

TECHNICAL SPECIFICATION

12-Port,X-Pol,Panel Antenna,
2×694-960&4×1695-2690MHz,65deg,16&18dBi,Integrated RET



A.0	Feb 5, 2025	David	Michael	Mr.Wang
Version	Date	Prepared	Reviewed	Approved

Electrical Specifications					
Description	12-Port,X-Pol,Panel Antenna, 2×694-960&4×1695-2690MHz,65deg,16&18dBi,Integrated RET				
ZTT Product Code	HBZ48P651618				
Frequency Range	MHz	2×694-960(R1/R2)			
Frequency Band	MHz	703-803		880-960	
Gain Over All Tilts	dBi	15.5±0.5		16.1±0.7	
Gain by Tilt Average Min	dBi	15.8		16.7	
Gain by Tilt Average Mid		15.5		16.2	
Gain by Tilt Average Max		15.1		15.6	
Horizontal 3dB Beam Width	Deg	65±5		64±6	
Vertical 3dB Beam Width	Deg	9.2±0.7		8.0±0.7	
1 st Upper Side Lobe Suppression Above Main Beam	dB	≥15			
Front to Back Ratio at 180Deg ±30Deg	dB	≥24			
Electrical Downtilt	Deg	2-12,Continuously adjustable			
VSWR	/	≤1.5			
Cross Polar Isolation	dB	≥25			
Interband Isolation	dB	≥25			
Intermodulation IM3	dBc	≤-150(2×43 dBm carrier)			
Max. Power Per Port	Watt	300(at 50℃ ambient temperature)			
Frequency Range	MHz	4×1695-2690(Y1/Y2/Y3/Y4)			
Frequency Band	MHz	1710-1880	1920-2170	2300-2400	2490-2690
Gain Over All Tilts	dBi	17.5±0.5	17.6±0.5	18.4±0.4	18.6±0.6
Gain by Tilt Average Min	dBi	17.8	17.9	18.5	18.6
Gain by Tilt Average Mid		17.6	17.6	18.3	18.4
Gain by Tilt Average Max		17.2	17.3	18.0	18.1
Horizontal 3dB Beam Width	Deg	67±3	66±7	64±6	62±4
Vertical 3dB Beam Width	Deg	6.3±0.5	5.9±0.5	5.8±0.4	5.5±0.5
1 st Upper Side Lobe Suppression Above Main Beam	dB	≥16			
Front to Back Ratio	dB	≥24			

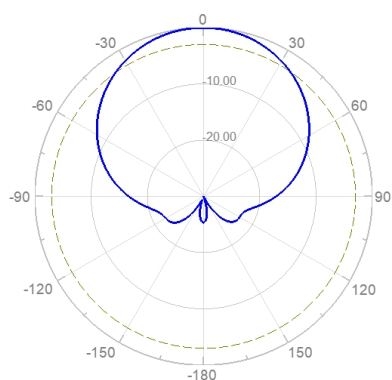
at 180Deg ± 30 Deg		
Cross-Polar Ratio 0Deg	dB	≥ 15
Electrical Downtilt	Deg	2-12, Continuously adjustable
VSWR	/	≤ 1.5
Cross Polar Isolation	dB	≥ 25
Interband Isolation	dB	≥ 25
Intermodulation IM3	dBc	$\leq -150(2 \times 43 \text{ dBm carrier})$
Max. Power Per Port	Watt	200(at 50°C ambient temperature)
Impedance	Ohm	50
Polarization	Deg	± 45
Mechanical Specifications		
Antenna Dimensions	mm	2100×499×199
Antenna Net Weight	kg	27.1
Packing Dimensions	mm	2385×570×275
Antenna Gross Weight	kg	48.4
Connector Type	/	12×4.3-10 Female
Connector Position	/	Bottom
Radiator Material	/	Aluminum
Radome Material / Color	/	Fiberglass / Light Grey RAL7035
Reflector Material	/	Aluminum
Storage Temperature	°C	-55 to +65
Operating Temperature	°C	-55 to +65
Humidity	/	5% to 95%
Max. operational Wind Speed	km/h	200
Wind Load @Rated Wind Front	N	1319
Wind Load @Rated Wind Side	N	218
Wind Load @Rated Wind Rear	N	1478
Lightning Protection	/	DC ground
Accessories		
Downtilt Kit (mechanical)	Deg	0-12
Mounting Accessories (clamp)	/	Included with antenna
Mounting Pipe Diameter	mm	50-115
Internal RET Specifications		
RCU (remote control unit)	/	Replaceable RET (can be exchangeable without exchanging antenna)

		AISG2.0 /3GPP
Input Voltage Range	V	10-30 DC
Power Consumption	W	< 13 (motor activated, 12V) < 2 (stand by, 12V)
Adjustment Time (full range)	s	< 120 (typically, depending on antenna type)
RET Connector	/	1 pair of AISG 5 pin male & female
Pin Assignment According AISG	/	5-pin circular connector conforming to IEC 60130-9 - Ed. 3.0
Lightning Protection	kA	5 (8/20 μ s differential mode), 8 (8/20 μ s common mode)

