



# TMT250

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Mini Tracker Easy

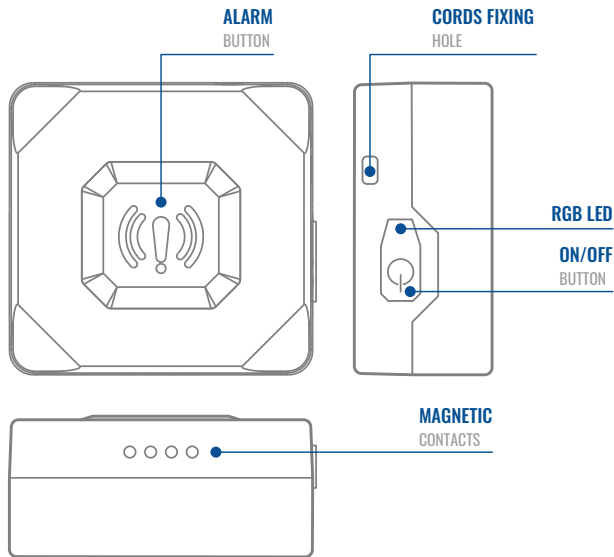
Quick Manual v1.0

# CONTENT

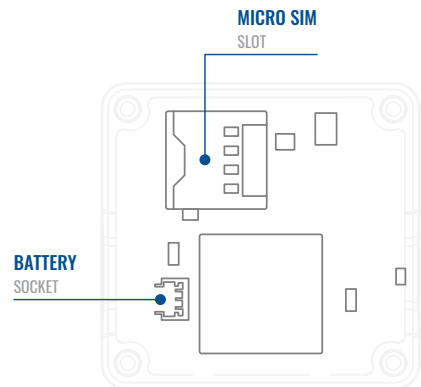
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# KNOW YOUR DEVICE

## TOP VIEW

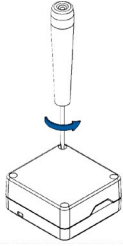


## TOP VIEW (WITHOUT COVER)



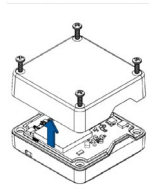
# SET UP YOUR DEVICE

## HOW TO INSERT MICRO-SIM CARD AND CONNECT THE BATTERY



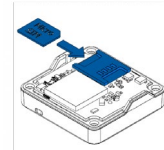
### 1 COVER OPENING

Unscrew 4 screws counterclockwise



### 2 COVER REMOVAL

Remove the cover.

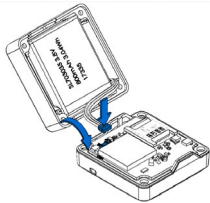


### 3 REMOVING PROTECTION

Insert Micro-SIM card as shown with PIN request disabled or read [Wiki](#)<sup>1</sup> how to enter it later in [Teltonika Configurator](#)<sup>2</sup>. Make sure that Micro-SIM card cut-off corner is pointing forward to slot.

<sup>1</sup> [wiki.teltonika-mobility.com/view/TMT250\\_Security\\_info#SIM\\_Card](http://wiki.teltonika-mobility.com/view/TMT250_Security_info#SIM_Card)

<sup>2</sup> [wiki.teltonika-mobility.com/view/Teltonika\\_Configurator](http://wiki.teltonika-mobility.com/view/Teltonika_Configurator)

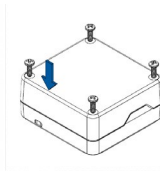


### 4 BATTERY CONNECTION

Connect the **battery** as shown to the device.

After configuration, see [PC Connection \(WINDOWS\)](#). When it is done, reattach the cover and push it in place.

<sup>1</sup> Page 5, "PC Connection (Windows)"



### 5 ATTACHING COVER BACK

Attach device cover back and screw in all 4 screws.

