

# FMM130



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



## FUTURE-PROOF NETWORK SUPPORT

Reliable 4G LTE Cat M1 network coverage with fallback to 2G

## REMOTE MONITORING

Blocking engine remotely among the numerous available fleet control measures

## CAN ADAPTER SUPPORT

Reading fuel, odometer, RPM, engine temperature and more

## ACCURATE FUEL USAGE CONTROL

Impulse input for fuel flow meters data reading and precise fuel usage control



LIGHT VEHICLES



HEAVY DUTY TRANSPORT



TRAILER TRACKING



REFRIGERATED TRANSPORT



INTERNATIONAL LOGISTICS

FMM130 is a 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 acquisition of remote objects is needed: fleet management, car rental companies, taxi companies, public transport, logistics companies, personal cars and so on.



**Module**

Name	Quectel BG95-M3, Quectel BG96, Teltonika TM2500
Technology	LTE CAT M1/NB-IoT/GSM/GPRS/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/NB-IoT/GSM
2G bands	BG95-M3: B2/B3/B5/B8 BG96: B2/B3/B5/B8
4G bands	BG95-M3: LTE-FDD (CAT M1): B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B27/B28/B66/B85 LTE-FDD (CAT NB2): B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B28/B66/B71/B85 GSM: 850/900/1800/1900 BG96: LTE FDD: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B26/B28 LTE TDD: B39 (for CAT M1 only)
Data transfer	BG95-M3: LTE: Max. 588Kbps (DL)/Max.1119Kbps (UL) GPRS: Max. 107Kbps (DL)/Max. 85.6Kbps (UL) BG96: LTE: Max. 375Kbps (DL)/Max.375Kbps (UL) GPRS: Max. 107Kbps (DL)/Max. 85.6Kbps (UL)

Transmit power	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)
--------------------------	--

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	65 x 56.6 x 2.,6 mm (L x W x H)
------------	---------------------------------

Weight	55 g
--------	------

### 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)	0 °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 or eSIM
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	CE/RED, E-mark, RCM, EAC, REACH, RoHS, CITC, TRA, ANATEL
------------	--