



**THE NORTH WEST CHINA RESEARCH INSTITUTE
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**ISO9001
Certified**

NWIEE 9 M ANTENNA IN KA BAND



The model 39SA090-KA 9M antenna system is designed and manufactured by NWIEE with CAD, which can be applied to GEO satellite tracking station.

The backup structure for the reflector, the hub connecting, the main reflector with mount and the pedestal provides the guaranteed pointing accuracy required in Ka band operation.

Antenna system is characteristic of high gain, low side-lobe, low noise temperature, low cross polarization, capable for frequency reuse both in transmit and receive bands, high driving/control accuracy with angle position display in high resolution.

39SA090-KA antenna system meets the standard of CCIR-REC580, ITU.

NWIEE 9M ANTENNA IN KA BAND

R.F. Specifications

Item	Receive	Transmit
Diameter	9M	



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Frequency in GHz	19.6 ~ 21.2	29.4 ~ 31.0
Sidelobe Pattern	First sidelobe level \leq -14 dB	
Gain (dBi)	62.6+20lg(f/20.4)	66.0+20lg(f/30.2)
Polarization	LHCP/RHCP	
Noise Temperature (LNA input)	140K (20° El Angle, Sunny, Breeze)	
VSWR	1.35:1	1.35:1
Power Capacity		500W
Port to Port Isolation (dB)	Tx-Rx \geq 85	
Feed Insertion Loss(dB)	Rx: \leq 1.2 ; Tx: \leq 0.8	
Feed Interfaces	WR - 42	WR - 28
Mechanical Specifications		
Pedestal Mode	Rotate platform	
Azimuth Travel Range	\pm 170°	
Elevation Travel Range	0°~90°	
Az/El Travel Rate	0.001°~2°/sec	
Tracking Accuracy	1/10 Beam width	
Surface Accuracy	0.3mm (R.M.S)	
Weight	26T	
Environment Specifications		
Operation wind	20-35m/s	
Survival wind	55m/s (Stow position)	
Ambient temperature	-40°C ~ 60°C (Outdoor Devices)	
Humidity	0%~100%	
Solar radiation	360 BTU/h/ft ²	
Radial ice (Survival)	13mm ice thick in normal operation,25mm ice thick undestroyed.	
Seism (survival)	0.3 G's (Horizontal), 0.15 G's (Vertical)	