

TDD : XXXXPol 2490~2690MHz/3300~3800MHz BCH 65°/65°17/17dBi 2~12°/2~12° Beamforming
 FDD : XXXXPol 698~960MHz×2/1427~2690MHzx2 65°/65° 16.5/18 dBi 2~12°/2~12° Integrated and replaceable
 RCU (Remote Control Unit) Antenna

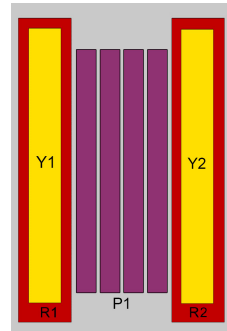
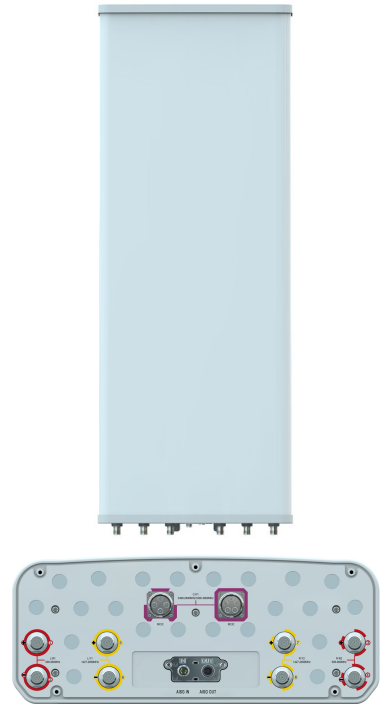
| Electrical Specifications-TDD | | | | | |
|---------------------------------------|--|--|---------------------------------|-----------|----------|
| General Parameters | Frequency range(MHz) | | 2490~2690 | 3300~3800 | |
| | Polarization | | ±45° | | |
| | Electrical downtilt(°) | | 2~12 | | |
| | Electrical downtilt tolerance(°) | | ±1 | | |
| Calibration and Electrical Parameters | Coupling factor between calibration port and each antenna port(dB) | | -26±2 | | |
| | Max.amplitude tolerance from calibration port to input ports(dB) | | <0.9 | | |
| | Max.phase tolerance from calibration port to input ports(°) | | ≤8 | | |
| | Ports VSWR | | ≤1.5 | | |
| | Co-polarization isolation between ports(dB) | | ≥20@2~5°;≥25@6~12° | | |
| | Cross-polarization isolation between ports(dB) | | ≥ 22 | | |
| | Inter array spacing(mm) | | 55(0.47λ@2590MHz,0.65λ@3550MHz) | | |
| Radiation Parameters | Single Column Beam | Horizontal 3dB beam width(°) | | 80±15 | 65±15 |
| | | Gain(dBi) | | 14.3±0.4 | 14.8±0.4 |
| | | Vertical 3dB beam width(°) | | ≥6.5 | ≥4.5 |
| | | Cross polar ratio(0°)(dB) | | ≥15 | |
| | | Cross polar ratio(±60°)(dB) | | ≥10 | |
| | | Front to back ratio(dB) | | ≥22 | |
| | | Vertical sidelobe suppression for first sidelobe above main beam(dB) | | ≥15 | |
| | Broadcast Beam | Gain(dBi) | | 16.5±0.7 | 16.5±0.8 |
| | | SPR(±60°)(%) | | ≥90 | |
| | | Vertical 3dB beam width(°) | | ≥6.5 | ≥4.5 |
| | | Cross polar ratio(0°)(dB) | | ≥18 | |
| | | Front to back ratio(dB) | | ≥25 | |
| | Service Beam | 0° direct beam gain(dBi) | | 20±0.8 | 21±0.8 |
| | | 0° direct beam horizontal 3dB beam width(°) | | ≤28 | |
| | | 0° direct beam sidelobe suppression(dB) | | ≥10 | |
| | | 0° direct beam cross polar ratio(axial)(dB) | | ≥18 | |
| | | 0° direct beam front to back ratio(dB) | | ≥25 | |
| | | ±30° direct beam gain(dBi) | | 18±0.8 | 19±0.8 |

