

## 3.7M Ka-band Tx/Rx ANTENNA SPECIFICATION

ELECTRICAL SPECIFICATION		
Diameter	3.7M	
Operating Frequency, GHz	Ka-band	
	Receive	Transmit
	17.7~21.2	27.5~31.0
Gain, Mid-band, dBi	$\geq 54.7 + 20\text{Log}(f/20)$	$\geq 58.1 + 20\text{Log}(f/30)$
3dB beamwidth,°	0.28	0.19
VSWR	1.4:1	1.4:1
Antenna Noise Temperature,K @20° Elevation	105	
Polarization	Linear Pol. 4 port	
Power Capacity,W		500
XPD (on Axis), dB	$\geq 30$	$\geq 30$
Tx-Rx Isolation,dB	$\geq 85$	
Feed Interface	BJ-220	BJ-320
Feed Insertion Loss, dB	0.65	0.65
Radiation Pattern: First Sidelobe	Far sidelobe meet the requirements of ITU-RS 580 $\leq -14\text{dB}$	
MECHANICAL SPECIFICATION		
Antenna Type	Shaped Cassegrain Antenna	
Antenna Pedestal Type	Az-El Type	
Azimuth	$\pm 90^\circ$ (sector)	
Elevation	$5^\circ \sim 90^\circ$ (Continuous)	
Drive mode	Motorized	
Travel speed	0.01/s~0.1/s	
Finishes Reflector Surface Pedestal & Back Structure	Aluminum panels with high-diffusing white paint Hot-dipped Galvanized	
Surface Accuracy (RMS)	$\leq 0.25\text{mm}$	
Antenna Drive	Manual/Motorized	
ENVIRONMENTAL SPECIFICATION		
Operational Wind	25m/s	
Survival Wind	55m/s	
Temperature	- 45°C ~ + 60°C	
Relative Humidity	100%	
Seismic (Survival)	0.3g (H), 0.15g (V)	
SERVO SYSTEM AND TRACKING SYSTEM		

Tracking mode	Step tracking
Operational mode	Standby, manual control, step tracking
Tracking accuracy	1/10 beam width
Pointing accuracy	1/5 beam width
Remote control interface	RS232/RS485