# FFV4Q4-65D-R7

20-port sector antenna, 4x 617-894, 8x 1695-2690 MHz 65° HPBW and 8x 2500-4000 MHz, Beamformer, 7x 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

## 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** | 8 |
| **RF Connector Quantity, low band** | 4 |
| **RF Connector Quantity, total** | 20 |

## Remote Electrical Tilt (RET) Information

| | |
|---|---|
| **RET Hardware** | CommRET v2 |
| **RET Interface** | 8-pin DIN Female \| 8-pin DIN Male |
| **RET Interface, quantity** | 1 female \| 1 male |
| **Input Voltage** | 10–30 Vdc |
| **Internal RET** | High band (1) \| Low band (2) \| Mid band (4) |
| **Power Consumption, active state, maximum** | 8 W |
| **Power Consumption, idle state, maximum** | 1 W |

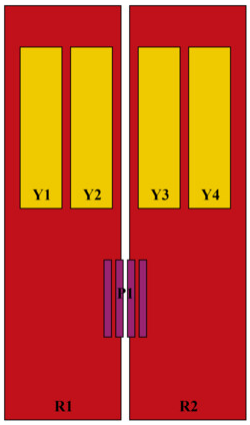
# FFV4Q4-65D-R7

| | |
|---|---|
| **Protocol** | 3GPP/AISG 2.0 (Single RET) |

## Dimensions

| | |
|---|---|
| **Width** | 498 mm \| 19.606 in |
| **Depth** | 197 mm \| 7.756 in |
| **Length** | 2688 mm \| 105.827 in |
| **TDD Column Spacing** | 58 mm \| 2.283 in |

## Array Layout



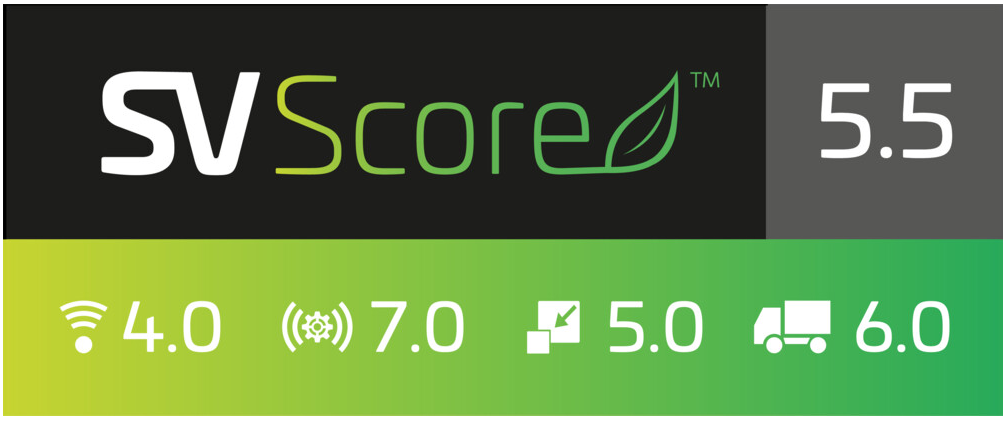

| Array ID | Frequency (MHz) | RF Connector | RET (SRET) | AISG No. | AISG RET UID |
|---|---|---|---|---|---|
| R1 | 617-894 | 1 - 2 | 1 | AISG1 | CPxxxxxxxxxxxxxxR1 |
| R2 | 617-894 | 3 - 4 | 2 | AISG1 | CPxxxxxxxxxxxxxxR2 |
| Y1 | 1695-2690 | 5 - 6 | 3 | AISG1 | CPxxxxxxxxxxxxxxY1 |
| Y2 | 1695-2690 | 7 - 8 | 4 | AISG1 | CPxxxxxxxxxxxxxxY2 |
| Y3 | 1695-2690 | 9 - 10 | 5 | AISG1 | CPxxxxxxxxxxxxxxY3 |
| Y4 | 1695-2690 | 11 - 12 | 6 | AISG1 | CPxxxxxxxxxxxxxxY4 |
| P1 | 2500-4000 | 13 - 20 | 7 | AISG1 | CPxxxxxxxxxxxxxxP1 |

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

## Port Configuration

# FFV4Q4-65D-R7


## Logo Image




## Electrical Specifications

| | |
|---|---|
| **Impedance** | 50 ohm |
| **Operating Frequency Band** | 1695 – 2690 MHz \| 2500 – 4000 MHz \| 617 – 894 MHz |
| **Polarization** | ±45° |
| **Total Input Power, maximum** | 1,400 W @ 50 °C |

