

# RRV3-65D-R5



10-port sector antenna, 4x 694–960 and 6x 1695–2690 MHz, 65° HPBW, 5x RET

- All Internal RET actuators are connected in “Cascaded SRET” configuration
- Supports re-configurable antenna sharing capability enabling control of the internal RET system using up to two separate RET compatible OEM radios

This product will be discontinued on: November 30, 2024

## General Specifications

|   |  |
|---|--|
| <b>Antenna Type</b>                     | Sector   |
| <b>Band</b>                             | Multiband  |
| <b>Grounding Type</b>                   | RF connector inner conductor and body grounded to reflector and mounting bracket                                     |
| <b>Performance Note</b>                 | Outdoor usage   Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN |
| <b>Radome Material</b>                  | Fiberglass, UV resistant   |
| <b>Radiator Material</b>                | Low loss circuit board   |
| <b>Reflector Material</b>               | Aluminum   |
| <b>RF Connector Interface</b>           | 4.3-10 Female  |
| <b>RF Connector Location</b>            | Bottom   |
| <b>RF Connector Quantity, high band</b> | 6  |
| <b>RF Connector Quantity, low band</b>  | 4  |
| <b>RF Connector Quantity, total</b>     | 10   |

## Remote Electrical Tilt (RET) Information

|  |                                   |
|--|-----------------------------------|
| <b>RET Hardware</b>                                  | CommRET v2                        |
| <b>RET Interface</b>                                 | 8-pin DIN Female   8-pin DIN Male |
| <b>RET Interface, quantity</b>                       | 2 female   2 male                 |
| <b>Input Voltage</b>                                 | 10–30 Vdc                         |
| <b>Internal RET</b>                                  | High band (3)   Low band (2)      |
| <b>Power Consumption, idle state, maximum</b>        | 1 W                               |
| <b>Power Consumption, normal conditions, maximum</b> | 8 W                               |

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**Protocol** 3GPP/AISG 2.0 (Single RET)

## Dimensions

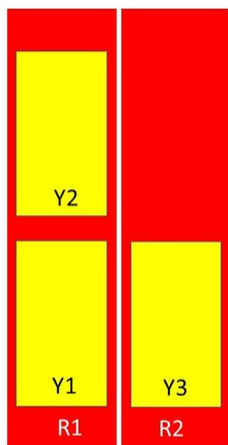
**Width** 498 mm | 19.606 in

**Depth** 197 mm | 7.756 in

**Length** 2688 mm | 105.827 in

**Net Weight, without mounting kit** 43.2 kg | 95.24 lb

## Array Layout



| Array | Freq (MHz) | Conns | RET (SRET) | AISG RET UID         |
|-------|------------|-------|------------|----------------------|
| R1    | 694-960    | 1-2   | 1          | CPxxxxxxxxxxxxxxxxR1 |
| R2    | 694-960    | 3-4   | 2          | CPxxxxxxxxxxxxxxxxR2 |
| Y1    | 1695-2690  | 5-6   | 3          | CPxxxxxxxxxxxxxxxxY1 |
| Y2    | 1695-2690  | 7-8   | 4          | CPxxxxxxxxxxxxxxxxY2 |
| Y3    | 1695-2690  | 9-10  | 5          | CPxxxxxxxxxxxxxxxxY3 |

Left Bottom Right

(Sizes of colored boxes are not true depictions of array sizes)

## Electrical Specifications

**Impedance** 50 ohm

**Operating Frequency Band** 1695 – 2690 MHz | 694 – 960 MHz

**Polarization** ±45°

**Total Input Power, maximum** 1,800 W @ 50 °C

## Electrical Specifications

| Frequency Band, MHz                   | 694–790 | 790–890 | 880–960 | 1695–1880 | 1850–1990 | 1920–2180 | 2300–2500 | 2500–2690 |
|---------------------------------------|---------|---------|---------|-----------|-----------|-----------|-----------|-----------|
| <b>Gain, dBi</b>                      | 15.8    | 16.4    | 16.8    | 17        | 17.6      | 17.8      | 18.3      | 17.8      |
| <b>Beamwidth, Horizontal, degrees</b> | 70      | 67      | 62      | 59        | 60        | 61        | 61        | 69        |
| <b>Beamwidth, Vertical, degrees</b>   | 8.1     | 7.4     | 6.8     | 7.5       | 7         | 6.6       | 5.7       | 5.3       |

