

# ThermoKing TouchPrint

## Introduction

ThermoKing TouchPrint device is designed specifically to meet the recommendations of Food Hygiene Regulations with the regard to transport and delivery of chilled and frozen foodstuffs in refrigerated vehicles. Connection to the Ruptela HCV devices enables TouchPrint device to send data to a remote server. Therefore users can monitor temperature readings from anywhere in real time.

Feature for different tracking devices is available starting with these firmware versions:

- HCV5 - all versions
- FM-Tco4 HCV - 00.02.09.04

You can get the latest firmware and configurator from our FTP server: [doc.ruptela.it](http://doc.ruptela.it)

## Legal notice

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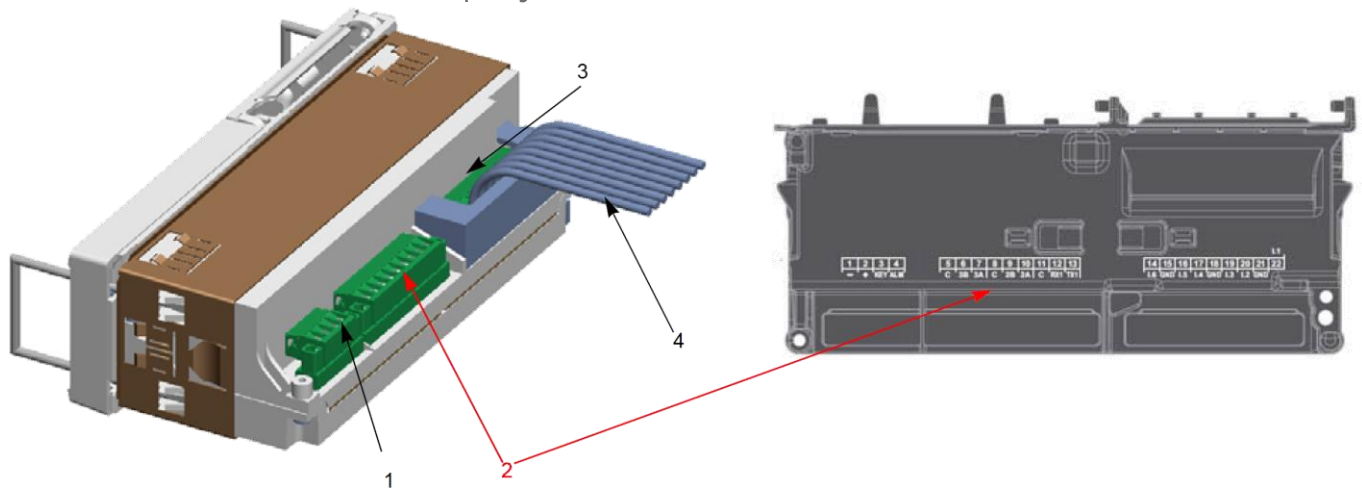
## Document change log

| Date       | Version | Change details   |
|------------|---------|--|
| 2016-03-04 | 1.0     | Initial draft  |
| 2016-04-14 | 1.1     | Added ThermoKing TouchPrint serial interface configuration requirements  |
| 2016-06-09 | 1.2     | Wiring setup updated   |
| 2020-10-26 | 1.3     | Added: HCV5 as a supported device, connection schematic for 5 <sup>th</sup> gen devices.<br>Updated: Connection schematic. |

