



**APXVAA4L24\_43-U-NA20**

12-Ports, X-Pol, Panel Antenna, 2.4m, 2x 617-894/4x 1695-2690 MHz 65deg, Integrated RET

**FEATURES / BENEFITS**

- MIMO 4x4 in low-band and mid-band x2 (L/CL & CR/R)
- Integrated and fieldreplaceable RET
- ACU model number: x3 ACU-A20-SR, ACU HW 05
- Compliant with AISG V2.0 and 3GPP
- AISG jumper cable included
- Mechanical down tilt kit included



**Technical features**

**ELECTRICAL SPECIFICATIONS**

| Electrical Specification Header |      | Low Band Arrays (617-894 MHz) Ports 1-4 |            |            |
|---------------------------------|------|---|------------|------------|
| Frequency Band                  | MHz  | 617-698                                 | 698-806    | 806-894    |
| Gain                            | dBi  | 15.7                                    | 15.9       | 16.0       |
| Azimuth Beamwidth 3dB           | Deg  | 70+/-3                                  | 68+/-3     | 65+/-4     |
| Elevation Beamwidth 3dB         | Deg  | 9.9+/-7                                 | 8.6+/-7    | 7.6+/-3    |
| Cross-Pol at Boresight          | dB   | 22                                      | 21         | 21         |
| F/B at 180 Copolar              | dB   | 28                                      | 28         | 28         |
| Electrical Downtilt             | Deg  | 2 to 12                                 | 2 to 12    | 2 to 12    |
| First Upper Side Lobe           | dB   | 15                                      | 15         | 16         |
| VSWR                            | -    | 1.5:1                                   | 1.5:1      | 1.5:1      |
| Return Loss                     | dB   | -14                                     | -14        | -14        |
| Cross Polar Isolation           | dB   | 25                                      | 25         | 25         |
| 3rd Order PIM 2 x 43dBm         | dBc  | -153                                    | -153       | -153       |
| Maximum CW Power per Port       | Watt | 400                                     | 400        | 400        |
| Gain Over All Tilts             | dBi  | 15.1 +/-0.6                             | 15.2+/-0.7 | 15.4+/-0.6 |
| Cross-Pol over Sector           | dB   | 10                                      | 7          | 5          |
| F/B at +/-30° Total Power       | dB   | 19                                      | 20         | 20         |
| Upper Side Lobe Peak to +20     | dB   | 15                                      | 15         | 16         |



**ELECTRICAL SPECIFICATIONS**

| Electrical Specification Header |      | High Band Arrays (1695-2690 MHz) Ports 5-12 |            |           |             |              |
|---------------------------------|------|---|------------|-----------|-------------|--------------|
| Frequency Band                  | MHz  | 1695-1880                                   | 1850-1990  | 1920-2200 | 2200-2500   | 2500-2690    |
| Gain                            | dBi  | 17.9  | 18.6       | 19.8      | 19.2        | 19.1         |
| Azimuth Beamwidth 3dB           | Deg  | 67+/-7                                      | 65+/-9     | 61+/-10   | 59+/-6      | 58+/-8       |
| Elevation Beamwidth 3dB         | Deg  | 5.6+/- .5                                   | 5.3+/- .4  | 4.8+/- .6 | 4.5+/- .3   | 4.4+/- .4    |
| Cross-Pol at Boresight          | dB   | 23  | 21         | 20        | 20          | 19           |
| F/B at 180 Copolar              | dB   | 32  | 32         | 32        | 31          | 30           |
| Electrical Downtilt             | Deg  | 2 to 12                                     | 2 to 12    | 2 to 12   | 2 to 12     | 2 to 12      |
| First Upper Sidelobe            | dB   | 15  | 15         | 16        | 17          | 17           |
| VSWR                            | -    | 1.5:1                                       | 1.5:1      | 1.5:1     | 1.5:1       | 1.5:1        |
| Return Loss                     | dB   | -14   | -14        | -14       | -14         | -14          |
| Cross Polar Isolation           | dB   | 25  | 25         | 25        | 25          | 25           |
| 3rd Order PIM 2 x 43dBm         | dBc  | -153  | -153       | -153      | -153        | -153         |
| Maximum CW Power per Port       | Watt | 250   | 250        | 250       | 250         | 250          |
| Gain Over All Tilts             | dBi  | 16.9+/-1                                    | 17.8+/- .8 | 18.8+/-1  | 18.1 +/-1.1 | 17.7+/- .1.4 |
| Cross-Pol over Sector           | dB   | 5   | 6          | 6         | 2           | 1            |
| F/B at +/-30° Total Power       | dB   | 25  | 25         | 26        | 23          | 23           |
| Upper Side Lobe Peak to +20     | dB   | 14  | 15         | 14        | 13          | 11           |

**ELECTRICAL SPECIFICATIONS**

|              |     |        |
|--------------|-----|--------|
| Impedance    | Ohm | 50     |
| Polarization | Deg | +/- 45 |

**MECHANICAL SPECIFICATIONS**

|                                 |         |   |
|---------------------------------|---------|---|
| Dimensions - H x W x D          | mm (in) | 2436 x 609 x 215 (95.9 x 24 x 8.5)                                  |
| Weight (Antenna Only)           | kg (lb) | 65 (143.3)  |
| Weight (Mounting Hardware only) | kg (lb) | 11.5 (25.3)   |
| Packing size- HxWxD             | mm (in) | 2565 x 735 x 390 (101 x 29 x 15.4)                                  |
| Shipping Weight                 | kg (lb) | 86.7 (191.1)  |
| Connector type                  |         | 12 x 4.3-10 female at bottom + 6 AISG connectors (3 male, 3 female) |
| Radome Material / Color         |         | Fiber Glass / Light Grey RAL7035                                    |

