

# THE WORLD'S SMALLEST, LIGHTEST & SMARTEST SATCOM SYSTEM\*

## DZMx



\*IT'S ALSO THE TOUGHEST!

DZMx is built to MILSPEC and DO160G, and designed to withstand extremes of temperature, vibration and impact. Housed in a super strong extruded alloy case, with minimal wiring, it's fast and simple to install. Incredibly, DZMx weighs only 1.4lbs (650g)!

**DZMx IS THE ONLY ALL-IN-ONE IRIDIUM & CELLULAR SOLUTION FOR VOICE, DATA & GPS TRACKING.**

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***Flightcell***<sup>®</sup>

*ALWAYS CONNECTED.*

# DUAL NETWORK AIRCRAFT TRACKING



**GLOBAL SATELLITE COVERAGE**



Satellite SBD tracking  
Satellite voice/SMS tracking

Auto switch to cellular

Cellular tracking/voice/data  
Satellite voice option

Auto switch to satellite

**CELLULAR COVERAGE**

**DZMx is the only system that offers dual network, uninterrupted GPS tracking via satellite and cellular networks, significantly reducing your costs.**

- Fully unlocked data feed - you choose your tracking and airtime provider
- Uninterrupted tracking, even when on a call
- Tracking via satellite and cellular networks - DZMx uses lower cost option when in range
- Event driven-tracking (user configurable)
- Uses Truepath™ for more precise flight path mapping.



## Tracking Providers:

TracPlus	Guardian Mobility	Flight Explorer	Global Nav	Outerlink	SkyNet	SkyTrac
Spidertracks	Troo	Blue Sky	Heligràfics	Tesacom	Satcom Direct	

## DZMx integrates:



### IRIDIUM PHONE IN FLIGHTCELL CRADLE

Use Iridium handset for aircraft satcoms **or** standalone away from the aircraft.

Versions for:

- Iridium 9575 Extreme
- Iridium 9555
- Iridium 9505/A

### DZMx REMOTE HEAD

Enables **full** control of DZMx from up to two additional crew positions.



### ETHERNET/USB HUB

Provides connection options for:

- Tablets, PCs, other on board systems
- WIFI/Ethernet router
- USB for firmware upgrades and data downloads.



