# RRVV2VVQ4-6533D-R9

24-port sector/multibeam antenna, 4x 694–960, 4x 1695-2690MHz 65° HPBW, 8x 1710-2690MHz 4x33° HPBW and 8x 2300-3800MHz, 90° HPBW 9x RET

- Enhances network capacity through six sectors on high band while maintaining low band coverage layer through three sectors with only three antenna faces
- Includes 1x 4-Column Array for 2300-3800MHz and calibration port. Column spacing optimized to support Soft Split Beamforming

## 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) |

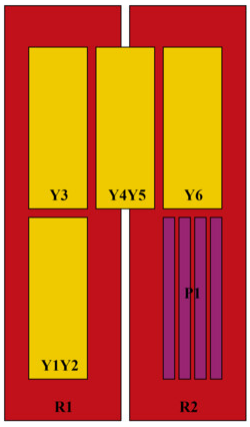
# RRVV2VVQ4-6533D-R9

| | |
|---|---|
| **Power Consumption, active state, maximum** | 8 W |
| **Power Consumption, idle state, maximum** | 1 W |
| **Protocol** | 3GPP/AISG 2.0 |

## Dimensions

| | |
|---|---|
| **Width** | 579 mm \| 22.795 in |
| **Depth** | 212 mm \| 8.346 in |
| **Length** | 2688 mm \| 105.827 in |
| **Net Weight, antenna only** | 67 kg \| 147.71 lb |

## Array Layout

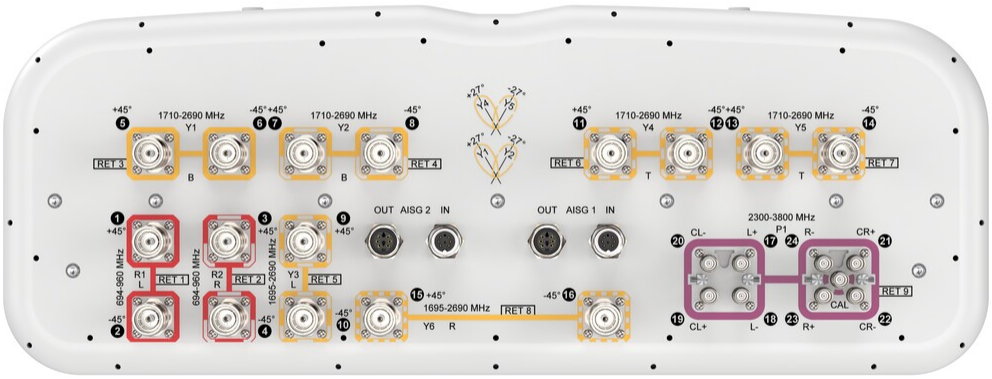



| Array ID | Frequency (MHz) | RF Connector | RET (SRET) | AISG No. | AISG RET UID |
|---|---|---|---|---|---|
| R1 | 694-960 | 1 - 2 | 1 | AISG1 | CPxxxxxxxxxxxxxxR1 |
| R2 | 694-960 | 3 - 4 | 2 | AISG1 | CPxxxxxxxxxxxxxxR2 |
| Y1 | 1710-2690 | 5 - 6 | 3 | AISG1 | CPxxxxxxxxxxxxxxY1 |
| Y2 | 1710-2690 | 7 - 8 | 4 | AISG1 | CPxxxxxxxxxxxxxxY2 |
| Y3 | 1695-2690 | 9 - 10 | 5 | AISG1 | CPxxxxxxxxxxxxxxY3 |
| Y4 | 1710-2690 | 11 - 12 | 6 | AISG1 | CPxxxxxxxxxxxxxxY4 |
| Y5 | 1710-2690 | 13 - 14 | 7 | AISG1 | CPxxxxxxxxxxxxxxY5 |
| Y6 | 1695-2690 | 15 - 16 | 8 | AISG1 | CPxxxxxxxxxxxxxxY6 |
| P1 | 2300-3800 | 17 - 24 | 9 | AISG1 | CPxxxxxxxxxxxxxxP1 |

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

## Port Configuration

# RRVV2VVQ4-6533D-R9




## Electrical Specifications

| | |
|---|---|
| **Impedance** | 50 ohm |
| **Operating Frequency Band** | 1695 – 2690 MHz \| 1710 – 2690 MHz \| 2300 – 3800 MHz \| 694 – 960 MHz |
| **Polarization** | ±45° |

