

V Series

Vehicle Tracker Specification



V series vehicle tracker is an intelligent vehicle monitoring terminal. The device integrates CAT.1/CAT.M/GSM/NB-IoT, GNSS, Wi-Fi, Bluetooth, a variety of sensors and extended GPIOs. It contains several variants covering different regions and networks around the world.

The vehicle's position, movement, and state are monitored, which encrypted (TEA, AES or RSA) into a package and uploaded to the cloud platform in real time. In case of over speeding, jamming, excessive Idling, unplug and crash, alarms will be reported and displayed on the platform. If necessary, with our device, it's possible to turn off the engine remotely through the platform. so asset transportation scheduling and analysis can be managed through the cloud platform visually, which improves transportation efficiency and reduces risks and costs.

The device is compact that easy to be hidden in the vehicle. It is directly connected to the car power supply for power supply. At the same time, the built-in small battery is used as an external power failure alarm. It can be used as a Bluetooth gateway to bind to multiple Bluetooth tags. For details, please refer to the MOKO H4 Beacon products. It can monitor multiple assets in parallel in real time. Stable connection and flexible configuration are ideally for cost sensitive vehicle management applications.

Key Benefits

- ◆ Integrate GNSS, Wi-Fi, LBS Multi-positioning technology, can quickly and accurately locate the vehicle, and support Bluetooth positioning indoors.
- ◆ Worldwide LTE CAT.1/CAT.M/, NB-IoT and GSM/GPRS/EDGE coverage.
- ◆ Integrate multiple sensors to realize Unplug detection, Towing detection, Crash detection, Vibration detection.
- ◆ Support multiple peripheral interfaces, Digital input/output, RS485/TTL, etc. Digital input can be used for ignition (ACC), door or alarm button status monitoring. The digital output can be used to remotely control engine to turn off.
- ◆ The visualized cloud platform supports the full-scene status monitoring of vehicles and goods. At the same time, it also supports FOTA.



CAT.1/ CAT.M/
GSM/ NB-IoT



Multi-constellation
GNSS



Wi-Fi 2.4G



Bluetooth 5.0



Multiple sensors



Speeding alarm



Remotely control
engine to turn off



Cloud-Platform
Service



Firmware Upgrade
OTA

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Variant for the Global

VT001-M-GL (Cat M1):

LTE FDD: B1/B2/B3/B4/B5/B8/B12/B13/B14/B18/B19/B20/B25/B26*/B27/B28/B66/B71/B85

GSM: 850/900/1800/1900MHz

VT001-L-GL* (Cat 1):

LTE FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28

GSM: 850/900/1800/1900MHz

VT001-G-GL(GSM only):

GSM: 850/900/1800/1900MHz

Variant for China/India

VT001-L-CN (Cat 1):

LTE FDD: B1/B3/B5/B8

LTE TDD: B34/B38/B39/B40/B41

GSM: 900/1800MHz

Variant for EMEA

VT001-L-EM (Cat 1):

LTE FDD: B1/B3/B5/B7/B8/B20/B28

GSM: 850/900/1800/1900MHz

Variant for Latin America

VT001-L-LA (Cat 1):

LTE FDD: B2/B3/B4/B5/B7/B8/B28/B66

GSM: 850/900/1800/1900MHz

Variant for North America

VT001-L-NA* (Cat 1):

LTE FDD: B2/B4/B5/B12/B13/B25/B26

VT001-M-NA (Cat M1):

LTE FDD: B1/B2/B3/B4/B5/B8/B12/B13/B14/B18/B19/B20/B25/B26*/B27/B28/B66/B71/B85

Data

LTE (Cat 1):

LTE FDD: Max 10Mbps (DL)/Max 5Mbps (UL)

LTE TDD: Max 8.96Mbps (DL)/Max 3.1Mbps (UL)

LTE (Cat M):

LTE FDD: Max 588Kbps (DL)/Max 1119Kbps (UL)

GSM:

GPRS: Max 107Kbps (DL)/Max 85.6Kbps (UL)

EDGE: Max 296Kbps (DL)/Max 236.8Kbps (UL)

Command Set: Track protocol command

Transmit protocol: TCP, UDP, SMS

Working modes: Power saving mode for long standby time
Continuous mode for emergency tracking

Scheduled Timing Report:

Report position and status at preset time intervals

Wakeup Report: Report when the device wakes up

Geo-fences*: Support up to 5 internal geo-fence regions

Low Power Alarm: Alarm when internal battery is low

Motion Detection: Motion detection based on internal 3-axis accelerometer

Reporting Frequency Adjustment: The device will increase the position reporting frequency when it turns a corner

Hardware Features

USB: × 1, Micro

UART: × 1, RS485*, RS232*, 1-Wire*

(U)SIM Interface: × 1, 1.8V/3V, Nano SIM card

Cellular Antenna: internal

GNSS Antenna: internal, GPS/GLONASS/BeiDou

LED: × 3, System Light, Network Light, GNSS Light

WLAN: 2.4G (VT001-G no support)

Bluetooth: 5.0 (VT001-G no support)

Battery Capacity: 90mA (lithium polymer battery, optional)

GNSS Features

Horizontal Position Accuracy: Autonomous: <2.5m CEP

Velocity Accuracy: Without Aid: <0.1m/s

Acceleration Accuracy: Without Aid: <0.1m/s²

Reacquisition Time: <1s

TTFF @-130dBm with EASY™:

Cold Start: <15s; Warm Start: <5s; Hot Start: <1s

TTFF @-130dBm without EASY™:

Cold Start: <35s; Warm Start: <30s; Hot Start: <1s

General Features

Supply Voltage: 9V~ 40V (9V~ 100V optional)

Stand-by Current: ≤10mA

Operating Temperature: -20°C ~ +70°C

Dimensions: 82mm × 40mm × 18mm

Weight: Approx. 54g (VT001-G), 59g (VT001-M), 58g (VT001-L)

Firmware Upgrade: USB interface, OTA

Data Encryption*: TEA, AES or RSA (optional)

Power consumption: <10mA sleep mode@All variants

<1mA deep sleep mode@VT001-L/VT001-M variants

* Under Development



Electrical Characteristics

VT001-L/VT001-M:

- Supply Voltage:
Supply voltage (VCC): 9V~ 40V (9V~ 100V optional)
- Digital Output (open Drain)
Drain current (DO1-Digital Output OFF):
≤100μA (Default use for RELAY control)
Drain current (DO2-Digital Output OFF):
≤100μA (Can be used for normal output DO)
Drain current (DO1/DO2-Digital Output ON): ≤200mA
- Digital Input
Input resistance (DI1) :
≥370KΩ (Positive trigger input for ACC)
Input voltage (ACC): ≤VCC
Input voltage threshold (ACC) : ≥7V
- Configurable Input:
Input resistance (DI1/AI1): ≥3MΩ (Used for DI/AI)
Digital Input voltage (DI1):
≤VCC (Negative trigger input for normal use)
Digital input voltage threshold (DI1): ≤0.2V
Analog Input voltage (AI1): ≤16V

VT001-G:

- Supply Voltage: 9V~ 40V (9V~ 100V optional)
- Digital Output (open Drain)
Drain current (DO1-Digital Output OFF):
≤100μA (Default use for RELAY control)
Drain current (DO1-Digital Output ON): ≤200mA
- Digital Input
Input resistance (DI1) :
≥370KΩ (Positive trigger input for ACC)
Input voltage (DI1): ≤VCC
Input voltage threshold (ACC) : ≥7V

Interface Features

VT001-L/VT001-M:

VCC GND DI for Ign; DO for RELAY; DO; DI/AI (6 wires)

VT001-G:

VCC GND DI for Ign; DO for RELAY(4 wires)

Buffer Storage

VT001-L: 34000 message

VT001-M: 60000 message

VT001-G: 11000 message