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|   |          |          |          |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>Beam Tilt, degrees</b>                           | 2-12     | 2-12     | 2-12     | 2-12     | 2-12     | 2-12     | 2-12     | 2-12     |
| <b>USLS (First Lobe), dB</b>                        | 12       | 16       | 17       | 20       | 20       | 20       | 18       | 16       |
| <b>Front-to-Back Ratio at 180°, dB</b>              | 32       | 32       | 33       | 37       | 38       | 36       | 34       | 33       |
| <b>Isolation, Cross Polarization, dB</b>            | 28       | 28       | 28       | 28       | 28       | 28       | 28       | 28       |
| <b>Isolation, Inter-band, dB</b>                    | 30       | 30       | 30       | 30       | 30       | 30       | 30       | 30       |
| <b>VSWR   Return loss, dB</b>                       | 1.5 14.0 | 1.5 14.0 | 1.5 14.0 | 1.5 14.0 | 1.5 14.0 | 1.5 14.0 | 1.5 14.0 | 1.5 14.0 |
| <b>PIM, 3rd Order, 2 x 20 W, dBc</b>                | -150     | -150     | -150     | -150     | -150     | -150     | -150     | -150     |
| <b>Input Power per Port at 50°C, maximum, watts</b> | 350      | 350      | 350      | 300      | 300      | 300      | 250      | 250      |

## Electrical Specifications, BASTA

| <b>Frequency Band, MHz</b>                         | <b>694-790</b>                 | <b>790-890</b>                 | <b>880-960</b>                 | <b>1695-1880</b>               | <b>1850-1990</b>               | <b>1920-2180</b>               | <b>2300-2500</b>               | <b>2500-2690</b>               |
|--|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| <b>Gain by all Beam Tilts, average, dBi</b>        | 15.5                           | 16.2                           | 16.6                           | 16.5                           | 17.2                           | 17.4                           | 17.8                           | 17.2                           |
| <b>Gain by all Beam Tilts Tolerance, dB</b>        | ±0.5                           | ±0.4                           | ±0.3                           | ±0.9                           | ±0.5                           | ±0.6                           | ±0.6                           | ±0.7                           |
| <b>Gain by Beam Tilt, average, dBi</b>             | 2° 15.5<br>7° 15.6<br>12° 15.4 | 2° 16.1<br>7° 16.3<br>12° 16.0 | 2° 16.5<br>7° 16.7<br>12° 16.3 | 2° 16.3<br>7° 16.6<br>12° 16.4 | 2° 16.8<br>7° 17.3<br>12° 17.2 | 2° 16.9<br>7° 17.5<br>12° 17.5 | 2° 17.3<br>7° 17.9<br>12° 17.8 | 2° 16.8<br>7° 17.4<br>12° 17.1 |
| <b>Beamwidth, Horizontal Tolerance, degrees</b>    | ±4.4                           | ±2.9                           | ±4.6                           | ±3.7                           | ±1.6                           | ±2.3                           | ±6.4                           | ±6.3                           |
| <b>Beamwidth, Vertical Tolerance, degrees</b>      | ±0.4                           | ±0.6                           | ±0.4                           | ±0.5                           | ±0.3                           | ±0.5                           | ±0.3                           | ±0.2                           |
| <b>USLS, beampeak to 20° above beampeak, dB</b>    | 12                             | 15                             | 16                             | 13                             | 15                             | 16                             | 15                             | 13                             |
| <b>Front-to-Back Total Power at 180° ± 30°, dB</b> | 21                             | 21                             | 22                             | 30                             | 32                             | 29                             | 28                             | 27                             |
| <b>CPR at Boresight, dB</b>                        | 25                             | 25                             | 25                             | 18                             | 22                             | 22                             | 17                             | 17                             |
| <b>CPR at Sector, dB</b>                           | 8                              | 5                              | 7                              | 8                              | 10                             | 9                              | 8                              | 5                              |

## Mechanical Specifications

|   |   |
|---|---|
| <b>Mechanical Tilt Range</b>            | 0°-12°                                      |
| <b>Wind Loading @ Velocity, frontal</b> | 1,070.0 N @ 150 km/h (240.5 lbf @ 150 km/h) |
| <b>Wind Loading @ Velocity, lateral</b> | 375.0 N @ 150 km/h (84.3 lbf @ 150 km/h)    |
| <b>Wind Loading @ Velocity, maximum</b> | 1,385.0 N @ 150 km/h (311.4 lbf @ 150 km/h) |
| <b>Wind Loading @ Velocity, rear</b>    | 880.0 N @ 150 km/h (197.8 lbf @ 150 km/h)   |
| <b>Wind Speed, maximum</b>              | 241 km/h (150 mph)                          |

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## Packaging and Weights

|                       |                      |
|-----------------------|----------------------|
| <b>Width, packed</b>  | 565 mm   22.244 in   |
| <b>Depth, packed</b>  | 309 mm   12.165 in   |
| <b>Length, packed</b> | 2935 mm   115.551 in |
| <b>Weight, gross</b>  | 64.1 kg   141.316 lb |

## Regulatory Compliance/Certifications

| <b>Agency</b> | <b>Classification</b>  |
|---------------|--|
| CHINA-ROHS    | Above maximum concentration value  |
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |
| ROHS          | Compliant/Exempted   |
| UK-ROHS       | Compliant/Exempted   |



## Included Products

- BSAMNT-4 – Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.
- BSAMNT-M4 – Middle Downtilt Mounting Kit for Long Antennas for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor bracket set.

## \* Footnotes

**Performance Note** Severe environmental conditions may degrade optimum performance