APXVB4LTY16AB_43-C-I20

Features

- 2 ports / 1 cross pol system in low band (698-960 MHz)
- 8 ports / 4 cross pol systems in high band (1710-2690 MHz)
- 8 ports / 4 cross pol systems in high band (3300-3800 MHz)
- Integrated and field replaceable SRET
- ACU HW version: 2.02
- Compliant with AISG v2.0 and 3GPP

PRODUCT OVERVIEW										
		FDD					TDD			
	Frequency Range (MHz)	(1x) 698-960	(4x) 1710-2690				(8T8R) 3300-3800			
	Array	R1	Y1	Y2	Y3	Y4	P1			
	Connector	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18
		2 PORTS	8 PORTS				8 PORTS			
		4.3-10 Female	4.3-10 Female				4.3-10 Female			
	Polarization	XPOL	XPOL				XPOL			
	Azimuth Beamwidth (avg)	65°	65°				90° Unit Beam			
	Electrical Downtilt	2-14°	2-12°				2-12°			
	Dimensions	1650 x 429 x 199 mm (65.0 x 16.9 x 7.8 in)								

ORDERING OPTIONS Select from the following ordering options

ANTENNA MODEL NUMBER	CONFIGURATION	MOUNTING HARDWARE	MOUNTING PIPE DIAMETER	SHIPPING WEIGHT
APXVB4LTY16AB_43-C-I20	ACU-I20-B6 Internal RET Included	APM50-B1 Beam Tilt Kit Included	50-110 mm (2.0-4.3 in)	39.5 kg (87.1 lbs)

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ELECTRICAL SPECIFICATIONS

■ **R1**

Frequency Range		MHz	698-960		
		MHz	698-806	790-894	880-960
Polarization		---	±45°		
Gain	Over all Tilts	dBi	13.6 ± 0.5	14.4 ± 0.5	14.8 ± 0.5
	Max Gain	dBi	14.1	14.9	15.3
Azimuth Beamwidth (3 dB)		degrees	66.8° ± 3.4°	68.4° ± 3°	66.4° ± 4.3°
Elevation Beamwidth (3 dB)		degrees	16° ± 1.5°	13.5° ± 0.8°	12.8° ± 1°
Electrical Downtilt		degrees	2-14°		
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	17.9	20.5	21
First Upper Side Lobe Suppression		dB	15.8	13	13
Cross-Pol Over Sector		dB	3.6	6.8	8
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	18.8	22	22
Maximum Effective Power Per Port		Watts	350 W		
Cross Polar Isolation		dB	25		
Interband Isolation		dB	25		

Specifications follow BASTA guidelines.

ELECTRICAL SPECIFICATIONS

■ **Y1**

Frequency Range		MHz	1710-2690				
		MHz	1710-1880	1850-1990	1920-2170	2300-2400	2490-2690
Polarization		---	±45°				
Gain	Over all Tilts	dBi	13.3 ± 0.5	13.5 ± 0.5	14 ± 1	14.6 ± 0.7	14.8 ± 1
	Max Gain	dBi	13.8	14	15	15.3	15.8
Azimuth Beamwidth (3 dB)		degrees	68.9° ± 6.8°	64.8° ± 6.7°	63.8° ± 6.7°	56.5° ± 4.6°	53.4° ± 6.2°
Elevation Beamwidth (3 dB)		degrees	12° ± 2°	11.1° ± 1°	10.1° ± 1°	9.4° ± 0.6°	8.7° ± 0.5°
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	16.9	17.6	18	18.4	19
First Upper Side Lobe Suppression		dB	15	13	11	9.7	7
Cross-Pol Over Sector		dB	6.9	9	6	1	0.1
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	16.4	18	17	16	14
Maximum Effective Power Per Port		Watts	250 W				
Cross Polar Isolation		dB	25				
Interband Isolation		dB	25				

Specifications follow BASTA guidelines.

