


# 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

| Part name                        | Physical specification    |
|----------------------------------|---------------------------|
| Navigation indication            | LED                       |
| Modem indication                 | LED                       |
| OBD-II                           | Standard OBD-II connector |
| USB                              | Mini USB socket           |
| <b>Technical details</b>         |                           |
| 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<br>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<br>-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<br>(Absolute Maximum Ratings) | -32   |      | +32  | V    |