

Model 0.98m QDA-LT Antenna

Quick Deploy Antennas



The Strength to Perform

Description

The lightweight General Dynamics SATCOM Technologies 0.98-meter QDA-LT antenna is designed for worldwide transmit and receive operation in Ku, C, X and Ka-band. This portable antenna consists of a precision compression molded reflector and cable-driven motorized 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 shape and accurate reflector surface provide good sidelobe and cross-polarization performance. Repeatability is maintained with precision registration of the two-piece segmented reflector and RF components. The antenna can be quickly assembled by one person in less than ten minutes, and the auto-acquire controller finds the correct satellite and optimizes co-pol and cross-pol performance with the push of a single button.

The 0.98m QDA-LT antenna system, is packaged in two transit cases. The transit cases, designed to be shipped via commercial air cargo, feature wheels and suitcase handles to ease relocation by one person.

Features

- Precision compression molded reflector
- Cable-driven motorized mount
- Automatic satellite acquisition (depending on options)
- Captive hardware/fasteners
- No tools required for assembly or deployment
- INTELSAT, FCC, ITU and EUTELSAT sidelobe compliant
- Extremely low loss RF component mounting
- Integrated auto-locate controller

Options

- Multiple colors (black, white, green, tan or other)
- C, X, Ku and Ka-band feeds
- Transport case configurations

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GENERAL DYNAMICS
SATCOM Technologies

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Technical Specifications

Electrical	Receive	Transmit
Frequency (GHz)	10.700 - 12.750	13.750 - 14.500
Antenna Gain at Midband, dBi	39.30	43.60
Sidelobe Compliant with	29 -25 log θ	29 -25 log θ
Return Loss	1.30:1 (17.7 dB)	1.30:1 (17.7 dB)
Antenna Noise Temperature		
5° Elevation	74 K	
10° Elevation	58 K	
20° Elevation	51 K	
40° Elevation	50 K	
Cross Polarization Isolation		
On Axis	30.0 dB	30.0 dB
Within 1.0 dB Beamwidth	27.0 dB	27.0 dB
Pattern Beamwidth (in degrees at midband)		
-3 dB	1.77	1.98
-15 dB	3.72	3.11
Power Handling		1 kW CW
Output Waveguide Flange Interface	WR-75 Flat	WR-75 Flat
RF Specification	975-1877	

Mechanical	
Reflector Material	Two-piece SMC compression molded
Antenna Optics	Prime focus, offset feed, 0.8 F/D ratio
Azimuth Travel	$\pm 150^\circ$ ($\pm 180^\circ$ option available)
Elevation Travel	-0° to 100° (5° to 90° operational)
Polarization Travel	$\pm 90^\circ$
Pedestal Structure	Cable-driven elevation-over-azimuth aluminum construction
Shipping Specifications	Consult factory for details

Auto Acquisition Control System	
Features	Automatic acquisition/satellite recognition/peaking using GPS, fluxgate compass, tilt sensor and high accuracy position feedback
Packaging	Integrated/embedded within antenna case
Input Power	24 VDC, 115/230 VAC (consult factory for options on controller)

Environmental	
Wind Loading	
Operational (anchored)	30 mph (48 km/h) gusting to 45 mph (72 km/h)
Survival (with tie-downs)	50 mph (80 km/h) any position 80 mph (129 km/h) in stow position with reflector removed
Pointing Loss (operational winds)	2 dB peak Rx loss at Ku-band
Temperature	
Operational	-22° to $+140^\circ$ F (-30° to $+60^\circ$ C)
Survival (packed)	-40° to $+160^\circ$ F (-40° to $+71^\circ$ C)
Solar Radiation	360 BTU/h/ft ² (1000 Kcal/h/m ²)
Relative Humidity	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.	

