

7. 3M Ka-band antenna head-turning pedestal

Electrical Specification		
Type	7.3m Ka-band	
Frequency band	Receive	Transmit
	17.7-21.2	27.5-31.0
Gain, Mid-band, dBi	61.1+20lg(F/20)	64.2+20lg(F/30)
VSWR	1.3:1	1.3:1
Noise Temperature (K)	4 port	/
20° EL	≤130	/
Power Capacity	/	500W (each port)
Interface type	WR-42	WR-34
Polarization type	Circular Pol.	
Feed Insertion Loss (dB)	≤0.8°	≤0.8°
Port Isolation (dB): Rx-Tx	≥85	/
Circular Pol. Tx-Tx, Rx/Rx	≥20	≥20
Axis ratio (dB)	≤0.5° (on axis)	≤0.5° (on axis)
First Sidelobe (dB)	≤-14	≤-14
Sidelobe envelope (more than 90% sidelobe envelope meet the requirement of this sidelobe envelope)	29-25lg(θ) dBi 1° ≤ θ ≤ 20° -3.5 dBi 20° < θ ≤ 26.3° 32-25lg(θ) dBi 26.3° < θ ≤ 48° -10 dBi θ > 48°	
Mechanical Specification		
Az travel range	±90°	continuous
El travel range	5° -90°	continuous
Surface Accuracy	≤0.3mm (R. M. S)	
Weight	6700kg	
Servo Control Specification		
Az speed	0.001° /s ~ 1° /s	Dual DC motors
El speed	0.001° /s ~ 1° /s	DC ball-screw
Operational mode	Manual control speed, manual control position, preset satellite position, step tracking, mono-pulse tracking	
Display resolution	0.001° option	



Tracking accuracy	1/10~1/15 beam width	
Servo power consumption	3kw/380V 0.5kw/220V	
Environment Specification		
Wind Speed	Guaranteed accuracy wind operation 20.8m/s Degraded accuracy wind operation 28.4/s	
Stow wind speed	35m/s	
Not destroyed wind speed	55m/s	Antenna locking towards sky
Temperature	-40°C ~60°C (Outdoor) -20°C ~55°C (Indoor)	
Humidity	0%~100%	
Earthquake (Survival)	0.3G' s (Horizon) 0.15G' s (Vertical)	
Solar Radiation	360BTU/h/ft ²	
Ice	3 cm	