# 6-Port Panel Antenna

(1x) 694-960 | (2x) 1695-2690 MHz

65° | 1998 mm | INTEGRATED RET

# APXVBLL20H_43-C-I20

## APXVBLL20H_43-A-I20

### Features

- 2 ports / 1 cross pol system in low band (694-960 MHz)
- 4 ports / 2 cross pol systems in high band (1695-2690 MHz)
- Supporting 4x4 MIMO in high band
- Integrated and field replaceable SRET
- ACU HW version -HRLS200608H1.00
- 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) | (1x) 694-960 | (2x) 1695-2690 | |
| | Array | R1 | Y1 | Y2 |
| | Connector | 1-2 | 3-4 | 5-6 |
| | | 6 PORTS | | |
| | Polarization | XPOL | | |
| | Azimuth Beamwidth (avg) | 65° | 65° | 65° |
| | Electrical Downtilt | 2-12° | 2-12° | |
| | Dimensions | 1998 x 378 x 158 mm (78.6 x 14.9 x 6.2 in) | | |

**ORDERING OPTIONS** Select from the following ordering options

| ANTENNA MODEL NUMBER | CONFIGURATION | MOUNTING HARDWARE | MOUNTING PIPE DIAMETER | SHIPPING WEIGHT | MOUNTING HARDWARE WEIGHT |
|---|---|---|---|---|---|
| APXVBLL20H_43-C-I20 | ACU-I20-H12I Internal Field Replaceable RET Included | APM50-H1 Beam Tilt Kit Included | 50-125 mm (2.0-4.9 in) | 30.0 kg (66.1 lbs) | 4.0 kg (8.8 lbs) |
| APXVBLL20H_43-A-I20 | ACU-I20-H12I Internal Field Replaceable RET Included | APM50-H1N Direct Pipe No Tilt Mounting Kit Included | 50-125 mm (2.0-4.9 in) | 29.0 kg (63.9 lbs) | 3.0 kg (6.6 lbs) |

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| ELECTRICAL SPECIFICATIONS | | | R1 | | |
|---|---|---|---|---|---|
| Frequency Range | | MHz | 694-960 | | |
| | | MHz | 694-806 | 790-894 | 880-960 |
| Polarization | | --- | ±45° | | |
| Gain | Over all Tilts | dBi | 15.3 ± 0.5 | 16.0 ± 0.5 | 16.0 ± 0.2 |
| | Max Gain | dBi | 15.8 | 16.5 | 16.2 |
| Azimuth Beamwidth (3 dB) | | degrees | 68.0° ± 2.0° | 65.1° ± 2.5° | 62.1° ± 2.1° |
| Elevation Beamwidth (3 dB) | | degrees | 11.3° ± 1.0° | 10.1° ± 0.5° | 9.3° ± 0.5° |
| Electrical Downtilt | | degrees | 2-12° | | |
| Impedance | | Ohms | 50Ω | | |
| VSWR (Return Loss) | | --- | 1.5:1 (-14 dB) | | |
| Passive Intermodulation | | dBc | -153 (3rd Order for 2x20 W Carriers) | | |
| Front-to-Back Ratio, Total Power, ± 30° | | dB | 25 | 23 | 24 |
| First Upper Side Lobe Suppression | | dB | 15 | 15 | 13 |
| Cross Polar Discrimination Over Sector | | dB | 10 | 8 | 7 |
| Cross Polar Discrimination (XPD) at Mechanical Boresight (0°) | | dB | 28 | 29 | 28 |
| Maximum Effective Power Per Port | | Watts | 250 W | | |
| Cross Polar Isolation | | dB | 28 | | |
| Interband Isolation | | dB | 28 | | |

