

65°

1490 mm

INTEGRATED RET

SITE SHARING OPTIONAL

## P4-BB4L15-NB

P4-BB4L15-NBN, P4-BB4L15-SB, P4-BB4L15-SBN

### Features

- 4 ports / 2 cross pol systems in low band (694-960 MHz)
- 8 ports / 4 cross pol systems in high band (1695-2690 MHz)
- Integrated and field replaceable SRET
- Optional with Site Sharing feature (Model name suffix -SB, -SBN)
- Optional with Direct Pipe No Tilt mounting hardware (Model name suffix -NBN, -SBN)
- Compliant with AISG v2.0 and 3GPP

PRODUCT OVERVIEW	Frequency Range (MHz)	(2x) 694-960		(4x) 1695-2690			
	Array	■ R1	■ R2	■ Y1	■ Y2	■ Y3	■ Y4
	Connector	1-2	3-4	5-6	7-8	9-10	11-12
		12 PORTS					
	Polarization	XPOL					
	Azimuth Beamwidth (avg)	65°		65°			
	Electrical Downtilt	2-15°		2-12°			
	Dimensions	1490 x 499 x 215 mm (58.7 x 19.6 x 8.5 in)					

### ORDERING OPTIONS

Select from the following ordering options

ANTENNA MODEL NUMBER	CONFIGURATION	MOUNTING HARDWARE	MOUNTING PIPE DIAMETER	SHIPPING WEIGHT	MOUNTING HARDWARE WEIGHT
P4-BB4L15-NB	ACU-I20-B6 Internal RET Included	APM50-B1 Beam Tilt Kit Included	50-110 mm (2.0-4.3 in)	38.7 kg (85.3 lbs)	4.5 kg (9.9 lbs)
P4-BB4L15-NBN	ACU-I20-B6 Internal RET Included	APM50-B1N Direct Pipe No Tilt Mounting Kit Included	50-110 mm (2.0-4.3 in)	37.6 kg (82.9 lbs)	3.4 kg (7.5 lbs)
P4-BB4L15-SB	ACU-X20-B6 Internal RET Included	APM50-B1 Beam Tilt Kit Included	50-110 mm (2.0-4.3 in)	38.7 kg (85.3 lbs)	4.5 kg (9.9 lbs)
P4-BB4L15-SBN	ACU-X20-B6 Internal RET Included	APM50-B1N Direct Pipe No Tilt Mounting Kit Included	50-110 mm (2.0-4.3 in)	37.6 kg (82.9 lbs)	3.4 kg (7.5 lbs)



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### ELECTRICAL SPECIFICATIONS

■ R1 ■ R2

Frequency Range		MHz	694-960		
		MHz	694-806	790-896	870-960
Polarization		---	±45°		
Gain	Over all Tilts	dBi	14.6 ± 0.8	14.8 ± 0.4	14.8 ± 0.5
	Max Gain	dBi	15.4	15.2	15.3
Azimuth Beamwidth (3 dB)		degrees	63.8° ± 4.2°	66.8° ± 3.8°	65.8° ± 4.7°
Elevation Beamwidth (3 dB)		degrees	16.2° ± 1.1°	14.9° ± 0.8°	13.5° ± 0.8°
Electrical Downtilt		degrees	2-15°		
Impedance		Ohms	50Ω		
VSWR (Return Loss)		---	1.5:1 (-14 dB)		
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	-153		
Front-to-Back Ratio, Total Power, ± 30°		dB	19	19	22.4
First Upper Side Lobe Suppression		dB	18.4	17.1	17.3
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	19.2	21.6	20.7
Maximum Effective Power Per Port		Watts	350 W		
Cross Polar Isolation		dB	25		
Interband Isolation		dB	25		

Specifications follow BASTA guidelines.

### ELECTRICAL SPECIFICATIONS

■ Y1 ■ Y2 ■ Y3 ■ Y4

Frequency Range		MHz	1695-2690				
		MHz	1695-1880	1850-1990	1920-2200	2300-2490	2500-2690
Polarization		---	±45°				
Gain	Over all Tilts	dBi	17.1 ± 0.6	17.2 ± 0.6	17.2 ± 0.5	17 ± 0.6	17.5 ± 0.8
	Max Gain	dBi	17.7	17.8	17.7	17.6	18.3
Azimuth Beamwidth (3 dB)		degrees	70.7° ± 7.7°	67.4° ± 6°	67.7° ± 6.2°	62.6° ± 6.8°	57.2° ± 5.8°
Elevation Beamwidth (3 dB)		degrees	6.7° ± 0.5°	6.2° ± 0.4°	5.9° ± 0.5°	5.3° ± 0.3°	4.8° ± 0.4°
Electrical Downtilt		degrees	2-12°				
Impedance		Ohms	50Ω				
VSWR (Return Loss)		---	1.5:1 (-14 dB)				
Passive Intermodulation 3rd Order for 2x20 W Carriers		dBc	-153				
Front-to-Back Ratio, Total Power, ± 30°		dB	23.6	22.4	22.5	22.7	21.8
First Upper Side Lobe Suppression		dB	15.9	16.9	18.8	19.6	14.9
Cross Polar Discrimination (XPD) at Mechanical Boresight (0°)		dB	23.7	23.8	23.6	23.2	17.5
Maximum Effective Power Per Port		Watts	250 W				
Cross Polar Isolation		dB	25				
Interband Isolation		dB	25				