# PC CONNECTION (WINDOWS)

1. Connect device to computer using **Magnetic USB cable** or **Bluetooth** connection:
  - Using **Magnetic USB cable**
    - You will need to install USB drivers, see "[How to install USB drivers \(Windows\)](#)"<sup>1</sup>
  - Using **Bluetooth**
    - TMT250 Bluetooth is enabled by default. Turn on **Bluetooth** on your PC, then select **Add Bluetooth or other device > Bluetooth**. Choose your device named – "TMT250\_last\_7\_imei\_digits", without LE in the end. Enter default password 5555, press **Connect** and then select **Done**.
2. You are now ready to use the device on your computer.

<sup>1</sup> Page 5, "How to install USB drivers (Windows)"

## HOW TO INSTALL USB DRIVERS (WINDOWS)

1. Please download COM port drivers from [here](#)<sup>1</sup>.
2. Extract and run **TeltonikaCOMDriver.exe**.
3. Click **Next** in driver installation window.
4. In the following window click **Install** button.
5. Setup will continue installing the driver and eventually the confirmation window will appear. Click **Finish** to complete the setup.

<sup>1</sup> [wiki.teltonika-mobility.com/images/d/d0/TeltonikaCOMDriver.zip](http://wiki.teltonika-mobility.com/images/d/d0/TeltonikaCOMDriver.zip)

# CONFIGURATION (WINDOWS)

At first the device will have default factory settings set, unless pre-configured device settings are ordered. These settings should be changed according to the user's needs. Main configuration can be performed via [Teltonika Configurator](#)<sup>1</sup> software. Get the latest **Configurator** versions from [here](#)<sup>2</sup>. Configurator operates on **Microsoft Windows OS** and uses prerequisite **MS .NET Framework**. Make sure you have the correct version installed.

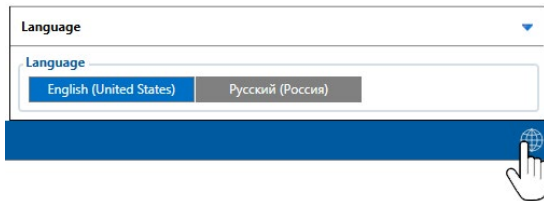
<sup>1</sup> [wiki.teltonika-mobility.com/view/Teltonika\\_Configurator](http://wiki.teltonika-mobility.com/view/Teltonika_Configurator)


<sup>2</sup> [wiki.teltonika-mobility.com/view/TMT250\\_Stable\\_firmware](http://wiki.teltonika-mobility.com/view/TMT250_Stable_firmware)

## MS .NET REQUIREMENTS

Operating system	MS .NET Framework version	Version	Links
Windows Vista			
Windows 7			
Windows 8.1	MS .NET Framework 4.6.2	32 and 64 bit	<a href="http://www.microsoft.com">www.microsoft.com</a> <sup>1</sup>
Windows 10			

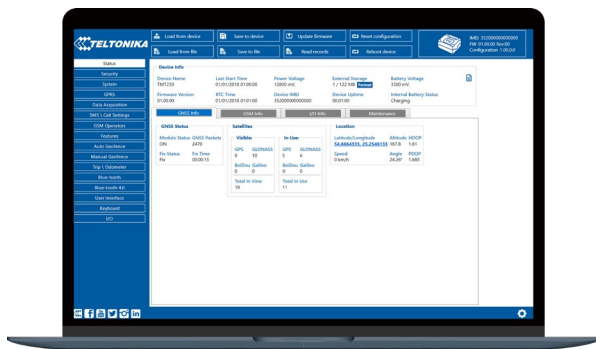
<sup>1</sup> [dotnet.microsoft.com/en-us/download/dotnet-framework](http://dotnet.microsoft.com/en-us/download/dotnet-framework)



Downloaded Configurator will be in compressed archive. Extract it and launch Configurator.exe. After launch software language can be changed by clicking  in the right bottom corner. Turn On device by connecting Magnetic USB cable or pressing Power On button for 2 sec. When device is turned on LED should start blinking. Then connect device to computer using Magnetic USB cable. For configuration also can be used Bluetooth (Device Bluetooth is enabled by default, default password 5555) connection.











Configuration process begins by pressing on connected device.



After connection to Configurator **Status window** will be displayed.

