

# FMB002 General description

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FMB002 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 FMB002 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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## Package contents

The FMB002 device is supplied to the customer in a cardboard box containing all the equipment that is necessary for operation. The package contains:

- FMB002 device;
- OBD II power supply adapter.

## Basic characteristics

GSM / GPRS / GNSS features:

- Teltonika [TM2500](#) quad band module (GSM 850 / 900 / 1800 / 1900 MHz);
- GPRS Multi-Slot class 12 (Up to 85,6 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;

- 128 MB Flash (422 400 Records);
- 3.7 V 45 mAh

Interface features:

- Power supply: +10...+30 V;
- USB port;
- OBD II;
- CAN;
- K-LINE;
- 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

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

### Technical details

Data sending/gathering every 1s	81.6 mAh
Data sending/gathering every 30s	37.3 mAh

Device is not sending/gathering records but is not in a sleep mode	33 mAh
GPS sleep	16.1 mAh
Deep Sleep	12.8 mAh
Online Deep Sleep	13.2 mAh
Ultra Deep Sleep	11 mAh
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	30 g

## 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	45	0.17 - 0.18	10 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)	+12		+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