

1-Wire 13.56 MHz and 125 kHz RFID Reader

1 Introduction

1.1 About the Accessory

The 1-Wire 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. The device is easy-to-implement, and it is possible to use the same security passes you already use in your company.

The 13.56 MHz 1-Wire RFID reader is designed for use with Mifare 13.56 MHz frequency cards.

The 125 kHz 1-Wire RFID reader is designed for use with UNIQUE standard 125 kHz frequency cards.

1.2 Legal Information

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1.3 Compatibility

1-Wire RFID readers are compatible with the following devices with the newest firmware version:

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

1.4 Contact Information

General enquiries

Website: ruptela.com

E-mail: info@ruptela.com

Phone: +370 5 2045188

Technical support

E-mail : support@ruptela.com

Phone: +370 5 2045030

1.5 Document Changelog

Version	Date	Modification
1.0	2021-02-15	Initial draft.

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.

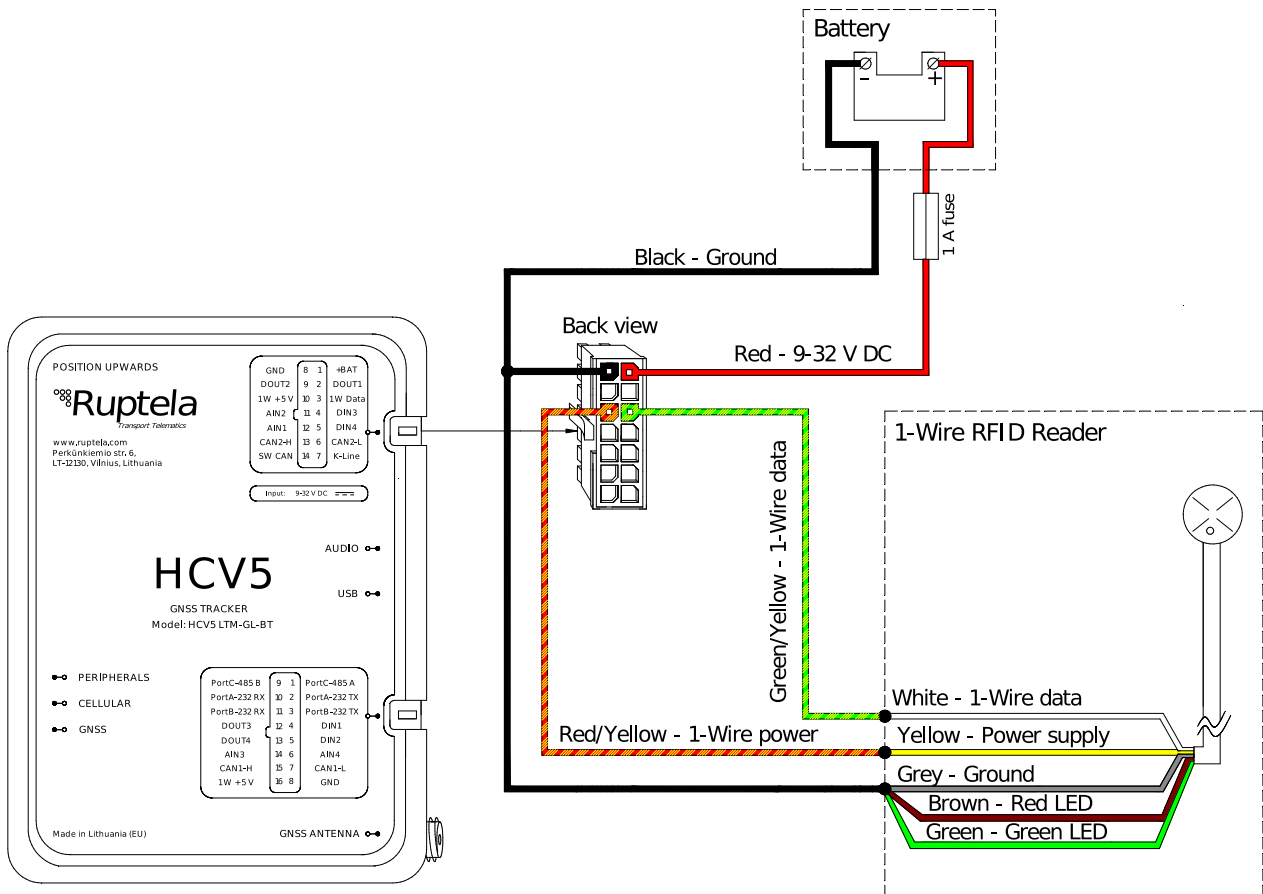
1.7 References

Datasheet: <https://doc.ruptela.lt/display/AB/Accessories>

2 Connection

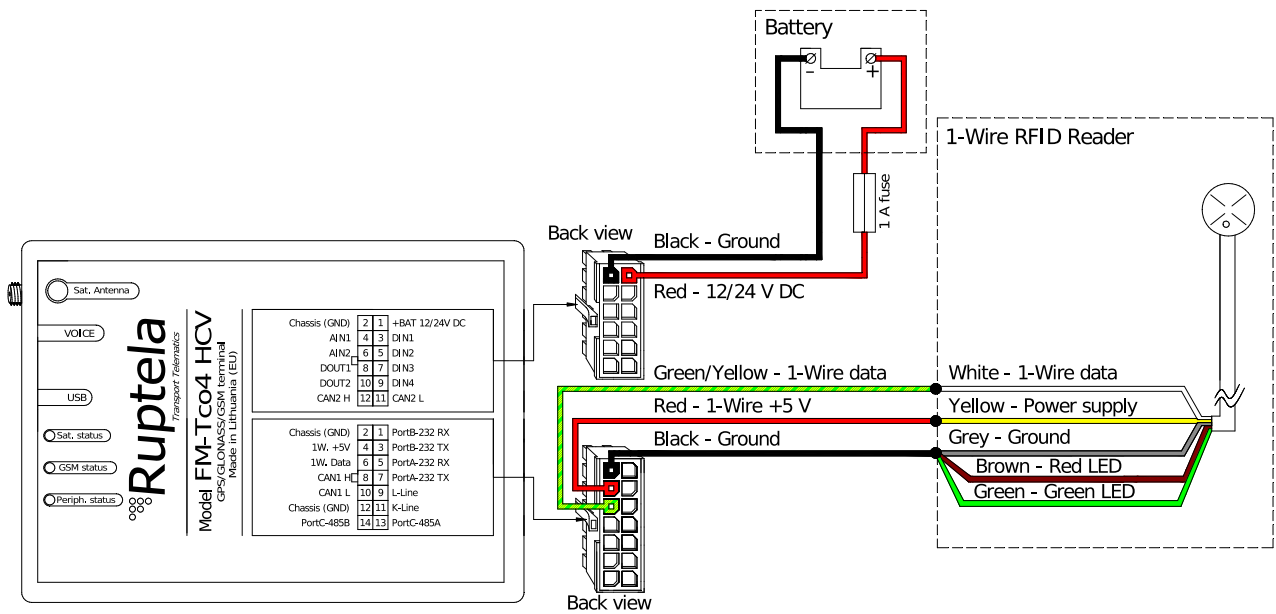
2.1 Connection to 5th Generation Advanced Family Devices

Connect the 1-Wire RFID reader to your tracking device as follows:



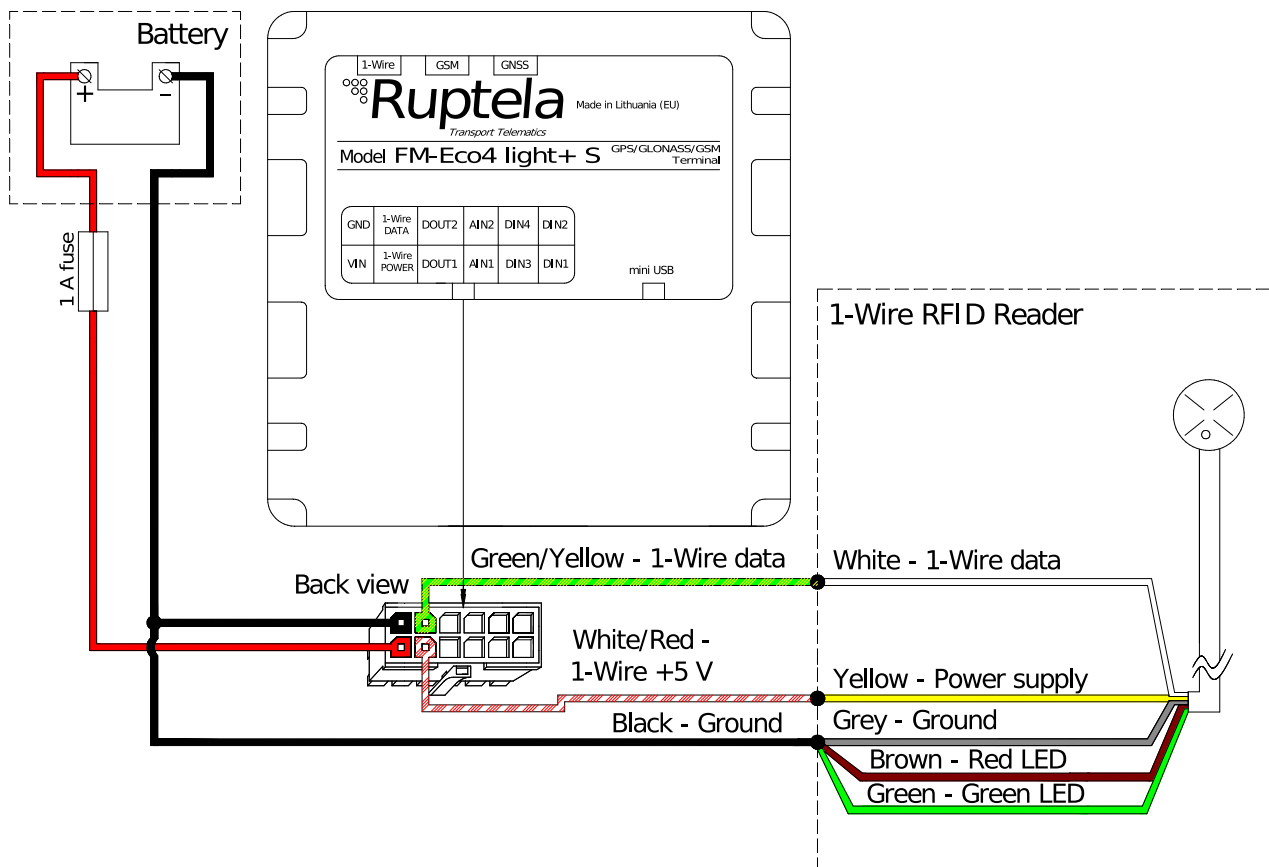
2.2 Connection to 4th Generation Advanced Family Devices

