

## GO9 — Expandable Telematics Device



### GO9

GO9 is telematics device is the most powerful yet. The GO9 offers a 32-bit processor, the GO9 offers state-of-the-art GPS technology, g-force monitoring, engine and battery health assessments.

### Vehicle Tracking

Using 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.

### Top Features

- Easy installation
- Small form factor device
- Intelligent in-vehicle driver coaching
- Breakthrough accident detection and notification
- External device expandability via IOX Technology
- Built-in auto-calibrating accelerometer and gyrometer
- 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

### Security

The platform security is designed for end-to-end protection of your data.

Key implementations include:

- GO device and network interfaces use authentication, encryption, and message integrity verification.
- GO devices are 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.
- Vodafone uses independent third-party experts to validate the platform from end to end.
- FIPS 140-2 validated by NIST (certificate #3371)

## Technical Specifications and Features

Interfaces	Engine Management Legacy OBD (SAE J1850 PWM/VPW, ISO 9141-2, and ISO 14230 (KWP2000)) Single Wire CAN (GM 33.3 kbps, Fiat/Dodge 50 kbps) ISO 15765 CAN (including WWH-OBD, GMLAN, VW TP2.0) @ 125/250/500 kbps Medium Speed CAN @ 125/250/500 kbps J1939-13 Type 2 TTL CAN 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
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Cellular	GO9 3G/2G Global 3G: 800/850/900/1900/2100 MHz 2G: 850/900/1800/1900 MHz  3GPP Compliant
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### GPS Receiver

72-channel engine (GPS/GLONASS)  
Under 1 second Time-To-First Fix for hot and aided starts  
Concurrent GPS & GLONASS system  
A-GNSS  
Accuracy: ~2.5 m  
OTA FW updates

### I/O Expandability Support (IOX)

Currently supports a combination of up to 5 of the following:

- Driver ID
- Hours of Service (HOS)
- Garmin
- Iridium Satellite
- AUX — 4 per IOX (Digital or Analog)
- Serial Port and Additional CAN for third-party device integration
- Driver Feedback via external Buzzer and GOTALK
- Substance Spreader
- Relay control
- Alert

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Environmental and  
EMC

Operating Temperature  
-40 to +85 °C

SAE J1455

Thermal Shock (Section 4.1.3.2)

Humidity cycle (Section 4.1)

Temperature Cycle (Section 4.2)

Mechanical Vibration (Section 4.10)

Operational Shock, Transit drop, Handling Drop (Section 4.11.x.x)

Inductive Switching, Burst Transients, Starter Motor Engagement (Section 4.13.2.2.1)

Coupled Transients (Section 4.13.2.2.2)

Electrostatic Discharge Handling, operational and non-operational (Section 4.13.2.2.3)

Radiated Immunity

Radiated and Conducted Emissions

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Accelerometer &  
Gyroscope

3D accelerometer and 3D gyroscope. Full-scale acceleration range of  $\pm 8g$  and an angular rate range of  $\pm 250$  dps  
Acceleration and angular rate output data rate of 1.66 kHz

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Mechanical

Weight: 70 g (0.15 lb)

Dimensions: 75 mm L × 50 mm W × 23 mm H

Housing: Flame retardant black ABS

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Electrical

Voltage

12 V and 24 V systems supported

Current (at 12 V)

Operating Mode: 60–300 mA

Operating mode + IOX: Up to 2 A

Sleep mode: 1.5 mA

Resettable overcurrent protection to IOX

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## Compliance

Standards: FCC, IC, PTCRB, NOM, HERO, HERF, HERP, CE, Emark, RED, REACH, RoHS, WEEE, RCM

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## 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

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## 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

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## Voltage Recording

Curve-based voltage logging to detect weak batteries, failing alternators, and failing starters.

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## 64-Mb Non-volatile Flash Memory

Main Data Memory: Up to 80,000 logs in offline mode (out of coverage)  
Accident 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 accident-level events.

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## Recording Parameters

Patented curve-based GPS/voltage/accelerometer/engine data logging algorithm for fewer, more accurate data points.

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## Intelligent Ignition

Non-engine-based ignition detect on voltage and movement, allowing for 3-wire installation. Ideal for older vehicles with no engine information and covert installation for asset recovery.

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## *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.

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.

## *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 Vodafone 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 Vodafone Installer are:

- The OBD port location is such that the device protrudes and interferes with entering or exiting the vehicle, or located where it could be inadvertently kicked or bumped during vehicle operation

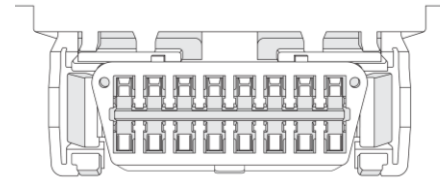
- The device isn't fully secured and so may come loose with vibrations or accidental contact
- An electrical harness or additional wiring is required
- Vehicle mounting modifications are required to secure the device, i.e. removing of panels; deformed/damaged OBD connector; or physical damage to the 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 accidents, leading to death or serious personal injury.

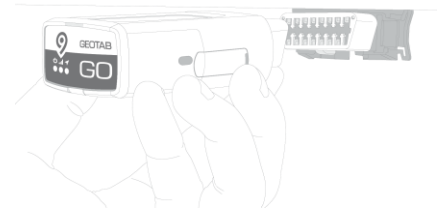
### How to Install the GO Device

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

Note: Heavy-duty vehicles use a different connector system. Contact your Authorized Vodafone reseller for heavy-duty connector applications or for extension harnesses should it be necessary to place your device away from the engine diagnostic port.



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.

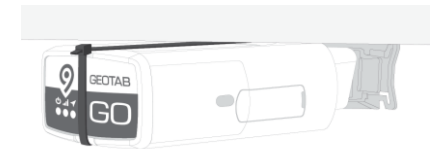
- Red LED — Device configuration
- Green LED — Cellular network connectivity
- Blue LED — GPS network connectivity

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 verify that the device is communicating. In the space provided, enter your name, the company name, and the GO device serial number — found at the bottom of the device. Click Log Install.

7 After you click Log Install, the web page displays the current communication status of the device in GREEN or RED text. If the device is communicating, the status is displayed in GREEN text. If the device is not communicating, the status is displayed in RED text.

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

**Installer Name:**

**Installer Company:**

**Device Serial No:**

**Odometer:**

**Asset Number:**

**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*

**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.

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