

APXVTY10AB_MQ-C-I20

Features

This antenna offers 4 columns (8 ports) for 3.5GHz beamforming. It is ideal for 5G introduction.

- Beamforming applications in the 3.5GHz band (3300-3800 MHz)
- Multiple individual beam control (Unit Beam)
- Single high powered beam option (Broadcast Beam)
- Beam steering flexibility (Service Beam)
- Calibration port functionality for precise steering performance
- Integrated and field replacable SRET
- ACU HW version: 2.02
- Compliant with AISG v2.0 and 3GPP



PRODUCT OVERVIEW	Frequency Range (MHz)	TDD 8T8R
		3300-3800
	Array	■ P1
	Connector	(2x) Cluster Connector MQ4/MQ5
	Polarization	XPOL
	Azimuth Beamwidth (avg)	65° Unit Beam
	Electrical Downtilt	2-12°
	Dimensions	1000 x 295 x 115 mm (39.4 x 11.6 x 4.5 in)

ORDERING OPTIONS

Select from the following ordering options

ANTENNA MODEL NUMBER	CONFIGURATION	MOUNTING HARDWARE	MOUNTING PIPE DIAMETER	SHIPPING WEIGHT
APXVTY10AB_MQ-C-I20	ACU-I20-B1 Integrated RET Included	APM50-B1 Beam Tilt Kit Included	50-110 mm (2.0-4.3)	19 kg (41.9 lbs)

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ELECTRICAL SPECIFICATIONS

Cal. Board and S Parameter

Frequency Range	MHz	3300-3800	
	MHz	3300-3600	3600-3800
Coupling Between Cal. Port to Input Port	dB	-26 ± 2	
Coupling Amplitude Accuracy	dB	≤ 0.7	
Coupling Phase Accuracy	degrees	$\leq 5^\circ$	
VSWR	---	≤ 1.5	
Maximum Power	Watts	50 W	
ISO Co-Polar @ 2-6° tilt	dB	≥ 20	
ISO Co-Polar @ 7-12° tilt	dB	≥ 25	
ISO Cross-Polar @ 2-6° tilt	dB	≥ 25	
ISO Cross-Polar @ 7-12° tilt	dB	≥ 27	

Specifications follow BASTA guidelines.

ELECTRICAL SPECIFICATIONS

Radiation Parameter - Unit Beam

Frequency Range		MHz	3300-3800	
		MHz	3300-3600	3600-3800
Polarization		---	±45°	
Gain	Over all Tilts	dB _i	15.6 ± 0.5	15.9 ± 1
	Max Gain	dB _i	16.1	16.9
Azimuth Beamwidth (3 dB)		degrees	70.6° ± 10.9°	64° ± 7.5°
Elevation Beamwidth (3 dB)		degrees	6.1° ± 0.5°	6° ± 0.4°
Electrical Downtilt		degrees	2-12°	
Impedance		Ohms	50Ω	
VSWR		---	1.5:1	
Front-to-Back Ratio, Total Power, ± 30°		dB	18	19
First Upper Side Lobe Suppression		dB	17	19
Cross-Pol Over Sector		dB	8	7
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	21	20

Specifications follow BASTA guidelines.

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ELECTRICAL SPECIFICATIONS

Radiation Parameter - Broadcasting Beam

Frequency Range		MHz	3300-3800	
		MHz	3300-3600	3600-3800
Polarization		---	±45°	
Gain	Over all Tilts	dBi	15.9 ± 1	16.1 ± 0.5
	Max Gain	dBi	16.9	16.6
Azimuth Beamwidth (3 dB)		degrees	67° ± 5.9°	57.5° ± 6.3°
Elevation Beamwidth (3 dB)		degrees	6.1° ± 0.5°	5.9° ± 0.5°
Electrical Downtilt		degrees	2-12°	
Impedance		Ohms	50Ω	
VSWR		---	1.5:1	
Front-to-Back Ratio, Total Power, ± 30°		dB	20	21
First Upper Side Lobe Suppression		dB	17.4	19

Specifications follow BASTA guidelines.

ELECTRICAL SPECIFICATIONS

Radiation Parameter - Working Beam

Frequency Range		MHz	3300-3800	
		MHz	3300-3600	3600-3800
Polarization		---	±45°	
Gain	Over all Tilts	dBi	20.8 ± 0.5	20.4 ± 0.5
	Max Gain	dBi	21.3	20.9
Azimuth Beamwidth (3 dB)		degrees	19.8° ± 0.5°	18.7° ± 0.5°
Elevation Beamwidth (3 dB)		degrees	6.1° ± 0.5°	5.9° ± 0.5°
Electrical Downtilt		degrees	2-12°	
Impedance		Ohms	50Ω	
VSWR		---	1.5:1	
Front-to-Back Ratio, Total Power, ± 30°		dB	23	24
First Upper Side Lobe Suppression		dB	18.6	20

Specifications follow BASTA guidelines.