## Electrical Specifications

| | R1,R2 | R1,R2 | R1,R2 | Y1,Y2,Y4,Y5 | Y1,Y2,Y4,Y5 | Y1,Y2,Y4,Y5 | Y3,Y6 | Y3,Y6 | Y3,Y6 | P1 | P1 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Frequency Band, MHz** | 694–790 | 790–890 | 890–960 | 1710–1920 | 1920–2180 | 2300–2690 | 1695–1920 | 1920–2180 | 2300–2690 | 2300–2690 | 3300–3800 |
| **RF Port** | 1-4 | 1-4 | 1-4 | 5-8,11-14 | 5-8,11-14 | 5-8,11-14 | 9,10,15,16 | 9,10,15,16 | 9,10,15,16 | 17-24 | 17-24 |
| **Gain, dBi** | 16.2 | 16.7 | 16.8 | 18.7 | 19.8 | 20.5 | 16.2 | 17.4 | 17.8 | 15.8 | 16.6 |
| **Gain at Mid Tilt, dBi** | 15.9 | 16.5 | 16.6 | 18.1 | 19.6 | 20.3 | 15.8 | 17.1 | 17.6 | 14.9 | 15.8 |
| **Beam Centers, Horizontal, degrees** | | | | ±27 | ±27 | ±27 | | | | | |
| **Beamwidth, Horizontal, degrees** | 70 | 61 | 60 | 35 | 32 | 27 | 67 | 61 | 58 | 90 | 66 |
| **Beamwidth,** | 8.9 | 8 | 7.4 | 7.3 | 6.5 | 5.4 | 7.1 | 6.5 | 5.4 | 6 | 5.5 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Vertical, degrees** | | | | | | | | | | | |
| **Beam Tilt, degrees** | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 |
| **USLS (First Lobe), dB** | 16 | 20 | 19 | 17 | 18 | 20 | 15 | 16 | 17 | 11 | 14 |
| **Front-to-Back Ratio at 180°, dB** | 32 | 31 | 30 | 33 | 35 | 34 | 33 | 34 | 32 | 28 | 27 |
| **Coupling level, Amp, Antenna port to Cal port, dB** | | | | | | | | | | 26 | 26 |
| **Coupling level, max Amp Δ, Antenna port to Cal port, dB** | | | | | | | | | | ±2 | ±2 |
| **Coupler, max Amp Δ, Antenna port to Cal port, dB** | | | | | | | | | | 0.9 | 0.9 |
| **Coupler, max Phase Δ, Antenna port to Cal port, degrees** | | | | | | | | | | 7 | 7 |
| **Isolation, Cross Polarization, dB** | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 23 | 23 |
| **Isolation, Inter-band, dB** | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| **Isolation, Co-polarization, dB** | | | | | | | | | | 18 | 18 |
| **Isolation, Beam to Beam, dB** | | | | 17 | 17 | 17 | | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **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 | 1.5 \| 14.0 | 1.5 \| 14.0 |
| **PIM, 3rd Order, 2 x 20 W, dBc** | -150 | -150 | -150 | -150 | -150 | -150 | -150 | -150 | -150 | -143 | -143 |
| **Input Power per Port at 50°C, maximum, watts** | 300 | 300 | 300 | 250 | 250 | 200 | 250 | 250 | 200 | 75 | 75 |

## Electrical Specifications, BASTA

| **Frequency Band, MHz** | **694–790** | **790–890** | **890–960** | **1710–1920** | **1920–2180** | **2300–2690** | **1695–1920** | **1920–2180** | **2300–2690** | **2300–2690** | **3300–3800** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Gain by all Beam Tilts, average, dBi** | 15.8 | 16.4 | 16.5 | 17.9 | 19.3 | 19.9 | 15.7 | 16.8 | 17.3 | 14.9 | 15.7 |
| **Beamwidth, Horizontal Tolerance, degrees** | ±6 | ±4 | ±4 | ±4 | ±3 | ±3 | ±9 | ±5 | ±6 | ±20 | ±12 |
| **Beamwidth, Vertical Tolerance, degrees** | ±0.5 | ±0.5 | ±0.3 | ±0.5 | ±0.4 | ±0.4 | ±0.5 | ±0.5 | ±0.4 | ±0.6 | ±0.4 |
| **USLS, beampeak to 20° above beampeak, dB** | 16 | 16 | 17 | 15 | 17 | 14 | 14 | 15 | 12 | 11 | 12 |
| **Front-to-Back Total Power at 180° ± 30°, dB** | 25 | 25 | 24 | 28 | 29 | 28 | 25 | 29 | 27 | 22 | 22 |
| **CPR at Boresight, dB** | 21 | 22 | 22 | 16 | 21 | 21 | 18 | 23 | 20 | 14 | 16 |
| **CPR at Sector, dB** | 13 | 10 | 13 | | | | 8 | 8 | 5 | 8 | 3 |
| **CPR at 10 dB** | | | | 8 | 12 | 13 | | | | | |

| | |
|---|---|
| **Horizontal Beamwidth, dB** | |

## Electrical Specifications, Broadcast 65°

| **Frequency Band, MHz** | **2300–2690** | **3300–3800** |
|---|---|---|
| **Gain, dBi** | 17.6 | 16.9 |
| **Beamwidth, Horizontal at 3 dB, degrees** | 65 | 65 |
| **Beamwidth, Vertical, degrees** | 5.9 | 5.6 |
| **Front-to-Back Total Power at 180° ± 30°, dB** | 25 | 23 |
| **USLS (First Lobe), dB** | 12 | 14 |

