7.3M X-band Full-Motion Antenna Specification

ELECTRICAL SPECIFICATION	
Diameter	7.3M
Operating Frequency, GHz	X-Band
	Receive
	8.0-8.5
Gain, Mid-band, dBi	53.5
-3dB Beam Width	0.36°
Antenna Noise Temperature	
5° Elevation	65°K
10°Elevation	55°K
20° Elevation	45°K
40° Elevation	42°K
VSWR	1.3:1
Axial Ratio	⩽ 0.50dB
Polarized	Circular polarization(RHCP&LHCP)
Port	2
Port to Port Isolation, dB	20
Feed Flange	WR137
Radiation Pattern:First Sidelobe	⩽-14dB, CCIR 580-4

MECHANICAL SPECIFICATION		
Antenna Type		Dual shaped Cassegrain Antenna
Antenna Pedestal Type		Elevation- over- Azimuth
Reflector Accuracy(RMS)		≤0.35mm
Azimuth		±91°
Elevation		±91°
Travel Speed	Azimuth	5°/s (max)
	Elevation	5°/s (max)
Acceleration	Azimuth	5°/s^2 (max)
	Elevation	5°/s^2 (max)

TRACKING/POINTING SPECIFICATIONS	
Tracking Accuracy	⩽0.05°(RMS)
Point Accuracy	⩽0.08°(RMS)
Time Synchronization	1^{-3}s to UTC
Mode Capabilities	Auto Track(monopulse auto-tracking)
	Program Track
	Manual mode
	Command location mode

ENVIRONMENTAL SPECIFICATION	
Operational Wind	75km/h wind gusting to 100Km/h
Survival Wind	200km/h at stow position
Temperature	- 40°C ～ + 55°C
Solar Radiation	1kW/sqm
Relative Humidity	0% ~ 100%
Rain	100mm/h
Seismic (Survival)	0.3g (H), 0.1g (V)