FMB641

LEADING GNSS/GSM TERMINAL FOR PROFESSIONAL APPLICATIONS

Teltonika FMB641 is an updated version of current most popular GNSS, GSM terminal for PROFESSIONAL applications FMB640. Compared to FMB640 – FMB641 has new processor that improves the devices computation power therefore 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 FMB640 is also supported by FMB641, for the purpose of maximizing 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.

Dual SIM – significantly reduce roaming costs

Allows device to work without external power source

CAN data reading from vehicles and specialized transport

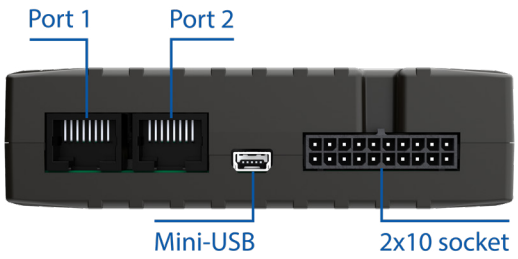
Remote tachograph data download

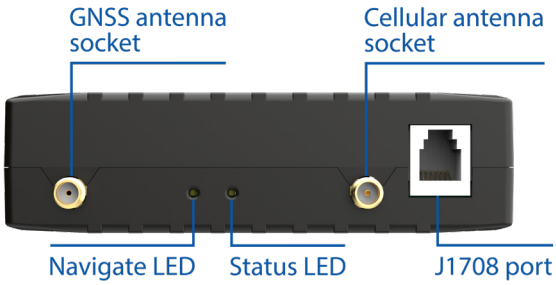
1-Wire® interface to monitor temperature data and RFID/iButton tags

RS232/RS485 serial communication interfaces

USE CASES

- CONSTRUCTION AND MINING
- HEAVY DUTY TRANSPORT
- PUBLIC SAFETY SERVICES
- REFRIGERATED TRANSPORT
- INTERNATIONAL LOGISTICS
- AGRICULTURE TRANSPORT





Module

Name	Teltonika TM2500
Technology	GSM/GPRS/GNSS

GNSS

GNSS	GPS, GLONASS, GALILEO, BEIDOU, SBAS, QZSS, DGPS
Receiver	33/99 acquisition channels
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	GSM/GPRS
2G	Quad-band 850 / 900 / 1800 / 1900 MHz
GPRS	GPRS Mobile Station Class B
Data transfer	GPRS Multi-Slot Class 12(up to 240 kbps)
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

Power Consumption

At 12V < 7 mA	Deep Sleep
At 12V < 12 mA	Online Deep Sleep
At 12V < 28 mA	GPS Sleep
At 12V < 65mA	Nominal with no load
At 12V < 120 mA	GPRS

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

Features

Sensors	Accelerometer
Scenarios	Green/Eco Driving, Over Speeding detection, Jamming detection, Excessive Idling detection, Towing detection, Crash detection, Immobilizer, iButton Read Notification, Auto Geofencing, Manual Geofencing, Trip detection, Odometer, Fuel counter, GNSS Unplug Detection, DDD download and Tacho online data, Offline tracking, Voice call
Supported peripherals	RFID RS232, RFID 1-Wire, iButton 1-Wire, Temperature 1-Wire, Continental tire pressure measurement sensor
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 (J1939, J1708), Ultrasonic level sensor
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, TSM232 Sattelite backup, Carrier Freezer
RS485	Silent, Log Mode, NMEA, LLS, TCP ASCII/Binary, TCP ASCII/Binary (Buffered)

RS485 input voltage range on A or B pin (common-mode voltage)	-7V to +12V
RS232 input voltage range (common-mode voltage)	+/-15V
RS232 input voltage range (maximum operational voltage)	+/-25V

Certification & Approvals

Regulatory	CE/RED, E-Mark in progress