

APXV9TY10AEB_43-C-I20

APXV9TY10AEB_43-A-I20

Features

- Beamforming applications in the 4.2GHz band (3300-4200 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
- Optional with Direct Pipe No Tilt mounting hardware (Model name suffix -A-I20)
- Compliant with AISG v2.0 and 3GPP



PRODUCT OVERVIEW	Frequency Range (MHz)	TDD 8T8R			
		(4x) 3300-4200			
	Array	■ P1	■ P2	■ P3	■ P4
	Connector	1-2	3-4	5-6	7-8
		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
APXV9TY10AEB_43-C-I20	ACU-I20-B1 RET Included	APM50-B1 Beam Tilt Kit Included	50-110 mm (2.0-4.3)	19.0 kg (41.9 lbs)	4.5 kg (9.9 lbs)
APXV9TY10AEB_43-A-I20	ACU-I20-B1 RET Included	APM50-B1N Direct Pipe No Tilt Mounting Kit Included	50-110 mm (2.0-4.3)	17.9 kg (39.5 lbs)	3.4 kg (7.5 lbs)



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ELECTRICAL SPECIFICATIONS

Cal. Board and S Parameter

Frequency Range	MHz	3300-4200		
	MHz	3300-3600	3600-3800	3800-4200
Coupling Between Cal. Port to Input Port	dB	-26 ± 2		
Coupling Amplitude Accuracy	dB	≤ 0.8		
Coupling Phase Accuracy	degrees	≤ 8°		
VSWR	---	≤ 1.5		
Maximum Power	Watts	50 W		
ISO Co-Polar	dB	≥ 20		
ISO Cross-Polar	dB	≥ 25		

ELECTRICAL SPECIFICATIONS

■ P1 ■ P2 ■ P3 ■ P4
Unit Beam

Frequency Range	MHz	(4x) 3300-4200			
	MHz	3300-3600	3600-3800	3800-4200	
Polarization	---	±45°			
Gain	Over all Tilts	dBi	15.2 ± 0.6	15.5 ± 0.6	15.4 ± 0.9
	Max Gain	dBi	15.8	16.1	16.3
Azimuth Beamwidth (3 dB)	degrees	93.5° ± 11.1°	89.1° ± 9.0°	85.3° ± 10.6°	
Elevation Beamwidth (3 dB)	degrees	5.7° ± 0.5°	5.4° ± 0.5°	5.2° ± 0.6°	
Electrical Downtilt	degrees	2-12°			
Impedance	Ohms	50Ω			
VSWR	---	1.5:1			
Front-to-Back Ratio, Total Power, ± 30°	dB	19.1	18.8	18.6	
First Upper Side Lobe	dB	15.0	14.8	16.8	
Cross-Pol Over Sector	dB	13.6	12.5	8.2	
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)	dB	18.4	17.5	18.7	

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ELECTRICAL SPECIFICATIONS

Broadcasting Beam

Frequency Range		MHz	3300-4200		
		MHz	3300-3600	3600-3800	3800-4200
Polarization		---	±45°		
Gain	Over all Tilts	dBi	17.3 ± 0.5	17.6 ± 0.7	16.7 ± 1.1
	Max Gain	dBi	17.8	18.3	17.8
Azimuth Beamwidth (3 dB)		degrees	55.1° ± 6.3°	55.5° ± 4.7°	55.3° ± 4.2°
Elevation Beamwidth (3 dB)		degrees	5.6° ± 0.5°	5.3° ± 0.4°	5.2° ± 0.7°
Electrical Downtilt		degrees	2-12°		
Impedance		Ohms	50Ω		
VSWR		---	1.5:1		
Front-to-Back Ratio, Total Power, ± 30°		dB	22.3	21.7	19.7
First Upper Side Lobe		dB	14.6	12.3	14.8

ELECTRICAL SPECIFICATIONS

Working Beam

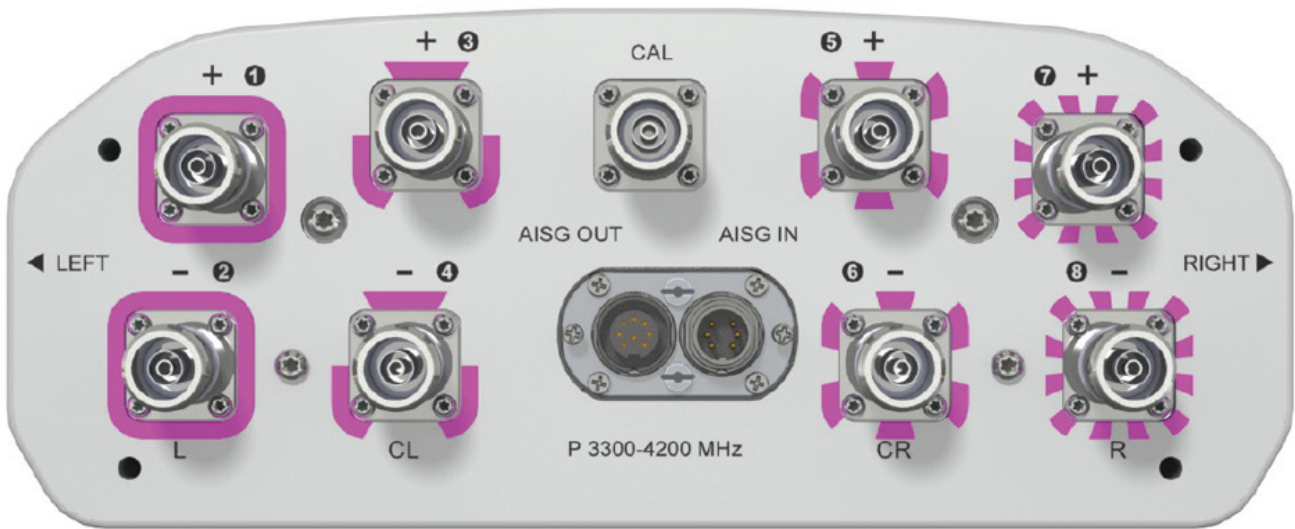
Frequency Range		MHz	3300-4200		
		MHz	3300-3600	3600-3800	3800-4200
Polarization		---	±45°		
Gain	Over all Tilts	dBi	20.4 ± 0.4	20.1 ± 0.7	19.8 ± 0.9
	Max Gain	dBi	20.8	20.8	20.7
Azimuth Beamwidth (3 dB)		degrees	26.0° ± 1.4°	24.1° ± 0.9°	22.2° ± 1.5°
Electrical Downtilt		degrees	2-12°		
Impedance		Ohms	50Ω		
VSWR		---	1.5:1		
Front-to-Back Ratio, Total Power, ± 30°		dB	28.5	25.9	24.6

