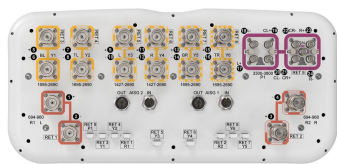


# RRZZV4S4-65D-R9N43



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

This product will be discontinued on: December 31, 2025

## 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 |

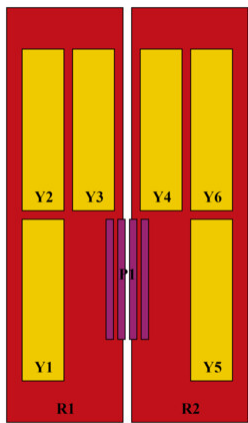
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|                                          |                                             |
|------------------------------------------|---------------------------------------------|
| RET Interface, quantity                  | 2 female   2 male                           |
| Input Voltage                            | 10–30 Vdc                                   |
| Internal RET                             | High band (1)   Low band (2)   Mid band (6) |
| 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

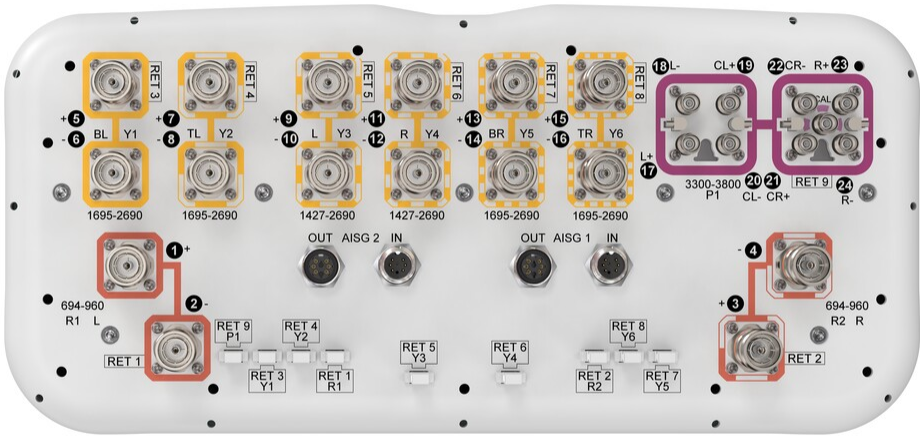


| Array ID | Frequency (MHz) | RF Connector | RET (SRET) | AISG No. | AISG RET UID     |
|----------|-----------------|--------------|------------|----------|------------------|
| R1       | 694-960         | 1 - 2        | 1          | AISG1    | CPxxxxxxxxxxxxR1 |
| R2       | 694-960         | 3 - 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,Y6 | Y1,Y2,Y5,Y6 | P1        |
|--------------------------------|---------|---------|---------|-----------|-----------|-----------|-------------|-------------|-----------|
| 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          |
| CPR at Boresight, dB                                    | 28         | 26         | 23         | 17         | 17         | 17         | 20         | 20         | 16         |
| 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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|                                                                |      |
|----------------------------------------------------------------|------|
| <b>dB</b>                                                      |      |
| <b>Steered 0° Horizontal Sidelobe, dB</b>                      | 15   |
| <b>Steered 30° Gain, dBi</b>                                   | 19.6 |
| <b>Steered 30° Beamwidth, Horizontal, degrees</b>              | 29   |
| <b>Steered 30° Front-to-Back Total Power at 180° ± 30°, dB</b> | 27   |

## Electrical Specifications, Soft Split

|                                                    |                  |
|----------------------------------------------------|------------------|
| <b>Frequency Band, MHz</b>                         | <b>3300–3800</b> |
| <b>Gain, dBi</b>                                   | 19.7             |
| <b>Beamwidth, Horizontal, degrees</b>              | 31               |
| <b>Front-to-Back Total Power at 180° ± 30°, dB</b> | 27               |
| <b>Horizontal Sidelobe, dB</b>                     | 18               |

## Mechanical Specifications

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

## Packaging and Weights

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

## Regulatory Compliance/Certifications

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

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|         |                    |
|---------|--------------------|
| ROHS    | Compliant/Exempted |
| 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 |
|-------------------------|-----------------------------------------------------------------|