# GV500 (New Casing)

## OBD Vehicle Tracking Device

- 📶 **Compact Design, Plug and Play**
- 📶 **Real Time Vehicle Status Monitoring From OBD Port**
- 📶 **Wide Operating Voltage Range 8V to 32V DC**
- 📶 **Perfect for Insurance and Car Leasing Applications**

The GV500 is a vehicle tracking device that plugs into a vehicle's OBDII port. Its compact design allows easy installation. Its internal OBD reader can obtain information from the vehicle's on-board computer and relay it over GPRS networks. Its built-in GPS receiver has superior sensitivity and fast time to first fix. Its quad band GPRS/GSM subsystem supports 850/900/1800/1900 MHz allowing the GV500'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. 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 GPS position.

### Advantages

- OBDII connectivity, easy to install
- Quad band GSM/GPRS frequencies 850/900/1800/1900 MHz
- Wide operating voltage range 8V to 32V DC
- Internal u-blox chipset
- Embedded full featured @Track protocol
- Internal 3-axis accelerometer for power saving and motion detection
- Internal GSM antenna
- Two internal GPS antennas, automatically use the one with better signal
- CE/FCC/E-Mark certified

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### 📶 GSM Specifications

| | |
|---|---|
| Frequency | Quad band: 850/900/1800/1900 MHz<br>Compliant to GSM phase 2/2+<br>-Class 4 (2W @ 850/900 MHz)<br>-Class 1 (1W @ 1800/1900 MHz) |
| GPRS | GPRS multi-slot class 12<br>GPRS mobile station class B |
| RMS Phase Error | 5 deg |
| Max Out RF Power | GSM850/GSM900: 33.0±2 dBm<br>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 |

### 📶 General Specifications

| | |
|---|---|
| Dimension | 44.5mm*48.9mm*26.6mm |
| Weight | About 58g |
| Backup Battery | Li-Polymer 250 mAh |
| Operating Voltage | 8V to 32V DC |
| Operating Temperature | -30°C ~ +80°C<br>-40°C ~ +80°C for storage |

### 📶 GPS Specifications

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

### 📶 Air Interface Protocol

| | |
|---|---|
| Transmit Protocol | TCP, UDP, SMS |
| Scheduled Timing Report | Report position and status at preset intervals |
| OBDII Disconnection Alarm | Alarm report of OBDII connection and disconnection status |
| Geo-fence | Geo-fence alarm and parking alarm, support up to 5 internal geo-fence regions |
| Driving Behavior Monitoring | Aggressive driving behavior detection, e.g. harsh braking and acceleration |
| Crash Detection | Accident data collection for reconstruction and analysis |
| Low Power Alarm | Alarm when backup battery is low |
| Power On Report | Report when the device is powered on |
| Tow Alarm | Alarm trigger based on built-in 3-axis accelerometer |

### 📶 Interfaces

| | |
|---|---|
| OBDII Port | Allow information to be read from OBDII port, and provide device power.<br>Support legislated OBDII protocols:<br>J1850 PWM, J1850 VPW, ISO 9141-2, ISO 14230, ISO 15765-4, J1939 |
| GSM Antenna | Internal only |
| GPS Antenna | Internal only |
| Indicator LED | CEL, GPS and OBD |
| Mini USB Port | Mini USB port for upgrading and debugging |