

APXVBB20B_43-C-I20

APXVBB20B_43-A-I20

Features

- 4 ports / 2 cross pol systems in low band (698-960 MHz)
- Supporting 4x4 MIMO
- 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 | Frequency Range (MHz) | 698-960 | |
| | Array | ■ R1 | ■ R2 |
| | Connector | 1-2 | 3-4 |
| | | 4 PORTS | |
| | Polarization | XPOL | |
| | Azimuth Beamwidth (avg) | 65° | |
| | Electrical Downtilt | 2-12° | |
| | Dimensions | 1990 x 499 x 199 mm (78.3 x 19.6 x 7.8 in) | |

ORDERING OPTIONS

Select from the following ordering options

| ANTENNA MODEL NUMBER | CONFIGURATION | MOUNTING HARDWARE | MOUNTING PIPE DIAMETER | SHIPPING WEIGHT | MOUNTING HARDWARE WEIGHT |
|----------------------|--|--|------------------------|-----------------------|--------------------------|
| APXVBB20B_43-C-I20 | ACU-I20-B2 Internal RET Included | APM50-B1 Beam Tilt Kit Included | 50-110 mm (2.0-4.3 in) | 38.5 kg (84.9 lbs) | 4.5 kg (9.9 lbs) |
| APXVBB20B_43-A-I20 | ACU-I20-B2 Internal RET Included | APM50-B1N Direct Pipe No Tilt Mounting Kit Included | 50-110 mm (2.0-4.3 in) | 37.4 kg (82.4 lbs) | 3.4 kg (7.5 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 | 14.8 ± 0.9 | 15.4 ± 0.4 | 15.8 ± 0.4 |
| | Max Gain | dBi | 15.7 | 15.8 | 16.2 |
| Azimuth Beamwidth (3 dB) | | degrees | 73.5° ± 5.9° | 69.4° ± 2.1° | 64.9° ± 1.4° |
| Elevation Beamwidth (3 dB) | | degrees | 10.7° ± 1.1° | 9.8° ± 0.4° | 9.0° ± 0.5° |
| 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 | 21.9 | 22.7 | 23.1 |
| First Upper Side Lobe Suppression | | dB | 17.1 | 16.3 | 14.9 |
| Cross Polar Discrimination Over Sector | | dB | 12.7 | 9.8 | 5.6 |
| Cross Polar Discrimination (XPD) at Mechanical Boresight (0°) | | dB | 25.7 | 26.5 | 27.7 |
| Maximum Effective Power Per Port | | Watts | 350 W | | |
| Cross Polar Isolation | | dB | 26 | | |
| Interband Isolation | | dB | 26 | | |

Specifications follow BASTA guidelines.

ELECTRICAL SPECIFICATIONS

■ R2

| | | | | | |
|--|----------------|---------|----------------|--------------|--------------|
| Frequency Range | | MHz | 698-960 | | |
| | | MHz | 698-806 | 790-894 | 880-960 |
| Polarization | | --- | ±45° | | |
| Gain | Over all Tilts | dBi | 14.9 ± 0.8 | 15.5 ± 0.3 | 15.8 ± 0.3 |
| | Max Gain | dBi | 15.7 | 15.8 | 16.1 |
| Azimuth Beamwidth (3 dB) | | degrees | 74.1° ± 5.8° | 69.5° ± 2.5° | 64.7° ± 1.3° |
| Elevation Beamwidth (3 dB) | | degrees | 10.7° ± 1.0° | 9.8° ± 0.4° | 9.0° ± 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 | 21.3 | 23.1 | 22.3 |
| First Upper Side Lobe Suppression | | dB | 16.9 | 16.3 | 15.4 |
| Cross Polar Discrimination Over Sector | | dB | 11.6 | 9.1 | 6.1 |
| Cross Polar Discrimination (XPD) at Mechanical Boresight (0°) | | dB | 24.0 | 24.8 | 28.7 |
| Maximum Effective Power Per Port | | Watts | 350 W | | |
| Cross Polar Isolation | | dB | 26 | | |
| Interband Isolation | | dB | 26 | | |

