

# FMC225

WATERPROOF LTE CAT 1 TERMINAL WITH RS485/RS232 INTERFACES AND BACKUP BATTERY

Product page



## IP67 CASING

Reliable tracking in harsh conditions

## 4G NETWORK

Global-band LTE CAT 1 Module, which ensure reliable connection with a fallback to 2G (GSM) networks

## RS232/RS485

Serial communication interfaces to connect third-party external devices

## DUAL SIM

Adds a backup communication channel and significantly reduce roaming costs



AGRICULTURE



CONSTRUCTION & MINING



WATER TRANSPORT



PUBLIC SERVICES



HEAVY DUTY TRANSPORT

FMC225 is WATER and DUST resistant real-time tracking terminal with GNSS and LTE/GSM connectivity and backup battery. FMC225 features RS485/RS232 data interface, which gives ability to connect various third-party external devices. It is perfectly suitable for applications where location acquirement of remote objects is needed: fleet management, car rental companies, taxi companies, public transport, logistics companies, personal cars and so on. Because of IP67 casing, device is totally protected from dust and remains safe during the short periods of immersion in water up to 1m depth. As a result, FMC225 can be used in agriculture, construction and mining or any other fleet where harsh tracking conditions exists.



**Module**

Name	FMC225-MBIB0: MeiG SLM320-E with Teltonika TM2500 (in development) FMC225-MCIB0: MeiG SLM320-LA with Teltonika TM2500 (in development)
Technology	LTE(Cat1)/2G(GSM/GPRS)/GNSS/BLUETOOTH

**GNSS**

GNSS	GPS, GLONASS, GALILEO, BEIDOU, QZSS, AGPS
Receiver	Tracking: 33
Tracking sensitivity	-165 dBm
Position accuracy	< 2.5 CEP
Velocity accuracy	< 0.1m/s (within +/- 15% error)
Hot start	< 1 s
Warm start	< 25 s
Cold start	< 35 s

**Cellular**

Technology	LTE Cat 1, GSM
2G bands	FMC225-MBIB0: GSM: B2/B3/B5/B8 FMC225-MCIB0: GSM: B2/B3/B5/B8
4G bands	FMC225-MBIB0: LTE FDD: B1/B3/B7/B8/B20/B28 LTE-TDD:B38/B40/B41 FMC225-MCIB0: LTE FDD: B1/B2/B3/B4/B5/B7/B8/B20/B28 LTE-TDD:B40
Data transfer	LTE: LTE FDD: Max 10Mbps (DL)/Max 5Mbps (UL) LTE TDD: Max 8Mbps (DL)/Max 2Mbps (UL) GSM: GPRS: Max 85.6Kbps (DL)/Max 85.6Kbps (UL)
3A, 125V	Class 4 for GSM850/900: 23±2dBm Class 1 for GSM1800/1900: 20±2dBm Class 3 for LTE-TDD: 23±2.7dBm Class 3 for LTE-FDD: 23±2.7dBm
Data support	SMS (text/data)

**Power**

Input voltage range	10 - 30 V DC with overvoltage protection
Internal Back-up battery	170 mAh Li-Ion battery 3.7 V (0.63 Wh)
Power consumption	At 12V < 4 mA ( <b>Ultra Deep Sleep</b> ) At 12V < 6 mA ( <b>Deep Sleep</b> ) At 12V < 12 mA ( <b>Online Deep Sleep</b> ) At 12V < 19 mA ( <b>GPS Sleep</b> ) At 12V < 36 mA At 12V < 2A Max. (with full Load / Peak)

**Bluetooth**

Specification	4.0 + LE
Supported peripherals	Temperature and Humidity sensor, OBDII dongle, Inateck Barcode Scanner, Universal BLE sensors support

**Physical specification**

Dimensions	70,5 x 67,0 x 25,6 mm (L x W x H) 85,0 x 67,0 x 25,6 mm (L x W x H) (length with connector socket)
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## Operating environment

Operating temperature (without battery)	-20 °C to +85°C
Storage temperature (without battery)	-20 °C to +85 °C
Operating temperature (with battery)	-20 °C to +40 °C
Storage temperature (with battery)	-20 °C to +45 °C
Operating humidity	5% to 95% non-condensing
Ingress Protection Rating	IP67
Battery charge temperature	0 °C to +45 °C
Battery discharge temperature	-20 °C to +60 °C
Battery storage temperature	-20 °C to +45 °C for 1 month -20 °C to +35 °C for 6 months

## Interface

Digital Inputs	2
Digital Outputs	1
Analog Inputs	1
CAN Adapter Inputs	1
1-Wire	1
RS232	1
RS485	1
GNSS antenna	Internal High Gain
Cellular antenna	Internal High Gain
USB	2.0 Micro-USB
LED indication	2 status LED lights
SIM	2x SIM Card (Dual-SIM)
Memory	128MB internal flash memory

## Features

Sensors	Accelerometer
Scenarios	Green Driving, Over Speeding detection, GNSS Fuel Counter, DOUT Control Via Call, Excessive Idling detection, Immobilizer, iButton Read Notification, Unplug detection, Towing detection, Crash detection, Auto Geofence, Manual Geofence, Trip
Sleep modes	GPS Sleep, Online Deep Sleep, Deep Sleep, Ultra Deep Sleep
Configuration and firmware update	FOTA Web, FOTA, Teltonika Configurator (USB, Bluetooth), FMBT mobile application (Configuration)
SMS	Configuration, Events, DOUT control, Debug
GPRS commands	Configuration, DOUT control, Debug
Time Synchronization	GNSS, NITZ, NTP
Fuel monitoring	LLS (Analog), Digital LLS (RS232, RS485), LV-CAN200, ALL-CAN300, CAN-CONTROL, OBDII dongle
Ignition detection	Digital Input 1, Accelerometer, External Power Voltage, Engine RPM (CAN Adapters, OBDII dongle)
RS232 Modes	Log Mode, NMEA, LLS, LCD, RFID HID/MF7, Garmin FMI, TCP ASCII/Binary
RS485 Modes	Log Mode, NMEA, LLS, TCP ASCII/Binary

**Certification & Approvals \***

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Regulatory

CE-RED, E-mark, RCM, Anatel, Reach, RoHS, TRA, CITC

\* in progress