

FMM13A

ADVANCED CAT M1/GNSS/BLUETOOTH® TRACKER
WITH INTERNAL ANTENNAS AND BACKUP



FLEXIBLE DIN/AIN

Configurable DIN/AIN for flexible remote monitoring and control

LTE CAT M1

Device supports LTE CAT M1 connectivity, which allows low-power wide area technologies to be used

NEGATIVE INPUT

Allows easier installation of accessories

IMPULSE INPUTS

Suitable for fuel flow meters data reading



LIGHT
VEHICLES



HEAVY DUTY
TRANSPORT



TRAILER
TRACKING



REFRIGERATED
TRANSPORT



INTERNATIONAL
LOGISTICS

FMM13A is small and professional real-time tracking terminal with GNSS and LTE CAT-M1 connectivity and backup battery. Device equipped with GNSS/Bluetooth and LTE CAT-M1 module, internal GNSS and LTE antennas, configurable digital, analogue inputs and digital outputs, negative input, impulse inputs. 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.



Module

Name	FMM13A-Q2IB0: Quectel BG95-M1 with Teltonika TM2500
Technology	LTE CAT M1/GNSS/BLUETOOTH® LE

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 M1
Data transfer	LTE: Max. 588Kbps (DL)/Max. 1119(UL)
Transmit power	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)
Internal fuse	3 A, 125 V

Power consumption	At 12V < 3 mA (Ultra Deep Sleep) At 12V < 5 mA (Deep Sleep) At 12V < 11 mA (Online Deep Sleep) At 12V < 18 mA (GPS Sleep) At 12V < 34 mA (nominal with no load) At 12V < 2A Max. (with full Load / Peak)
-------------------	---

BLUETOOTH® technology

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

Physical specification

Dimensions	77 x 62 x 20 mm (L x W x H)
------------	-----------------------------

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	IP41
Battery charge temperature	0 °C to +45 °C
Battery discharge temperature	-20 °C to +60 °C

Interface

Digital Inputs	3
Negative Inputs	1 (Digital Input 2)
Impulse Inputs	2 (Digital Input 1, Digital Input 2)
Digital Outputs	3
Analog Inputs	2
CAN Adapter Inputs	1
1-Wire	1
GNSS antenna	Internal High Gain
Cellular antenna	Internal High Gain
USB	2.0 Micro-USB
LED indication	2 status LED lights
SIM	Micro-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® wireless technology), 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), LV-CAN200, ALL-CAN300, CAN-CONTROL, OBDII dongle
Ignition detection	Digital Input 1, Accelerometer, External Power Voltage, Engine RPM (CAN Adapters, OBDII dongle)

Certification & Approvals

Regulatory	FCC, PTCRB, IC, AT&T approval
------------	-------------------------------