

**TDD : XXXXPoI 3300~3800MHz BCH 65° 16.5dBi 2~12° Beamforming**  
**FDD : XXXXXXPoI 698~960MHz×2/1427~2690MHz×2/1710~2690MHz×2 65°/65°/65°16.5/17.5/17.5dBi 2°**  
**~12°/2°~12°/2°~12° Integrated and replaceable RCU (Remote Control Unit) Antenna**

Electrical specifications-TDD					
General parameters	Frequency range(MHz)		P1-3300~3800		
			3300~3600	3600~3800	
	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@2~4°;≥25@5~12°		
	Cross-polarization isolation between ports(dB)		≥22		
	Inter array spacing(mm)		43(0.51λ@3550MHz)		
Radiation parameters	Single column beam	Horizontal 3dB beam width(°)		90±15	86±15
		Gain(dBi)		14.3±0.5	15±0.6
		Vertical 3dB beam width(°)		≥6	≥5.5
		Cross polar ratio(0°)(dB)		≥15	
		Cross polar ratio(±60°)(dB)		≥8	
		Front to back ratio(dB)		≥23	
		Vertical sidelobe suppression for first sidelobe above main beam(dB)		≥15	
	Broadcast beam	Gain(dBi)		16.5±0.5	16.5±0.6
		SPR(±60°)(%)		≥90	
		Vertical 3dB beam width(°)		≥6	≥5.5
		Front to back ratio(dB)		≥25	
	Service beam	0° direct beam gain(dBi)		20±0.5	20±0.6
		0° direct beam horizontal 3dB beam width(°)		≤30	≤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)		18.3±0.5	19±0.6

**Electrical specifications**

Frequency Range (MHz)	R1/R2 -698~960				Y2/Y3 -1710~2690			
	698~803	790~862	824~894	880~960	1710~1990	1920~2200	2200~2490	2490~2690
Polarization	±45°							
Gain at mid tilt (dBi)	15.4	15.8	16.0	16.3	16.4	16.7	16.9	17.3
Gain over all tilts (dBi)	15.2±0.4	15.6±0.4	15.8±0.4	16.1±0.4	16.2±0.5	16.5±0.6	16.7±0.7	17.1±0.7
Horizontal 3dB beamwidth (°)	66±4	65±5	65±6	67±5	68±6	67±6	61±5	58±6
Vertical 3dB beamwidth (°)	9.3±0.8	8.3±0.5	8.1±0.6	7.7±0.5	7.0±0.6	6.1±0.6	5.4±0.6	5.0±0.6
Front to back ratio (dB) Total power, ±30°	>22	>23	>24	>25	>25	>25	>25	>25
Cross polar ratio (dB) (at Boresight)	>18	>19	>19	>19	>18	>18	>18	>18
Electrical downtilt (°)	2~12				2~12			
Sidelobe suppression (dB) (First sidelobe above main beam)	>16	>16	>16	>16	>15	>15	>15	>15
VSWR	<1.5							
Isolation: intra-system (dB)	≥25							
Isolation: inter-system (dB)	R1//R2≥25 R1,R2//other≥28				Y2//Y3 ≥ 25 Y2, Y3//Other≥ 28			
Intermodulation IM3 (2×43dBm carrier)	≤-150 dBc							
Impedance (Ω)	50							
Max. power per input (W) @50°C	400				200			
Lightning protection	Dc Ground							

**Electrical specifications**

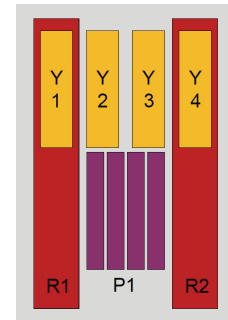
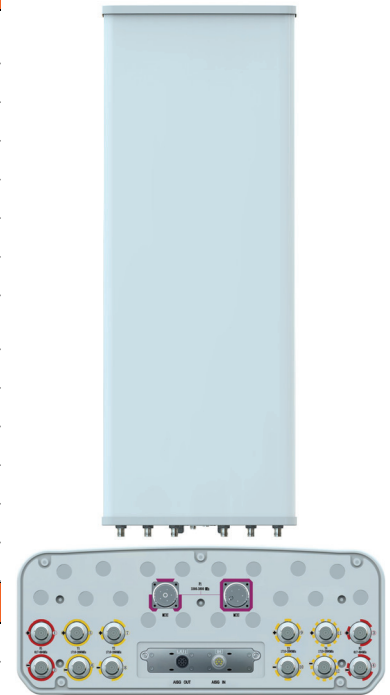
Frequency Range (MHz)	Y1/Y4 -1427~2690				
	1427~1518	1710~1990	1920~2200	2200~2490	2490~2690
Polarization	±45°				
Gain at mid tilt (dBi)	15.6	16.5	16.9	17.2	17.5
Gain over all tilts (dBi)	15.5±0.5	16.3±0.5	16.7±0.5	17.0±0.6	17.3±0.6
Horizontal 3dB beamwidth (°)	63±5	65±6	63±5	60±5	59±6
Vertical 3dB beamwidth (°)	8.3±0.6	6.6±0.6	5.9±0.6	5.4±0.6	4.8±0.6
Front to back ratio (dB) Total power, ±30°	>25	>25	>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	>16	>14	>15	>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:12×4.3-10-Female
Connector position	Bottom
Height × width × depth (mm)	2680×499×198
Packing size (mm)	3120×620×330
Antenna weight (kg)	51
Installation kit weight (kg)	8.4
Packing weight (kg)	67.4
Wind load (N,at 150km/h) Frontal/Lateral/Rearside	1485/435/1670
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-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	2×8 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
Y3	TY00000.....Y3
Y4	TY00000.....Y4
P1	TY00000.....P1

**Antenna pattern sample for reference**
