

2.4M C & Ku-Band Rx/Tx Antenna

Series 1240

Technical Specifications

Electrical		C-Band Linear	C-Band Circular	Ku-Band
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) 100 λ / 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) On Axis	Receive Transmit	>30 dB >30 dB	N/A N/A	>30 dB >35 dB
Axial Ratio (Circular)	Receive Transmit	N/A N/A	2.28 dB 1.94 dB	N/A N/A
Feed Interface	Receive Transmit	CPR 229F CPR 137 or Type N	CPR 229F CPR 137 or Type N	WR 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, +/- 5° Fine Adjustment
Mount Type	Elevation over Azimuth
Shipping Specifications Shipping Weight (Total): Install (Net) Weight:	525 lbs. (237 kg.) 345 lbs. (157 kg.)

Environmental Performance		
Wind Loading	Operational Survival	50 mph (80 km/h) 125 mph (201 km/h)
Temperature Range (operational)		-40° to 140°F (-40° to 60°C)
Rain (operational)		1/2" (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

GENERAL DYNAMICS

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