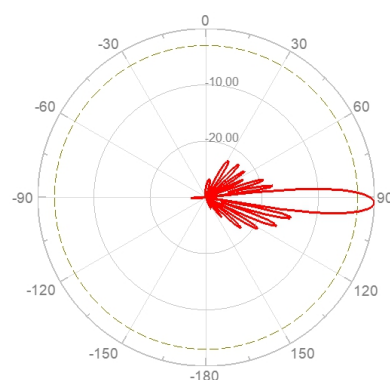
Reference Pattern

694-960MHz

Horizontal Pattern

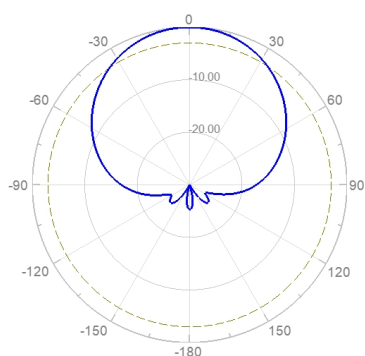


Vertical Pattern

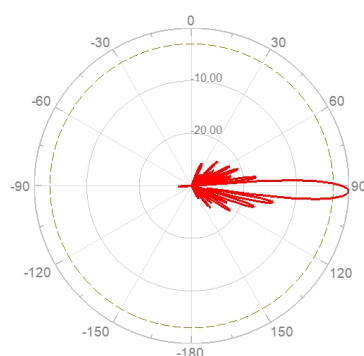


1695-2690MHz

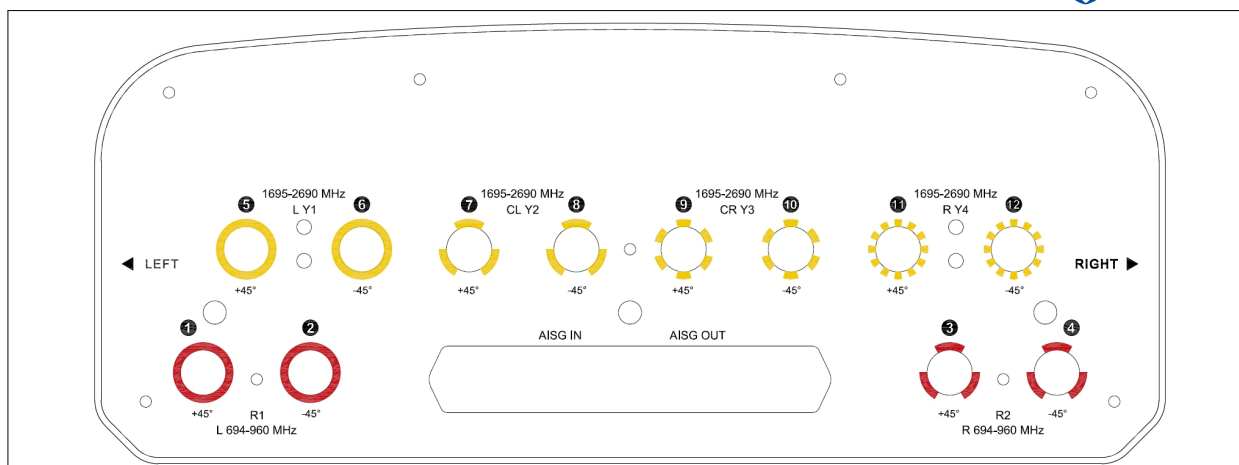
Horizontal Pattern



Vertical Pattern

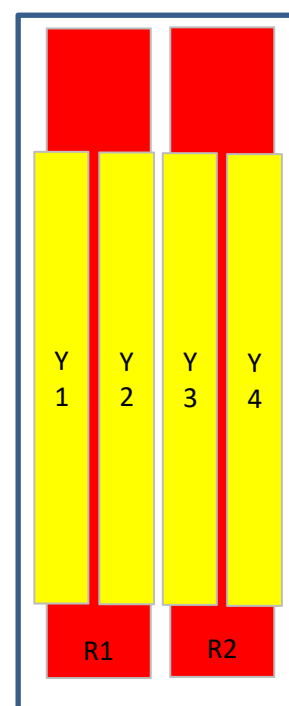


Layout of Interface



Layout of Array

Array	Connector	Frequency(MHz)	RET Serial
R1	1-2	694-960	ZTR1...01
R2	3-4	694-960	ZTR2...02
Y1	5-6	1695-2690	ZTY1...03
Y2	7-8	1695-2690	ZTY2...04
Y3	9-10	1695-2690	ZTY3...05
Y4	11-12	1695-2690	ZTY4...06



All data are based on NGMN recommendations on Base Station Antenna Standards (BASTA V11.1).