



GV50 Series

Compact Integrated Vehicle Trackers



- 📶 **Small-sized, Ultra-thin Device Allowing Covert Installation**
- 📶 **Cost Effective Solution for Basic Tracking**
- 📶 **Multiple I/O Interfaces for Monitoring and Control**
- 📶 **Internal 3-axis Accelerometer for Motion Detection**
- 📶 **Driving Behavior Monitoring and Incident Notification**
- 📶 **GV50MA and GV50ME Sub-models Provide Optional Internal Bluetooth Version**

The GV50 Series is a range of GPS trackers designed for a wide variety of simple vehicle tracking applications including vehicle finance asset protection, stolen vehicle recovery and simple fleet management. Vehicle trackers within the series support LTE CAT-1, LTE CAT-M1 (eMTC), LTE CAT-M2 (NB-IoT) on many bands supporting North American and European Cellular Operators. The GV50 Series offer basic digital I/Os that can be used for monitoring or controlling external peripherals. The built-in GPS receiver has best in class sensitivity and fast time to first fix. 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 alarm, geo-fence boundary crossings, as well as external power supply monitoring and position reports.

GV50 Product Series

| Model No. | Region | Technology | LTE Category | Operating Band | Certificate |
|-----------|---------------|------------|--------------|----------------------------------|-------------------|
| GV50LTA | North America | LTE | CAT1 | LTE: B4/B13 | FCC/Verizon |
| GV50MA_A | North America | LTE | eMTC | LTE: B2/B4 | FCC/PTCRB/AT&T |
| GV50MA_V | North America | LTE | eMTC | LTE: B13 | FCC/PTCRB/Verizon |
| GV50ME | Europe | GSM/LTE | eMTC/NB-IoT | GSM: 900/1800 MHz LTE: B3/B8/B20 | CE/E-Mark |

GSM Specifications

| ITEM | MODEL | GV50ME |
|-------------------|-------|--|
| Frequency | | 900/1800 MHz |
| Data Transmission | | GPRS multi-slot class 12 EDGE multi-slot class 12 |

LTE Specifications

| ITEM \ MODEL | GV50LTA | GV50MA_A | GV50MA_V | GV50ME |
|-------------------|---------------------------|--|----------|--|
| Operating Band | B4/B13 | B2/B4 | B13 | B3/B8/B20 |
| Data Transmission | (DL) 10Mbps (UL) 5Mbps | eMTC (DL) 300Kbps eMTC (UL) 375Kbps | | eMTC (DL) 300Kbps eMTC (UL) 375Kbps NB1 (DL) 34Kbps NB1 (UL) 66Kbps |

GNSS Specifications

| ITEM \ MODEL | GV50LTA | GV50MA_A | GV50MA_V | GV50ME |
|---------------------------|--|--|----------|--------|
| GPS Type | u-blox All-In-One GPS receiver | Qualcomm Gen 8C GNSS receiver | | |
| Sensitivity | Cold Start -147 dBm Tracking: -162 dBm | Cold start: -148 dBm Tracking: -159 dBm | | |
| Position Accuracy (CEP50) | Autonomous: < 2.5m | Autonomous: < 2.5m | | |
| TTFF (Open Sky) | Cold start: 30s average Hot start: 1s average | Cold start: 30s average Hot start: 1s average | | |

General Specifications

| | |
|-----------------------|--|
| Dimensions | 87mm*55mm*12.5mm |
| Weight | 50g |
| Backup Battery | Li-Polymer 190 mAh |
| Operating Voltage | DC 8V to 32V |
| Operating Temperature | -30°C ~ +80°C -40°C ~ +85°C for storage |

Air Interface Protocol

| | |
|-----------------------------|---|
| Transmit Protocol | TCP, UDP, SMS |
| Scheduled Timing Report | Report position and status at preset intervals |
| Geo-Fence | Geo-fence alarm, support up to 20 circular and 20 polygon geo-fence regions |
| Power On Report | Report when the device is powered on |
| Tow Alarm | Based on internal 3-axis accelerometer |
| Driving Behavior Monitoring | Aggressive driving behavior detection, e.g. harsh braking and acceleration |
| Crash Detection | Accident data collection for reconstruction and analysis |
| Special Alarm | Special alarm based on the digital inputs |
| Remote Control | OTA control of digital outputs |

Interfaces

| | |
|------------------------|--|
| Digital Inputs | One positive trigger for ignition detection |
| Digital Outputs | One open drain, 150 mA max drive current |
| Digital Inputs/Outputs | Configurable I/Os, one special I/O can be configured as a negative trigger digital input or an open drain output with 150 mA max drive current |
| Communication Port | One TTL UART port for upgrading and debugging |
| Cellular Antenna | Internal antenna |
| GPS Antenna | Internal patch antenna |
| Indicator LED | CEL and GPS |

Optional Bluetooth Specifications (Available for GV50MA, GV50ME)

| | |
|----------------------|---|
| Frequency | 2.4 GHz RF transceiver compatible with Bluetooth low energy (BLE) |
| Receiver Sensitivity | Excellent receiver sensitivity -88 dBm |
| Max out RF Power | Up to 10 dBm |
| Optional BT Antenna | Internal only |



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