

# RRVVHHTT-65D-R6



1. 16-port, sector antenna, RF port assignments are as follows: R1+R2 = 694–960, Y2+Y4 = 1695–2690MHz, B1+B2 = 1695–2180 and Y1+Y3 = 2490–2690 MHz, 65° horizontal beamwidth, 6x Internal RET. B1+B2 and Y1+Y3 share common RET, 2.7m

- 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
- A common electrical tilt setting is shared by RF Ports B1+B2 and Y1+Y3
- Electrical tilt settings applicable to RF Ports R1, R2, Y2, Y4 can be set independently (See Array Layout and RET Table below)

## OBSOLETE

This product was discontinued on: March 31, 2023

Replaced By:

RRZZHHTT-65D-R6

16-port, sector antenna, RF port assignments are as follows: R1+R2 = 694–960, Y2+Y4 = 1427–2690MHz, B1+B2 = 1695–2180 and Y1+Y3 = 2490–2690 MHz, 65° horizontal beamwidth, 6x Internal RET. B1+B2 and Y1+Y3 share common RET, 2.7m

## 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> | 12   |
| <b>RF Connector Quantity, mid band</b>  | 0  |
| <b>RF Connector Quantity, low band</b>  | 4  |

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RF Connector Quantity, total

16

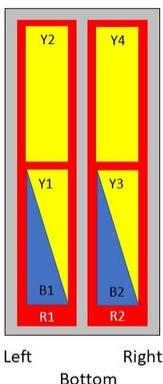
## Remote Electrical Tilt (RET) Information

|   |                                   |
|---|-----------------------------------|
| RET Hardware                                  | CommRET v2                        |
| RET Interface                                 | 8-pin DIN Female   8-pin DIN Male |
| RET Interface, quantity                       | 2 female   2 male                 |
| Input Voltage                                 | 10–30 Vdc                         |
| Internal RET                                  | High band (4)   Low band (2)      |
| Power Consumption, idle state, maximum        | 1 W                               |
| Power Consumption, normal conditions, maximum | 8 W                               |
| 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 | 53.2 kg   117.286 lb |

## Array Layout

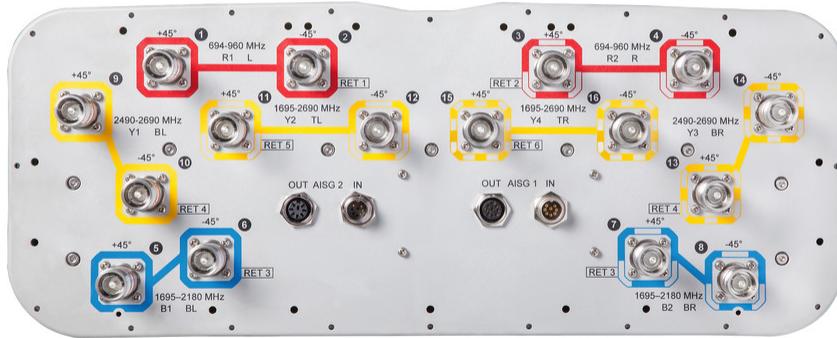


| Array | Freq (MHz) | Conns | RET (SRET) | AISG RET UID           |
|-------|------------|-------|------------|------------------------|
| R1    | 694-960    | 1-2   | 1          | CPxxxxxxxxxxxxxxxxxR1  |
| R2    | 694-960    | 3-4   | 2          | CPxxxxxxxxxxxxxxxxxR2  |
| B1    | 1695-2180  | 5-6   | 3          | CPxxxxxxxxxxxxxxxxx B1 |
| B2    | 1695-2180  | 7-8   |            | CPxxxxxxxxxxxxxxxxx B2 |
| Y1    | 2490-2690  | 9-10  | 4          | CPxxxxxxxxxxxxxxxxx Y1 |
| Y3    | 2490-2690  | 13-14 |            |                        |
| Y2    | 1695-2690  | 11-12 | 5          | CPxxxxxxxxxxxxxxxxx Y2 |
| Y4    | 1695-2690  | 15-16 | 6          | CPxxxxxxxxxxxxxxxxx Y3 |

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

## Port Configuration

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## Electrical Specifications

|                                   |   |
|-----------------------------------|---|
| <b>Impedance</b>                  | 50 ohm  |
| <b>Operating Frequency Band</b>   | 1695 – 2180 MHz   1695 – 2690 MHz   2490 – 2690 MHz   694 – 960 MHz |
| <b>Polarization</b>               | ±45°  |
| <b>Total Input Power, maximum</b> | 900 W @ 50 °C   |

## Electrical Specifications

|  | R1-R2          | R1-R2          | B1-B2            | B1-B2            | Y1&Y3            | Y2&Y4            | Y2&Y4            |
|--|----------------|----------------|------------------|------------------|------------------|------------------|------------------|
| <b>Frequency Band, MHz</b>               | <b>694–862</b> | <b>880–960</b> | <b>1920–2180</b> | <b>1695–1880</b> | <b>2490–2690</b> | <b>1695–2180</b> | <b>2300–2690</b> |
| <b>Gain, dBi</b>                         | 16.2           | 16.7           | 17.3             | 16.8             | 16.9             | 17               | 17.4             |
| <b>Beamwidth, Horizontal, degrees</b>    | 68             | 61             | 60               | 58               | 68               | 59               | 62               |
| <b>Beamwidth, Vertical, degrees</b>      | 8.1            | 7              | 6.8              | 7.6              | 5.7              | 7.4              | 5.6              |
| <b>Beam Tilt, degrees</b>                | 2–12           | 2–12           | 2–12             | 2–12             | 2–12             | 2–12             | 2–12             |
| <b>USLS (First Lobe), dB</b>             | 18             | 20             | 20               | 18               | 17               | 15               | 17               |
| <b>Front-to-Back Ratio at 180°, dB</b>   | 31             | 32             | 36               | 35               | 32               | 38               | 33               |
| <b>Isolation, Cross Polarization, dB</b> | 28             | 28             | 28               | 28               | 28               | 28               | 28               |

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|   |            |            |            |            |            |            |            |
|---|------------|------------|------------|------------|------------|------------|------------|
| <b>Isolation, Inter-band, dB</b>                    | 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 |
| <b>PIM, 3rd Order, 2 x 20 W, dBc</b>                | -150       | -150       | -150       | -150       | -150       | -150       | -150       |
| <b>Input Power per Port at 50°C, maximum, watts</b> | 300        | 300        | 250        | 250        | 150        | 250        | 200        |

## 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)                          |

## Packaging and Weights

|                       |                      |
|-----------------------|----------------------|
| <b>Width, packed</b>  | 608 mm   23.937 in   |
| <b>Depth, packed</b>  | 352 mm   13.858 in   |
| <b>Length, packed</b> | 2880 mm   113.386 in |
| <b>Weight, gross</b>  | 75 kg   165.346 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

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**Performance Note**

Severe environmental conditions may degrade optimum performance