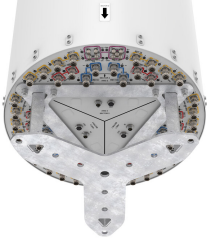


3X-RRZZHHTTS4-BR24



72-port sector antenna, 12x 694-960, 12x 1427-2690, 12x 1695-2180, 12x 2490-2690MHz 65° HPBW and 24x 3300-3800 MHz, 90° HPBW, 24x RET

- Separated Extension KIT available for this antenna, check Optional Mounting Kits section
- No pole mounting kit for this antenna

General Specifications

| | |
|---|--------------------------|
| Antenna Type | DualPol® tri-sector |
| Band | Multiband |
| Calibration Connector Interface | M-LOC |
| Calibration Connector Quantity | 3 |
| Color | Light Gray (RAL 7035) |
| Performance Note | Outdoor usage |
| Radome Material | Fiberglass, UV resistant |
| RF Connector Interface | 4.3-10 Female M-LOC |
| RF Connector Location | Bottom |
| RF Connector Quantity, high band | 24 |
| RF Connector Quantity, mid band | 36 |
| RF Connector Quantity, low band | 12 |
| RF Connector Quantity, total | 72 |

Remote Electrical Tilt (RET) Information

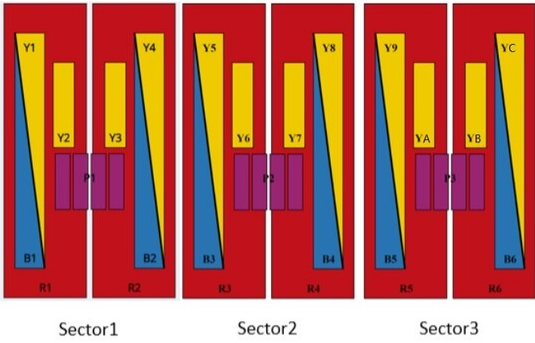
| | |
|--------------------------------|--|
| RET Hardware | CommRET v2 |
| RET Interface, quantity | 3 female 3 male |
| Internal RET | High band (3) Low band (6) Mid band (15) |
| Protocol | 3GPP/AISG 2.0 |

Dimensions

| | |
|---------------------------------|---------------------|
| Length | 2100 mm 82.677 in |
| Net Weight, antenna only | 110 kg 242.508 lb |
| Outer Diameter | 580 mm 22.835 in |

