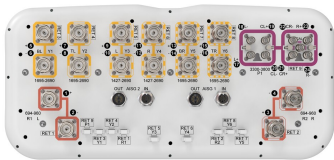


# RRZZV4S4-65D-R9N43



24-port sector antenna, 4x 694-960, 4x 1427-2690, 8x 1695-2690 MHz, 65° HPBW and 8x 3300-3800 MHz, 90° HPBW, 9x RET.

- All Internal RET actuators are connected in "Cascaded SRET" configuration
- Cluster connectors for the beam-forming array, including eight RF ports plus one calibration port
- Antenna shape optimized for wind load reduction
- Retractable tilt indicator rods
- Includes nine internal RET's
- S4 array uses MLOC cluster connectors

## General Specifications

|                                  |  |
|----------------------------------|--|
| Antenna Type                     | Sector and 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                           |
| Input Voltage           | 10–30 Vdc                                   |
| Internal RET            | High band (1)   Low band (2)   Mid band (6) |

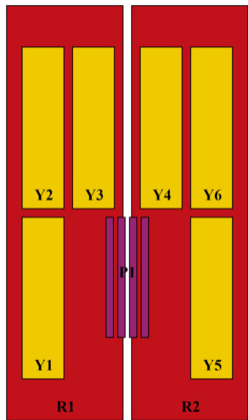
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|  |                            |
|--|----------------------------|
| Power Consumption, active state, maximum | 8 W                        |
| Power Consumption, idle state, maximum   | 1 W                        |
| Protocol                                 | 3GPP/AISG 2.0 (Single RET) |

## Dimensions

|                    |                      |
|--------------------|----------------------|
| Width              | 430 mm   16.929 in   |
| Depth              | 197 mm   7.756 in    |
| Length             | 2769 mm   109.016 in |
| TDD Column Spacing | 42 mm   1.654 in     |

## Array Layout

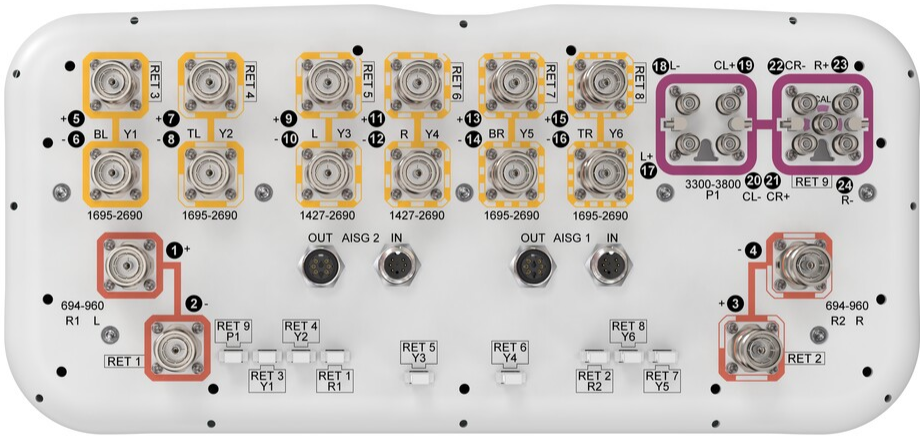


| Array ID | Frequency (MHz) | RF Connector | RET<br>(SRET) | AISG No. | AISG RET UID     |
|----------|-----------------|--------------|---------------|----------|------------------|
| R1       | 694-960         | 1 - 2        | 1             | AISG1    | CPxxxxxxxxxxxxR1 |
| R2       | 694-960         | 3 - 4        | 2             | AISG1    | CPxxxxxxxxxxxxR2 |
| Y1       | 1695-2690       | 5 - 6        | 3             | AISG1    | CPxxxxxxxxxxxxY1 |
| Y2       | 1695-2690       | 7 - 8        | 4             | AISG1    | CPxxxxxxxxxxxxY2 |
| Y3       | 1427-2690       | 9 - 10       | 5             | AISG1    | CPxxxxxxxxxxxxY3 |
| Y4       | 1427-2690       | 11 - 12      | 6             | AISG1    | CPxxxxxxxxxxxxY4 |
| Y5       | 1695-2690       | 13 - 14      | 7             | AISG1    | CPxxxxxxxxxxxxY5 |
| Y6       | 1695-2690       | 15 - 16      | 8             | AISG1    | CPxxxxxxxxxxxxY6 |
| P1       | 3300-3800       | 17 - 24      | 9             | AISG1    | CPxxxxxxxxxxxxP1 |

