

# R3ZZV4-65B-R9



18-port sector antenna, 6x 694-960, 4x 1427-2690 and 8x 1695-2690 MHz, 65° HPBW, 9xRET

- 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

## General Specifications

|   |  |
|---|--|
| <b>Antenna Type</b>                     | Sector   |
| <b>Band</b>                             | Multiband  |
| <b>Color</b>                            | Light Gray (RAL 7035)  |
| <b>Grounding Type</b>                   | RF connector inner conductor and body grounded to reflector and mounting bracket |
| <b>Performance Note</b>                 | Outdoor usage  |
| <b>Radome Material</b>                  | Fiberglass, UV resistant   |
| <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> | 0  |
| <b>RF Connector Quantity, mid band</b>  | 12   |
| <b>RF Connector Quantity, low band</b>  | 6  |
| <b>RF Connector Quantity, total</b>     | 18   |

## Remote Electrical Tilt (RET) Information

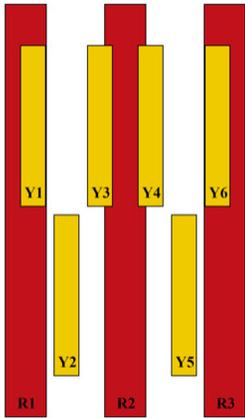
|   |                                   |
|---|-----------------------------------|
| <b>RET Hardware</b>                             | CommRET v2                        |
| <b>RET Interface</b>                            | 8-pin DIN Female   8-pin DIN Male |
| <b>RET Interface, quantity</b>                  | 2 female   2 male                 |
| <b>Input Voltage</b>                            | 10-30 Vdc                         |
| <b>Internal RET</b>                             | Low band (3)   Mid band (6)       |
| <b>Power Consumption, active state, maximum</b> | 8 W                               |
| <b>Power Consumption, idle state, maximum</b>   | 1 W                               |
| <b>Protocol</b>                                 | 3GPP/AISG 2.0                     |

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## Dimensions

|                                 |                      |
|---------------------------------|----------------------|
| <b>Width</b>                    | 579 mm   22.795 in   |
| <b>Depth</b>                    | 212 mm   8.346 in    |
| <b>Length</b>                   | 2100 mm   82.677 in  |
| <b>Net Weight, antenna only</b> | 47.9 kg   105.601 lb |

## Array Layout

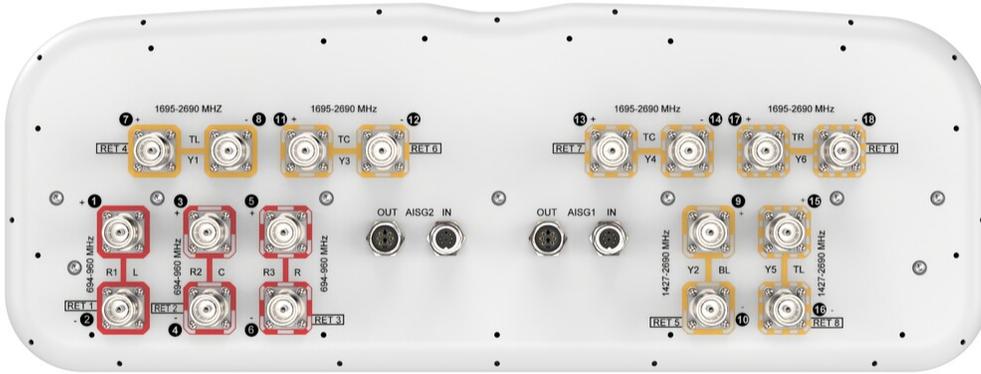


| Array ID | Frequency (MHz) | RF Connector | RET<br>(SRET) | AISG No. | AISG RET UID         |
|----------|-----------------|--------------|---------------|----------|----------------------|
| R1       | 694-960         | 1 - 2        | 1             | AISG1    | CPxxxxxxxxxxxxxxxxR1 |
| R2       | 694-960         | 3 - 4        | 2             | AISG1    | CPxxxxxxxxxxxxxxxxR2 |
| R3       | 694-960         | 5 - 6        | 3             | AISG1    | CPxxxxxxxxxxxxxxxxR3 |
| Y1       | 1695-2690       | 7 - 8        | 4             | AISG1    | CPxxxxxxxxxxxxxxxxY1 |
| Y2       | 1427-2690       | 9 - 10       | 5             | AISG1    | CPxxxxxxxxxxxxxxxxY2 |
| Y3       | 1695-2690       | 11 - 12      | 6             | AISG1    | CPxxxxxxxxxxxxxxxxY3 |
| Y4       | 1695-2690       | 13 - 14      | 7             | AISG1    | CPxxxxxxxxxxxxxxxxY4 |
| Y5       | 1427-2690       | 15 - 16      | 8             | AISG1    | CPxxxxxxxxxxxxxxxxY5 |
| Y6       | 1695-2690       | 17 - 18      | 9             | AISG1    | CPxxxxxxxxxxxxxxxxY6 |

