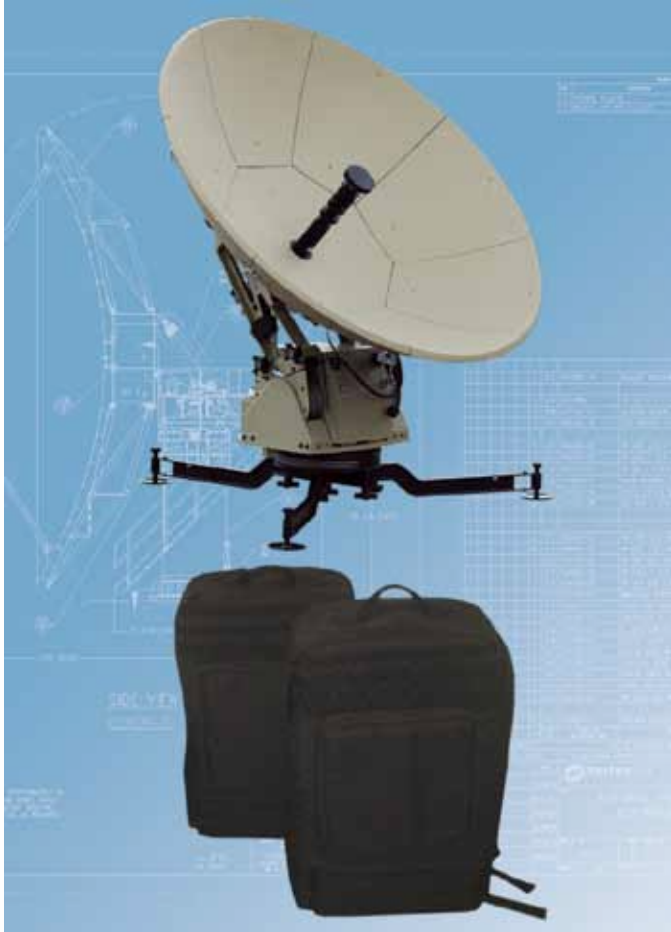


Model C100B Antenna

Flyaway Backpack Antennas



The Strength to Perform

Controller with worldwide automatic satellite acquisition

No tools required for assembly or deployment

X, Ku, or Ka-band feed options

FCC, ITU, DISA, ARSTRAT sidelobe compliant

Description

The General Dynamics SATCOM Technologies lightweight 1-meter flyaway backpack is a motorized auto-acquire antenna designed for worldwide auto-acquisition transmit/receive operation in X, Ku and Ka-band. This antenna consists of a segmented High Pressure Composite reflector and motorized positioner mount. The backpack configuration results in a light-weight and highly portable antenna product. The unique optical shape and accurate composite reflector surface provide superior sidelobe and excellent cross-polarization performance. Repeatability is maintained with precision registration of the nine-piece reflector segments and RF components. The antenna can be quickly assembled by one person in less than ten minutes. The auto-acquire controller can find and optimize for the correct satellite with the push of a button. The antenna controller is configured with an IP-based intuitive GUI and may be configured prior to deployment.

Features

- Composite reflector
- Captive hardware/fasteners
- No tools required for assembly or deployment
- Superior cross-pol performance
- Extremely low loss RF component mounting
- Auto acquisition with DVB reference
- External GPS receiver
- Auto-acquire/peaking polarization drive
- 24 VDC or 100-240 VAC with internal power supply

Options

- Multiple colors (white, green, or tan)
- Transport case for vehicle/air transport
- Beacon receiver
- Spectrum Analyzer
- Ruggedized touch screen remote computer
- BUC/LNB integration

Model C100B Antenna

Technical Specifications

Electrical	Ku-Band 2-Port Linear Polarized		Ka-Band 2-Port Circular Polarized		X-Band 2-Port Circular Polarized	
	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
Beamwidth (in degrees at midband)						
-3 dB	1.80	1.49	1.10	0.88	3.06	2.84
Antenna Gain at Midband, dBi	39.20	41.20	43.10	45.10	34.50	35.00
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
Sidelobe Compliant with	ITU, FCC requirements*		ARSTRAT		DISA	
Power Handling	100 W CW		100 W CW		100 W CW	
RF Specification	975-3792		975-3836		975-2468	

Mechanical	
Antenna Diameter	1 meter (3.2 ft)
Antenna Optics	Axis-symmetric stepped ring focus
Reflector Construction	Nine-piece composite
Azimuth Travel	±120°
Elevation Travel	5° to 90° operational
Polarization Travel	±90°
Positioner	Cable drive
Base	Tripod
Packaging	Airline checkable, backpacks, single band, base package - two (2) 45 lb (20 kg) each. Optional airline checkable, hardcases, single band - two (2) 70 lb (32 kg) each. Contact factory for packaging solutions of various BUC/LNB configurations.

Auto Acquisition Control System	
System Interface	Independent embedded outdoor controller supporting one button acquisition (requires laptop). Optional laptop user interface via Ethernet for advanced antenna control.
Power	24 VDC or 100-240 VAC, 500W. Supports antenna controller, LNB and BUC.

Environmental	
Wind Loading	
Operational (w/ tie-downs or ballast)	25 mph (40 km/h)
Survival (with tie-downs or ballast)	40 mph (64 km/h)
Pointing Loss (operational winds)	Less than 2 dB peak Rx loss at Ku-band
Temperature - Antenna and Control System	
Operational	-22° to +122° F (-30° to +50° C)
Survival (packed)	-40° to +160° F (-40° to +71° C)
Solar Radiation	360 BTU/h/ft ² (1120 W/m ²)
Relative Humidity - Antenna and Control System	100% (outdoor duty)
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

GENERAL DYNAMICS SATCOM Technologies

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