Various **Status window**<sup>1</sup> tabs display information about **GNSS**<sup>2</sup>, **GSM**<sup>3</sup>, **I/O**<sup>4</sup>, **Maintenance**<sup>5</sup> and etc. TMT250 has one user editable profile, which can be loaded and saved to the device. After any modification of configuration the changes need to be saved to device using **Save to device** button. Main buttons offer following functionality:

-  **Load from device** – loads configuration from device.
-  **Save to device** – saves configuration to device.
-  **Load from file** – loads configuration from file.
-  **Save to file** – saves configuration to file.
-  **Update firmware** – updates firmware on device.
-  **Read records** – reads records from the device.
-  **Reboot device** – restarts device.
-  **Reset configuration** – sets device configuration to default.

Most important configurator section is **GPRS** – where all your server and **GPRS settings**<sup>6</sup> can be configured and **Data Acquisition**<sup>7</sup> – where data acquiring parameters can be configured. More details about TMT250 configuration using Configurator can be found in our **Wiki**<sup>8</sup>.

<sup>1</sup> [wiki.teltonika-mobility.com/view/TMT250\\_Status\\_info](http://wiki.teltonika-mobility.com/view/TMT250_Status_info)  
<sup>2</sup> [wiki.teltonika-mobility.com/view/TMT250\\_Status\\_info#GNSS\\_Info](http://wiki.teltonika-mobility.com/view/TMT250_Status_info#GNSS_Info)  
<sup>3</sup> [wiki.teltonika-mobility.com/view/TMT250\\_Status\\_info#GSM\\_Info](http://wiki.teltonika-mobility.com/view/TMT250_Status_info#GSM_Info)  
<sup>4</sup> [wiki.teltonika-mobility.com/view/TMT250\\_Status\\_info#I.2FO\\_Info](http://wiki.teltonika-mobility.com/view/TMT250_Status_info#I.2FO_Info)  
<sup>5</sup> [wiki.teltonika-mobility.com/view/TMT250\\_Status\\_info#Maintenance](http://wiki.teltonika-mobility.com/view/TMT250_Status_info#Maintenance)  
<sup>6</sup> [wiki.teltonika-mobility.com/view/TMT250\\_GPRS\\_settings](http://wiki.teltonika-mobility.com/view/TMT250_GPRS_settings)  
<sup>7</sup> [wiki.teltonika-mobility.com/view/TMT250\\_Data\\_acquisition\\_settings](http://wiki.teltonika-mobility.com/view/TMT250_Data_acquisition_settings)  
<sup>8</sup> [wiki.teltonika-mobility.com/view/TMT250\\_Configuration](http://wiki.teltonika-mobility.com/view/TMT250_Configuration)

# QUICK SMS CONFIGURATION

Default configuration has optimal parameters present to ensure best performance of track quality and data usage.

Quickly set up your device by sending this SMS command to it:

```
« setparam 2001:APN;2002:APN_username;2003:APN_password;2004:Domain;2005:Port;2006:0»
```

1

2

3

4

5

6

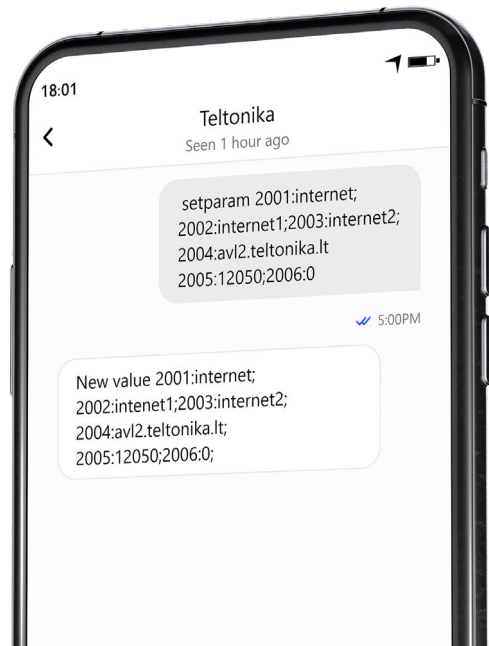
**Note:** Before SMS text, two space symbols should be inserted.