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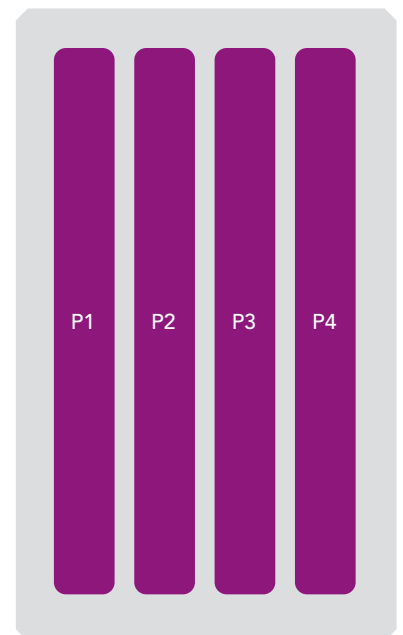
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BOTTOM VIEW - LABELING



ARRAY LAYOUT

ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE	RET	AISG RET UID
■ P1	3300-4200 MHz	1-2	(2x) 4.3-10 Female	P1	RFxxxxxxxxxx-P1
■ P2	3300-4200 MHz	3-4	(2x) 4.3-10 Female		
■ P3	3300-4200 MHz	5-6	(2x) 4.3-10 Female		
■ P4	3300-4200 MHz	7-8	(2x) 4.3-10 Female		



The illustration is not shown to scale.

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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)
	Maximum	N (lbf) 379 (85)
Survival Wind Speed	km/h (mph)	200 (124)
Connector Type	--	(8x) 4.3-10 Female, (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 (52.8 x 15.0 x 8.3)

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>Refer to ordering options</i>	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) <i>Refer to ordering options</i>	APM50-B1N	3.4 kg (7.5 lbs)

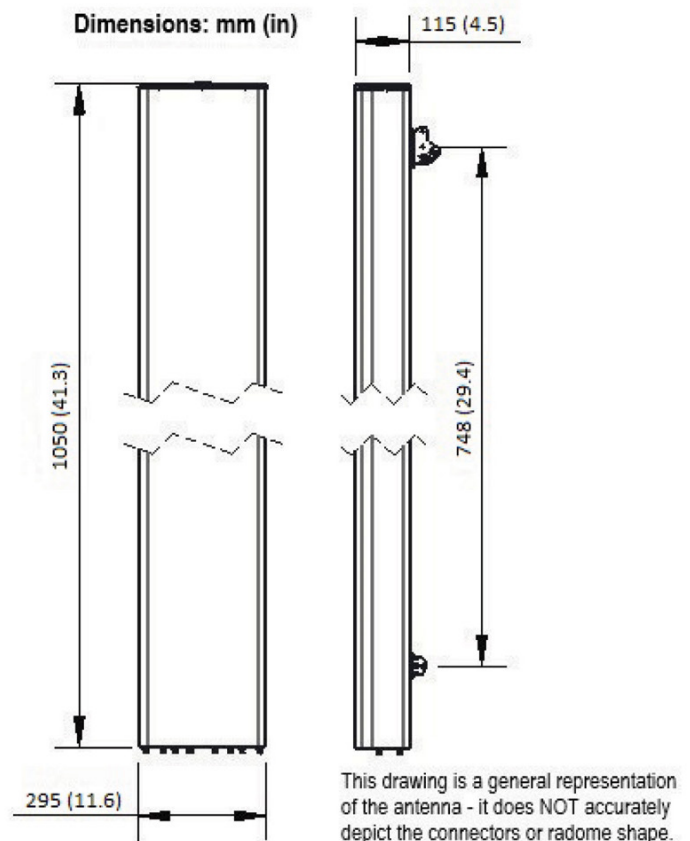
INSTALLATION Please read all installation notes before installing product.



- 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: 42mm.
- For additional mounting information, please check **External Document Links**.
- For Radiating Patterns: [Request pattern files](#)

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