

IOX-SATIRDv2



Iridium Satellite

Geotab offers Iridium satellite GPS fleet tracking solutions. The Iridium modem has been integrated with the GO6™ platform as a backup means of communication. If the device can no longer communicate via cellular coverage it will send positional updates over the Iridium network, providing a reliable and cost effective fleet management solution.

Man-Down Add-on

The Iridium satellite modem can be wired into a panic button. When triggered, it sends an “Emergency” message through the satellite network to the MyGeotab user. This feature will send a top priority message, regardless of the state of the vehicle. When triggered, the device will start a beeping sequence that continues until the message is received.


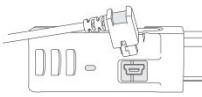




Harness Technical Specifications

Weight	65 g
Size	<ul style="list-style-type: none"> Overall length: 850 mm Widest Point: 17 mm x 34 mm
Housing	Flame retardant black ABS
Interfaces	<ul style="list-style-type: none"> CAN: 500 Kbit/s Serial interface
Inputs	Emergency Switch Line: Open or shorted
Power Output	<ul style="list-style-type: none"> Iridium Interface: 12V/24V, up to 900 mA Daisy Chaining: 12V/24V, up to 2500 mA
Power Consumption	<ul style="list-style-type: none"> Operating Mode: 40 – 550 mA Sleeping Mode: 1.1 mA
Connectors	<ul style="list-style-type: none"> Keyed 5-pin mini-USB type-B plug: Daisy chain power and CAN in. Keyed 5-pin mini-USB type-B socket: Daisy chain power and CAN out. 12-pin Molex 4302-1200: Iridium Single Wire: Emergency
Installation	<ul style="list-style-type: none"> Keyed mini-USB plug connects to GO6™ or another IOX™ harness. 12-pin plug connects to Iridium unit Blue/Black wires can be connected to an emergency “panic button” switch.

Installation Instructions

Mandatory Activation Required

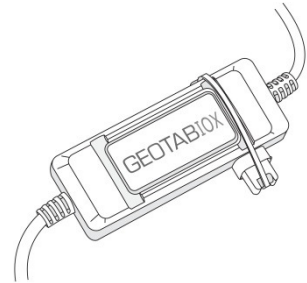
Prior to installation, it is mandatory that the Iridium Satellite Modem be activated 24 hours prior to installation. To request activation you must email activations@geotab.com, with these words placed in the subject line: IOX-SATIRDv2 activation request.

1.	Start with the Geotab GO6™ device unplugged from the vehicle. Remove the blue IOX™ expansion port cover on your GO6™.	
2.	Plug in the 90° USB connector of the IOX™ to the GO6™. Secure the USB connector using a zip tie, being careful not to over tighten it, damaging the USB. Note: The USB can only be inserted in one orientation (shown in image).	
3.	Choose an appropriate mounting location for the satellite modem. Keep in mind that the mounting location you have chosen for the GO6™ and the length of wiring on the IOX-SATIRDv2 can influence the available locations to mount it. The modem location must not interfere with the safe operation of the vehicle.	
4.	The Iridium satellite antenna is a magnet mount antenna; however, a ring of two-sided tape has been added to the bottom of the antenna to cater for mounting on plastic. The antenna location cannot interfere with the safe operation of the vehicle or obstruct the driver's field of vision outside the vehicle in any way.	
5.	The antenna can be mounted below a dashboard provided there are no metallic objects or other obstructions directly above, that could interfere with satellite reception. It is highly recommended to mount the antenna out of site and secured with at least one zip tie.	
6.	The antenna and IOX-SATIRDv2 cable are both connected to the satellite modem at the same end as the status LEDs. The LEDs indicate RED (power) and GREEN (connectivity).	
7.	Once your connections to the IOX-SATIRDv2 wiring have been made, connect the GO6™ to the engine diagnostic port and immediately start the vehicle. Remember, your GO6™ is now in debug mode.	
8.	IOX-SATIRDv2 has a two wire pigtail made up of a BLUE wire and a BLACK wire; these are the external trigger wires for the Iridium panic feature. These wires can be connected to a momentary contact switch. When this feature is triggered, the device will start a beeping sequence. The beeping will stop once the message has been received and a rule can be created in MyGeotab by adding Engine Rule for 'Panic'. (Need to Display All Diagnostics).	

9.	<p>Using a PC or Smart phone that has internet access, navigate to http://myinstall.geotab.com.</p> <p>Fill in your name, email address, and the Geotab serial number and click on "Check".</p>	
10.	<p>You will now see a screen similar to this with GREEN lettering. This indicates your installation was successfully completed. Should the test appear in RED you must verify the installation.</p>	

Termination Shunt

You may notice your IOX™ comes with a termination shunt installed in the expansion port. If you are installing more than one IOX™ in a daisy chain you will need to remove the shunt from each device in line with the exception of the "LAST" IOX™ connected. That shunt must remain in the last IOX™ and should be secured with a zip tie.



The use of the shunt in the LAST IOX™ is necessary for the GO6™ to learn and configure the IOX™ as effectively as possible.

Note: Failing to install the shunt in the last IOX™ could affect IOX™ configuration, it is recommended you secure the shunt using a zip tie if not already done.

