

9.0Meter Earth Station Antenna



General Description

The 9.0-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:

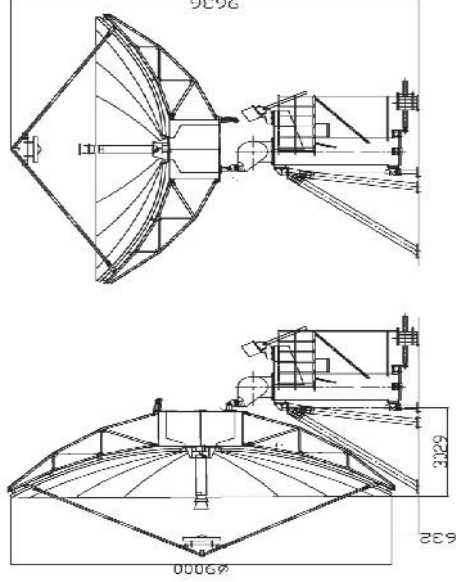
- *Precisely adjusted before leaving factory, and no need theodolite to adjust the panel accuracy;
 - *Meets CCIR 580 and INTELSAT Requirements
 - *High precision alloy aluminum main reflector. Hot spray galvanized with white paint
 - *CP/LP switchable feed
 - *High RF performance
 - *Galvanized stainless 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-system 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



Technical Specification

Electrical Specification													
Type	RNA90T			RNB90T			RNC90T			RND90T		RNE90T	
Operating Frequency, GHz	Standard C band		Extended C band		Inset C band		Ku Band		DBS Band		Transmit		
	Receive	Transmit	Receive	Transmit	Receive	Transmit	Receive	Transmit	Receive	Transmit	Receive	Transmit	
3.625~4.2	5.85~6.425	5.85~6.725	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	58.6	61.9	
49.4	53.3	53.6	49.2	53.6	50.9	54.3	58.6	60.27	58.6	61.9			
Polarization	Linear/circular			Linear/circular			Linear			Linear			
XPD (on Axis), dB (Linear)	35	35	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	30	30	
Axis Ratio, dB (Circular)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
VSWR	1.25	1.25	1.30	1.30	1.30	1.25	1.30	1.30	1.30	1.30	1.30	1.30	
Antenna Noise Temperature (4 Port Feed)	45K		48K		49K		80K		77K		77K		
10° Elevation	38K		41K		42K		70K		67K		67K		
30° Elevation	35K		39K		40K		64K		63K		63K		
50° Elevation													
-3 dB Beam Width, Mid-band	0.56°	0.36°	0.57°	0.35°	0.47°	0.31°	0.19°	0.16°	0.19°	0.13°	0.19°	0.13°	
Typical G/T (EL=10°)	31.0dB/K (30K LNA)		30.7dB/K (30K LNA)		32.3dB/K (30K LNA)		37.1dB/K (70K LNA)		37.2dB/K (70K LNA)		37.2dB/K (70K LNA)		
Tx. Total Power Capability, KW		5		5		5		2		2		2	
Feed Interface	CPR229F	CPR137F	CPR229F	CPR137F	CPR229F	CPR137F	WR-75	WR-75	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	0.5	0.5	
Isolation, Tx to Rx, dB	85	85	85	85	85	85	85	85	85	85	85	85	
Tx/Tx ,Rx /Rx, dB (linear)	30	30	30	30	30	30	30	30	30	30	30	30	
Tx/Tx ,Rx /Rx, dB (Circular)	20	20	20	20	20	20	20	20	20	20	20	20	
Sidelobes	CCIR 580-5												
Mechanical Specification													
Antenna Diameter	9m												
Antenna Type	Ring Focus/Cassagrain												
Surface Accuracy (RMS)	≤0.5mm												
Reflector Construction	16 precision-formed aluminum panels with heat-diffusing white paint; Hot spray galvanized back structure.												
Mount type	Kingpost, pedestal												
Antenna Pointing Range	Azimuth Elevation Polarization		±85°(three sections) 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										
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/m ²												
Seismic(Survival)	0.3g(H), 0.15g(V)												
Ice Loading	13mm Operational; 25mm Survival												