(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>   | 1427 – 2690 MHz   1695 – 2690 MHz   694 – 960 MHz |
| <b>Polarization</b>               | ±45°  |
| <b>Total Input Power, maximum</b> | 1,500 W @ 50 °C                                   |

## Electrical Specifications

|                              | R1,R3          | R1,R3          | R1,R3          | R2             | R2             | R2             |
|------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <b>Frequency Band, MHz</b>   | <b>698–806</b> | <b>790–896</b> | <b>890–960</b> | <b>698–806</b> | <b>790–896</b> | <b>890–960</b> |
| <b>RF Port</b>               | 1,2,5,6        | 1,2,5,6        | 1,2,5,6        | 3,4            | 3,4            | 3,4            |
| <b>Gain at Mid Tilt, dBi</b> | 13.8           | 14.4           | 14.5           | 12.7           | 13.9           | 14.8           |

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|   |          |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|----------|
| <b>Beamwidth, Horizontal, degrees</b>               | 64       | 62       | 58       | 63       | 58       | 52       |
| <b>Beamwidth, Vertical, degrees</b>                 | 10.3     | 9.2      | 8.6      | 11.2     | 10.6     | 10       |
| <b>Beam Tilt, degrees</b>                           | 2-12     | 2-12     | 2-12     | 2-12     | 2-12     | 2-12     |
| <b>USLS (First Lobe), dB</b>                        | 15       | 16       | 16       | 13       | 14       | 18       |
| <b>Front-to-Back Ratio at 180°, dB</b>              | 28       | 26       | 25       | 24       | 26       | 30       |
| <b>Front-to-Back Total Power at 180° ± 30°, dB</b>  | 23       | 22       | 21       | 21       | 22       | 27       |
| <b>CPR at Boresight, dB</b>                         | 22       | 22       | 22       | 16       | 19       | 22       |
| <b>Isolation, Cross Polarization, typical, dB</b>   | 25       | 25       | 25       | 25       | 25       | 25       |
| <b>Isolation, Inter-band, typical, dB</b>           | 25       | 25       | 25       | 25       | 25       | 25       |
| <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 |
| <b>PIM, 3rd Order, 2 x 20 W, dBc</b>                | -153     | -153     | -153     | -153     | -153     | -153     |
| <b>Input Power per Port at 50°C, maximum, watts</b> | 300      | 300      | 300      | 300      | 300      | 300      |

## Electrical Specifications

|  | <b>Y2,Y5</b>     | <b>Y2,Y5</b>     | <b>Y2,Y5</b>     | <b>Y2,Y5</b>     | <b>Y2,Y5</b>     |
|--|------------------|------------------|------------------|------------------|------------------|
| <b>Frequency Band, MHz</b>                         | <b>1427-1518</b> | <b>1695-1990</b> | <b>1920-2300</b> | <b>2300-2500</b> | <b>2490-2690</b> |
| <b>RF Port</b>                                     | 9,10,15,16       | 9,10,15,16       | 9,10,15,16       | 9,10,15,16       | 9,10,15,16       |
| <b>Gain at Mid Tilt, dBi</b>                       | 14.4             | 16.7             | 17.6             | 18               | 17.9             |
| <b>Beamwidth, Horizontal, degrees</b>              | 58               | 55               | 57               | 62               | 61               |
| <b>Beamwidth, Vertical, degrees</b>                | 7.8              | 6.4              | 5.8              | 5.1              | 4.7              |
| <b>Beam Tilt, degrees</b>                          | 2-12             | 2-12             | 2-12             | 2-12             | 2-12             |
| <b>USLS (First Lobe), dB</b>                       | 15               | 18               | 19               | 20               | 18               |
| <b>Front-to-Back Ratio at 180°, dB</b>             | 29               | 35               | 35               | 35               | 29               |
| <b>Front-to-Back Total Power at 180° ± 30°, dB</b> | 24               | 29               | 29               | 27               | 25               |

