

FMB020 General description

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FMB020 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.

Monitorable basic vehicle parameters depend on vehicle mark and model.

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Package contents

The FMB020 device is supplied to the customer in a cardboard box containing all the equipment that is necessary for operation. The package contains:

- FMB020 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;
- 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.
- Nano-SIM

Technical features

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

Technical details

| | |
|--|---------|
| Data sending/gathering every 1s | 80.2 mA |
| Data sending/gathering every 30s | 37 mA |
| Device is not sending/gathering records but is not in a sleep mode | 32.7 mA |
| GPS sleep | 15.1 mA |

| | |
|---|-----------------------------|
| Deep Sleep | 12.5 mA |
| Online Deep Sleep | 13 mA |
| Ultra Deep Sleep | 10.8 mA |
| Battery charge current | Maximum: 45 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 | 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) | +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 |