# FMM800 General description

Main Page > Fast & Easy Trackers > FMM800 > FMM800 Manual > FMM800 General description

FMM800 is a tracking terminal with GNSS and LTE/GSM connectivity, which is able to collect device coordinates and transfer them via LTE/GSM networks to a server. This device is perfectly suitable for applications, which require the location acquirement of remote objects. FMM800 is a LTE CAT M1 device. The main feature of FMM800 is it's easy installation via OBD port. It is a perfect tracker for a wide range of use cases – including fleet management of light commercial vehicles, driver log-book, insurance telematics (UBI), car rental & leasing and more.

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### **Contents**

- 1 Package contents
- 2 Basic characteristics
- 3 Technical features
- 4 Technical information about internal battery
- <u>5 Electrical characteristics</u>
- 6 Absolute maximum ratings

## Package contents

The FMM800 device is supplied to the customer in a cardboard box containing all the equipment that is necessary for operation. The package contains:

- FMM800 device;
- Top and bottom device cover parts;
- OBD II power supply adapter.

## **Basic characteristics**

GSM / GPRS / GNSS features:

- Name Quectel BG95-M3, Teltonika TM2500;
- Technology LTE CAT M1/NB-IoT/GSM/GPRS/GNSS/BLUETOOTH;
- SMS (text, data);
- Integrated GNSS receiver;
- Up to -165 dBm GNSS receiver sensitivity.

#### **CELLULAR:**

Technology	Supported bands
2G bands	GSM B2/B3/B5/B8 850/900/1800/1900

FMM800-Q3IB0:LTE-FDD (CAT M1):

B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B27/B28/B66/B85

4G bands FMM800-Q3IB0:LTE-FDD (CAT NB2):

B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B28/B66/B71/B85

LTE: LTE FDD (CAT-M1): Max. 588Kbps (DL)/Max.1119Kbps (UL)

Data transfer (Quectel) LTE: LTE FDD (CAT-NB2): Max. 127Kbps (DL)/Max.158.5Kbps (UL)

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

#### 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);
- 170 mAh Li-ion rechargeable 3.7 V battery.

#### Interface features:

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

### Technical features

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

#### **Technical details**

GPRS: max 50 mA
Nominal: average 35 mA
GPS sleep: average 12 mA
Deep Sleep: average 4.5
mA

Average: 140 mA
Pated: 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	63 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.

- $\stackrel{\textstyle \swarrow}{\boxtimes}$  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			
Characteristic description	Min. Typ.	Max.	Unit	
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			
Characteristic description	Min. Typ. Max.		Unit	
Supply Voltage (Absolute Maximum Ratings)	-32		+32	V