



VL103 Series

LTE GNSS Terminal



Compact size with great power, the VL103 is a discreetly-installed, fully-featured tracker with LTE, GNSS, RS485 interface and the IP66 waterproof rating. LTE communication with GSM (2G) fallback ensures a solid connection in almost all cases, and the wide 9-90V input voltage range is compatible with virtually any vehicle. It is a perfect tracker for a wide range of use cases – stolen vehicle recovery and the management of motorcycles, passenger cars and light commercial vehicles.



Vehicle Intelligentization



Fleet Management



Vehicle Security



LTE & GSM Network

Communication via 4G LTE networks with 2G GSM fallback.



Configurable Input/Output

Set to alarm button status monitoring by default, also configurable as an extra digital output.



Vehicle Battery Protection

Automatically stop drawing power from the vehicle battery when it drops near the threshold.



IP66 Dust & Water Resistance

Rugged design ensures continued optimal performance, even in the toughest conditions.



RS485 Interface (VL103D-specific)

RS485 interface extends more device usage scenarios.



Driving Behavior Analysis (Basic)

Receive alerts when any of 4 kinds of dangerous driving behavior is detected.

Standard Configuration

Positioning & Location

| | |
|--------------------------------|--|
| Technology | GPS, GLONASS, GALILEO, AGPS, LBS |
| Accuracy | <2,5m CEP |
| Tracking sensitivity | -165dBm |
| Acquisition sensitivity | -148dBm |
| TTF (open sky) | Avg. hot start ≤ 2sec; Avg. cold start ≤ 38sec |

Cellular

| | |
|-------------------|---|
| Technology | LTE Cat 1, 2G (GSM) LA: LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B28 GSM: B2/B3/B5/B8 |
| Frequency | EMEA: LTE-FDD: B1/B3/B7/B8/B20/B28 LTE-TDD: B34/B38/B39/B40/B41 GSM: B2/B3/B5/B8 |

Power

| | |
|--------------------------|---|
| Battery | 270mAh/3,7V industrial-grade Li-Polymer battery |
| Input voltage | 9-90VDC Standby: 5mA |
| Power consumption | Working: 50mA External power protection: 0,5mA |

Operating environment

| | |
|------------------------------|---------------------------|
| Operating temperature | -20°C to +70°C |
| Operating humidity | 5% to 95%, non-condensing |
| IP rating | IP66 |

Interface

| | |
|--------------------------|--|
| LED indication | GNSS (Blue), Cellular (Green), Power (Red) |
| SIM | Nano-SIM |
| Digital I/Os | 1*ACC, 1*SOS, 1*Relay |
| Analog I/Os | VL103D: ADC_1: 0-30V (±0,1V) or 0-5V (±0,1V) VL103M: SOS or ADC |
| Voltage detection | 0-90V (±0,3V) |
| Memory capacity | 3000+ GPS data entries |
| USB | Type-C (for firmware upgrade) |
| GNSS antenna | Internal |
| Bluetooth antenna | Internal |
| Serial ports | 1*RS485 (VL103D-specific) |

Feature

| | |
|--|--|
| Voice monitoring range | N/A |
| Sensors | Accelerometer Vehicle movement alert, Speeding alert, |
| Scenarios | Geo-fence entry/exit, Vehicle battery detection |
| Specialties | Microphone (VL103M-specific) |
| Driving behavior analysis (DBA) | Harsh acceleration, Harsh braking, Harsh cornering, Collision |
| Bluetooth | BLE 5.0 |
| Configuration support | Bluetooth, Type-C, SMS, PC Tools, Tracksolid Pro |
| Certification | CE, FCC, RoHS |

Physical specification

| | |
|-------------------|----------------------|
| Dimensions | 92,0 x 32,0 x 18,5mm |
| Weight | 54,5g |

Optional Configuration*

| | |
|-------------------------|--|
| Buzzer | VL103M-specific |
| Bluetooth sensor | K7800 environmental sensor |
| RS485 sensor | Capacitive fuel level sensor, Ultrasonic fuel level sensor, Temperature sensor |

*Optional Configuration required to be customized or purchased separately.