

3.7 Meter Earth Station Antenna

Electrical Specification					
Type		C37T		K37T	
Operating Frequency, GHz		C-Band		Ku-Band	
		Receive	Transmit	Receive	Transmit
		3.625~4.2	5.85~6.425	10.95~12.75	13.75~14.5
Gain, Mid-band, dBi		41.94	45.52	51.24	52.55
Polarization		Linear/Circular		Linear	
XPD(on Axis), dB		35	35	35	35
XPD across 1dB Beam Width, 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				49K	
10° Elevation		35K		39K	
30° Elevation		29K		35K	
50° Elevation		25K			
-3 dB Beam Width, Mid-band		1.31°	0.87°	0.43°	0.38°
Typical G/T (EL>10°)		24dB/K (30° LNA)		30.6dB/K (70° LNA)	
Tx. Power Capability, KW			5		2
Feed Interface		CPR—229F	CPR—137F	WR-75	WR-75
Feed Insertion Loss,dB		0.2	0.2	0.25	0.25
Isolation, Tx to Rx, dB		85		85	
First Side lobe		-14		-14	
90% Peaks under Following Envelop		29-25log θ (1° $\leq\theta < 20^\circ$)		29-25log θ (1° $\leq\theta < 20^\circ$)	
Mechanical Specification					
Antenna Diameter		3.7m			
Antenna Type		Ring Focus			
Surface Accuracy(RMS)		$\leq 0.35\text{mm}$			
Antenna Pointing Range		Azimuth	$\pm 85^\circ$		
		Elevation	0°~90°(Continuous)		
		Polarization	$\pm 90^\circ$ (Continuous)		
Drive Mode		Manual or Motorized			
Motor Drive System	Azimuth Travel Rate	0.30°/S(0.06°/S)			
	Elevation Travel Rate	0.20°/S(0.04°/S)			
Environmental Specification					
Operational Wind		72km/h gusting to 97km/h			
Survival Wind		200km/h			
Temperature		-40°~+60°			
Relative Humidity		100%			
Solar Radiation		1135Kcal/h/m ²			
Seismic(Survival)		0.3g(H), 0.15g(V)			