

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.
2.1	2021-01-06	Added: Device Center Troubleshooting. Updated: Legal Information.

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



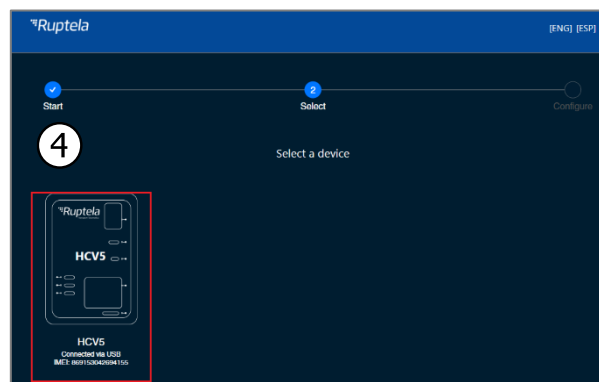
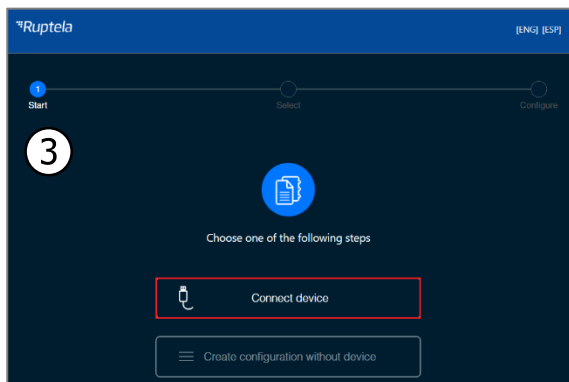
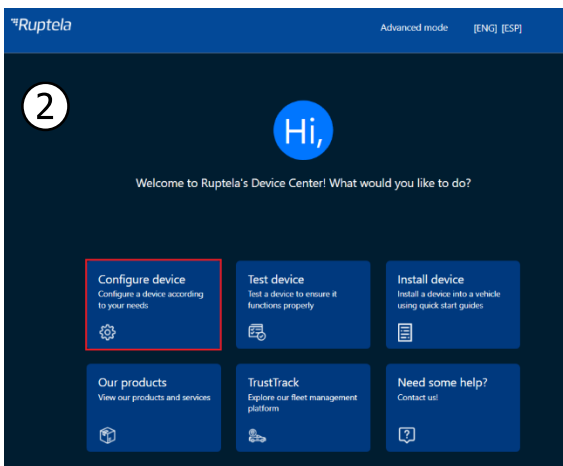
Suggestions on how to proceed.

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

Protocol

UDP TCP

APN

Name

Username Password

Backup server

IP/Domain name

Port
0

Copy all data Off

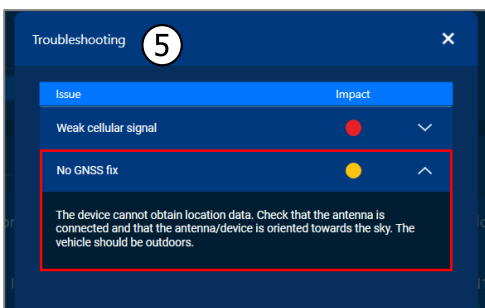
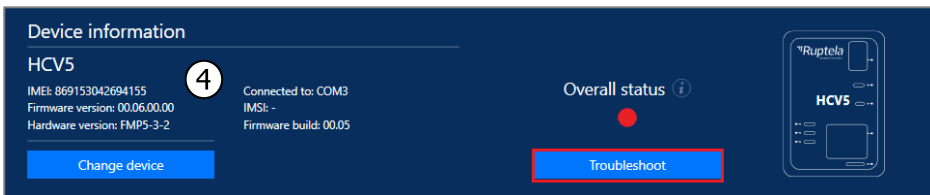
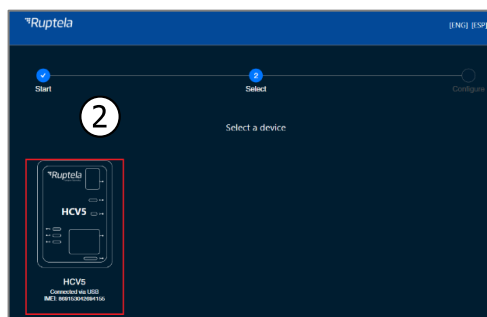
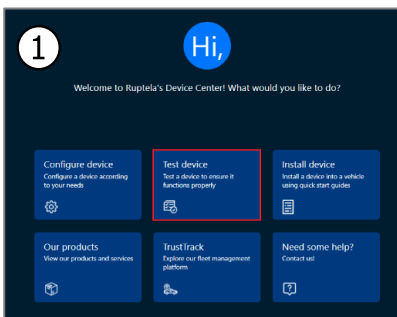
3 Device Testing