## DZMx SPECIFICATIONS

<b>ELECTRICAL</b> Input Voltage: 12 – 32VDC Power Supply Current: ~1A @ 28VDC ICS to DZM Audio: Input Levels: 20mVrms to 1.15Vrms, adjustable 775mVRMS nominal Input impedance: 600Ω Microphone bias voltage: 12V via 2.2kΩ DZM to ICS Audio: Output levels: Up to 5Vrms, adjustable 775mVRMS nominal 150Ω Output impedance: 150Ω Backlighting Control: AC/DC, 0 – 32V User calibrated High/Low set-points Backlight colour: Green 520nm. Designed for NVIS compliance. GPS: Antenna bias voltage: 5V Antenna current: Up to 100mA Sensitivity: ~162dBm (with Flightcell Antenna) Time to first fix: 26s	<b>MATERIALS</b> Aluminium 6061 <b>CONNECTORS</b> Mounting fasteners: DZUS or M5 Main connector: 1 x D25 male plus 1 x D25 female <b>or</b> 1 x D38999 male (military versions) Antenna connectors: Transceivers TNC GPS: BNC <b>DIMENSIONS</b> Available in DZUS or GA mount. <table border="1"> <tr> <td></td> <td><b>DZUS mount</b></td> <td><b>GA mount</b></td> </tr> <tr> <td>Faceplate width:</td> <td>146mm 5.75"</td> <td>158mm 6.22"</td> </tr> <tr> <td>Body width:</td> <td>126mm 4.96"</td> <td>126mm 4.96"</td> </tr> <tr> <td>Faceplate height:</td> <td>57mm 2.24"</td> <td>60mm 2.36"</td> </tr> <tr> <td>Body height:</td> <td>54mm 2.13"</td> <td>54mm 2.13"</td> </tr> <tr> <td>Depth (front to rear faces):</td> <td>110mm 4.33"</td> <td>110mm 4.33"</td> </tr> </table>		<b>DZUS mount</b>	<b>GA mount</b>	Faceplate width:	146mm 5.75"	158mm 6.22"	Body width:	126mm 4.96"	126mm 4.96"	Faceplate height:	57mm 2.24"	60mm 2.36"	Body height:	54mm 2.13"	54mm 2.13"	Depth (front to rear faces):	110mm 4.33"	110mm 4.33"	<b>WEIGHT</b> 580-720g (1.21-1.59 lbs) depending on configuration <b>DATA INTERFACES</b> <table border="1"> <tr> <th>Interface</th> <th>Description</th> </tr> <tr> <td>RS232</td> <td>3-wire serial port</td> </tr> <tr> <td>RS-485/422</td> <td>4-wire serial port</td> </tr> <tr> <td>USB-Micro AB Connector</td> <td>OTG (On-The-Go) USB port</td> </tr> <tr> <td>USB-via D25 or D38999</td> <td>DZMx is USB Host</td> </tr> <tr> <td>10/100 ethernet</td> <td>Ethernet port</td> </tr> <tr> <td>General purpose inputs</td> <td>5 (3 x digital, 2 x analogue)</td> </tr> <tr> <td>General purpose outputs</td> <td>2 outputs</td> </tr> </table> <b>CERTIFICATION</b> DO-160G sections 4-9, 15-21, 25. <b>ENVIRONMENTAL</b> Built to IP54 (Civ), IP65 (Mil) Operating temperature: -40°C to 70°C	Interface	Description	RS232	3-wire serial port	RS-485/422	4-wire serial port	USB-Micro AB Connector	OTG (On-The-Go) USB port	USB-via D25 or D38999	DZMx is USB Host	10/100 ethernet	Ethernet port	General purpose inputs	5 (3 x digital, 2 x analogue)	General purpose outputs	2 outputs	<b>DASH NUMBERS</b> <b>DZP_04-000</b> DZMx Civil no Transceiver <b>DZP_04-100</b> DZMx Civil with Satellite <b>DZP_04-300</b> DZMx Civil with Satellite & 3G Cell <b>DZP_04-020</b> DZMx Military, NVIS A, no transceiver <b>DZP_04-120</b> DZMx Military, NVIS A, with Satellite <b>DZP_04-320</b> DZMx Military, NVIS A, with Sat & 3G Cell
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# WHAT'S INSIDE FLIGHTCELL DZMx?

## CONNECTORS



MILITARY D38999 x 1



CIVIL D25 x 2

## OPTIONAL MODEMS

CELLULAR  
4G/LTE/3G

IRIDIUM  
9523

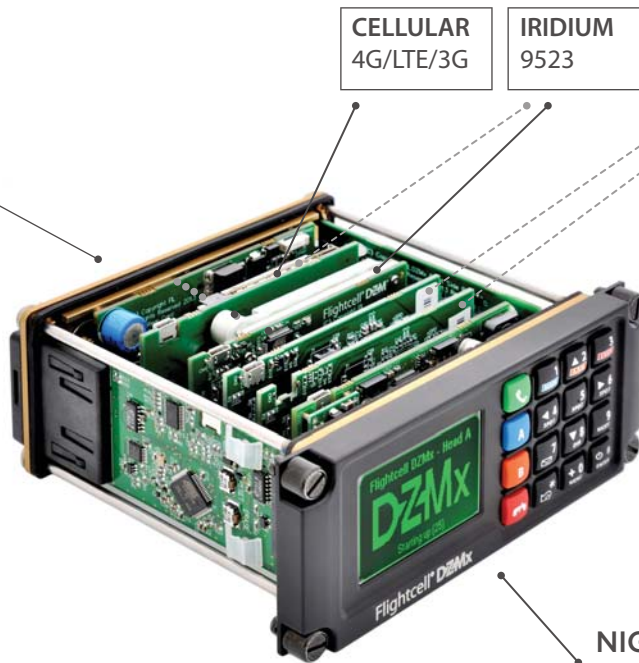
## OPTIONAL EXPANSION CARDS

ARINC 429

7 ADDITIONAL  
Switched data inputs

ADDITIONAL  
ETHERNET

FUTURE  
EXPANSION



## MOUNTING OPTIONS

- DZUS (5.5")
- GA radio rack (6.25")

