

# 2.4M C & Ku-Band Antenna

## Series 1251

### Technical Specifications

Electrical		C-Band Linear	C-Band Circular	Ku-Band
Antenna Size		2.4 M (96 in.)	2.4 M (96 in.)	2.4 M (96 in.)
Operating Frequency (GHz)	Receive Transmit	3.625 - 4.20 GHz 5.850 - 6.425 GHz	3.625 - 4.20 GHz 5.850 - 6.425 GHz	10.95 - 12.75 GHz 13.75 - 14.50 GHz
Midband Gain (+/- .2 dB)	Receive Transmit	38.00 dBi 42.00 dBi	38.00 dBi 42.00 dBi	47.60 dBi 49.20 dBi
Antenna Noise Temperature				
10° Elevation		52 K	30 K	42 K
20° Elevation		46 K	23 K	32 K
30° Elevation		45 K	20 K	28 K
40° Elevation		44 K	19 K	27 K
Sidelobe Envelope, Co-Pol (dBi)				
100λ / D ≤ θ ≤ 20°		29 - 25 Logθ dBi	29 - 25 Logθ dBi	29 - 25 Logθ dBi
20° < θ ≤ 26.3°		-3.5 dBi	-3.5 dBi	-3.5 dBi
26.3° < θ ≤ 48°		32 - 25 Logθ dBi	32 - 25 Logθ dBi	32 - 25 Logθ dBi
48° < θ		-10 dBi (averaged)	-10 dBi (averaged)	-10 dBi (averaged)
Cross-Pol Isolation (Linear)		>30 dB on axis	N/A	>30 dB on axis
Axial Ratio (Circular)	Receive Transmit	N/A N/A	2.28 1.94	N/A N/A
VSWR		1.3:1 Max.	1.3:1 Max.	1.3:1 Max.
Feed Interface	Receive Transmit	CPR 229 F CPR 137 or Type N	CPR 229 F CPR 137 or Type N	WR 75 WR 75 or Direct Radio Mounting

Mechanical	
Reflector Material	Glass Fiber Reinforced Polyester SMC
Antenna Optics	Prime Focus, Offset Feed, Two-Piece Divided Along Major Axis
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	+/- 45° Fine Adjustment, 360° Continuous
Mount Type	Elevation over Azimuth
Shipping Specifications	Net Weight: 545 lbs. (248 kg.)      Packaged Weight: 885 lbs. (402 kg.)

Environmental Performance		
Wind Loading	Operational Survival	50 mph (80 km/h) 125 mph (201 km/h)
Temperature	Operational Survival	-40° to 140° F (-40° to 60° C) -50° to 160° F (-46° to 71° C)
Rain	Operational Survival	1/2"/hr 2"/hr
Ice	Operational Survival	----- 1/2" radial
Atmospheric Conditions		Salt, Pollutants and Contaminants as Encountered in Coastal and Industrial Areas
Solar Radiation		360 BTU/h/ft <sup>2</sup>

## GENERAL DYNAMICS SATCOM Technologies

1500 Prodelin Drive • Newton, NC 28658 USA • Telephone: +1-828-464-4141 • Fax: +1-828-464-4147  
Email: vsat@gdsatcom.com • Web Site: www.gdsatcom.com

1000-035 Rev. 05/11