

7.3M C-Ku-Band Fixed Earth Station

ELECTRICAL SPECIFICATION

	C-Band		Ku-Band	
	Receive	Transmit	Receive	Transmit
Operating Frequency, GHz	3.4~4.2	5.85~6.725	10.95~12.75	13.75~14.5
Gain, Mid-band, dBi	48	51.6	57.5	58.9
Polarization	Linear/ Circular		Linear	
XPD (on Axis), dB	35	35	35	35
XPD (across 1dB Beamwidth), dB	33	33	33	33
Axial Ratio (Circular-Polarized)				
2-Port Feed	1.30	1.09		
4-Port Feed	1.06	1.06		
VSWR	1.25	1.25	1.25	1.25
Antenna Noise Temperature, 2-port Feed				
10° Elevation	43°K		66°K	
30° Elevation	32°K		52°K	
50° Elevation	29°K		47°K	
-3dB Beamwidth, Mid-band	0.72°	0.47°	0.23°	0.2°
Typical G/T (EI>10°)	29.3dB/°K (30° LNA)		36.1dB/°K (70° LNA)	
Tx. Power Capability, KW		5		2
Feed Interface	CPR-229G	CPR-137G	WR-75	WR-75
Isolation, Tx to Rx, dB	90		85	
Rx/Rx, Tx/Tx Linear, dB	30		30	
Rx/Rx, Tx/Tx Circular, dB	22		22	
Sidelobes	CCIR 580-2			

MECHANICAL SPECIFICATION

Antenna Diameter	7.3m
Antenna Type	Ring Focus
Mount Type	EI. over Az.
Surface Accuracy (RMS)	≤ 0.5mm
Antenna Pointing Range	
Azimuth	±90°, ±65° (Continuous)
Elevation	0°~90° (Continuous)
Polarization	180° (Continuous)
Drive Mode	Manual or Motorized
Motor Drive System	
Azimuth Travel Rate	0.1°/S (0.02°/S)
Elevation Travel Rate	0.1°/S (0.02°/S)
Polarization	1°/S

ENVIRONMENTAL SPECIFICATION

Operational Wind	72km/h Gusting to 97km/h
Survival Wind	216km/h
Temperature	-40°C~+60°C
Relative Humidity	100%
Solar Radiation	1135Kcal/h/m ²
Seismic (Survival)	0.3g (H), 0.15g (V)
Ice Loading	13mm Operational; 25mm Survival