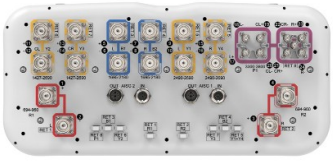
# RRZZHHTTS4-65B-R8N



24-port sector antenna, 4x 694-960, 4x 1427-2690, 4x 1695-2180, 4x 2490-2690 MHz, 65° HPBW, and 8x 3300-3800 MHz, 90° HPBW, 8x RET

- Antenna includes 2x Single Column X-Pol Arrays for 694-960MHz and 2x Single Column X-Pol Arrays for 1427-2690MHz, suitable for 4x MIMO applications
- Includes 2x Single Column X-Pol Diplexed Arrays providing 4-Ports x 1695-2180MHz and 4 Ports x 2490-2690MHz, suitable for 4x MIMO applications
- Retractable tilt indicator rods
- Includes eight Internal RET's. All 2490-2690MHz (Y1&Y4) ports share common RET
- M-LOC cluster connector for 3.3-3.8GHz, equipped with calibration port
- Antenna shape optimized for wind load reduction

## General Specifications

| | |
|---|---|
| **Antenna Type** | Sector & beamforming |
| **Band** | Multiband |
| **Calibration Connector Interface** | M-LOC |
| **Calibration Connector Quantity** | 1 |
| **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 \| M-LOC |
| **RF Connector Location** | Bottom |
| **RF Connector Quantity, high band** | 8 |
| **RF Connector Quantity, mid band** | 12 |
| **RF Connector Quantity, low band** | 4 |
| **RF Connector Quantity, total** | 24 |

## 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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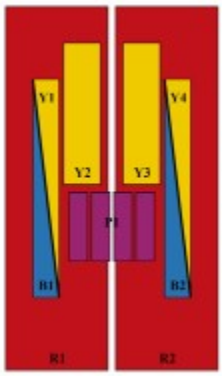
| | |
|---|---|
| **Input Voltage** | 10–30 Vdc |
| **Internal RET** | High band (1) \| Low band (2) \| Mid band (5) |
| **Power Consumption, active state, maximum** | 8 W |
| **Power Consumption, idle state, maximum** | 1 W |
| **Protocol** | 3GPP/AISG 2.0 (Single RET) |

## Dimensions

| | |
|---|---|
| **Width** | 430 mm \| 16.929 in |
| **Depth** | 197 mm \| 7.756 in |
| **Length** | 2100 mm \| 82.677 in |
| **Net Weight, antenna only** | 41.2 kg \| 90.83 lb |
| **TDD Column Spacing** | 42 mm \| 1.654 in |

## Array Layout




| Array ID | Frequency (MHz) | RF Connector | RET (SRET) | AISG No. | AISG RET UID |
|---|---|---|---|---|---|
| R1 | 694-960 | 1 - 2 | 1 | AISG1 | CPxxxxxxxxxxxxxxR1 |
| R2 | 694-960 | 3 - 4 | 2 | AISG1 | CPxxxxxxxxxxxxxxR2 |
| B1 | 1695-2180 | 5 - 6 | 3 | AISG1 | CPxxxxxxxxxxxxxxB1 |
| B2 | 1695-2180 | 7 - 8 | 4 | AISG1 | CPxxxxxxxxxxxxxxB2 |
| Y1 | 2490-2690 | 9 - 10 | 5 | AISG1 | CPxxxxxxxxxxxxxxY1 |
| Y4 | 2490-2690 | 15 - 16 | | | |
| Y2 | 1427-2690 | 11 - 12 | 6 | AISG1 | CPxxxxxxxxxxxxxxY2 |
| Y3 | 1427-2690 | 13 - 14 | 7 | AISG1 | CPxxxxxxxxxxxxxxY3 |
| P1 | 3300-3800 | 17 - 24 | 8 | AISG1 | CPxxxxxxxxxxxxxxP1 |

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

## Port Configuration



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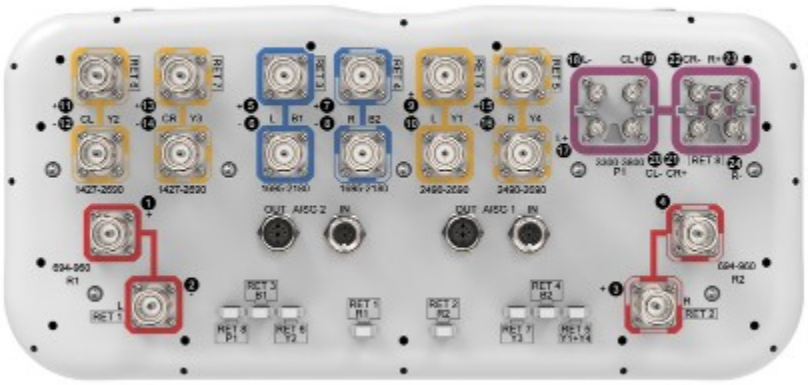

## Electrical Specifications

| | |
|---|---|
| **Impedance** | 50 ohm |
| **Operating Frequency Band** | 1427 – 2690 MHz \| 1695 – 2180 MHz \| 2490 – 2690 MHz \| 3300 – 3800 MHz \| 694 – 960 MHz |
| **Polarization** | ±45° |
| **Total Input Power, maximum** | 900 W @ 50 °C |

