

SATELLITE & CELLULAR VOICE, DATA & HYBRID TRACKING ALL-IN-ONE

DZMx

Smallest, Lightest, Smartest.



Now with WiFi and Bluetooth® options!

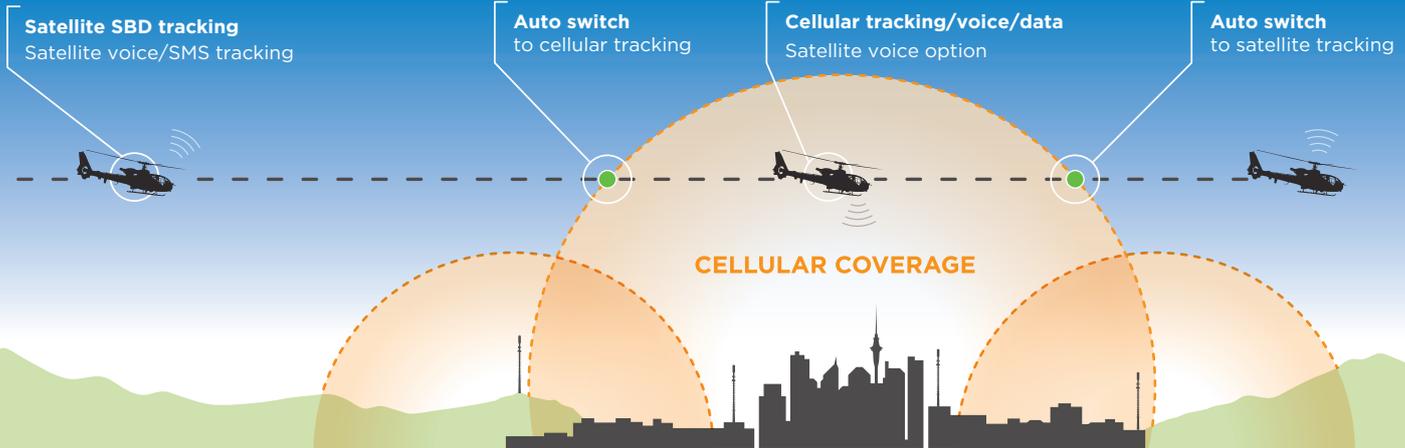


www.flightcell.com

Flightcell®

ALWAYS CONNECTED.

DUAL NETWORK AIRCRAFT TRACKING



Flightcell DZMx pioneered dual network, uninterrupted GPS tracking via satellite and cellular networks, to significantly reduce the cost of tracking.

- Fully unlocked system - you choose your tracking and airtime provider.
- Uninterrupted tracking - even when you're on a call.
- Hybrid tracking via satellite and cellular networks - uses cheapest option when in range, providing more GPS positions for even less cost.
- Event driven-tracking - user configurable.
- Uses Truepath™ - provides more precise flight path mapping.



Flightcell DZMx mapping partners:

TracPlus	Guardian Mobility	Blue Sky Network	Satcom Direct	SkyNet	Flight Explorer
SkyTrac	Global Nav	Spidertracks	Outerlink	GeoDecisions	



DZMx integrates:

IRIDIUM PHONE IN FLIGHTCELL CRADLE

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

Hub provides connection options for

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



DZMx SPECIFICATIONS

ELECTRICAL

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
	Output impedance: 600Ω
Backlighting Control	DC, 0 - 32V User calibrated High/Low set-points Designed for NVIS compliance.
Backlight colour	Green 520nm.
GPS	Antenna bias voltage: 5V Antenna current: Up to 100mA Sensitivity: -162dBm (with Flightcell Antenna) Time to first fix: 26s

MATERIALS

Aluminium 6061	
CONNECTORS	
Mounting fasteners:	DZUS or M5
Main connector:	1 x D25 male plus 1 x D25 female or 1 x D38999 male (military versions)
Antenna connectors:	Transceivers TNC GPS: BNC

DIMENSIONS

	DZUS mount		GA mount	
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"

WEIGHT

580-720g (1.21-1.59 lbs) depending on configuration
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DATA INTERFACES

Interface	Description
RS232	3-wire serial port
RS-485/422	4-wire serial 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

DO-160G CERTIFICATION

Env.Cat [(A2)(B2)(F1)]BAB[UG]HXXXXZZA[AC][SS]MXXXXXXAC

ENVIRONMENTAL

Built to:	IP54 (Civ), IP65 (Mil)
Operating temperature:	-40°C to 70°C

FLEXIBLE CONFIGURATION OPTIONS

CONNECTORS



MILITARY D38999 x 1



CIVIL D25 x 2

OPTIONAL MODEMS

CELLULAR
4G/LTE/3G

IRIDIUM
9523

IRIDIUM
SBD 9603

OPTIONAL EXPANSION CARDS

ARINC 429

7 ADDITIONAL discrete
data inputs

ADDITIONAL
ETHERNET

OPTIONAL FUNCTIONALITY

- Iridium PTT
- Firefighting app
- Agriculture app
- Dropbox app
- Virtual Private Network (VPN)

BUILT IN WIRELESS OPTIONS

- WiFi
- Bluetooth®



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

DATA INPUTS/OUTPUTS

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

AUDIO

2 x independent audio
panel connections

ANTENNAS

- Iridium Satellite and GPS
- Cellular



IRIDIUM CRADLES

- 9505/A
- 9555
- 9575 (Extreme)



