

# Flightcell® DZM2



Secure Global Voice + Data + Flight Tracking



The world's most advanced Iridium satellite phone communication and tracking system



[www.flightcell.com](http://www.flightcell.com)

The Flightcell DZM2 delivers secure, user-configurable two way voice and data communications via Iridium satellite or cellular phone, plus sophisticated 'smart' flight tracking, anywhere in the world. And it's all seamlessly integrated in this very compact, lightweight environmentally sealed hub.

### Flightcell DZM2 is the world's most compact and advanced satellite phone, tracking and data system for aircraft and tactical vehicles.

The compact hub integrates Iridium transceivers into aircraft and vehicle intercom systems, providing:

- Global point-to-point voice communications at all crew stations
- Global GPS position tracking
- Short burst or circuit switched data transmission, allowing mission-critical data to be sent from aircraft to base or aircraft to aircraft.

The optional embedded encryption system provides increased security.

Flightcell DZM2 uses an Iridium handset to provide all the benefits of a built-in satellite phone system, while the phone can be removed in seconds from the Flightcell phone mount, providing mobile satellite communications.

### Complete End-to-End Secure Communications System

The optional embedded encryption system provides secure voice and data communications and tracking via the Iridium network, using the AES256 standard or user's own algorithm.

#### Equipment options:

- Flightcell DZM2 for mobile assets
  - Flightcell Secure Terminal in Command and Control Center – interfaces with standard telephone or PABX
- Flexible encryption key management:
- On the ground using Flightcell PC rekeying utility
  - Over the Air Rekeying (OTAR) for remote assets

### Voice Communications

- The Flightcell DZM2 uses an Iridium 9505, 9505A or 9522A transceiver to provide global point-to-point communications.
- A second transceiver connection allows integration of cell phone modem or tactical radio.

#### Calling options:

- Dial on the Iridium handset or connected cell phone modem from the DZM2 keypad
- Speed dial using the DZM2's inbuilt phone book and three quick-dial keys
- Select **Clear** or **Secure** mode with one key stroke.

DZM2 rear view showing the environmentally sealed enclosure (IP54).



### Global asset tracking

- Flightcell DZM2 uses an Iridium transceiver to transmit GPS position data.
- Authorized base stations can track aircraft or vehicles anywhere in the world with no range limitations
- Flightcell's programmable adaptive tracking system provides for positions to be transmitted at operator-preset intervals according to multiple criteria: Time interval, Course change, Altitude change
- Event based reports: Startup, Takeoff, Landing
- Three escalating manual position reporting options:
  - **Point of Interest**, with pre-coded messages
  - **Under Fire**
  - **Distress**
- Current position can be remotely acquired from the ground
- Encrypted position data
- Flexible transmission options – positions can be delivered via secure military internet or direct to Flightcell Secure Terminal.

### Data transmission

Transmit and receive clear or encrypted data via Iridium or other data-capable transceivers:

- Receive SMS text messages on the DZM display or connected PDA or laptop
- Transmit SMS messages from connected PDA or laptop
- Transmit and receive reports and manifests using custom forms
- Send real time technical or situational data allowing timely decision making
- Transfer data via RS232 and RS432 interfaces

### Designed for military operations

- NVG (Night Vision Goggle) compliant display
- Rugged, environmentally sealed enclosure (IP54) to withstand desert, jungle or marine conditions.

### Benefits

Flightcell DZM2 allows easy integration of Iridium and other satellite phone, cell phone or tactical radio options into aircraft intercom systems, to:

- Expand aircraft or vehicle communication options
- Provide global point-to-point communication
- Overcome terrain, range and interference problems that limit radio communications
- Provide global GPS tracking.

### Customization and Configuration

- Audio, tracking and other settings can be changed to meet operational requirements
- Over The Air Configuration tools allow settings on remote DZMs to be queried and updated
- Firmware upgrades can be uploaded by the user without removing the DZM from the aircraft or vehicle
- Hardware and firmware can be customized on request.

### Applications

- Protect sensitive communications using Flightcell's embedded encryption system
- Maintain direct contact with base or other aircraft or vehicle assets via voice or messaging
- Contact specialist support, such as maintenance, logistics or medical
- Track aircraft or vehicle assets anywhere in the world
- Provide critical real-time data to mission control or engineering support
- Receive data from base.

### Iridium satellite phone mount

Flightcell's Iridium Phone Mount has been engineered specifically for military operations. Voice, data, antenna and power connectors are all integrated into the mount.

The Flightcell Iridium Phone Mount provides

- Convenience and portability – the Iridium handset can be quickly removed from aircraft when required.
- Secure mounting of phone in aircraft - the tough alloy frame meets USAF airworthiness requirements
- Automatic power on/off with aircraft power.



Left: The Flightcell Iridium Phone Mount.

Below: Installed view of the Flightcell DZM



### DZM2 Specifications

<b>Power supply voltage:</b>	24-30 V DC
<b>Power supply current:</b>	Up to 250mA
<b>ICS transmit audio:</b>	Input: 6mVrms to 5Vrms Adjustable gain Input impedance: 2k7
<b>ICS receive audio:</b>	Output: 53mVrms to 5Vrms into 150Ω
<b>Sat phone input:</b>	23mVrms to 1.75Vrms Adjustable gain
<b>Sat phone output:</b>	Typical electret mic levels Adjustable gain
<b>Cell phone input:</b>	23mVrms to 1.75Vrms Adjustable gain
<b>Cell phone output:</b>	Typical electret mic levels Adjustable gain

<b>Auxiliary audio input:</b>	6mVrms to 5Vrms Adjustable gain
<b>Left input impedance:</b>	1kΩ
<b>Right input impedance:</b>	1kΩ
<b>Sat phone data connection:</b>	RS-232 levels. Settings adjustable for different phone types.
<b>Cell phone data connection:</b>	RS-232 levels. Settings adjustable for different phone types.
<b>PC data connection:</b>	RS-232 levels
<b>Backlighting control:</b>	0-28V DC or 0-5V AC
<b>Fixed control:</b>	Off, Low, Med, High
<b>Backlight colour:</b>	Green 540nm. Designed for NVIS B compliance.
<b>GPS:</b>	
<b>TTFS (Time to first fix):</b>	Typ 44s

<b>Max Velocity:</b>	500m/s
<b>Max Acceleration:</b>	4G
<b>Max Altitude:</b>	18000m
<b>Ext Antenna:</b>	
• Connector:	TNC
• Bias Voltage:	3V
• Antenna Current:	6-70mA
• Typical gain:	21dB
<b>Dimensions:</b>	
Width: 5.75" (146 mm)	Height: 2.25" (57 mm)
Depth: 5.1" (130 mm)	Weight: 26.5oz (750g)
<b>Mounting fasteners:</b>	DZUS
<b>Main connector:</b>	D38999/26WE35SN
<b>GPS connector:</b>	TNC

