

2.4 Meter C & Ku-Band Rx/Tx Antenna

Series 1241

Technical Specifications

Electrical		C-Band Linear	C-Band Circular	Ku-Band Linear
Antenna Size		2.4M (96 in.)	2.4M (96 in.)	2.4M (96 in.)
Operating Frequency (GHz)	Receive Transmit	3.625 - 4.20 GHz 5.85 - 6.425 GHz	3.625 - 4.20 GHz 5.85 - 6.425 GHz	10.70 - 12.75 GHz 13.75 - 14.50 GHz
Antenna Gain at Midband, dBi ($\pm .2$ dB)	Receive Transmit	38.20 dBi 42.20 dBi	38.20 dBi 42.20 dBi	47.40 dBi 49.20 dBi
VSWR		1.3:1 max	1.3:1 max	Rx: 1.5:1 max Tx: 1.3:1 max
Pattern Beamwidth (in degrees at midband)	-3 dB -15 dB	Rx: 2.20° Tx: 1.40° Rx: 4.90° Tx: 3.10°	Rx: 2.20° Tx: 1.40° Rx: 4.90° Tx: 3.10°	Rx: 0.70° Tx: 0.60° Rx: 1.60° Tx: 1.40°
Sidelobe Envelope, Co-Pol (dBi)	10 θ /D $\theta \leq 20^\circ$ 20° $\theta \leq 26.3^\circ$ 26.3° $\theta \leq 48^\circ$ $\theta > 48^\circ$	29 - 25 Log θ dBi -3.5 dBi 32 - 25 Log θ dBi -10 dBi (averaged).	29 - 25 Log θ dBi -3.5 dBi 32 - 25 Log θ dBi -10 dBi (averaged)	29 - 25 Log θ dBi -3.5 dBi 32 - 25 Log θ dBi -10 dBi (averaged)
Antenna Noise Temperature	10° Elevation 20° Elevation 30° Elevation 40° Elevation	52 K 46 K 45 K 44 K	57 K 49 K 45 K 45 K	56 K 51 K 48 K 41 K
Cross Polarization Isolation (Linear)	Receive On Axis Transmit	>30 dB >30 dB	N/A N/A	>30 dB >30 dB
Axial Ratio (Circular)	Receive Transmit	N/A N/A	1.4 VAR (2.95 dB) 1.3 VAR (2.28 dB)	N/A N/A
Feed Interface	Receive Transmit	CPR 229F CPR 137 or Type N	CPR 229F CPR 137 or Type N	1WR 75 or Direct Radio Mounting
Maximum Radio Weight (Optional Feed Stabilizer available for higher radio weight)		20 Lbs. (9 Kg.)	20 Lbs. (9 Kg.)	12 Lbs. (5.5 Kg.)

Mechanical		
Reflector Material		Glass Fiber Reinforced Polyester SMC
Antenna Optics		Prime Focus, Offset Feed, Four-piece
Mast Pipe Size		6" SCH 40 Pipe (6.63" OD) 16.83 cm.
Elevation Adjustment Range		5° to 90° Continuous Fine Adjustment
Azimuth Adjustment Range		360° Continuous, +/- 10° Fine Adjustment
Mount Type		Elevation over Azimuth
Shipping Specifications	Shipping Weight (Total): Install (Net) Weight:	545 lbs. (248 kg.) 365 lbs. (166 kg.)

Environmental Performance		
Wind Loading	Operational Survival	50 mph (80 km/h) 125 mph (201 km/h)
Temperature	Operational	- 40° to 140°F (- 40° to 60°C)
Rain	Operational	½" (13mm) / hr
Atmospheric Conditions		Salt, Pollutants and Contaminants as Encountered in Coastal and Industrial Areas
Relative Humidity		0 to 100% with Condensation
Solar Radiation		360 BTU/h/ft²



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For more detailed information, please refer to the corresponding CPI technical description if one has been published, or contact CPI. Specifications may change without notice as a result of additional data or product refinement. Please contact CPI before using this information for system design.

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