

# Type 244: 2.4 m Ku-band Dual Optics Antenna System



- ISO9001:2008 Certification
- Eutelsat Certificate No. EA-V062
- Two-piece precision offset thermoset-molded reflector.
- Heavy-duty galvanized Az/El mount.
- Fine Azimuth and elevation adjustments.
- Plated hardware for maximum corrosion resistance.
- Includes Ku-band feed assembly and precision aluminum sub-reflector.
- All materials comply with EU directive No. 2002/95/EC (RoHS).



The **Skyware Global Type 244 2.4 m Dual Optics Rx/Tx Antenna** is a rugged commercial grade product suitable for the most demanding applications. The dual optics design provides the superior cross-pol discrimination demanded for optimum performance networks.

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 and helps to maintain the parabolic shape necessary for transmit performance.

The heavy-gauge steel Az/El provides a rigid support to the reflector and feed support arm. Heavy-duty lock-down bolts secure the mount to any 168 mm (6.63") O.D. mast and prevents slippage in high wind.

- Dual Optics design for ultra low cross-polarization.
- Hot-dip galvanizing is standard on this model for maximum environmental protection.
- Tx Cross-Polarization Isolation of 35dB within 1dB contour,

## • PRODUCT SPECIFICATIONS

### RF Performance

Operating Frequency  
TX ..... 13.75 - 14.50GHz  
RX ..... 10.75 - 12.75GHz

Polarization ..... Linear, Orthogonal

Gain ( $\pm 0.3$  dB)  
TX ..... 49.2 dBi @ 14.25GHz  
RX ..... 47.5 dBi @ 11.70GHz

3 dB Beamwidth  
TX ..... 0.6° @ 14.3GHz  
RX ..... 0.7° @ 12.0GHz

Sidelobe Envelope (Tx, Co-Pol dBi)  
2.5° <  $\theta$  < 7° ..... 29-25 log  $\theta$  dBi  
7° <  $\theta$  < 9.2° ..... -3.5 dBi  
9.2° <  $\theta$  < 48° ..... 32-25 log  $\theta$  dBi  
48° <  $\theta$  < 180° ..... -10 dBi

Antenna Cross-Polarization within 1 dB contour  
TX ..... 35 dB  
RX ..... 35 dB

Antenna Noise Temperature  
10° EL ..... 45K°  
20° EL ..... 31K°  
30° EL ..... 30K°

VSWR  
Tx ..... 1.3:1  
Rx ..... 1.4:1

Isolation (Port to Port)  
Tx ..... 80 dB  
Rx ..... 40 dB

Feed Interface  
Tx ..... WR75 Flat Flange  
Rx ..... WR75 Flat Flange

(All specifications typical)

## 2.4 m Ku-Band Dual Optics RxTx Antenna System

### Mechanical Performance

Reflector Material ..... Two-Piece Glass  
Fiber Reinforced Polyester

Antenna Optics ..... Offset Gregorian  
(Dual Optics)

Mount Type ..... Elevation Over Azimuth

Elevation Adjustment Range ..... 10° - 90° Continuous  
Fine Adjustment

Azimuth Adjustment Range ..... 360° Continuous;  
 $\pm 12^\circ$  Fine Adjustment

Feed Support ..... Rectangular Section  
with Alignment Legs

Mast Pipe Interface ..... 6.63 in (168 mm) Diameter

### Environmental Performance

Wind Loading

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

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

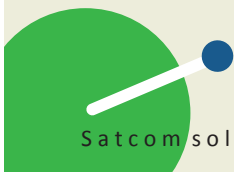
Temperature ..... -50°C to +80°C

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

Atmosphere ..... Standard Hardware Meets  
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



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