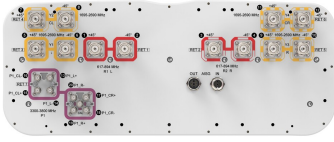


FFV4S4-65B-R7



20-port sector antenna, 4x 617-894, 8x 1695-2690 MHz 65° HPBW and 8x 3300-3800 MHz, 90° HPBW, 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 |

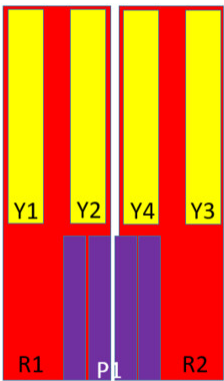
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Protocol 3GPP/AISG 2.0 (Single RET)

Dimensions

Width 498 mm | 19.606 in
Depth 197 mm | 7.756 in
Length 2000 mm | 78.74 in
Net Weight, antenna only 43 kg | 94.799 lb
TDD Column Spacing 42 mm | 1.654 in

Array Layout



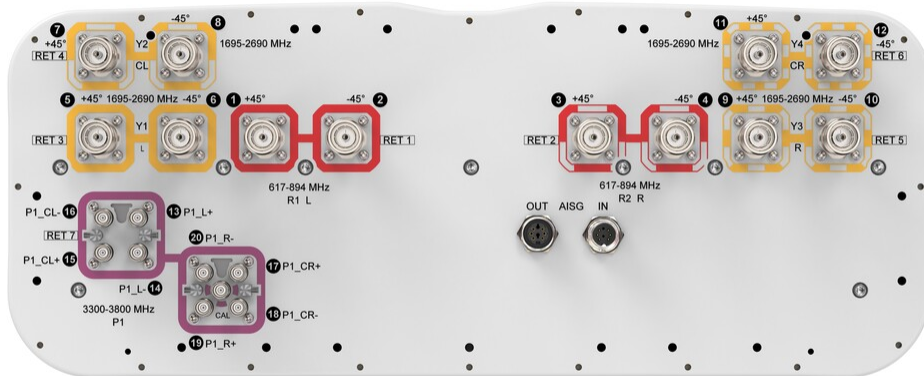
| Array | Freq (MHz) | Conns | RET (SRET) | AISG RET UID |
|-------|------------|-------|------------|----------------------|
| R1 | 617-894 | 1-2 | 1 | CPxxxxxxxxxxxxxxxxR1 |
| R2 | 617-894 | 3-4 | 2 | CPxxxxxxxxxxxxxxxxR2 |
| Y1 | 1695-2690 | 5-6 | 3 | CPxxxxxxxxxxxxxxxxY1 |
| Y2 | 1695-2690 | 7-8 | 4 | CPxxxxxxxxxxxxxxxxY2 |
| Y3 | 1695-2690 | 9-10 | 5 | CPxxxxxxxxxxxxxxxxY3 |
| Y4 | 1695-2690 | 11-12 | 6 | CPxxxxxxxxxxxxxxxxY4 |
| P1 | 3300-3800 | 13-20 | 7 | CPxxxxxxxxxxxxxxxxP1 |

Left Right
Bottom

(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 | 1695 – 2690 MHz 3300 – 3800 MHz 617 – 894 MHz |
| Polarization | ±45° |
| Total Input Power, maximum | 1,400 W @ 50 °C |

Electrical Specifications

| | R1,R2 | R1,R2 | Y1,Y3 | Y1,Y3 | Y1,Y3 | Y1,Y3 | Y2,Y4 |
|--|----------------|----------------|------------------|------------------|------------------|------------------|------------------|
| Frequency Band, MHz | 617–698 | 698–894 | 1695–1880 | 1850–1990 | 1920–2200 | 2490–2690 | 1695–1880 |
| RF Port | 1,2,3,4 | 1,2,3,4 | 5,6,9,10 | 5,6,9,10 | 5,6,9,10 | 5,6,9,10 | 7,8,11,12 |
| Gain, dBi | 13.7 | 14.7 | 16 | 16.4 | 16.5 | 17 | 15.8 |
| Beamwidth, Horizontal, degrees | 69 | 60 | 70 | 71 | 69 | 55 | 62 |
| Beamwidth, Vertical, degrees | 13.8 | 11.8 | 7.6 | 7.2 | 6.9 | 5.7 | 8.1 |
| Beam Tilt, degrees | 2–14 | 2–14 | 2–12 | 2–12 | 2–12 | 2–12 | 2–12 |
| USLS (First Lobe), dB | 16 | 15 | 17 | 19 | 19 | 20 | 17 |
| Front-to-Back Ratio at 180°, dB | 28 | 29 | 34 | 33 | 32 | 25 | 36 |
| Isolation, Cross Polarization, dB | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| Isolation, Inter-band, dB | 25 | 25 | 25 | 25 | 25 | 25 | 25 |

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| | | | | | | | |
|--|----------|----------|----------|----------|----------|----------|----------|
| 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 |
| PIM, 3rd Order, 2 x 20 W, dBc | -150 | -150 | -150 | -150 | -150 | -150 | -150 |
| Input Power per Port at 50° C, maximum, watts | 250 | 250 | 200 | 200 | 200 | 200 | 200 |

