Model C135M Ku-Band Antenna

Mobile Antennas

The Strength to Perform

Description

The General Dynamics SATCOM Technologies lightweight 1.35-meter mobile antenna is a compact design 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 exceptionally low sidelobe and cross-polarization performance, well within INTELSAT and EUTELSAT requirements.

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

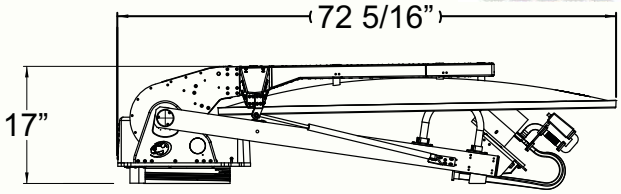
Features

- Aluminum/Carbon fiber construction
  - Light weight
  - 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
- INTELSAT and EUTELSAT compliant

Options

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

Buy Now!



Designed to fit in a typical 1.2m antenna envelope

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Technical Specifications

	Ku-Band 2-Port Linear Polarized Cross-pol Compensated		Ku-Band 2-Port Non-Compensated	
Electrical	Receive	Transmit	Receive	Transmit
Frequency (GHz)	10.700 - 12.750	13.750 - 14.500	10.700 - 12.750	13.750 - 14.500
Antenna Gain at Midband, dBi	42.80	44.50	42.90	44.30
VSWR	1.35:1 (16.5 dB)	1.30:1 (17.7 dB)	1.30:1 (17.7 dB)	1.30:1 (17.7 dB)
Beamwidth (in degrees at midband)				
-3 dB	1.23	1.03	1.17	1.00
-15 dB	2.58	2.16	2.46	2.10
Sidelobe Performance	Meets Eutelsat, FCC 25.209 or ITU-RS-580		Meets FCC 25.209 or ITU-RS-580	
Antenna Noise Temperature				
5° Elevation	72 K		71 K	
10° Elevation	58 K		57 K	
20° Elevation	51 K		50 K	
40° Elevation	50 K		48 K	
Power Handling (total)		1 kW CW		1 kW CW
Cross Polarization Isolation (minimum)				
On Axis	35 dB	35 dB	30 dB	30 dB
Within 1.0 dB Beamwidth	27 dB	35 dB	27 dB	27 dB
Port to Port Isolation (minimun)				
Rx/Tx (Rx frequency)	0 dB	-30 dB	0 dB	-30 dB
Tx/Rx (Tx frequency)	-85 dB	0 dB	-85 dB	0 dB
RF Specification	975-4593		975-3975	

Mechanical	
Antenna Diameter	1.35 meters (4.4 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	±200° continuous
Stow Height	17 in (43 cm)
Antenna Weight	145 lbs. (66 kg)
Integration Capability	80 lbs. (36 kg) on feed boom, axis crossover for rack mounting

Environmental	
Wind Performance (depending on vehicle capabilities)	
Pointing Loss of 0.8 dB	30 mph (48 km/h) gusting to 45 mph (72 km/h)
Drive	45 mph (72 km/h) gusting to 60 mph (97 km/h)
Survival	80 mph (128 km/h) any position
	112 mph (180 km/h) at stow
Temperature Range	
Operational	-5° to +130° F (-20° to +55° C)
Survival	-40° to +140° F (-40° 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.	