

## APXVLL21B\_43-C-I20

### Features

- 4 ports / 2 cross pol systems in high band (1710-2690 MHz)
- Integrated and field replaceable SRET
- ACU HW version -2.02
- Compliant with AISG v2.0 and 3GPP



|                         |                         |  |      |
|-------------------------|-------------------------|--|------|
| <b>PRODUCT OVERVIEW</b> | Frequency Range (MHz)   | (2x) 1710-2690                             |      |
|                         | Array                   | ■ Y1                                       | ■ Y2 |
|                         | Connector               | 1-2  | 3-4  |
|                         |                         | 4 PORTS                                    |      |
|                         | Polarization            | XPOL                                       |      |
|                         | Azimuth Beamwidth (avg) | 65°  |      |
|                         | Electrical Downtilt     | 2-10°                                      |      |
|                         | Dimensions              | 1900 x 320 x 123 mm (74.8 x 12.6 x 4.8 in) |      |

### ORDERING OPTIONS Select from the following ordering options

| ANTENNA MODEL NUMBER | CONFIGURATION                       | MOUNTING HARDWARE                  | MOUNTING PIPE DIAMETER | SHIPPING WEIGHT    |
|----------------------|-------------------------------------|------------------------------------|------------------------|--------------------|
| APXVLL21B_43-C-I20   | ACU-I20-B2<br>Internal RET Included | APM50-B1<br>Beam Tilt Kit Included | 50-110 mm (2.0-4.3 in) | 27.4 kg (60.4 lbs) |



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## APXVLL21B\_43-C-I20

### ELECTRICAL SPECIFICATIONS

■ Y1

|  |                |         |                |              |              |              |              |
|--|----------------|---------|----------------|--------------|--------------|--------------|--------------|
| Frequency Range  |                | MHz     | 1710-2690      |              |              |              |              |
|  |                | MHz     | 1710-1880      | 1850-1990    | 1920-2170    | 2300-2400    | 2500-2690    |
| Polarization   |                | ---     | ±45°           |              |              |              |              |
| Gain   | Over all Tilts | dBi     | 18.1 ± 0.5     | 18.6 ± 0.5   | 18.8 ± 0.5   | 18.8 ± 0.5   | 18.9 ± 0.5   |
|  | Max Gain       | dBi     | 18.6           | 19.1         | 19.3         | 19.3         | 19.4         |
| Azimuth Beamwidth (3 dB)   |                | degrees | 66.4° ± 3.0°   | 67.3° ± 2.0° | 67.6° ± 1.5° | 64.8° ± 2.0° | 59.4° ± 4.5° |
| Elevation Beamwidth (3 dB)                                       |                | degrees | 5.2° ± 0.5°    | 5.0° ± 0.1°  | 4.5° ± 0.5°  | 4.0° ± 0.1°  | 4.0° ± 0.1°  |
| Electrical Downtilt  |                | degrees | 2-10°          |              |              |              |              |
| Impedance  |                | Ohms    | 50Ω            |              |              |              |              |
| VSWR (Return Loss)   |                | ---     | 1.5:1 (-14 dB) |              |              |              |              |
| Passive Intermodulation<br>3rd Order for 2x20 W Carriers         |                | dBc     | -150           |              |              |              |              |
| Front-to-Back Ratio, Total Power, ± 30°                          |                | dB      | 24.2           | 25           | 24           | 22           | 19           |
| First Upper Side Lobe Suppression                                |                | dB      | 22             | 21           | 17.1         | 18.7         | 16.3         |
| Cross Polar Discrimination Over Sector                           |                | dB      | 13             | 12           | 12           | 11           | 10           |
| Cross Polar Discrimination (XPD)<br>at Mechanical Boresight (0°) |                | dB      | 18             | 23           | 25           | 26           | 22           |
| Maximum Effective Power Per Port                                 |                | Watts   | 250 W          |              |              |              |              |
| Cross Polar Isolation  |                | dB      | 28             |              |              |              |              |
| Interband Isolation  |                | dB      | 28             |              |              |              |              |

Specifications follow BASTA guidelines.

