



Overview

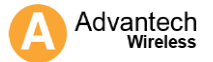
The A-Line Series 9m Ka-Band antenna system from Advantech Wireless is designed and manufactured with CAD, which can be applied to GEO satellite tracking station.

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.

The 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.

The 9m Ka-Band antenna system from Advantech Wireless meets the standard of CCIR-REC580, ITU.

A-Line Series 9m Ka-Band ANTENNA



Antenna Specifications

R.F. Specifications		
	Receive	Transmit
Diameter	9M	
Frequency in GHz	19.6~21.2	29.4~31.0
Sidelobe Pattern	First sidelobe level ≤ -14 dB	
Gain (dBi)	$62.6+20\lg(f/20.4)$	$66.0+20\lg(f/30.2)$
Polarization	LHCP/RHCP	
Noise Temperature (LNA input)	140K (20° EI Angle, Sunny, Breeze)	
VSWR	1.35:1	1.35:1
Power Capacity		500W
Port to Port Isolation (dB)	Tx-Rx ≥ 85	
Feed Insertion Loss(dB)	Rx: ≤ 1.2 ; Tx: ≤ 0.8	
Feed Interfaces	WR-42	WR-28
Mechanical Specifications		
Pedestal Mode	Rotate Platform	
Azimuth Travel Range	$\pm 170^\circ$	
Elevation Travel Range	$0^\circ \sim 90^\circ$	
Az/EI Travel Rate	$0.001^\circ \sim 2^\circ/\text{sec}$	
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	$-40^\circ\text{C} \sim 60^\circ\text{C}$ (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)	

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