

# INpact Slave PCIe

## How to Update Card and Protocol

### STARTUP GUIDE

4.02.0320.20002 1.3 en-US ENGLISH

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# Important User Information

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# 1 Update Components

To use all functions of the INpact, the protocol to communicate with the PCIe must be up to date. The PCIe protocol chip can be updated via the card update.

A specific Industrial Ethernet protocol can be flashed to the Common Ethernet INpact via the protocol-specific update and preconfigured protocols can be updated via the protocol-specific update.

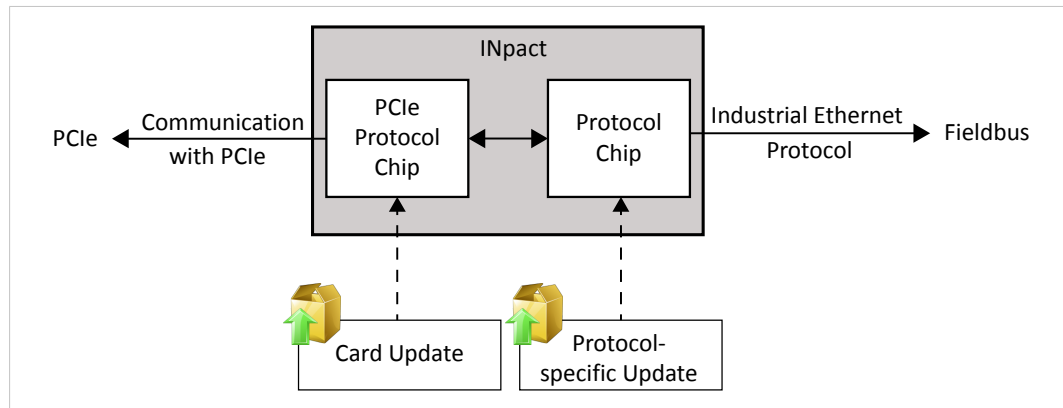


Fig. 1 INpact Update Components

## 2 Card Update



Interface is damaged if the update progress is aborted!  
Before updating, close all other applications.  
Do not restart or shut down the computer during the update.



Windows update can only be executed with VCI driver version 4.0.793 or newer.  
Make sure the correct driver version is installed.



Linux update can only be executed with IDL Kernel driver version 1.0.644 or newer.  
Make sure the correct driver version is installed.

- Download the zip file *IxxatINpactCardUpdate\_Windows\_V* or *IxxatINpactCardUpdate\_Linux\_V* from [www.ixxat.com/support](http://www.ixxat.com/support) and execute the application.
  - All installed INpact devices are checked.
  - Version information of the first detected INpact (1) and information regarding the update (2) is shown.

```

C:\Users\IXXATadm\Desktop>IxxatINpactCardUpdate_Windows_U4_0_192_0.exe
*****
** INpactBootloaderUpdate
**
** Version: 04.00.0192
**
** This program updates the flash memory on INpact devices.
*****
#
*****
1 [ Hardware: 1
   [ INpact mPCIe F0
   [ S#
   [ Hardware Version      A03BBBE3
   [ Bootmanager Version   00
   [ FPGA Version          00
   [ Bootmanager Version   3.9 rev 876
   [ FPGA Version          01.05.00
   [
   [ FLASH file < information about matching content >:
   [
   [ INpact mPCIe F0
   [ Bootmanager Version   3.10 rev 938
   [ FPGA Version          01.07.00 rev 936
   [
2 [ Update the device < Yes / No / Cancel > ?

```

Fig. 2 Windows Card Update

Possible Outputs	
Output	Description
No update is necessary!	The INpact is already updated.
Update the device (Yes / No / Cancel)	<b>Yes:</b> Update is started. <b>No:</b> Do not start the update. Search for the next installed INpact. <b>Cancel:</b> Update is cancelled and application is closed. (only Windows)
Sorry, no hardware found	Windows: Check the Windows device manager if the INpact is shown correctly. Linux: Check if the IDL Linux Driver is correctly installed.

- To update the INpact, confirm the output **Update the device** by entering **Y**.
- Wait until the update is finished.
- When the update is finished, shut down the computer.

- ▶ Wait a moment and then restart the computer.
  - INpact card update is completed.
  - PCIe protocol chip is updated.

## 3 Protocol-Specific Update

The protocol can be updated via the Transport Provider (Windows) or via an Ethernet connection (Windows and Linux).