### ELECTRICAL SPECIFICATIONS

■ Y2

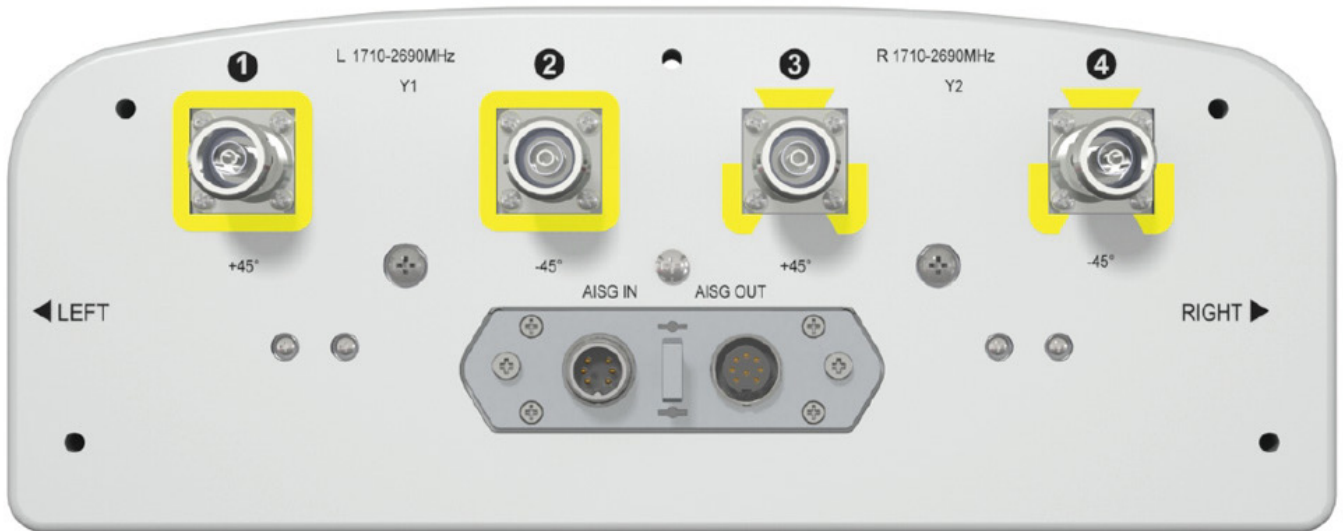
|  |                |         |                |              |              |              |              |
|--|----------------|---------|----------------|--------------|--------------|--------------|--------------|
| Frequency Range  |                | MHz     | 1710-2690      |              |              |              |              |
|  |                | MHz     | 1710-1880      | 1850-1990    | 1920-2170    | 2300-2400    | 2490-2690    |
| Polarization   |                | ---     | ±45°           |              |              |              |              |
| Gain   | Over all Tilts | dBi     | 18.1 ± 0.5     | 18.7 ± 0.5   | 18.9 ± 0.5   | 18.9 ± 0.3   | 19.0 ± 1.0   |
|  | Max Gain       | dBi     | 18.6           | 19.2         | 19.4         | 19.2         | 20.0         |
| Azimuth Beamwidth (3 dB)   |                | degrees | 66.6° ± 1.5°   | 67.0° ± 1.8° | 67.6° ± 2.0° | 65.1° ± 2.1° | 59.6° ± 3.8° |
| Elevation Beamwidth (3 dB)                                       |                | degrees | 5.1° ± 0.5°    | 5.0° ± 0.1°  | 4.5° ± 0.5°  | 4.0° ± 0.1°  | 4.0° ± 0.1°  |
| Electrical Downtilt  |                | degrees | 2-10°          |              |              |              |              |
| Impedance  |                | Ohms    | 50Ω            |              |              |              |              |
| VSWR (Return Loss)   |                | ---     | 1.5:1 (-14 dB) |              |              |              |              |
| Passive Intermodulation<br>3rd Order for 2x20 W Carriers         |                | dBc     | -150           |              |              |              |              |
| Front-to-Back Ratio, Total Power, ± 30°                          |                | dB      | 24             | 24           | 24           | 22           | 20           |
| First Upper Side Lobe Suppression                                |                | dB      | 25             | 25.2         | 21           | 20.3         | 19.9         |
| Cross Polar Discrimination Over Sector                           |                | dB      | 12.6           | 12           | 12           | 12           | 10.4         |
| Cross Polar Discrimination (XPD)<br>at Mechanical Boresight (0°) |                | dB      | 19             | 23           | 25           | 26           | 21           |
| Maximum Effective Power Per Port                                 |                | Watts   | 250 W          |              |              |              |              |
| Cross Polar Isolation  |                | dB      | 28             |              |              |              |              |
| Interband Isolation  |                | dB      | 28             |              |              |              |              |