## NIGHT VISION OPTIONS

- NVIS B - Civil
- NVIS A/MIL3009 - Military



# THE DZMx SYSTEM

## STANDARD

## OPTIONAL

### AUDIO

2 x independent audio panel connections

### DATA INPUTS/OUTPUTS

- 5 primary discrete inputs
- 2 outputs
- 7 additional discrete inputs

### IRIDIUM CRADLES

- 9505/A
- 9555
- 9575



### ANTENNAS

- Iridium Satellite
- GPS/Glonass
- Cellular



### DATA CONNECTIONS





- USB
- Ethernet
- Serial (RS232/422/485)
- ARINC 429

### CABIN PHONE (POTS)

### REMOTE HEAD/S



### TABLET/PC/ONBOARD SYSTEMS

<h2>DESIGN FEATURES</h2>		<h3>The world's smallest satcom system.</h3>	<h3>The world's lightest satcom system.</h3>	<h3>The world's toughest satcom system.</h3>	<h3>Multiple transceiver options, configurable modular design.</h3>
<p><b>DZMx is the world's only all-in-one satellite and cellular voice, data and tracking system.</b> All electronics are installed in one compact, panel mounted control head – nothing in the avionics bay, and minimal wiring means substantial savings on installation costs.</p>		<p>DZMx measures only:</p> <ul style="list-style-type: none"> <li>• 4.95" (125mm) wide</li> <li>• 2.18" (55mm) high</li> <li>• 4.72" (120mm) deep.</li> </ul>	<p>We know every ounce matters, so we've built a system that is 60% lighter than any other satcom system - only 1.4lbs (650g)!</p>	<p>Built to MILSPEC and DO160G certified (Sections 4-8,15-21,25) Super strong machined alloy faceplate and extruded alloy housing.</p>	<p>1-2 internal transceivers, and optional expansion:</p> <ul style="list-style-type: none"> <li>• ARINC429</li> <li>• Data inputs</li> <li>• Second ethernet port</li> </ul>
<h3>Multi-channel options, modular design.</h3> <ul style="list-style-type: none"> <li>• Single or dual Iridium satellite channels (int.)</li> <li>• Iridium plus 3G/4G LTE cellular (int.)</li> <li>• Iridium phone in a Flightcell cradle (ext.)</li> </ul>	<h3>Environmentally sealed for long life and low maintenance.</h3> <p>Designed to withstand temperature extremes, humidity, water, sand and dust.</p> <ul style="list-style-type: none"> <li>• IP54 (Civ) • IP65 (Mil)</li> </ul>	<h3>Familiar phone layout.</h3> <ul style="list-style-type: none"> <li>• Easy to follow menu operation</li> <li>• Multi-line LCD display</li> <li>• Soft touch backlit keys</li> </ul>	<h3>Night vision goggle compliant.</h3> <p>Backlit keypad and LCD display are NVIS compliant as standard.</p> <ul style="list-style-type: none"> <li>• NVIS A (Mil)</li> <li>• NVIS B (Civil)</li> </ul>	<h3>Accessible SIM cards.</h3> <p>Easy access to SIM card slots to change your satellite or cellular network providers.</p>	<h3>Optional remote control head.</h3> <p>Allows full operational functionality for up to two additional work stations on the aircraft.</p>
<h3>Easy configuration.</h3> <p>Use the DZM's menus or embedded web app. Configure phone, data, and tracking settings. Easy firmware upgrades via USB data stick.</p>	<h2>GLOBAL VOICE</h2> <p><b>DZMx is the world's only all-in-one satellite and cellular phone system, providing crystal clear voice communications via Iridium satellite and cellular networks, so you're always connected.</b></p>		<h3>Satellite and cellular voice calls.</h3> <p>Full global coverage via Iridium satellite and low cost cellular option when in range.</p>	<h3>Crystal clear audio.</h3> <p>DZMx is a full digital audio system (input/output) for optimal sound quality and clarity when you need it most.</p>	<h3>Audio optimisation.</h3> <p>Fully adjustable audio input and output levels to match all audio systems.</p>