### 3.1 Loading the Protocol Specific Firmware Files

To update the protocol, the latest firmware files must be loaded in the firmware repository of the Anybus Firmware Manager II.

- ▶ From [www.anybus.com](http://www.anybus.com) download and install the latest Anybus Firmware Manager II.
- ▶ Contact Ixxat support for the latest protocol specific firmware files.
- ▶ Start the Firmware Manager II and open **Firmware Repository** in the toolbar.

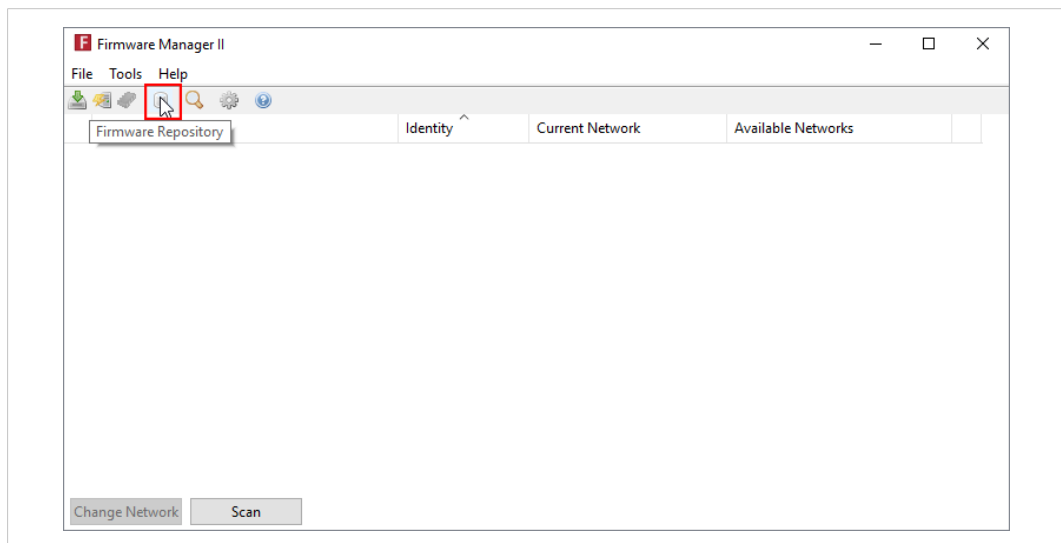


Fig. 3 Manual Update Wizard

- ▶ Drag and drop the firmware files in the firmware repository.
- ▶ Update the protocol via Transport Provider or via Ethernet.

### 3.2 Updating the Protocol via Transport Provider



Downloading and updating the firmware via the Transport Provider is only possible with Windows. With the Transport Provider only one device can be configured at a time.



VCI driver software is constantly improved and expanded! Check if a newer version is available within support area on [www.ixxat.com](http://www.ixxat.com).

- ▶ Make sure, that the latest version of the VCI driver V4 is installed.
- ▶ Make sure, that the INpact interface is installed in a Windows computer.
- ▶ From [www.anybus.com](http://www.anybus.com) download and install the latest Anybus Firmware Manager II.
- ▶ Make sure, that the latest protocol specific firmware files are loaded in the firmware repository (see [Loading the Protocol Specific Firmware Files, p. 6](#)).

- ▶ Start the Firmware Manager II and open **Manual Update Wizard** in the toolbar.

