

+ Satellite Voice + Data + Flight Following

iridium

Flightcell® DZM2

- + Event-driven GPS tracking technology
- + User configurable two-way voice and data
- + Intelligent + milspec + rugged construction



www.flightcell.com

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

Flightcell DZM2: the world's most compact and advanced satellite phone, tracking & data system.

The compact DZM2 system integrates Iridium transceivers into aircraft and vehicle intercom systems, providing:

- Global voice communications to all ICS stations
- Optional 2 wire telephone connection for wired or DECT cordless cabin phone
- Optional wired Iridium Intelligent handset for the cabin
- Global GPS position tracking
- Data transmission
- Transfer files from aircraft to ground via Iridium direct or internet gateways
- Email and SMS text to and from the aircraft.

Flightcell DZM2 uses an Iridium portable handset as the satellite transceiver, providing all the benefits of a built-in satellite phone system, whilst the handset can be removed in seconds from the Flightcell phone mount, providing mobile satellite communications off the aircraft.

VOICE COMMUNICATIONS

Iridium: global satellite coverage

The Flightcell DZM2 uses an Iridium 9505, 9505A, or 9555 handset to provide global point-to-point voice and data communications. The DZM2 can also use a 9522A or 9522B Iridium modem instead of a handset.

- Dial the Iridium handset or connected cell phone modem directly, using the DZM2 keypad
- Speed dial using the DZM2's inbuilt phone book and three quick-dial keys.

Cellular network

A second transceiver connection allows integration of a cellular modem (CDMA, GSM or 3rd Generation WCDMA/HSDPA).

On board calling and handset options

- Dial remotely from the DZM2; Iridium (and optional cellular) is integrated into ICS audio
- Dial using a wired or cordless DECT handset
- Dial using a wired Iridium Intelligent handset.

DZM2 rear view showing the environmentally sealed enclosure (IP64).



DATA TRANSMISSION, INTERNET & TEXT MESSAGING

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

- Transmit and receive SMS text messages on the DZM2 display or connected PDA or laptop
- Transmit and receive reports and manifests using custom forms
- Iridium internet and email connection.

EVENT DRIVEN GLOBAL TRACKING

DZM2 uses Iridium (handheld) and cellular (modem) transceivers to transmit GPS position data including Direction, Ground Speed and Sensor.

Event driven position data is also sent including Battery On, Engine Start, Take-off, Landing and Engine Stop. DZM's Event Driven Tracking is fully programmable on screen allowing the operator to set interval and event criteria.

Better flight-tracking with Truepath®

DZM2 sends an additional three intermediary positions when necessary with every transmission to show more accurately the path that was flown. These extra positions are in effect sent for free and better represent the behaviour and actual flightpath of the aircraft.

- Authorised ground computer terminals can track DZM equipped aircraft anywhere in the world without range limitations.
- Manual pilot-activated positions or points of interest can be transmitted by a single press or with an optional unique identifier code.
- Distress activation button for instant distress position escalation via a mapping provider.

ARM® Automated Rescue Monitoring

When used in conjunction with a mapping provider that supports ARM® or AFF style computerised SAR watch, DZM2 will provide 24/7 flight following when activated. DZM is a US Dept. of Interior AFF certified product.

- Remote acquisition of current position by polling from a ground terminal (when supported by mapping provider)
- Remote acquisition of DZM settings and status with re-set capability (conditions apply).

DESIGNED FOR LAW ENFORCEMENT, RESCUE & DEFENCE OPERATIONS

- NVG (Night Vision Goggle) compliant display
- Rugged, environmentally sealed enclosure (IP54) to withstand extreme conditions
- Optional embedded 256 bit AES encryption system provides increased security for both voice and data.

BENEFITS

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

- Provide global point-to-point communication
- Overcome terrain, range and interference problems that limit radio communications
- Provide global GPS tracking
- Provide global data connectivity.

CUSTOMIZATION & CONFIGURATION

Audio, tracking and other DZM2 settings can be changed on-board or remotely (over the air) to meet user 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 DZM2 from the aircraft.

IRIDIUM SATELLITE PHONE MOUNTS

Flightcell's Iridium satellite phone mounts have been engineered specifically for military operations. Voice, data, antenna and power connectors are all integrated into the mount. They provide:



- Rugged convenience and portability - the handset can be quickly removed from the aircraft if required
- Secure mounting of phone - the tough alloy frame meets USAF airworthiness requirements
- Automatic power on/off with aircraft power
- Available for Iridium 9505, 9505A and 9555 handsets.

Left: Flightcell's Iridium 9505A Phone Mount. Below: Installed view of the Flightcell DZM2 (H60 Blackhawk)



DZM2 Specifications

| | |
|------------------------|---|
| Power supply voltage: | 12-32V DC |
| Power supply current: | Up to 250mA |
| ICS audio to DZM: | Input: 6mVrms to 5Vrms Adjustable gain 600ohm nominal |
| ICS input impedance: | 600ohm nominal |
| ICS audio from DZM: | Output: 53mVrms to 5Vrms into 150Ω |
| Iridium audio: | 23mVrms to 1.75Vrms Adjustable gain |
| Cellular audio: | 23mVrms to 1.75Vrms Adjustable gain |
| Auxiliary audio input: | 6mVrms to 5Vrms Adjustable gain |
| Impedance: | 600ohm nominal |

| | |
|---------------------------|--|
| Iridium data connection: | RS232C. Auto sensing transceiver type. |
| Cellular data connection: | RS232C |
| Data connection 1: | RS232C |
| Data connection 2: | RS422 |
| NMEA Output | Selectable |
| Backlighting control: | 0-28V DC or 0-5V AC |
| Fixed control: | 5 level options |
| Backlight LED colour: | Green 540nm. NVIS A&B compliance. |
| GPS: | |
| TTFS (Time to first fix): | Cold 29secs / Hot <1sec |
| Max Velocity: | 515m/s (1000 knots) |
| Max Acceleration: | 4G (Tracking) |
| Max Altitude: | 18000m (59000ft) |
| Ext Antenna connector: | TNC |

| | |
|---|---------------------------------------|
| Ext Antenna Bias Voltage: | 5VDC |
| Antenna Current: | 6-70mA |
| Dimensions: Body, including connectors* | |
| Width: | 4.95" (125mm) |
| Height: | 2.18" (55mm) |
| Depth: | 5.25" (132mm) |
| Weight: | 26.5oz (750g) |
| Faceplate: Dzus | Width: 5.75" (146mm) |
| Height: | 2.25" (57.25mm) |
| Depth: | .40" (10mm) |
| Faceplate: GA* | |
| Width: | 6.125" (158mm) |
| Height: | 2.36" (60mm) |
| Depth: | .73" (18.5mm) |
| Mounting fasteners: | DZU or * M6 Cap Screw |
| Main connector: | D38999/24WE35PN |
| GPS connector: | TNC (Female) |
| Certification: | DO160E, Sections 8,15,21; Mil Std-704 |
| Environmental: | IP64 |

