TELTONIKA | Telematics

FMC650

PROFESSIONAL LTE/GNSS/BLE TERMINAL

Teltonika FMC650 is a direct successor to current most popular 4G PROFESSIONAL lineup device – FMC640. FMC650 has 4G (LTE Cat 1) network coverage including 2G (GSM) fallback compatibility. Device equipped with GNSS and LTE modules, external GNSS and LTE antennas. Separate GNSS module improves the accuracy of the track, making FMC650 more suitable for free flow electronic tolling system integration. Compared to FMC640 – FMC650 has a new processor that improves the devices computation power along with increased device internal memory it can be tailored to more specific use cases. Switchable CAN terminators that will allow you to use the device in CAN network with numerous nodes. Lastly, it can be powered via USB for easier configuration process. All the features that are supported by FMC640 is also supported by FMC650, therefore it will maximize your fleet efficiency with features like FMS CAN data (J1939), fuel CAN data (J1708), tachograph live data (K-Line), remote tachograph file download, various third party RS232 or RS485 devices support and Dual-SIM or eSIM compatibility. Terminal is suitable for applications like international logistics, refrigerated transport, agriculture, construction & mining, security & emergency services and even more.
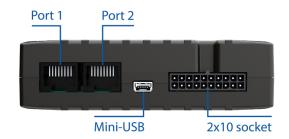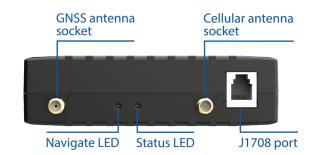
4G
Reliable 4G connection with fallback to 2G network

Allows device to work without external power source

ECU
CAN data reading from vehicles and specialized transport

Remote tachograph data download

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

RS232 RS485
RS232/RS485 serial communication interfaces

USE CASES

CONSTRUCTION AND MINING

HEAVY DUTY TRANSPORT

PUBLIC SAFETY SERVICES

REFRIGERATED TRANSPORT

INTERNATIONAL LOGISTICS

AGRICULTURE TRANSPORT

Port 1   Port 2

Mini-USB   2x10 socket

GNSS antenna socket   Cellular antenna socket

Navigate LED   Status LED   J1708 port

Module

Name	MeiG SLM320 -PE2C, MeiG SLM320-L16A
Technology	LTE(CaT1)/ 2G(GSM/GPRS)

GNSS

Module Name	Airoha AG3335MB
GNSS	GPS, GLONASS, GALILEO, BEIDOU, QZSS
Receiver	L1 and L5 dual-band GNSS receiver
Tracking sensitivity	-162 dBM
Position accuracy	< 2.5 CEP
Hot start	< 1.5 s
Warm start	< 25 s
Cold start	< 32 s

Cellular

Technology	LTE Cat 1, GSM
2G bands	SLM320-PE2C: B2/B3/B5/B8 SLM320-L16A: B2/B3/B5/B8
4G bands	SLM320-PE2C: LTE-FDD:B1/B3/B7/B8/B20/B28 LTE-TDD:B38/B40/B41 SLM320-L16A: LTE-FDD:B1/B2/B3/B4/B5/B7/B8/B20/B28 LTE-TDD:B40
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)

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

Bluetooth

Name	Blue NRG232
Specification	5.0 + LE
Supported peripherals	Temperature and Humidity sensor, Universal BLE sensors support

Physical specification

Dimension	104,1 x 76,8 x 31,5 mm (L x W x H)
Weight	197 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 storage temperature	-20 °C to +45°C

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

Features

Movement detection	Accelerometer
Scenarios	Green/Eco Driving, Over Speeding detection, Jamming detection, Excessive Idling detection, Towing detection, Crash detection, Immobilizer, iButton Read Notification
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 1-Wire, iButton 1-Wire, Temperature 1-Wire, LV-CAN200, ALL-CAN300, CAN-CONTROL, CAN FMS (J1939, J1708), K-line data, Continental tire pressure measurement sensor, Iridium SBD (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
Time Synchronization	GNSS, NITZ, NTP
Fuel monitoring	LLS (Analog), Digital LLS (RS232, RS485), LV-CAN200, ALL-CAN300, CAN-CONTROL, CAN FMS, Ultrasonic level sensor
Ignition detection	Digital Input, Accelerometer, External Power Voltage

Certification & Approvals

Regulatory	CE/RED, E-Mark in progress