Geotab® GO9® — Expandable Telematics Device

For the most up-to-date version, please visit: goo.gl/f7huRc

GO9 Device

Geotab's GO9 telematics device is the most powerful yet. The GO9 offers a 32-bit processor, 4x more memory and 5x more RAM than the GO8®. Similar to the GO8, the GO9 offers state-of-the-art GPS technology, g-force monitoring, GEOTAB IOX® expandability, engine and battery health assessments, and communication on the LTE network (for more information, refer to the **Cellular** section of the Technical Specifications and Features table below).

Vehicle Tracking

Using Geotab's patented tracking algorithm, the GO9 accurately recreates vehicle trips and analyzes incidents. The GO9 also offers in-vehicle alerts to instantly notify drivers of infractions and — with hardware Add-Ons — provides live coaching for driver's on-road performance. The GO9 does not require a dash-mounted antenna or any wire splicing.

Security

GO device security is designed for end-to-end protection of your data.

Key security implementations in the GO9 include:

- Network interfaces use authentication, encryption, and message integrity verification.
- Each GO9 device is individualized. Each device uses a unique ID and non-static security key — making it difficult to fake a device's identity.
- Over-the-air updates use digitally-signed firmware to verify that updates come from a trusted source.
- Geotab uses independent third-party experts to validate the platform from end to end.

- A FIPS 140-2 validated firmware module used for performing cryptography (certificate #3371).

Top Features

- Easy installation
- LTE Connectivity (select regions)*
- Small form factor device
- Intelligent in-vehicle driver coaching
- Breakthrough collision detection and notification
- External device expandability via IOX Technology
- Built-in auto-calibrating accelerometer and gyroscope
- Near-real-time vehicle data
- Fast GPS acquisition time using Almanac OTA support
- Support for GPS+GLONASS connectivity
- Additional native support for more vehicle protocols
- End-to-end cybersecurity

Technical Specifications and Features

Interfaces	**Engine Management** Legacy Interfaces: • Physical Interfaces: J1850 PWM, J1850 VPW, J1708, 9141-2 and ISO 14230 (KWP2000) at Pins 2 and 10. • Speed: 10.4/41.6 kbaud for J1850, 9141-2 and ISO 14230 and 9600/62500 bps for J1708 • Data packet protocols: J1850 PWM, J1850 VPW, J1708, J1708 CAT, ISO Toyota, ISO Vario, ISO Ford, ISO Isuzu • Diagnostic/application protocols: OBD2 Standard CAN: • Physical Interfaces: CAN at Pins 6 and 14, Pins 3 and 11, Pins 2 and 10. • Speed: 125/250/500 kbps • Data packet protocols: ISO 15765 CAN, GMLAN, VW TP 2.0, SAE J1939-21, SAE J1939-FMS • Diagnostic/application protocols: OBD2, WWH-OBD, UDS (ISO 14229) Single Wire CAN: • Physical Interfaces: Single Wire CAN at Pin 1 • Speed: 33/50/83.3 kbps • Data packet protocols: GMLAN, OEM Specific Medium/Low Speed CAN: • Physical Interfaces: J1939-13 Type 2, TTL CAN at Pins 3 and 11, Pins 2 and 10 • Speed: 50/125/250 kbps • Data packet protocols: GMLAN, OEM Specific, ISO 15765 CAN, SAE J1939-21, SAE J1939-FMS • Diagnostic/application protocols: Std OBD2, WWH-OBD, UDS (ISO 14229)

	* 2- or 3-wire install support (for older vehicles/asset tracking) **Input/Output** Buzzer LEDs — Ignition, GPS, Cellular IOX (more details below) Internal GPS/Cellular antennas