# FFV4Q4-65D-R7

## Electrical Specifications

| | R1,R2 | R1,R2 | Y1-Y4 | Y1-Y4 | Y1-Y4 | P1 | P1 | P1 |
|---|---|---|---|---|---|---|---|---|
| **Frequency Band, MHz** | **617–698** | **698–894** | **1695–1920** | **1920–2200** | **2490–2690** | **2500–2690** | **3300–3800** | **3700–4000** |
| **RF Port** | 1,2,3,4 | 1,2,3,4 | 5-12 | 5-12 | 5-12 | 13-20 | 13-20 | 13-20 |
| **Gain, dBi** | 15.2 | 16.1 | 16.6 | 17.3 | 17.6 | 16 | 16.4 | 15.9 |
| **Beamwidth, Horizontal, degrees** | 69 | 60 | 60 | 57 | 49 | 90 | 66 | 64 |
| **Beamwidth, Vertical, degrees** | 9.5 | 8.1 | 6.5 | 5.9 | 5.2 | 5.9 | 6 | 6.2 |
| **Beam Tilt, degrees** | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 |
| **USLS (First Lobe), dB** | 16 | 17 | 15 | 16 | 15 | 17 | 15 | 15 |
| **Front-to-Back Ratio at 180°, dB** | 29 | 29 | 35 | 34 | 30 | 33 | 27 | 25 |
| **Coupling level, Amp, Antenna port to Cal port, dB** | | | | | | 26 | 26 | 26 |
| **Coupling level, max Amp Δ, Antenna port to Cal port, dB** | | | | | | ±2 | ±2 | ±2 |
| **Coupler, max Amp Δ, Antenna port to Cal port, dB** | | | | | | 0.9 | 0.9 | 0.9 |
| **Coupler, max Phase Δ, Antenna port to Cal port, degrees** | | | | | | 7 | 7 | 7 |
| **Isolation, Cross Polarization, dB** | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| **Isolation, Inter-band, dB** | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| **Isolation, Co-polarization, dB** | | | | | | 18 | 18 | 18 |
| **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 |
| **PIM, 3rd Order, 2 x 20 W, dBc** | -150 | -150 | -150 | -150 | -150 | -140 | -140 | -140 |
| **Input Power per Port at 50°C, maximum, watts** | 250 | 250 | 200 | 200 | 200 | 80 | 80 | 80 |

## Electrical Specifications, BASTA

| **Frequency Band, MHz** | **617–698** | **698–894** | **1695–1920** | **1920–2200** | **2490–2690** | **2500–2690** | **3300–3800** | **3700–4000** |
|---|---|---|---|---|---|---|---|---|
| **Gain by all Beam Tilts, average, dBi** | 14.8 | 15.7 | 16.1 | 16.8 | 17.3 | 15.5 | 15.6 | 15.1 |
| **Gain by all Beam Tilts Tolerance, dB** | ±0.5 | ±0.5 | ±0.8 | ±0.7 | ±0.6 | ±0.7 | ±0.8 | ±0.7 |
| **Beamwidth, Horizontal Tolerance, degrees** | ±6 | ±5 | ±8 | ±7 | ±10 | ±18 | ±14 | ±9 |
| **Beamwidth, Vertical** | ±0.6 | ±0.9 | ±0.4 | ±0.4 | ±0.3 | ±0.5 | ±0.7 | ±0.6 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Tolerance, degrees** | | | | | | | | |
| **USLS, beampeak to 20° above beampeak, dB** | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 11 |
| **Front-to-Back Total Power at 180° ± 30°, dB** | 21 | 22 | 26 | 27 | 23 | 25 | 22 | 20 |
| **CPR at Boresight, dB** | 20 | 20 | 20 | 24 | 21 | 16 | 13 | 12 |
| **CPR at Sector, dB** | 14 | 9 | 7 | 7 | 5 | 11 | 8 | 8 |

## Electrical Specifications, Broadcast 65°

| **Frequency Band, MHz** | **2500–2690** | **3300–3800** | **3700–4000** |
|---|---|---|---|
| **Gain, dBi** | 18.2 | 17.4 | 16.6 |
| **Beamwidth, Horizontal, degrees** | 55 | 59 | 61 |
| **Beamwidth, Vertical, degrees** | 5.9 | 5.9 | 6.2 |
| **Front-to-Back Total Power at 180° ± 30°, dB** | 30 | 23 | 19 |
| **USLS (First Lobe), dB** | 17 | 17 | 17 |