## GPRS SETTINGS:

- 1 2001 – APN
- 2 2002 – APN username (if there are no APN username, empty field should be left)
- 3 2003 – APN password (if there are no APN password, empty field should be left)

## SERVER SETTINGS:

- 4 2004 – Domain
- 5 2005 – Port
- 6 2006 – Data sending protocol (0 – TCP, 1 – UDP)





## DEFAULT CONFIGURATION SETTINGS

### MOVEMENT AND IGNITION DETECTION:



**MOVEMENT**  
will be detected by accelerometer

### DEVICE MAKES A RECORD ON MOVING IF ONE OF THESE EVENTS HAPPEN:



120  
seconds passes



**TRAVELED DISTANCE**  
100 meters



**ANGLE DIFFERENCE**  
between last coordinate and current  
position is greater than 10° degrees



**SPEED DIFFERENCE**  
between last coordinate and current  
position is greater than 10 km/h

### DEVICE MAKES A RECORD ON STOP IF:



1  
Hour passes



**IF DEVICE HAS MADE A RECORD**  
120 sec on move and 600 send on stop

### RECORDS SENDING TO SERVER:

After successful SMS configuration, TMT250 device will synchronize time and update records to configured server. Time intervals and default I/O elements can be changed by using [Teltonika Configurator](#)<sup>1</sup> or [SMS parameters](#)<sup>2</sup>.

<sup>1</sup>[wiki.teltonika-mobility.com/view/Teltonika\\_Configurator\\_Introduction](http://wiki.teltonika-mobility.com/view/Teltonika_Configurator_Introduction)

<sup>2</sup>[wiki.teltonika-mobility.com/view/TMT250\\_Parameter\\_list](http://wiki.teltonika-mobility.com/view/TMT250_Parameter_list)

# TROUBLESHOOTING

## TMT250 DOESN'T SEND DATA TO YOUR CONFIGURED SERVER:

- Check if the device is turned on.
- Check if the SIM card is properly inserted.
- Check if the device has registered to the network.
- Data Acquisition settings are configured correctly.
- Check if your APN, Domain and Port are entered correctly and GPRS

## IF THE DEVICE IS NOT DETECTED BY THE PC OR CONFIGURATOR WHILE PLUGGED IN:

- Check if the device is turned on and the battery is charged to a sufficient level.
- Try using a different COM port.
- Try different Micro-USB cable.
- Reinstall Teltonika COM Driver.
- Reinstall MS .NET Framework.

More information about troubleshooting can be found in [here](#)<sup>1</sup>:

<sup>1</sup> [wiki.teltonika-mobility.com/view/FAQ](http://wiki.teltonika-mobility.com/view/FAQ)

If these recommendations did not help, please contact your sales manager or contact us directly through Teltonika VipHelpDesk. Find recommendations on how to fill in a query in our FAQ page in the Teltonika Wiki Knowledge base.

# MOUNTING RECOMMENDATIONS

We recommend using the device in such a way, that device buttons and LEDs are easily and quickly accessible. When using the Man-down feature, the device must be stably fixed in the configured base position.

# LED INDICATIONS

## DEFAULT STATUS LED INDICATIONS

BEHAVIOUR	MEANING
Red LED flashes frequently	GSM Error
Green LED flashes frequently	No GPS Fix
Green LED flashes rarely	GPS Fix
Red LED and vibration on for 2 sec	Device off
Green LED and vibration on for 2 sec	Device on
Green LED flashes periodically	I Am Alive
Green LED flashes periodically	Charging
Green LED on all the time	Fully Charged
Red LED flashes	Charger Error
Red LED flashes when the level of the battery is 10%	Battery Low

# BASIC CHARACTERISTICS

## MODULE

Name	Teltonika TM2500
Technology	2G (GSM/GPRS) / GNSS/Bluetooth (4.0 + LE)

## GNSS

GNSS	GPS, GLONASS, GALILEO, BEIDOU
Receiver	Tracking: 33
Tracking sensitivity	-165 dBm
Position accuracy	< 3 m
Velocity accuracy	< 0.1m/s (within +/- 15% error)
Hot start	< 1 s
Warm start	< 25 s
Cold start	< 35 s