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.



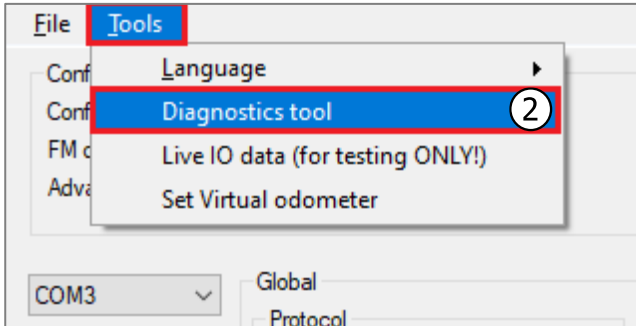
3.2 Device Testing via Advanced Configurator



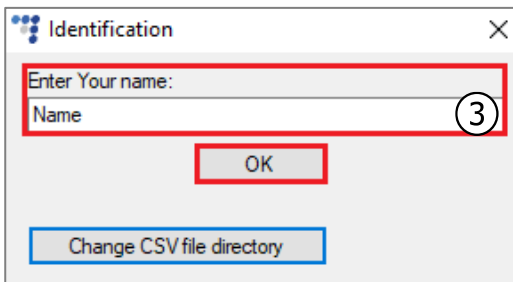
This functionality requires the use of the advanced configurator and is only applicable for the 4th generation devices.

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**.

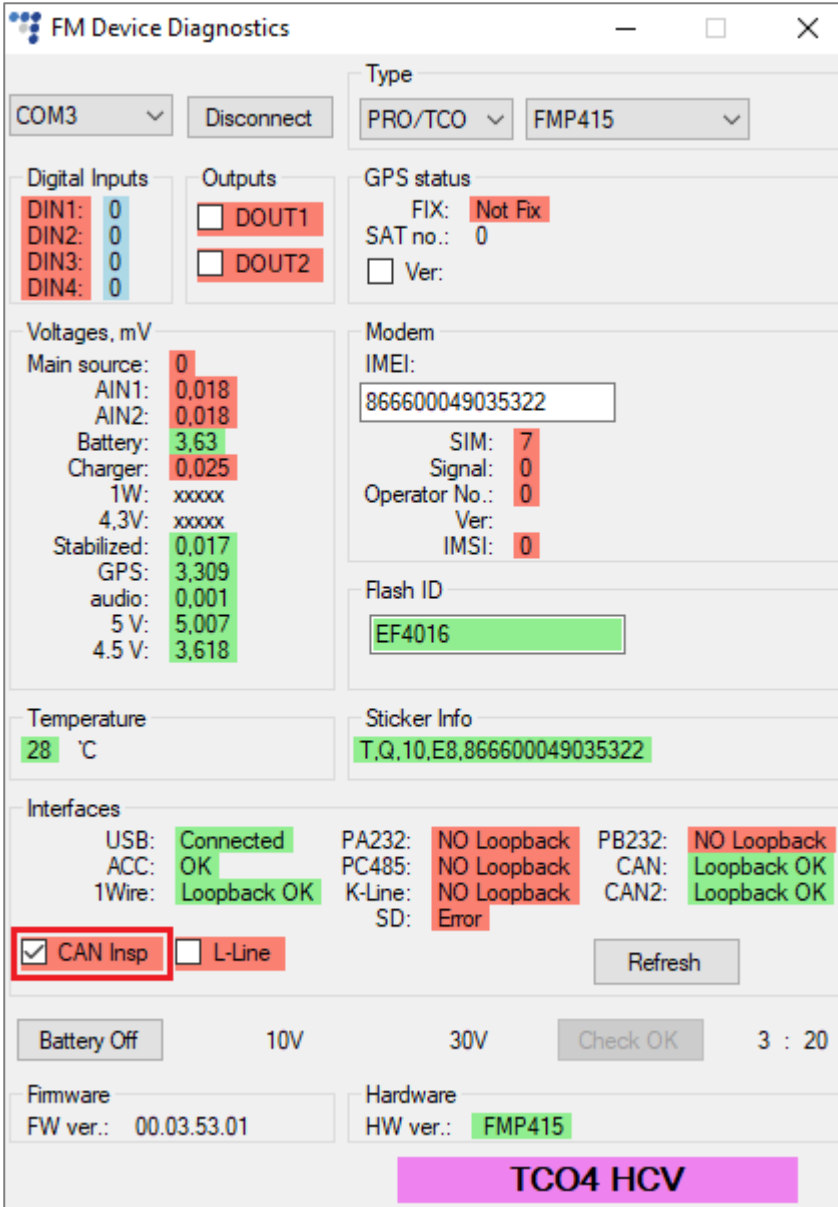
Check the following parameters: **Main source voltage** (should not be less than 10 V (for the FM-Eco4 S/T devices no less than 6 V), **GPS Status** (the device has to have GPS fix), **Modem** (operator's number **Operator No.** should be visible).