(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   3300 – 3800 MHz   694 – 960 MHz |
| Polarization               | ±45°  |
| Total Input Power, maximum | 900 W @ 50 °C   |

## Electrical Specifications

|                                | R1,R2   | R1,R2   | R1,R2   | Y3,Y4     | Y3,Y4     | Y3,Y4     | Y1,Y2,Y5,Y6Y1,Y2,Y5,Y6P1      |  |  |
|--------------------------------|---------|---------|---------|-----------|-----------|-----------|-------------------------------|--|--|
| Frequency Band, MHz            | 694-790 | 790-890 | 880-960 | 1427-1518 | 1695-2200 | 2300-2690 | 1695-2200 2300-2690 3300-3800 |  |  |
| RF Port                        | 1-4     | 1-4     | 1-4     | 9-12      | 9-12      | 9-12      | 5-8,13-16 5-8,13-16 17-24     |  |  |
| Gain, dBi                      | 15.6    | 16.2    | 16.4    | 15.5      | 17.3      | 18.3      | 17.1 17.9 15.8                |  |  |
| Beamwidth, Horizontal, degrees | 62      | 56      | 53      | 64        | 68        | 59        | 68 61 83                      |  |  |
| Beamwidth, Vertical, degrees   | 7.7     | 6.9     | 6.3     | 7         | 5.5       | 4.4       | 6.1 4.9 6.3                   |  |  |
| 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          | 15      | 16      | 16      | 18        | 17        | 19        | 15 18 16                      |  |  |

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|   |            |            |            |            |            |            |            |            |            |
|---|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Front-to-Back Ratio at 180°, dB                         | 34         | 33         | 31         | 32         | 32         | 32         | 30         | 32         | 28         |
| 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        |
| Coupler, max Phase Δ, Antenna port to Cal port, degrees |            |            |            |            |            |            |            |            | 7          |
| Isolation, Cross Polarization, dB                       | 27         | 27         | 27         | 26         | 26         | 26         | 27         | 27         | 25         |
| Isolation, Inter-band, dB                               | 27         | 27         | 27         | 25         | 26         | 26         | 27         | 27         | 25         |
| Isolation, Co-polarization, dB                          |            |            |            |            |            |            |            |            | 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 |
| 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                                   | 18        |
| Beamwidth, Horizontal, degrees              | 65        |
| Beamwidth, Vertical, degrees                | 6.3       |
| Front-to-Back Total Power at 180° ± 30°, dB | 25        |
| USLS (First Lobe), dB                       | 20        |

## Electrical Specifications, Service Beam

|  |           |
|--|-----------|
| Frequency Band, MHz                                    | 3300–3800 |
| Steered 0° Gain, dBi                                   | 20.8      |
| Steered 0° Beamwidth, Horizontal, degrees              | 24        |
| Steered 0° Front-to-Back Total Power at 180° ± 30°, dB | 29        |

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|   |      |
|---|------|
| Steered 0° Horizontal Sidelobe, dB                      | 15   |
| Steered 30° Gain, dBi                                   | 19.6 |
| Steered 30° Beamwidth, Horizontal, degrees              | 29   |
| Steered 30° Front-to-Back Total Power at 180° ± 30°, dB | 27   |

## 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 | 27        |
| Horizontal Sidelobe, dB                     | 18        |

## Mechanical Specifications

|                                  |   |
|----------------------------------|---|
| Wind Loading @ Velocity, frontal | 651.0 N @ 150 km/h (146.4 lbf @ 150 km/h)   |
| Wind Loading @ Velocity, lateral | 351.0 N @ 150 km/h (78.9 lbf @ 150 km/h)    |
| Wind Loading @ Velocity, maximum | 1,028.0 N @ 150 km/h (231.1 lbf @ 150 km/h) |
| Wind Loading @ Velocity, rear    | 421.0 N @ 150 km/h (94.6 lbf @ 150 km/h)    |
| Wind Speed, maximum              | 241 km/h (150 mph)                          |

## Packaging and Weights

|                |                      |
|----------------|----------------------|
| Width, packed  | 530 mm   20.866 in   |
| Depth, packed  | 356 mm   14.016 in   |
| Length, packed | 2897 mm   114.055 in |
| Weight, gross  | 75 kg   165.347 lb   |
| Weight, net    | 53.8 kg   118.609 lb |

## Regulatory Compliance/Certifications

| Agency        | Classification   |
|---------------|--|
| CHINA-ROHS    | Above maximum concentration value  |
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |
| ROHS          | Compliant/Exempted   |

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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

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