Technical Specifications

Model C100F Antenna

Electrical	Ku-Band 2-Port Linear Polarized Receive	Ka-Band 2-Port Circular Polarized Receive	Ku-Band 2-Port Linear Polarized Receive	Ku-Band 2-Port Linear Polarized Transmit	Ka-Band 2-Port Circular Polarized Receive	Ka-Band 2-Port Circular Polarized Transmit	X-Band 2-Port Circular Polarized Receive	X-Band 2-Port Circular Polarized Transmit
Frequency (GHz)	10.500 - 13.500	20.200 - 21.200	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	39.60	44.20	39.20	41.20	43.10	45.10	34.50	35.00
Sidelobe Compliant with	IESS (Intelsat) or ITU-RS-580	IESS (Intelsat) or ITU-RS-580	FCC requirements*		FCC requirements*		FCC requirements*	
Return Loss	15.9 dB	17.7 dB	15.9 dB	15.9 dB	17.7 dB	17.7 dB	17.7 dB	17.7 dB
Antenna Noise Temperature								
5° Elevation	76 K	187 K	85 K		192 K		89 K	
10° Elevation	59 K	141 K	75 K		149 K		74 K	
20° Elevation	50 K	107 K	68 K		117 K		69 K	
40° Elevation	46 K	83 K	63 K		96 K		67 K	
Cross Polarization Isolation								
On Axis	35.0 dB	24.8 dB	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	24.8 dB	35.0 dB	35.0 dB	24.8 dB	24.8 dB	23.2 dB	18.8 dB
Beamwidth (in degrees at midband)								
-3 dB	1.75	1.00	1.80	1.49	1.10	0.88	3.06	2.84
-15 dB	3.68	2.10	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	WR-42	WR-75 Flat	WR-75 Flat	WR-42 Flat	WR-28 Flat	WR-112 Flat	WR-112 Flat
RF Specification	975-4239	975-4237	975-3792		975-3836		975-2468	

Mechanical	
Reflector Material	Nine-piece composite
Antenna Optics	Axis-symmetric stepped ring focus
Azimuth Travel	±120° to ±360° options available depending on configuration
Elevation Travel	-0° to 90° operational
Polarization Travel	±90°
Positioner Options	Gear drive or cable drive
Base Options	Tripod or case lid mounts
Packaging Options	Single/multi case, airline checkable, backpacks

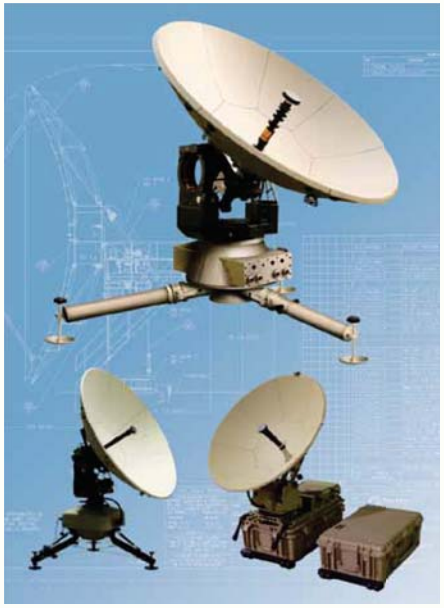
Auto Acquisition Control System	
System Interface	Independent embedded outdoor controller supporting one button acquisition (requires laptop). Optional laptop user interface via Ethernet for advanced antenna control. Multiple controller configuration options available.
Power	105/260 VAC, 50/60 Hz

Environmental	
Wind Loading	
Operational (w/ tie-downs or ballast)	30 mph (48 km/h) gusting to 45 mph (72 km/h)
Survival (with tie-downs or ballast)	50 mph (80 km/h) any position, 80 mph (129 km/h) in stow position with reflector removed
Pointing Loss (operational winds)	Less than 1 dB peak Rx loss at Ka-band
Temperature - Antenna and Control System	
Operational	-30° to +140° F (-40° to +60° C)
Survival (packed)	-40° to +160° F (-40° to +71° C)
Solar Radiation	360 BTU/h/ft² (1000 Kcal/h/m²)
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

Model C100F Antenna

Flyaway 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

Motorized positioner, mount, and case options

Intelsat, FCC and ITU sidelobe compliant

Description

The General Dynamics SATCOM Technologies lightweight C100F is a multi-configurable motorized auto-acquire antenna designed for worldwide auto-acquisition transmit/receive operation in X, Ku and Ka-band. This portable antenna consists of a segmented High Pressure Composite reflector and motorized positioner mount. The various configurations result in a light-weight and packable antenna product with superior stiffness and high performance. 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 five minutes. The auto-acquire controller can find the correct satellite and optimize co-pol and cross-pol performance with the push of a button. The antenna controller can be configured as a multi-functional device combining several options such as external GUI, monitor and control, spectrum analyzer and inclined tracking.