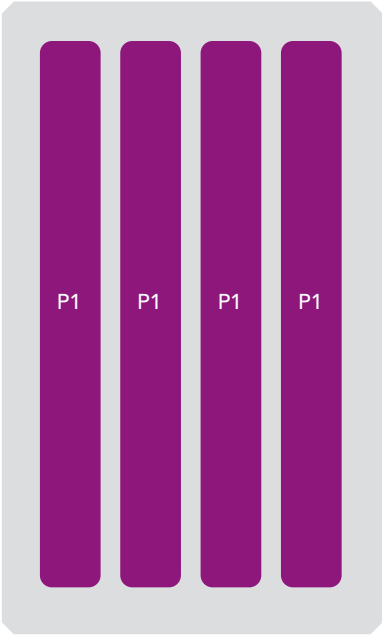
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BOTTOM VIEW - LABELING



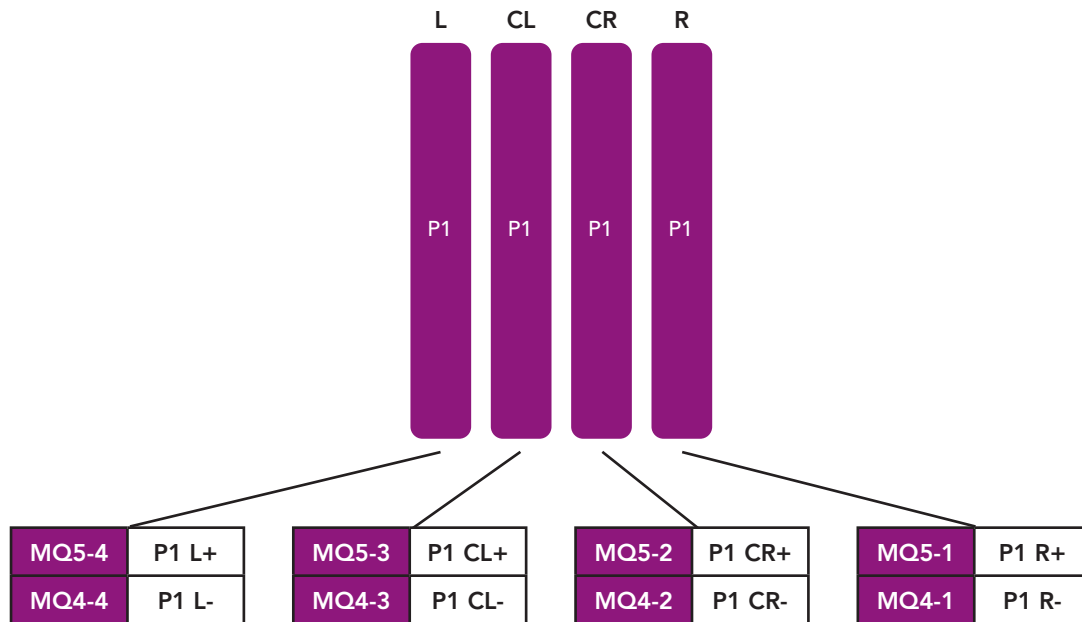
ARRAY LAYOUT

ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE
<div></div> P1	3300-3800 MHz	1	(1x) Cluster Connector MQ4/MQ5
	3300-3800 MHz		
	3300-3800 MHz	2	(1x) Cluster Connector MQ4/MQ5
	3300-3800 MHz		



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)	1000 (39.4)
Width		mm (in)	295 (11.6)
Depth		mm (in)	115 (4.5)
Net Weight - Antenna Only		kg (lbs)	10.5 (23.1)
Net Weight - Mounting Hardware Only		kg (lbs)	4.5 (9.9)
Wind Load Rated at 150 km/h (93 mph)	Front	N (lbf)	218 (49)
	Side	N (lbf)	224 (50)
	Rear	N (lbf)	253 (57)
Survival Wind Speed / Rated Wind Speed		km/h (mph)	200 (150)
Connector Type		--	(2x) Cluster Connectors MQ4/MQ5, (2x) AISG Connectors (1 Male, 1 Female) at Bottom
Radome Color		---	Light Grey RAL7035
Radome Material		---	ASA or Fiberglass
Lightning Protection		---	DC Ground
Shipping	Packing Size (Length x Width x Depth)	mm (in)	1280 x 380 x 210 (50.4 x 15.0 x 8.3)
	Shipping Weight	kg (lbs)	19 (41.9)

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 50-110 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.

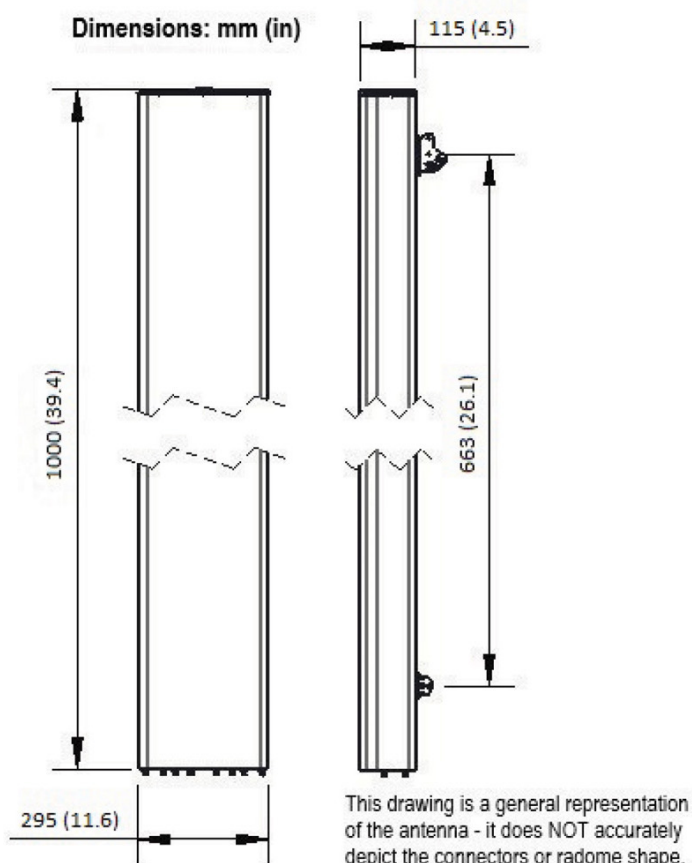


Always attach the antenna using all mounting points.

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: 55mm.

MQ4/MQ5 cluster connectivity follow NGMN.

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

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