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ELECTRICAL SPECIFICATIONS

Y2

Frequency Range		MHz	1710-2690				
		MHz	1710-1880	1850-1990	1920-2170	2300-2400	2490-2690
Polarization		---	±45°				
Gain	Over all Tilts	dBi	12.7 ± 0.7	12.9 ± 1	13.8 ± 1.5	14.8 ± 1	15 ± 1
	Max Gain	dBi	13.4	13.9	15.3	15.8	16
Azimuth Beamwidth (3 dB)		degrees	66.3° ± 7.2°	66.5° ± 6.3°	66° ± 5.4°	54° ± 3.7°	50.5° ± 4.5°
Elevation Beamwidth (3 dB)		degrees	12.1° ± 1°	11.7° ± 1°	10.8° ± 1°	9.3° ± 0.5°	8.7° ± 0.5°
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	18	16	16.8	17.9	18
First Upper Side Lobe Suppression		dB	11	13.8	12	13	12
Cross-Pol Over Sector		dB	7	8	9	1	1
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	19	19	14.3	13.8	12.4
Maximum Effective Power Per Port		Watts	250 W				
Cross Polar Isolation		dB	25				
Interband Isolation		dB	25				

Specifications follow BASTA guidelines.

ELECTRICAL SPECIFICATIONS

Y3

Frequency Range		MHz	1710-2690				
		MHz	1710-1880	1850-1990	1920-2170	2300-2400	2490-2690
Polarization		---	±45°				
Gain	Over all Tilts	dBi	13.8 ± 1	14.3 ± 0.6	14.9 ± 1	14.6 ± 0.5	14.8 ± 1.3
	Max Gain	dBi	14.8	14.9	15.9	15.1	16.1
Azimuth Beamwidth (3 dB)		degrees	68.5° ± 5.7°	66.7° ± 4°	62.3° ± 6.5°	60.6° ± 2.5°	54.8° ± 4.5°
Elevation Beamwidth (3 dB)		degrees	13.3° ± 1°	12.6° ± 0.5°	11.7° ± 1°	10.5° ± 0.5°	9.8° ± 1°
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	21	20	20	19.7	21
First Upper Side Lobe Suppression		dB	13.6	14.9	14	14.9	14
Cross-Pol Over Sector		dB	9	8.5	7	7	2.1
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	19.1	19.1	19	24.8	20.8
Maximum Effective Power Per Port		Watts	250 W				
Cross Polar Isolation		dB	25				
Interband Isolation		dB	25				

Specifications follow BASTA guidelines.

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ELECTRICAL SPECIFICATIONS			Y4				
Frequency Range		MHz	1710-2690				
		MHz	1710-1880	1850-1990	1920-2170	2300-2400	2490-2690
Polarization		---	±45°				
Gain	Over all Tilts	dBi	13.9 ± 0.5	14.4 ± 0.5	15.1 ± 1	14.9 ± 0.9	14.9 ± 1
	Max Gain	dBi	14.4	14.9	16.1	15.8	15.9
Azimuth Beamwidth (3 dB)		degrees	73.1° ± 4.1°	69.3° ± 3.5°	65.6° ± 4°	58.6° ± 3.5°	56.4° ± 3.5°
Elevation Beamwidth (3 dB)		degrees	13.2° ± 1°	12.6° ± 0.5°	11.9° ± 1°	10.5° ± 0.5°	9.6° ± 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	22.4	22.4	22	20	21
First Upper Side Lobe Suppression		dB	13	13.6	12.1	14.4	13
Cross-Pol Over Sector		dB	11	12	13	6.7	2
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	19.7	22.9	20	18.6	20.4
Maximum Effective Power Per Port		Watts	250 W				
Cross Polar Isolation		dB	25				
Interband Isolation		dB	25				

Specifications follow BASTA guidelines.

ELECTRICAL SPECIFICATIONS		P1 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	≤ 0.9	
Coupling Phase Accuracy	degrees	≤ 7°	
VSWR	---	≤ 1.5	
Maximum Power	Watts	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.

