

Product Specifications:

FMC650

Features		
	Installation	Requires installation
	Portal	Real time tracking supported by our own tracking platform
	Immobiliser	Remotely immobilise your vehicle in the event of a theft
	Crash detection	Using the inbuilt accelerometer, track your vehicle and be alerted in the event of a crash
	Eco-driving	Monitor how your efficiency with Eco-driving analysis, by measuring acceleration, braking and cornering
	Speeding detection	Keep your vehicle safe by monitoring driver behaviour
	Jamming detection	Disrupt thieves using GNSS jamming to steal from your vehicles (<i>Jamming detection supported with SLM320-E and SLM320-LA modules</i>)
	GNSS Fuel Counter	Measure fuel consumption and the rate of fuel consumption
	Excessive idling detection	Monitor your vehicles idling times and save money
	Unplug detection	Get an alert if the tracker is removed, which stops tampering with the device and ensuring your protection
	Towing detection	Get alerted if your vehicle is being towed
	Geofencing	Get geofencing alerts using user-defined areas
	CAN Data	Fuel Level (Dashboard), Total fuel consumption, Vehicle speed (wheel), Vehicle driven distance, Engine speed (RPM), Accelerator pedal position
	Sensors	Accelerometer
	Functionalities	Auto Geofencing, Manual Geofencing, Trip detection, Odometer, Fuel counter, GNSS Unplug Detection, DDD download and Tacho online data, Offline tracking
	Supported peripherals	Garmin, RFID RS232, RFID I-Wire, iButton I-Wire, Temperature I-Wire, LV-CAN200, CAN FMS (J1939, J1708), K-line data, Continental tire pressure measurement sensor, Iridium SBD (Iridium Edge/TSM232), Carrier freezer, Log Mode, NMEA, TCP ASCII/Binary, Temperature and humidity sensor, Universal BLE® sensors support
	Sleep modes	GPS Sleep, Online Deep Sleep, Deep Sleep
	Configuration and firmware update	FOTA Web, FOTA, Teltonika Configurator
	SMS	Configuration, Events, DOUT control, Debug
	GPRS commands	Configuration, DOUT control, Debug

Features		
	Time Synchronization	GNSS, NITZ, NTP
	Ignition detection	Digital Input, Accelerometer, External Power Voltage
	RS232 Modes	Log Mode, NMEA, LLS, LCD, RFID HID/MF7, Garmin FMI, TCP ASCII/Binary, TCP ASCII/Binary (Buffered), Rec to LCD, Atol Tachograph, UL202-2 Fuel Sensor, Iridium Edge/TSM232 Satellite backup, Carrier Freezer
	RS485 Modes	Silent, Log Mode, NMEA, LLS, TCP ASCII/Binary, TCP ASCII/Binary (Buffered)

Module		
	Name	FMC650-MBX50: MeiG SLM320-PE2C
	Technology	LTE (Cat1) / 2G (GSM / GPRS)

GNSS		
	Module name	Airoha AG3335MB
	GNSS	GPS, GLONASS, GALILEO, BEIDOU, QZSS
	Receiver	L1: 75 acquisition/tracking channels L5: 60 tracking channels
	Tracking sensitivity	-165 dBm
	Position Accuracy	< 2.5 m CEP
	Hot start	< 1 s
	Warm start	< 25 s
	Cold start	< 32 s
	Velocity Accuracy	< 0.1 m/s (within +/- 15% error)

Cellular		
	Technology	LTE Cat 1, GSM
	2G bands	FMC650-MBX50: B2/B3/B5/B8
	4G bands	FMC650-MBX50: LTE-FDD: B1/B3/B7/B8/B20/B28 LTE-TDD: B38/B40/B41
	Data transfer	LTE FDD: Max 10Mbps (DL)/Max 5Mbps (UL) LTE TDD: Max 8Mbps (DL)/Max 2Mbps (UL) GPRS: Max 85.6Kbps (DL)/Max 85.6Kbps (UL)
	Data support	SMS (text/data)
	Transmit power	Class 4 for GSM850/900: 31±2dBm Class 1 for GSM1800/1900: 30±2dBm Class 3 for LTE-TDD: 23±3dBm Class 3 for LTE-FDD: 23±3dBm Bluetooth LE: up to 6.64 dBm

Power		
	Input voltage range	8–32 V DC with overvoltage (compatible with pulse 5a and pulse 5b) and reverse polarity protection
	Internal Back-up battery	550 mAh Ni-Mh, 8.4 V battery
	Internal fuse	3A, 125V
	2 W max. Current consumption at 12 V	At 12V < 4 mA (Deep Sleep) At 12V < 11 mA (Online Deep Sleep) At 12V < 32 mA (GPS Sleep) At 12V < 45 mA (nominal with no load) At 12V < 0.25 A Max. (with full Load / Peak)
	2 W max. Current consumption at 24 V	GPRS: average 35 mA Nominal: average 24 mA (with no load) GNSS sleep: average 17 mA Deep Sleep: average 2,9 mA Online Deep Sleep: average 7 mA Full Load/Peak: <0.25A Max

Bluetooth technology		
	Name	Blue NRG232
	Specification	5.0 + LE
	Supported peripherals	Temperature and Humidity sensor, Universal BLUETOOTH® LE sensors support

Interface		
	Digital Inputs	4
	Digital Outputs	4
	Analog Inputs	4
	1-Wire	1
	RS232	2
	RS485	1
	CAN J1939	2
	J1708	1
	K-line	1
	GNSS antenna	External High Gain (L1+L5)
	Cellular antenna	External High Gain
	USB	2.0 Mini-USB – device can be powered by USB for easier device configuration
	LED indication	2 status LED lights
	SIM	2x SIM Card (Dual-SIM) or 1x eSIM

Interface		
	Memory	16 MB internal flash memory and external Micro SD card up to 32GB
	Switchable CAN terminals	Supported on CAN1 and CAN2 lines

Physical specification		
	Weight	197 g
	Dimensions	104.1 x 76.8 x 31.5 mm (L x W x H)

Operating environment		
	Operating temperature (without battery)	-40 °C to +85 °C
	Storage temperature (without battery)	-40 °C to +85 °C
	Operating humidity	5% to 95% non-condensing
	Storage temperature (with battery)	-20 °C to +45 °C
	Ingress Protection Rating	IP41
	Battery storage temperature	-20 °C to +45 °C for 1 month -20 °C to +35 °C for 6 months

Certification & approvals		
	Regulatory	CE-RED, UKCA, E-mark, RCM, Pulse 5a, SIRIM QAS, ICASA, CITC