

# DZMx

41°15'41.58S 173°16'48.11E

Ready SAT

Ready CELL

Tracking: In Flight

Flightcell® DZMx



# Flightcell®

**ALWAYS CONNECTED.**

# DUAL NETWORK AIRCRAFT TRACKING



GLOBAL SATELLITE  
COVERAGE



**Satellite SBD tracking**  
Satellite voice/SMS tracking

**Auto switch**  
to cellular tracking

**Cellular tracking/voice/data**  
Satellite voice option

**Auto switch**  
to satellite tracking

CELLULAR COVERAGE

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
<b>CONNECTORS</b>
Mounting fasteners: DZUS or M5
Main connector: 1 x D25 male plus 1 x D25 female or 1 x D38999 male (military versions)
<b>Antenna connectors:</b>
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

### 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
<b>DO-160G CERTIFICATION</b>	
Env.Cat [(A2)(B2)(F1)]BAB[UG]HXXXXZZA[AC][SS]MXXXXXXAC	
<b>ENVIRONMENTAL</b>	
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 FUNCTIONALITY

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

## BUILT IN WIRELESS OPTIONS

- WiFi
- Bluetooth®



## OPTIONAL MODEMS

CELLULAR  
4G/LTE/3G

IRIDIUM  
9523

IRIDIUM  
SBD 9603

## OPTIONAL EXPANSION CARDS

ARINC 429

7 ADDITIONAL discrete  
data inputs

ADDITIONAL  
ETHERNET

## MOUNTING OPTIONS

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

## NIGHT VISION OPTIONS

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



# THE DZMx SYSTEM

## STANDARD

### AUDIO

2 x independent audio  
panel connections

### ANTENNAS

- Iridium Satellite and GPS
- Cellular



## DATA INPUTS/OUTPUTS

- 5 primary  
discrete inputs
- 2 outputs

- 7 additional  
discrete inputs



## DATA CONNECTIONS

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

- ARINC 429
- WiFi
- Bluetooth®



TABLET/PC/ONBOARD SYSTEMS

## OPTIONAL

### IRIDIUM CRADLES

- 9505/A
- 9555
- 9575 (Extreme)



### REMOTE HANDSET



### REMOTE HEAD/S



DZMx FEATURES		Smallest, lightest, smartest	The world's toughest satcom system	Multiple transceiver options, configurable modular design	Multi-channel options
<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.		• 4.95" (125mm) wide • 2.18" (55mm) high • 4.72" (120mm) deep • 1.4lbs (650g)!	Built to MILSPEC and DO160G certified (Sections 4-8,15-21,25) Super strong machined alloy faceplate and extruded alloy housing.	1-2 internal transceivers offering expansion and dual mode redundancy in the event of network failures.	• Single or dual Iridium channels (internal) • Iridium and cellular (internal) • Iridium phone in a Flightcell cradle (external).
<b>Environmentally sealed for long life and low maintenance</b> Designed to withstand temperature extremes, humidity, water, sand and dust. • IP54 (Civ) • IP65 (Mil)	<b>Built in WiFi and Bluetooth®</b> • WiFi hotspot and hub • Internal antenna • Connect to smart devices • Stream audio to ICS.	<b>Night vision goggle compliant</b> Backlit keypad and LCD display are NVIS compliant as standard. • NVIS A (Mil) • NVIS B (Civil)	<b>Accessible SIM cards</b> Easy access to SIM card slots to change your satellite or cellular network providers.	<b>Optional remote control head</b> Allows full operational functionality for up to two additional work stations on the aircraft.	<b>Easy to use and configure</b> Easy to follow menu and configuration options. Configure via front panel keypad, connected laptop or app via WiFi.
GLOBAL VOICE		Satellite and cellular voice calls	Crystal clear audio	Audio optimisation	Standard phone keypad layout
<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>		Full global coverage via Iridium satellite and low cost cellular option when in range.	DZMx is a full digital audio system (input/output) for optimal sound quality and clarity when you need it most.	Fully adjustable audio input and output levels to match all audio systems.	DZMx is the only satcom system that uses the standard and familiar phone keypad layout - no training required.
<b>Iridium Push-To-Talk</b> Global satellite PTT communications between multiple aircraft and ground units.	<b>Built in contact list with 3 speed dial keys</b> All your contacts are accessible from the built-in contact list. Easily manage contacts using DZMx web app.	<b>Use smart phones</b> Connect smart phones to the ICS for hands-free calling and audio streaming.	<b>Aircraft audio connections</b> DZMx provides two independent connections to the aircraft audio system.	<b>Connectivity</b> • Serial RS232/432/485 • Ethernet • USB • Optional ARINC429 • WiFi • Bluetooth®	
GLOBAL DATA		Messaging	Pre-configured, quick messaging	 <p>DZMx (civil) rear view showing multiple connection options.</p>	
<b>DZMx connects your aircraft to the world via the Iridium satellite narrowband and cellular broadband networks.</b>		Freehand text messaging using connected device via Iridium (SBD and SMS), cellular (SMS) and internet.	Send pre-configured messages from DZMx or smart device to: • Any cell or satphone • Your mapping system.	 <p>DZMx (civil) side view.</p>	
<b>Specialised data applications</b> Transmit mission-specific data for improved aircraft management and more accurate billing. • Fire fighting payload and drop-zone data. • Crop dusting flight records, loads and drop data • Airline operations • Medical - transmit 12-Lead ECG data		<b>Multiple data inputs</b> 5 standard switched inputs (digital or analogue). Optional expansion card provides 7 more inputs. Two digital outputs.	<b>Broadband</b> Full email and internet via 3G/4G/LTE cellular data (when available).		
GPS TRACKING		Cellular IP Tracking	Truepath™ for more precise tracking	Unlocked - choose your mapping service	Lower tracking costs
<b>DZMx offers dual network, uninterrupted GPS tracking via both satellite and cellular networks to significantly reduce your tracking costs.</b>		DZMx utilises cellular technology that offers low cost position points at 15-second intervals.	DZMx bundles multiple GPS positions during each transmission to provide more precise mapping of the aircraft track.	DZMx's unlocked data feed is supported by multiple tracking providers - you're not locked into any airtime or tracking provider.	Using cellular networks can significantly reduce the cost of tracking. Expect to get more for less.
<b>Continuous tracking</b> Simultaneous voice and tracking via a single channel. Send position reports even while on a phone call.	<b>Event driven tracking</b> • Distress • Engine • Load • Take off / land • Hover • Point of interest • OOOI	<b>ARM</b> One key sends request to your tracking provider for Automated Rescue Monitoring. Get notified if tracking is unexpectedly interrupted (where supplied).	<b>AFF compliant</b> USFS and NAFC AFF compliant tracking. 	<b>Mark point of interest</b> Convenient one key activation to manually mark your GPS position. Send optional pre-configured message with GPS position.	