



# GB100

## Battery Mounted Insurance Telematics Device

- One Second GPS Sampling and Incident Notification
- Designed for Insurance and Car Leasing Applications
- Two Wire Battery Mounted Design Enabling Customer Self-fit or Low Cost Installation



The GB100 is a device designed for self-installation by a customer. It simply mounts directly onto the vehicle's battery with only two wires to attach. This approach allows for either a very low cost installation or for the insurance customer to self-install. Its built-in GPS receiver has very high sensitivity, a fast time to first fix and supports 1Hz (every second) location sampling during vehicle motion. Its quad band GPRS/GSM subsystem supports 850/900/1800/1900 MHz and enables the GB100's location to be monitored in real time or periodically tracked by a backend server and mobile devices. Its built-in 3-axis accelerometer allows motion detection, incident detection, 1600 Hz\* pre/post incident data collection and extends battery life through sophisticated power management algorithms. System integration is straightforward as complete documentation is provided for the full featured @Track protocol. The @Track protocol supports a wide variety of reports including emergency, geo-fence boundary crossings, driving behavior, low battery and scheduled and compressed GPS position.

### Advantages

- Extremely compact design 91.5mm\*51.5mm\*11mm
- Internal 1600 Hz\* 3-axis accelerometer supporting incident notification, driver behavior monitoring, power saving and motion detection
- Waterproof (IP65) enclosure
- Internal u-Blox GPS chipset
- Low power consumption, long standby time with internal battery
- Quad band GSM/GPRS 850/900/1800/1900 MHz
- Embedded full featured @Track protocol
- Internal GSM antenna
- Internal GPS antenna



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### GSM Specifications

Frequency	Quad band: 850/900/1800/1900 MHz Compliant to GSM phase 2/2+ -Class 4 (2W @ 850/900 MHz) -Class 1 (1W @ 1800/1900 MHz)
GPRS	GPRS multi-slot class 10 GPRS mobile station class B
RMS Phase Error	5 deg
Max Out RF Power	GSM850/900: 33.0±2 dBm DCS/PCS: 30.0±2 dBm
Dynamic Input Range	-15 ~ -108 dBm
Receiver Sensitivity	Class II RBER 2% (-107 dBm)
Stability Of Frequency	<2.5 ppm
Max Frequency Error	±0.1 ppm

### GPS Specifications

GPS Chipset	u-blox All-In-One GPS receiver
Sensitivity	Autonomous: -147 dBm Hot start: -156 dBm Reacquisition: -160 dBm Tracking: -162 dBm
Position Accuracy (CEP)	Autonomous: < 2.5m SBAS: < 2.0m
TTFF (Open Sky)	Cold start: 27s average Warm start: 27s average Hot start: 1s average

### Interfaces

GSM Antenna	Internal only
GPS Antenna	Internal only
Indicator LED	GSM, GPS and power

### General Specifications

Dimensions	91.5mm*51.5mm*11mm
Weight	75g
Backup Battery	High Temperature NiMH 200 mAh
Operating Voltage	8V to 32V DC
Operating Temperature	-20°C ~ +70°C -20°C ~ +70°C for storage
Accelerometer	3 axis – 100 Hz (standard), up to 1600 Hz (option)
Bluetooth (option)	Support BLE4.2 protocol
Gyroscope (option)	MEMS gyro-sensor

### Air Interface Protocol

Transmit Protocol	TCP, UDP, SMS
Power Supply Monitoring	Alarm status reporting of the external power and backup battery of the device
Scheduled Report	Report position at a preset time interval, distance, mileage or combination of these values
Geo-fence	Geo-fence alarm and parking alarm, support up to 20 internal geo-fence regions
Speed Alarm	Flexible speed monitoring for unusual speed alarm
Driving Behavior Monitoring	Aggressive driving behavior detection, e.g. harsh braking and acceleration
Compressed GPS Data Packet	One second GPS data packet while vehicle in motion
Crash Data Packet	Up to 15 seconds pre and post incident crash data from accelerometer

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