

FMC230 Datasheet



OVERVIEW

Typical applications	Ideal for all vehicle types and machines.
Use cases	<ul style="list-style-type: none"> Monitor real-time and historical location Automate servicing and inspection schedules Improve driver safety and performance

GENERAL SPECIFICATIONS

Dimension	70.5x67.0x25.6mm
Weight	79g
Battery (back-up)	170 mAh Li-Ion battery 3.7 V (0.63 Wh)
Battery life	NA
Location updates	Every 30s when moving and powered Every 24hr when stationary or unpowered

OPERATING ENVIRONMENT

Operating temperature	-20°C to +85°C
Storage temperature	-20°C to +85°C
Operating humidity	5% to 95% non-condensing
Battery discharge temperature	-20°C to +60°C

INTERFACE

GNSS antenna	Internal High Gain
Cellular antenna	Internal GSM High Gain
LED indication	2 status LED
Configuration	Automatic OTA (Over The Air) updates
Sensors	Accelerometer

CONNECTIVITY

Technology	LTE(CaT1)/2G(GSM/GPRS)/GNSS/BLUETOOTH® LE
GNSS	GPS, GLONASS, GALILEO, BEIDOU, QZSS, AGPS
Tracking sensitivity	-165 dBm
Position accuracy	<2.5 m CEP
2G bands	GSM: B2/B3/B5/B8
4G bands	LTE FDD: B1/B2/B3/B4/B5/B7/B8/B20/B28 LTE-TDD: B40
Receiver	33 channel
Global Network	Yes, when powered

CERTIFICATIONS & APPROVALS

IP grade	IP67
Approvals	CE-RED, E-mark, RCM, Anatel, TRA, CITC, REACH, RoHS, ICASA



ASSET IoT Gateway

ABAX FMM230 Datasheet

OVERVIEW

The ABAX FMM230 IoT Gateway is ideal for monitoring of all types of vehicles, vans, trailers, heavy equipment and high-value mobile assets and is designed for rapid return of investment.

FMM230 is a water and dust resistant real-time GPS-tracker with a backup battery when needed. It enables improved operating efficiency, asset recovery, and streamlined regulatory compliance.

It is part of ABAX IoT global network that combines asset tracking, fleet management, and compliance solutions in a single platform.



TYPICAL APPLICATIONS

- Vehicles - all brands and types
 - Corporate vehicles
 - Company vehicles
 - Private vehicles with mileage claim
- Machinery tracking with a power source or 1 usage log
 - Construction equipment
 - Diggers, backhoes, bulldozers, cranes, etc.
 - Forklifts, lifts, dumpers, agriculture
- Single usage logging for all powered assets
- Service and maintenance for heavy equipment and high-value mobile assets

DESIGNED TO ACCESS THE IOT NETWORK

A gateway of the ABAX global IoT network. Advanced positioning system simultaneously reads from multiple independent satellite systems including GPS, Glonass, Galileo and BeiDou global navigation satellite systems.

Internal antenna for discreet installation.

Cat-M1 LTE with 2G fallback world wide connectivity to ensure the unit are always online.

Real-time GPS location with live updates.

Automatic OTA (Over The Air update).

PRODUCT HIGHLIGHTS

- External alternate supplier to serve both vehicle and equipment
- Ensure your corporate vehicles are tax compliant
- A flexible solution for heavy equipment
- Monitor and increase asset utilization
- Optimize asset pool inventory and location
- Recover lost assets
- Get an overview over your drivers driving behaviour



ABAX FMM230 Datasheet

GENERAL SPECIFICATIONS

Dimension	70,5x67,0x25,6 mm 85,0x67,0x25,6 mm (length with connector socket)
Weight	55g
Storage temperature	-20°C to +85°C (without battery) 20°C to +45°C (with battery)
Operating temperature	-20°C to +85°C (without battery) -20°C to +45°C (with battery)
Sensors	Accelerometer
Input voltage range	10 - 30 v DC with overvoltage protection
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)
Internal Back-up battery	170 mAh Li-Ion battery 3.7 V (0.63 Wh)
Cellular	LTE CAT M1/NB-IoT/GSM LTE: Max. 588Kbps (DL)/ Max.1119Kbps (UL) GPRS: Max. 107Kbps (DL)/Max. 85.6Kbps (UL)
Position updates	Every 30 second when powered and in movement, once a day still and once a day when not powered

ENVIRONMENTAL DATA, RELIABILITY, CERTIFICATION

Approvals	CE-RED, E-mark, RCM, Reach, RoHS
IP Grade	IP67

GNSS SPECIFICATIONS

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

MOBILE CONNECTIVITY SPECIFICATIONS

LTE CAT M1/NB-IoT/GSM connectivity supporting bands B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B27/B28/B66/B85 with 2G fallback
GSM network positioning based on antenna site identification
Global support for antenna site triangulation and positioning
Ca. 97% coverage for Europe's GSM network (in terms of GSM positioning)
Timing advance support

INTERFACES

Radio communication frequency	4.0 + LE. Temperature and Humidity sensor, OBDII dongle, Inateck Barcode Scanner, Universal BLE sensors support
Usage logging or general input	10 - 30 V DC with overvoltage protection. Trigger value is >8 Volt DC to start usage logging
Configuration	Automatic OTA (Over The Air update) firmware and configuration updates
Sensors	Accelerometer

