

RAVEN

a skyware global company

PRODUCT SPECIFICATIONS

Detail Photos

(on right from top to bottom)

Pre-assembled Az/El Mount

Fine-elevation adjustment
with stamped degree scale

RF tested Ku-band feed
assembly



1.8 m RxTx Class I Antenna System TYPE 180TX

The reflector is thermo-set-molded for strength and surface accuracy.

The Raven Type 180TX 1.8 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 Az/El mount is constructed from heavy-gauge steel to provide a rigid support to the reflector. The Az/El mount secures the antenna to any 114 mm (4.50") O.D. mast and prevents slippage in high winds. Hot-dip galvanizing is standard for extreme environmental conditions.

- All materials comply with EU directive No. 2002/95/EC (RoHS).
- One-piece thermoset-molded offset reflector.
- Single bolt fine elevation adjustment.
- Galvanized 19 mm (.75") O.D. feed support legs
- Plated hardware for maximum corrosion resistance.
- Available with C-Band or Ku-Band feeds.
- Hot dip galvanized Az/El mount.
- Designed for typical 1 W and 2 W Block Up-Converters (BUCs)*

** 2 kg or 4.5 lb max. weight for RF electronics (BUC and LNB) Ku-Band*

5 kg or 11 lb max. weight for RF electronics (BUC and LNB) at C-Band



SPECIFICATIONS

Type 180TX 1.8 m RxTx Class I Antenna System

RF Performance

	C-band	Ku-band
Effective Aperture	1.8 m (71 in)	1.8 m (71 in)
Operating Frequency	Tx ... 5.850 - 6.725 GHz Rx ... 3.400 - 4.200 GHz	13.75 - 14.50 GHz 10.70 - 12.75 GHz
Polarization	Linear, Orthogonal	Linear, Orthogonal
Gain (± 2 dBi)	Tx ... 39.3 dBi @ 6.1 GHz Rx ... 35.4 dBi @ 3.9 GHz	46.8 dBi @ 14.3 GHz 45.3 dBi @ 12.0 GHz
3 dB Beamwidth	Tx ... 2.0° @ 6.1 GHz Rx ... 3.0° @ 3.9 GHz	0.8° @ 14.3 GHz 1.0° @ 12.0 GHz
Sidelobe Envelope (Tx, Co-Pol dBi)		
Mainbeam $< \theta < 20^\circ$	29 - 25 Log θ	29 - 25 Log θ
$20^\circ < \theta < 26.3^\circ$	-3.5	-3.5
$26.3^\circ < \theta < 48^\circ$	32 - 25 Log θ	32 - 25 Log θ
$48^\circ < \theta < 180^\circ$	-10	-10
Antenna Cross-Polarization	30 dB on Axis	30 dB on Axis
Antenna Noise Temperature		
10° El	41° K	43° K
20° El	36° K	28° K
30° El	33° K	23° K
VSWR	Tx ... 1.3:1 Rx ... 1.4:1	1.3:1 1.5:1
Isolation (Port to Port)	Tx ... 60 dB Rx ... 60 dB	80 dB 35 dB
Feed Interface	Tx ... CPR-137 or Type N Rx ... CPR-229	WR75 Flat Flange 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	.....	10° - 90° Continuous Fine Adjustment
Azimuth Adjustment Range	.....	360° Continuous, $\pm 10^\circ$ Fine
Mast Pipe Interface	.....	114 mm (4.50 in) Diameter
Wind Loading	Operational	80 km/h (50 mph)
	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 ²
Shock and Vibration	.....	As Encountered During Shipping and Handling

RAVEN

a skyware global company

Raven NC LLC
Authorized Distributor:
Servsat Communications, Inc.

All designs, specifications and availabilities of products and services presented in this bulletin are subject to change without notice.
VST-011.2
© 2009 Raven Antenna Systems, Inc.