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Array Layout

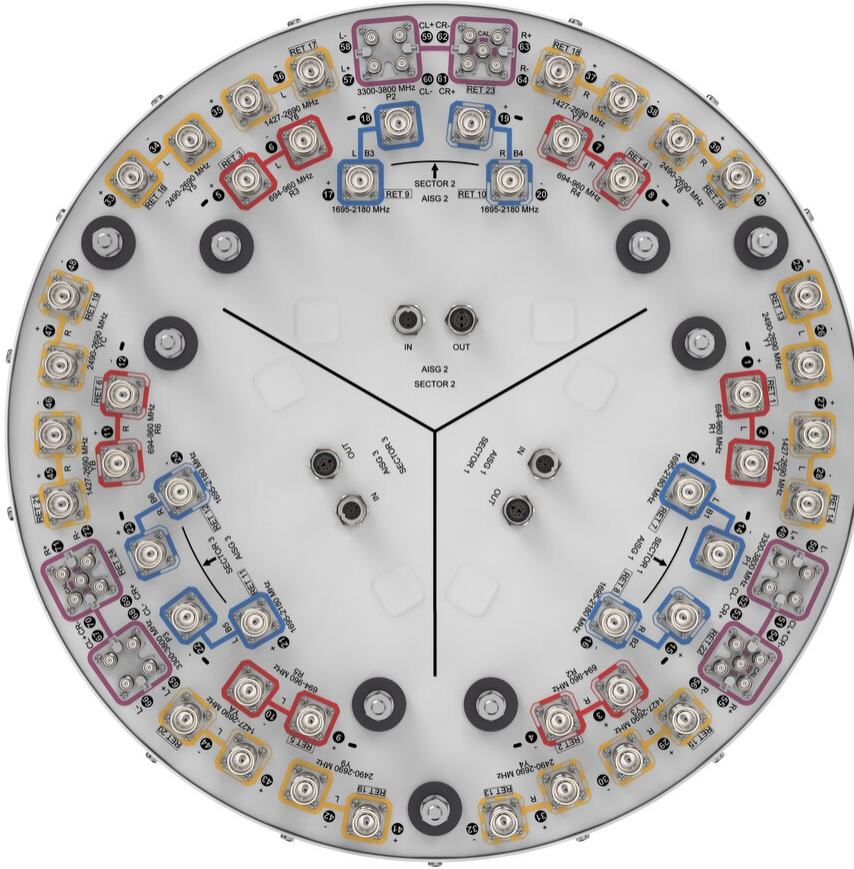


| Array ID | Frequency (MHz) | RF Connector | RET (dBm) | AISG No. | AISG RET UID |
|----------|-----------------|--------------|--------------|----------|----------------------|
| R1 | 694-960 | 1 - 2 | 1 | AISG1 | CPxxxxxxxxxxxxxxxxR1 |
| R2 | 694-960 | 3 - 4 | 2 | | CPxxxxxxxxxxxxxxxxR2 |
| B1 | 1695-2180 | 13 - 14 | 3 | | CPxxxxxxxxxxxxxxxxB1 |
| B2 | 1695-2180 | 15 - 16 | 4 | | CPxxxxxxxxxxxxxxxxB2 |
| Y1 | 2490-2690 | 25 - 26 | 5 | AISG2 | CPxxxxxxxxxxxxxxxxY1 |
| Y4 | 2490-2690 | 31 - 32 | 6 | | CPxxxxxxxxxxxxxxxxY2 |
| Y2 | 1427-2690 | 27 - 28 | 7 | | CPxxxxxxxxxxxxxxxxY3 |
| Y3 | 1427-2690 | 29 - 30 | 8 | AISG3 | CPxxxxxxxxxxxxxxxxY4 |
| P1 | 3300-3800 | 49 - 56 | 9 | | CPxxxxxxxxxxxxxxxxP1 |
| R3 | 694-960 | 5 - 6 | 10 | | CPxxxxxxxxxxxxxxxxR3 |
| R4 | 694-960 | 7 - 8 | 11 | | CPxxxxxxxxxxxxxxxxR4 |
| B3 | 1695-2180 | 17 - 18 | 12 | AISG1 | CPxxxxxxxxxxxxxxxxB3 |
| B4 | 1695-2180 | 19 - 20 | 13 | | CPxxxxxxxxxxxxxxxxB4 |
| Y5 | 2490-2690 | 33 - 34 | 14 | | CPxxxxxxxxxxxxxxxxY5 |
| Y8 | 2490-2690 | 39 - 40 | 15 | AISG2 | CPxxxxxxxxxxxxxxxxY6 |
| Y6 | 1427-2690 | 35 - 36 | 16 | | CPxxxxxxxxxxxxxxxxY7 |
| Y7 | 1427-2690 | 37 - 38 | 17 | | CPxxxxxxxxxxxxxxxxY8 |
| P2 | 3300-3800 | 57 - 64 | 18 | AISG3 | CPxxxxxxxxxxxxxxxxP2 |
| R5 | 694-960 | 9 - 10 | 19 | | CPxxxxxxxxxxxxxxxxR5 |
| R6 | 694-960 | 11 - 12 | 20 | | CPxxxxxxxxxxxxxxxxR6 |
| B5 | 1695-2180 | 21 - 22 | 21 | | CPxxxxxxxxxxxxxxxxB5 |
| B6 | 1695-2180 | 23 - 24 | 22 | AISG1 | CPxxxxxxxxxxxxxxxxB6 |
| Y9 | 2490-2690 | 41 - 42 | 23 | | CPxxxxxxxxxxxxxxxxY9 |
| YC | 2490-2690 | 47 - 48 | 24 | | CPxxxxxxxxxxxxxxxxYC |
| YA | 1427-2690 | 43 - 44 | 25 | AISG2 | CPxxxxxxxxxxxxxxxxYA |
| YB | 1427-2690 | 45 - 46 | 26 | | CPxxxxxxxxxxxxxxxxYB |
| P3 | 3300-3800 | 65 - 72 | 27 | | CPxxxxxxxxxxxxxxxxP3 |

(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 – 2180 MHz 2490 – 2690 MHz 3300 – 3800 MHz 694 – 960 MHz |
| Polarization | ±45° |