## Electrical Specifications, Service Beam

| **Frequency Band, MHz** | **2300–2690** | **3300–3800** |
|---|---|---|
| **Steered 0° Gain, dBi** | 20.4 | 21.2 |
| **Steered 0° Beamwidth, Horizontal, degrees** | 26 | 18 |
| **Steered 0° Front-to-Back Total Power at 180° ± 30°, dB** | 30 | 27 |
| **Steered 0° Horizontal Sidelobe, dB** | 12 | 11 |

| | | |
|---|---|---|
| **Steered 30° Gain, dBi** | 19.6 | 19.4 |
| **Steered 30° Beamwidth, Horizontal, degrees** | 27 | 21 |
| **Steered 30° Front-to-Back Total Power at 180° ± 30°, dB** | 28 | 27 |

## Electrical Specifications, Soft Split

| | |
|---|---|
| **Frequency Band, MHz** | **2300–2690** |
| **Gain, dBi** | 19.3 |
| **Beamwidth, Horizontal, degrees** | 31 |
| **Front-to-Back Total Power at 180° ± 30°, dB** | 28 |
| **Horizontal Sidelobe, dB** | 15 |

## Mechanical Specifications

| | |
|---|---|
| **Wind Loading @ Velocity, frontal** | 764.0 N @ 150 km/h (171.8 lbf @ 150 km/h) |
| **Wind Loading @ Velocity, lateral** | 328.0 N @ 150 km/h (73.7 lbf @ 150 km/h) |
| **Wind Loading @ Velocity, maximum** | 1,220.0 N @ 150 km/h (274.3 lbf @ 150 km/h) |
| **Wind Loading @ Velocity, rear** | 774.0 N @ 150 km/h (174.0 lbf @ 150 km/h) |
| **Wind Speed, maximum** | 241 km/h (150 mph) |

## Packaging and Weights

| | |
|---|---|
| **Width, packed** | 681 mm \| 26.811 in |
| **Depth, packed** | 368 mm \| 14.488 in |
| **Length, packed** | 2827 mm \| 111.299 in |
| **Weight, gross** | 85.5 kg \| 188.495 lb |

## Regulatory Compliance/Certifications

| Agency | Classification |
|---|---|
| ISO 9001:2015 | Designed, manufactured and/or distributed under this quality management system |

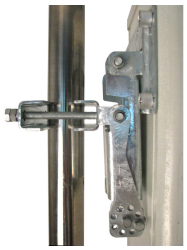
## Included Products

| | | |
|---|---|---|
| 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

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

# 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.

## Product Classification

| | |
|---|---|
| **Product Type** | Downtilt mounting kit |

## General Specifications

| | |
|---|---|
| **Application** | Outdoor |
| **Color** | Silver |

## Dimensions

| | |
|---|---|
| **Compatible Diameter, maximum** | 115 mm \| 4.528 in |
| **Compatible Diameter, minimum** | 60 mm \| 2.362 in |
| **Weight, net** | 6.5 kg \| 14.33 lb |

## Material Specifications

| | |
|---|---|
| **Material Type** | Galvanized steel |

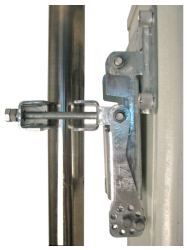
## Packaging and Weights

| | |
|---|---|
| **Included** | Brackets \| Hardware |
| **Packaging quantity** | 1 |

## 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.commscope.com/ProductCompliance |
| ROHS | Compliant |
| UK-ROHS | Compliant |

# 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.

## Product Classification

| | |
|---|---|
| **Product Type** | Downtilt mounting kit |

## General Specifications

| | |
|---|---|
| **Application** | Outdoor |
| **Color** | Silver |

## Dimensions

| | |
|---|---|
| **Compatible Diameter, maximum** | 115 mm \| 4.528 in |
| **Compatible Diameter, minimum** | 60 mm \| 2.362 in |
| **Weight, net** | 4.6 kg \| 10.141 lb |

## Material Specifications

| | |
|---|---|
| **Material Type** | Galvanized steel |

## Packaging and Weights

| | |
|---|---|
| **Included** | Brackets \| Hardware |
| **Packaging quantity** | 1 |

## 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.commscope.com/ProductCompliance |
| ROHS | Compliant |
| UK-ROHS | Compliant |