# Connection

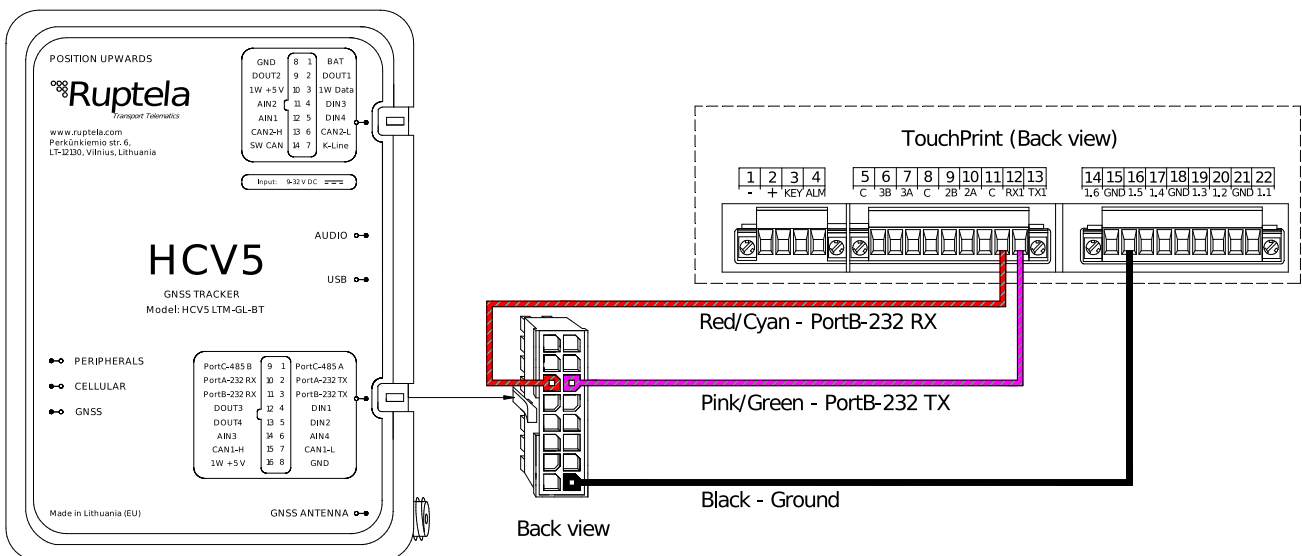
TouchPrint has various input/output ports on the back side of the device. These electrical connections (with screw removable connectors) will have an optional plastic element covering them, with the possibility to “seal” it so that to avoid the disconnection.

The standard version includes only one serial communication port. This RS-232 serial connection port can be used to interface with a 3<sup>rd</sup> party communication device to send some information.