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### BOTTOM VIEW

P4-BB4L15-NB and P4-BB4L15-NBN



### BOTTOM VIEW WITH OPTIONAL SITE SHARING RET

P4-BB4L15-SB, P4-BB4L15-SBN



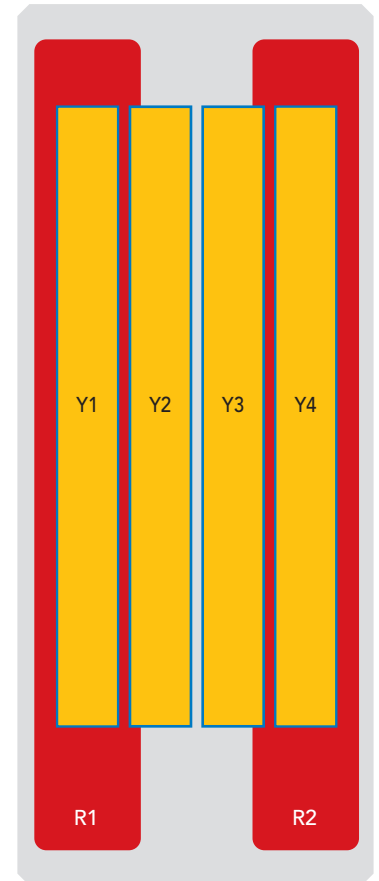
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### ARRAY LAYOUT

ARRAY	FREQUENCY	CONNECTOR	CONNECTOR TYPE	RET	AISG RET UID
<span style="color: red;">■</span> R1	694-960 MHz	1-2	(2x) 4.3-10 Female	R1	RFxxxxxxxxxx-R1
<span style="color: red;">■</span> R2	694-960 MHz	3-4	(2x) 4.3-10 Female	R2	RFxxxxxxxxxx-R2
<span style="color: yellow;">■</span> Y1	1695-2690 MHz	5-6	(2x) 4.3-10 Female	Y1	RFxxxxxxxxxx-Y1
<span style="color: yellow;">■</span> Y2	1695-2690 MHz	7-8	(2x) 4.3-10 Female	Y2	RFxxxxxxxxxx-Y2
<span style="color: yellow;">■</span> Y3	1695-2690 MHz	9-10	(2x) 4.3-10 Female	Y3	RFxxxxxxxxxx-Y3
<span style="color: yellow;">■</span> Y4	1695-2690 MHz	11-12	(2x) 4.3-10 Female	Y4	RFxxxxxxxxxx-Y4



The illustration is not shown to scale.

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### MECHANICAL SPECIFICATIONS

Length	mm (in)	1490 (58.7)
Width	mm (in)	499 (19.6)
Depth	mm (in)	215 (8.5)
Net Weight - Antenna Only	kg (lbs)	29.5 (65)
Wind Load Rated at 150 km/h (93 mph)	Front	N (lbf) 500 (112)
	Side	N (lbf) 429 (96)
	Rear	N (lbf) 594 (134)
	Maximum, Resultant	N (lbf) 980 (220)
Survival Wind Speed	km/h (mph)	200 (124)
Connector Type	--	(12x) 4.3-10 Female, (2x) AISG Connectors (1 Male, 1 Female) at Bottom Site Sharing: (4x) AISG Connectors (2 Male, 2 Female) at Bottom
Radome Color	---	Light Grey RAL7035
Radome Material	---	Fiberglass
Lightning Protection	---	Direct Ground
<b>Shipping</b>	Packing Size (Length x Width x Depth)	mm (in) 1775 x 570 x 295 (69.9 x 22.4 x 11.6)

### 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.

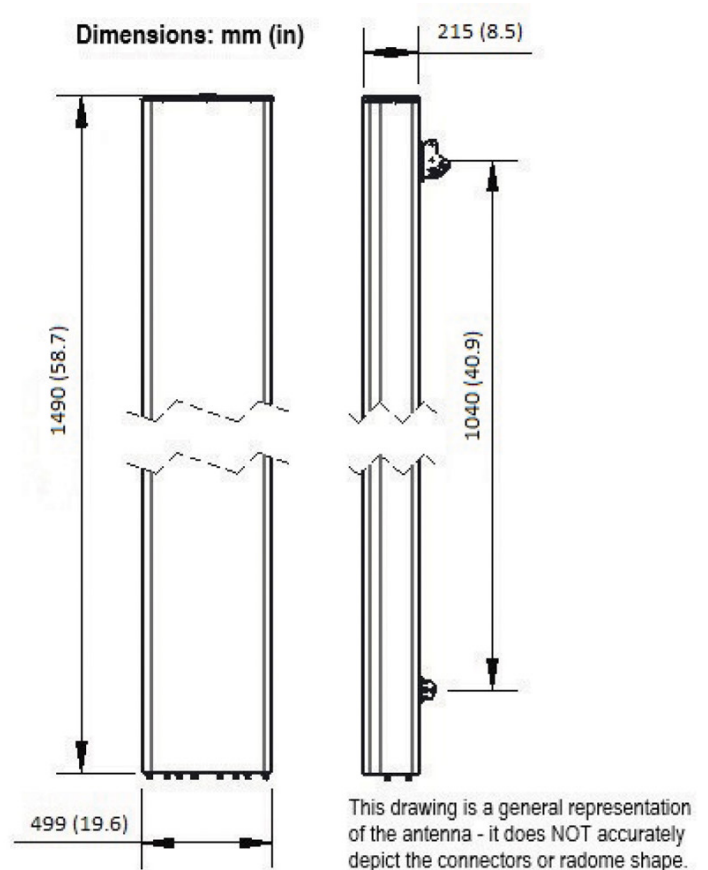


Always attach the antenna using all mounting points.

Do not install antenna with the connectors facing upwards.

### EXTERNAL DOCUMENT LINKS

[APM50 Mounting Kit Series Installation Instructions](#)



### NOTES

Specifications follow BASTA guidelines.

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

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