

## Channel Master 960 Antenna



*Factory pre-assembled  
Az/El mount*

### FEATURES

- One-piece precision offset thermoset-molded reflector.
- Long focal length optics for low cross-pol performance.
- Fine azimuth and elevation adjustments.
- Galvanized .75 in. O.D. feed support legs for lightweight outdoor units (ODU's).
- Optional 2 in. diameter lower feed arm for larger ODU's (up to 8 lbs).
- Cadmium-plated hardware for maximum corrosion resistance.

### DESCRIPTION

The Channel Master® Type 960 96cm Offset Rx-Tx 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 its critical parabolic shape necessary for transmit performance. The reflector optics feature a long focal length for excellent cross-pol performance, required by many satellite operators.

The Az/El mount is constructed from heavy-gauge steel to provide a rigid support to the reflector. The yoke cap clamp secures the mount to any 2.88 in. to 3.00 in. O.D. mast and prevents slippage in high wind. A specially formulated powder paint process offers excellent protection from weather-related corrosion.

# SPECIFICATIONS

# TYPE 960

## 96cm Receive-Transmit Offset Antenna System

### RF PERFORMANCE

Effective Aperture		96cm
Operating Frequency	Tx	13.75 - 14.50 GHz
	Rx	10.70 - 12.75 GHz
Polarization		Linear, Orthogonal
Gain ( $\pm 2$ dBi)	Tx	41.2 dBi @ 14.25 GHz
	Rx	39.7 dBi @ 11.95 GHz
3 dB Beamwidth	Tx	1.5° @ 14.3 GHz
	Rx	1.8° @ 12.0 GHz
Sidelobe Envelope (Tx,Co-Pol dBi)		29-25 Log $\theta$
	$1.8^\circ \leq \theta \leq 20^\circ$	-3.5
	$20^\circ \leq \theta \leq 26.3^\circ$	
	$26.3^\circ \leq \theta \leq 48^\circ$	32-25 Log $\theta$
	$48^\circ \leq \theta \leq 180^\circ$	-10 (Typical)
Antenna Cross-Polarization		$\geq 30$ dB in 1 dB Contour
Antenna Noise Temperature	10° EL	53° K
	20° EI	39° K
	30° EI	32° K
VSWR		1.3:1 Max.
Isolation	Tx	70 dB Min.
	Rx	35 dB Min.
Feed Interface		WR-75 (Both Ports)

### MECHANICAL PERFORMANCE

Reflector Material		Glass Fiber Reinforced Polyester
Antenna Optics		One-Piece Offset Feed Prime Focus- Long Focal Length
Mount Type		Elevation over Azimuth
Elevation Adjust. Range		7°-90° Continuous Fine Adjustment
Azimuth Adjust. Range		360° Continuous; $\pm 20^\circ$ Fine Adjust.
Mast Pipe Interface		2.88-3.00 in. (73-76 mm) Diameter
Wind Loading	Operational	45 mi/h (72 km/h)
	Survival	125 mi/h (200 km/h)
Temperature		-50°C to 80° C
Humidity		0 to 100% (Condensing)
Atmosphere		Salt, Pollutants and Contaminants as Encountered in Coastal and Industrial Areas
Solar Radiation		360 BTU/h/ft <sup>2</sup>
Shock and Vibration		As Encountered During Shipping and Handling



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