**TESTING AND ENVIRONMENTAL**

|                              |         |                         |
|------------------------------|---------|-------------------------|
| Temperature Range            | °C (°F) | -40 to 60 (-40 to 140 ) |
| Lightning protection         |         | Direct Ground           |
| Survival/Rated Wind Velocity | km/h    | 240 (150 )              |
| Wind Load @Rated Wind Front  | N       | 1820                    |
| Wind Load @Rated Wind Side   | N       | 486                     |
| Wind Load @Rated Wind Rear   | N       | 1102                    |

**ORDERING INFORMATION**

| Order No.            | Configuration                             | Mounting Hardware                 | Mounting pipe Diameter | Shipping Weight |
|----------------------|---|-----------------------------------|------------------------|-----------------|
| APXVAA4L24_43-U-NA20 | ACU-A20-SR Field Replace RET included (3) | APM40-5E Beam tilt kit (included) | 60-120mm               | 86.7 Kg         |

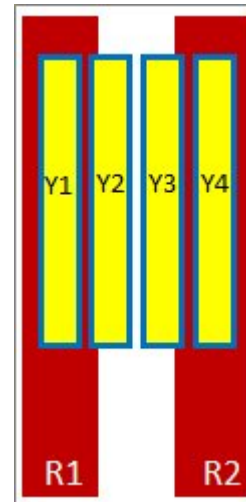
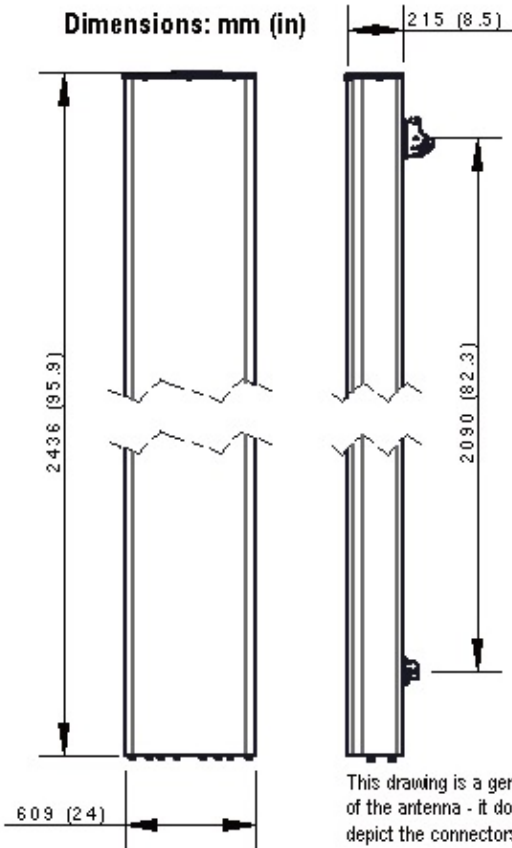
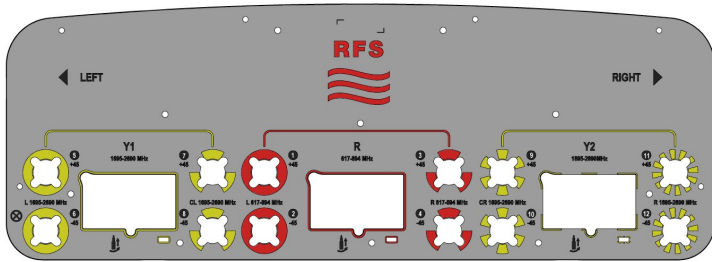


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| Port | Array     | Frequency | RET | AISG RET UID    |
|------|-----------|-----------|-----|-----------------|
| 1    | R1        | 617-894   | R1  | RFxxxxxxxxx-2R1 |
| 2    |           | 617-894   |     |                 |
| 3    | R2        | 617-894   |     |                 |
| 4    |           | 617-894   |     |                 |
| 5    | Y1        | 1695-2690 | Y1  | RFxxxxxxxxx-2Y1 |
| 6    | Y2        | 1695-2690 |     |                 |
| 7    |           | 1695-2690 |     |                 |
| 8    | 1695-2690 |           |     |                 |
| 9    | Y3        | 1695-2690 | Y2  | RFxxxxxxxxx-2Y2 |
| 10   | Y4        | 1695-2690 |     |                 |
| 11   |           | 1695-2690 |     |                 |
| 12   | 1695-2690 |           |     |                 |

| RET Information   |               |               |
|-------------------|---------------|---------------|
| Frequency         | 617-894       | 1695-2690     |
| Model             | ACU-A20-SR    | ACU-A20-SR    |
| Location          | Semi-internal | Semi-Internal |
| Field Replaceable | Yes           | Yes           |
| Quantity          | 1             | 2             |
| RET ID            | R1            | Y1 & Y2       |



External Document Links

- [APM40\\_Series\\_Installation\\_Instructions](#)
- [CAxxx-7 Series](#)
- [Manual Overdrive Instructions](#)

Notes

- All electrical parameters are compliant with BASTA NGMN 11.1 requirements.
- A one-meter AISG cable CA010-7 comes in the box, and for



additional cable information please click ""External Document Links"".

- For additional mounting information please click ""External Document Links"".
- **Radiating patterns:** [Request pattern files](#)