

# UHF RFID Reader

## 1 Introduction

### 1.1 About the Functionality

The UHF (Ultra-High Frequency) RFID reader is a small card-reader that enables the identification of the driver. It shows who is using the vehicle, at what time, and who is in charge of it. In case any discrepancies arise during the identification process, it is possible to block the vehicle's engine and notify the driver by an audio signal. Unlike the usual RFID reader, the UHF version can be used where higher data transfer rate and/or a longer read range required. The device is easy-to-implement, and it is possible to use the same security passes you already use in your company.

This feature description applies to tracking devices with the latest firmware version.

You can get the newest firmware and configurator from our documentation website: [doc.ruptela.it](https://doc.ruptela.it)

### 1.2 Legal Information

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### 1.3 Compatibility

The RFID reader is compatible with the following devices with the newest firmware version:

- HCV5
- LCV5
- Pro5
- FM-Tco4 HCV
- FM-Tco4 LCV
- FM-Pro4
- FM-Eco4 RS T

## 1.4 Contact Information

### General enquiries

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## 1.5 Document Changelog

Version	Date	Modification
<b>2.0</b>	2020-07-16	Updated: Connection schematics. Updated: Compatible devices list. Updated: Manual design and construction.
<b>2.1</b>	2020-08-05	Updated: Connection schematics. Updated: Compatible devices list.

## 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.

### **Note**

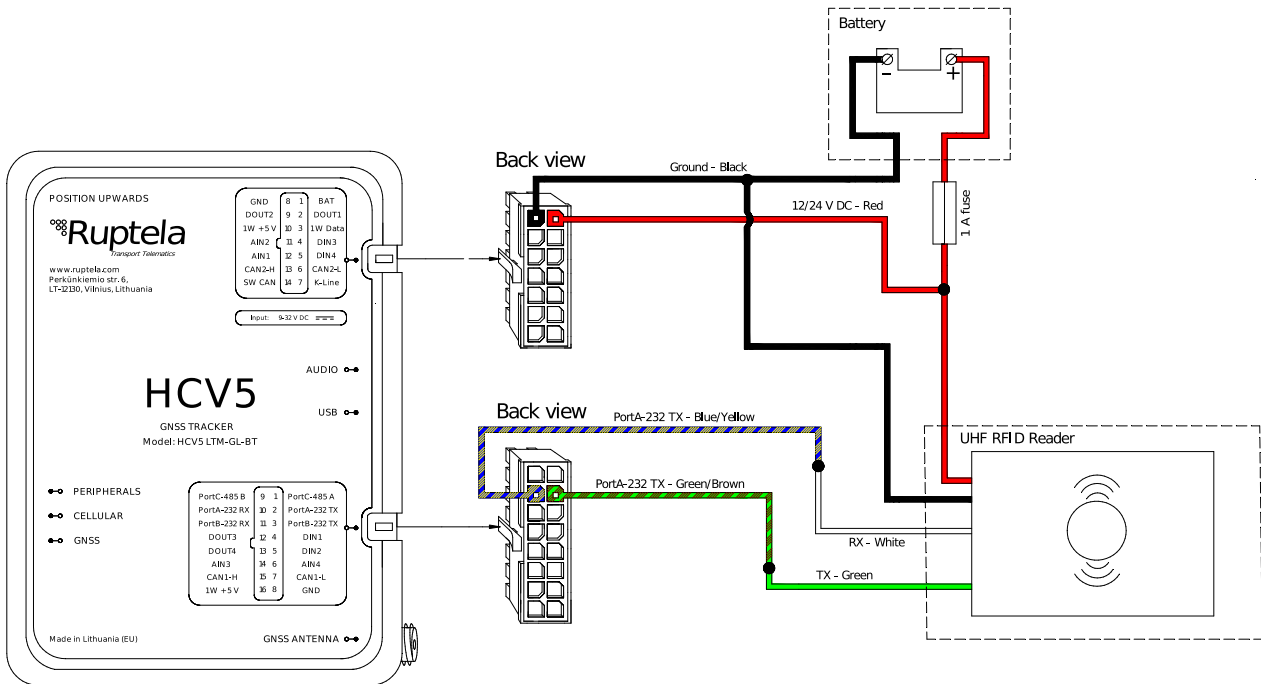


Used to highlight important information or special conditions.

