

# Basic Troubleshooting

## 1 Introduction

### 1.1 About the Troubleshooting

When the tracking device is not working properly, you can perform a diagnostic by using the Device Center installation assistant, diagnostic tool in advanced configurator, the Terminal tool.

### 1.2 Legal Information

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### 1.3 Compatibility

This functionality is compatible with the following devices with the newest firmware version:

- HCV5
- LCV5
- Pro5
- Trace5
- FM-Tco4 HCV
- FM-Tco4 LCV
- FM-Pro4
- FM-Eco4
- FM-Eco4 S/T
- FM-Plug4

## 1.4 Contact Information

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## 1.5 Document Changelog

Version	Date	Modification
2.0	2020-08-13	Updated: Manual structure and design.

## 1.6 Notations

The following notations are used in this document to highlight important information:

### **Bold text**

Used to indicate user interface elements or for emphasis.

### *Italic text*

Used to indicate items that belong to a list and can be selected, also for identification of examples.

### **Note**



Used to highlight important information or special conditions.

### **Tip**



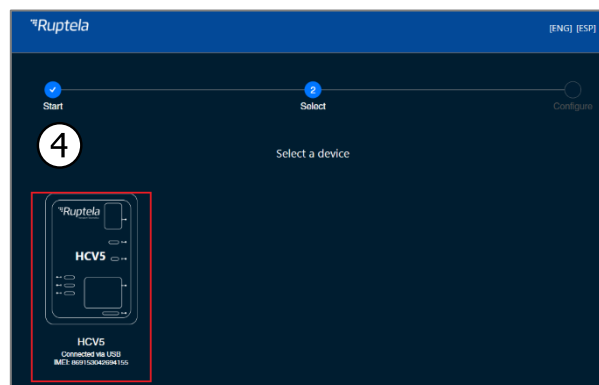
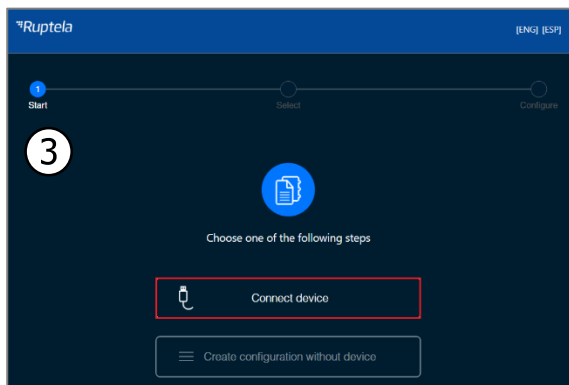
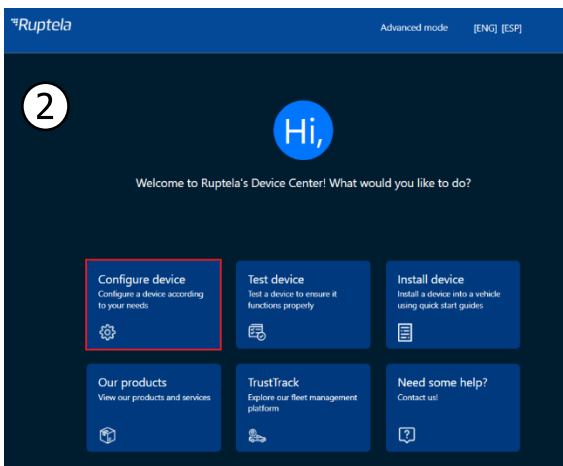
Suggestions on how to proceed.

## 2 Checking Device Configuration


Firstly, check if there are all the necessary connection settings in the device configuration. Follow these steps:


1. Connect the tracking device.
2. Launch the Device Center and click **Configure Device**.
3. Click **Connect device**.
4. Select your tracking device by clicking on it.
5. Click **Load from device** in the button bar to load the configuration.
6. Click on the **Connection** group and check if the **Main Server**, **Protocol** and **APN settings** are entered correctly.


If the settings are correct, but the device is still not sending any data, please refer to chapter 3.