Electrical Specifications

| | R1-R6 | R1-R6 | R1-R6 | Y2,Y3,Y6,Y7,YA,YB | Y2,Y3,Y6,Y7,YA,YB |
|-------------------------------|---------|---------|---------|-------------------|-------------------|
| Frequency Band, MHz | 694–806 | 790–896 | 890–960 | 1427–1518 | 1695–1990 |
| RF Port | 1-12 | 1-12 | 1-12 | 27-30,35-38,43-46 | 27-30,35-38,43-46 |
| Gain at Mid Tilt, dBi | 13.9 | 14.6 | 14.7 | 13.1 | 15.1 |
| Beamwidth, Horizontal, | 67 | 59 | 57 | 61 | 67 |

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degrees

| | | | | | |
|---|----------|----------|----------|----------|----------|
| Beamwidth, Vertical, degrees | 10.4 | 9.5 | 9.1 | 10 | 8.1 |
| Beam Tilt, degrees | 2-12 | 2-12 | 2-12 | 2-12 | 2-12 |
| USLS (First Lobe), dB | 18 | 17 | 15 | 16 | 18 |
| Isolation, Cross Polarization, dB | 27 | 27 | 27 | 25 | 25 |
| Isolation, Inter-band, dB | 27 | 27 | 27 | 25 | 25 |
| VSWR Return loss, dB | 1.5 14.0 | 1.5 14.0 | 1.5 14.0 | 1.5 14.0 | 1.5 14.0 |
| PIM, 3rd Order, typical, 2 x 20 W, dBc | -153 | -153 | -153 | -153 | -153 |
| Input Power per Port at 50°C, maximum, watts | 250 | 250 | 250 | 200 | 200 |

Electrical Specifications, BASTA

| | 694-806 | 790-896 | 890-960 | 1427-1518 | 1695-1990 |
|--|----------------|----------------|----------------|------------------|------------------|
| Frequency Band, MHz | 694-806 | 790-896 | 890-960 | 1427-1518 | 1695-1990 |
| Gain by all Beam Tilts, average, dBi | 13.9 | 14.5 | 14.6 | 13 | 14.9 |
| Front-to-Back Total Power at 180° ± 30°, dB | 25 | 25 | 25 | 24 | 28 |
| CPR at Boresight, dB | 19 | 18 | 19 | 15 | 21 |
| CPR at Sector, dB | 13 | 9 | 9 | 1 | 5 |

Electrical Specifications

| | Y2,Y3,Y6,Y7,YA,YB | Y2,Y3,Y6,Y7,YA,YB | Y2,Y3,Y6,Y7,YA,YB | B1-B6 |
|---|--------------------------|--------------------------|--------------------------|-------------------|
| Frequency Band, MHz | 1920-2300 | 2300-2500 | 2490-2690 | 1695-1990 |
| RF Port | 27-30,35-38,43-46 | 27-30,35-38,43-46 | 27-30,35-38,43-46 | 13-16,17-20,21-24 |
| Gain at Mid Tilt, dBi | 16.3 | 16.8 | 17 | 16.7 |
| Beamwidth, Horizontal, degrees | 59 | 60 | 57 | 72 |
| Beamwidth, Vertical, degrees | 7.2 | 6.4 | 5.9 | 5.5 |
| Beam Tilt, degrees | 2-12 | 2-12 | 2-12 | 2-12 |
| USLS (First Lobe), dB | 19 | 20 | 18 | 17 |
| Isolation, Cross Polarization, dB | 25 | 25 | 25 | 27 |
| Isolation, Inter-band, dB | 25 | 25 | 25 | 26 |
| VSWR Return loss, dB | 1.5 14.0 | 1.5 14.0 | 1.5 14.0 | 1.5 14.0 |
| PIM, 3rd Order, typical, 2 x 20 W, dBc | -153 | -153 | -153 | -153 |

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| | | | | |
|---|-----|-----|-----|-----|
| Input Power per Port at 50°C, maximum, watts | 200 | 150 | 150 | 200 |
|---|-----|-----|-----|-----|

Electrical Specifications, BASTA

| Frequency Band, MHz | 1920–2300 | 2300–2500 | 2490–2690 | 1695–1990 |
|--|------------------|------------------|------------------|------------------|
| Gain by all Beam Tilts, average, dBi | 16.1 | 16.6 | 16.7 | 16.5 |
| Front-to-Back Total Power at 180° ± 30°, dB | 28 | 27 | 30 | 24 |
| CPR at Boresight, dB | 19 | 19 | 19 | 18 |
| CPR at Sector, dB | 6 | 6 | 1 | 4 |