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ELECTRICAL SPECIFICATIONS			P1 Radiation Parameter - Unit Beam	
Frequency Range		MHz	3300-3800	
		MHz	3300-3600	3600-3800
Polarization		---	±45°	
Gain	Over all Tilts	dBi	14.7 ± 0.5	14.8 ± 0.5
	Max Gain	dBi	15.2	15.3
Azimuth Beamwidth (3 dB)		degrees	78.4° ± 7.4°	70.8° ± 4.6°
Elevation Beamwidth (3 dB)		degrees	7° ± 1°	6.6° ± 0.5°
Electrical Downtilt		degrees	2-12°	
Impedance		Ohms	50Ω	
VSWR (Return Loss)		---	1.5:1 (-14 dB)	
Front-to-Back Ratio, Total Power, ± 30°		dB	19	21
First Upper Side Lobe Suppression		dB	16	16.8
Cross-Pol Over Sector		dB	12	13
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	20.9	19.9

Specifications follow BASTA guidelines.

ELECTRICAL SPECIFICATIONS			P1 Radiation Parameter - Broadcasting Beam	
Frequency Range		MHz	3300-3800	
		MHz	3300-3600	3600-3800
Polarization		---	±45°	
Gain	Over all Tilts	dBi	15.4 ± 1	15.4 ± 1
	Max Gain	dBi	16.4	16.4
Azimuth Beamwidth (3 dB)		degrees	61.5° ± 7.7°	59° ± 7.8°
Elevation Beamwidth (3 dB)		degrees	7° ± 1°	6.7° ± 0.5°
Electrical Downtilt		degrees	2-12°	
Impedance		Ohms	50Ω	
VSWR (Return Loss)		---	1.5:1 (-14 dB)	
Front-to-Back Ratio, Total Power, ± 30°		dB	21.9	20.8
First Upper Side Lobe Suppression		dB	16	15.4

Specifications follow BASTA guidelines.

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ELECTRICAL SPECIFICATIONS			P1 Radiation Parameter - Working Beam	
Frequency Range		MHz	3300-3800	
		MHz	3300-3600	3600-3800
Polarization		---	±45°	
Gain	Over all Tilts	dBi	20.5 ± 0.5	20.2 ± 0.5
	Max Gain	dBi	21	20.7
Azimuth Beamwidth (3 dB)		degrees	21.6° ± 0.7°	20.4° ± 0.6°
Elevation Beamwidth (3 dB)		degrees	7° ± 1°	6.6° ± 0.5°
Electrical Downtilt		degrees	2-12°	
Impedance		Ohms	50Ω	
VSWR (Return Loss)		---	1.5:1 (-14 dB)	
Front-to-Back Ratio, Total Power, ± 30°		dB	27	27
First Upper Side Lobe Suppression		dB	17	17

Specifications follow BASTA guidelines.

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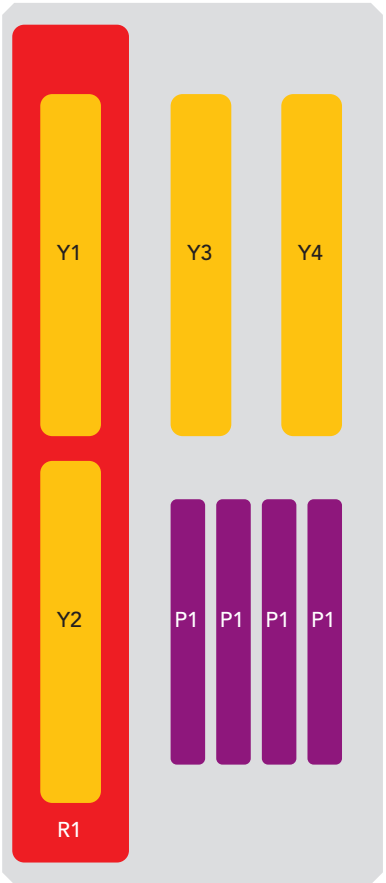
BOTTOM VIEW - LABELING

