

7.3M C-Ku-Band Fixed Earth Station

ELECTRICAL SPECIFICATION

| | C-Band | | Ku-Band | |
|--|------------------------|------------|------------------------|------------|
| | Receive | Transmit | Receive | Transmit |
| Operating Frequency, GHz | 3.4~4.2 | 5.85~6.725 | 10.95~12.75 | 13.75~14.5 |
| Gain, Mid-band, dBi | 48 | 51.6 | 57.5 | 58.9 |
| Polarization | Linear/ Circular | | Linear | |
| XPD (on Axis), dB | 35 | 35 | 35 | 35 |
| XPD (across 1dB Beamwidth), 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 | 43°K | | 66°K | |
| 30° Elevation | 32°K | | 52°K | |
| 50° Elevation | 29°K | | 47°K | |
| -3dB Beamwidth, Mid-band | 0.72° | 0.47° | 0.23° | 0.2° |
| Typical G/T (EI>10°) | 29.3dB/°K (30° LNA) | | 36.1dB/°K (70° LNA) | |
| Tx. Power Capability, KW | | 5 | | 2 |
| Feed Interface | CPR-229G | CPR-137G | WR-75 | WR-75 |
| Isolation, Tx to Rx, dB | 90 | | 85 | |
| Rx/Rx, Tx/Tx Linear, dB | 30 | | 30 | |
| Rx/Rx, Tx/Tx Circular, dB | 22 | | 22 | |
| Sidelobes | CCIR 580-2 | | | |

MECHANICAL SPECIFICATION

| | |
|------------------------|-------------------------|
| Antenna Diameter | 7.3m |
| Antenna Type | Ring Focus |
| Mount Type | EI. over Az. |
| Surface Accuracy (RMS) | ≤ 0.5mm |
| Antenna Pointing Range | |
| Azimuth | ±90°, ±65° (Continuous) |
| Elevation | 0°~90° (Continuous) |
| Polarization | 180° (Continuous) |
| Drive Mode | Manual or Motorized |
| Motor Drive System | |
| Azimuth Travel Rate | 0.1°/S (0.02°/S) |
| Elevation Travel Rate | 0.1°/S (0.02°/S) |
| Polarization | 1°/S |

ENVIRONMENTAL SPECIFICATION

| | |
|--------------------|---------------------------------|
| Operational Wind | 72km/h Gusting to 97km/h |
| Survival Wind | 216km/h |
| Temperature | -40°C~+60°C |
| Relative Humidity | 100% |
| Solar Radiation | 1135Kcal/h/m ² |
| Seismic (Survival) | 0.3g (H), 0.15g (V) |
| Ice Loading | 13mm Operational; 25mm Survival |