



# GV65

## Compact Vehicle Tracking Device



- 📶 **Multiple GNSS Support With u-blox M8 Chipset**
- 📶 **Multiple I/Os Including Smart Input, Ignition Detection and Fuel Level Sensing**
- 📶 **1-Wire Supporting Temperature Sensors and iButton Driver ID**
- 📶 **Support Virtual Odometer**

The GV65 is a mini GNSS tracker designed for a wide variety of vehicle tracking applications. It has multiple digital/analog I/Os and includes a 1-wire interface used for driver ID and temperature monitoring. Its built-in GNSS subsystem supports GPS and GLONASS and has an optional external antenna allowing superior sensitivity and fast time to first fix. Its quad band GPRS/GSM subsystem supports 850/900/1800/1900 MHz allowing the GV65'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 and sophisticated power management. 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, external power supply monitoring and scheduled GNSS position.



### Advantages

- Wide operating voltage range 8V to 32V DC
- Internal u-blox chipset
- Quad band GSM/GPRS 850/900/1800/1900 MHz
- Embedded full featured @Track protocol
- Multiple I/O interfaces for monitoring and control
- Internal 3-axis accelerometer for power conservation and motion detection
- Internal GSM antenna
- Internal or external GNSS antenna
- CE/E-Mark certified

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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 12 GPRS mobile station class B
RMS Phase Error	5 deg
Max Out RF Power	GSM850/GSM900: 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

### GNSS Performance (using GPS and GLONASS)

GNSS Receiver Type	72-channel u-blox All-In-One GNSS receiver
Sensitivity	Autonomous: -147 dBm Hot start: -155 dBm Tracking & navigation: -162 dBm Reacquisition: -160 dBm
Position Accuracy (CEP)	Autonomous: < 2.5m SBAS: < 2.0m
TTFF (Open Sky)	Cold start: 30s average Warm start: 28s average Hot start: 1s average

### Interfaces

Digital Inputs	Three digital inputs One positive trigger for ignition detection Two negative trigger inputs for normal use
Digital Outputs	Two digital outputs, open drain, 150 mA max current drain, one output with internal latch circuit
Analog Inputs	One analogue input with selectable input voltage range (0 - 12V or 0 - 30V)
1-Wire	Support 1-wire temperature sensor and iButton Driver ID
GSM Antenna	Internal only
GNSS Antenna	Internal and optional external GPS/GLONASS antenna
Indicator LED	CEL, GPS and power
Mini USB Port	Mini USB port for upgrading and debugging



### General Specifications

Dimensions	73mm*54mm*22.7mm
Weight	56g
Operating Voltage	8V to 32V DC
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 at preset time and distance intervals
Geo-fence	Geo-fence alarm and parking alarm, support up to 20 internal geo-fence regions
Power On Report	Report when the device is powered on
Power Off Report	Report when the device is powered off
Motion Detection	Motion alarm based on internal 3-axis accelerometer
Special Alarm	Special alarm based on the digital inputs
Power Supply Monitoring	Alarm report for the external power of the device
Tow Alarm	Alarm report for movement when ignition off
Speed Alarm	Flexible speed monitoring for unusual speed alarm
Remote Control	OTA control of device outputs
Fuel Level Sensing	Configurable support for fuel level sensing using the vehicle's built-in fuel sensor or gauge
Temperature Detection	Alarm for temperature detection
Identification	Support iButton
Driving Behavior Monitoring	Aggressive driving behavior detection, e.g. harsh braking and acceleration
Crash Detection	Accident data collection for reconstruction and analysis

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