ARRAY LAYOUT

ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE	RET	AISG RET UID
R1	698-960 MHz	1-2	(2x) 4.3-10 Female	R1	RFxxxxxxxxxxx-R1
Y1	1710-2690 MHz	3-4	(2x) 4.3-10 Female	Y1	RFxxxxxxxxxxx-Y1
Y2	1710-2690 MHz	5-6	(2x) 4.3-10 Female	Y2	RFxxxxxxxxxxx-Y2
Y3	1710-2690 MHz	7-8	(2x) 4.3-10 Female	Y3	RFxxxxxxxxxxx-Y3
Y4	1710-2690 MHz	9-10	(2x) 4.3-10 Female	Y4	RFxxxxxxxxxxx-Y4
P1	3300-3800 MHz	11-12	(2x) 4.3-10 Female	P1	RFxxxxxxxxxxx-P1
	3300-3800 MHz	13-14	(2x) 4.3-10 Female		
	3300-3800 MHz	15-16	(2x) 4.3-10 Female		
	3300-3800 MHz	17-18	(2x) 4.3-10 Female		

NOTE: RET motors will tilt one at a time, not simultaneously.



The illustration is not shown to scale.

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MECHANICAL SPECIFICATIONS

Length		mm (in)	1650 (65.0)
Width		mm (in)	429 (16.9)
Depth		mm (in)	199 (7.8)
Net Weight - Antenna Only		kg (lbs)	28 (61.7)
Net Weight - Mounting Hardware Only		kg (lbs)	4.5 (9.9)
Wind Load Rated at 150 km/h (93 mph)	Front, Resultant	N (lbf)	476 (107)
	Side, Resultant	N (lbf)	440 (99)
	Rear, Resultant	N (lbf)	565 (127)
	Maximum, Resultant	N (lbf)	955 (215)
	Maximum, Drag Force	N (lbf)	841 (189)
Survival Wind Speed / Rated Wind Speed		km/h (mph)	200 (150)
Connector Type		--	(19x) 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)	1920 x 525 x 295 (75.6 x 20.7 x 11.6)
	Shipping Weight	kg (lbs)	39.5 (87.1)

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

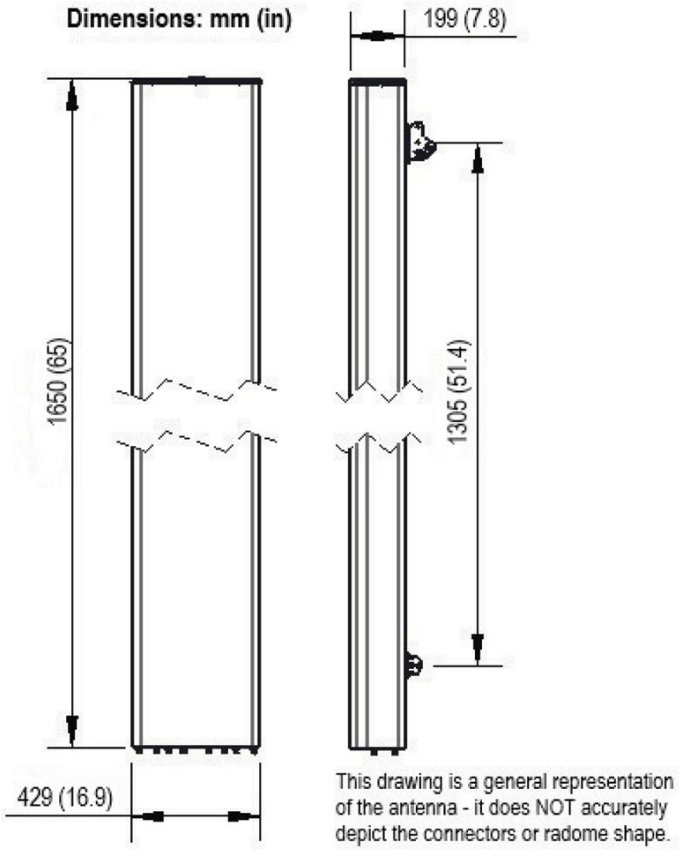
INSTALLATION

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