REMOTE HANDSET



REMOTE HEAD/S



DATA CONNECTIONS

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



TABLET/PC/ONBOARD SYSTEMS

<h3>DZMx FEATURES</h3> <p>DZMx is the world's only all-in-one satellite and cellular voice, data and tracking system. 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>Smallest, lightest, smartest</p> <ul style="list-style-type: none"> • 4.95" (125mm) wide • 2.18" (55mm) high • 4.72" (120mm) deep • 1.4lbs (650g)! 	<p>The world's toughest satcom system</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>Multiple transceiver options, configurable modular design</p> <p>1-2 internal transceivers offering expansion and dual mode redundancy in the event of network failures.</p>	<p>Multi-channel options</p> <ul style="list-style-type: none"> • Single or dual Iridium channels (internal) • Iridium and cellular (internal) • Iridium phone in a Flightcell cradle (external).
<p>Environmentally sealed for long life and low maintenance</p> <p>Designed to withstand temperature extremes, humidity, water, sand and dust.</p> <ul style="list-style-type: none"> • IP54 (Civ) • IP65 (Mil) 	<p>Built in WiFi and Bluetooth®</p> <ul style="list-style-type: none"> • WiFi hotspot and hub • Internal antenna • Connect to smart devices • Stream audio to ICS. 	<p>Night vision goggle compliant</p> <p>Backlit keypad and LCD display are NVIS compliant as standard.</p> <ul style="list-style-type: none"> • NVIS A (Mil) • NVIS B (Civil) 	<p>Accessible SIM cards</p> <p>Easy access to SIM card slots to change your satellite or cellular network providers.</p>	<p>Optional remote control head</p> <p>Allows full operational functionality for up to two additional work stations on the aircraft.</p>	<p>Easy to use and configure</p> <p>Easy to follow menu and configuration options. Configure via front panel keypad, connected laptop or app via WiFi.</p>
<h3>GLOBAL VOICE</h3> <p>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.</p>		<p>Satellite and cellular voice calls</p> <p>Full global coverage via Iridium satellite and low cost cellular option when in range.</p>	<p>Crystal clear audio</p> <p>DZMx is a full digital audio system (input/output) for optimal sound quality and clarity when you need it most.</p>	<p>Audio optimisation</p> <p>Fully adjustable audio input and output levels to match all audio systems.</p>	<p>Standard phone keypad layout</p> <p>DZMx is the only satcom system that uses the standard and familiar phone keypad layout - no training required.</p>
<p>Iridium Push-To-Talk</p> <p>Global satellite PTT communications between multiple aircraft and ground units.</p>	<p>Built in contact list with 3 speed dial keys</p> <p>All your contacts are accessible from the built-in contact list. Easily manage contacts using DZMx web app.</p>	<p>Use smart phones</p> <p>Connect smart phones to the ICS for hands-free calling and audio streaming.</p>	<p>Aircraft audio connections</p> <p>DZMx provides two independent connections to the aircraft audio system.</p>	<p>Connectivity</p> <ul style="list-style-type: none"> • Serial RS232/432/485 • Ethernet • USB • Optional ARINC429 • WiFi • Bluetooth® 	
<h3>GLOBAL DATA</h3> <p>DZMx connects your aircraft to the world via the Iridium satellite narrowband and cellular broadband networks.</p>		<p>Messaging</p> <p>Freehand text messaging using connected device via Iridium (SBD and SMS), cellular (SMS) and internet.</p>	<p>Pre-configured, quick messaging</p> <p>Send pre-configured messages from DZMx or smart device to:</p> <ul style="list-style-type: none"> • Any cell or satphone • Your mapping system. 	 <p>DZMx (civil) rear view showing multiple connection options.</p>	
<p>Specialised data applications</p> <p>Transmit mission-specific data for improved aircraft management and more accurate billing.</p> <ul style="list-style-type: none"> • Fire fighting payload and drop-zone data. • Crop dusting flight records, loads and drop data • Airline operations • Medical - transmit 12-Lead ECG data 	<p>Multiple data inputs</p> <p>5 standard switched inputs (digital or analogue). Optional expansion card provides 7 more inputs. Two digital outputs.</p>	<p>Broadband</p> <p>Full email and internet via 3G/4G/LTE cellular data (when available).</p>	 <p>DZMx (civil) side view.</p>		
<h3>GPS TRACKING</h3> <p>DZMx offers dual network, uninterrupted GPS tracking via both satellite and cellular networks to significantly reduce your tracking costs.</p>		<p>Cellular IP Tracking</p> <p>DZMx utilises cellular technology that offers low cost position points at 15-second intervals.</p>	<p>Truepath™ for more precise tracking</p> <p>DZMx bundles multiple GPS positions during each transmission to provide more precise mapping of the aircraft track.</p>	<p>Unlocked - choose your mapping service</p> <p>DZMx's unlocked data feed is supported by multiple tracking providers - you're not locked into any airtime or tracking provider.</p>	<p>Lower tracking costs</p> <p>Using cellular networks can significantly reduce the cost of tracking. Expect to get more for less.</p>
<p>Continuous tracking</p> <p>Simultaneous voice and tracking via a single channel. Send position reports even while on a phone call.</p>	<p>Event driven tracking</p> <ul style="list-style-type: none"> • Distress • Engine • Load • Take off / land • Hover • Point of interest • OOOI 	<p>ARM</p> <p>One key sends request to your tracking provider for Automated Rescue Monitoring. Get notified if tracking is unexpectedly interrupted (where supplied).</p>	<p>AFF compliant</p> <p>USFS and NAFC AFF compliant tracking.</p> 	<p>Mark point of interest</p> <p>Convenient one key activation to manually mark your GPS position. Send optional pre-configured message with GPS position.</p>	