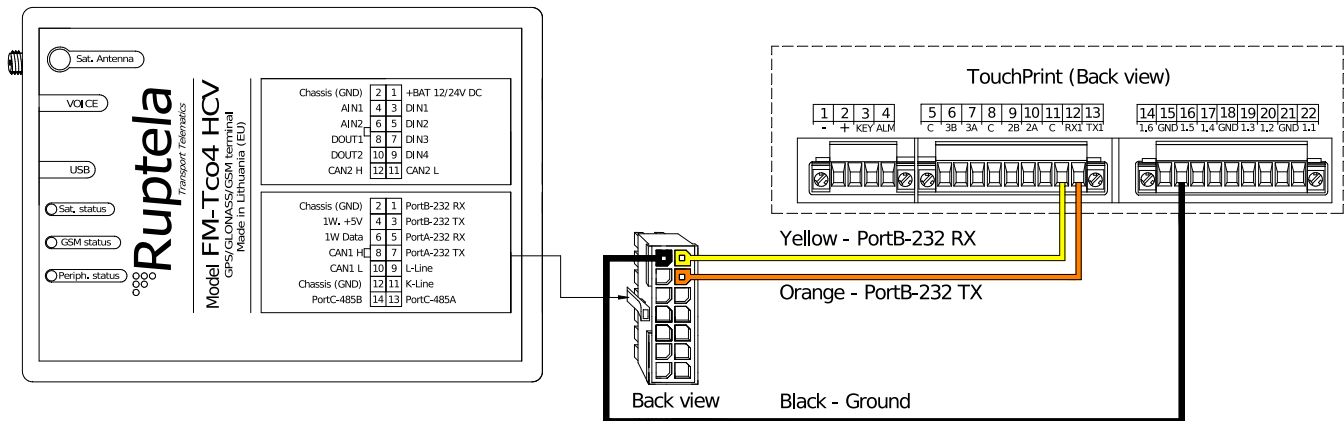


1. Power Terminal
2. Serial Communication terminal (RS232/RS48)
3. Input terminal
4. Sensor Harness

## Advanced Family Device Connection:



## Pro Family Device Connection:



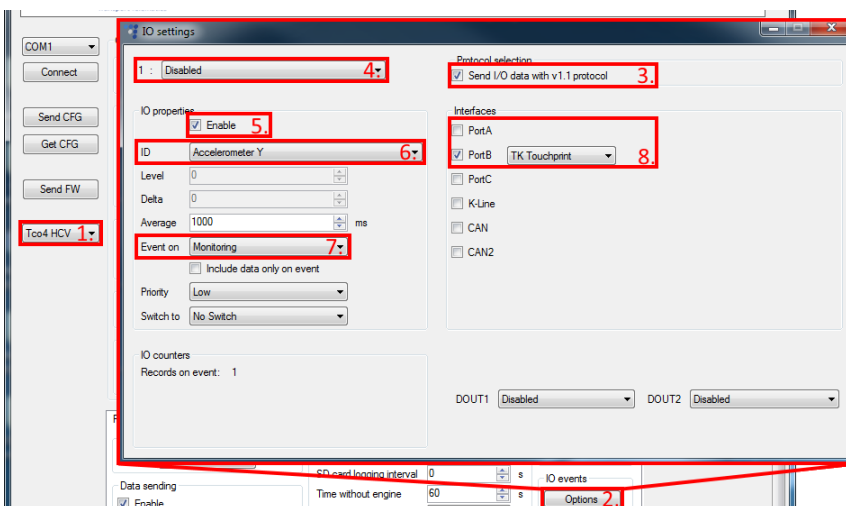
## ThermoKing TouchPrint configuration

The tracking devices can interface with the TouchPrint RS232 serial port only if it was configured properly. RS-232 port baud rate on the TouchPrint device has to be set to 9600. This is default value programmed during the production process. The tracking devices do not support other baud rates for this device. ThermoKing TouchPrint serial interface configuration instructions can be found in device user manual.

## Tracking device configuration

Follow these steps to configure your tracking device:

1. In the main configurator window choose your device.
2. **IO events** "Options" button opens up a new "IO settings" window, here you can enable or disable IO parameters.
3. In **Protocol selection** section put a tick in **Send I/O data with v1.1 protocol** checkbox. After this step, TouchPrint IO parameters will be displayed in the IO list.
4. Select a slot that you want to enable.
5. In the **IO properties** section tick the **Enable** check box, otherwise the slot will remain empty.
6. **ID** contains the parameter list. Choose a parameter you want to enable for the selected slot. One parameter can be enabled only one time. List of ThermoKing TouchPrint parameters that can be enabled:  
*TK Touchprint input 1, TK Touchprint input 2, TK Touchprint input 3, TK Touchprint input 4, TK Touchprint input 5, TK Touchprint input 6.*
7. Choose **Event on** field values for each parameter. For TouchPrint IO's **Event on** can be set to *Monitoring, Change or Hysteresis*. More details about these parameters available in "TouchPrint IO parameters description" table below.
8. In the Interfaces section, put a tick on either **PortA** or **PortB** checkbox. This should be the same device interface that is used in connection to the TouchPrint device. In the drop down list on the right choose "TK Touchprint". Only one sensor can be connected at the same time.



## TouchPrint IO parameters description

IO parameters used with TouchPrint device.

| IO ID | Parameter name        | Size, B | Min. value | Max. value | IO factor  | Description  |
|-------|-----------------------|---------|------------|------------|------------|--|
| 509   | TK Touchprint input 1 | 2       | -32751     | 32767      | 0,1 °F/Bit | 32768 - probe error<br>32769 - ADC not ready<br>32770 - data not available |
| 510   | TK Touchprint input 2 | 2       | -32751     | 32767      | 0,1 °F/Bit | 32768 - probe error<br>32769 - ADC not ready<br>32770 - data not available |
| 511   | TK Touchprint input 3 | 2       | -32751     | 32767      | 0,1 °F/Bit | 32768 - probe error<br>32769 - ADC not ready<br>32770 - data not available |
| 512   | TK Touchprint input 4 | 2       | -32751     | 32767      | 0,1 °F/Bit | 32768 - probe error<br>32769 - ADC not ready<br>32770 - data not available |
| 513   | TK Touchprint input 5 | 2       | -32751     | 32767      | 0,1 °F/Bit | 32768 - probe error<br>32769 - ADC not ready<br>32770 - data not available |
| 514   | TK Touchprint input 6 | 2       | -32751     | 32767      | 0,1 °F/Bit | 32768 - probe error<br>32769 - ADC not ready<br>32770 - data not available |

Event on for TouchPrint IO's can be set to *Monitoring*, *Change* or *Hysteresis*.

In ThermoKing Touchprint device configuration all these inputs can be configured as a probe or a switch. Therefore, depending on configuration, inputs can send temperature values or 0/1 values.

### Note

To enable ThermoKing TouchPrint IO parameters in the IO settings window extended protocol version v1.1 has to be used.