Cellular	Availability varying on certification - full list of supported countries here.
	• **GO9 LTE ATT/TELUS/Rogers/Bell/Mexico**
	  ○ LTE (CAT-1): Bands 2/4/5/12, 3G: Bands 2/5
	• **GO9 LTE ATT FirstNet Ready**
	  ○ LTE (CAT-1): Bands 2/4/5/12/14, 3G: Bands 2/5
	• **GO9 LTE T-Mobile**
	  ○ Single Mode LTE (CAT-1): Bands 2/4/12
	• **GO9 LTE Verizon**
	  ○ Single Mode LTE (CAT-1): Bands 4/13
	• **GO9 LTE Sprint (Discontinued)**
	  ○ Single Mode LTE (CAT-1): Bands 25/26/2/5/12
	• **GO9 LTE - Oceania (New Zealand, Australia)**
	  ○ LTE (CAT-M1): Bands 3/28
	• **GO9 LTE - EMEA* (EU28, Japan, South Korea only)**
	  ○ LTE (CAT-M1): Bands 1/3/5/8/20, 2G: Bands 850/900/1800/1900 MHz
	• **GO9 3G/2G Global**
	  ○ 3G: 800/850/900/1900/2100 MHz
	  ○ 2G: 850/900/1800/1900 MHz
	  ○ 3GPP Compliant

GPS Receiver	E1 and Above Models: Concurrent GPS, GLONASS, Galileo and BeiDou plus SBAS and QZSS. Below E1: Concurrent GPS and GLONASS plus SBAS and QZSS. Under 2 second Time-To-First Fix for hot and aided starts E1 and Above Models: Cold Start under 24s. Below E1: Cold start under 26 s A-GNSS Accuracy: ~2.0 m CEP OTA FW updates supported
I/O Expandability Support (IOX)	Currently supports a combination of up to 5 of the following IOXs. See Guide to Geotab IOX Add-Ons for more details. • IOX-ALERT • IOX-ANALOG • IOX-AUXM

	• IOX-BATTERY • IOX-BT • IOX-BUZZ • IOX-CAN • IOX-KEYLESS • IOX-GOTALK • IOX-NFCREADERA • IOX-OUTPUTM • IOX-RS232F • IOX-RS232M • IOX-RS232D • IOX-SATIRDv2 • IOX-USB • IOX-UREADER • IOX-WRKS More information
Environmental	**Operating Temperature** −40 to +85 °C **SAE J1455** Temperature • Thermal Shock • Temperature Cycle Humidity Mechanical Vibration Mechanical Shock • Operational Shock • Transit drop • Handling Drop General Heavy-Duty Truck Electrical Environment • Steady State Electrical Characteristics
Accelerometer & Gyroscope	3D accelerometer and 3D gyroscope. Full-scale acceleration range of ±8 g and an angular rate range of ±250 dps Acceleration and angular rate output data rate of 1.66 kHz
Mechanical	**Weight**: 70 g (0.15 lb) **Dimensions**: 75 mm L × 50 mm W × 23 mm H **Housing**: PC+ABS
Electrical	**Voltage** 12 V and 24 V systems supported

	Current 120 mA at 12 V Operating mode (typical/nominal current draw) 250 mA at 12 V Operating mode (max. current draw) 24mA at 12 V (continuous connect draw) 4.5 mA at 12 V Sleep mode (min. current draw) 3.0 mA at 24 V Sleep mode (min. current draw) ✱ **NOTE:** Maximum current draw values are reached during transmission in regions with fair to excellent cellular coverage. Maximum current draw at 24 V will be less than at 12 V. GO9 devices can pass through a maximum total current of 2750 mA @ 12 V/24 V to IOX hardware in a daisy chain via resettable overcurrent protection. ✱ **NOTE:** Up to 5 IOX accessories may be connected in the IOX Daisy Chain. For each IOX in the daisy chain, add their max current draw, and do not exceed the max total IOX current draw.
Compliance	FCC, ISED, PTCRB, NOM, HERO/HERF/HERP (select SKUs), CE, E-Mark, REACH, RoHS, WEEE, RCM, MIC, CITC, IMDA, KCC, NCC, NBTC, UKCA, RAMATEL, ANATEL, BTRC, NTRC, SDPPI, ARTCI, ARTEC, SIRIM, ANRT, NICTA, ARTP **Carriers**: T-Mobile, AT&T, Verizon, Telefónica, Rogers, Bell, TELUS, Telenor, Telstra
Over-the-Air (OTA) Support	**Firmware Updates**: For maintenance, new features, and custom applications **Parameters**: For turning additional features on/off **Almanac/Ephemeris Data**: For quicker GPS latch
In-cab Buzzer	**Decibel Output**: >85 dBA at 10 cm **Driver Feedback**: Harsh braking, harsh acceleration, harsh corners, over-revving, excessive idling and speeding, engine based seatbelt violations (when available), and custom **Test Mode**: Diagnostic beeps for validating GPS and wireless connection
Voltage Recording	Curve-based voltage logging to detect weak batteries, failing alternators, and failing starters.
64-Mb Non-volatile Flash Memory	**Main Data Memory**: ~40,000 logs for GO9 devices, or ~70,000 logs for GO9B devices **Collision Data Memory**: Buffer records over 100 minutes of second-by-second data (6,000 logs). Last 72 records (1.2 minutes) are sent instantly on accelerometer-triggered collision-level events.
Recording Parameters	Patented curve-based GPS/voltage/accelerometer/engine data logging algorithm for fewer, more accurate data points.
Intelligent Ignition	Non-engine-based ignition detection on voltage and movement, allowing for 3-wire installation. Ideal for older vehicles with no engine information and covert installation for asset recovery.