<h3>Standard phone keypad layout.</h3> <p>DZMx is the only satcom system that uses the standard and familiar phone keypad layout. No training required.</p>	<h3>Built-in contact list with three speed dial keys.</h3> <p>All your contacts are accessible from the built-in contact list. Easily manage contacts using DZM web app.</p>	<h3>Cabin phone options.</h3> <p>Optional cabin phone over POTS (2 wire) for private satellite and cellular calls. Provides cabin to cockpit intercom</p>	<h3>Aircraft audio connections.</h3> <p>DZMx provides two independent connections to the aircraft audio system</p>	<h3>Connectivity.</h3> <p>Multiple data connections:</p> <ul style="list-style-type: none"> <li>• Serial RS232/432/485</li> <li>• Ethernet</li> <li>• USB</li> <li>• Optional ARINC429</li> </ul>	
<h2>GLOBAL DATA</h2> <p><b>DZMx connects your aircraft to the world via the Iridium satellite narrowband and 3G/4G/LTE broadband networks.</b></p>		<h3>Messaging.</h3> <p>Messaging via Iridium (SBD &amp; SMS) or cellular (SMS)</p>	<h3>Pre-configured messaging.</h3> <p>Quickly send pre-configured messages from your DZMx to:</p> <ul style="list-style-type: none"> <li>• any cell or satphone</li> <li>• your mapping system.</li> </ul>	 <p>DZMx (civil) rear view showing multiple connection options.</p>	
<h3>Specialised data applications.</h3> <p>Transmit mission-specific data for improved aircraft management and more accurate billing.</p> <ul style="list-style-type: none"> <li>• Fire fighting payload and drop-zone data.</li> <li>• Crop dusting flight records, loads and drop data</li> <li>• Airline operations</li> <li>• Custom application development available.</li> </ul>		<h3>Multiple data inputs.</h3> <p>5 standard switched inputs (digital or analogue). Optional expansion card allows 7 more inputs. Two digital outputs.</p>	<h3>Broadband.</h3> <p>Full email and internet via 3G/4G/LTE cellular (when available).</p>	 <p>DZMx (civil) side view.</p>	
<h2>GPS TRACKING</h2> <p><b>DZMx is the only system that offers dual network, uninterrupted GPS tracking via both satellite and cellular networks to significantly reduce your tracking costs.</b></p>		<h3>Trupath™ for more precise tracking.</h3> <p>DZMx bundles multiple GPS positions during each transmission providing more precise mapping of the aircraft track.</p>	<h3>Unlocked - choose your mapping service.</h3> <p>DZMx's unlocked data feed is supported by multiple tracking providers - you're not locked into any airtime or tracking provider.</p>	<h3>Lower tracking costs.</h3> <p>Uninterrupted GPS tracking via Iridium and 3G/4G/LTE cellular can significantly reduce your tracking costs.</p>	<h3>Continuous tracking.</h3> <p>Simultaneous voice and tracking via a single channel. Send position reports even while on a phone call</p>
<h3>Event driven tracking.</h3> <p>User-configurable intelligent features to provide more flight data:</p> <ul style="list-style-type: none"> <li>• Distress reports</li> <li>• Engine start/stop</li> <li>• Take off/landing</li> <li>• Point of interest /OOOI</li> </ul>	<h3>ARM.</h3> <p>One key sends request to your tracking provider for Automated Rescue Monitoring. Get notified if tracking is unexpectedly interrupted (where supplied).</p>	<h3>AFF compliant.</h3> <p>US Department of the Interior Forest Service AFF compliant tracking.</p> 	<h3>Mark point of interest.</h3> <p>Convenient one key activation to manually mark your GPS position. Send optional pre-configured message with GPS position.</p>	