

TDD : XXXXPol 2490~2690MHzMHz BCH 65° 16dBi 2~12°Beamforming
FDD : XXXXPol 698~960MHzx2/1727~2690MHzx2 65°/65° 15/18 dBi 2~12°/2~12° Integrated and replaceable RCU (Remote Control Unit) Antenna

| Electrical Specifications-TDD | | | |
|---------------------------------------|--|--|-------------------|
| General Parameters | Frequency range(MHz) | | Y2-2490~2690 |
| | | | 2490~2690 |
| | 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(°) | | ≤9 |
| | Ports VSWR | | ≤1.5 |
| | Co-polarization isolation between ports(dB) | | ≥20 |
| | Cross-polarization isolation between ports(dB) | | ≥ 22 |
| | Inter array spacing(mm) | | 57(0.49λ@2590MHz) |
| Radiation Parameters | Single Column Beam | Horizontal 3dB beam width(°) | 90±15 |
| | | Gain(dBi) | 14.3±0.9 |
| | | Vertical 3dB beam width(°) | 8±0.8 |
| | | Cross polar ratio(0°)(dB) | ≥15 |
| | | Front to back ratio(dB) | ≥22 |
| | | Vertical sidelobe suppression for first sidelobe above main beam(dB) | ≥15 |
| | Broadcast Beam | Gain(dBi) | 15.8±0.9 |
| | | SPR(±60°)(%) | ≥90 |
| | | Vertical 3dB beam width(°) | 8±0.8 |
| | | Front to back ratio(dB) | ≥25 |
| | Service Beam | 0° direct beam gain(dBi) | 19.5±0.9 |
| | | 0° direct beam horizontal 3dB beam width(°) | 24±3 |
| | | 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) | 17.7±0.9 |

| Electrical Specifications | | | | |
|---|----------------|----------|----------|---------|
| Frequency range (MHz) | R1/R2 -698~960 | | | |
| | 698~803 | 790~862 | 824~894 | 880~960 |
| Polarization | ±45° | | | |
| Gain at mid tilt (dBi) | 14 | 14.6 | 14.9 | 15.2 |
| Gain over all tilts (dBi) | 13.9±0.6 | 14.5±0.6 | 14.8±0.6 | 15±0.6 |
| Horizontal 3dB beamwidth (°) | 69±4 | 67±4 | 66±4 | 65±4 |
| Vertical 3dB beamwidth (°) | 11.5±1 | 10.4±0.7 | 10±0.7 | 9.3±0.6 |
| Front to back ratio(dB) Total power, 180° | >21 | >23 | >23 | >24 |
| Cross polar ratio (dB) (at Boresight) | >18 | >18 | >18 | >18 |
| Electrical downtilt (°) | 2~12 | | | |
| Sidelobe suppression (dB) (First sidelobe above main beam) | >16 | >16 | >15 | >15 |
| VSWR | <1.5 | | | |
| Isolation: intra-system (dB) | ≥25 | | | |
| Isolation: inter-system (dB) | ≥26 | | | |
| Intermodulation IM3 (2×43dBm carrier) | ≤-153 dBc | | | |
| Impedance (Ω) | 50 | | | |
| Max. power per input (W) @50°C | 400 | | | |
| Lightning protection | Dc Ground | | | |

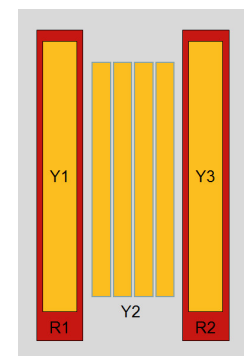
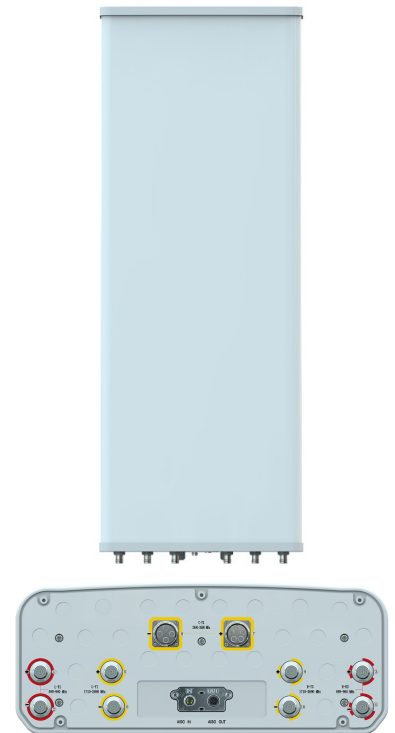
| Electrical Specifications | | | | |
|---|------------------|-----------|-----------|-----------|
| Frequency Range (MHz) | Y1/Y3 -1710~2690 | | | |
| | 1710~1990 | 1920~2200 | 2200~2490 | 2490~2690 |
| Polarization | ±45° | | | |
| Gain at mid tilt (dBi) | 16.9 | 17.2 | 17.7 | 18 |
| Gain over all tilts (dBi) | 16.7±0.6 | 17±0.6 | 17.5±0.6 | 17.8±0.6 |
| Horizontal 3dB beamwidth (°) | 68±6 | 65±5 | 63±5 | 59±6 |
| Vertical 3dB beamwidth (°) | 6.3±0.7 | 5.6±0.6 | 4.9±0.5 | 4.4±0.5 |
| Front to back ratio (dB) Total power, ±30° | >25 | >25 | >25 | >24 |
| Cross polar ratio (dB) (at Boresight) | >18 | >18 | >18 | >18 |
| Electrical downtilt (°) | 2~12 | | | |
| Sidelobe suppression (dB) (First sidelobe above main beam) | >16 | >16 | >15 | >15 |
| VSWR | <1.5 | | | |
| Isolation: intra-system (dB) | ≥25 | | | |
| Isolation: inter-system (dB) | ≥26 | | | |
| Intermodulation IM3 (2×43dBm carrier) | ≤-153 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) | 2080×499×198 |
| Packing size (mm) | 2370×565×250 |
| Antenna weight (kg) | 40 |
| Installation kit weight (kg) | 5.5 |
| Packing weight (kg) | 53.9 |
| Wind load (N,at 150km/h) Frontal/Lateral/Maximum | 1100/325/1240 |
| Max. wind velocity (km/h) | 216 |
| Radome material | Fiberglass |
| Radome color | Gray |
| Mechanical tilt (°) | 0~10 |
| 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,Daisychain 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 |
| Y3 | TY00000.....Y3 |

Antenna Pattern Sample For Reference
