



98 cm RXTX Ka Band Antenna System

The Skyware Global 98cm Ka Band Antenna is a rugged, commercial grade product suitable for the most demanding applications.

The pressed steel reflector assures the surface accuracy needed for Ka band performance. Pre-galvanized steel with a powder coat finish guarantees excellent corrosion resistance and long life. The die-cast back structure provides for precision alignment of the reflector and support of the RF assembly without distortion. The reflector optics incorporate a long focal length for excellent cross-pol discrimination or "bean squint".

The heavy gauge steel Az/El mount provides a rigid support for the antenna and incorporates precise fine elevation and azimuth adjustment. This Az/El allows the antenna to be installed on any standard 2-3/8" (60mm) OD installation mount.

A matched feed horn and polarizer allows the antenna to be mated to the Skyware Global Ka transceiver or to a stand-alone feed assembly.

- RoHS compliant
- Precision pressed steel reflector
- Long focal length optics for low cross-pol or beam squint
- Steel components are pre-galvanized and powder coat painted for excellent corrosion resistance
- All hardware meets 500 minimum salt spray test requirements (ASTM B-117)
- Fine elevation and azimuth adjustments
- Ideally suited for Skyware Global Ka Transceiver

SPECIFICATIONS

98cm Ka-Band RxTx Antenna System

RF Performance

Operating Frequency	TX	29.50 - 30.00 GHz
	RX	19.20 - 20.20 GHz
Polarization	TX	Circular, RH or LH
	RX	Circular, LH or RH
Gain ¹ (min)	TX	46.6 dBi @ 29.75 GHz
	RX	43.5 dBi @ 19.75 GHz
3 dB Beamwidth	TX	0.7° @ 29.75 GHz
	RX	1.1° @ 19.70 GHz
Sidelobe Envelope (Tx, Co-Pol dBi)		
	100 $\lambda/D < \theta < 20^\circ$	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	>22 dB
	RX	>24 dB
Antenna Noise Temperature ¹		@ 30° El 62°K Mx
VSWR		1.3:1 Max
Isolation (Port to Port) ²	TX	TBD dB
	RX	TBD dB
Feed Interface		Circular

¹ Gain and Noise Temperature at Feed Horn Flange

² With Optional OMT/Filter

(All specifications typical)

Mechanical Performance

Reflector Material		Steel
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; $\pm 3^\circ$ Fine Adjustment
Mast Pipe Interface		60 mm (2.38 in) Diameter
Wind Loading	Operational	65 km/h (40 mph)
	Functional Survival	128 km/h (80 mph)
	Ultimate Survival	200 km/h (125 mph)
Temperature		-50°C to 80°C
Humidity		0 to 100% (Condensing)
Corrosion protection		Standard Hardware Meets 500 Hour Salt Spray Test Requirements (ASTM B-117)
Solar Radiation		360 BTU/h/ft ²
Shock and Vibration		As Encountered During Shipping and Handling



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