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

- Top Bar:** Shows 'COM3' (circled in red with a '4'), a 'Disconnect' button, and 'Type' dropdowns set to 'PRO/TCO' and 'FMP415'.
- Digital Inputs/Outputs:** 'Digital Inputs' shows DIN1-4 at 0. 'Outputs' shows DOUT1 and DOUT2 as checkboxes.
- Voltages, mV:** A list of voltage readings including 'Main source: 0' (circled in red), AIN1/2 at 0.009, Battery at 3.628, Charger at 0.027, 1W, 4.3V, Stabilized at 0, GPS at 3.309, audio at 0, 5V at 5.004, and 4.5V at 3.614.
- GPS status:** Shows 'FIX: Not Fix' (circled in red), 'SAT no.: 0', and 'Ver:'.
- Modem:** Shows 'IMEI: 866600049035322', 'SIM: 7', 'Signal: 0', 'Operator No.: 0' (circled in red), 'Ver:', and 'IMSI: 0'.
- Flash ID:** Shows 'EF4016'.
- Temperature:** Shows '28 °C'.
- Sticker Info:** Shows 'T,Q,10,E8,866600049035322'.
- Interfaces:** Lists 'USB: Connected', 'ACC: OK', '1Wire: Loopback OK', 'CAN Insp', and 'L-Line'. It also shows loopback status for PA232, PB232, PC485, CAN, K-Line, and CAN2, and an 'SD: Error'.
- Buttons:** Includes 'Refresh', 'Battery Off', '10V', '30V', and 'Check OK'.
- Bottom Section:** Shows 'Firmware FW ver.: 00.03.53.01', 'Hardware HW ver.: FMP415', and a large pink banner at the bottom with the text 'TCO4 HCV'.

