

APXVTMTY15AB_MQ-C-I20

Features

- TDD 2x MQ ports in 2300-2690 MHz
- TDD 2x MQ ports in 3300-3800 MHz
- Integrated and field-replaceable SRET
- ACU HW version: 2.02
- Compliant with AISG v2.0 and 3GPP



PRODUCT OVERVIEW	Frequency Range (MHz)	TDD 8T8R	
		(1x) 2300-2690	(1x) 3300-3800
	Array	■ Y1	■ P1
	Connector	(2x) Cluster Connector MQ4/MQ5	(2x) Cluster Connector MQ4/MQ5
	Polarization	XPOL	
	Azimuth Beamwidth (avg)	90° Unit Beam	
	Electrical Downtilt	2-12°	
	Dimensions	1600 x 499 x 199 mm (63.0 x 19.6 x 7.8 in)	

ORDERING OPTIONS

Select from the following ordering options

ANTENNA MODEL NUMBER	CONFIGURATION	MOUNTING HARDWARE	MOUNTING PIPE DIAMETER	SHIPPING WEIGHT
APXVTMTY15AB_MQ-C-I20	ACU-I20-B2 Integrated RET Included	APM50-B1 Beam Tilt Kit Included	50-110 mm (2.0-4.3 in)	43.9 kg (96.8 lbs)

APXVTMTY15AB_MQ-C-I20

■ Y1 / ■ P1

ELECTRICAL SPECIFICATIONS

Cal. Board and S Parameter

Frequency Range	MHz	2300-2690 / 3300-3800			
	MHz	2300-2490	2490-2690	3300-3600	3600-3800
Coupling between Cal. Port to Input Port	dB	-26 ± 2			
Coupling Amplitude Accuracy	dB	≤ 0.9			
Coupling Phase Accuracy	degrees	$\leq 7^\circ$			
VSWR	---	≤ 1.5			
Maximum Power	Watts	80 W	80 W	50 W	50 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			

Specifications follow BASTA guidelines.

■ Y1 / ■ P1

ELECTRICAL SPECIFICATIONS

Radiation Parameter - Unit Beam

Frequency Range		MHz	2300-2690 / 3300-3800			
		MHz	2300-2490	2490-2690	3300-3600	3600-3800
Polarization		---	$\pm 45^\circ$			
Gain	Over all Tilts	dBi	17.6 ± 0.5	17.3 ± 1	15.6 ± 0.5	15.6 ± 0.5
	Max Gain	dBi	18.1	18.3	16.1	16.1
Azimuth Beamwidth (3 dB)		degrees	$76.9^\circ \pm 7.6^\circ$	$86.8^\circ \pm 4.4^\circ$	$78.7^\circ \pm 6.2^\circ$	$71.5^\circ \pm 4.6^\circ$
Elevation Beamwidth (3 dB)		degrees	$4.8^\circ \pm 0.5^\circ$	$4^\circ \pm 0.1^\circ$	$6^\circ \pm 0.1^\circ$	$5.8^\circ \pm 0.5^\circ$
Electrical Downtilt		degrees	$2-12^\circ$			
Impedance		Ohms	50Ω			
VSWR (Return Loss)		---	1.5:1 (-14 dB)			
Front-to-Back Ratio, Total Power, $\pm 30^\circ$		dB	23.3	21	18	18.1
First Upper Side Lobe Suppression		dB	17	18.5	16	17
Cross-Pol Discrimination Over Sector		dB	4.9	9	10.9	13
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	16	18	16.4	14

Specifications follow BASTA guidelines.

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■ Y1 / ■ P1

ELECTRICAL SPECIFICATIONS

Radiation Parameter - Broadcasting Beam

Frequency Range		MHz	2300-2690 / 3300-3800			
		MHz	2300-2490	2490-2690	3300-3600	3600-3800
Polarization		---	±45°			
Gain	Over all Tilts	dBi	17.9 ± 0.5	18 ± 1	17.2 ± 0.5	17.4 ± 0.5
	Max Gain	dBi	18.4	19	17.7	17.9
Azimuth Beamwidth (3 dB)		degrees	64.3° ± 3.1°	63° ± 4.8°	50.3° ± 5.2°	48.2° ± 5.5°
Elevation Beamwidth (3 dB)		degrees	5° ± 0.1°	4.4° ± 0.5°	6° ± 0.1°	5.9° ± 0.6°
Electrical Downtilt		degrees	2-12°			
Impedance		Ohms	50Ω			
VSWR (Return Loss)		---	1.5:1 (-14 dB)			
Front-to-Back Ratio, Total Power, ± 30°		dB	23.1	23	20.5	21
First Upper Side Lobe Suppression		dB	16	17.8	15.8	13.7

Specifications follow BASTA guidelines.