*Specifications follow BASTA guidelines.*

| ELECTRICAL SPECIFICATIONS | | | Y1 | | | | |
|---|---|---|---|---|---|---|---|
| Frequency Range | | MHz | 1695-2690 | | | | |
| | | MHz | 1695-1880 | 1850-1990 | 1920-2170 | 2300-2400 | 2490-2690 |
| Polarization | | --- | ±45° | | | | |
| Gain | Over all Tilts | dBi | 16.2 ± 0.5 | 16.8 ± 0.5 | 17.1 ± 1.0 | 17.4 ± 0.5 | 17.4 ± 0.5 |
| | Max Gain | dBi | 16.7 | 17.3 | 18.1 | 17.9 | 17.9 |
| Azimuth Beamwidth (3 dB) | | degrees | 70.6° ± 8.1° | 64.3° ± 6.5° | 65.5° ± 4.5° | 66.8° ± 3.3° | 64.5° ± 4.1° |
| Elevation Beamwidth (3 dB) | | degrees | 6.4° ± 0.5° | 6.0° ± 0.1° | 5.6° ± 0.5° | 5.0° ± 0.1° | 4.9° ± 0.5° |
| Electrical Downtilt | | degrees | 2-12° | | | | |
| Impedance | | Ohms | 50Ω | | | | |
| VSWR (Return Loss) | | --- | 1.5:1 (-14 dB) | | | | |
| Passive Intermodulation | | dBc | -153 (3rd Order for 2x20 W Carriers) | | | | |
| Front-to-Back Ratio, Total Power, ± 30° | | dB | 21 | 24 | 25 | 25 | 22 |
| First Upper Side Lobe Suppression | | dB | 17 | 19 | 19 | 21 | 20 |
| Cross Polar Discrimination Over Sector | | dB | 11 | 8 | 9 | 10.1 | 4 |
| Cross Polar Discrimination (XPD) at Mechanical Boresight (0°) | | dB | 25 | 24 | 21.8 | 25 | 26 |
| Maximum Effective Power Per Port | | Watts | 200 W | | | | |
| Cross Polar Isolation | | dB | 28 | | | | |
| Interband Isolation | | dB | 28 | | | | |

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# APXVBLL20H_43-C-I20
## APXVBLL20H_43-A-I20

| ELECTRICAL SPECIFICATIONS | | | Y2 | | | | |
|---|---|---|---|---|---|---|---|
| Frequency Range | | MHz | 1695-2690 | | | | |
| | | MHz | 1695-1880 | 1850-1990 | 1920-2170 | 2300-2400 | 2490-2690 |
| Polarization | | --- | ±45° | | | | |
| Gain | Over all Tilts | dBi | 16.4 ± 0.5 | 16.8 ± 0.5 | 17.3 ± 1.0 | 17.5 ± 0.5 | 17.4 ± 0.5 |
| | Max Gain | dBi | 16.9 | 17.3 | 18.3 | 18.0 | 17.9 |
| Azimuth Beamwidth (3 dB) | | degrees | 70.4° ± 9.0° | 66.7° ± 8.9° | 65.4° ± 5.5° | 65.7° ± 3.0° | 62.5° ± 4.0° |
| Elevation Beamwidth (3 dB) | | degrees | 6.2° ± 0.5° | 5.8° ± 0.5° | 5.5° ± 0.5° | 5.0° ± 0.1° | 4.9° ± 0.5° |
| Electrical Downtilt | | degrees | 2-12° | | | | |
| Impedance | | Ohms | 50Ω | | | | |
| VSWR (Return Loss) | | --- | 1.5:1 (-14 dB) | | | | |
| Passive Intermodulation | | dBc | -153 (3rd Order for 2x20 W Carriers) | | | | |
| Front-to-Back Ratio, Total Power, ± 30° | | dB | 22 | 25 | 26 | 24 | 21 |
| First Upper Side Lobe Suppression | | dB | 17 | 20 | 19 | 20 | 17.5 |
| Cross Polar Discrimination Over Sector | | dB | 12 | 8 | 9 | 11 | 3 |
| Cross Polar Discrimination (XPD) at Mechanical Boresight (0°) | | dB | 25 | 25 | 25.9 | 27.3 | 25 |
| Maximum Effective Power Per Port | | Watts | 200 W | | | | |
| Cross Polar Isolation | | dB | 28 | | | | |
| Interband Isolation | | dB | 28 | | | | |