Preparing For Installation

Before installing the GO™ device, please record the device serial number. The serial number is used to verify the communication status of the GO device.

Carefully read the device release notes (goo.gl/fZURff) or the vehicle specific installation notes (goo.gl/MCIXt0) to verify that we support your vehicle. If you have any questions or concerns, please consult your Authorized Reseller.

Ensure no dash warning lights are on in the vehicle while it is running, and all other functions, such as headlamps and flashers etc. work prior to installing the device.

Before Installation, add the device to your MyGeotab database using the device serial number. This will ensure all data logged from point of install onward is sent to your database.

✱ **NOTE**: You must select the correct Geotab hardware suitable for your specific installation environment and vehicle use. For installations where exposure to the elements (e.g., liquids, dust, or interior wet cleaning/powerwash) is anticipated, select the GO RUGGED® device (GR8 rated IP67, and GR9 rated IP68 and IP69K). For additional information regarding environmental contaminants, see the applicable installation instructions as well as the Important Safety Information & Limitations of Use section below.

Installation Instructions

⚠ Read important related safety information and limitations of use following these installation instructions. Read and follow all instructions and warnings to prevent serious injury and/or vehicle damage.

WARNING! Prior to GO installation, read and follow important safety information including limitations of use located following these installation instructions. Always read and follow all safety information to prevent loss of vehicle control and serious injury.

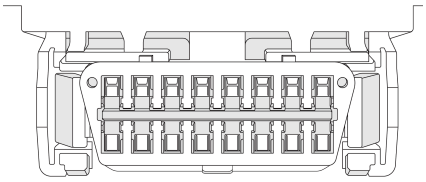
WARNING! Some installations are not straightforward and must be completed by an Authorized Installer to ensure a secure installation. An unsecure device installation can cause poor electric and/or data connection that can lead to short circuits and fires or cause malfunctions of vehicle controls that can result in serious personal injury or significant damage to your vehicle. Some examples requiring professional installation from an Authorized Installer are:

- The OBD port location is such that the device could protrude or interfere when entering or exiting the vehicle or located so could be inadvertently kicked or bumped during vehicle operation.
- The device is not fully secured and so may be able to vibrate loose or get kicked or knocked.
- An electrical harness or additional wiring is required.
- Vehicle mounting modifications are required to secure the device (for example, removing of panels), the OBD connector has been deformed or damaged, or there is any physical damage visible to the electrical wiring.
- The device does not beep six times and power on when first installed.
- The installer questions their ability to complete a secure installation according to these instructions.

WARNING! Do not attempt to install, reconfigure, or remove any product from a 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 devices while the vehicle is in motion could result in malfunctions or collisions, leading to death or serious personal injury.