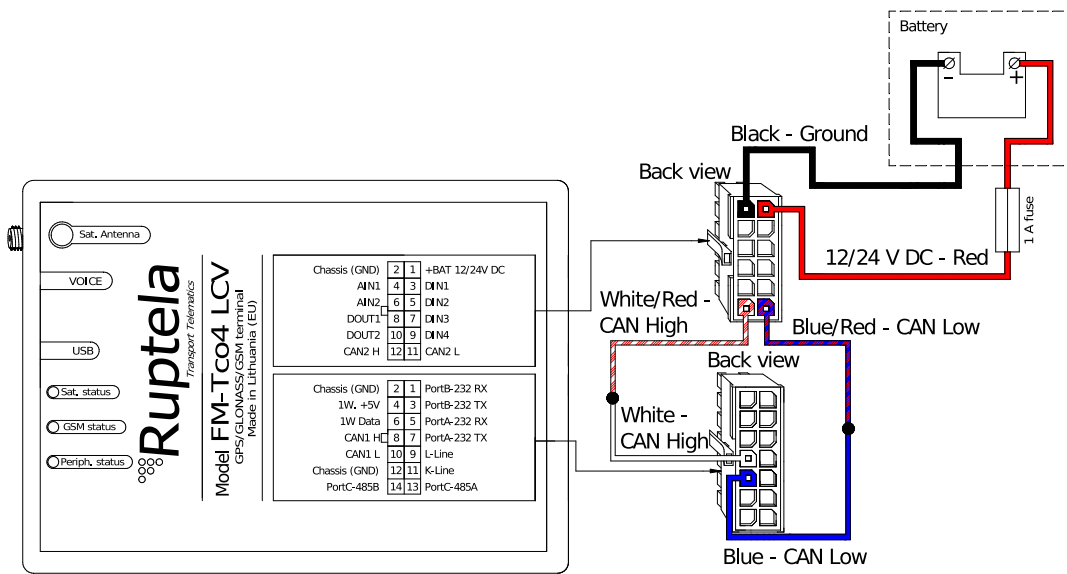
3.2.1 CAN Interface Inspection

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.

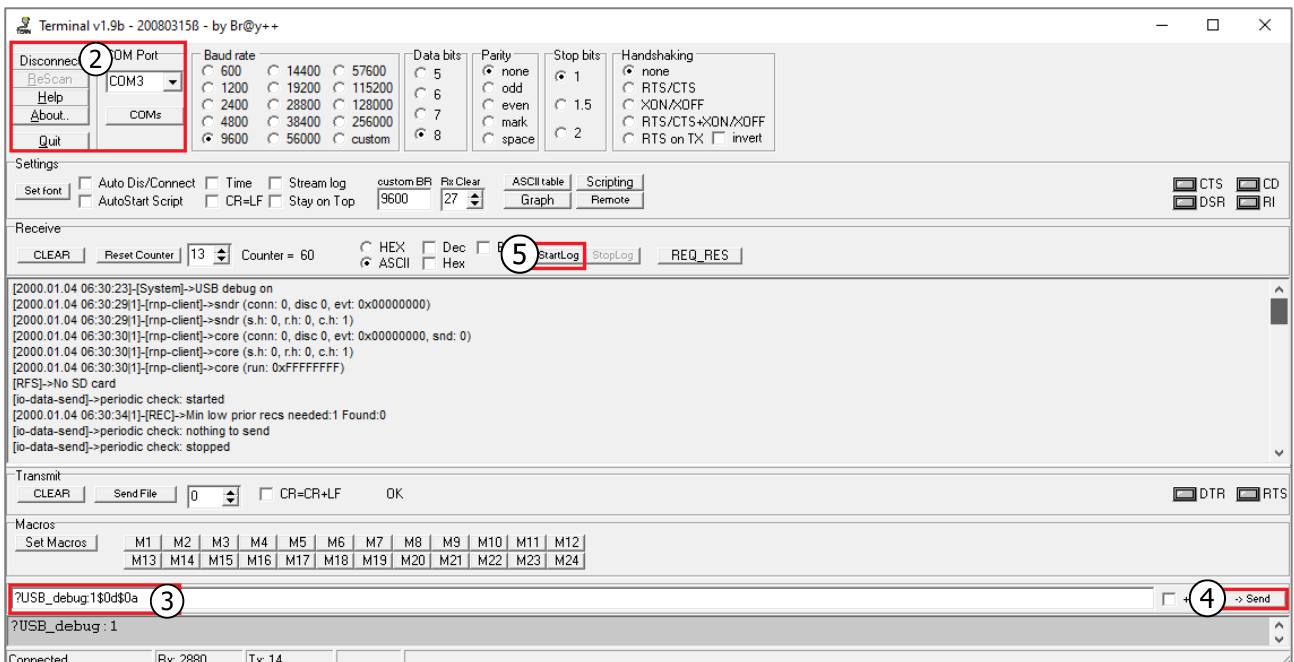
3.2.2 Connection Schematic for CAN Interface Inspection



