

7.3m Earth Station Series



Tx Rx Earth Station Antennas



ADVSAT 7.3 meter antenna delivers exceptional performance for transmit/receive and receive only applications, operating in several frequencies in L band, C band, Ku band and Ka-band.

This Cassegrain antenna reflector has a special design that incorporates precision-formed panels, truss radials and hub assembly using matched tooling for interchangeable components. Reflector is made of superior aluminum alloy with surface accuracy of less than 0.4mm when the reflector is assembled completely.

The antenna 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 interferences.

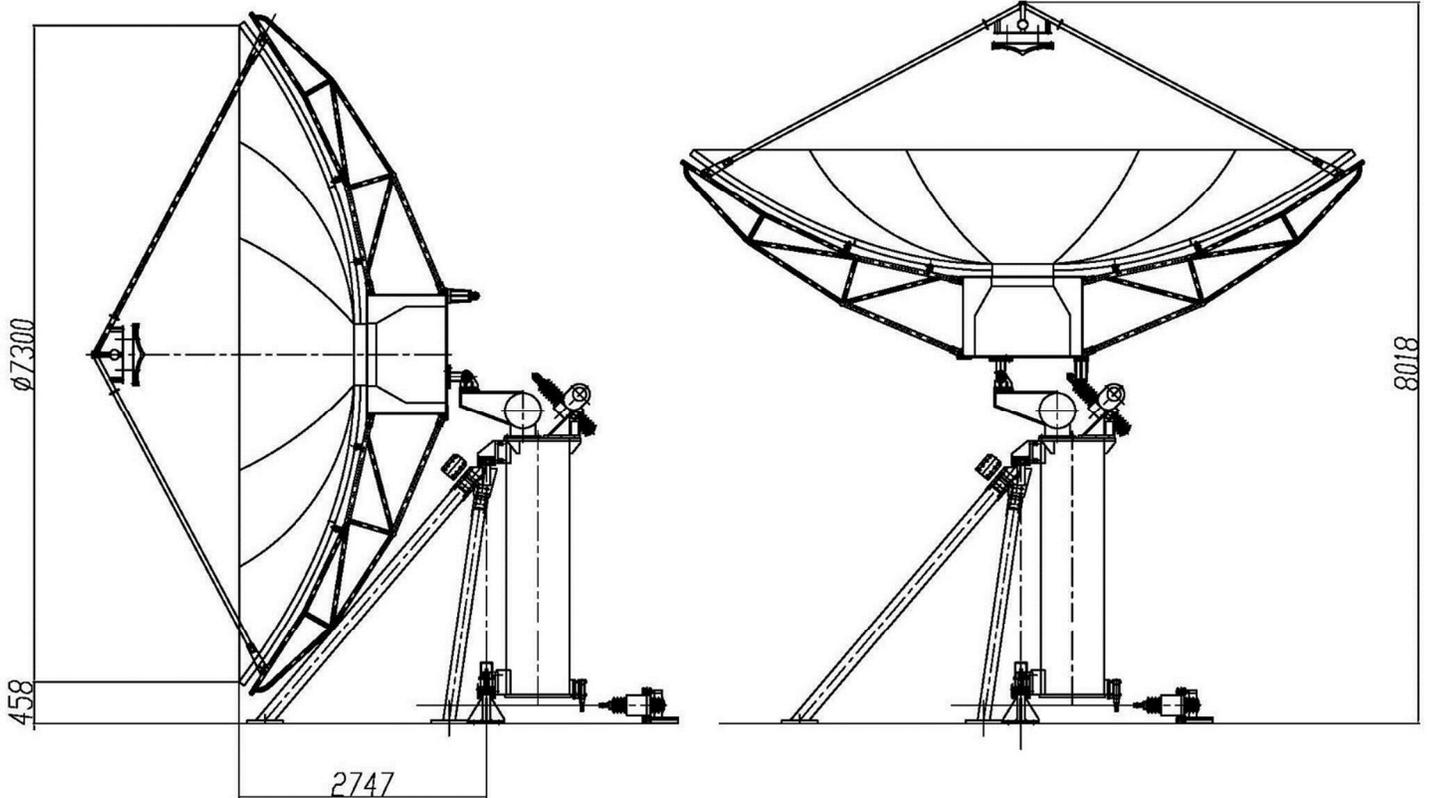


A large center hub provides spacious equipment accommodation for mounting large BUCs or TWT amplifiers as well as redundancy switching equipment. The reflector is supported by a galvanized kingpost pedestal with EL/ Az or elevation over azimuth adjustment that provides the required stiffness for pointing and tracking accuracy. The pedestals are designed for full orbital arc coverage installations.

Antenna Features:

- Precisely reflectors adjustment in the factory, theodolite not required in field to adjust the panel accuracy.
- Meets CCIR 580 and INTELSAT Requirements with High G/T and very low side lobes
- High precision alloy aluminum main reflector with hot spray galvanized and white paint.
- CP/LP field switchable feed
- Galvanized stainless-steel hardware
- Different frequency ranges L, S, X, Ka bands and multi-bands through feed exchange configurations
- Ka band antenna with rotary pedestal is available
- Large hub for install RF equipment
- Multi-layer anti-corrosion treatment.
- 800 MHz Extended C band is available.
- Full motion antenna

- Feed blower or deicing sub-system with automatic controls
- Different frequency ranges L, S, X, Ka bands and multi-bands through feed configurations
- CP/LP switchable feed Field Changeable Feed System, Switchable Circular to Linear C-band
- Two or four Tx/Rx port in linear or circular polarized feeds
- Antenna control system with tracking included
- High Wind Survival (290km/h)



- Factory Feed System Testing and Documentation
- Ocean /Air Transport Packing
- Foundation Kit
- Lightning Rod Kit

- Grounding Kit Cable-Mounting Kit
- Hot-dipped Galvanized Steel Ground Mount Assembly
- Cable-Mounting Kit
- Major Subsystem Spare Part Kit Anti-icing and Deicing



Specifications

Operation Frequency, GHz		C-Band		Ku-Band	
		Receive	Transmit	Receive	Transmit
		3.4~4.2	5.85~6.725	10.95~12.75	13.75~14.5
Gain, Mid-band, dBi		47.59	51.63	57.6	58.53
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	34°K		57°K	
	30° Elevation	27°K		47°K	
	50° Elevation	24°K		43°K	
-3dB Beamwidth, Mid-band		0.685°	0.43°	0.216°	0.194°
Typical G/T (EL>10°)		29.3dB/K (30° LNA)		36.1dB/K (70° LNA)	
Feed Insertion Loss		0.25	0.2	0.25	0.25
TX. Power Capability, KW			5		2
Feed Interface		CPR-229G	CPR-137G	WR-75	WR-75
Isolation, Tx to Rx, dB		90		85	
First Sidelobe		-14dB		-14dB	
90% Peaks under Following Envelop		29-25logθ (1°≤θ<20°)		29-25logθ (1°≤θ<20°)	

Antenna Diameter		7.3m
Antenna Type		Ring Focus
Mount Type		EL. over AZ.
Surface Accuracy (RMS)		≤0.4mm
Antenna Pointing Range	Azimuth	±85°
	Elevation	0°~ 90° (Continuous)
	Polarization	±90° (Continuous)
Motor Drive System	Azimuth Travel Rate	0.1°/S (0.02°/S)
	Elevation Travel Rate	0.1°/S (0.02°/S)
	Polarization	1.0°/S
Drive Mode		Manual or Motorized

