GO9™ - FAQ

Help Center

Questions about the GO9? Check out the below.

GO9 Frequently Asked Questions

Question	Answer
How does my device detect ignition?	Due to differences in vehicle manufacturers, it is not always possible to determine if the vehicle ignition is turned on or off. For this reason, the telematics device attempts to detect the engine running in the following three ways: – When the engine "ON" status is detected via the CAN bus – When there are voltage fluctuations (where no CAN is available) – When movement is detected (where neither RPM nor voltage fluctuation are detected.)
If enabled, what are the G-force thresholds defined for the in-cab device buzzer?	 <table><tr><td>**Event**</td><td>**Passenger Car (G)**</td><td>**Truck/Cube Van (G)**</td><td>**Heavy-Duty (G)**</td></tr><tr><td>Harsh Braking</td><td>< −0.61</td><td>< −0.54</td><td>< −0.47</td></tr><tr><td>Hard Acceleration</td><td>> 0.43</td><td>> 0.34</td><td>> 0.29</td></tr><tr><td>Harsh Cornering</td><td>> 0.47 & < −0.47</td><td>> 0.4 & < −0.4</td><td>> 0.32 & < −0.32</td></tr></table> ⊘**Note.** Passenger Car refers to ordinary passenger vehicles; Truck/Cube Van to typical delivery type trucks or other step-side vans; and Heavy-Duty to larger box trucks and tractor trailers.
Is the Driveri camera product compatible with the GO9 device?	Yes, Driveri cameras will sync to registered vehicles equipped with GO9 devices.
What vehicle YMMs are supported for odometer, seatbelt, fuel usage, and fuel level?	If there are questions around specific Year, Make, Model vehicles, and their supported data then please submit a vehicle list (including year, make, model) to Support for review via email.
What is the general process for troubleshooting odometer issues?	Most odometer problems on install stem from the following: – **Poor installation**: As odometer is request based, a poor install can cause the device to go into listen-only mode. We may not get any engine data on particularly poor installs. This can also happen if the device has been kicked or comes loose, same symptoms apply. You can check for the engine faults such as 'Telematics device fault: problem communicating with engine – potential bad install – harness issue or device failure – intermittent connection detected on the engine communications bus and it is now in listen-only mode' – **Vehicle not being driven enough**: Again, odometer is request based, it's searched for on ignition and it can take a few miles of driving for the device to latch onto the odometer source. – **Poor odometer support for the vehicle**: If all other potential reasons are accounted for then coordinate with Support to determine if the vehicle is fully supported, and to identify next steps towards resolution.
Is roaming supported?	AT&T devices will roam onto Rogers, Bell, or Telus in Canada and Telefonica in Mexico. Verizon devices will roam onto Rogers, Bell, or Telus in Canada but will have no roaming capabilities in Mexico.
Are switch inputs available?	Yes, switch inputs are available and the device can support up to 4 inputs.
Is a cable required for switch inputs?	Yes, the IOX-AUXM cable is required for inputs. The cable allows for automatic identification of GND-Float, GND-Driven, and Float-Driven, driving circuits with capacitive loading of - **GND—Float** – IOX™ reports Low '0' when input floating, IOX reports High '1' when input - **Float—Driven** – IOX reports Low '0' when input floating, IOX reports High '1' when input >3.3 V – **GND—Driven** – IOX reports Low '0' when input 3.3 V
How do I install the cable for inputs?	Please see the link for the IOX-AUXM cable in the GO9 Installation Guide.

GO9™ - FAQ

Question	Answer
Is the GO9 compatible with tracking vehicles with wheelchair lifts?	Certain wheelchair lift brands do not work well with the GO9 device, or any other devices plugged into the diagnostic port, sometimes causing the vehicle not to start or drivers to be unable to shift out of Park. It's recommended that if a device is going to be installed in these vehicles that the user contact their support team first to have the devices put into Listen Only Mode (No Engine Data). Please see the following related resource articles: >> Geotab: Vehicle-Specific Installation Notes [PUB] – Wheelchair Lifts >> Wheelchair Lifts and Telematics Devices
Why does the GO9 device beep?	Device beeping occurs mostly because of driver behavior, device disconnect/reconnect, or device update (firmware, any parameter) activity. After installation, a device may appear to beep excessively while it continues to download any recent updates (this process is similar to a new phone or tablet downloading updates after being turned on for the first time). Beeping will generally subside within 24-48 hours of drive time.
How often are new updates/firmware applied to the GO9?	Geotab will typically release new firmware every 2 months, with firmware release notes readily available to the public.
How does the device capture and report DTCs?	The device waits one (1) minute after ignition On before processing/requesting DTCs. After one (1) minute, the device starts to log DTCs from the vehicle and stores them to an internal buffer of 20 DTCs per protocol. ⊘**Note.** For J1939, the device captures only DM1 messages, which cover "All active DTCs and some lamp statuses".