| Electrical Specifications | | | | |
|---|-------------------------------|----------|----------|----------|
| Frequency range (MHz) | R1/R2 -698~960 | | | |
| | 698~803 | 790~862 | 824~894 | 880~960 |
| Polarization | ±45° | | | |
| Gain at mid tilt (dBi) | 15.4 | 15.8 | 16 | 16.3 |
| Gain over all tilts (dBi) | 15.2±0.5 | 15.6±0.5 | 15.8±0.6 | 16.1±0.5 |
| Horizontal 3dB beamwidth (°) | 68±5 | 67±5 | 66±5 | 65±5 |
| Vertical 3dB beamwidth (°) | 9.3±0.8 | 8.4±0.5 | 8±0.5 | 7.5±0.5 |
| Front to back ratio(dB) Total power, 180° | >21 | >23 | >25 | >24 |
| Cross polar ratio (dB) (at Boresight) | >18 | >19 | >17 | >18 |
| Electrical downtilt (°) | 2~12 | | | |
| Sidelobe suppression (dB) (First sidelobe above main beam) | >15 | >15 | >16 | >16 |
| VSWR | <1.5 | | | |
| Isolation: intra-system (dB) | ≥25 | | | |
| Isolation: inter-system (dB) | R1//R2≥25 R1,R2//others≥28 | | | |
| Intermodulation IM3 (2×43dBm carrier) | ≤-150 dBc | | | |
| Impedance (Ω) | 50 | | | |
| Max. power per input (W) @50°C | 400 | | | |
| Lightning protection | Dc Ground | | | |

| Electrical Specifications | | | | | |
|---|------------------|-----------|-----------|-----------|-----------|
| Frequency Range (MHz) | Y1/Y2 -1427~2690 | | | | |
| | 1427~1518 | 1710~1990 | 1920~2200 | 2200~2490 | 2490~2690 |
| Polarization | ±45° | | | | |
| Gain at mid tilt (dBi) | 16 | 16.7 | 17.2 | 17.7 | 17.5 |
| Gain over all tilts (dBi) | 15.9±0.4 | 16.6±0.4 | 17±0.6 | 17.5±0.8 | 17.2±0.5 |
| Horizontal 3dB beamwidth (°) | 63±5 | 64±6 | 65±5 | 62±5 | 59±6 |
| Vertical 3dB beamwidth (°) | 8.3±0.5 | 6.6±0.6 | 5.9±0.5 | 5.4±0.4 | 4.8±0.4 |
| Front to back ratio (dB) Total power, ±30° | >26 | >26 | >25 | >25 | >24 |
| Cross polar ratio (dB) (at Boresight) | >20 | >20 | >20 | >19 | >18 |
| Electrical downtilt (°) | 2~12 | | | | |
| Sidelobe suppression (dB) (First sidelobe above main beam) | >16 | >15 | >14 | >16 | >15 |
| VSWR | <1.5 | | | | |
| Isolation: intra-system (dB) | ≥25 | | | | |
| Isolation: inter-system (dB) | ≥28 | | | | |
| Intermodulation IM3 (2×43dBm carrier) | ≤-150 dBc | | | | |
| Impedance (Ω) | 50 | | | | |
| Max. power per input (W) @50°C | 200 | | | | |
| Lightning protection | Dc Ground | | | | |

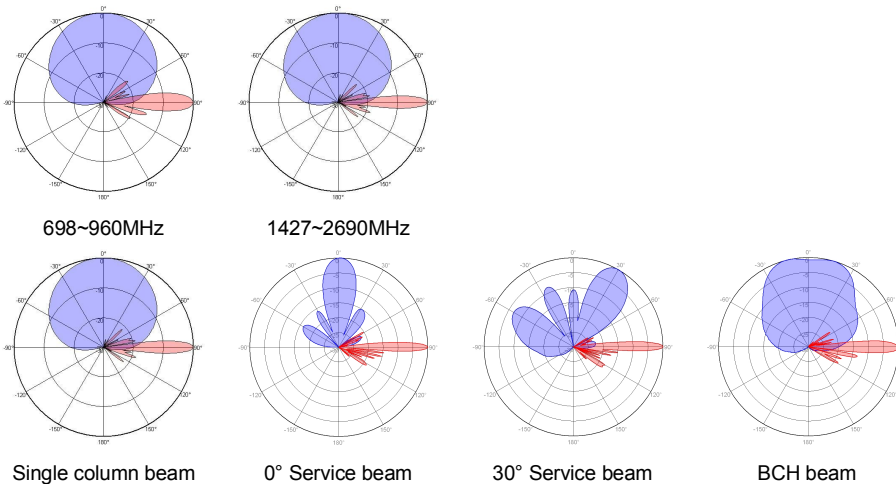
| Mechanical Specifications | |
|--|---|
| Connector | TDD: 1×(MQ4+MQ5) Connector-Male FDD: 8×4.3-10-Female |
| Connector position | Bottom |
| Height × width × depth (mm) | 2680×499×198 |
| Packing size (mm) | 2965×565×250 |
| Antenna weight (kg) | 47.2 |
| Installation kit weight (kg) | 8.4 |
| Packing weight (kg) | 66.3 |
| Wind load (N, at 150km/h) Frontal/Lateral/Maximum | 1485/435/1675 |
| Max. wind velocity (km/h) | 216 |
| Radome material | Fiberglass |
| Radome color | Gray |
| Mechanical tilt (°) | 0~8 |
| Operating temperature (°C) | -50~65 |
| Mounting hardware (mm) | Φ50~Φ115 |

