

Type 180: 1.8m Rx/Tx Class I Antenna System



- ISO 9001:2008 Certificate of Registration
- All materials comply with EU Directive No. 2002/95/EC (RoHS).
- One-piece precision offset thermoset-molded 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/EI mount.
- Designed for typical 1W and 2W block Up-Converters (BUCs)*



The **Skyware Global 1.8m Rx/Tx Class I 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/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 114 mm (4.50") O.D. mast and prevent slippage in high winds.
- Hot-dip galvanizing is standard for extreme environmental conditions.

* 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

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• PRODUCT SPECIFICATIONS

RF Performance

Effective Aperature

C-Band 1.8m (71in)
 Ku-Band 1.8m (71in)
 Extended Band 1.8m (71in)

Operating Frequency

C-Band TX: 5.85-6.725Ghz; RX: 3.4Ghz-4.2Ghz
 Ku-Band TX: 13.75-14.5Ghz; RX: 10.7Ghz-12.75Ghz
 Extended-Band . . . TX: 12.75-14.5Ghz; RX: 10.7Ghz-11.7Ghz

Polarization

C-Band Linear or Orthogonal
 Ku-Band Linear or Orthogonal
 Extended-Band Linear or Orthogonal

Gain (±0.2 dBi)

C-Band TX: 39.3 dBi@6.1Ghz; RX: 35.4 dBi@3.9Ghz
 Ku-Band TX: 46.8 dBi@14.3Ghz; RX: 45.3 dBi@12Ghz
 Extended-Band TX: 46.8 dBi@14.3Ghz; RX: 45.3 dBi@12Ghz

3dB Beamwidth

C-Band TX: 2.0@6.1Ghz; RX: 3.0@3.9Ghz
 Ku-Band TX: 0.8@14.3Ghz; RX: 1.0@12Ghz
 Extended-Band TX: 0.8@14.3Ghz; RX: 1.0@12Ghz

Sidelobe Envelope (Tx, Co-Pol dBi)

Mainbeam < 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

Antenna Cross-Polarization. 30db on Axis

Antenna Noise Temperature

C-Band 10°EL@41K; 20°@36K; 30°@33K
 Ku-Band 10°EL@43K; 20°@28K; 30°@23K
 Extended-Band 10°EL@43K; 20°@28K; 30°@23K

VSWR

C-Band TX: 1.3:1; RX: 1.4:1
 Ku-Band TX: 1.3:1; RX: 1.5:1
 Extended Band TX: 1.3:1; RX: 1.5:1

Isolation Port to Port

C-Band TX: 60dB; RX: 60dB
 Ku-Band TX: 80dB; RX: 35dB
 Extended-Band TX: 80dB; RX: 35dB

Feed Interface

C-Band TX: CPR-137 or Type N; RX: CPR-229
 Ku-Band TX: WR75 Flat Flange; RX: WR75 Flat Flange
 Extended-Band TX: WR75 Flat Flange; RX: WR75 Flat Flange

1.8m Rx/Tx Class I Antenna

Mechanical Performance

Reflector Material. Glass Fiber Reinforced Composite

Antenna Optics One-Peice Offset Feed Prime Focus

Mount Type Elevation Over Azimuth

Elevation Adjustment Range 8°-90° Continuous
 Fine Adjustment (Screw)

Azimuth Adjustment Range 360° Continuous
 ± 10° Fine Adjustment (Cam)

Mast Pipe Interface. 4.5" (114mm) Diameter

Enviromental Performance

Wind Loading

Operational 45mph (72km/h)

Functional Survival. 80mph (128km/h)

Ultimate Survival 125mph (200km/h)

Operational Temperature -40°C to +60°C

Survival Temperature -50°C to +80°C

Humidity. 0 to 100% (Condensing)

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

Solar Radiation 360 BTU/h/ft²

Shock and Vibration. As Encountered during
 Shipping and handling



(All specifications typical)

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