## 2 Connection

### 2.1 Connection to 5<sup>th</sup> Gen Advanced Family Devices

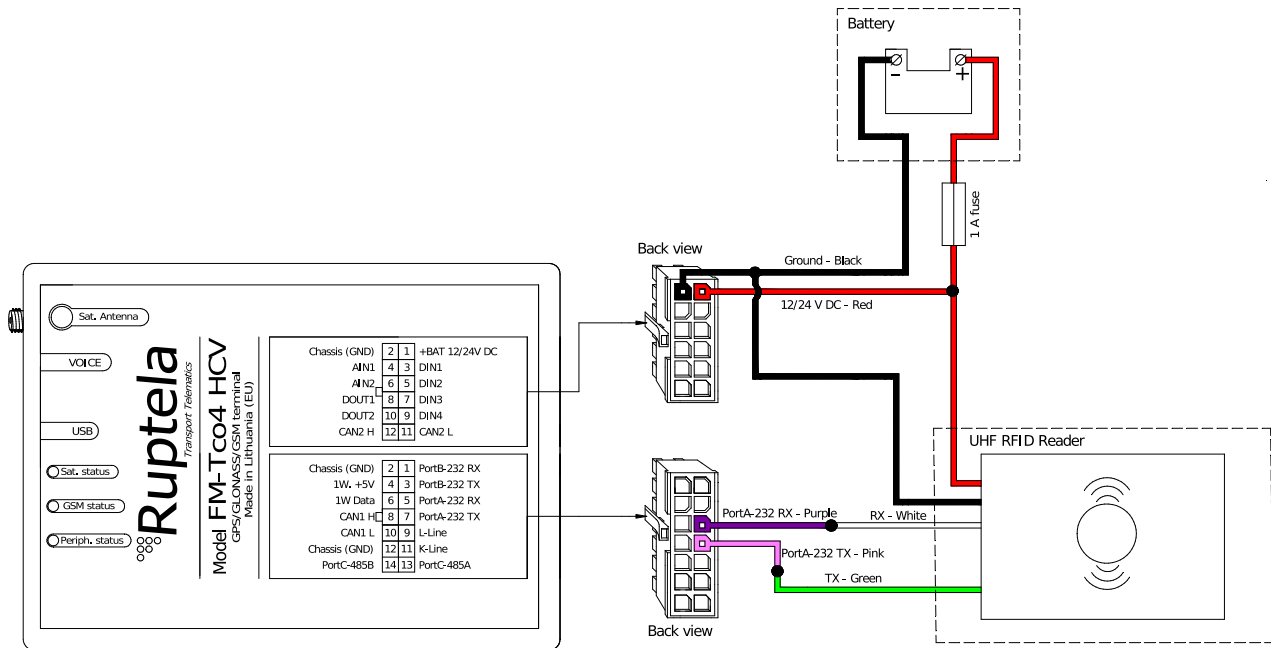
Connect the UHF RFID reader to your tracking device as follows (Port A is used in this schematic):



Alternatively, TX and RX wires can be connected to Port B (16 pin connector, pin 3 and 11, pink/green wire, red/cyan wires).

