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PRODUCT SPECIFICATIONS

Detail Photos

(on right from top to bottom)

Heavy-duty galvanized Az/El Mount

Fine azimuth and elevation adjustments

RF tested Ku-band feed assembly



Type approved for use on Intelsat satellite system



1.8 m Ku-band RxTx Class III Antenna System

TYPE 183

The Raven Type 183 1.8 m Class III 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 and feed support arm. Heavy-duty lockdown bolts secure the mount to any 114 mm (4.50") O.D. mast and prevent slippage in high winds.

Hot-dip galvanizing is standard on this model for maximum environmental protection.

- All materials comply with EU directive No. 2002/95/EC (RoHS).
- One-piece precision offset thermoset-molded reflector.
- Heavy-duty galvanized Az/El mount.
- Fine Azimuth and elevation adjustments.
- Galvanized support arm and alignment struts.
- Factory pre-assembled mount.
- Galvanized and stainless hardware for maximum corrosion resistance.
- Includes Ku-band linear cross-polarized RxTx feed assembly.
- Heavy-duty Class III mount for 11 kg (25 lb) RF electronics (LNB & BUC).

SPECIFICATIONS

Type 183 1.8 m Ku-band RxTx Class III Antenna System

Type Approval Information

Antenna Model	62-1835611
Intelsat Standard	Standard G & K2 (IESS 601)
Approval Code	IA027800

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

RF Performance

Effective Aperture	1.8 m (71 in)
Operating Frequency	Tx 13.75 - 14.50 GHz Rx 10.70 - 12.75 GHz
Polarization	Linear, Orthogonal
Gain (± 2 dBi)	Tx 46.8 dBi @ 14.3 GHz Rx 45.3 dBi @ 12.0 GHz
3 dB Beamwidth	Tx 0.79° @ 14.3 GHz Rx 0.99° @ 12.0 GHz
Sidelobe Envelope (Tx, Co-Pol dBi)	1° < θ < 20° 29 - 25 Log θ 20° < θ < 26.3° -3.5 26.3° < θ < 48° 32 - 25 Log θ 48° < θ < 180° -10
Antenna Cross-Polarization	30 dB (On Axis) 26 dB in .5 dB Contour
Antenna Noise Temperature	10° El 43° K 20° El 28° K 30° El 23° K
VSWR	Tx 1.3:1 Rx 1.5:1
Isolation (Port to Port)	Tx 80 dB Rx 35 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	10° - 90° Continuous Fine Adjustment
Azimuth Adjustment Range	360° Continuous $\pm 10^\circ$ Fine Adjustment
Feed Support	Rectangular Section with Alignment Legs
Most 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

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