

TDD : XXXXPoI 2300~2690MHz/3300~3800MHz BCH 65°/65° 17/17dBi 2~12°/2~12° Beamforming
FDD : XXXXPoI 698~960MHz×2/1427~2690MHz×2 65°/65° 16/18 dBi 2~12°/2~12° Integrated and replaceable
RCU (Remote Control Unit) Antenna

Electrical specifications-TDD					
General parameters	Frequency range(MHz)		P1-2300~3800		
			2300~2690	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@2~4°;≥25@5~12°		
Radiation parameters	Single column beam	Horizontal 3dB beam width(°)		90±15	65±15
		Gain(dBi)		14.3±0.9	15.3±1.0
		Vertical 3dB beam width(°)		7.2±0.6	4.9±0.5
		Cross polar ratio(0°)(dB)		≥15	
		Cross polar ratio(±60°)(dB)		≥8	
		Front to back ratio(dB)		≥21	≥25
	Broadcast beam	Vertical sidelobe suppression for first sidelobe above main beam(dB)		≥15	≥13
		Gain(dBi)		16.5±0.8	16.8±0.8
		SPR(±60°)(%)		≥90	
		Vertical 3dB beam width(°)		7.1±0.6	4.8±0.5
		Cross polar ratio(0°)(dB)		≥18	
	Service beam	Front to back ratio(dB)		≥25	
		0° direct beam gain(dBi)		20.3±0.8	21.0±0.8
		0° direct beam horizontal 3dB beam width(°)		≤28	≤25
		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±0.8	19.0±0.8	

Electrical specifications

Frequency Range (MHz)	R1/R2 -698~960			
	698~803	790~862	824~894	880~960
Polarization	$\pm 45^\circ$			
Gain at mid tilt (dBi)	15.4	15.8	16	16.3
Gain over all tilts (dBi)	15.3 \pm 0.5	15.6 \pm 0.5	15.8 \pm 0.6	16.2 \pm 0.6
Horizontal 3dB beamwidth ($^\circ$)	68 \pm 5	67 \pm 5	66 \pm 5	65 \pm 5
Vertical 3dB beamwidth ($^\circ$)	9.3 \pm 0.8	8.4 \pm 0.5	8 \pm 0.5	7.5 \pm 0.5
Front to back ratio(dB) Total power, 180 $^\circ$	>21	>23	>25	>24
Cross polar ratio (dB) (at Boresight)	>18	>19	>17	>18
Electrical downtilt ($^\circ$)	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//other ≥ 26			
Intermodulation IM3 (2 \times 43dBm carrier)	≤ -150 dBc			
Impedance (Ω)	50			
Max. power per input (W) @50 $^\circ$ C	400			
Lightning protection	Dc Ground			

Electrical specifications

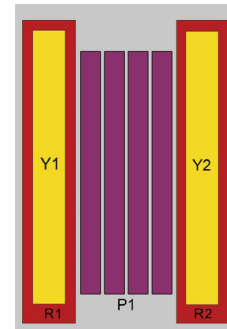
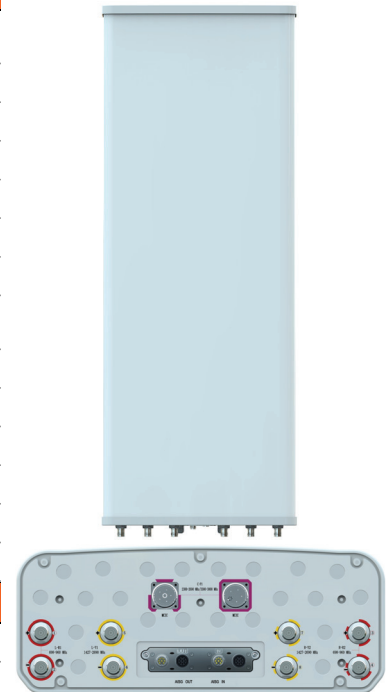
Frequency Range (MHz)	Y1/Y2 -1427~2690				
	1427~1518	1710~1990	1920~2200	2200~2490	2490~2690
Polarization	$\pm 45^\circ$				
Gain at mid tilt (dBi)	16.3	16.9	17.4	17.8	17.6
Gain over all tilts (dBi)	16.1 \pm 0.4	16.8 \pm 0.4	17.2 \pm 0.6	17.7 \pm 0.8	17.4 \pm 0.5
Horizontal 3dB beamwidth ($^\circ$)	68 \pm 5	66 \pm 6	64 \pm 5	61 \pm 5	60 \pm 6
Vertical 3dB beamwidth ($^\circ$)	8.3 \pm 0.5	6.6 \pm 0.6	5.9 \pm 0.5	5.4 \pm 0.4	4.8 \pm 0.4
Front to back ratio (dB) Total power, $\pm 30^\circ$	>26	>26	>25	>24	>24
Cross polar ratio (dB) (at Boresight)	>20	>20	>20	>19	>18
Electrical downtilt ($^\circ$)	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)	≥ 26				
Intermodulation IM3 (2 \times 43dBm carrier)	≤ -150 dBc				
Impedance (Ω)	50				
Max. power per input (W) @50 $^\circ$ 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)	3120×620×330
Antenna weight (kg)	42
Installation kit weight (kg)	8.4
Packing weight (kg)	59.2
Wind load (N,at 150km/h) Frontal/Lateral/Rearside	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-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



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