| Integrated RET Properties | |
|------------------------------|---|
| RET model | TRCU-TQ10P2V01 |
| RET type | Integrated (Replaceable) |
| RET protocol | AISG 2.0 / 3GPP |
| Power supply(V) | 10-30 DC |
| Power consumption(W) | ≤0.6 (Idle, 12V), ≤6 (in Motion, 12V) |
| Adjustment time (Full Range) | < 4Mins |
| Adjustment cycles | > 50,000 |
| Temperature range (°C) | -40~65 |
| Lightning protection | 3KA(8/20μs) @ Pin5& Pin3; 5KA(8/20μs) @ Pin1/ Pin6& Pin7 |
| Connectors | 2 x 8 Pin circle connector according To IEC 60130-9 And AISG. Daisy chain in: Male, Daisy chain out: Female Pin1: 12V; Pin3: RS485B; Pin5: RS485A; Pin6: 10-30V; Pin7: GND; Pin2 & Pin4 & Pin8: N/C |



| Ant Array | RET Unique ID |
|-----------|----------------|
| R1 | TY00000.....R1 |
| R2 | TY00000.....R2 |
| Y1 | TY00000.....Y1 |
| Y2 | TY00000.....Y2 |
| P1 | TY00000.....P1 |

Antenna Pattern Sample For Reference



Beamforming Weights

| Broadcast beamwith 65° | | Frequency Range(MHz) | port | port1 | port2 | port3 | port4 | port5 | port6 | port7 | port8 |
|------------------------|------------------------------|----------------------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|
| P0 | Fullpower broadcast tilt2-12 | 2490~2690 | Amplitude | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| | | | Phase(°) | -80 | 0 | 0 | -80 | 0 | 0 | 0 | 0 |
| P1 | Fullpower broadcast tilt2-12 | 2490~2690 | Amplitude | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| | | | Phase(°) | 0 | 0 | 0 | 0 | -80 | 0 | 0 | -80 |
| P0 | Fullpower broadcast tilt2-12 | 3300~3800 | Amplitude | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| | | | Phase(°) | -20 | 0 | 0 | 0 | 0 | 0 | 0 | -180 |
| P1 | Fullpower broadcast tilt2-12 | 3300~3800 | Amplitude | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 |
| | | | Phase(°) | 0 | 0 | 0 | -180 | -20 | 0 | 0 | 0 |
| Service Beam | | Frequency Range(MHz) | port | port1 | port2 | port3 | port4 | port5 | port6 | port7 | port8 |
| + 45° | 0°for tilt2-12 | 2490~3800 | Amplitude | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| | | | Phase(°) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| - 45° | 0°for tilt2-12 | 2490~3800 | Amplitude | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| | | | Phase(°) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| + 45° | 30°for tilt2-12 | 2490~2690 | Amplitude | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| | | | Phase(°) | 0 | 100 | 200 | 300 | 0 | 0 | 0 | 0 |
| - 45° | 30°for tilt2-12 | 2490~2690 | Amplitude | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| | | | Phase(°) | 0 | 0 | 0 | 0 | 0 | 100 | 200 | 300 |
| + 45° | 30°for tilt2-12 | 3300~3800 | Amplitude | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| | | | Phase(°) | 0 | 130 | 260 | 390 | 0 | 0 | 0 | 0 |
| - 45° | 30°for tilt2-12 | 3300~3800 | Amplitude | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| | | | Phase(°) | 0 | 0 | 0 | 0 | 0 | 130 | 260 | 390 |