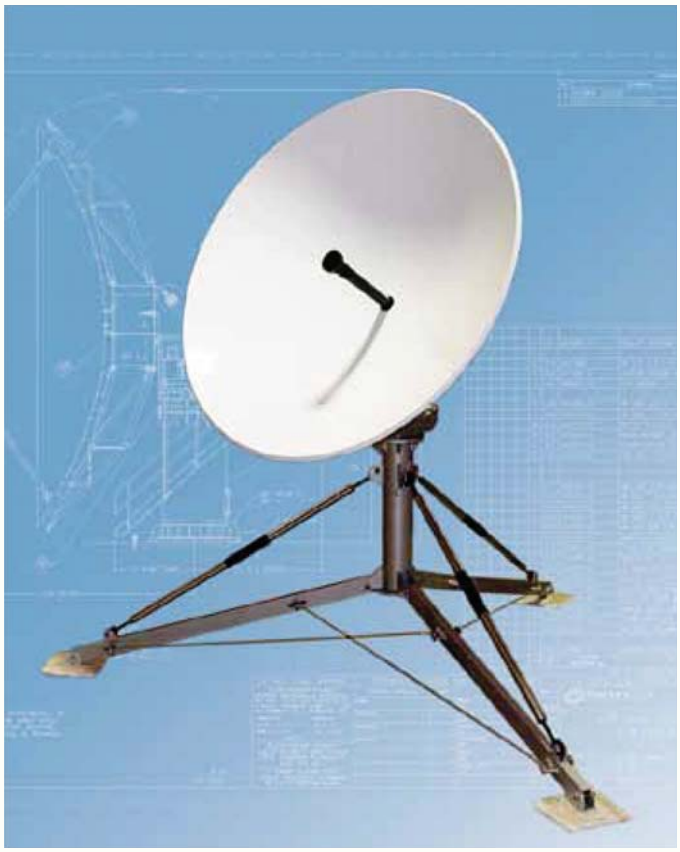
Model 0.96m QD-LT Antenna

Quick Deploy Antennas



The Strength to Perform

Description

The ultra-lightweight General Dynamics SATCOM Technologies 0.96-meter QD-LT is designed for worldwide transmit and receive operation in Ku, X and Ka-band. This portable antenna consists of a segmented composite reflector and compact aluminum tripod mount. This configuration results in an extremely low-weight and packable antenna product with superior stiffness and high performance under wind loading conditions.

The unique optical shape and accurate reflector surface provide good sidelobe and excellent cross-polarization performance. Repeatability is maintained with precision registration of the nine-piece reflector segments and RF components. The antenna is easily transportable and can be quickly assembled by one person in less than ten minutes.

The 0.96m QD-LT antenna system, including a Stepped Ring Focus (SRF) feed, is packaged in one or two transit cases (depending on configuration ordered). The transit case(s), designed to be shipped via commercial air cargo, feature wheels and suitcase handles to ease relocation by one person.

Features

- Carbon fiber reinforced polymer (CFRP) reflector
- Compact aluminum tripod mount
- Captive hardware/fasteners
- No tools required for assembly or deployment
- INTELSAT, FCC and ITU sidelobe compliant
- Extremely low loss RF component mounting
- Superior cross-pol performance

Options

- Multiple colors (black, white, green, tan or other)
- Ku, X and Ka-band feeds available

GENERAL DYNAMICS
SATCOM Technologies

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Technical Specifications

	Ku-Band 2-Port Linear Polarized		Ka-Band 2-Port Circular Polarized		X-Band 2-Port Circular Polarized	
Electrical	Receive	Transmit	Receive	Transmit	Receive	Transmit
Frequency (GHz)	10.700 - 12.750	13.750 - 14.500	20.200 - 21.200	30.000 - 31.000	7.250 - 7.750	7.900 - 8.400
Antenna Gain at Midband, dBi	39.20	41.20	43.10	45.10	34.50	35.00
Sidelobe Compliant with	FCC requirements*		FCC requirements*		FCC requirements*	
Return Loss	15.9 dB	15.9 dB	17.7 dB	17.7 dB	17.7 dB	17.7 dB
Antenna Noise Temperature						
5° Elevation	85 K		192 K		89 K	
10° Elevation	75 K		149 K		74 K	
20° Elevation	68 K		117 K		69 K	
40° Elevation	63 K		96 K		67 K	
Cross Polarization Isolation						
On Axis	35.0 dB	35.0 dB	24.8 dB	24.8 dB	23.2 dB	18.8 dB
Within 1.0 dB Beamwidth	35.0 dB	35.0 dB	24.8 dB	24.8 dB	23.2 dB	18.8 dB
Pattern Beamwidth (in degrees at midband)						
-3 dB	1.80	1.49	1.10	0.88	3.06	2.84
-15 dB	3.78	3.13	2.31	1.85	6.43	5.96
Power Handling		100 W CW		100 W CW		500 W CW
Output Waveguide Flange Interface	WR-75 Flat	WR-75 Flat	WR-42 Flat	WR-28 Flat	WR-112 Flat	WR-112 Flat
RF Specification	975-3792		975-3836		975-2468	

Mechanical	
Reflector Material	Nine-piece carbon fiber composite
Antenna Optics	Axis-symmetric stepped ring focus
Azimuth Travel	Fine adjust ±30°
Elevation Travel	0° to 90°
Polarization Travel	±90°
Mount Type	Quick-erect tripod with elevation-over-azimuth positioner
Shipping Configuration	Cases can be configured to meet 90 in (229 cm) rule (depending on options) (standard 39" x 23" x 25" H)
Shipping Weight	Standard configuration is 125 lbs. packaged (depending on options). Additional feeds pack in separate case.

Environmental	
Wind Loading	
Operational (anchored)	45 mph (72 km/h) gusting to 58 mph (93 km/h)
Survival (with tie-downs)	50 mph (80 km/h) any position
	120 mph (193 km/h) in stow position with reflector removed
Pointing Loss (operational winds)	2 dB peak Rx loss at Ku-band
Temperature	
Operational	-22° to +140° F (-30° to +60° C)
Survival (packed)	-40° to +160° F (-40° to +71° C)
Solar Radiation	360 BTU/h/ft² (1000 Kcal/h/m²)
Relative Humidty	0% to 100% (up to 95% non-condensing for control system components)
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.	

* Per 25.220 (c) (1) with maximum input power density of -15.3 dBW / 4 kHz

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