# RRZZVVT4S4-65BR8V4

28-port sector antenna, 4x 694-960, 4x 1427-2690 and 4x 1695-2690 MHz 65° HPBW, 8x 2300-2690 and 8x 3300-3800MHz, 90° HPBW, 8x RET

- Also includes 1x 4-Column Array for 2300-2690 MHz and a separate 1x 4-Column Array for 3300-3800MHz. Column spacing optimized to support Soft Split Beamforming
- Includes eight Internal RET's
- Supports re-configurable antenna sharing capability enabling control of the internal RET system using up to two separate RET compatible OEM radios
- New end cap shape for additional wind load reduction
- 2x MQ4 and 2x MQ5 cluster connectors (comprising 16 RF ports + 2 calibration ports in total) are provided for the beam-forming arrays

## General Specifications

| | |
|---|---|
| **Antenna Type** | Sector and beamforming |
| **Band** | Multiband |
| **Calibration Connector Interface** | MQ5 |
| **Calibration Connector Quantity** | 2 |
| **Color** | Light Gray (RAL 7035) |
| **Grounding Type** | RF connector inner conductor and body grounded to reflector and mounting bracket |
| **Performance Note** | Outdoor usage |
| **Radome Material** | Fiberglass, UV resistant |
| **Reflector Material** | Aluminum |
| **RF Connector Interface** | 4.3-10 Female \| MQ4 \| MQ5 |
| **RF Connector Location** | Bottom |
| **RF Connector Quantity, high band** | 16 |
| **RF Connector Quantity, mid band** | 8 |
| **RF Connector Quantity, low band** | 4 |
| **RF Connector Quantity, total** | 28 |

## 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 |

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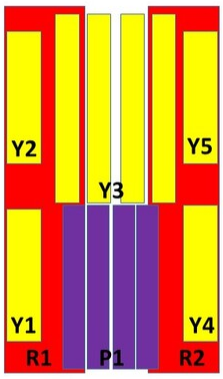
| | |
|---|---|
| **Input Voltage** | 10–30 Vdc |
| **Internal RET** | High band (2) \| Low band (2) \| Mid band (4) |
| **Power Consumption, active state, maximum** | 8 W |
| **Power Consumption, idle state, maximum** | 1 W |
| **Protocol** | 3GPP/AISG 2.0 (Single RET) |

## Dimensions

| | |
|---|---|
| **Width** | 498 mm \| 19.606 in |
| **Depth** | 197 mm \| 7.756 in |
| **Length** | 2180 mm \| 85.827 in |
| **Net Weight, without mounting kit** | 48 kg \| 105.822 lb |

## Array Layout




| Array | Freq (MHz) | Conns | RET (SRET) | AISG RET UID |
|---|---|---|---|---|
| R1 | 694-960 | 1-2 | 1 | CPxxxxxxxxxxxxxxR1 |
| R2 | 694-960 | 3-4 | 2 | CPxxxxxxxxxxxxxxR2 |
| Y1 | 1427-2690 | 5-6 | 3 | CPxxxxxxxxxxxxxxY1 |
| Y2 | 1695-2690 | 7-8 | 4 | CPxxxxxxxxxxxxxxY2 |
| Y3 | 2300-2690 | 9-16 | 5 | CPxxxxxxxxxxxxxxY3 |
| Y4 | 1427-2690 | 17-18 | 6 | CPxxxxxxxxxxxxxxY4 |
| Y5 | 1695-2690 | 19-20 | 7 | CPxxxxxxxxxxxxxxY5 |
| P1 | 3300-3800 | 21-28 | 8 | CPxxxxxxxxxxxxxxP1 |

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

## Port Configuration

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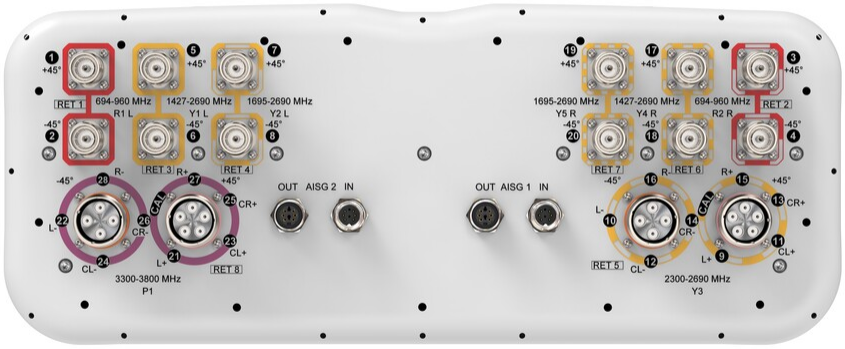


## Electrical Specifications

| | |
|---|---|
| **Impedance** | 50 ohm |
| **Operating Frequency Band** | 1427 – 2690 MHz \| 1695 – 2690 MHz \| 2300 – 2690 MHz \| 3300 – 3800 MHz \| 694 – 960 MHz |
| **Polarization** | ±45° |
| **Total Input Power, maximum** | 1,900 W @ 50 °C |

