

## APXVBBLL20B2\_43-C-I20

### Features

- 4 ports / 2 cross pol systems in low band (698-960 MHz)
- 4 ports / 2 cross pol systems in high band (1710-2690 MHz)
- Integrated and field replaceable SRET
- Compliant with AISG v2.0 and 3GPP

|                         |                         |  |      |                |      |
|-------------------------|-------------------------|--|------|----------------|------|
| <b>PRODUCT OVERVIEW</b> | Frequency Range (MHz)   | (2x) 698-960                               |      | (2x) 1710-2690 |      |
|                         | Array                   | ■ R1                                       | ■ R2 | ■ Y1           | ■ Y2 |
|                         | Connector               | 1-2  | 3-4  | 5-6            | 7-8  |
|                         |                         | 8 PORTS                                    |      |                |      |
|                         | Polarization            | XPOL                                       |      |                |      |
|                         | Azimuth Beamwidth (avg) | 65°  |      | 65°            |      |
|                         | Electrical Downtilt     | 2-12°                                      |      | 2-12°          |      |
|                         | Dimensions              | 2000 x 469 x 205 mm (78.7 x 18.5 x 8.1 in) |      |                |      |

### ORDERING OPTIONS Select from the following ordering options

| ANTENNA MODEL NUMBER  | CONFIGURATION                          | MOUNTING HARDWARE                     | MOUNTING PIPE DIAMETER | SHIPPING WEIGHT    | MOUNTING HARDWARE WEIGHT |
|-----------------------|--|---------------------------------------|------------------------|--------------------|--------------------------|
| APXVBBLL20B2_43-C-I20 | ACU-I20-B4<br>Internal RET<br>Included | APM50-B1<br>Beam Tilt Kit<br>Included | 50-110 mm (2.0-4.3 in) | 41.9 kg (92.4 lbs) | 4.5 kg (9.9 lbs)         |



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## APXVBBLL20B2\_43-C-I20

### ELECTRICAL SPECIFICATIONS

■ R1 ■ R2

|   |                |         |                |              |              |
|---|----------------|---------|----------------|--------------|--------------|
| Frequency Range                                 |                | MHz     | 698-960        |              |              |
|   |                | MHz     | 698-806        | 790-894      | 880-960      |
| Polarization                                    |                | ---     | ±45°           |              |              |
| Gain  | Over all Tilts | dBi     | 15.0 ± 0.5     | 15.4 ± 0.4   | 15.5 ± 0.4   |
|   | Max Gain       | dBi     | 15.5           | 15.8         | 15.9         |
| Azimuth Beamwidth (3 dB)                        |                | degrees | 69.4° ± 3.7°   | 68.2° ± 3.6° | 67.3° ± 4.9° |
| Elevation Beamwidth (3 dB)                      |                | degrees | 12.7° ± 0.8°   | 11.6° ± 0.8° | 10.6° ± 0.7° |
| Electrical Downtilt                             |                | degrees | 2-12°          |              |              |
| Impedance                                       |                | Ohms    | 50Ω            |              |              |
| VSWR (Return Loss)                              |                | ---     | 1.5:1 (-14 dB) |              |              |
| Passive Intermodulation<br>3rd Order, 2 x 43dBm |                | dBc     | -153           |              |              |
| Front-to-Back Ratio, Total Power, ± 30°         |                | dB      | 22.8           | 25.2         | 25.4         |
| First Upper Side Lobe Suppression               |                | dB      | 19.0           | 18.3         | 16.0         |
| Cross Polar Discrimination at Boresight         |                | dB      | 21.6           | 20.1         | 20.8         |
| Maximum Effective Power Per Port                |                | Watts   | 300 W          |              |              |
| Cross Polar Isolation                           |                | dB      | 26             |              |              |
| Interband Isolation                             |                | dB      | 26             |              |              |

Specifications follow BASTA guidelines.

### ELECTRICAL SPECIFICATIONS

■ Y1 ■ Y2

|   |                |         |                |              |              |              |              |
|---|----------------|---------|----------------|--------------|--------------|--------------|--------------|
| Frequency Range                                 |                | MHz     | 1710-2690      |              |              |              |              |
|   |                | MHz     | 1710-1880      | 1850-1990    | 1920-2200    | 2200-2490    | 2500-2690    |
| Polarization                                    |                | ---     | ±45°           |              |              |              |              |
| Gain  | Over all Tilts | dBi     | 17.7 ± 0.6     | 17.6 ± 0.6   | 17.5 ± 0.6   | 16.9 ± 0.7   | 16.9 ± 0.7   |
|   | Max Gain       | dBi     | 18.3           | 18.2         | 18.1         | 17.6         | 17.6         |
| Azimuth Beamwidth (3 dB)                        |                | degrees | 63.4° ± 5.0°   | 60.6° ± 4.8° | 60.6° ± 5.8° | 66.0° ± 6.9° | 60.0° ± 8.3° |
| Elevation Beamwidth (3 dB)                      |                | degrees | 6.6° ± 0.4°    | 6.2° ± 0.5°  | 6.0° ± 0.6°  | 5.4° ± 0.2°  | 4.9° ± 0.3°  |
| Electrical Downtilt                             |                | degrees | 2-12°          |              |              |              |              |
| Impedance                                       |                | Ohms    | 50Ω            |              |              |              |              |
| VSWR (Return Loss)                              |                | ---     | 1.5:1 (-14 dB) |              |              |              |              |
| Passive Intermodulation<br>3rd Order, 2 x 43dBm |                | dBc     | -153           |              |              |              |              |
| Front-to-Back Ratio, Total Power, ± 30°         |                | dB      | 24.6           | 22.5         | 22.4         | 21.8         | 22.5         |
| First Upper Side Lobe Suppression               |                | dB      | 16.2           | 15.4         | 17.7         | 25.6         | 16.9         |
| Cross Polar Discrimination at Boresight         |                | dB      | 21.6           | 24.5         | 18.5         | 17.1         | 17.7         |
| Maximum Effective Power Per Port                |                | Watts   | 200 W          |              |              |              |              |
| Cross Polar Isolation                           |                | dB      | 26             |              |              |              |              |
| Interband Isolation                             |                | dB      | 26             |              |              |              |              |

