

# RAVEN

a skyware global company

## PRODUCT SPECIFICATIONS

Detail Photos

(on right from top to bottom)

Pre-assembled Az/EI Mount with Fine Azimuth and Elevation Adjustments

Cross-Pol Compensating (XPC) Ku-band feed assembly



The reflector is thermoset-molded for strength and surface accuracy.



## 1.2 m RxTx Class I Antenna System TYPE 122

The Raven Type 122 1.2 m Class I RxTx Antenna is a rugged commercial grade product suitable for the most demanding applications. The reflector is thermoset-molded for strength and surface accuracy. Molded into the rear of the reflector is a network of support ribs which not only strengthens the antenna, but also helps to sustain the critical parabolic shape necessary for transmit performance.

The precision Az/EI mount is constructed from heavy-gauge steel to provide a rigid support to the reflector. The Az/EI mount secures the antenna to any 73-76 mm (2.88"-3.00") mast and prevents slippage in high winds. A specially formulated powder paint process offers excellent protection from weather-related corrosion.

The antenna features a unique feed which provides cross-pol performance that exceeds industry standards

- All materials comply with EU directive No. 2002/95/EC (RoHS).
- One-piece precision offset thermoset-molded reflector.
- Available with Ku-band co-pol or cross-pol feeds.
- Galvanized 19 mm (.75 in) O.D. feed support legs for lightweight outdoor units (ODU's).
- Plated hardware for maximum corrosion resistance.
- Az/EI mount includes both elevation and azimuth fine adjustments
- Class I system designed for typical 1 W and 2 W Ku-band RF Electronics.\*

\* 2.0 kg or 4.5 lb max. weight (For BUC and INB)  
2.2 kg or 4.8 lb max. weight (For Transceiver)

## SPECIFICATIONS

### Type 122 1.2 m RxTx Class I Antenna System

#### Type Approval Information

Antenna Model	62 - 1225401
Eutelsat Standard	M
Approval Code	EA-A038

(See Our Website for a Complete List of Type Approvals)

#### RF Performance

Effective Aperture	1.2 m (48 in)
Operating Frequency	Tx 14.00 - 14.50 GHz Rx 10.70 - 12.75 GHz
Polarization	Linear, Orthogonal (Co-Pol Optional)
Gain ( $\pm 2$ dBi)	Tx 43.3 dBi @ 14.3 GHz Rx 41.8 dBi @ 12.0 GHz
3 dB Beamwidth	Tx 1.2° @ 14.3 GHz Rx 1.5° @ 12.0 GHz
Sidelobe Envelope (Tx, Co-Pol dBi)	Mainbeam $< \theta < 20^\circ$ 29 - 25 Log $\theta$ 20° $< \theta < 26.3^\circ$ -3.5 26.3° $< \theta < 48^\circ$ 32 - 25 Log $\theta$ 48° $< \theta < 180^\circ$ -10 (Typical)
Antenna Cross-Polarization	30 dB in 1 dB Contour (Tx)
Antenna Noise Temperature	10° El 48° K 20° El 35° K 30° El 29° K
VSWR*	Tx 1.3:1 Rx 1.5:1
Isolation* (Port to Port)	Tx 90 dB Rx >40 dB
Feed Interface	Tx WR75 Flat Flange Rx WR75 Flat 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	8° - 90° Continuous Fine Adjustment
Azimuth Adjustment Range	360° Continuous; $\pm 5^\circ$ Fine Adjustment
Mast Pipe Interface	73 - 76 mm (2.88 in - 3.00 in) Diameter
Wind Loading	Operational 72 km/h (45 mph) (<1 dB BPE) Survival 200 km/h (125 mph)
Temperature	-50°C to 80°C
Humidity	0 to 100% (Condensing)
Atmosphere	Standard Hardware Meets 500 Hour Salt Spray Test Requirements (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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