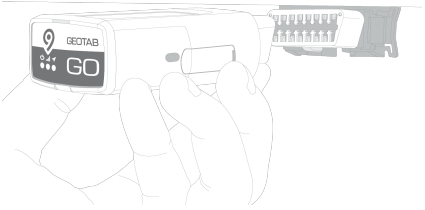
How to Install the GO Device

1 Locate the vehicle's engine diagnostic port, typically found in the driver's area at or below knee level.



✱ **NOTE:** For heavy-duty trucks, always use a vehicle-specific harness when offered by Geotab or the vehicle manufacturer (see Harness Identification and Application and Harness Assessment Cheat Sheet). Where a heavy-duty truck-specific harness is not offered by Geotab or the vehicle manufacturer, use the adapter harness (HRN-CG13S1) for any 16-pin (OBDII) installation method to avoid possible GO device damage.

2 Align the receiver end of the device with the engine diagnostic port and push in place. Please ensure the device is well-connected to the diagnostic port. Once connected, the device emits 6 quick beeps.



3 Once the device is connected and receives power, the LEDs on the front of the device start blinking then turn solid once completing the actions below.

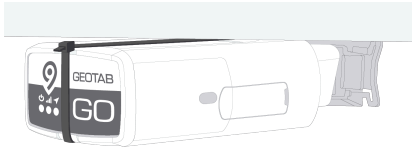
Red LED — Device configuration

Green LED — Cellular network connectivity

Blue LED — GPS network connectivity

The device emits two quick beeps every 60 seconds during set-up. Initial startup may take several minutes to complete.

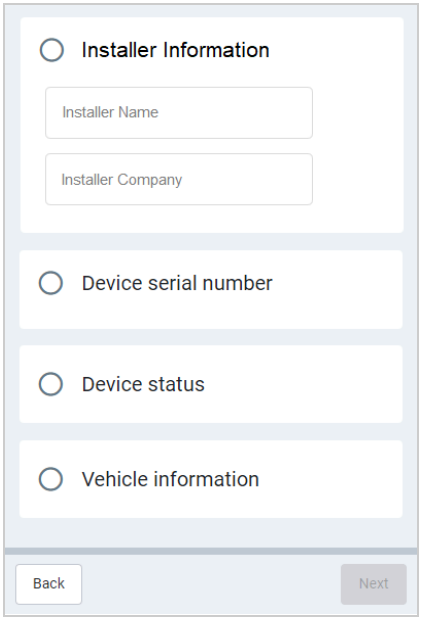
4 Once all three LEDs turn solid and you hear 10 quick beeps, secure the device using the provided cable tie.



✱ **NOTE:** The device is considered installed when the Green and Blue LEDs turn solid.

5 When performing under-dash installations with an extension harness, make sure the antenna side points upwards — towards the sky for faster GPS latch times. The GPS antenna in the **GO9** is located on the bottom of the device.

6 Navigate to installmygps.com and open MyInstall (public) to verify that the device is communicating. Under the **Installer Information**, enter your name and your company name, and then press **Next**. Under **Device serial number**, enter your GO device serial number, found at the bottom of the device, and then press **Validate**.



7 The Device Status displays a **PASS** or **FAIL** label to inform you of the status of the device. The **PASS** status indicates that the device has successfully communicated with the network in the last 24 hours. The **FAIL** status indicates that the device has not communicated with the network in the last 24 hours.

✱ **NOTE:** If the device is not communicating, please ensure the GO Device is installed correctly and try again.

8 Press **Next** to go to the **Vehicle information** section. Enter vehicle related information: vehicle name, license plate, VIN, make, model, year, odometer, engine hours, work order reference, and installation comments. You can manually enter the **Make**, **Model**, and **Year** fields or tap the search icon beside **VIN** to auto-populate them. If you enter the **Odometer** value, you must select a unit of measurement (km or miles**)**. You can use the **Work order reference** field to enter the work order number. You can enter **Installation comments** if desired. Tap **Finish installation** to complete the installation.

✱ **NOTE**: For some vehicle makes and models, the auto-populate option might not be possible.

Please refer to the MyInstall User Guide for more information.

