FMC640

PROFESSIONAL LTE/GNSS TERMINAL

FMC640 is a PROFESSIONAL series device with 4G (LTE Cat 1) network coverage including 3G (UMTS), 2G (GSM) fallback compatibility. Device equipped with GNSS/Bluetooth and LTE modules, external GNSS and LTE antennas. FMC640 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.Terminal is suitable for applications like international logistics, refrigerated transport, agriculture, construction & mining, security & emergency services and even more. Device supports universal BLE sensors, beacon tags, hands-free, firmware and configuration update via Bluetooth.

Reliable 4G connection with fallback to 3G and 2G network

Bluetooth for external devices and Low Energy sensors

CAN data reading from vehicles and specialized transport

Dual SIM – significantly reduce roaming costs

RS232/RS485 serial communication interfaces

Tachograph files and data remote download

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	Quectel EG91-EX
Technology	LTE(CaT1)/3G(UMTS/HSPA)/2G(GSM/GPRS)/GNSS

GNSS

GNSS	GPS, GLONASS, GALILEO, BEIDOU, QZSS
Protocol compatible	NMEA, GGA, GGL, GSA, GSV, RMC, VTG
Receiver	Tracking: 33/99 acquisition channels
Tracking sensitivity	-165 dBM
Accuracy	< 3 m
Hot start	< 1 s
Warm start	< 25 s
Cold start	< 35 s

Cellular

Technology	LTE Cat 1, UMTS, GSM
2G bands	EG91-EX: GSM: B3/B8
3G bands	EC91-EX: WCDMA: B1/B8
4G bands dedicated for EMEA region	EC91-EX: LTE FDD: B1/B3/B7/B8/B20/B28
Data transfer	LTE: LTE FDD: Max 10Mbps (DL)/Max 5Mbps (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	550 mAh Ni-Mh, 8,4 V battery

Bluetooth

Specification	5.0 + LE
Supported peripherals	Temperature and Humidity sensor, Headset, Universal BLE sensors support

Physical specification

Dimensions	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

Interface

Digital Inputs	4
Digital Outputs	4
Analog Inputs	4
1-Wire interface	1
RS232	2
RS485	1
CAN J1939	2
J1708	1
K-line	1
GNSS antenna	External High Gain
Cellular antenna	External LTE CAT 1 High Gain
USB	2.0 Mini-USB
LED indication	2 status LED lights
SIM	2x SIM Card (Dual-SIM)
Memory	2 MB internal flash memory and external Micro SD card

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
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