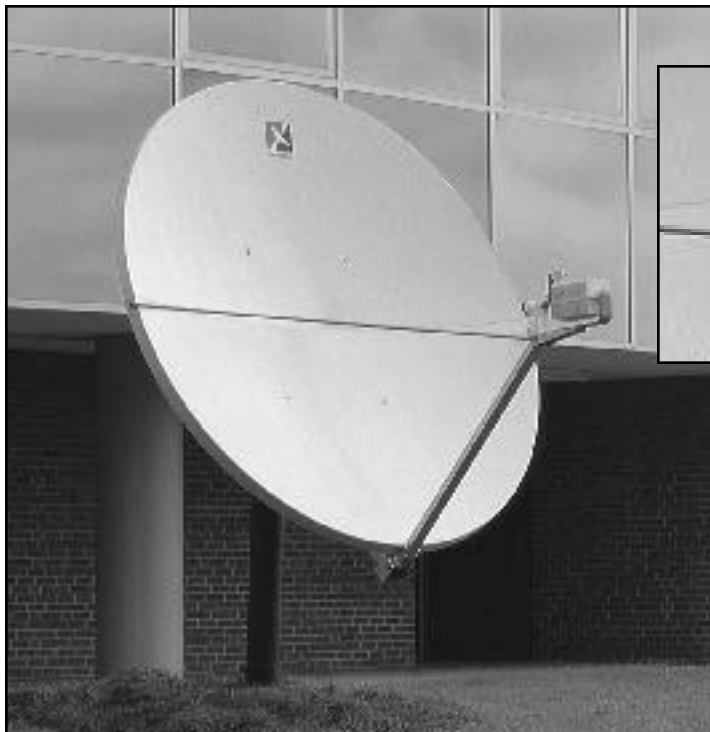
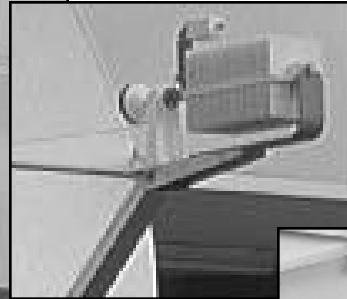


## 2.4m Receive-Transmit Offset Antenna System



*Ku-Band Rx-Tx Feed  
Assembly*



*Heavy-duty galvanized  
Az/EI mount*

### FEATURES

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- Two-piece precision offset thermoset-molded reflector.
- Fine azimuth and elevation adjustments.
- Galvanized feed support arm and alignment struts.
- Factory pre-assembled mount.
- Galvanized and stainless hardware for maximum corrosion resistance.
- Available with a wide variety of C-Band and Ku-Band Rx-Tx feed assemblies and ODU mounting kits.

### DESCRIPTION

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The Channel Master® Type 243 2.4m Offset Rx-Tx Antenna is a rugged commercial grade product suitable for the most demanding applications. The two-piece reflector is thermoset-molded for strength and surface accuracy. Molded into the rear of each reflector half 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 and feed support arm. Heavy-duty lockdown bolts secure the mount to any 6.63 in. O.D. mast to prevent slippage in high winds. Hot-dip galvanizing is standard for maximum environmental protection.

# SPECIFICATIONS

# TYPE 243

## 2.4m Receive-Transmit Offset Antenna System

### RF PERFORMANCE

		<b>C-Band</b> <u>Linear</u>	<b>Ku-Band</b> <u>Linear</u>
Effective Aperture		2.4m (96 in.)	2.4m (96 in.)
Operating Frequency	Tx	5.850 - 6.725 GHz	13.75 - 14.50 GHz
	Rx	3.400 - 4.200 GHz	10.70 - 12.75 GHz
Polarization		Linear, Co or Cross-Polarized	Linear, Co or Cross-Polarized
Gain ( $\pm 3$ dBi)	Tx	42.0 dBi @ 6.138 GHz	49.3 dBi @ 14.25 GHz
	Rx	38.0 dBi @ 3.913 GHz	47.6 dBi @ 11.95 GHz
3 dB Beamwidth	Tx	1.3° @ 6.1 GHz	.59° @ 14.3 GHz
	Rx	2.1° @ 3.9 GHz	.71° @ 12.0 GHz
Sidelobe Envelope (Tx,Co-Pol dBi)			
		29-25 Log $\theta$	29-25 Log $\theta$
		2°* < $\theta$ < 20°	-3.5
		20° < $\theta$ < 26.3°	-3.5
		26.3° < $\theta$ < 48°	32-25 Log $\theta$
		48° < $\theta$ < 180°	-10 (Typical)
Antenna Cross-Polarization		>30 dB (on axis)	>30 dB (on axis)
Antenna Noise Temperature**	10° EI	40°K	42°K
	20° EI	35°K	34°K
	30° EI	32°K	31°K
VSWR		1.3:1 Max.	1.3:1 Max.
Isolation,Tx to Rx		60 dB Min.	80 dB Min.
Feed Interface	Tx	Type N or CPR-137	WR-75
	Rx	CPR-229	WR-75

\* 1° for Ku-Band Envelope

\*\* Does not include dissipative losses

### MECHANICAL PERFORMANCE

Reflector Material		Glass Fiber Reinforced Polyester
Antenna Optics		Two-Piece Offset Feed Prime Focus
Mount Type		Elevation over Azimuth
Elevation Adjust.Range		10°-90° Continuous Fine Adjustment
Azimuth Adjust.Range		360° Continuous; $\pm 12^\circ$ Fine Adjustment
Mast Pipe Interface		6.63 in.(168 mm) Diameter
Wind Loading	Operational	50 mi/h (80 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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