Electrical Specifications

| | B1-B6 | Y1,Y4,Y5,Y8,Y9,YC | P1,P2,P3 | P1,P2,P3 |
|--|-------------------|--------------------------|------------------|------------------|
| Frequency Band, MHz | 1920–2180 | 2490–2690 | 3300–3600 | 3600–3800 |
| RF Port | 13-16,17-20,21-24 | 25-26,31-34,39-42,47-48 | 49-72 | 49-72 |
| Gain at Mid Tilt, dBi | 17 | 17.8 | 15.1 | 15.4 |
| Beamwidth, Horizontal, degrees | 69 | 63 | 84 | 81 |
| Beamwidth, Vertical, degrees | 5 | 4 | 6.5 | 6 |
| Beam Tilt, degrees | 2–12 | 2–12 | 2–12 | 2–12 |
| USLS (First Lobe), dB | 17 | 17 | 14 | 15 |
| 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 | 27 | 27 | 25 | 25 |
| Isolation, Inter-band, dB | 26 | 27 | 25 | 25 |
| Isolation, Co-polarization, dB | | | 19 | 19 |
| VSWR Return loss, dB | 1.5 14.0 | 1.5 14.0 | 1.5 14.0 | 1.5 14.0 |
| PIM, 3rd Order, typical, 2 x 20 W, dBc | -153 | -153 | -140 | -140 |
| Input Power per Port at 50°C, | 200 | 150 | 75 | 75 |

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maximum, watts

Electrical Specifications, BASTA

| Frequency Band, MHz | 1920–2180 | 2490–2690 | 3300–3600 | 3600–3800 |
|---|-----------|-----------|-----------|-----------|
| Gain by all Beam Tilts, average, dBi | 16.9 | 17.4 | 14.8 | 15.2 |
| Front-to-Back Total Power at 180° ± 30°, dB | 24 | 26 | 30 | 31 |
| CPR at Boresight, dB | 20 | 20 | 16 | 15 |
| CPR at Sector, dB | 4 | 4 | 6 | 6 |

Electrical Specifications, Broadcast 65°

| Frequency Band, MHz | 3300–3600 | 3600–3800 |
|---|-----------|-----------|
| Gain, dBi | 16.4 | 16.4 |
| Beamwidth, Horizontal, degrees | 65 | 65 |
| Beamwidth, Horizontal at 10 dB, degrees | 117 | 112 |
| Beamwidth, Vertical, degrees | 6.5 | 6.1 |
| Front-to-Back Total Power at 180° ± 30°, dB | 33 | 33 |
| USLS (First Lobe), dB | 18 | 18 |

Electrical Specifications, Service Beam

| Frequency Band, MHz | 3300–3600 | 3600–3800 |
|---|-----------|-----------|
| Steered 0° Gain, dBi | 19.8 | 20.7 |
| Steered 0° Beamwidth, Horizontal, degrees | 28 | 24 |
| Steered 0° Front-to-Back Total Power at 180° ± 30°, dB | 36 | |
| Steered 0° Horizontal Sidelobe, dB | 14 | 14 |
| Steered 30° Gain, dBi | 19.3 | 19.3 |
| Steered 30° Beamwidth, Horizontal, degrees | 29 | 29 |
| Steered 30° Front-to-Back Total Power at 180° ± 30°, dB | 36 | 35 |
| Steered 30° Horizontal Sidelobe, dB | 9 | 10 |

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Electrical Specifications, Soft Split

| Frequency Band, MHz | 3300–3600 | 3600–3800 |
|---|-----------|-----------|
| Gain, dBi | 19.3 | 19.2 |
| Beamwidth, Horizontal, degrees | 31 | 33 |
| Front-to-Back Total Power at 180° ± 30°, dB | 35 | 35 |
| Horizontal Sidelobe, dB | 16 | 19 |

Mechanical Specifications

| | |
|----------------------------------|---|
| Wind Loading @ Velocity, frontal | 745.0 N @ 150 km/h (167.5 lbf @ 150 km/h) |
| Wind Loading @ Velocity, lateral | 745.0 N @ 150 km/h (167.5 lbf @ 150 km/h) |
| Wind Loading @ Velocity, maximum | 745.0 N @ 150 km/h (167.5 lbf @ 150 km/h) |
| Wind Loading @ Velocity, rear | 745.0 N @ 150 km/h (167.5 lbf @ 150 km/h) |
| Wind Speed, maximum | 241 km/h (150 mph) |

Packaging and Weights

| | |
|----------------|-----------------------|
| Width, packed | 714 mm 28.11 in |
| Depth, packed | 692 mm 27.244 in |
| Length, packed | 2537 mm 99.882 in |
| Weight, gross | 131.5 kg 289.908 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 |



* Footnotes

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