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|   |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|
| <b>dB</b>   |          |          |          |          |          |
| <b>CPR at Boresight, dB</b>                         | 18       | 18       | 18       | 19       | 19       |
| <b>Isolation, Cross Polarization, dB</b>            | 25       | 25       | 25       | 25       | 25       |
| <b>Isolation, Inter-band, dB</b>                    | 25       | 25       | 25       | 25       | 25       |
| <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 |
| <b>PIM, 3rd Order, 2 x 20 W, dBc</b>                | -153     | -153     | -153     | -153     | -153     |
| <b>Input Power per Port at 50°C, maximum, watts</b> | 250      | 250      | 250      | 200      | 200      |

## Electrical Specifications

|  | <b>Y1,Y3,Y4,Y6</b>    | <b>Y1,Y3,Y4,Y6</b>    | <b>Y1,Y3,Y4,Y6</b>    | <b>Y1,Y3,Y4,Y6</b>    |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| <b>Frequency Band, MHz</b>                         | <b>1695–1990</b>      | <b>1920–2300</b>      | <b>2300–2500</b>      | <b>2490–2690</b>      |
| <b>RF Port</b>                                     | 7,8,11,12,13,14,17,18 | 7,8,11,12,13,14,17,18 | 7,8,11,12,13,14,17,18 | 7,8,11,12,13,14,17,18 |
| <b>Gain at Mid Tilt, dBi</b>                       | 15.8                  | 16.8                  | 17.5                  | 17.6                  |
| <b>Beamwidth, Horizontal, degrees</b>              | 66                    | 60                    | 63                    | 60                    |
| <b>Beamwidth, Vertical, degrees</b>                | 6.8                   | 6.2                   | 5.5                   | 5.3                   |
| <b>Beam Tilt, degrees</b>                          | 2–12                  | 2–12                  | 2–12                  | 2–12                  |
| <b>USLS (First Lobe), dB</b>                       | 16                    | 17                    | 19                    | 18                    |
| <b>Front-to-Back Ratio at 180°, dB</b>             | 28                    | 29                    | 31                    | 33                    |
| <b>Front-to-Back Total Power at 180° ± 30°, dB</b> | 22                    | 24                    | 25                    | 27                    |
| <b>CPR at Boresight, dB</b>                        | 20                    | 20                    | 20                    | 20                    |
| <b>Isolation, Cross Polarization, dB</b>           | 25                    | 25                    | 25                    | 25                    |
| <b>Isolation, Inter-band, dB</b>                   | 25                    | 25                    | 25                    | 25                    |
| <b>VSWR   Return loss, dB</b>                      | 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>               | -153                  | -153                  | -153                  | -153                  |
| <b>Input Power per Port</b>                        | 250                   | 250                   | 200                   | 200                   |

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at 50°C, maximum,  
watts

## Mechanical Specifications

|   |   |
|---|---|
| <b>Wind Loading @ Velocity, frontal</b> | 568.0 N @ 150 km/h (127.7 lbf @ 150 km/h)   |
| <b>Wind Loading @ Velocity, lateral</b> | 223.0 N @ 150 km/h (50.1 lbf @ 150 km/h)    |
| <b>Wind Loading @ Velocity, maximum</b> | 1,037.0 N @ 150 km/h (233.1 lbf @ 150 km/h) |
| <b>Wind Loading @ Velocity, rear</b>    | 576.0 N @ 150 km/h (129.5 lbf @ 150 km/h)   |
| <b>Wind Speed, maximum</b>              | 241 km/h (150 mph)                          |

## Packaging and Weights

|                       |                      |
|-----------------------|----------------------|
| <b>Width, packed</b>  | 681 mm   26.811 in   |
| <b>Depth, packed</b>  | 368 mm   14.488 in   |
| <b>Length, packed</b> | 2239 mm   88.15 in   |
| <b>Weight, gross</b>  | 62.5 kg   137.789 lb |

## Regulatory Compliance/Certifications

| <b>Agency</b> | <b>Classification</b>  |
|---------------|--|
| 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 <a href="http://www.commscope.com/ProductCompliance">www.commscope.com/ProductCompliance</a> |
| ROHS          | Compliant  |
| UK-ROHS       | Compliant  |



## 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

|                         |   |
|-------------------------|---|
| <b>Performance Note</b> | Severe environmental conditions may degrade optimum performance |
|-------------------------|---|