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. This requires the use of a cable tie when securing the device or any extension harness to the OBD connector, securing both sides of the harness. If you do not use a cable tie, vibration in the vehicle can lead to a loose connection which could indirectly cause the vehicle's engine computer to fail, loss of vehicle control and cause serious injury. Inspect devices and cabling regularly to ensure all devices and cables remain securely attached.

WARNING! If at any point after an in-vehicle device is installed a warning lights up on the vehicle dash or the vehicle stalls or has a marked drop in performance, shut off the engine, remove the device, and contact your reseller. Continuing to operate a vehicle with these symptoms can cause loss of vehicle control, and serious injury.

Important Safety Information and Limitations of Use

For the latest version of the Limitations of Use, please visit: goo.gl/k6Fp0w.

WARNING! Your 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, that can lead to a fire hazard and cause loss or serious injury.

WARNING! Do not attempt to remove the devices from the vehicle in which they are originally installed for installation in another vehicle. Not all vehicles share compatibility, 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 and cause serious injury and/or vehicle damage.

NOTICE: This product does not contain any user-serviceable parts. Configuration, servicing, and repairs must only be made by an authorized reseller or installer. Unauthorized servicing of these products will void your product warranty.

NOTICE: The EU Declaration of Conformity is available at https://gtb.page.link/wkLP (3G) and https://gtb.page.link/2PV3 (LTM).

Regulatory Statements

Warning: RF Exposure Compliance

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. Users and installers must be provided with antenna installation instruction and transmitter operating conditions for satisfying RF exposure compliance.

L'antenne ou les antennes utilisées pour cet émetteur doivent être installées pour fournir une distance de séparation d'au moins 20 cm de toutes les personnes et ne doivent pas être co-localisées ou fonctionner en conjonction avec une autre antenne ou émetteur. Les utilisateurs et les installateurs doivent recevoir des instructions d'installation de l'antenne et les conditions de fonctionnement de l'émetteur pour satisfaire la conformité à l'exposition aux RF.

CANADA

CAN ICES-003 (B) / NMB-003 (B)

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. L'appareil ne doit pas produire de brouillage;

2. L’appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d’en compromettre le fonctionnement.

USA

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

✱ **NOTE**: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by Geotab could void the user’s authority to operate the equipment.

⚠ **WARNING**: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

Mexico

La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

EU

Product Wireless Information
703-748 MHz: Max 27.2 dBm EIRP
830-845 MHz: Max 25 dBm EIRP
832-862 MHz: Max 27.35 dBm EIRP
880-915 MHz: Max 31.17 dBm EIRP
1710-1785 MHz: Max 30.49 dBm EIRP
1920-1980 MHz: Max 27.3 dBm EIRP

SCIP Number(s)
fcc3db8e-38e6-45f7-862e-ed349110f883
1ff95a86-28a1-46a7-8b83-1157195073da

Germany

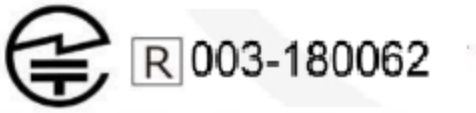
Wir besitzen keine Versand- und Lagerfläche in Deutschland und sind nicht von der Rücknahmepflicht nach § 17 ElektroG betroffen.

Brazil

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados.

Japan

本装置には、電波法に基づく技術基準適合証明を受けた特定無線設備が含まれています。認証番号と上段の表記はあくまでも推奨です。



Thailand

เครื่องโทรคมนาคมและอุปกรณ์นี้ มีความสอดคล้องตามมาตรฐานหรือข้อก าหนดทางเทคนิคของ กสทช.

เครื่องวิทยุคมนาคมนี้มีระดับการแผ่คลื่นแม่เหล็กไฟฟ้าสอดคล้องตามมาตรฐาน

ความปลอดภัยต่อสุขภาพของมนุษย์จากการใช้เครื่องวิทยุคมนาคมที่คณะกรรมการกิจการโทรคมนาคมแห่งชาติประกาศก าหนด

Oman

OMAN - TRA
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Malaysia

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Serbia

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