GV75MG SAT

LTE Cat M1/GSM and NTN Satellite Communication Waterproof Tracker Supporting Wide Voltage and BLE

- **LTE Cat M1 + IoT-NTN**
- **BLE Beacon Detection**
- **IP67 Waterproof**



The GV75MG SAT is a telematics device that supports Cat M1/GSM and NTN-IoT satellite networks. It can be widely applied in various transportation scenarios such as freight logistics and asset tracking, and can also be used for positioning ocean-going ships. The device features a wide voltage range of DC 9–90V and an IP67-rated waterproof design, allowing it to operate stably and reliably over the long term in various environments.

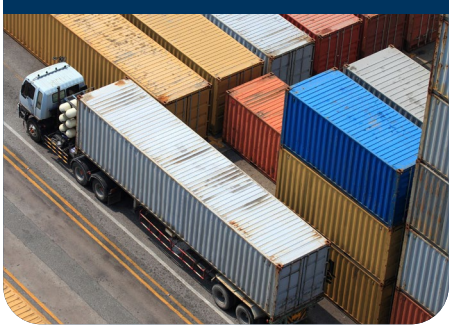
- **DC 9~90V**
- **Jamming Detection**
- **Scheduled Report**
- **Geo-fences**
- **Motion Detection**
- **Driving Behavior Monitoring**
- **Crash Detection & Accident Reconstruction**
- **Tow Alarm**
- **Configurable I/O**
- **OTA Control**

Applications

Asset Tracking



Freight Logistics



Ocean-going Vessel



General Specifications

Dimensions	112(L) × 65(W) × 20(H) mm
Weight	160g
Backup Battery	Li-Polymer, 1100mAh, Rechargeable
Standby Time	Without reporting: 2630 hours 5 min reporting: 39 hours 10 min reporting: 126 hours
Operating Voltage	9 ~ 90V DC
Zero Power Consumption	Vehicle battery drain prevention when ignition is off Typ. <0.4mA@12V
Waterproof	IP67 Compliant
Operating Temperature	-20 °C ~ +70 °C -30 °C ~ +80 °C for storage
BLE	Support BLE 5.2 protocol
Region	Global, North America

LTE Specifications

Operating Band	LTE-FDD Cat M1: B1/ B2/ B3/ B4/ B5/ B8/ B12/ B13/ B18/ B19/ B20/ B25/ B26/ B27/ B28/ B66/ B85 LTE-FDD Cat NB2: B1/ B2/ B3/ B4/ B5/ B8/ B12/ B13/ B18/ B19/ B20/ B25/ B28/ B66/ B71/ B85
Data Transmission	Cat M1: Max. 588 kbps (DL); Max. 1119 kbps (UL) Cat NB2: Max. 127 kbps (DL); Max. 158.5 kbps (UL) Cat NB1: Max. 32 kbps (DL); Max. 70 kbps (UL)

GSM Specifications

Frequency	EGPRS: 850/900/1800/1900 MHz
Data Transmission	EDGE: Max. 296Kbps(DL) / Max. 236.8Kbps(UL) GPRS: Max. 107Kbps(DL) / Max. 85.6Kbps(UL)

IoT-NTN Specifications

Operating Band	B23/B255/B256
Sensitivity	B23: -115/-108.2 dBm B255: -115/-108.2 dBm B256: -115/-108.2 dBm

GNSS Specifications

GNSS Type	All-in-one GNSS receiver, AGPS supported
Constellation Support	GPS, BDS, Galileo, GLONASS
Sensitivity	Cold start: -149 dBm ; Hot start: -165 dBm ; Tracking: -159 dBm
Position Accuracy (CEP)	Autonomous: <2.0m
TTFF (Open Sky)	Cold start: 26s average ; Hot start: 1s average

Interfaces

Digital Input	1 x positive trigger input for ignition detection
Configurable Input/Output	2 x configurable input/output: For digital input: active low. For digital output: open drain, 150 mA max drive current drain
Serial Port	1 x RS232 serial port used for debugging devices
Cellular Antenna	Internal only
GNSS Antenna	Internal only
BLE Antenna	Internal only
LED Indicators	PWR, CEL, GPS

Air Interface Protocol

Transmission Protocol	TCP, UDP, SMS
Scheduled Report	Report position and status based on preset time intervals, distance, mileage, or a combination of these settings
Geo-fences	Geo-fence alarm and parking alarm, support up to 20 internal geo-fence regions
Speed Alarm	Flexible speed monitoring for unusual speed alarm
Low Power Alarm	Alarm when backup battery is low
Power On Report	Report when the device is powered on
SOS Alarm	Alarm message report triggered by panic button in emergency situation
Tow Alarm	Alarm for tow event in ignition-off state
Jamming Detection	Alarm based on jamming detection
Virtual Ignition Detection	Based on voltage and accelerometer
Driving Behavior Monitoring	Aggressive driving behavior detection, including harsh braking, acceleration, etc
Crash Detection	Accident data collection for reconstruction and analysis
Motion Detection	Motion alarm based on internal 3-axisaccelerometer
Remote Control	OTA control of digital outputs

Connectivity

Technology	BLE
Frequency	2.4GHz
Remark	BLE 5.2, worked as a BLE gateway to connect accessories like beacon, temperature sensor, door sensor, etc