ± 0.2°
Front-to-Back Ratio, Total Power, ± 30°		dB	27
First Upper Side Lobe Suppression		dB	14.7

APXVLLTM15AB_43-C-I20

BOTTOM VIEW - LABELING



ARRAY LAYOUT

ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE	RET	AISG RET UID
B1	1710-2170 MHz	1-2	(2x) 4.3-10 Female	B1	RFxxxxxxxxxxB1
B2	1710-2170 MHz	3-4	(2x) 4.3-10 Female	B2	RFxxxxxxxxxxB2
Y1	2515-2675 MHz	5-6	(2x) N-Type Female	Y1	RFxxxxxxxxxx-Y1
	2515-2675 MHz	7-8	(2x) N-Type Female		
	2515-2675 MHz	9-10	(2x) N-Type Female		
	2515-2675 MHz	11-12	(2x) N-Type Female		

The illustration is not shown to scale.

APXVLLTM15AB_43-C-I20

MECHANICAL SPECIFICATIONS

Length		mm (in)	1527 (60.1)
Width		mm (in)	560 (22.0)
Depth		mm (in)	180 (7.1)
Net Weight - Antenna Only		kg (lbs)	28.8 (63.5)
Net Weight - Mounting Hardware Only		kg (lbs)	4.5 (9.9)
Wind Load Rated at 150 km/h (93 mph)	Front	N (lbf)	1025 (230)
	Side	N (lbf)	282 (63)
	Rear	N (lbf)	1103 (248)
Survival Wind Speed / Rated Wind Speed		km/h (mph)	200 (150)
Connector Type		--	(4x) 4.3-10 Female, (8x) N-Type Female, (1x) Calibration Connector, (2x) AISG Connectors (1 Male, 1 Female) at Bottom
Radome Color		---	Light Grey RAL7035
Radome Material		---	Fiberglass
Lightning Protection		---	DC Ground
Shipping	Packing Size (Length x Width x Depth)	mm (in)	1780 x 655 x 285 (60.1 x 25.8 x 11.2)
	Shipping Weight	kg (lbs)	39.3 (86.6)

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

APXVLLTM15AB_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) *Shipped with antenna*	APM50-B1	4.5 kg (9.9 lbs)

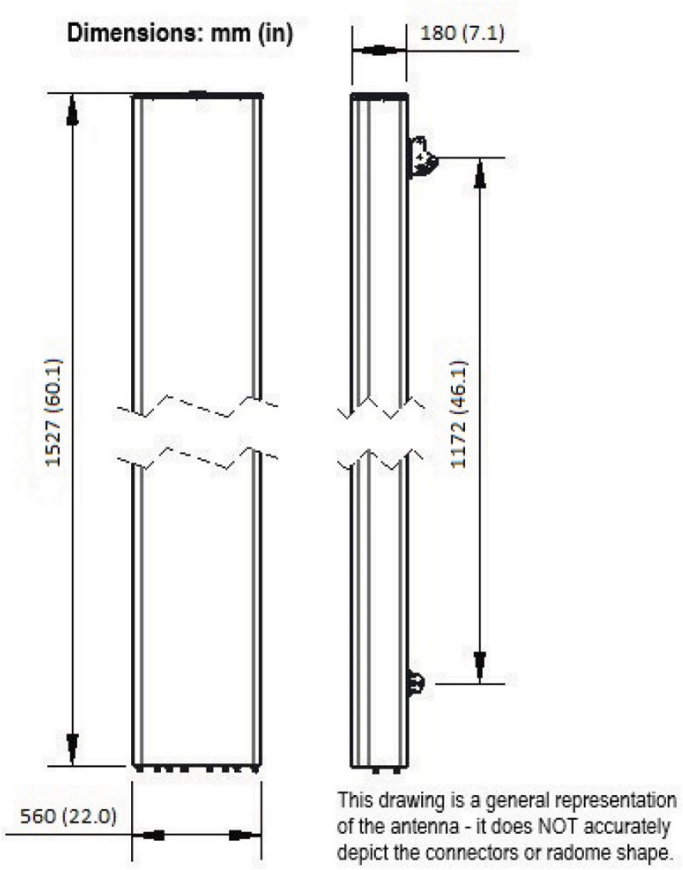
INSTALLATION

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