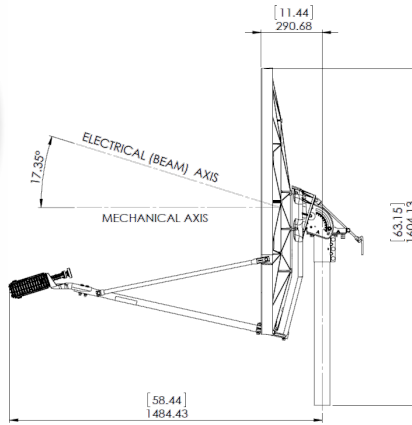


# Type 127: 1.2m Rx/Tx Extended Ka-Band Antenna



- ISO 9001:2008 CERTIFICATE OF REGISTRATION
- One-piece precision composite Reflector
- Precision Az/EI Mount
- Fine Azimuth and Elevation Adjustment Features
- All Materials Comply with EU Directive No. 2002/95/EC (RoHS)



- 720 Hour Salt Spray Hardware
- Designed for Skyware Global Ka Band Feed Components
- Designed for Tier I OEM Transceiver

New **Skyware Global 1.2m Rx/Tx Extended Ka-Band Antenna** is a rugged, commercial quality product suitable for the most demanding applications.

- The reflector is constructed from glass fiber reinforced polyester for strength and accuracy. A proprietary process developed by Skyware Global ensures high RF reflectivity as needed for Ka Band operation
- The precision Az/EI mount is made of galvanized steel for excellent corrosion resistance. This mount includes special features to increase pointing accuracy with low backlash and lockdown error.
- This Az/EI allows the antenna to be installed on standard 73mm [2-7/8"] OD installation mounts.
- All hardware is plated to 720 hour salt spray standards tested in accordance with ASTM B-117.
- Designed for use with the Skyware Global line of Ka-band feed assemblies.
- Tx Cross-Polarization Isolation of 25dB (within 1dB b/w) or better for CP Application.
- Excellent Tx Port to Port Isolation of 90dB or better.
- Meets or exceeds regulatory agency requirements.
- System designed for typical Ka-band RF Electronics.



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## • PRODUCT SPECIFICATIONS

### RF Performance

Operating Frequency  
RX .....18.3-20.2 GHz  
TX .....28.3-30.0 GHz

Polarization  
RX .....Circular, LH or RH  
TX .....Circular, LH or RH

Gain (+/0.3db)  
RX .....46.3 dBi @ 20.2 GHz  
TX .....49.5 dBi @ 30.0 GHz

VSWR .....1.3:1 Max

3dB Beamwidth  
RX .....0.83° @ 20.2 GHz  
TX .....0.56° @ 30.0 GHz

Sidelobe Envelope Co-Pol (dBi)  
100  $\lambda/D < \theta < 20^\circ$  .....29-25 log $\theta$  dBi  
20° <  $\theta < 26.3^\circ$  .....-3.5 dBi  
26.3° <  $\theta < 48^\circ$  .....32-25 log $\theta$  dBi  
0 > 48° .....-10 dBi (typical)

Antenna Noise Temperature  
10° Elevation .....90K  
20° Elevation .....53K  
30° Elevation .....51K

Cross Polarization Isolation  
within 1.0 dB Beamwidth  
RX .....22 dBi  
TX .....25 dBi

Isolation (Port to Port)  
RX .....80db  
TX .....90db

Output Waveguide Interface Flange  
RX .....WR42  
TX .....WR28

## 1.2m Rx/Tx Extended Ka-Band Antenna

### Mechanical Performance

Reflector Material .....Glass Fiber Reinforced Polyester

Antenna Optics ..... One-Piece Offset Feed Prime Focus

Mount Type ..... Elevation Over Azimuth

Elevation Adjustment Range .....5° - 90° Continuous  
Fine Adjustment

Azimuth Adjustment Range .....360° Continuous  
 $\pm 5^\circ$  Fine Adjustment

Mast Size .....2.5" SCH 40 Pipe  
(2.88" OD) 73.2 mm Diameter

Antenna Weight ..... Approx 51 lbs  
(Not Including Mast)

Packaged Weight ..... Approx 58 lbs

### Environmental Performance

Windloading

Operational .....45mph (72 km/h)

Functional Survival .....80mph (128 km/h)

Ultimate Survival .....125mph (200 km/h)

Survival Temperature .....-50°C to +80°C

Operational Temperature .....-40°C to +55°C

Humidity .....0 to 100% (Condensing)

Corrosion Protection ..... Hardware meets  
720 hour Salt Spray Test ASTM B-117

Solar Radiation .....360 BTU/h/ ft<sup>2</sup>

Shock and Vibration ..... As Encountered during  
Shipping and handling



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