## Electrical Specifications, Envelope Pattern

| **Frequency Band, MHz** | **2500–2690** | **3300–3800** | **3700–4000** |
|---|---|---|---|
| **Gain, dBi** | 21 | 21 | 20.6 |
| **Beamwidth, Horizontal at 10 dB, degrees** | 120 | 125 | 126 |
| **Beamwidth, Vertical at 3 dB, degrees** | 5.8 | 6 | 6 |
| **Front-to-Back Total Power at 180° ± 30°, dB** | 31 | 26 | 23 |
| **USLS (First Lobe), dB** | 19 | 18 | 16 |

## Electrical Specifications, Service Beam

| **Frequency Band, MHz** | **2500–2690** | **3300–3800** | **3700–4000** |
|---|---|---|---|
| **Steered 0° Gain, dBi** | 20.4 | 20.9 | 20.4 |
| **Steered 0° Beamwidth, Horizontal, degrees** | 25 | 19 | 19 |
| **Steered 0° Front-to-Back Total Power at 180° ± 30°, dB** | 33 | 28 | 25 |
| **Steered 0° Horizontal Sidelobe, dB** | 13 | 11 | 11 |
| **Steered 30° Gain, dBi** | 20.3 | 19.3 | 18.8 |

| | | | |
|---|---|---|---|
| **Steered 30° Beamwidth, Horizontal, degrees** | 27 | 22 | 18 |
| **Steered 30° Front-to-Back Total Power at 180° ± 30°, dB** | 32 | 26 | 23 |

## Electrical Specifications, Soft Split

| | |
|---|---|
| **Frequency Band, MHz** | **2500–2690** |
| **Gain, dBi** | 20.2 |
| **Beamwidth, Horizontal, degrees** | 30 |
| **Front-to-Back Total Power at 180° ± 30°, dB** | 32 |
| **Horizontal Sidelobe, dB** | 17 |

## Mechanical Specifications

| | |
|---|---|
| **Wind Loading @ Velocity, frontal** | 970.0 N @ 150 km/h (218.1 lbf @ 150 km/h) |
| **Wind Loading @ Velocity, lateral** | 304.0 N @ 150 km/h (68.3 lbf @ 150 km/h) |
| **Wind Loading @ Velocity, maximum** | 1,162.0 N @ 150 km/h (261.2 lbf @ 150 km/h) |
| **Wind Loading @ Velocity, rear** | 667.0 N @ 150 km/h (149.9 lbf @ 150 km/h) |
| **Wind Speed, maximum** | 241 km/h (150 mph) |

## Packaging and Weights

| | |
|---|---|
| **Width, packed** | 565 mm \| 22.244 in |
| **Depth, packed** | 309 mm \| 12.165 in |
| **Length, packed** | 2875 mm \| 113.189 in |
| **Weight, gross** | 64.5 kg \| 142.198 lb |
| **Weight, net** | 47.2 kg \| 104.058 lb |

## Regulatory Compliance/Certifications

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

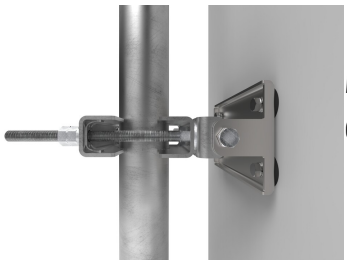
## Included Products

| | | |
|---|---|---|
| BSAMNT-3F | – | Mounting bracket for cylindrical pipe installations (60-115mm pipe diameter) for fix mechanical tilt applications. |

## * Footnotes

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

# BSAMNT-3F



Mounting bracket for cylindrical pipe installations (60-115mm pipe diameter) for fix mechanical tilt applications.

## Product Classification

| | |
|---|---|
| **Product Type** | Fixed tilt 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** | 5.6 kg \| 12.346 lb |

## Material Specifications

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

## Packaging and Weights

| | |
|---|---|
| **Included** | Brackets \| Hardware |
| **Packaging quantity** | 1 |
| **Weight, gross** | 5.8 kg \| 12.787 lb |

## Regulatory Compliance/Certifications

| Agency | Classification |
|---|---|
| CE | Compliant with the relevant CE product directives |
| 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-3F