

5.36 METER EARTH STATION ANTENNA

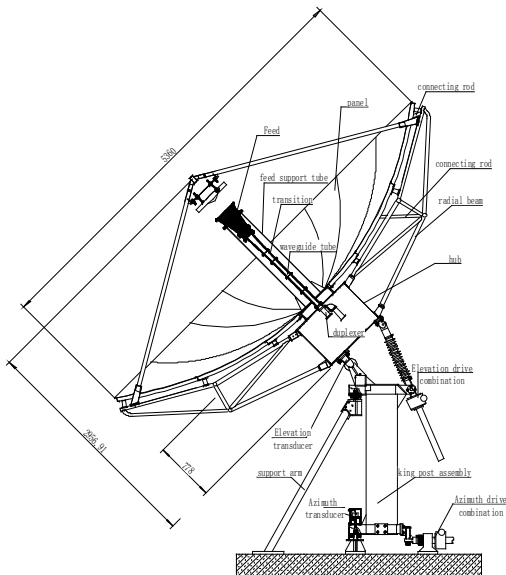


Antenna Accessory

- ▶ Motorization Kits
- ▶ 50 Satellite Positions Preset
- ▶ Limit Switches
- ▶ Step track
- ▶ ODU Support Kits
- ▶ Factory Feed System Testing and Documentation
- ▶ Ocean Transport Packing
- ▶ Foundation Kit
- ▶ Lightening Rod Kit
- ▶ Grounding Kit
- ▶ Cable-Mounting Kit
- ▶ Major Subsystem Spare Park Kits
- ▶ Anti-icing and Deicing

Features

- ▶ Meets or Exceeds CCIR 580 and INTELSAT Requirements
- ▶ Offset/Prime Focus
- ▶ High G/T, Excellent Pattern Characteristics
- ▶ Hot-dipped Galvanized Steel Ground Mount Assembly
- ▶ C-band Antenna Operating in 800MHz Bandwidth Option
- ▶ 2-port, 3-port or 4-port Linear/Circular Feed
- ▶ Field Changeable Feed System, Switchable Circular to Linear C-band
- ▶ High Wind (290km/h)
- ▶ Antenna Az 0-360deg Continuous Pointing Range



Structural figure of 5.36m communication antenna (Figure 1)

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	44.91	48.95	54.46	55.7
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				
10° Elevation	37K		68K	
30° Elevation	29K		53K	
50° Elevation	25K		39K	
-3dB Beam Width, Mid-band	0.9067°	0.6°	0.311°	0.267°
Typical G/T (EI>10°)	25.9dB/K (30° LNA)		32.3dB/K (70° LNA)	
Tx. Power Capability, KW		5		2
Feed Interface	CPR-229G	CPR-137G	WR-75	WR-75
Isolation, Tx to Rx, dB	85		85	
First Sidelobe	CCIR.580-4		CCIR.580-4	
90% Peaks under Following Envelop	29-25log θ ($1^\circ \leq \theta < 20^\circ$)		29-25log θ ($1^\circ \leq \theta < 20^\circ$)	

Mechanical specification

Antenna Diameter	5.36
Antenna Type	Dual Reflector Modified Gregorian
Mount Type	EI. Over Az.
Surface Accuracy (RMS)	$\leq 0.5\text{mm}$
Antenna Pointing Range	
Azimuth	$\pm 85^\circ$, $\pm 60^\circ$ (Continuous)
Elevation	15° ~ 90° (Continuous)
Polarization	180° (Continuous)
Drive Mode	Manual or Motorized
Motor Drive System	
Azimuth Travel Rate	0.11°/S (0.06°/S)
Elevation Travel Rate	0.17°/S (0.08°/S)
Polarization	1°/S

Environmental Specification

Operational Wind	72km/h Gusting to 97km/h
Survival Wind	200km/h (290 km/H for HW version)
Temperature	-40°C ~ + 60°C
Relative Humidity	10% to 100%
Solar Radiation	1135Kcal/h/m ²
Seismic (Survival)	0.3g (h), 0.15g(V)
Ice Loading	13mm Operational; 25mm Survival