

# RRZZVV-65D-R6N47V6



12-port sector antenna, 4x 694-960, 4x 1427-2690 and 4x 1695-2690 MHz, 65° HPBW, 6x RET

- Innovative aerodynamic shape optimized for reduced wind loading in every direction
- Reduces the amount of aluminum used to minimize CO2 release
- SEED® antenna providing high gain and improved efficiency
- High radiation and pattern efficiency for improved coverage area, capacity or reduced power consumption for a given area
- Retractable tilt indicator rods

## 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  |
| <b>RF Connector Interface</b>          | 4.3-10 Female  |
| <b>RF Connector Location</b>           | Bottom   |
| <b>RF Connector Quantity, mid band</b> | 8  |
| <b>RF Connector Quantity, low band</b> | 4  |
| <b>RF Connector Quantity, total</b>    | 12   |

## 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 (2)   Mid band (4)       |
| <b>Power Consumption, active state, maximum</b> | 10 W                              |
| <b>Power Consumption, idle state, maximum</b>   | 2 W                               |
| <b>Protocol</b>                                 | 3GPP/AISG 2.0 (Single RET)        |


## Dimensions

|              |                    |
|--------------|--------------------|
| <b>Width</b> | 468 mm   18.425 in |
|--------------|--------------------|

# RRZZVV-65D-R6N47V6

|   |                      |
|---|----------------------|
| <b>Depth</b>                            | 228 mm   8.976 in    |
| <b>Length</b>                           | 2769 mm   109.016 in |
| <b>Net Weight, without mounting kit</b> | 41.5 kg   91.492 lb  |

## Array Layout



| Array ID | Frequency (MHz) | RF Connector | RET (SRET) | AISG No. | RET UID              |
|----------|-----------------|--------------|------------|----------|----------------------|
| R1       | 694-960         | 1 - 2        | 1          | AISG1or2 | CPxxxxxxxxxxxxxxxxR1 |
| R2       | 694-960         | 3 - 4        | 2          | AISG1or2 | CPxxxxxxxxxxxxxxxxR2 |
| Y1       | 1695-2690       | 5 - 6        | 3          | AISG1or2 | CPxxxxxxxxxxxxxxxxY1 |
| Y2       | 1427-2690       | 7 - 8        | 4          | AISG1or2 | CPxxxxxxxxxxxxxxxxY2 |
| Y3       | 1427-2690       | 9 - 10       | 5          | AISG1or2 | CPxxxxxxxxxxxxxxxxY3 |
| Y4       | 1695-2690       | 11 - 12      | 6          | AISG1or2 | CPxxxxxxxxxxxxxxxxY4 |

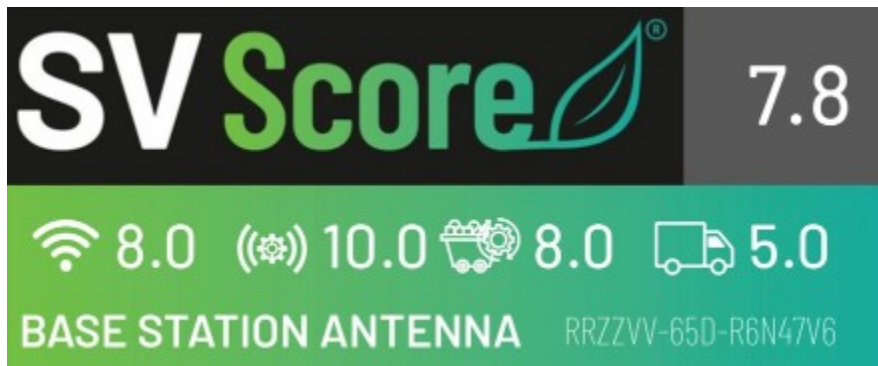
(Sizes of colored boxes are not true depictions of array sizes)

