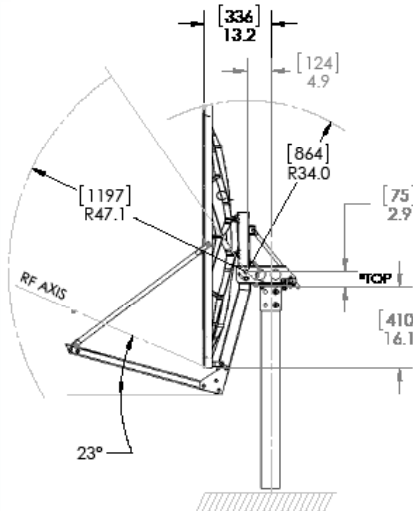


# Type 121: 1.2m Standard Rx/Tx Ka-Band SFL Antenna



- 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 Transceivers

The Skyware Global 1.2m 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 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 89mm [3.5"] OD installation mounts.
- All hardware is plated to 720 hour salt spray standards under 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.



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• PRODUCT SPECIFICATIONS

1.2m Standard Rx/Tx Ka-Band SFL Antenna

**RF Performance**

Operating Frequency	
TX .....	29.50-30.00GHz
RX .....	19.20-20.20GHz
Polarization	
TX .....	Circular, RH or LH
RX .....	Circular, RH or LH
Gain <sup>1</sup> (min)	
TX .....	49.3 dBi @ 30.0GHz
RX .....	46.0 dBi @ 20.2GHz
3 dB Beamwidth	
TX .....	0.6° @ 30GHz
RX .....	0.9° @ 20GHz
Sidelobe Envelope (Tx, Co-Pol dBi)	
100 λ/D < θ < 20° .....	29-25 log θ dBi
20° < θ < 26.3° .....	-3.5 dBi
26.3° < θ < 48° .....	32-25 log θ dBi
48° < θ < 180° .....	-10 dBi (Typical)
Antenna Cross-Polarization (within 1dB b/w)	
TX .....	25dB
RX .....	22dB
Antenna Noise Temperature <sup>1</sup>	
30° EL .....	57K Max
VSWR .....	1.2:1 Max
Isolation	
TX .....	90dB
RX .....	75dB
Feed Interface	
TX .....	WR28 Flat Flange
RX .....	WR42 Flat Flange

<sup>1</sup> Gain and Noise Temperature at Feed Horn Flange  
(All specifications typical)

**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 ± 3° Fine Adjustment
Mast Size . . . . .	3.5”(89mm) Diameter
Antenna Weight. . . . .	Approx 62 lbs (Not Including Mast)
Packaged Weight. . . . .	Approx 69 lbs

**Enviromental 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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