## **Tracking Hardware UK**

# FMM130

### ADVANCED CAT M1/GSM/GNSS/BLE TERMINAL WITH INTERNAL ANTENNAS AND BACKUP BATTERY

FMM130 is small and professional real-time tracking terminal with GNSS and LTE CAT-M1/NB-IoT/ GSM connectivity and backup battery. Device equipped with GNSS/Bluetooth and LTE CAT-M1/NB-IoT modules with fallback to 2G network, 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.



# **USE CASES**



VEHICLES



HEAVY DUTY Transport



TRAILER Tracking



REFRIGERATED TRANSPORT

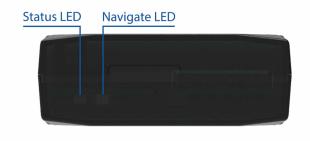


INTERNATIONAL LOGISTICS



CAR Sharing





| Module                   |   |
|--------------------------|---|
| Name                     | Quectel BG96, Teltonika TM2500  |
| Technology               | LTE CAT M1/NB-IoT/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 M1/NB-IoT/GSM   |
| 2G bands                 | B2/B3/B5/B8   |
| 4G bands                 | LTE FDD: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B28<br>LTE TDD: B39 (for CAT M1 only)                  |
| Data transfer            | LTE: Max. 375Kbps (DL)/Max.375Kbps (UL)   GPRS: Max. 85.6Kbps (DL)/Max. 85.6Kbps (UL)                 |
| 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)  |
| Bluetooth                |   |
| Specification            | 4.0 + LE  |
| Supported peripherals    | Temperature and Humidity sensor, OBDII dongle, Inateck Barcode Scanner, Universal BLE 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<br>(without battery) | -40 °C to +85 °C  |
|--|---|
| Storage temperature (without<br>battery)   | -40 °C to +85 °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  |
| Battery storage temperature                | -20 °C to +45 °C for 1 month<br>-20 °C to +35 °C for 6 months |

#### 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), 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)   |
|                                   |   |

## www.trackinghardware.co.uk