

# FMM001 General description

[Main Page](#) > [OBD Trackers](#) > [FMM001](#) > [FMM001 Manual](#) > **FMM001 General description**

FMM001 is a tracking terminal with GNSS and GSM connectivity, which is able to collect device coordinates and transfer them via GSM network to a server. This device is perfectly suitable for applications, which require the location acquirement of remote objects. It is important to mention that FMM001 has a standard OBD-II interface which lets you monitor basic vehicle parameters.

☒ Monitorable basic vehicle parameters depend on vehicle mark and model.

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## Contents

- [1 Package contents](#)
- [2 Basic characteristics](#)
- [3 Technical features](#)
- [4 Technical information about internal battery](#)
- [5 Electrical characteristics](#)
- [6 Absolute maximum ratings](#)

## Package contents

The FMM001 device is supplied to the customer in a cardboard box containing all the equipment that is necessary for operation. The package contains:

- FMM001 device;
- Top and bottom device cover parts;
- OBD II power supply adapter.

## Basic characteristics

GSM / GPRS / GNSS features:

- Quectel BG96 (LTE FDD: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B28 LTE TDD: B39 (for CAT M1 only)), TM2500 quad band module (GSM 850 / 900 / 1800 / 1900 MHz);
- GPRS Multi-Slot class 12 (Up to 240 kbps);
- SMS (text, data);
- Integrated GNSS receiver;
- Up to -165 dBm GNSS receiver sensitivity.

Hardware features:

- Built-in movement sensor;
- Built-in Bluetooth 3.0;
- Built-in Bluetooth 4.0;

- Internal High Gain GNSS antenna;
- Internal High Gain GSM antenna;
- Internal 128 MB Flash (422 400 Records);
- 170 mAh Li-ion rechargeable 3.7 V battery.

Interface features:

- Power supply: +10...+30 V;
- CAN;
- K-LINE;
- USB port;
- OBD II;
- 2 LEDs indicating device status.

Special features:

- Fast position fix;
- High Quality track even in high density urban canyon;
- Small case;
- 2 LED status indication;
- Real time tracking;
- Smart data acquisition based on:
  - Time;
  - Speed;
  - Angle;
  - Distance;
  - Ignition or any other I/O event;
- Sending acquired data via GPRS;
- GPRS and SMS I/O events;
- Virtual odometer;
- Jamming detection;
- Configurable using Secured SMS Commands.
- Overvoltage protection.

## Technical features

Part name	Physical specification
Navigation indication	LED
Modem indication	LED
OBD-II	Standard OBD-II connector
USB	Mini USB socket

### Technical details

2 W max.	GPRS: max 50 mA
Current consumption at 12 V	Nominal: average 35 mA
	GPS sleep: average 12 mA
	Deep Sleep: average 4.5 mA
Battery charge current	Average: 140 mA
	Rated: 250 mA
Operating temperature (without battery)	-40 ... +85 °C
Storage temperature (without battery)	-40 ... +85 °C
Storage relative humidity	5 ... 95% (no condensation)
Internal fuse	3 A, 125 V
Device + case + battery weight	70 g

Dimension drawing:




## Technical information about internal battery

Internal back-up battery	Battery voltage (V)	Nominal capacity (mAh)	Power (Wh)	Charge temperature (°C)	Discharge temperature (°C)	Storage temperature (°C)
Li-ion rechargeable battery	3.75□3.90	170	0.64 - 0.66	0 to +45	-20 to +60	-20 to +45 for 1 month -20 to +35 for 6 months

Batteries are covered by 6 month [warranty](#) support.

 CAUTION: RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

Battery should not be disposed of into general household waste.

 Bring damaged or worn-out batteries to your local recycling center or dispose them into a battery recycle bin commonly found in supermarkets.

## Electrical characteristics

Characteristic description	Value			Unit
	Min.	Typ.	Max.	
Supply Voltage:				
Supply Voltage (Recommended Operating Conditions)	+10		+30	V
Input voltage (Recommended Operating Conditions)	0		Supply voltage	V

# Absolute maximum ratings

Characteristic description	Value			Unit
	Min.	Typ.	Max.	
Supply Voltage (Absolute Maximum Ratings)	-32		+32	V