GO9 Data FAQ

Question	Answer
How does the GO9 report ignition?	Ignition detection is reported using one of the following methods: – Engine-Based: The Device first wakes up by detecting voltage spikes or accelerometer-based movement and then uses RPM or Engine Road Speed to determine ignition status. – Three-Wire (e.g., Hardwire): The device is connected via a three-wire harness: power, ground, and ignition. The harness ignition connection is responsible for setting the ignition state. – Trip Tracking/Two-Wire (e.g., Motion): If the device does not receive engine data or is not connected to a three-wire harness, then the device attempts to determine ignition based on a logic called Trip Tracking. Another logic, called Two-Wire, is more voltage-focused and can be used to determine ignition. Trip Tracking: Based on movement, using the accelerometer to detect vibration and then checking the GPS to see if the unit has moved a certain distance, if yes, then it will turn ignition on. It requires both the accelerometer to be calibrated and a solid GPS lock to work. Two Wire: Based on approx. 10% or higher voltage fluctuation to trigger ignition change.

GO9™ - FAQ

Question	Answer
How does the GO9 report Speed data?	Speed is captured by using GPS settings such as dilution of precision (DOP) masks and GPS-reported speed accuracy estimates to invalidate data. It is only considered valid if there is a sufficient number of satellites being used and the changes in speed between subsequent GPS readings are realistic. Geotab also defers to the engine-based road speed if the GPS speed is invalid or the vehicle is stationary to counter GPS wobble. – Curve based logging is performed on both GPS position and GPS road speed to ensure the best fit on the map and an accurate speed profile and idle time. – If GPS data is invalid the road speed curve logging is performed using engine-based road speed. – Latitude and Longitude are used to validate GPS-based road speed. – If movement is detected by the accelerometer while ignition is off, the GPS will be turned on. If the latitude or longitude changes by a sufficient amount (approximately 100m) the trip will be tracked and the modem will connect (if a live unit) and remain connected until the device stops moving. The GO device updates GPS position on the map up to every 100 seconds (100 data samples are acquired at 1 sample per second, and then the curve logic runs), to include speed. The device tries not to send data unless there's a dynamic change in the data; if a vehicle travels straight 30 mph for 10 minutes, it's not going to send 100 samples in 100 seconds of 30mph data, but rather will send data every 100 seconds until there's a change of speed (or other curve change).
How does the GO9 report Accel & Decel data?	Defined as Acceleration Forward or Braking, utilizing the internal accelerometer in tandem with GPS signal, the accelerometer is calibrated while the vehicle is driven. As a result, there are no orientation restrictions when installing the telematics device for the accelerometer to work. The device must be securely installed for the accelerometer data to remain consistent. Because of real-time calibration, it can take one or two trips to calibrate the accelerometer. In addition, calibration relies on GPS data and may take longer to calibrate if the device is in an area with weak GPS signals. Accelerometer data is sampled at 100 Hz and saved using the curve-based algorithm. The accelerometer ranges from −8 g to +8 g with a resolution of 0.244 mg/bit for GO9s. For driver behavior events like accel/decel, the accelerometer constantly logs events over 300mg in the X-axis (front/back) direction using the curve-based logging algorithm.

GO9™ - FAQ

Question	Answer
How does the GO9 report seatbelt data?	The device goes through a comprehensive Seat Belt data detection and verification process. The process normally takes three trips for the seat belt data to validate. Each trip must last longer than one minute and include driving — at a speed greater than 10 km/hr — to consider the data as part of the validation process. – For data detection, the device needs to recognize seatbelt changes. – Seat belt changes occur during ignition events. On every ignition change event, if the seatbelt was previously in a buckled or unbuckled state, the seat belt status is set to Unknown. Setting the seat belt data to unknown ensures that the data from previous trips is not carried over to the present trip.
How does GO9 report gear status?	For the GO9, gear position can be defined directly from the vehicle diagnostics or the accelerometer. – For accelerometer, the device determines that the vehicle is out-of-reverse if the vehicle is stopped for five seconds or if the vehicle starts moving forward. Reverse detect is logged as follows: 1. Into reverse is logged as Gear Position with a value of -1; and 2. Out of reverse is logged as Gear Position with a value of 0 (neutral).