Electrical Specifications, BASTA

| Frequency Band, MHz | 617–698 | 698–894 | 1695–1880 | 1850–1990 | 1920–2200 | 2490–2690 | 1695–1880 |
|--|---------|---------|-----------|-----------|-----------|-----------|-----------|
| Gain by all Beam Tilts, average, dBi | 13.4 | 14.2 | 15.4 | 16.1 | 16.2 | 16.6 | 15.2 |
| Gain by all Beam Tilts Tolerance, dB | ±0.5 | ±0.7 | ±1 | ±0.4 | ±0.4 | ±0.7 | ±0.9 |
| Beamwidth, Horizontal Tolerance, degrees | ±6.5 | ±6.1 | ±5.8 | ±4.7 | ±3.8 | ±4.6 | ±6.1 |
| Beamwidth, Vertical Tolerance, degrees | ±0.9 | ±1.4 | ±0.7 | ±0.4 | ±0.6 | ±0.4 | ±0.7 |
| USLS, beampeak to 20° above beampeak, dB | | 15 | 12 | 14 | 14 | 13 | 12 |
| Front-to-Back Total Power at 180° ± 30°, dB | 21 | 21 | 24 | 26 | 25 | 19 | 25 |
| CPR at Boresight, dB | 16 | 16 | 17 | 19 | 18 | 19 | 18 |
| CPR at Sector, dB | 9 | 7 | 9 | 8 | 7 | 3 | 7 |

Electrical Specifications

| | Y2,Y4 | Y2,Y4 | Y2,Y4 | P1 |
|--|------------------|------------------|------------------|-------------------------|
| Frequency Band, MHz | 1850–1990 | 1920–2200 | 2490–2690 | 3300–3800 |
| RF Port | 7,8,11,12 | 7,8,11,12 | 7,8,11,12 | 13,14,15,16,17,18,19,20 |
| Gain, dBi | 16 | 16.2 | 16.5 | 15.7 |
| Beamwidth, Horizontal, degrees | 64 | 62 | 59 | 86 |
| Beamwidth, Vertical, degrees | 7.8 | 7.4 | 6.1 | 6.1 |
| Beam Tilt, degrees | 2–12 | 2–12 | 2–12 | 2–12 |
| USLS (First Lobe), dB | 18 | 18 | 17 | 15 |
| Front-to-Back Ratio at 180°, dB | 37 | 36 | 31 | 28 |
| Coupling level, Amp, Antenna port to Cal port, dB | | | | 26 |
| Coupling level, max Amp Δ, Antenna port to Cal port, dB | | | | ±2 |

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| | | | | |
|---|------------|------------|------------|------------|
| 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 | 25 | 25 | 25 | 25 |
| Isolation, Inter-band, dB | 25 | 25 | 25 | 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 |
| PIM, 3rd Order, 2 x 20 W, dBc | -150 | -150 | -150 | -140 |
| Input Power per Port at 50° C, maximum, watts | 200 | 200 | 200 | 75 |

Electrical Specifications, BASTA

| Frequency Band, MHz | 1850–1990 | 1920–2200 | 2490–2690 | 3300–3800 |
|--|-----------|-----------|-----------|-----------|
| Gain by all Beam Tilts, average, dBi | 15.7 | 15.9 | 16.1 | 15.1 |
| Gain by all Beam Tilts Tolerance, dB | ±0.5 | ±0.4 | ±0.5 | ±0.7 |
| Beamwidth, Horizontal Tolerance, degrees | ±4.9 | ±5.3 | ±5.9 | ±16.6 |
| Beamwidth, Vertical Tolerance, degrees | ±0.4 | ±0.6 | ±0.4 | ±0.6 |
| USLS, beampeak to 20° above beampeak, dB | 14 | 15 | 13 | 13 |
| Front-to-Back Total Power at 180° ± 30°, dB | 28 | 28 | 25 | 22 |
| CPR at Boresight, dB | 21 | 20 | 17 | 15 |
| CPR at Sector, dB | 8 | 8 | 5 | 6 |

Electrical Specifications, Broadcast 65°

| | |
|-----------------------------------|------------------|
| Frequency Band, MHz | 3300–3800 |
| Gain, dBi | 17.3 |
| Beamwidth, Horizontal, degrees | 65 |
| Beamwidth, Vertical, degrees | 6.2 |
| Front-to-Back Total Power | 25 |

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at 180° ± 30°, dB

USLS (First Lobe), dB 20

Electrical Specifications, Service Beam

Frequency Band, MHz 3300–3800

Steered 0° Gain, dBi 20.3

Steered 0° Beamwidth, Horizontal, degrees 25

Steered 0° Front-to-Back Total Power at 180° ± 30°, dB 29

Steered 0° Horizontal Sidelobe, dB 14

Steered 30° Gain, dBi 19.7

Steered 30° Beamwidth, Horizontal, degrees 27

Steered 30° Front-to-Back Total Power at 180° ± 30°, dB 28

Electrical Specifications, Soft Split

Frequency Band, MHz 3300–3800

Gain, dBi 19.1

Beamwidth, Horizontal, degrees 32

Front-to-Back Total Power at 180° ± 30°, dB 27

Horizontal Sidelobe, dB 18

Mechanical Specifications

Wind Loading @ Velocity, frontal 759.0 N @ 150 km/h (170.6 lbf @ 150 km/h)

Wind Loading @ Velocity, lateral 259.0 N @ 150 km/h (58.2 lbf @ 150 km/h)

Wind Loading @ Velocity, maximum 984.0 N @ 150 km/h (221.2 lbf @ 150 km/h)

Wind Loading @ Velocity, rear 625.0 N @ 150 km/h (140.5 lbf @ 150 km/h)

Wind Speed, maximum 241 km/h (150 mph)

Packaging and Weights

Width, packed 565 mm | 22.244 in

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| | |
|-----------------------|----------------------|
| Depth, packed | 309 mm 12.165 in |
| Length, packed | 2187 mm 86.102 in |
| Weight, gross | 56.8 kg 125.222 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 |
| 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. |
|----------|---|--|

* Footnotes

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