APXV9TY10AB_MQ-C-I20

APXV9TY10AB_MQ-A-I20

Features

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

- Beamforming applications in the 3.5 GHz 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 replaceable SRET
- ACU HW version: 2.02
- Optional with Direct Pipe No Tilt mounting hardware (Model name suffix -A-I20)
- Compliant with AISG v2.0 and 3GPP

PRODUCT OVERVIEW		TDD 8T8R
	Frequency Range (MHz)	3300-3800
	Array	P1
	Connector	Cluster Connector MQ4 / Cluster Connector MQ5
		8 PORTS
	Polarization	XPOL
	Azimuth Beamwidth (avg)	90° Unit Beam
	Electrical Downtilt	2-12°
	Dimensions	1050 x 295 x 115 mm (41.3 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	MOUNTING HARDWARE WEIGHT
APXV9TY10AB_MQ-C-I20	ACU-I20-B1 Internal RET Included	APM50-B1 Beam Tilt Kit Included	50-110 mm (2.0-4.3 in)	19.4 kg (42.8 lbs)	4.5 kg (9.9 lbs)
APXV9TY10AB_MQ-A-I20	ACU-I20-B1 Internal RET Included	APM50-B1N Direct Pipe No Tilt Mounting Kit Included	50-110 mm (2.0-4.3 in)	18.3 kg (40.3 lbs)	3.4 kg (7.5 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	≤ 1.0	
Coupling Phase Accuracy	degrees	≤ 10°	
VSWR	---	≤ 1.5	
Maximum Power	Watts	50 W	
ISO Co-Polar	dB	≥ 19	
ISO Cross-Polar	dB	≥ 24	

ELECTRICAL SPECIFICATIONS		Radiation Parameter - Unit Beam	
Frequency Range	MHz	3300-3800	
	MHz	3300-3600	3600-3800
Polarization	---	±45°	
Gain — Over all Tilts	dBi	16.2 ± 0.7	16.2 ± 0.6
Gain — Max Gain	dBi	16.9	16.8
Azimuth Beamwidth (3 dB)	degrees	96.9° ± 10.9°	89° ± 8.5°
Elevation Beamwidth (3 dB)	degrees	5.7° ± 0.6°	5.3° ± 0.4°
Electrical Downtilt	degrees	2-12°	
Impedance	Ohms	50Ω	
VSWR	---	1.5:1	
Front-to-Back Ratio, Total Power, ± 30°	dB	20.8	21.5
First Upper Side Lobe Suppression	dB	16.6	17.9
Cross-Pol Over Sector	dB	12.7	12.6
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)	dB	19.2	18.2

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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	17.0 ± 0.6	17.0 ± 0.6
	Max Gain	dBi	17.6	17.6
Azimuth Beamwidth (3 dB)		degrees	62.2° ± 15.3°	59.1° ± 5.7°
Elevation Beamwidth (3 dB)		degrees	6.2° ± 0.7°	5.9° ± 0.5°
Electrical Downtilt		degrees	2-12°	
Impedance		Ohms	50Ω	
VSWR		---	1.5:1	
Front-to-Back Ratio, Total Power, ± 30°		dB	20.6	21.6
First Upper Side Lobe Suppression		dB	12.8	17.0
Cross-Pol Over Sector		dB	13.7	13.1
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	21.2	25.4

ELECTRICAL SPECIFICATIONS			Radiation Parameter - Working Beam	
Frequency Range		MHz	3300-3800	
		MHz	3300-3600	3600-3800
Polarization		---	±45°	
Gain	Over all Tilts	dBi	20.7 ± 0.6	20.5 ± 0.4
	Max Gain	dBi	21.3	20.9
Azimuth Beamwidth (3 dB)		degrees	24.9° ± 1.0°	23.5° ± 0.6°
Elevation Beamwidth (3 dB)		degrees	6.1° ± 0.6°	5.9° ± 0.4°
Electrical Downtilt		degrees	2-12°	
Impedance		Ohms	50Ω	
VSWR		---	1.5:1	
Front-to-Back Ratio, Total Power, ± 30°		dB	24.9	23.8
First Upper Side Lobe		dB	15.6	19.1
Cross-Pol Over Sector		dB	8.3	3.6
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	23.1	25.6

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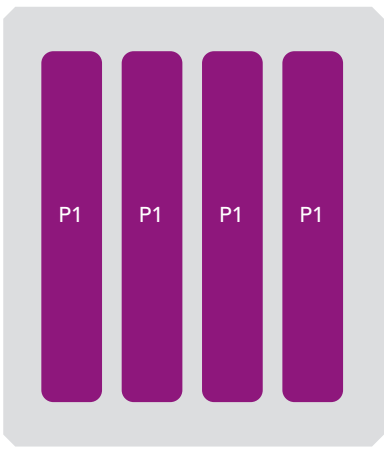
BOTTOM VIEW - LABELING



The illustration is not shown to scale.