## 2.2 Connection to 4<sup>th</sup> Gen Advanced Family Devices

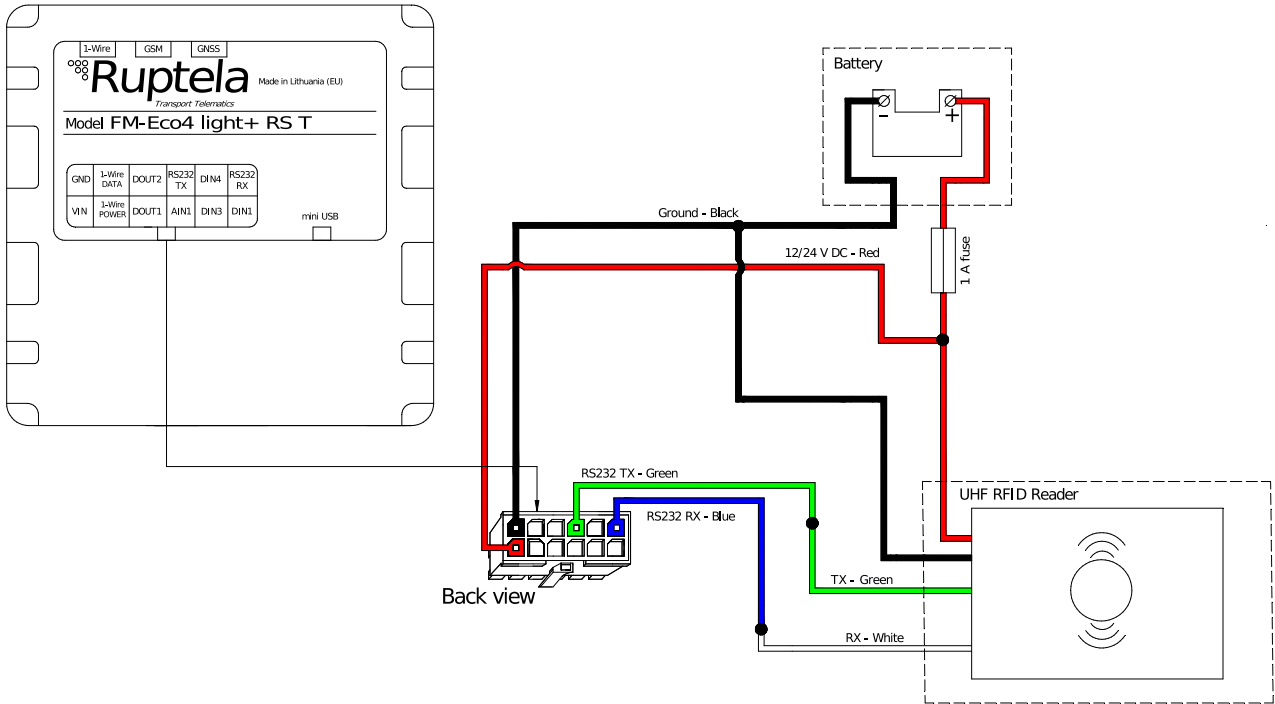
Connect the UHF RFID reader to your tracking device as follows (Port A is used in this schematic):



Alternatively, TX and RX wires can be connected to Port B (14 pin connector, pin 3 and 1, orange and yellow wires).

## 2.3 Connection to FM-Eco4 RS T Device

Connect the UHF RFID reader to your tracking device as follows:



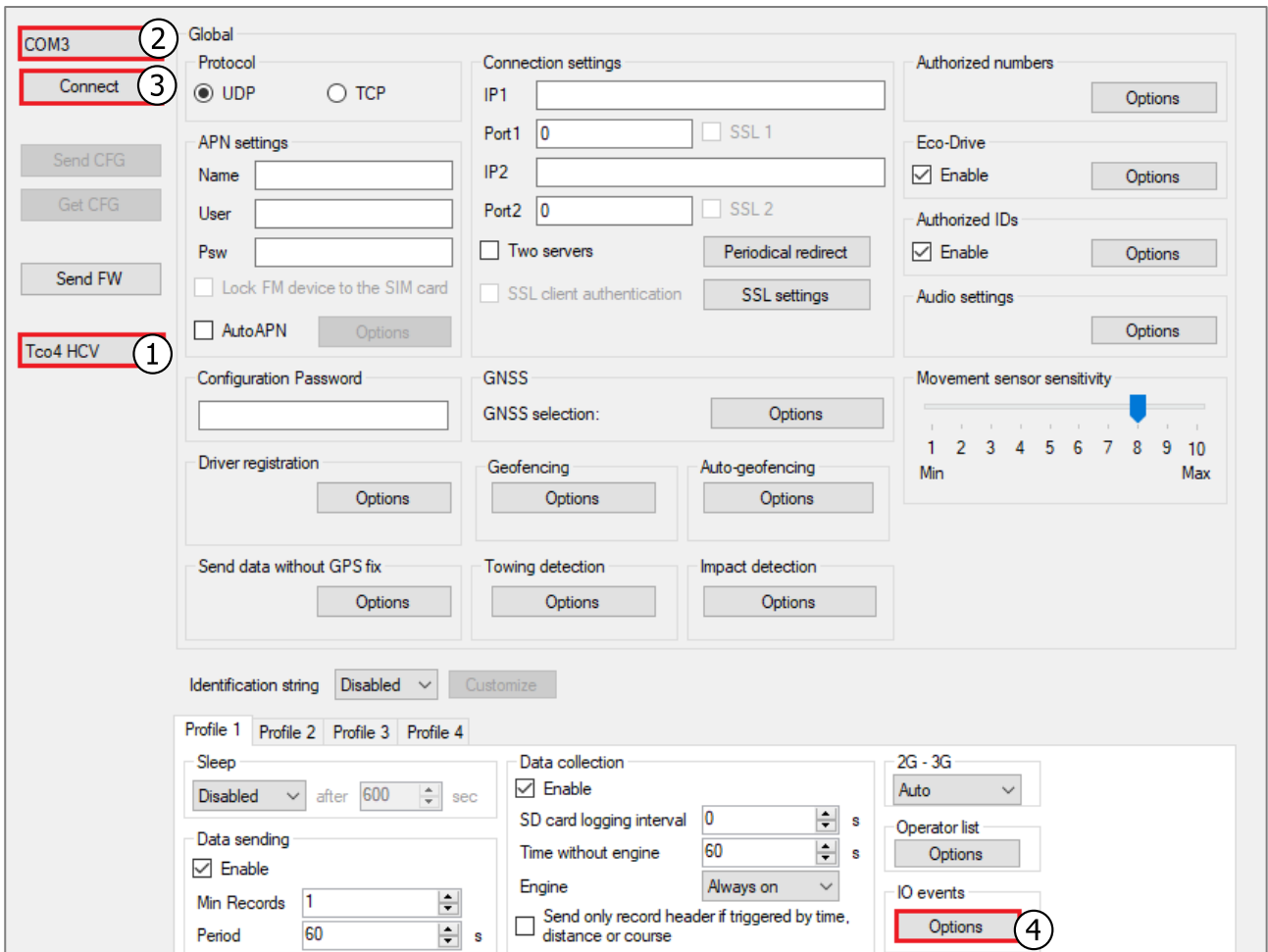
# 3 Configuration

**i** This functionality requires the use of the advanced configurator.

## 3.1 Starting the Configuration

To start the configuration, follow these steps:

1. Open the advanced configurator. Select your tracking device.
2. Select the COM port to which your device is connected.
3. Click **Connect**.
4. Click the **Options** button in the **IO events** section to open the **IO Settings** window.



## 3.2 Configuring the UHF RFID Reader

Follow these steps to configure the UHF RFID reader:

1. Tick the **Send I/O data with 1.1 protocol** checkbox (not applicable for the 5<sup>th</sup> gen devices)
2. In the **Interfaces** section select the port, to which the UHF RFID Reader is connected (*PortA* or *PortB*) (*PortB* is not applicable to the FM-Eco4 RS T device).
3. Select *UHF-RFID reader* from the drop-down list.
4. Select an empty parameter slot.
5. Enable the slot by ticking **Enable**.
6. In the **ID** section select *UHF-RFID reader PortA* or *UHF-RFID reader PortB* from the drop-down list (depends on the serial port to which the UHF RFID Reader is connected).
7. Set **Event on** to *Change*.



It is not recommended to use different kind of RFID readers at the same time.

IO settings

1 : UHF-RFID reader PortA ④

Protocol selection ①

 Send I/O data with v1.1 protocol

IO properties

Enable ⑤

ID UHF-RFID reader PortA ⑥

Level 0

Delta 0

Average 1000 ms

Event on Change ⑦

 Include data only on event

Priority Low

Switch to No Switch

Interfaces

PortA ② UHF-RFID reader ③

 PortB PortC K-Line CAN CAN2 1-Wire

DIN3 mode Positive mode

DIN4 mode Positive mode

Clear all IO Enable common IO Enable IO

IO counters

Records on event: 1

Digital outputs

DOUT1 Disabled  Inverted

DOUT2 Disabled  Inverted

Activation conditions

### 3.3 Finishing the Configuration

To finish the configuration, close the **IO settings** windows. Click **Send CFG** to send the configuration to the device.

