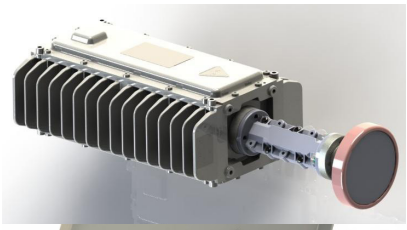
PRODUCT SPECIFICATIONS

Designed for use with Skyware Global's line of Ka Transceivers with matched feed horn and polarizer



98cm 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 "beam 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.

- 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 720 minimum salt spray test requirements (ASTM B-117)
- Fine elevation and azimuth adjustments
- Ideally suited for Skyware Global Ka Transceiver

98cm RxTx Ka Band Antenna

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

Gain1 (±0.3 dB)
TX . . . . . .46.8 dBi @ 29.75 GHz
RX . . . . . .43.8 dBi @ 19.70 GHz

3 dB Beamwidth
TX . . . . . .0.7° @ 29.75 GHz
RX . . . . . 1.1° @ 19.70 GHz

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)
RX 22dB

Antenna Noise Temperature [1]
. . . . . .@ 30° EL 62°K Max

VSWR
. . . . . .1.3:1 Max

Feed Interface . . . . . .Custom Circular

[1] Gain and Noise Temperature at Feed Horn Flange

(All specifications typical)

Mechanical Performance

Reflector Material. . . . . Steel

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

Mount Type . . . . . Elevation Over Azimuth

Elevation Adjustment Range . . . . . 8° - 90° Continuous Fine Adjustment

Azimuth Adjustment Range . . . . . 360° Continuous; ± 5° Fine Adjustment

Mast Pipe Interface. . . . . .60 mm (2.38 in) Diameter

Enviromental Performance

Wind Loading

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

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

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

Temperature . . . . . -50°C to +80°C

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

Corrosion protection . . . . . Standard Hardware 720 Hrs SST Requirements (ASTM B-117)

Solar Radiation . . . . . .360 BTU/h/ ft^2

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

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