The C100F antenna system is a multi-configurable antenna that will fit a variety of applications/deployment scenarios. The C100F is offered with multiple drive, feed, base mount, electronic, and packaging options. These standard options allow configuring the antenna into a custom solution that best fits the application.

Features

- Composite reflector
- Captive hardware/fasteners
- No tools required for assembly or deployment
- Superior cross-pol performance
- Extremely low loss RF component mounting
- Auto deploy, auto calibrate, auto stow controller with DVB-aided acquisition
- Internal GPS receiver

Options

- Multiple colors (white, green, tan or other)
- Auto-acquire/peaking polarization drive
- Transport case or backpack
- Beacon receiver and tracking
- Integrated GUI with spectrum analyzer
- Ruggedized touch screen remote computer

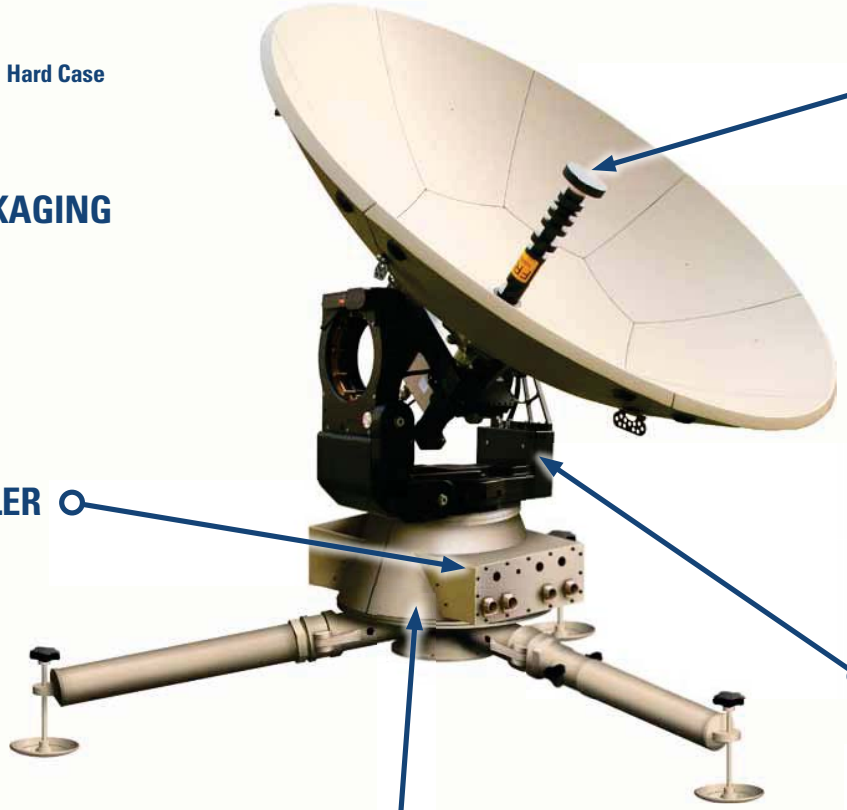
Model C100F Antenna Options

Backpack

Hard Case

PACKAGING

Airline Checkable



FEEDS

Ka-Band

Ku-Band

X-Band

ANTENNA CONTROLLER

GUI

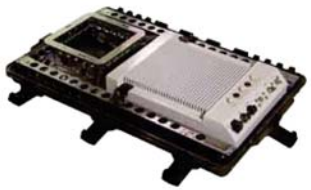
DRIVES

Cable Drive

Gear

PEDESTAL MOUNTS

Tripod Mounts



Case Lid Mount

Digisat International Inc.
4195 W. New Haven Ave., Suite 15
Melbourne, FL 32904
USA
+1-321-676-5250
Email: sales@digisat.org
http://www.digisat.org