Model C150M Ku-Band Antenna

Mobile Antennas

The Strength to Perform

Description

The General Dynamics SATCOM Technologies lightweight 1.5-meter mobile antenna is designed for worldwide transmit and receive operation in Ku-band. This transportable antenna consists of a single-piece carbon fiber composite reflector mounted on a cable drive elevation-over-azimuth positioner. This results in a low-weight antenna with superior stiffness and high performance under wind loading conditions.

The state-of-the-art design provides exceptional low sidelobe and cross-polarization performance and is INTELSAT, EUTELSAT and HISPASAT compliant.

The complete antenna system can be interfaced with most lightweight vehicle structures for the purpose of mobile SNG applications.

Features

- Aluminum/Carbon fiber construction
  - Lightweight
  - Precise surface
  - High stiffness
  - Robust design for vehicle mounting
- High performance
  - Low sidelobes, high E.I.R.P. capability
  - Compliant under operational wind conditions
- Stow/deployment
  - Low profile
  - Stow position on vehicle
  - Precision alignment

Options

- GPS or jog controller
- Boom-mounted electronics integration kits
- Tx waveguide run(s)

Buy Now!

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Technical Specifications

	Ku-Band 2-Port Linear Polarized Feed (X-Pol Compensated)		Ku-Band 4-Port Linear Polarized Feed (X-Pol Compensated)	
Electrical	Receive	Transmit	Receive	Transmit
Frequency (GHz)	10.700 - 12.750	13.750 - 14.500	10.950 - 12.750	13.750 - 14.500
Antenna Gain at Midband, dBi	44.30	45.90	43.90	45.50
VSWR	1.35:1 (16.5 dB)	1.30:1 (17.7 dB)	1.35:1 (16.5 dB)	1.30:1 (17.7 dB)
Beamwidth (in degrees at midband)				
-3 dB	1.01	0.85	1.03	0.87
-15 dB	2.12	1.79	2.16	1.83
Sidelobe Performance	Meets Eutelsat, FCC 25.209 or ITU-RS-580		Meets Eutelsat, FCC 25.209 or ITU-RS-580	
Antenna Noise Temperature				
5° Elevation	72 K		84 K	
10° Elevation	59 K		72 K	
20° Elevation	52 K		66 K	
40° Elevation	50 K		65 K	
Power Handling (total)		2 kW CW		2 kW CW
Cross Polarization Isolation (minimum)				
On Axis	35 dB	35 dB	35 dB	35 dB
Within 1.0 dB Beamwidth	25 dB	35 dB	25 dB	35 dB
Port to Port Isolation (minimum)				
Rx/Tx (Rx frequency)	0 dB	-30 dB	0 dB	-50 dB
Tx/Rx (Tx frequency)	-85 dB	0 dB	-85 dB	0 dB
RF Specification	975-2123		975-2124	

Mechanical	
Antenna Diameter	1.5 meters (4.9 ft)
Antenna Type	Single offset
Reflector Construction	Carbon fiber with white paint on surface
Mount Type	Elevation over azimuth
Antenna Travel	
Elevation	5° - 90° of reflector boresight
Azimuth	±180°, ±120° with dual run axis crossover
Stow Height	19 in (483 mm)
Antenna Weight	250 lbs. (113 kg)

Environmental	
Wind Performance (depending on vehicle capabilities)	
Pointing Loss of 0.5 dB	35 mph (56 km/h) gusting to 50 mph (80 km/h)
Drive	55 mph (89 km/h) gusting to 70 mph (113 km/h)
Survival	85 mph (137 km/h) any position
	120 mph (192 km/h) at stow
Temperature Range	
Operational	+5° to +122° F (-15° to +50° C)
Survival	-22° to +140° F (-30° to +60° C)
Rain	Up to 4 in/h (10 cm/h)
Relative Humidity	0% to 100% with condensation
Solar Radiation	360 BTU/h/ft^2 (1000 Kcal/h/m^2)
Radial Ice (survival)	1 in (2.5 cm)
Shock and vibration tolerant to conditions encountered during shipment by airplane, ship or truck. Atmospheric tolerant to conditions encountered in coastal regions and/or heavily industrialized areas.	