

# ManPak®T C060FM, C060FA

## *Next Generation Flyaway Terminal*



Simple manual or automated satellite acquisition

Waterproof and rugged design for harsh environments

Intuitive GUI and setup time of less than 5 minutes

Lightweight, and IATA compliant for easy transportation in 1-2 cases

### Overview

The General Dynamics SATCOM Technologies innovative ManPak®T line leads the way in the next generation of flyaway terminals. Available in 60cm to 1.0m reflector sizes, this tripod antenna line features simple manual or automated satellite acquisition; an intuitive GUI; and a range of optional extra features.

ManPak®T is lightweight, and IATA compliant allowing for ease of transportation. The completely waterproof and rugged design allows for operation in even the most challenging of conditions, be that in a war zone for military communications; capturing breaking news stories from the front line; or distributing CCTV from remote locations on international borders.

### Features

- High performance carbon fiber segmented antenna
- Assisted, fast acquisition via intuitive GUI (C060FA)
- Lightweight, IATA compliant
- Packs into one case (two cases for the C060FA)
- Ka, Ku & X-band
- Set up time less than 5 minutes
- ITAR free
- C060FA includes a clip-on auto pointing pack
- Interchangeable feed system for swapping frequency bands
- Range of integrated BUC/SSPB and LNB options available
- Common mount for C060 and C100
- Optional auto-pointing kit can be easily retro fitted or swapped between antennas and sizes

## C060FA User Interfaces

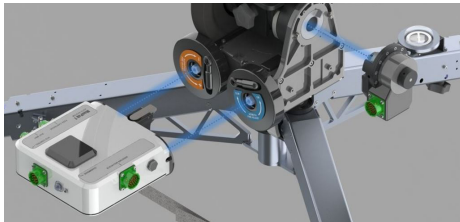
- AC Power Input – 85 to 264 VAC, 47-63 Hz
- DC Power Input – 11 to 36 VDC
- Ethernet (Weatherproof RJ45)
- RF Monitor (N-Type)
- USB (Weatherproof Type A)

## Control – C060FA

- Single Button Control
- Web Browser Monitor & Control
- Simple highly intuitive interactive Web User Interface

## Alignment - C060FA

The optional auto pointing kit supplied with the C060FA simply clips onto the antenna and provides an upgrade to fully automatic pointing capabilities. The powerful on board controller allows for highly intuitive, single button control or a graphical user interface experience via a Web UI to deskill the operation of locating and acquiring the desired satellite. The system utilizes the built in GPS, compass and inclinometer sensors in combination with information obtained from the optional beacon receiver and DVB receiver or attached MODEM, to provide data to the controller to enable automatic satellite pointing and peaking.



## Mechanical/Physical

- Reflector
  - 3 piece segmented Carbon Fibre
- Surface Accuracy
  - Better than 0.25mm rms error
- Antenna Weight
  - 51 lbs. (23 kg) (Including Antenna Weight)
- Packaging
  - Single IATA compliant cases
- C060FA Auto Upgrade Kit Weight
  - 35.2 lbs. (16 kg) including transit case

## Environmental

- Temperature (Tested to MIL-STD-810G CHG-1 501.6 & 502.6 Proc I & II)
  - Operational: -20°C to 49°C (-5°F to 120°F)
  - Storage: -45°C to 70°C (-50°F to 160°F)
- Humidity (Tested to MIL-STD-810G CHG-1 507.6 Proc II)
  - Operational: 95% Relative Humidity
- Altitude (Tested to MIL-STD-810G CHG-1 500.6 Proc I & II)
  - Operational: 3,000m @ -10°C (9,842ft @ 14°F)
  - Storage: 5,000m @ -30°C (1,6404ft @ -22°F)
- Vibration (storage/transit) (Tested to MIL-STD-810G CHG-1 514.7 Proc I)
  - Cat. 24 MIT: 0.04 g2/Hz, 20 Hz to 2,000 Hz, 1hr/axis, rms=7.7g's
- Sand & Dust Ingress (Tested to MIL-STD-810G CHG-1 510.6 Proc I & II)
  - Dust: 10.6g/m3, 9m/s @ 49°C
  - Sand: 1.1g/m3, 18m/s @ 49°C
- Solar Radiation (Tested to MIL-STD-810G CHG-1 505.6 Proc I)
  - Operational: 1120W/m2 @ 49°C (355BTU/ft2/hr @ 120°F)
- Ice/Freezing Rain (Tested to MIL-STD-810G CHG-1 521.4 Proc I)
  - 25.4mm (1") Ice buildup, de-ice before use
- Corrosion / Salt Fog (Tested to MIL-STD-810G CHG-1 509.6)
- Wind Loading
  - Operational: 30mph with gust to 45mph (with ballast)

Electrical	Ka-Band	Ku-Band	X-Band
Frequency (GHz)	Transmit: 29.5 to 31 Receive: 19.7 to 21.2	Transmit: 13.75 to 14.5 Receive: 10.95 to 12.75	Transmit: 7.9 to 8.4 Receive: 7.25 to 7.75
Polarization	Circular	Linear	Circular
Tx Gain	42.3 dBi	36.2 dBi	31.8 dBi
Rx Gain	38.3 dBi	34.6 dBi	30.4 dBi
G/T	G/T@19.7 GHz = 15.2 dBk	G/T@11.5 GHz = 14.4 dBk	G/T @ 7.4 GHz = 9.7 dBk

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