## Electrical Specifications

| **Frequency Band, MHz** | **694–790** | **790–890** | **890–960** | **1427–1518** | **1695–2180** | **2300–2690** | **1695–2180** | **2300–2690** | **2300–2690** | **3300–3800** |
|---|---|---|---|---|---|---|---|---|---|---|
| **Gain, dBi** | 15.1 | 15.5 | 15.7 | 14.7 | 16.3 | 17.2 | 15.7 | 16.8 | 15.2 | 16 |
| **Beamwidth, Horizontal, degrees** | 70 | 63 | 61 | 82 | 68 | 63 | 73 | 58 | 91 | 90 |
| **Beamwidth, Vertical, degrees** | 10.3 | 9.4 | 8.6 | 10.1 | 7.9 | 5.9 | 8.9 | 7 | 5.6 | 6.1 |
| **Beam Tilt, degrees** | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 |
| **USLS (First Lobe), dB** | 17 | 18 | 20 | 15 | 16 | 17 | 16 | 18 | 17 | 17 |
| **Front-to-Back Ratio at 180°, dB** | 31 | 29 | 29 | 31 | 29 | 33 | 31 | 30 | 31 | 30 |
| **Coupling level, Amp, Antenna port to Cal port, dB** | | | | | | | | | 26 | 26 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Coupling level, max Amp Δ, Antenna port to Cal port, dB** | | | | | | | | | ±2 | ±2 |
| **Coupler, max Amp Δ, Antenna port to Cal port, dB** | | | | | | | | | 0.9 | 0.9 |
| **Coupler, max Phase Δ, Antenna port to Cal port, degrees** | | | | | | | | | 7 | 7 |
| **Isolation, Cross Polarization, dB** | 28 | 28 | 28 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| **Isolation, Inter-band, dB** | 28 | 28 | 28 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| **Isolation, Co-polarization, dB** | | | | | | | | | 20 | 20 |
| **VSWR \| Return loss, dB** | 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 | 1.5 \| 14.0 | 1.5 \| 14.0 |
| **PIM, 3rd Order, 2 x 20 W, dBc** | -150 | -150 | -150 | -150 | -150 | -150 | -150 | -150 | -130 | -130 |
| **Input Power per Port at 50°C, maximum, watts** | 300 | 300 | 300 | 250 | 250 | 200 | 250 | 200 | 150 | 75 |

## Electrical Specifications, Broadcast 65°

| **Frequency Band, MHz** | **2300–2690** | **3300–3800** |
|---|---|---|
| **Gain, dBi** | 17.6 | 18 |
| **Beamwidth, Horizontal, degrees** | 65 | 65 |
| **Beamwidth, Vertical, degrees** | 5.7 | 6.3 |
| **Front-to-Back Total Power at 180° ± 30°, dB** | 27 | 27 |
| **USLS (First Lobe), dB** | 18 | 21 |

## Electrical Specifications, Service Beam

| **Frequency Band, MHz** | **2300–2690** | **3300–3800** |
|---|---|---|
| **Steered 0° Gain, dBi** | 20.3 | 20.8 |
| **Steered 0°** | 25 | 24 |

| | | |
|---|---|---|
| **Beamwidth, Horizontal, degrees** | | |
| **Steered 0° Front-to-Back Total Power at 180° ± 30°, dB** | 31 | 30 |
| **Steered 0° Horizontal Sidelobe, dB** | 14 | 13 |
| **Steered 30° Gain, dBi** | 19.3 | 20.1 |
| **Steered 30° Beamwidth, Horizontal, degrees** | 29 | 27 |
| **Steered 30° Front-to-Back Total Power at 180° ± 30°, dB** | 28 | 28 |

## Electrical Specifications, Soft Split

| **Frequency Band, MHz** | **2300–2690** | **3300–3800** |
|---|---|---|
| **Gain, dBi** | 19.2 | 20 |
| **Beamwidth, Horizontal, degrees** | 33 | 31 |
| **Front-to-Back Total Power at 180° ± 30°, dB** | 30 | 28 |
| **Horizontal Sidelobe, dB** | 17 | 17 |

## Mechanical Specifications

| | |
|---|---|
| **Wind Loading @ Velocity, frontal** | 760.0 N @ 150 km/h (170.9 lbf @ 150 km/h) |
| **Wind Loading @ Velocity, lateral** | 233.0 N @ 150 km/h (52.4 lbf @ 150 km/h) |
| **Wind Loading @ Velocity, maximum** | 911.0 N @ 150 km/h (204.8 lbf @ 150 km/h) |
| **Wind Loading @ Velocity, rear** | 523.0 N @ 150 km/h (117.6 lbf @ 150 km/h) |
| **Wind Speed, maximum** | 241 km/h (150 mph) |

## Packaging and Weights

| | |
|---|---|
| **Width, packed** | 565 mm \| 22.244 in |
| **Depth, packed** | 368 mm \| 14.488 in |
| **Length, packed** | 2359 mm \| 92.874 in |

| | |
|---|---|
| **Weight, gross** | 61.9 kg \| 136.466 lb |

## Regulatory Compliance/Certifications

| Agency | Classification |
|---|---|
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |

## 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. |

## * Footnotes

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