■ Y1 / ■ P1

ELECTRICAL SPECIFICATIONS

Radiation Parameter - Working Beam

Frequency Range		MHz	2300-2690 / 3300-3800			
		MHz	2300-2490	2490-2690	3300-3600	3600-3800
Polarization		---	±45°			
Gain	Over all Tilts	dBi	20.4 ± 0.5	21.7 ± 0.5	20.8 ± 0.5	20.3 ± 0.5
	Max Gain	dBi	20.9	22.2	21.3	20.8
Azimuth Beamwidth (3 dB)		degrees	23.6° ± 0.5°	21.5° ± 0.8°	21.9° ± 1°	20.9° ± 1°
Electrical Downtilt		degrees	2-12°			
Impedance		Ohms	50Ω			
VSWR (Return Loss)		---	1.5:1 (-14 dB)			
Front-to-Back Ratio, Total Power, ± 30°		dB	20.6	19	19.7	17.6

Specifications follow BASTA guidelines.

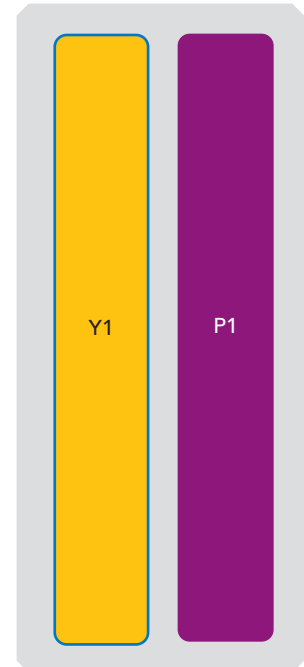
APXVTMTY15AB_MQ-C-I20

BOTTOM VIEW - LABELING



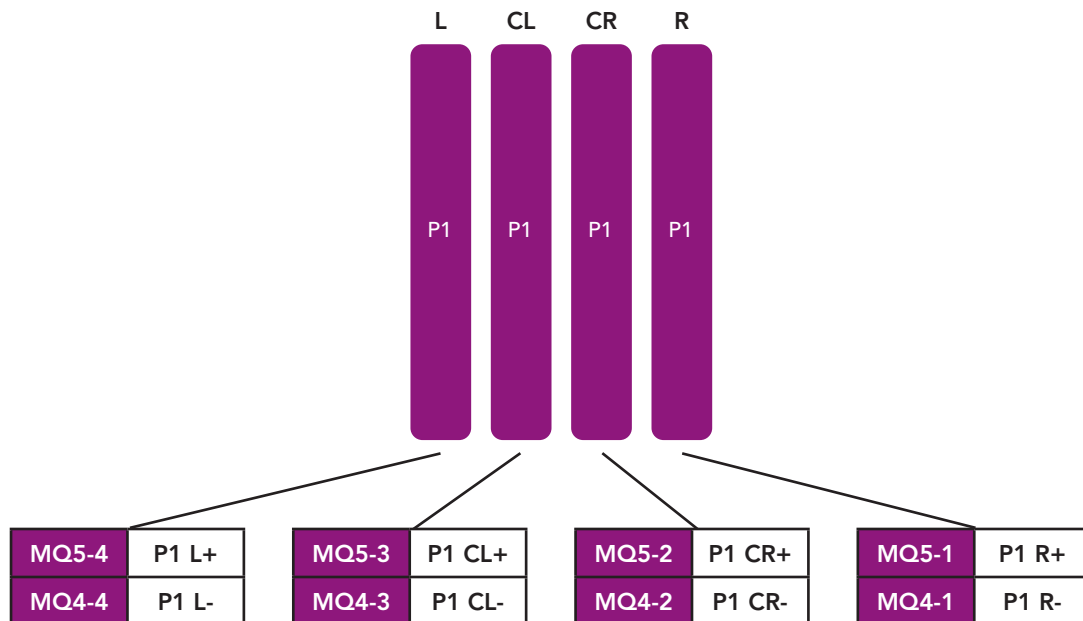
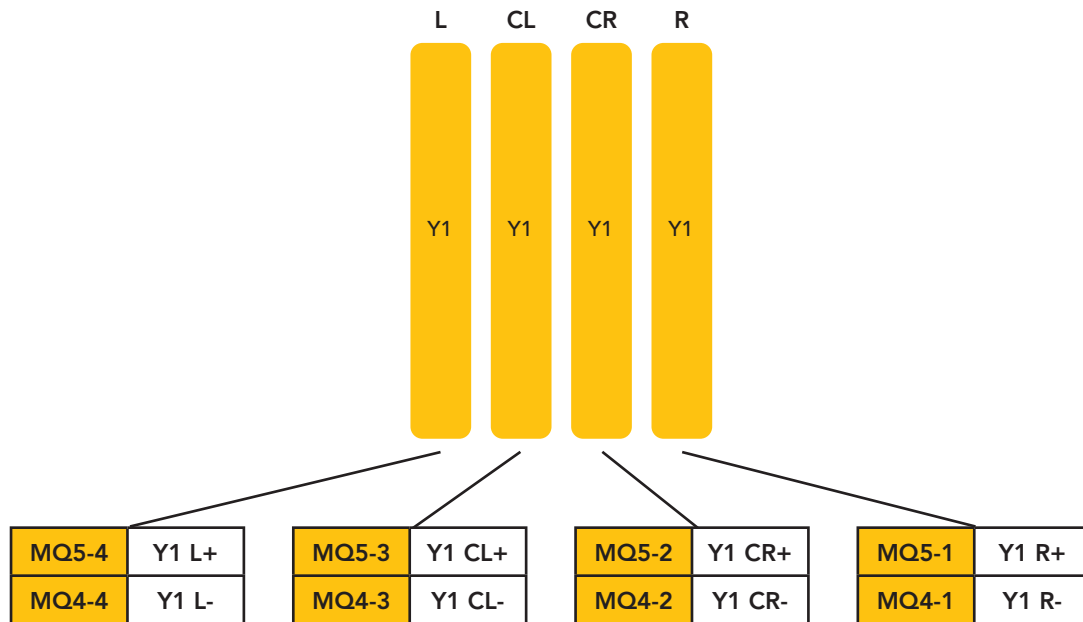
ARRAY LAYOUT

ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE	RET	AISG RET UID
Y1	2300-2690 MHz	1-2	(2x) Cluster Connector MQ4/MQ5	Y1	RFxxxxxxxxxx-Y1
P1	3300-3800 MHz	3-4	(2x) Cluster Connector MQ4/MQ5	P1	RFxxxxxxxxxx-P1



The illustration is not shown to scale.

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Physical array and port mapping according to AISG naming convention:
Left - Center Left - Center Right - Right (seen from front of antenna)

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MECHANICAL SPECIFICATIONS

Length		mm (in)	1600 (63.0)
Width		mm (in)	499 (19.6)
Depth		mm (in)	199 (7.8)
Net Weight - Antenna Only		kg (lbs)	33.2 (73.2)
Net Weight - Mounting Hardware Only		kg (lbs)	4.5 (9.9)
Wind Load Rated at 150 km/h (93 mph)	Front	N (lbf)	514 (116)
	Side	N (lbf)	446 (100)
	Rear	N (lbf)	596 (134)
Survival Wind Speed / Rated Wind Speed		km/h (mph)	200 (150)
Connector Type		---	(4x) Cluster Connectors MQ4/MQ5, (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)	1885 x 595 x 295 (74.2 x 23.4 x 11.6)
	Shipping Weight	kg (lbs)	43.9 (96.8)

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

TDD 8T8R

90° UNIT BEAM

1600 mm

INTEGRATED RET

MQ4/MQ5 CONNECTORS

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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 50-110 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.

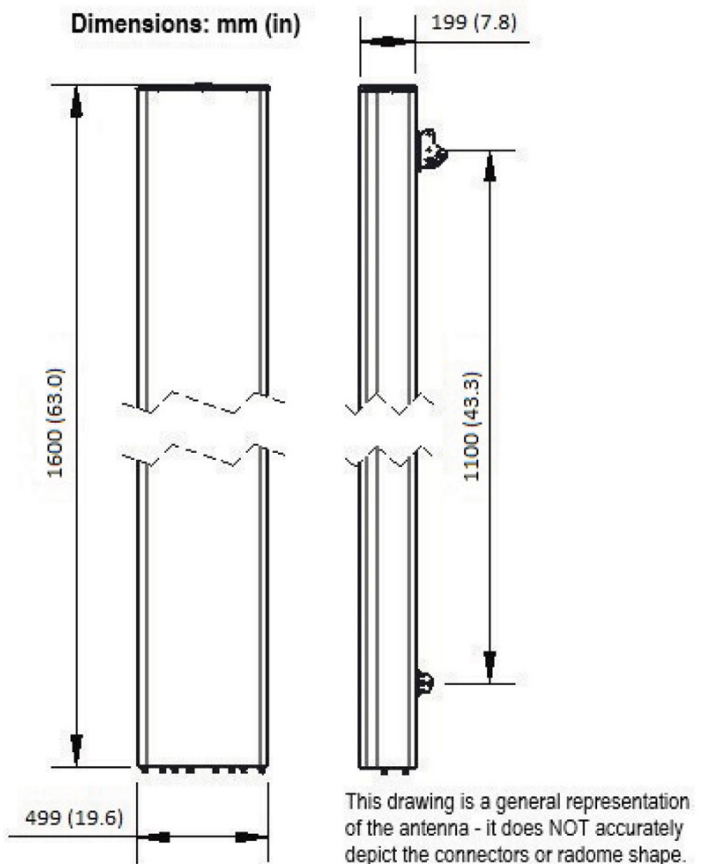


Always attach the antenna using all mounting points.

Do not install antenna with the connectors facing upwards.

EXTERNAL DOCUMENT LINKS

[APM50 Mounting Kit Series Installation Instructions](#)



NOTES

Specifications follow BASTA guidelines.

Horizontal dipole column spacing: 70mm and 50mm

MQ4/MQ5 cluster connectivity follow NGMN.

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

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

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.