

TDD : XXXX Pol 3300~3800MHz 65° 16dBi 2~12° Beamforming.
FDD : XXXXXX Pol 698~960MHzx2/Dual Beam 1710~2690MHzx4 65°/ 33°15.5/17.0dBi 2~12°/2~12°Integrated RCU (Remote Control Unit) Antenna.

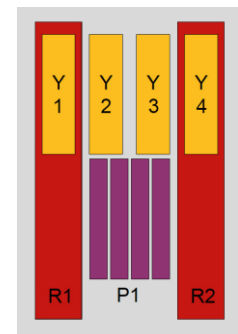
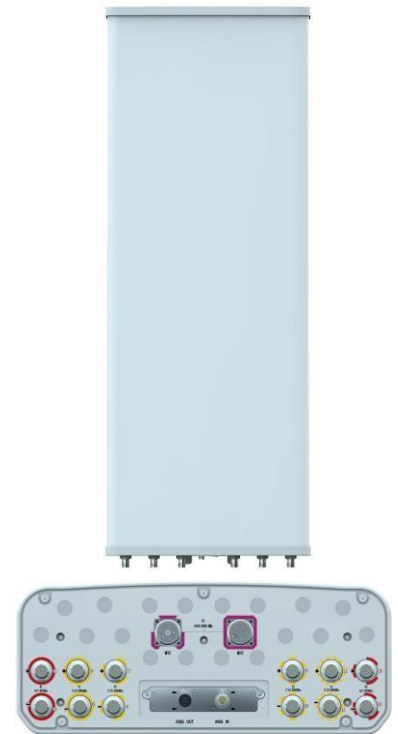
Electrical Specifications-TDD			
General Parameters	Frequency range(MHz)		P1-3300~3800
	Polarization		±45°
	Electrical downtilt(°)		2~12
	Electrical downtilt tolerance(°)		±1
Calibration and Electrical Parameters	Coupling factor between calibration port and each antenna port(dB)		-26±2
	Max.amplitude tolerance from calibration port to input ports(dB)		<0.9
	Max.phase tolerance from calibration port to input ports(°)		≤9
	Ports VSWR		≤1.5
	Co-polarization isolation between ports(dB)		≥20
	Cross-polarization isolation between ports(dB)		≥22
	Inter array spacing(mm)		57(0.67λ@3550MHz)
Radiation Parameters	Single Column Beam	Horizontal 3dB beam width(°)	70±15
		Gain(dBi)	15.7±0.5
		Vertical 3dB beam width(°)	6.0±0.8
		Cross polar ratio(0°)(dB)	≥15
		Front to back ratio(dB)	≥23
		Vertical sidelobe suppression for first sidelobe above main beam(dB)	≥15
	Broadcast Beam	Gain(dBi)	16.5±0.8
		SPR(±60°)(%)	≥90
		Vertical 3dB beam width(°)	6.0±0.8
		Front to back ratio(dB)	≥25
	Service Beam	0° direct beam gain(dBi)	20.8±0.8
		0° direct beam horizontal 3dB beam width(°)	19±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	

Electrical Specifications				
Frequency range (MHz)	R1/R2: 698~960×2			
	698~803	790-862	824~894	880~960
Polarization	±45°			
Gain at mid tilt (dBi)	15.0	15.2	15.3	15.5
Gain over all tilts (dBi)	14.8±0.6	15.0±0.6	15.1±0.6	15.3±0.6
Horizontal 3dB beamwidth (°)	68±3	66±3	65±3	63±5
Vertical 3dB beamwidth (°)	10.0±0.3	9.6±0.4	9.5±0.3	8.5±0.5
Front to back ratio (dB) Total power, ±30°	>22	>23	>23	>24
Cross polar ratio (dB) (at Boresight)	>17	>18	>17	>17
Electrical downtilt (°)	2~12			
Sidelobe suppression (dB) (First sidelobe above main beam)	>16	>16	>16	>15
VSWR	<1.5			
Isolation: intra-system (dB)	≥25			
Isolation: inter-system (dB)	≥25 (R1//R2) ≥26 (R1,R2//Y1,Y2,Y3,Y4)			
Intermodulation IM3 (2×43dBm carrier)	≤-150 dBc			
Impedance (Ω)	50			
Max. power per input (W) @50°C	400			
Lightning protection	Dc Ground			