3.3 Device Diagnostic via Terminal Tool

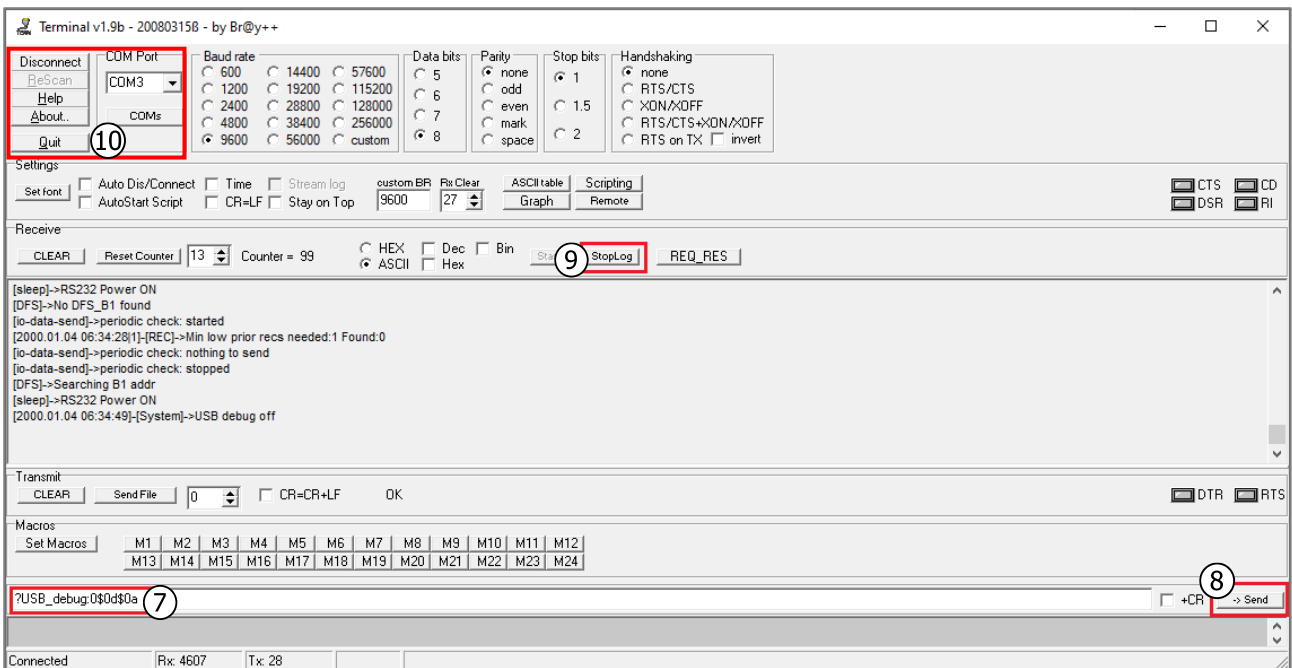
If the methods mentioned in the previous chapters did not help, you can use the Terminal tool for diagnostic. Follow these steps:

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.



4 Device Center Troubleshooting

Commonly reported issues with the Device Center:

1. The Device Center fails to launch
2. Advanced mode fails to load
3. No devices are detected in the Device Center

To solve these issues, we recommend trying the following:

- Updating the Device Center to the latest version
- Downloading the Microsoft Visual C++ Redistributable package:
x86 architecture: https://aka.ms/vs/16/release/vc_redist.x86.exe
x64 architecture: https://aka.ms/vs/16/release/vc_redist.x64.exe
- Downloading the Microsoft .NET Framework: <https://www.microsoft.com/en-us/download/details.aspx?id=53344>
- Reinserting the USB cable from both sides if no devices are detected and trying a different or shorter USB cable. Also, you can try to insert the USB directly to the PC, without using any hubs.