Connect the 1-Wire RFID reader to your tracking device as follows:



2.3 Connection to Eco4 Series Devices

Connect the 1-Wire 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 a 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.

The screenshot shows the advanced configurator interface with several sections and callouts:

- Callout 1:** Points to the device identifier 'HCV5' in the left sidebar.
- Callout 2:** Points to the 'COM3' port selection in the top left.
- Callout 3:** Points to the 'Connect' button in the top left.
- Callout 4:** Points to the 'Options' button in the 'IO events' section at the bottom right.

The interface includes sections for Global settings (Protocol: UDP/TCP), APN settings (Name, User, Psw, Lock FM device, AutoAPN), Connection settings (IP1, Port1, IP2, Port2, Two servers, SSL client authentication, Identification string), Configuration Password, Authorized numbers, Eco-Drive, Authorized IDs, Wireless, Audio settings, Movement sensor sensitivity (slider), Driver registration, Trip type detection, Geofencing, Auto-geofencing, GNSS, Offline tracking, Towing detection, Impact detection, Profile 1 (Sleep, Data sending, Data collection, GPS navigation filtering), Network, and Operator list.

3.2 Configuring 1-Wire RFID Reader

Follow these steps to enable IO parameters:

1. In the **IO settings** window, select a slot for the IO parameter.
2. Select the *iButton driver ID* parameter.
3. Tick the **Enable** checkbox.
4. Set the **Event on** to *Change*.
5. Set the **Priority** to *High*.

The screenshot shows the 'IO settings' window with the following configuration:

- Slot 1:** iButton driver ID (1)
- IO properties:**
 - Enable (3)
 - ID: iButton driver ID (2)
 - Level: 0
 - Delta: 0
 - Average: 1000 ms
 - Event on: Change (4)
 - Include data only on event
 - Priority: High (5)
 - Switch to: No Switch
- Protocol selection:**
 - Send I/O data with v1.1 protocol
- Interfaces:**
 - PortA
 - PortB
 - PortC
 - K-Line
 - CAN
 - CAN2
 - 1-Wire
 - DIN3 mode: Positive mode
 - DIN4 mode: Positive mode
- Buttons:** 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** window. Click **Send CFG** to send the configuration to the device.

The screenshot shows a configuration window for a device. On the left, there are two dropdown menus: 'COM5' and 'HCV5'. Below them are buttons for 'Disconnect', 'Send CFG' (highlighted with a red border), 'Get CFG', and 'Send FW'. Further down, there is a list of device identifiers: IMEI: 866600049035322, FW: 00.03.60.03, BL: 0x54 0x2d, BLE St: (5) No power, BLE APP:, BLE BL:, and BLE SD:.

The main configuration area is divided into several sections:

- Global:** Protocol (UDP selected, TCP unselected).
- APN settings:** Name, User, Psw, Lock FM device to the SIM card, and AutoAPN (with an Options button).
- Connection settings:** IP1, Port1 (0), IP2, Port2 (0), Two servers, SSL client authentication, Identification string, Periodical redirect, SSL settings, and DNS settings.
- Driver registration, Trip type detection, Geofencing, Auto-geofencing, GNSS, Offline tracking, Towing detection, Impact detection:** Each has an Options button.
- Configuration Password:** A text input field.
- Authorized numbers:** An Options button.
- Eco-Drive:** Enable (checked) with an Options button.
- Authorized IDs:** Enable (checked) with an Options button.
- Wireless:** Enable (checked) with an Options button.
- Audio settings:** An Options button.
- Movement sensor sensitivity:** A slider from 1 (Min) to 10 (Max), currently set at 8.