## Port Configuration



# RRZZVV-65D-R6N47V6

## Logo Image



## 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> | 1,800 W @ 50 °C                                   |

## Electrical Specifications

|  | R1,R2          | R1,R2          | R1,R2          | Y2,Y3            | Y2,Y3            | Y2,Y3            | Y2,Y3            | Y2,Y3            |
|--|----------------|----------------|----------------|------------------|------------------|------------------|------------------|------------------|
| <b>Frequency Band, MHz</b>                         | <b>698–806</b> | <b>790–894</b> | <b>890–960</b> | <b>1427–1518</b> | <b>1695–1995</b> | <b>1920–2300</b> | <b>2300–2500</b> | <b>2490–2690</b> |
| <b>RF Port</b>                                     | 1,2,3,4        | 1,2,3,4        | 1,2,3,4        | 7,8,9,10         | 7,8,9,10         | 7,8,9,10         | 7,8,9,10         | 7,8,9,10         |
| <b>Gain at Mid Tilt, dBi</b>                       | 16.5           | 17.2           | 17.4           | 17.1             | 18.3             | 19.1             | 19.6             | 20.1             |
| <b>Beamwidth, Horizontal, degrees</b>              | 72             | 68             | 66             | 64               | 69               | 64               | 62               | 54               |
| <b>Beamwidth, Vertical, degrees</b>                | 7.5            | 6.8            | 6.2            | 7.2              | 5.8              | 5.2              | 4.7              | 4.4              |
| <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>                       | 18             | 17             | 15             | 16               | 16               | 15               | 18               | 17               |
| <b>Front-to-Back Ratio at 180°, dB</b>             | 32             | 32             | 32             | 30               | 37               | 38               | 37               | 40               |
| <b>Front-to-Back Total Power at 180° ± 30°, dB</b> | 21             | 23             | 22             | 22               | 28               | 30               | 29               | 29               |
| <b>CPR at Boresight, dB</b>                        | 23             | 27             | 24             | 22               | 22               | 20               | 17               | 19               |
| <b>Isolation, Cross Polarization, dB</b>           | 25             | 25             | 25             | 25               | 25               | 25               | 25               | 25               |
| <b>Isolation, Inter-band, dB</b>                   | 25             | 25             | 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         | 1.5 14.0         | 1.5 14.0         |

# RRZZVV-65D-R6N47V6

|   |      |      |      |      |      |      |      |      |
|---|------|------|------|------|------|------|------|------|
| <b>PIM, 3rd Order, 2 x 20 W, dBc</b>                | -153 | -153 | -153 | -153 | -153 | -153 | -153 | -153 |
| <b>Input Power per Port at 50°C, maximum, watts</b> | 300  | 300  | 300  | 250  | 250  | 250  | 200  | 200  |

## Electrical Specifications

|   | <b>Y1,Y4</b>     | <b>Y1,Y4</b>     | <b>Y1,Y4</b>     | <b>Y1,Y4</b>     |
|---|------------------|------------------|------------------|------------------|
| <b>Frequency Band, MHz</b>                          | <b>1695–1995</b> | <b>1920–2300</b> | <b>2300–2500</b> | <b>2490–2690</b> |
| <b>RF Port</b>                                      | 5,6,11,12        | 5,6,11,12        | 5,6,11,12        | 5,6,11,12        |
| <b>Gain at Mid Tilt, dBi</b>                        | 17.9             | 18.6             | 19.3             | 20               |
| <b>Beamwidth, Horizontal, degrees</b>               | 73               | 70               | 65               | 57               |
| <b>Beamwidth, Vertical, degrees</b>                 | 5.9              | 5.3              | 4.7              | 4.4              |
| <b>Beam Tilt, degrees</b>                           | 2–12             | 2–12             | 2–12             | 2–12             |
| <b>USLS (First Lobe), dB</b>                        | 17               | 17               | 18               | 18               |
| <b>Front-to-Back Ratio at 180°, dB</b>              | 36               | 34               | 36               | 37               |
| <b>Front-to-Back Total Power at 180° ± 30°, dB</b>  | 28               | 28               | 26               | 25               |
| <b>CPR at Boresight, dB</b>                         | 22               | 22               | 18               | 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 at 50°C, maximum, watts</b> | 250              | 250              | 200              | 200              |

## Mechanical Specifications

|   |   |
|---|---|
| <b>BASTA Version, mechanical</b>        | BASTA v12                                 |
| <b>Wind Loading @ Velocity, frontal</b> | 547.0 N @ 150 km/h (123.0 lbf @ 150 km/h) |
| <b>Wind Loading @ Velocity, lateral</b> | 470.0 N @ 150 km/h (105.7 lbf @ 150 km/h) |
| <b>Wind Loading @ Velocity, maximum</b> | 976.0 N @ 150 km/h (219.4 lbf @ 150 km/h) |
| <b>Wind Loading @ Velocity, rear</b>    | 583.0 N @ 150 km/h (131.1 lbf @ 150 km/h) |
| <b>Wind Speed, maximum</b>              | 241 km/h (150 mph)                        |

## Packaging and Weights

|                      |                    |
|----------------------|--------------------|
| <b>Width, packed</b> | 566 mm   22.283 in |
|----------------------|--------------------|

# RRZZVV-65D-R6N47V6

---

|                       |                      |
|-----------------------|----------------------|
| <b>Depth, packed</b>  | 380 mm   14.961 in   |
| <b>Length, packed</b> | 3001 mm   118.15 in  |
| <b>Weight, gross</b>  | 56.5 kg   124.561 lb |

## Regulatory Compliance/Certifications

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

## Included Products

|           |   |  |
|-----------|---|--|
| BSAMNT-2F | – | Mounting bracket for cylindrical pipe installations (60-115mm pipe diameter) for fix mechanical tilt applications. |
|-----------|---|--|

## \* Footnotes

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