



Marketing Department Product Specification

Product Name: Ka-band Tx256 Single-beam Phased Array Antenna

1 Product Description

The Ka-band Single-Beam Transmit array is designed to meet communication requirements for both GEO and LEO satellites, featuring compact size and high EIRP, making it suitable for airborne, shipborne, and vehicular platforms.

2 Technical features

- 1) Independent beam regulation and switching;
- 2) 2D Scalable Architecture
- 3) Dual-Axis (2D) Subarray Scanning
- 4) Polarization Reconfigurability

3 Technical Parameters

S/N	Items	Technical Parameters	Remarks
1	Working Frequency	27.5GHz ~ 30GHz	
2	Polarization	LHCP/RHCP, switchable	
3	Layout	Elements: $N_x \times N_y = 256$	
		Arrangement: rectangular grid	
4	Scanning Range	$\pm 60^\circ$	
5	EIRP	$\geq 67\text{dBm @}27.5\text{GHz}$ (Normal direction)	
6	Scanning Loss @ 27.5GHz	Off-axis angle 30° : $\leq 2\text{dB}$;	
		Off-axis angle 45° : $\leq 4\text{dB}$;	
		Off-axis angle 60° : $\leq 6\text{dB}$;	
7	Sidelobe Suppression @ 27.5GHz	Normal direction: $\leq 10\text{dB}$;	
		Off-axis angle 30° : $\leq 9\text{dB}$;	
		Off-axis angle 45° : $\leq 8\text{dB}$;	
		Off-axis angle 60° : $\leq 7\text{dB}$;	

8	Axial Ratio @ 27.5GHz	Normal direction: $\leq 2\text{dB}$;		
		Off-axis angle 30° : $\leq 4\text{dB}$;		
		Off-axis angle 45° : $\leq 5\text{dB}$;		
		Off-axis angle 60° : $\leq 6\text{dB}$;		
9	VSWR	≤ 2.0		
10	P1dB	$\leq 10\text{dBm}$		
11	Operating Voltage	12V		
12	Power Consumption	$\leq 150\text{W}$		
13	Working Temperature	$-40^\circ\text{C} \sim +70^\circ\text{C}$		
14	Dimensions	73.6mm*73.6mm*30mm		
15	Interface Requirements	RF input	SSMP-JWHD9-L	
16	Weight	$\leq 0.4\text{Kg}$		

Note: The above indicators do not consider the complete radome.

4 Product Photo