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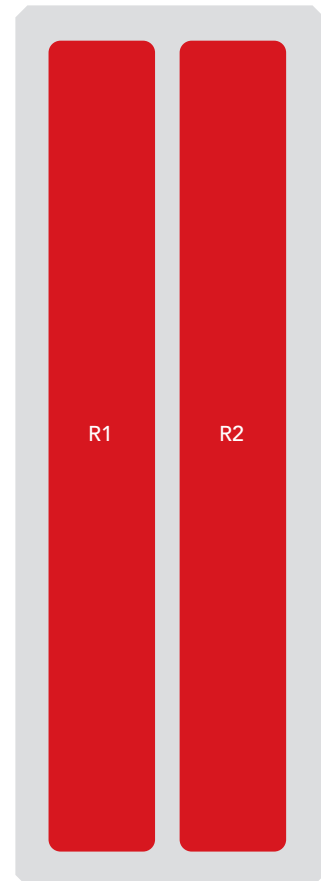
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BOTTOM VIEW - LABELING



ARRAY LAYOUT

| ARRAY | FREQUENCY | CONNECTOR | CONNECTOR TYPE | RET | AISG RET UID |
|-------|-------------|-----------|--------------------|-----|-----------------|
| ■ R1 | 698-960 MHz | 1-2 | (2x) 4.3-10 Female | R1 | RFxxxxxxxxxx-R1 |
| ■ R2 | 698-960 MHz | 3-4 | (2x) 4.3-10 Female | R2 | RFxxxxxxxxxx-R2 |



The illustration is not shown to scale.

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MECHANICAL SPECIFICATIONS

| | | |
|--|---------------------------------------|---|
| Length | mm (in) | 1990 (78.3) |
| Width | mm (in) | 499 (19.6) |
| Depth | mm (in) | 199 (7.8) |
| Net Weight - Antenna Only | kg (lbs) | 27.9 (61.5) |
| Wind Load Rated at 150 km/h (93 mph) | Front | N (lbf) 668 (150) |
| | Side | N (lbf) 531 (119) |
| | Rear | N (lbf) 793 (178) |
| Survival Wind Speed | km/h (mph) | 200 (124) |
| Connector Type | -- | (4x) 4.3-10 Female, (2x) AISG Connectors (1 Male, 1 Female) at Bottom |
| Radome Color | --- | Light Grey RAL7035 |
| Radome Material | --- | Fiberglass |
| Lightning Protection | --- | Direct Ground |
| Shipping | Packing Size (Length x Width x Depth) | mm (in) 2235 x 595 x 295 (88.0 x 23.4 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 60-110 mm (2.4-4.3 in) <i>Refer to ordering options</i> | APM50-B1N | 3.4 kg (7.5 lbs) |

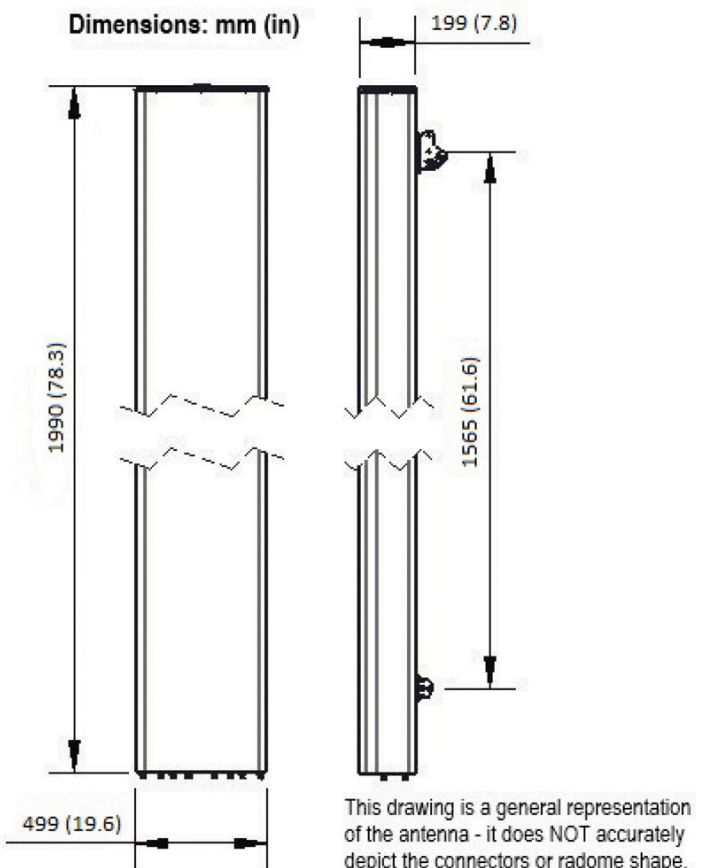
INSTALLATION Please read all installation notes before installing product.



- 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](#)

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