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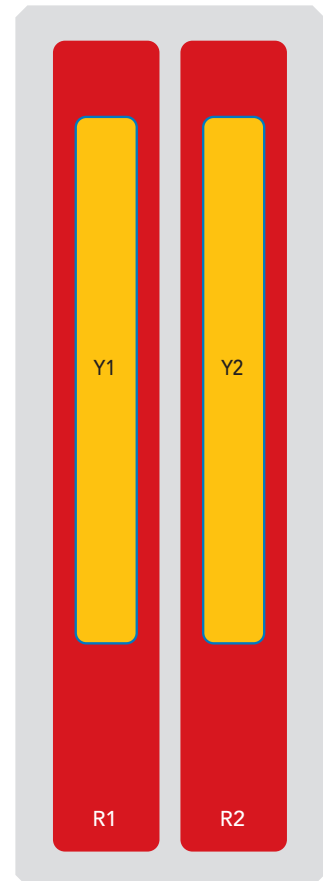
## APXVBBLL20B2\_43-C-I20

### BOTTOM VIEW - LABELING



### ARRAY LAYOUT

| ARRAY                                    | FREQUENCY     | CONNECTOR | CONNECTOR TYPE     | RET | AISG RET UID    |
|--|---------------|-----------|--------------------|-----|-----------------|
| <span style="color: red;">■</span> R1    | 698-960 MHz   | 1-2       | (2x) 4.3-10 Female | R1  | RFxxxxxxxxxx-R1 |
| <span style="color: red;">■</span> R2    | 698-960 MHz   | 3-4       | (2x) 4.3-10 Female | R2  | RFxxxxxxxxxx-R2 |
| <span style="color: yellow;">■</span> Y1 | 1710-2690 MHz | 5-6       | (2x) 4.3-10 Female | Y1  | RFxxxxxxxxxx-Y1 |
| <span style="color: yellow;">■</span> Y2 | 1710-2690 MHz | 7-8       | (2x) 4.3-10 Female | Y2  | RFxxxxxxxxxx-Y2 |



The illustration is not shown to scale.

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### MECHANICAL SPECIFICATIONS

|  |                                       |            |   |
|--|---------------------------------------|------------|---|
| Length                                     |                                       | mm (in)    | 2000 (78.7)   |
| Width                                      |                                       | mm (in)    | 469 (18.5)  |
| Depth                                      |                                       | mm (in)    | 205 (8.1)   |
| Net Weight - Antenna Only                  |                                       | kg (lbs)   | 30.1 (66.3)   |
| Wind Load<br>Rated at<br>150 km/h (93 mph) | Front                                 | N (lbf)    | 555 (125)   |
|  | Side                                  | N (lbf)    | 577 (130)   |
|  | Rear                                  | N (lbf)    | 579 (130)   |
| 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                       |                                       | ---        | Direct Ground   |
| <b>Shipping</b>                            | Packing Size (Length x Width x Depth) | mm (in)    | 2275 x 540 x 280 (89.6 x 21.2 x 11.0)                                 |

### 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)<br><i>Refer to ordering options</i> | APM50-B1     | 4.5 kg (9.9 lbs) |

### INSTALLATION

Please read all installation notes before installing product.

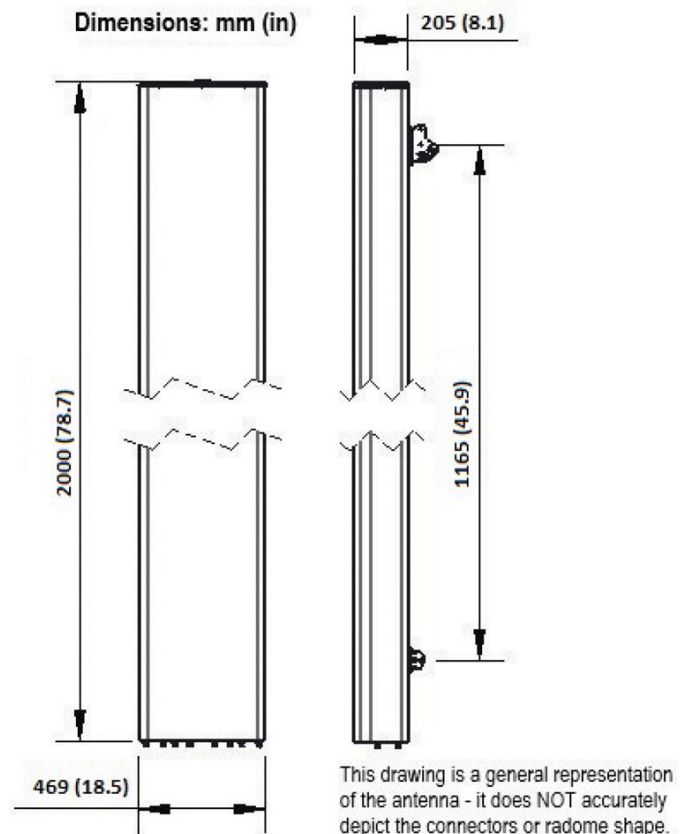


Always attach the antenna using all mounting points.

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](#)