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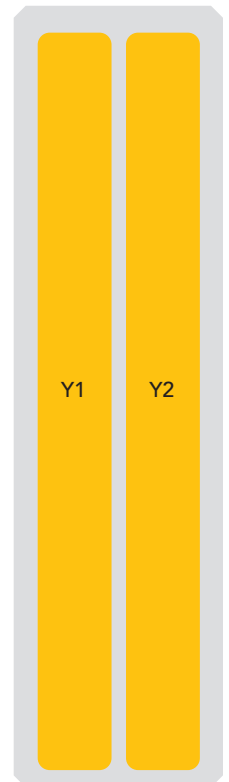
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## BOTTOM VIEW - LABELING



### ARRAY LAYOUT

| ARRAY | FREQUENCY     | CONNECTOR | CONNECTOR TYPE     | RET | AISG RET UID    |
|-------|---------------|-----------|--------------------|-----|-----------------|
| ■ Y1  | 1710-2690 MHz | 1-2       | (2x) 4.3-10 Female | Y1  | RFxxxxxxxxxx-Y1 |
| ■ Y2  | 1710-2690 MHz | 3-4       | (2x) 4.3-10 Female | Y2  | RFxxxxxxxxxx-Y2 |



The illustration is not shown to scale.

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## APXVLL21B\_43-C-I20

### MECHANICAL SPECIFICATIONS

|  |                                       |   |
|--|---------------------------------------|---|
| Length                                     | mm (in)                               | 1900 (74.8)   |
| Width                                      | mm (in)                               | 320 (12.6)  |
| Depth                                      | mm (in)                               | 123 (4.8)   |
| Net Weight - Antenna Only                  | kg (lbs)                              | 18.6 (41)   |
| Net Weight - Mounting Hardware Only        | kg (lbs)                              | 4.5 (9.9)   |
| Wind Load<br>Rated at<br>150 km/h (93 mph) | Front                                 | N (lbf) 821 (185)   |
|  | Side                                  | N (lbf) 271 (61)  |
|  | Rear                                  | N (lbf) 1066 (240)  |
| Survival Wind Speed / Rated Wind Speed     | km/h (mph)                            | 200 (150)   |
| 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   |
| <b>Shipping</b>                            | Packing Size (Length x Width x Depth) | mm (in) 2180 x 415 x 215 (85.8 x 16.3 x 8.5)                          |
|  | Shipping Weight                       | kg (lbs) 27.4 kg (60.4 lbs)   |

### 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        |

## APXVLL21B\_43-C-I20

**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>Shipped with antenna</i> | APM50-B1     | 4.5 kg (9.9 lbs) |

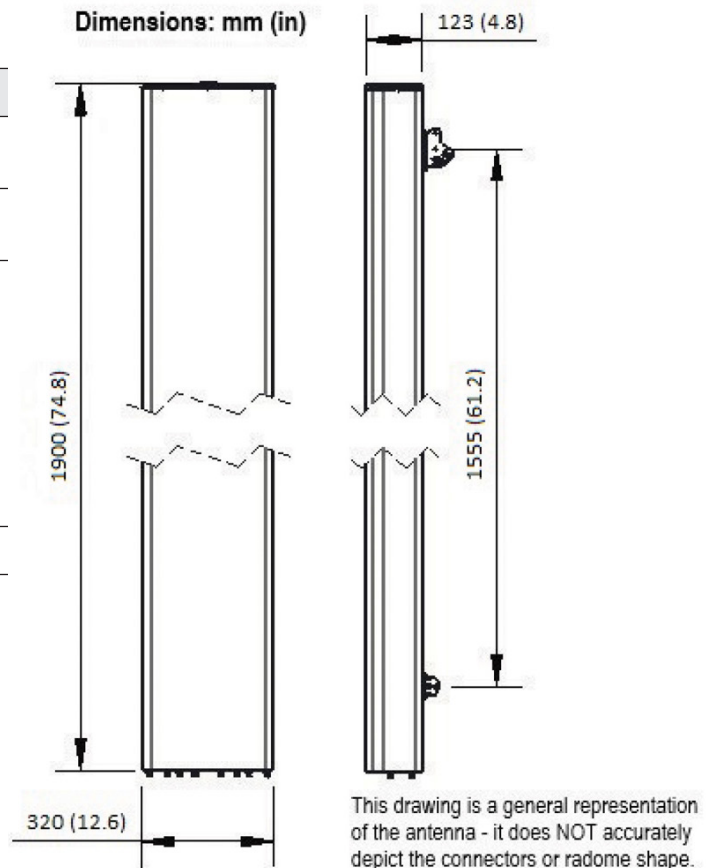
**INSTALLATION** Please read all installation notes before installing product.



- 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](#)