*Specifications follow BASTA guidelines.*

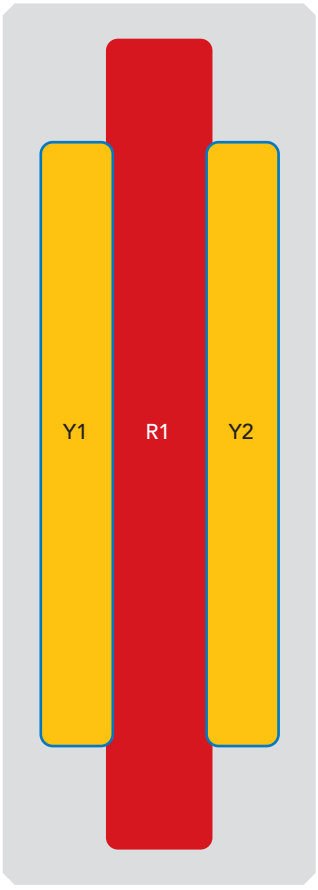
# APXVBLL20H_43-C-I20

## APXVBLL20H_43-A-I20

### BOTTOM VIEW - LABELING


### ARRAY LAYOUT

| ARRAY | FREQUENCY | CONNECTOR | CONNECTOR TYPE | RET | AISG RET UID |
|---|---|---|---|---|---|
| R1 | 694-960 MHz | 1-2 | (2x) 4.3-10 Female | R1 | RFxxxxxxxxxxx-R1 |
| Y1 | 1695-2690 MHz | 3-4 | (2x) 4.3-10 Female | Y1 | RFxxxxxxxxxxx-Y1 |
| Y2 | 1695-2690 MHz | 5-6 | (2x) 4.3-10 Female | Y2 | RFxxxxxxxxxxx-Y2 |




*The illustration is not shown to scale.*

# APXVBLL20H_43-C-I20
## APXVBLL20H_43-A-I20

### MECHANICAL SPECIFICATIONS

| | | | |
|---|---|---|---|
| Length | | mm (in) | 1998 (78.6) |
| Width | | mm (in) | 378 (14.9) |
| Depth | | mm (in) | 158 (6.2) |
| Net Weight - Antenna Only | | kg (lbs) | 22 (48.5) |
| Wind Load<br><br>Rated at<br>150 km/h (93 mph) | Front | N (lbf) | 501 (113) |
| | Side | N (lbf) | 411 (92) |
| | Rear | N (lbf) | 595 (134) |
| Survival Wind Speed | | km/h (mph) | 200 (124) |
| Connector Type | | -- | (6x) 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) | 2178 x 473 x 278 (85.7 x 18.6 x 10.9) |

### 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 |

# APXVBLL20H_43-C-I20
## APXVBLL20H_43-A-I20

**ACCESSORIES** Accessories may be ordered separately unless otherwise indicated.

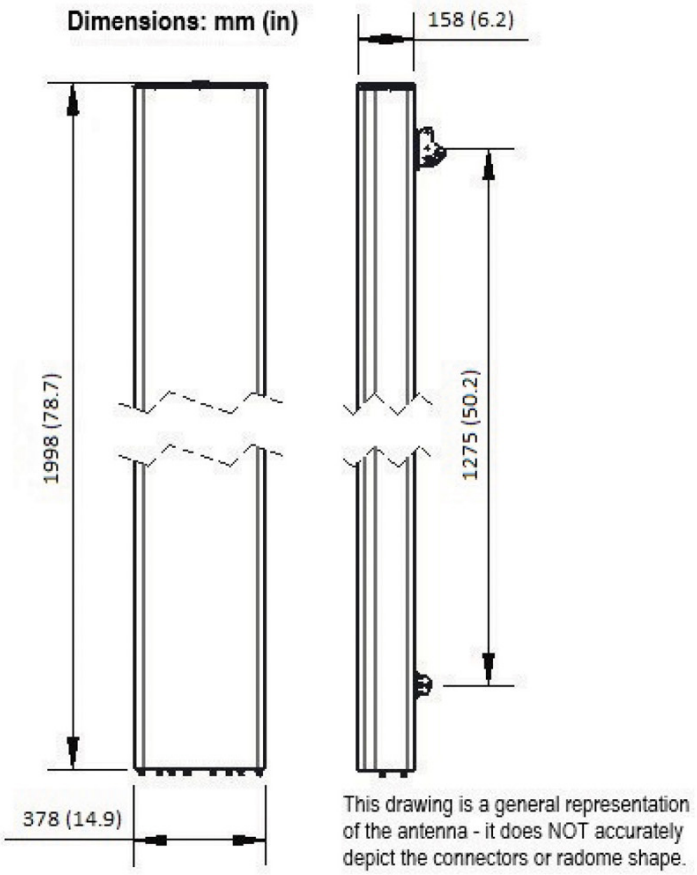
| ITEM | MODEL NUMBER | WEIGHT |
|---|---|---|
| Beam Tilt Mounting Bracket Kit for Pole Diameter 50-125 mm (2.0-4.9 in)<br>*Refer to ordering options* | APM50-H1 | 4.0 kg (8.8 lbs) |
| Direct Pipe No Tilt Bracket Kit for Pole Diameter 50-125 mm (2.0-4.9 in)<br>*Refer to ordering options* | APM50-H1N | 3.0 kg (6.6 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