## Electrical Specifications

| **Frequency Band, MHz** | **694–790** | **790–890** | **890–960** | **1427–1518** | **1695–2200** | **2300–2690** | **1695–2180** | **2490–2690** | **3300–3800** |
|---|---|---|---|---|---|---|---|---|---|
| **Gain, dBi** | 14.1 | 15 | 15 | 14.1 | 15.9 | 16.6 | 17.1 | 17.7 | 16 |
| **Beamwidth, Horizontal, degrees** | 70 | 60 | 59 | 69 | 63 | 61 | 69 | 64 | 82 |
| **Beamwidth, Vertical, degrees** | 10.6 | 9.5 | 8.7 | 9.9 | 7.6 | 6.2 | 5.2 | 4.2 | 6.1 |
| **Beam Tilt, degrees** | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 |
| **USLS (First Lobe), dB** | 20 | 19 | 18 | 13 | 18 | 20 | 19 | 21 | 16 |
| **Front-to-Back Ratio at 180°, dB** | 31 | 31 | 30 | 34 | 34 | 31 | 32 | 32 | 29 |
| **Coupling level, Amp, Antenna port to Cal port, dB** | | | | | | | | | 26 |
| **Coupling level, max Amp Δ, Antenna port to Cal port, dB** | | | | | | | | | ±2 |
| **Coupler, max Amp Δ, Antenna port to Cal port, dB** | | | | | | | | | 0.9 |



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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Coupler, max Phase Δ, Antenna port to Cal port, degrees** | | | | | | | | | 7 |
| **CPR at Boresight, dB** | 22 | 23 | 23 | 16 | 18 | 17 | 18 | 23 | 18 |
| **Isolation, Cross Polarization, dB** | 27 | 27 | 27 | 26 | 26 | 26 | 27 | 27 | 25 |
| **Isolation, Inter-band, dB** | 27 | 27 | 27 | 26 | 26 | 26 | 26 | 27 | 25 |
| **Isolation, Co-polarization, dB** | | | | | | | | | 19 |
| **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 |
| **PIM, 3rd Order, 2 x 20 W, dBc** | -153 | -153 | -153 | -153 | -153 | -153 | -153 | -153 | -140 |
| **Input Power per Port at 50° C, maximum, watts** | 250 | 250 | 250 | 200 | 200 | 150 | 200 | 150 | 75 |

## Electrical Specifications, Broadcast 65°

| | |
|---|---|
| **Frequency Band, MHz** | **3300–3800** |
| **Gain, dBi** | 16.5 |
| **Beamwidth, Horizontal, degrees** | 57 |
| **Beamwidth, Vertical, degrees** | 6.1 |
| **Front-to-Back Total Power at 180° ± 30°, dB** | 24 |
| **USLS (First Lobe), dB** | 17 |

## Electrical Specifications, Service Beam

| | |
|---|---|
| **Frequency Band, MHz** | **3300–3800** |
| **Steered 0° Gain, dBi** | 20.8 |
| **Steered 0° Beamwidth, Horizontal, degrees** | 23 |
| **Steered 0° Front-to-Back Total Power at 180° ± 30°, dB** | 30 |
| **Steered 0° Horizontal Sidelobe, dB** | 15 |
| **Steered 30° Gain, dBi** | 19.6 |
| **Steered 30° Beamwidth, Horizontal, degrees** | 28 |
| **Steered 30° Front-to-Back Total Power at 180° ± 30°,** | 28 |



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**dB**

## Electrical Specifications, Soft Split

| | |
|---|---|
| **Frequency Band, MHz** | **3300–3800** |
| **Gain, dBi** | 19.7 |
| **Beamwidth, Horizontal, degrees** | 31 |
| **Front-to-Back Total Power at 180° ± 30°, dB** | 28 |
| **Horizontal Sidelobe, dB** | 16 |

## Mechanical Specifications

| | |
|---|---|
| **Wind Loading @ Velocity, frontal** | 495.0 N @ 150 km/h (111.3 lbf @ 150 km/h) |
| **Wind Loading @ Velocity, lateral** | 253.0 N @ 150 km/h (56.9 lbf @ 150 km/h) |
| **Wind Loading @ Velocity, maximum** | 745.0 N @ 150 km/h (167.5 lbf @ 150 km/h) |
| **Wind Loading @ Velocity, rear** | 316.0 N @ 150 km/h (71.0 lbf @ 150 km/h) |
| **Wind Speed, maximum** | 241 km/h (150 mph) |

## Packaging and Weights

| | |
|---|---|
| **Width, packed** | 530 mm \| 20.866 in |
| **Depth, packed** | 349 mm \| 13.74 in |
| **Length, packed** | 2272 mm \| 89.449 in |
| **Weight, gross** | 53.5 kg \| 117.947 lb |

## Regulatory Compliance/Certifications

| Agency | Classification |
|---|---|
| CHINA-ROHS | Below maximum concentration value |
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |
| REACH-SVHC | Compliant as per SVHC revision on www.andrew.com/ProductCompliance |
| ROHS | Compliant |
| UK-ROHS | Compliant/Exempted |

## Included Products

| | | |
|---|---|---|
| BSAMNT-3 | – | 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. |



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## * Footnotes

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



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