5

 Load from file

 Save to file

 Load from device

 Save to device

6

CONNECTION

**Main server**

IP/Domain name  
92.62.134.34

Port  
9015

**Backup server**

IP/Domain name

Port  
0

Copy all data  
Off

**Protocol**

UDP ● TCP ●

**APN**

Name

Username Password

# 3 Device Testing

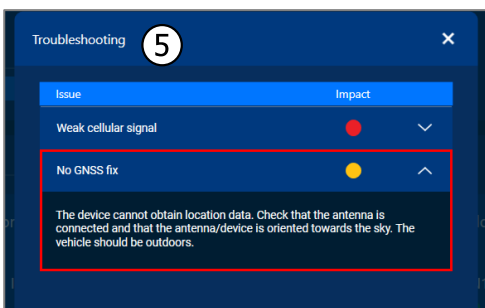
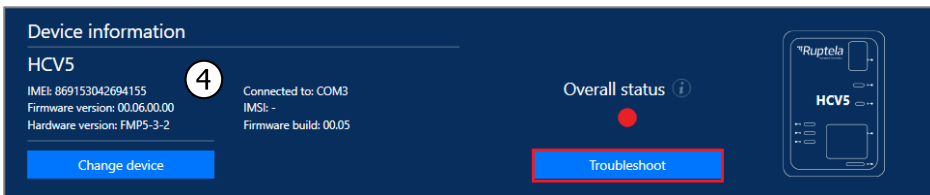
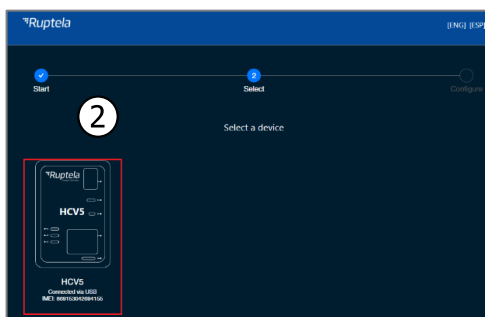
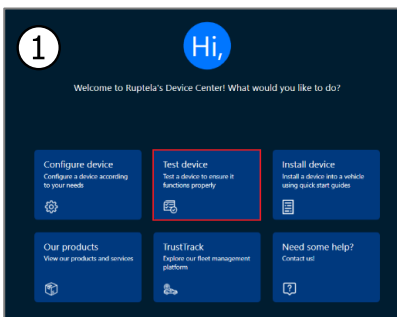
## 3.1 Device Testing via Installation Assistant

You can test your devices using the installation assistant tool. The installation assistant checks the status of the main modules and interfaces in real time, allowing you to quickly solve any issues.

Follow these steps for checking:

1. Go to the Device Center main menu and click **Test Device**.
2. Select your tracking device by clicking on it.
3. Wait until the device configuration and status are read. It may take about 20 seconds.
4. If the **Overall Status** is yellow or red, click **Troubleshoot** to open a list of possible issues.
5. In the troubleshoot window you will see a list of possible issues according to module/interface statuses. Each issue has a yellow (moderate) or red (critical) impact indicator. Click an issue to expand the issue description.

✓ Connect the device to an external power supply before testing. Some critical components (GNSS, cellular modules) cannot be tested when the device is powered only via USB.



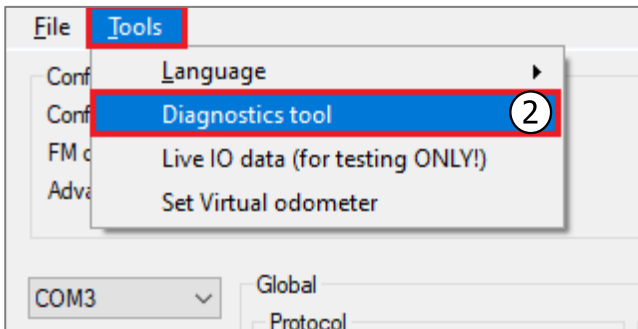
## 3.2 Device Testing via Advanced Configurator



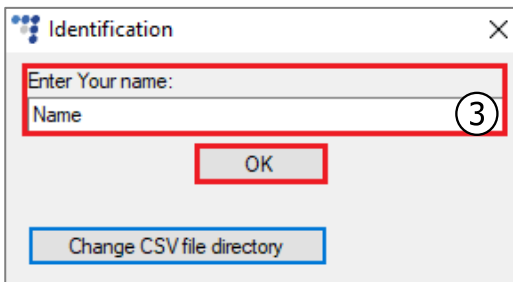
This functionality requires the use of the advanced configurator and is only applicable for the 4<sup>th</sup> generation devices.