## CELLUAR

Technology	GSM/GPRS
2G bands	Quad-band GSM 850 / 900 / 1800 / 1900 MHz
Data transfer	GPRS: Max 107Kbps (DL)/Max 85.6Kbps (UL)
Data support	SMS (Text/Data)

## POWER

Internal battery	3.8 V 800 mAh rechargeable Lithium-ion polymer battery
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## BLUETOOTH

Specification	Bluetooth 4.0 + LE
Supported peripherals	Bluetooth LE Movement sensors, LE Magnet sensors, LE Temperature and Humidity sensors and LE Temperature sensors support, iBeacon and Eddystone beacon support

## PHYSICAL SPECIFICATION

Dimensions	44 x 43 x 20 mm (L x W x H)
Weight	40 g

## INTERFACE

GNSS antenna	Internal High Gain
Cellular antenna	Internal GSM High Gain
USB	4 pin magnetic USB Cable
LED indication	1 RGB LED
SIM	Micro-SIM
Memory	128 MB internal flash memory

## OPERATING ENVIRONMENT

Operating humidity	Under 85% non-condensing
Ingress Protection Rating	IP67
Battery charge temperature	0 °C to +45 °C
Battery discharge temperature	-20 °C to +58 °C
Battery storage temperature	-20 °C to +45 °C for 3 months

## FEATURES

Sensors	Accelerometer
Scenarios	Alarm button, Man-down detection, Inside tracking, Movement/No Movement Events, 50 Manual Geofence zones, Over Speeding, Action on call feature, on Demand Tracking, Smart algorithm of GPRS data sending for GPRS traffic saving, Asset tracking
Sleep modes	Online Deep Sleep, Deep Sleep, Ultra Deep Sleep, GPS Sleep, Low power mode
Configuration and firmware update	FOTA Web, Teltonika Configurator (USB, Bluetooth)
SMS	Configuration, Events, Debug

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GPRS commands	Configuration, Debug
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Time	
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Synchronization	GNSS, NITZ, NTP
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## CERTIFICATION & APPROVALS

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Regulatory	CE/RED, EAC, Anatel, UKCA, RoHS, REACH, IP67
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# SAFETY INFORMATION

This message contains information on how to operate TMT250 safely. By following these requirements and recommendations, you will avoid dangerous situations. You must read these instructions carefully and follow them strictly before operating the device!



## Limit the use of device in vehicles

Please follow all restrictions. Wireless devices can interfere with other electronic equipment in vehicles.



## Interference

All wireless devices are sensitive to electromagnetic interference, as a result wireless devices affect the performance of each other.



## Road safety first

Comply with local traffic laws, always hold your hands on a steering wheel when using a device. Your safety is of importance when you drive.



## Operate the device in suitable conditions

Do not use the device where mobile connectivity is forbidden.



## Limit the use of device in hospitals

Please follow all restrictions. Turn off the device in the vicinity of medical devices when required



Be cautious near flammable materials and liquids



## Charging precautions

SELV LPS chargers, personal computers or laptops that device will be connected to must comply with the requirements of IEC 60950:2005 standard.



## Use only original batteries

Using uncertified manufacturer or different type batteries may cause the device to malfunction or even explode



## Use batteries safely

Protect batteries from moisture. Place them in a cool and dry place when storing. Avoid extensive operation at high temperatures. Do not attempt charging battery directly from the electrical mains. All utilised batteries shall comply with IEC 62133.



## Power supplies

Power supply circuits used to charge the device connection must have safeguards, which prevent power leakage, short circuits or in- correct electrical grounding. Any used switches ought to be installed in a readily accessible location. Power must be uninterrupted and the distance between the contacts must be 3 mm or larger.



## Other

In order to prevent device from mechanical damage it is advisable to transport it in a shock-resistant packaging. If device stopped working properly regardless of the settings only a qualified specialist can help. It is recommended to contact your local seller or your UAB Teltonika manager in such a case.



