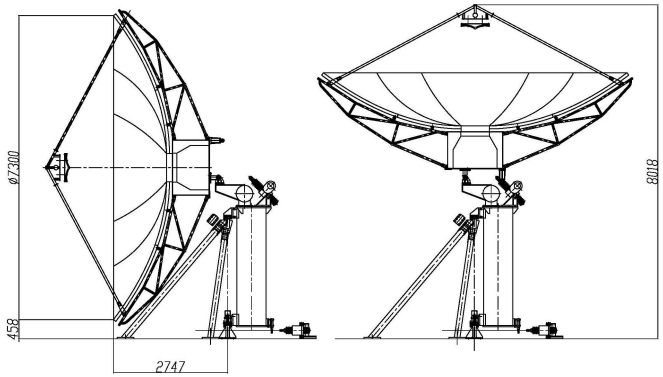
Probecom

Http://www.probecom.cn

7.3Meter Earth Station Antenna

General Description

The probecom 7.3-meter antenna delivers exceptional performance for transmit/receive and receive only applications for L through Ka-band frequencies. This antenna offers a reflector design that incorporates precision-formed panels, truss radials and hub assembly using matched tooling for interchangeable components. It features an innovative Cassegrain or Ring Focus feed and sub-reflector design which results in high gain, low noise temperature, high antenna efficiency and excellent rejection of noise and microwave interference. A large center hub provides spacious accommodation for equipment mounting. The reflector is supported by a galvanized elevation over azimuth kingpost pedestal that provides the required stiffness for pointing and tracking accuracy. The pedestals are designed for full orbital arc coverage and are readily adaptable to ground or rooftop installations.



Highlighted Features:

*Precisely adjusted before leaving factory, and no need theodolite to adjust the panel accuracy;

*Meets CCIR 580 and INTELSAT Requirements

*High precision alloy aluminum main reflector.

Hot spray galvanized with white paint

*CP/LP switchable feed

*High RF performance

*Galvanized stainless steel hardware

*Different frequency ranges from many feed configurations

*Ka band antenna with rotary pedestal is available

A large hub for install RF equipments

*Multi-layer anti-corrosion treatment.

Options

*L,S, X ,Ka bands and multi-bands

*Customer feed system design

*800MHz Extended C band is available

*Full motion antenna

*Feed blower or deicing sub-systerm with automatic controls

*Two or four Tx/Rx port in linear or circular polarized feeds

*Antenna control system with tracking

ODU Support Kits

*Increase the surface spray zinc thickness along seaside.

Antenna Accessory

Motorization Kits

Limit Switches

Factory Feed System Testing and Documentation

Ocean /Air Transport Packing

Foundation Kit

Grounding Kit Cable-Mounting Kit

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Technical Specification

Electrical Specification										
Type	C73T		EC73T		IC73T		K73T		DBS73T	
Operating Frequency, GHz	Standard C band		Extended C band		Insat C band		Ku Band		DBS Band	
	Receive	Transmit	Receive	Transmit	Receive	Transmit	Receive	Transmit	Receive	Transmit
	3.625~4.2	5.85~6.425	3.4~4.2	5.85~6.725	4.5~4.8	6.725~7.025	10.70~12.75	13.75~14.5	10.70~12.75	17.3-18.4
Typical Gain, Mid-band, dBi	47.6	51.5	47.3	51.8	49.1	52.5	56.8	58.4	56.8	60.3
Polarization	Linear/circular		Linear/circular		Linear/circular		Linear		linear	
XPD(on Axis), dB(Linear)	35	35	35	35	35	35	35	35	35	35
XPD across 1dB Beam Width, dB(Linear)	30	30	30	30	30	30	30	30	30	30
Axis Ratio, dB (circular)	0.5	0.5	0.5	0.5	0.5	0.5	/	/	/	/
VSWR	1.25	1.25	1.30	1.30	1.25	1.25	1.30	1.30	1.30	1.30
Antenna Noise Temperature (4 Port Feed) 10° Elevation 30° Elevation 50° Elevation	 45K 38K 35K		 46K 41K 39K		 47K 42K 40K		 75K 64K 60K		 73K 62K 59K	
-3 dB Beam Width, Mid-band	0.68°	0.43°	0.70°	0.42°	0.57°	0.39°	0.24°	0.16°	0.24°	0.16°
Typical G/T（EL=10°）	28.8dB/K (30K LNA)		28.5dB/K (30K LNA)		30.2dB/K (30K LNA)		35.2dB/K (70K LNA)		35.2dB/K (70K LNA)	
Tx. Total Power Capability, KW		5		5		5		2		2
Feed Interface	CPR229F	CPR137F	CPR229F	CPR137F	CPR229F	CPR137F	WR-75	WR-75	WR-75	WR-62
Feed Insertion Loss,dB	0.4	0.3	0.4	0.3	0.4	0.3	0.5	0.4	0.5	0.5
Isolation, Tx to Rx, dB Tx/Tx ,Rx /Rx, dB (linear) Tx/Tx ,Rx /Rx, dB (Circular)	85 30 20		85 30 20		85 30 20		85 30 /		85 30 /	
Sidelobes	CCIR 580-5									

Mechanical Specification				
Antenna Diameter		7.3m		
Antenna Type		Ring Focus/Cassagrain		
Surface Accuracy（RMS）		≤0.5mm		≤0.3mm
Reflector Construction		16 precision-formed aluminum panels with heat-diffusing white paint, Hot spray galvanized back structure.		
Mount type		Kingpost pedestal	Turn table	
Antenna Pointing Range	Azimuth Elevation Polarization	±85°(three sections) 0°~90°(Continuous) ±90°(Continuous)	0°~350°(Continuous) 0°~90°(Continuous) ±90°(Continuous)	
Drive Mode		Motorized		
Motor Drive System	Azimuth Travel Rate Elevation Travel Rate Polarization Travel Rate	0.023°/S 0.021°/S 1°/S	0.003°-0.3°/S 0.003°-0.3°/S 1°/S	

Environmental Specification	
Operational Wind	79km/h gusting to 126km/h
Survival Wind	200km/h(at zenith)
Temperature	-40°~+60°
Relative Humidity	100%
Solar Radiation	1135Kcal/h/m²
Seismic(Survival)	0.3g(H), 0.15g(V)
Ice Loading	13mm Operational; 25mm Survival