You can also test your device using advanced configurator. Follow these steps:

1. Open the advanced configurator main window.
2. Click **Tools** -> **Diagnostics tool**.



3. Enter your name in the pop-up window. Click **OK**.



4. In the **FM Device Diagnostics Window** select the COM port to which your device is connected and click **Connect**.

Check the following parameters: **Main source voltage** (should not be less than 10 V (for the FM-Eco4 S/T devices no less than 6 V), **GPS Status** (the device has to have GPS fix), **Modem** (operator's number **Operator No.** should be visible).

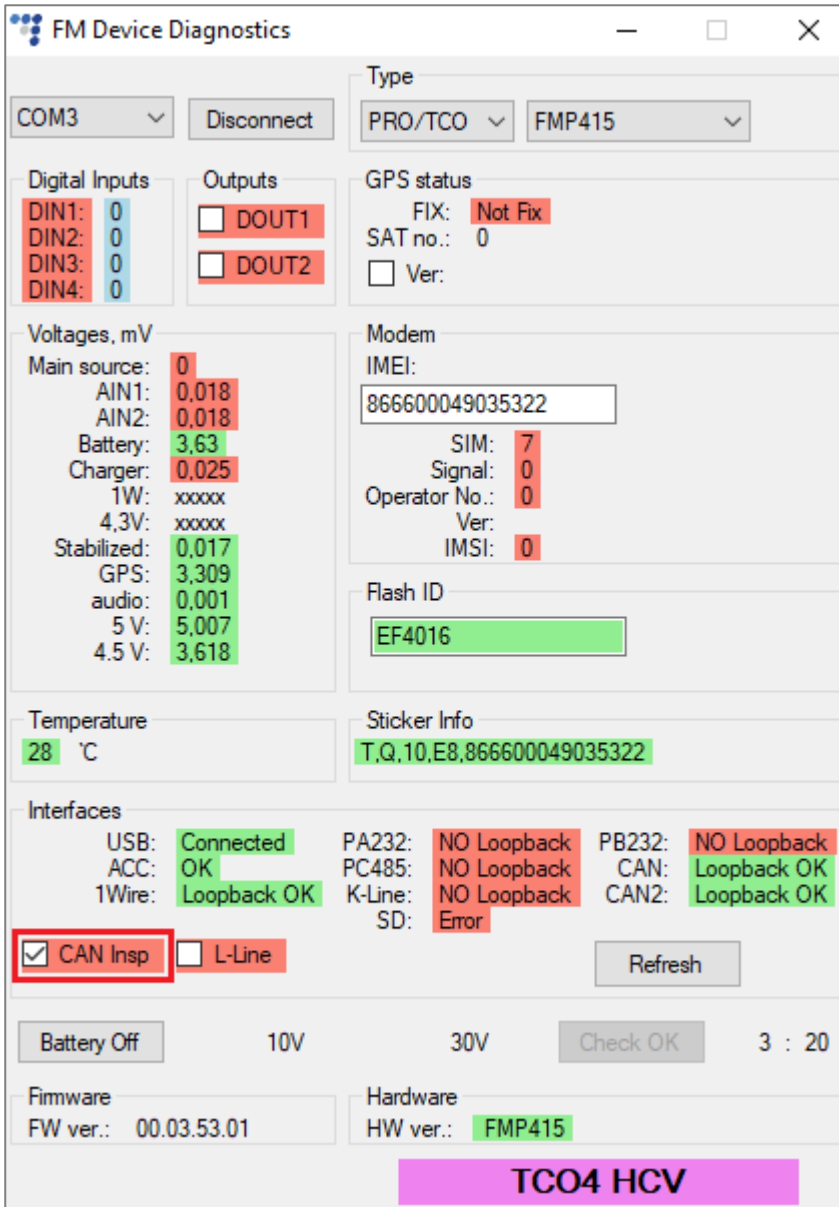
The screenshot displays the 'FM Device Diagnostics' software interface. The window title is 'FM Device Diagnostics'. The interface is divided into several sections:

- Top Bar:** Shows 'COM3' (circled in red with a '4' next to it), a 'Disconnect' button, and 'Type' dropdowns set to 'PRO/TCO' and 'FMP415'.
- Digital Inputs/Outputs:** 'Digital Inputs' shows DIN1-4 all at 0. 'Outputs' shows DOUT1 and DOUT2 with checkboxes.
- Voltages, mV:** A table of voltage readings:

Main source:	0
AIN1:	0,009
AIN2:	0,009
Battery:	3,628
Charger:	0,027
1W:	xxxxx
4,3V:	xxxxx
Stabilized:	0
GPS:	3,309
audio:	0
5 V:	5,004
4.5 V:	3,614
- Modem:** Shows IMEI: 866600049035322, SIM: 7, Signal: 0, Operator No.: 0, Ver: 0, IMSI: 0.
- Flash ID:** EF4016
- Temperature:** 28 °C
- Sticker Info:** T,Q,10,E8,866600049035322
- Interfaces:** USB: Connected, ACC: OK, 1Wire: Loopback OK. PA232: NO Loopback, PB232: NO Loopback, PC485: NO Loopback, CAN: Loopback OK, K-Line: NO Loopback, CAN2: Loopback OK, SD: Error.
- Buttons:** 'CAN Insp' and 'L-Line' checkboxes, and a 'Refresh' button.
- Battery Status:** 'Battery Off' button, voltage levels 10V and 30V, 'Check OK' button, and time 0 : 11.
- Firmware/Hardware:** FW ver.: 00.03.53.01, HW ver.: FMP415.
- Footer:** A pink bar with the text 'TCO4 HCV'.

### 3.2.1 CAN Interface Inspection

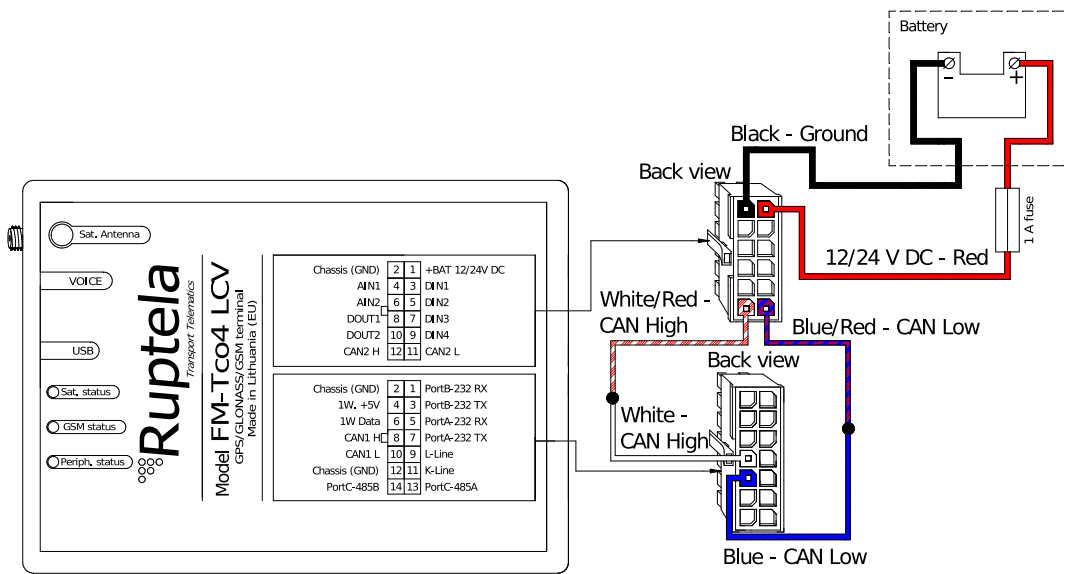
If you have problems with the device's CAN interfaces you can check their state. To check the CAN interfaces, connect the CAN wires like in the schematics on page 8 and check the **CAN Insp** checkbox. If the test is failed, the checkbox will be highlighted in red, if the test passed – in green.