## Use the right screwdriver

In order to prevent device's cover from mechanical damage it is recommended to use screwdriver, which is included in the package. Do not use electrical screwdrivers.



### Remove device safely

Device must be disconnected from computer or charger by unplugging the magnetic USB cable from the device.



Do not short circuit the battery or charging contacts. Exposing the metal strips of the battery to a close contact with a metallic object, such a coin, a clip or a set of keys can cause accidental short-circuiting and damage battery and other components.



To be able to disconnect the charging cable from the mains as quickly as possible in the event of a failure, connect the power supply unit where it is easily accessible.



### Charging precautions

Do not attempt to charge a wet device.



If you notice any visible damage to your GPS tracker or charging cable, do not use it



**Li-ion**

### Battery should not be disposed of with general household waste.

Bring damaged or worn-out batteries to your local recycling center or dispose them to the battery recycling bin found in stores.



Never place the GPS tracker near an open fire or hot surfaces.



Do not immerse the device in any liquids including salt water, ionized water, or soapy water, or alcoholic beverage. Liquid damage not covered under warranty.



If you carry out repairs yourself, connect the GPS tracker incorrectly or operate it incorrectly, liability and warranty claims are excluded.



Make sure that the GPS tracker (also when charging the battery) is kept away from heat sources and high temperatures, such as direct sunlight in a vehicle. Disregarding of this instruction may result in destruction of the battery and overheating, explosion and fire.



Do not remove the battery with sharp or pointed objects. Do not drop, disassemble or modify it.



Use only Teltonika Telematics approved batteries for replacement. Using uncertified manufacturer or different type batterie may cause the device to malfunction or even explode.



If device is stored for a longer time, we recommend to remove battery from the device to prevent damage to battery life.



Only use the original accessories or accessories with approved by technical support for the charging process. If the battery is charged otherwise, this may result in overheating, explosion or fire.



Use only the original parts supplied to charge the GPS tracker. If the charging cable is damaged, replace it only with original accessories from the manufacturer or parts approved by our support team.

# CERTIFICATION AND APPROVALS



This sign on the package means that it is necessary to read the User's Manual before your start using the device. Full User's Manual version can be found in our [Wiki](#)<sup>1</sup>.

<sup>1</sup> [wiki.teltonika-mobility.com/view/TMT250](http://wiki.teltonika-mobility.com/view/TMT250)



This sign on the package means that all used electronic and electric equipment should not be mixed with general household waste.

## CHECK ALL CERTIFICATES

All newest certificates may be found in our [Wiki](#)<sup>2</sup>.

<sup>2</sup> [wiki.teltonika-mobility.com/view/TMT250\\_Certification\\_%26\\_Approvals](http://wiki.teltonika-mobility.com/view/TMT250_Certification_%26_Approvals)

# WARRANTY

We guarantee our products 24-month warranty<sup>1</sup> period.

All batteries carry a 6-month warranty period.

Post-warranty repair service for products is not provided.

If a product stops operating within this specific warranty time, the product can be:

- Repaired
- Replaced with a new product
- Replaced with an equivalent repaired product fulfilling the same functionality
- Replaced with a different product fulfilling the same functionality in case of EOL for the original product

<sup>1</sup> Additional agreement for an extended warranty period can be agreed upon separately.



# WARRANTY DISCLAIMER

- Customers are only allowed to return products as a result of the product being defective, due to order assembly or manufacturing fault.
- Products are intended to be used by personnel with training and experience.
- Warranty does not cover defects or malfunctions caused by accidents, misuse, abuse, catastrophes, improper maintenance or inadequate installation – not following operating instructions (including failure to heed warnings) or use with equipment with which it is not intended to be used.
- Warranty does not apply to any consequential damages.
- Warranty is not applicable for supplementary product equipment (i. e. PSU, power cables, antennas) unless the accessory is defective on arrival.
- [More information on what is RMA<sup>1</sup>](#)

<sup>1</sup> [wiki.teltonika-gps.com/view/RMA\\_guidelines](http://wiki.teltonika-gps.com/view/RMA_guidelines)