Device Technical Specifications and Features

Hardware Specifications

Size	80 mm (L) x 54 mm (W) x 23 mm (H)
Weight	158 g (0.35 lbs)
Inputs	RS-232 Interface
Housing	Aluminum casing
Environmental Tests	Operating Temp. -40 °C to 80 °C
Operating Voltage	8 V to 36 V
Current Consumption	Operating Current: 100 - 125 mA
Antenna	Standard with magnet roof mount and sticky adhesive for optional dash mount.
Installation	Please refer to the installation manual available on the Geotab website.

Standard Logging Features (custom parameters)*

- **Ignition:** Sends a log when ignition changes state (On & Off).
- **Poll:** Gives end users the option to request the current location of the device.
- **Update Period:** Allows the device to send a positional update every 30 minutes.
- **Emergency Trigger:** Allows the driver to send an emergency/distress log to head office. The Geotab device will notify the driver when the message has been received by Checkmate.
- **Accident Upload Event via Iridium:** Allows the device to send an "Accident Upload Event" fault.
- **Switch to SATIRD Coverage:** Allows the device to send a log indicating when it has switched to sending data over the Iridium network.

Extended Logging Features (custom parameters)*

- **Monitor Vehicle Voltage:** Allows the device to send a message when the vehicle's voltage drops below 'x' volts.
- **Iridium AUX:** Allows the driver to send a positional update via auxiliary trigger
- **Monitor Movement w/ IGN Off:** Allows the device to send a positional update if the device detects movement with no voltage fluctuation and the ignition is off.

***Note:** The desired custom parameter from the list above must be added to the Checkmate database in order to generate the corresponding data.

	Default Iridium Parameters for Customers
Ignition ON & OFF; Accident Level Events; SATIRD Coverage	<GoParameters><Parameter Description="Monitor IGN ON/OFF, Accident Level Events, SATIRD Coverage" Bytes="3D" Offset="58"/></GoParameters>
Update every 30min	<GoParameters><Parameter Description="Satellite update period as 30min" Bytes="1E" Offset="59"/></GoParameters>
Note: Not Required for GO6 Installs Panic Trigger on Aux 1 (Contact Geotab Support to change Aux #)	<GoParameters><Parameter Description="Aux 1 trigger emergency message to be sent via satellite" Bytes="01" Offset="61"/></GoParameters>

Warnings and Cautions

WARNING: Mapping, navigation and tracking features available through Geotab software is dependent on third party mapping data and services and the availability and accuracy of the Global Positioning System ("GPS") operated by the United States government. Both third party data and services as well as GPS is subject to changes which may affect the accuracy or performance of mapping, navigation and tracking information or graphics presented through the use of Geotab software. Geotab products, software and services are not intended for use for primary navigation, route planning or similar purposes, as information presented may be inaccurate, delayed or misinterpreted. Relying on Geotab software for such purposes may result in incorrect navigation leading to unsafe driving situations.

WARNING: Geotab's products and related software and services are not designed or intended for use in emergency or failsafe situations including, without limitation, situations: (A) where failure of same may result in a risk of property damage, death or personal injury; (B) where Geotab's products, software or services are used to alert others upon the occurrence of certain vehicular events recorded by Geotab in-vehicle devices; or (C) requiring fail-safe controls or fail-proof delivery of information, including without limitation any operations involving radioactive or hazardous materials, life support systems or munitions or weapons. Communication features in Geotab in-vehicle devices may be interrupted or inoperable if a vehicle travels outside of a network coverage area or where there is a fault or service interruption with the carrier. Communication of data through Geotab in-vehicle devices also requires transmission of data through the internet. Failure in internet access will result in the interruption of communications.

WARNING: Do not attempt to install, reconfigure or remove any product from any vehicle while the vehicle is in motion or otherwise in operation. All installation, configuration or removal must be done only in stationary vehicles which are securely parked. Attempting to service units while being operated could result in malfunctions or accidents, leading to death or serious personal injury.

WARNING: If at any point after a Geotab in-vehicle device is installed, a warning light illuminates on the vehicle dash or the vehicle stalls or has a marked drop in performance, shut off the engine, remove the device, and contact Geotab support.

WARNING: Do not attempt to remove Geotab in-vehicle devices from the vehicle in which they are originally installed for installation in another vehicle. Not all vehicles are compatible with Geotab in-vehicle devices, and doing so may result in unexpected interactions with your vehicle, including sudden loss of power or shutdown of the vehicle's engine while in operation or cause your vehicle to operate poorly or erratically.

WARNING: All in-vehicle devices and related cabling must be securely fastened and kept clear of all vehicle controls, including gas, brake and clutch pedals. You must inspect devices and cabling on a regular basis to ensure all devices and cabling continue to be securely attached. Loose cabling or devices may impede the use of vehicle controls, resulting in unanticipated acceleration, braking or other loss of vehicle control, which could lead to death or serious personal injury. Improperly fastened in-vehicle devices may detach and impact operators upon sudden acceleration or deceleration, which may cause injury.

CAUTION: Geotab products do not contain any user-serviceable parts. Configuration, servicing, and repairs must only be made by an authorized Geotab reseller or installer. Unauthorized servicing of Geotab products will void your product warranty. Improper installation may also lead to short circuits and the risk of fire, leading to personal injury or significant damage to your vehicle. Installation or servicing may also require modifications to your vehicle. Failure to comply with specified procedures or without adequate knowledge of the vehicle may result in damage to your vehicle, which may cause malfunctions of vehicle controls or vehicular environmental systems and result in personal injury.

CAUTION: Geotab in-vehicle devices must be kept clear of debris, water and other environmental contaminants. Failure to do so may result in units malfunctioning or short-circuiting, causing a fire hazard.

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