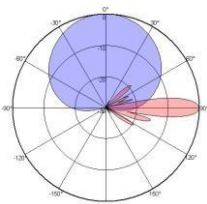
Electrical Specifications				
Frequency Range (MHz)	Y1/Y2,Y3/Y4: 1710~2690×4			
	1710~1990	1920~2200	2200~2490	2490~2690
Polarization	±45°			
Gain at mid tilt (dBi)	16.3	16.9	17.0	17.1
Gain over all tilts (dBi)	16.1±0.8	16.7±0.8	16.8±0.8	16.9±0.8
Horizontal beam centers (°)	±28	±26	±24	±22
Horizontal 3dB beamwidth (°)	33±3	30±3	29±3	27±3
Vertical 3dB beamwidth (°)	8.8±0.6	8.0±0.8	7.6±0.8	7.4±0.8
Front to back ratio (dB) Total power, ±30°	>25	>25	>25	>25
Electrical downtilt (°)	2~12			
Sidelobe suppression (dB) (First sidelobe above main beam)	>16	>16	>16	>15
VSWR	<1.5			
Isolation: intra-system (dB)	≥25			
Isolation: inter-system (dB)	≥15 (beam to beam, 1710~2690//1710~2690)			
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+M5)Connector-Male FDD:12×4.3-10-Female
Connector position	Bottom
Height × width × depth (mm)	2080×550×198
Packing size (mm)	2370×655×250
Antenna weight (kg)	44
Installation kit weight (kg)	8.7
Packing weight (kg)	61.5
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

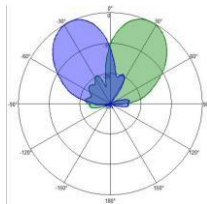
Integrated RET Properties	
RET model	TRCU-TQ20P3V01
RET type	Integrated (Replaceable)
Calibration port	Yes
RET protocol	AISG 2.0/3GPP
Power supply(V)	10-30 DC
Power consumption(W)	≤0.6 (Idle,12V),≤6 (In motion,12V)
Adjustment time (Full Range)	<4Mins
Adjustment cycles	>50,000
Temperature range (°C)	-40~65
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
Technical requirements	The manufacturer of the supplied antennas is one of the Participants in the development of technical requirements for N-P-BASTA sectoral antennas (https://www.ngmn.org/about-us/our-partners.html). Full adherence to the recommendations from NGMN when testing antennas described in: "Recommendation on Standards for Passive Base Station Antennas v 12."



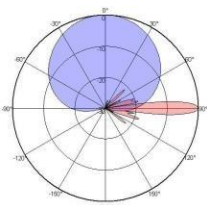
Ant Array	RET Unique ID
R1	TY00000.....R1
R2	TY00000.....R2
Y1	TY00000.....Y1
Y2	TY00000.....Y2
Y3	TY00000.....Y3
Y4	TY00000.....Y4
P1	TY00000.....P1

Antenna Pattern Sample For Reference


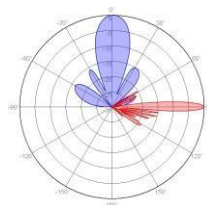
8~960MHz



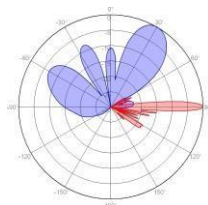
1710~2690MHz



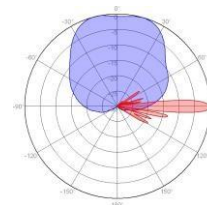
Single column beam



0° Service beam



30° Service beam



BCH beam

