

**PRODUCT
SPECIFICATIONS**

Detail Photos
(on right from top to bottom)
Pre-assembled Az/EI Mount
Fine-elevation adjustment
with stamped degree scale
RF tested Ku-band feed
assembly



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



1.8 m RxTx Class I Antenna System TYPE 180TX

The ASC Signal Type 180TX 1.8 meter 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/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 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/EI 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 ... 35.5 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° @ 14.3 GHz	0.79° @ 14.3 GHz 10.99° @ 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



ASC Signal Corporation
620 North Greenfield Parkway
Garner, NC 27529 USA

Telephone: +1-919-329-8700

Fax: +1-919-329-8701

Internet: www.ascsignal.com

All designs, specifications and availabilities of products and services presented in this bulletin are subject to change without notice.

ASC-VSAT31

© 2007 ASC Signal Corporation

**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 ASC Signal 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



ASC Signal Corporation
1315 Industrial Park Drive
Smithfield, NC 27577
USA

Telephone: +1-919-934-9711

Internet: www.ascsignal.com

All designs, specifications and availabilities of products and services presented in this bulletin are subject to change without notice.

ASC-VSAT34.1

© 2007 ASC Signal Corporation