FMC125

ADVANCED LTE TERMINAL WITH GNSS AND LTE/3G/GSM CONNECTIVITY, RS485/ RS232 INTERFACES AND BACKUP BATTERY

FMC125 is small and professional real-time tracking terminal with GNSS and LTE/3G/GSM connectivity and backup battery. Device equipped with GNSS/Bluetooth and LTE modules, internal GNSS, LTE antennas. FMC125 features RS485/RS232 data interface, which gives ability to connect various third-party external devices. 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.

4G
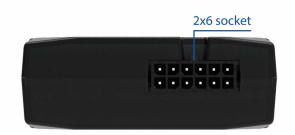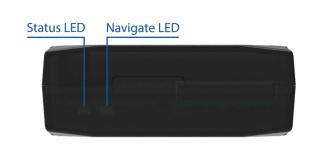Reliable 4G connection with fallback to 3G network

Bluetooth for external devices and Low Energy sensors

ECU
CAN data reading from vehicles and specialized transport

Double network reliability and multiple network selection

RS232 RS485
RS232/RS485 serial communication interfaces

1-Wire®
1-Wire® interface to monitor temperature data and RFID/iButton tags

USE CASES

LIGHT VEHICLES

HEAVY DUTY TRANSPORT

TRAILER TRACKING

REFRIGERATED TRANSPORT

INTERNATIONAL LOGISTICS

CAR SHARING

2x6 socket

Status LED   Navigate LED

Module

Name	Quectel EC21-AU, Quectel EC21-EC, Teltonika TM2500
Technology	LTE(CaT1)/3G(UMTS/HSPA)/2G(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 1, UMTS, GSM	
2G bands	EC21-AU:	GSM: B2/B3/B5/B8
	EC21-EC:	GSM: B3/B8
3G bands	EC21-AU:	WCDMA: B1/B2/B5/B8
	EC21-EC:	WCDMA: B1/B8
4G bands	EC21-AU:	LTE FDD: B1/B2/B3/B4/B5/B7/B8/B28
		LTE TDD: B40
	EC21-EC:	LTE FDD: B1/B3/B7/B8/B20/B28A
Data transfer	LTE:	LTE FDD: Max 10Mbps (DL)/Max 5Mbps (UL)
		LTE TDD: Max 8.96Mbps (DL)/Max 3.1Mbps (UL)
	UMTS:	WCDMA: Max 384Kbps (DL)/Max 384Kbps (UL)
	GSM:	GPRS: Max 107Kbps (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 20.6 mm (L x W x H)
Weight	55 g

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
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 -20 °C to +35 °C for 6 months

Interface

Digital Inputs	1
Digital Outputs	1
Analog Inputs	1
CAN Adapter Inputs	1
1-Wire	1
RS232	1
RS485	1
GNSS antenna	Internal High Gain
Cellular antenna	Internal High Gain
USB	2.0 Micro-USB
LED indication	2 status LED lights
SIM	2x SIM Card (Dual-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), Digital LLS (RS232, RS485), LV-CAN200, ALL-CAN300, CAN-CONTROL, OBDII dongle
Ignition detection	Digital Input 1, Accelerometer, External Power Voltage, Engine RPM (CAN Adapters, OBDII dongle)
RS232 Modes	Log Mode, NMEA, LLS, LCD, RFID HID/MF7, Garmin FMI, TCP ASCII/Binary
RS485 Modes	Log Mode, NMEA, LLS, TCP ASCII/Binary