If the parameters are ok, but the tracking device still does not work properly, refer to chapter 3.3.



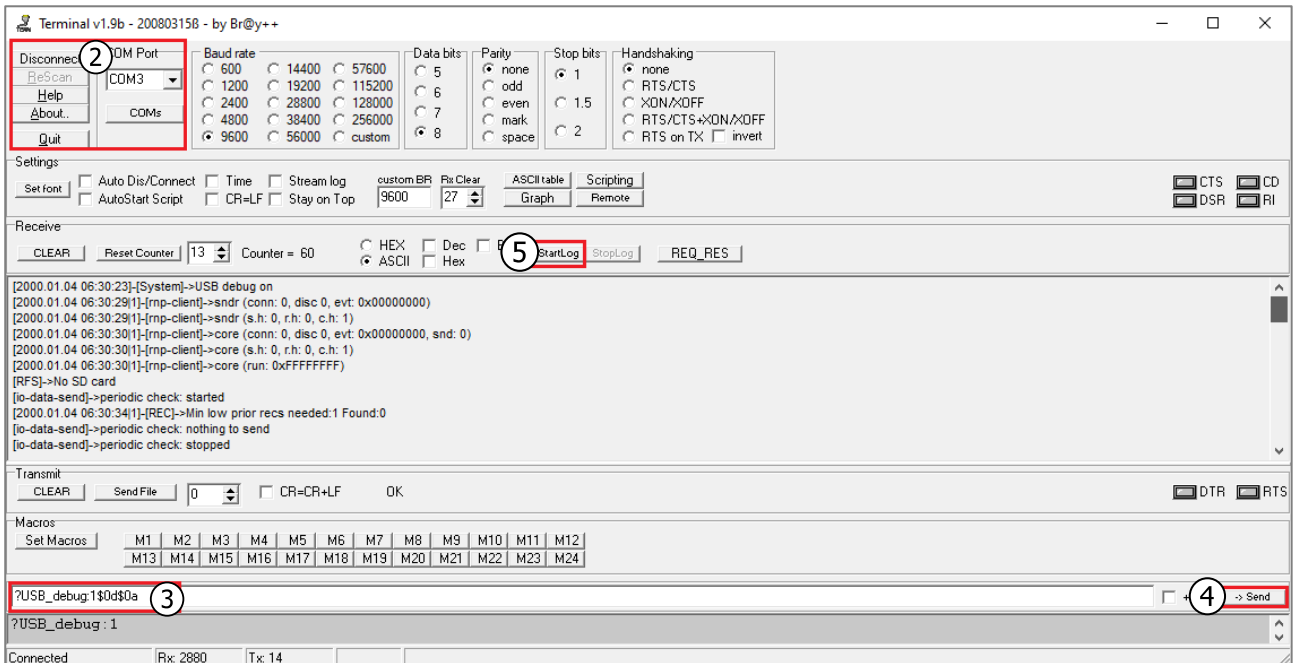
### 3.2.2 Connection Schematic for CAN Interface Inspection



### 3.3 Device Diagnostic via Terminal Tool

If the methods mentioned in the previous chapters did not help, you can use the Terminal tool for diagnostic. Follow these steps:

1. Download the Terminal tool [here](#).
2. Select the COM port to which your device is connected and click **Connect**.
3. Type in the command bar the following command: `?USB_debug:1$0d$0a`.
4. Click **->Send**. A live data stream will be shown.
5. Click **StartLog**. A log will be created. Select a place, where you want to save the log.
6. Wait for a required amount of time for the information to be gathered into the log.



7. Type in the command bar the following command: `?USB_debug:0$0d$0a`.
8. Click **->Send**. The data stream will stop.
9. Click **StopLog**.
10. Click **Disconnect**.
11. Contact the Ruptela technical support for your problem and include the log file into the report.

✓ We recommend gathering a longer log (10-20 min). We also recommend connecting DIN4 to the external power supply to imitate ignition.

