

**TDD : XXXXPOL 2300~2690MHz BCH 65° 16dBi 2°~12° Beamforming**  
**FDD : XXXXPOL 690~960MHz×2/1695~2690MHz×2/1695~2690MHz 65°/65°/65° 15.5/17.5/15.7dBi**  
**2°~12°/2°~12°/2°~12° Integrated and replaceable RCU (Remote Control Unit)Antenna**

Electrical Specifications-TDD			
General Parameters	Frequency range(MHz)		Y2- 2300~2690 2300~2690
	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
	Max. power per input (W) @50°C		50
Radiation Parameters	Single Column Beam	Horizontal 3dB beam width(°)	90±15
		Gain(dBi)	14.5±1
		Vertical 3dB beam width(°)	8.3±0.9
		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)	16±1
		SPR(±60°)(%)	≥90
		Vertical 3dB beam width(°)	8.3±0.9
		Cross polar ratio(0°)(dB)	≥18
		Front to back ratio(dB)	≥25
		Vertical sidelobe suppression for first sidelobe above main beam(dB)	≥15
	Service Beam	0° direct beam gain(dBi)	19.7±1
		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)	18±1

<b>Electrical Specifications</b>				
Frequency range (MHz)	R1/R2 -690~960			
	690~803	790~862	824~894	880~960
Polarization	±45°			
Gain at mid tilt (dBi)	14.0	14.5	14.9	15.5
Gain over all tilts (dBi)	13.9±0.6	14.3±0.5	14.8±0.6	15.3±0.5
Horizontal 3dB beamwidth (°)	69±4	67±4	66±4	65±4
Vertical 3dB beamwidth (°)	11.4±1	10.5±0.7	10±0.6	9.3±0.6
Front to back ratio(dB) Total power, 180°	>21	>22	>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)	≥25			
Intermodulation IM3 (2×43dBm carrier)	≤-153 dBc			
Impedance (Ω)	50			
Max. power per input (W) @50°C	400			
Lightning protection	Dc Ground			

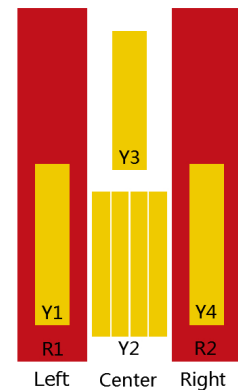
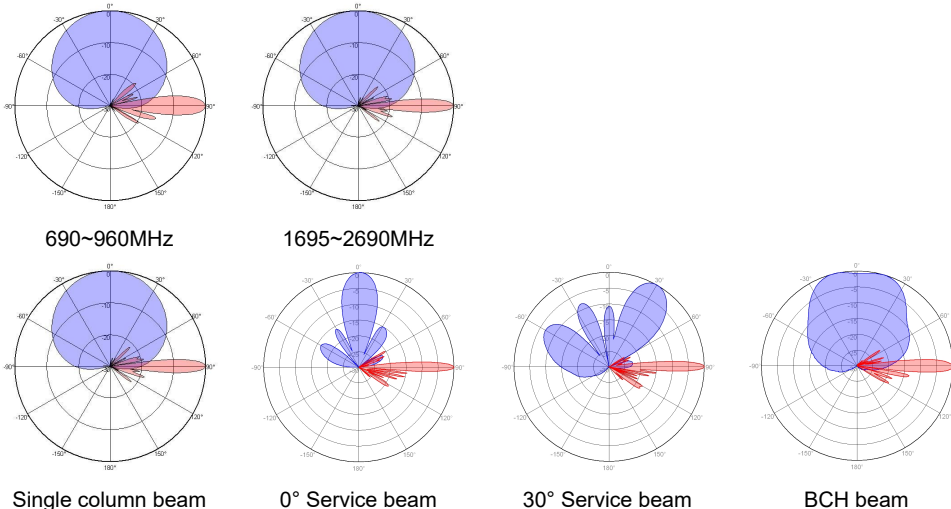
<b>Electrical Specifications</b>								
Frequency Range (MHz)	Y1/Y4 -1695~2690				Y3 -1695~2690			
	1695~1990	1920~2200	2200~2490	2490~2690	1695~1990	1920~2200	2200~2490	2490~2690
Polarization	±45°							
Gain at mid tilt (dBi)	16.7	17.2	17.7	17.5	15	15.4	15.6	15.7
Gain over all tilts (dBi)	16.6±0.4	17.0±0.6	17.5±0.8	17.2±0.5	14.9±0.5	15.2±0.5	15.4±0.5	15.5±0.5
Horizontal 3dB beamwidth (°)	68±6	66±5	63±5	59±6	68±5	65±5	63±5	59±5
Vertical 3dB beamwidth (°)	6.6±0.5	5.9±0.5	5.4±0.4	4.8±0.5	9.3±1.0	8.4±0.8	7.4±0.7	6.6±0.6
Front to back ratio (dB) Total power, ±30°	>24	>25	>25	>23	>25	>25	>25	>24
Cross polar ratio (dB) (at Boresight)	>17	>18	>17	>16	>17	>16	>16	>16
Electrical downtilt (°)	2~12				2~12			
Sidelobe suppression (dB) (First sidelobe above main beam)	>15	>15	>15	>15	>15	>15	>15	>15
VSWR	<1.5							
Isolation: intra-system (dB)	≥25							
Isolation: inter-system (dB)	≥25							
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:10×4.3-10-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)	5.4
Packing weight (kg)	53
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-TQ20P3V01
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

**Antenna Pattern Sample For Reference**


Ant Array	RET Unique ID
R1	TY00000.....R1
R2	TY00000.....R2
Y1	TY00000.....Y1
Y2	TY00000.....Y2
Y3	TY00000.....Y3
Y4	TY00000.....Y4