

## 1.8 Meter Earth Station Antenna

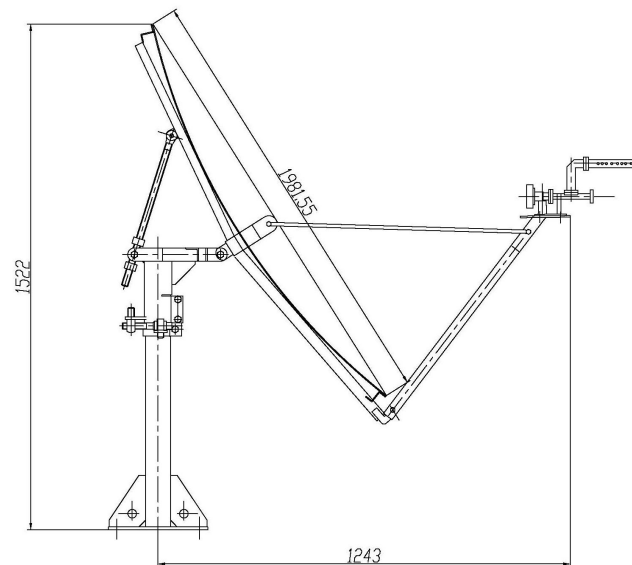


### General Description

The probecom 1.8-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 offset feed 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:

- \*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
- \*Multi-layer anti-corrosion treatment.



### Options

- \*L, S, X, Ka bands and multi-bands
- \*Customer feed system design
- \*800MHz Extended C band is available
- \*Feed blower or deicing sub-system with automatic controls
- \*Linear or circular polarized feeds
- \*ODU Support Kits
- \*Increase the surface spray zinc thickness along seaside.

### Antenna Accessory

- \*Factory Feed System Testing and Documentation
- \*Ocean /Air Transport Packing
- \*Foundation Kit
- \*Grounding Kit Cable-Mounting Kit

## Technical Specification

Electrical Specification										
Type	C18T		EC18T		IC18T		K18T		DBS18T	
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
Gain, Mid-band, dBi	35.5	39.4	35.2	39.4	37.0	40.4	45.0	46.6	40.4	48.7
Polarization	Linear/Circular		Linear/ Circular		Linear/ Circular		Linear		Linear	
XPD(on Axis), dB( Linear)	33	33	33	33	33	33	33	33	33	33
Axis Ratio, dB (circular)	2	0.75	2	0.75	2	0.75	/	/	/	/
VSWR	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
Antenna Noise Temperature (2 Port Feed)	39K		39K		40K		43K		43K	
10° Elevation	29K		29K		32K		36K		36K	
30° Elevation	26K		26K		28K		32K		32K	
50° Elevation										
-3 dB Beam Width, Mid-band	2.9°	1.9°	3.1°	1.9°	2.5°	1.7°	1.0°	0.8°	1.0°	0.7°
Typical G/T ( EL=10° )	14.8dB/K (70K LNA)		14.5dB/K (70K LNA)		16.3dB/K (70K LNA)		24.2dB/K (70K LNA)		19.6dB/K (70K LNA)	
Tx. Power Capability, KW		1		1		1		1		1
Feed Interface	CPR-229F	CPR-137F	CPR-229F	CPR-137F	CPR-229F	CPR-137F	WR-75	WR-75	WR-75	WR-62
Feed Insertion Loss,dB	0.3	0.25	0.3	0.25	0.3	0.25	0.3	0.25	0.3	0.25
Isolation, Tx to Rx, dB	85		85		85		85		85	
Sidelobe	CCIR 580-5									
Mechanical Specification										
Antenna Diameter		1.8m								
Antenna Type		Offset								
Surface Accuracy ( RMS )		≤0.35mm								
Reflector Construction		1 precision-formed aluminum panels with heat-diffusing white paint, Hot spray galvanized back structure.								
Mount type		Kingpost pedestal								
Antenna Pointing Range	Azimuth Elevation Polarization	0°~360°(Continuous)								
		5°~85°(Continuous)								
		±90°(Continuous)								
Drive Mode		Manual								
Environmental Specification										
Operational Wind		72km/h gusting to 97km/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								

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