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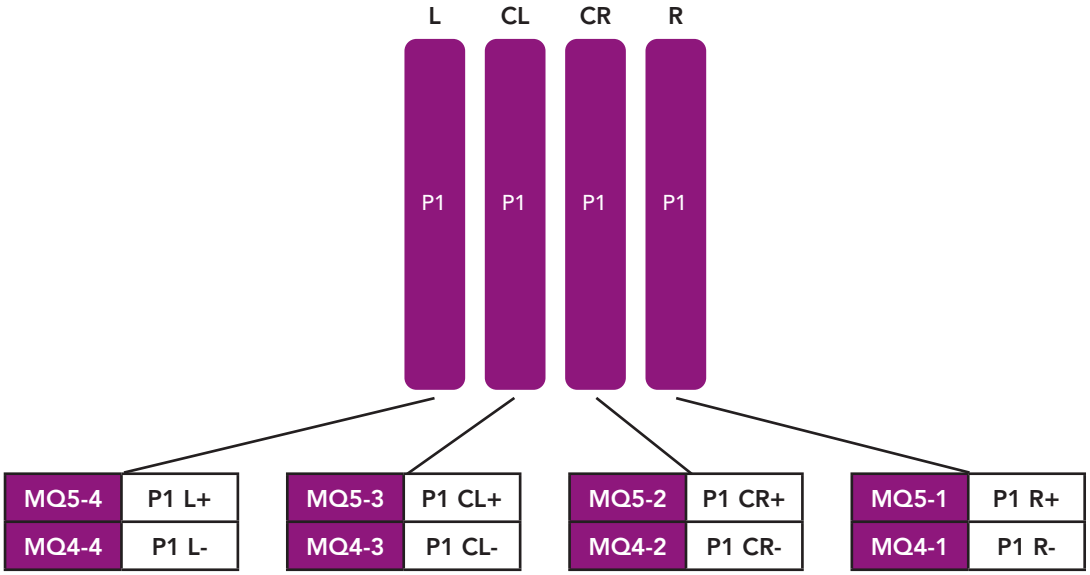

Physical array and port mapping according to AISG naming convention:
Left - Center Left - Center Right - Right (seen from front of antenna)

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MECHANICAL SPECIFICATIONS

Length		mm (in)	1050 (41.3)
Width		mm (in)	295 (11.6)
Depth		mm (in)	115 (4.5)
Net Weight - Antenna Only		kg (lbs)	11.9 (26.2)
Wind Load Rated at 150 km/h (93 mph)	Front	N (lbf)	203 (46)
	Side	N (lbf)	139 (31)
	Rear	N (lbf)	241 (54)
Survival Wind Speed		km/h (mph)	200 (124)
Connector Type		--	(2x) 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)	1340 x 380 x 210 (52.7 x 15.0 x 8.3)

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

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ACCESSORIES Accessories may be ordered separately unless otherwise indicated.

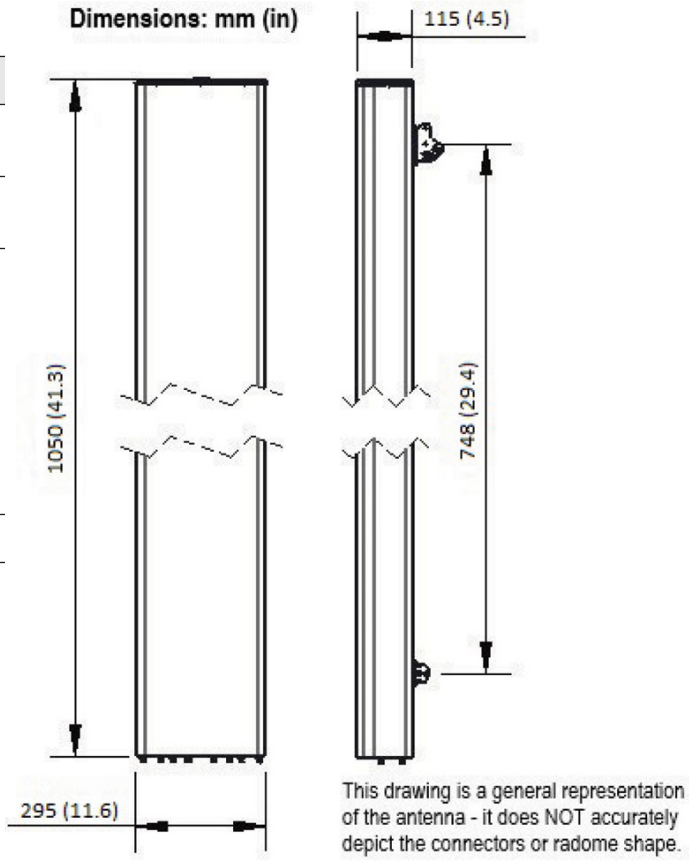
ITEM	MODEL NUMBER	WEIGHT
Beam Tilt Mounting Bracket Kit for Pole Diameter 50-110 mm (2.0-4.3 in) *Refer to ordering options*	APM50-B1	4.5 kg (9.9 lbs)
Direct Pipe No Tilt Bracket Kit for Pole Diameter 50-110 mm (2.0-4.3 in) *Refer to ordering options*	APM50-B1N	3.4 kg (7.5 lbs)

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: 42 mm
MQ4/MQ5 cluster connectivity follow NGMN.
For additional mounting information, please check **External Document Links**.
For Radiating Patterns: Request pattern files