

## Satcom & Antenna Technologies Division



Transmit Quality Precision SMC Reflector

Fine Elevation and Azimuth Adjustments

Extended Ku-Band RxTx Feed

Durable and Rugged Construction for Ease of Shipping and Handling

Heavy Gauge Pre-Galvanized Steel Az/EI Mount

### Overview

CPI Satcom & Antenna Technologies Inc. (CPI SAT) 1.2m Ku-Band VSAT Antenna Series 1122 is ideally suited for demanding commercial applications. The one-piece compression molded reflector is precision manufactured for high-efficiency Ku-Band operation. The Az/EI mount is designed for easy installation on standard 2-7/8" OD or 3.0" OD Installation Mounts, and features fine Azimuth and Elevation Adjustments. The Az/EI mount is constructed from heavy gauge pre-galvanized steel for strength and corrosion resistance. An extended Ku-Band RxTx feed is standard with the Series 1122 Antenna.

## Electrical

- **Antenna Size**
  - 1.2 m (48 in.)
- **Operating Frequency (GHz)**
  - Receive = 10.70-12.75 GHz
  - Transmit = 13.75-14.50 GHz
- **Midband Gain (+/- .3dBi)**
  - Receive = 41.5 dBi
  - Transmit = 43.2 dB
- **Antenna Noise Temperature**
  - 20° Elevation = 45° K
  - 30° Elevation = 40° K
- **Antenna Sidelobe Envelope**
  - Per ITU-R S.580-6
- **Antenna Beamwidth**
  - Receive = 1.5°
- **Polarization**
  - Linear, Orthogonal
- **Cross-Pol Isolation**
  - 30 dB on Axis

## Feed Specifications – Standard RxTx

- **Operating Frequency (GHz)**
  - Receive = 10.70-12.75 GHz
  - Transmit = 13.75-14.50 GHz
- **Port-Port Isolation**
  - Transmit = 85 dB Min
  - Receive = 30 dB Min
- **VSWR**
  - Transmit = 1.3:1 Max
  - Receive = 1.5:1 Max
- **Insertion Loss**
  - Transmit = 0.2 dB Max
  - Receive = 0.4 dB Max

## Mechanical Performance

- **Reflector Material**
  - Glass Fiber Reinforced Polyester SMC
- **Antenna Optics**
  - Prime Focus, Offset, 0.6 F/D
- **Mount Type**
  - Elevation over Azimuth
- **Elevation Adjustment Range**
  - 10° to 90° Continuous Fine Adjustment
- **Azimuth Adjustment Range**
  - 360° Continuous, +/- 10° Fine Adjustment
- **Mast Pipe Interface**
  - 2.5 SCH Pipe (2.88" OD) or 3.00" OD (73 or 76mm)
- **Max RF Equipment Weight**
  - Tier 1 Feed Support = 8 lb. (3.6 kg)

## Environmental Performance

- **Wind Loading**
  - Operational = 45 mi/h (72 km/h)
  - Survival = 125 mi/h (200 km/h)
- **Temperature**
  - Operational = -40° to 140° F (-40° to 60° C)
  - Survival = -50° to 160° F (-46° to 71° C)
- **Rain**
  - Operational = ½ "/h (13mm/h)
  - Survival = 2 "/h (51mm/h)
- **Ice**
  - Survival = ½ inch (13mm) Radial Ice
- **Atmospheric Conditions**
  - Salt, Pollutants, and Contaminants as Encountered in Coastal and Industrial Areas
- **Solar Radiation**
  - 360 BTU/h/ft2 (1135 W/m2)