The Skyware Global 1.8m Standard Rx/Tx Ka-Band SFL Antenna is a rugged, commercial quality product suitable for the most demanding applications.

- The reflector is constructed from glass fiber reinforced polyester (SMC) for strength and accuracy. A proprietary process developed by Skyware Global insures high RF reflectivity as needed for Ka-Band operation.

- The precision Az/El 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/El allows the antenna to be installed on standard 4" diameter pipe (4.5"/114mm) or 5" diameter pipe (5.56"/141mm) OD.

- 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.

- Excellent Tx Port to Port Isolation of 90dB or better.

- Meets or exceeds regulator agency requirements.

- System designed for typical Ka-band RF Electronics.
### RF Performance

**Operating Frequency**
- **TX**: 29.50-30.00GHz
- **RX**: 19.20-21.00GHz

**Polarization**
- **TX**: Circular, RH or LH
- **RX**: Circular, LH or RH

**Gain** (min)
- **TX**: 52.5 dBi @ 30.0GHz
- **RX**: 49.1 dBi @ 20.2GHz

**3 dB Beamwidth**
- **TX**: 0.4° @ 30GHz
- **RX**: 0.6° @ 20GHz

**Sidelobe Envelope (Tx, Co-Pol dBi)**
- \(100 \lambda/D < \theta < 20^\circ\): \(29-25 \log \theta \text{ dBi}\)
- \(20^\circ < \theta < 26.3^\circ\): \(-3.5 \text{ dBi}\)
- \(26.3^\circ < \theta < 48^\circ\): \(-3.5 \text{ dBi}\)
- \(48^\circ < \theta < 180^\circ\): \(-10 \text{ dBi (Typical)}\)

**Antenna Cross-Polarization (within 1dB b/w)**
- **TX**: 25dB
- **RX**: 22dB

**Antenna Noise Temperature**
- @ 30° EL: 57K Mk
- **VSWR**: 1.2:1 Max

**Isolation**
- **TX**: 90dB
- **RX**: 75dB

**Feed Interface**
- **TX**: WR28 Flat Flange
- **RX**: WR42 Flat Flange

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### Mechanical Performance

**Reflector Material**: Glass Fiber Reinforced Polyester (SMC)

**Antenna Optics**: One-Piece Offset Feed Prime Focus

**Mount Type**: Elevation Over Azimuth

**Elevation Adjustment Range**: 10°-90° Continuous Fine Adjustment

**Azimuth Adjustment Range**: 360° Continuous ± 3° Fine Adjustment

**Mast Size Interface**: 4” (114mm) Diameter Min
- 5” (141mm) Diameter Max

**Antenna Weight**: Approx 113.6Kg (Not Including Mast)

### Environmental Performance

**Windloading**
- **Operational**: 80km/h (50mph)
- **Functional Survival**: 128km/h (80mph)
- **Ultimate Survival**: 200km/h (125mph)

**Survival Temperature**: -50°C to +80°C

**Operational Temperature**: -40°C to +55°C

**Humidity**: 0 to 100% (Condensing)

**Corrosion Protection**: Hot Dip Galvanized Structural Components, Hardware meets 720 hour Salt Spray Test (ASTM B-117)

**Solar Radiation**: 360 BTU/h/ft²

**Shock and Vibration**: As Encountered during Shipping and handling