

7.3M EARTH STATION ANTENNA DATASHEET

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7. 3 METER EARTH STATION ANTENNA

1. General Description

7.3 Meter cassgrain antenna can deliver superior performance for sat communication applications such as Broadcasters, Service Providers, GSM operator, Satellite operator, Military and Government Agencies, FreeLands or Rescue Organizations.

7.3 Meter ring focus antenna adopts all aluminum re-enforced reflectors, consisting of precisely formed panels with matched radials and hub assemblies ensure the ease of installation. The standard designed azimuth over elevation pedestal provides a cost-effective solution for high stiffness and stability, full orbital arc coverage and fine drive performance, and ensures the pointing accuracy for C-Band Tx/Rx and Ku-Band Tx/Rx operations.

2. Highlighted Features

**Meets CCIR 580 and INTELSAT Requirements*

**CP/LP switchable feed*

**High RF performance*

**Galvanized stainless steel hardware*

**Hot –dip Zinc Parts*

**Different frequency ranges from many feed configurations*

**Ka band antenna with rotary pedestal is available*

** Antenna reflector be pre-assembly in works, special designed taper-pin easy instllation and ensure on site assembly accuracy ,no theodolite required*

3. Options

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

**800MHz bandwidth is available*

**Full motion antenna*

**Feed blower or deicing with automatic controls*

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

4. Antenna Accessory

Motorization Kits

Limit Switches

ODU Support Kits

Factory Feed System Testing and Documentation

Ocean /Air Transport Packing

Foundation Kit

Grounding Kit Cable-Mounting Kit

5. Electrical, Mechanical, Environmental Specification

| Type | | MMC73T | |
|-------------------------------------|-------------|--------------------|-------------|
| Operating Frequency, GHz | | INSAT C-Band | |
| | | Receive | Transmit |
| | | 4.5~4.8 | 6.725~7.025 |
| Gain, Mid-band, dBi | | 48.79 | 52.19 |
| Polarization | | Linear/Circular | |
| XPD(on Axis), dB | | 35 | 35 |
| XPD across 1dB Beam Width, dB | | 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 |
| Antenna Noise Temperature | | 2/4 Port Feed | |
| 10° Elevation | | 36K/50K | |
| 30° Elevation | | 27K/44K | |
| 50° Elevation | | 25K/36K | |
| -3 dB Beam Width, Mid-band | | 0.60° | 0.40° |
| Typical G/T (EL>10° , 2-port) | | 31.1dB/K (30° LNA) | |
| Tx. Power Capability, KW | | 5 | |
| Feed Interface | | CPR—229F | CPR—137F |
| Feed Insertion Loss, dB | | 0.2/0.25 | 0.2/0.25 |
| Isolation, Tx to Rx, dB | | 85 | |
| Tx/Tx ,Rx /Rx, Linear , dB | | 30 | |
| Tx/Tx ,Rx /Rx, Circular , dB | | 20 | |
| Side lobe | | CCIR 580-4 | |

Mechanical Specification

| | | |
|------------------------|----------------------------------|---------------------|
| Antenna Diameter | | 7.3m |
| Antenna Type | | Ring Focus |
| Surface Accuracy(RMS) | | ≤0.5mm |
| Antenna Pointing Range | Azimuth | ±85° |
| | Elevation | 0°~90°(Continuous) |
| | Polarization | ±90°(Continuous) |
| Drive Mode | | Manual or Motorized |
| Motor Drive System | Azimuth or Elevation Travel Rate | 0.02°/S-0.04°/S |
| | Polarization Travel Rate | 1°/S |

Environmental Specification

| | |
|-------------------|---------------------------------|
| Operational Wind | 79km/h gusting to 126km/h |
| Survival Wind | 198km/h |
| Temperature | -40° ~+60° |
| Relative Humidity | 100% |
| Solar Radiation | 1135Kcal/h/m ² |
| Seismic(Survival) | 0.3g(H), 0.15g(V) |
| Ice Loading | 13mm Operational; 30mm Survival |