

# Type 755: 75cm Rx/Tx Ku-Band Elliptical Antenna System



- ISO 9001:2008 Certificate of Registration
- One-piece precision elliptical offset thermoset-molded reflector.
- Single bolt fine elevation adjustment.
- Extruded aluminum feed support arm.
- Pre-assembled Az/EI/Skew mount for optimum alignment capability.
- Plated hardware for maximum corrosion resistance.
- Includes Rx/Tx feed assembly.
- Available with Co-Pol or Cross-Pol feed.
- All materials comply with EU Directive No. 2002/95/EC (RoHS).
- Designed for typical 1W and 2W Ku-band Block-Up Converters (BUCs)\*

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



The **Skyware Global 75cm Rx/Tx Ku-Band Elliptical 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 strengthens the antenna and sustains the parabolic shape necessary for transmit performance.
- The heavy-gauge galvanized steel Az/EI/Skew mount provides rigid support to the reflector.
- The mount secures the antenna to any 60 mm (2.38") O.D. mast and prevents slippage in high winds.
- This mount allows for precise alignment of the elliptical reflector to the geostationary arc.
- A special powder paint process offers excellent protection from weather-related corrosion.



## • PRODUCT SPECIFICATIONS

### RF Performance

Effective Aperture . . . . . 75 cm equivalent (30 in)  
(62 cm x 89 cm Elliptical Aperture)

Operating Frequency  
TX . . . . . 13.75-14.50GHz  
RX . . . . . 10.70-12.75GHz

Polarization . . . . . Linear, Co or Cross-Polarized

Gain ( $\pm 0.2$  dB)  
TX . . . . . 39.3 dBi @ 14.3GHz  
RX . . . . . 37.8 dBi @ 12.0GHz

3 dB Beamwidth  
TX . . . . .  $1.6^\circ$  @ 14.3GHz  
RX . . . . .  $2.0^\circ$  @ 12.0GHz

Sidelobe Envelope (Tx, Co-Pol dBi)  
 $1.8 < \theta < 20^\circ$  . . . . .  $29-25 \log \theta$  dBi  
 $20^\circ < \theta < 26.3^\circ$  . . . . .  $-3.5$  dBi  
 $26.3^\circ < \theta < 48^\circ$  . . . . .  $.32-25 \log \theta$  dBi  
 $48^\circ < \theta < 180^\circ$  . . . . .  $-10$

Antenna Cross-Polarization. . . . .  $.30$  db on Axis

Antenna Noise Temperature <sup>1</sup>  
 $30^\circ$  EL . . . . . 50K

VSWR  
TX . . . . . 1.3:1  
RX . . . . . 1.5:1

Isolation (Port to Port)  
TX . . . . . 80db  
RX . . . . . 35db

Feed Interface  
TX . . . . . WR75 Flat Flange  
RX . . . . . WR75 Flat Flange

(All specifications typical)

## 75cm Rx/Tx Ku-Band Elliptical Antenna

### Mechanical Performance

Reflector Material . . . . . Glass Fiber Reinforced Polyester

Antenna Optics . . . . . One-Peice Offset Feed Prime Focus

Mount Type . . . . . Three Axis, Skew, Elevation and Azimuth

Polarization (Skew) Adjustment Range . . .  $\pm 90^\circ$  Continuous

Elevation Adjustment Range . . . . .  $5^\circ-90^\circ$  Continuous  
Fine Adjustment

Azimuth Adjustment Range . . . . .  $360^\circ$  Continuous

Mast Pipe Interface. . . . .  $.60$  mm  
( $2.38$  in) Diameter

### Enviromental Performance

Wind Loading  
Operational. . . . . 50 mph (80 km/h)

Functional Survival . . . . . 80 mph (128 km/h)

Ultimate Survival . . . . . 125 mph (200 km/h)

Operational Temperature. . . . .  $-40^\circ\text{C}$  to  $+60^\circ\text{C}$

Survival Temperature. . . . .  $-50^\circ\text{C}$  to  $+80^\circ\text{C}$

Humidity. . . . . 0 to 100% (Condensing)

Atmosphere. . . . . Standard Hardware 500 Hrs  
SST Requirements (ASTM B-117)

Solar Radiation. . . . .  $360$  BTU/h/ft<sup>2</sup>

Shock and Vibration. . . . . As Encountered during  
Shipping and handling



Satcom solutions for the long haul



REV 03/15-02  
Page 2 of 2

Request A Quote