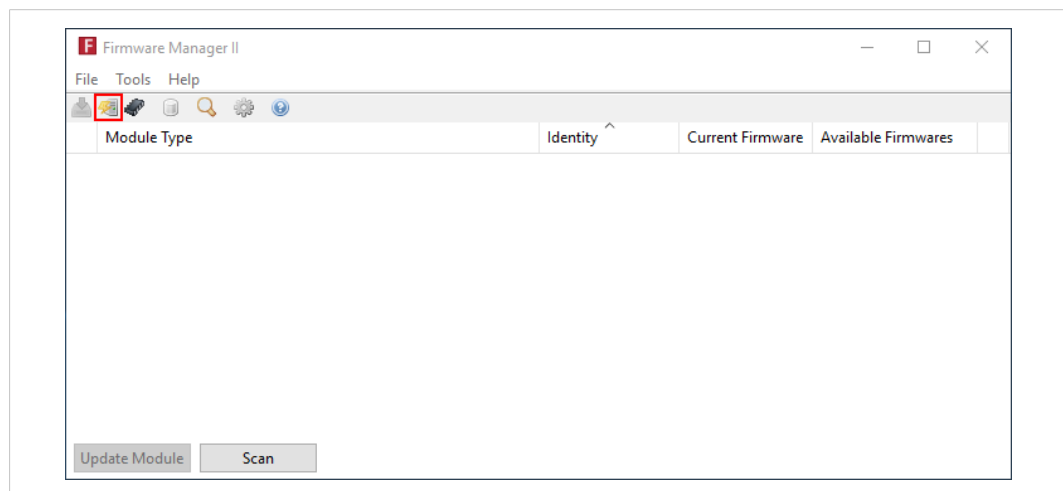


Fig. 4 Manual Update Wizard

- ▶ Select **Anybus CompactCom 40** and click button **Next**.

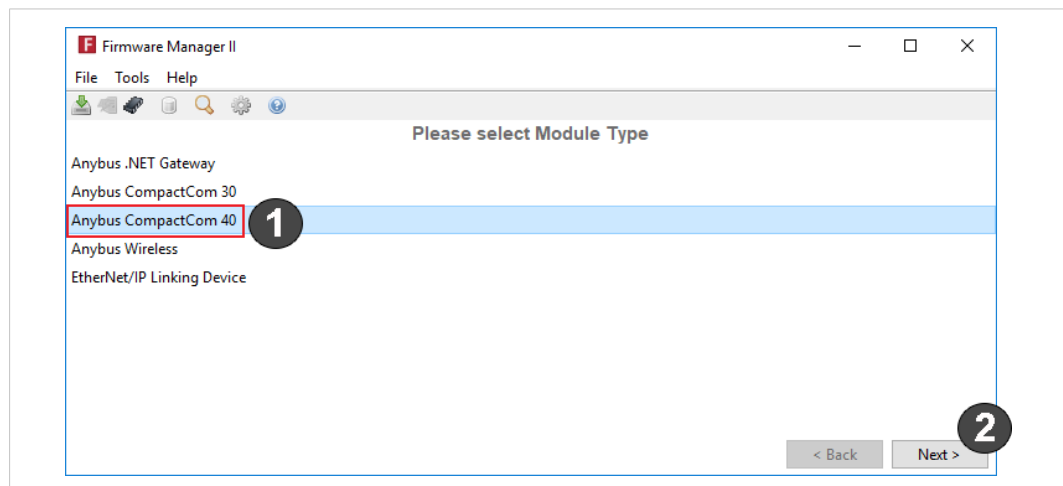


Fig. 5 Select module type

- ▶ Select **Transport Provider** and click button **Next**.

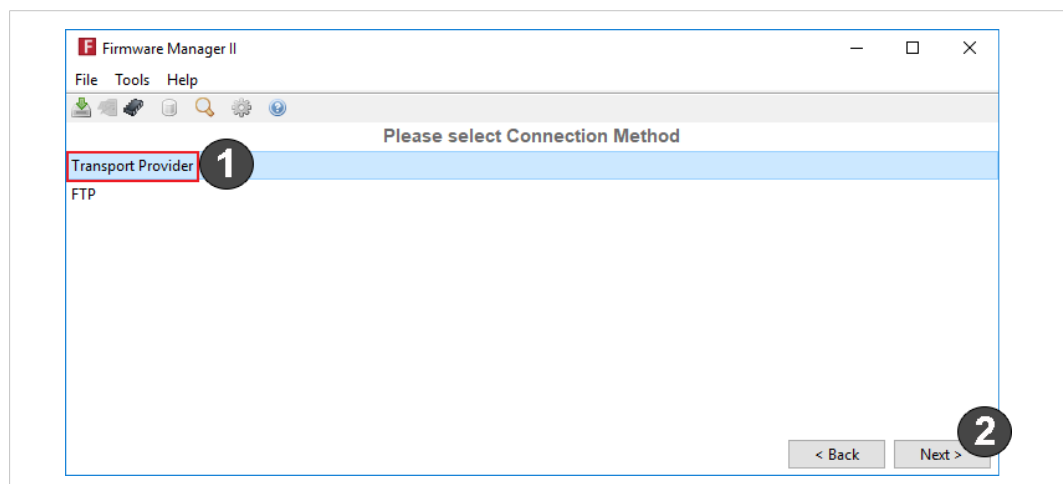
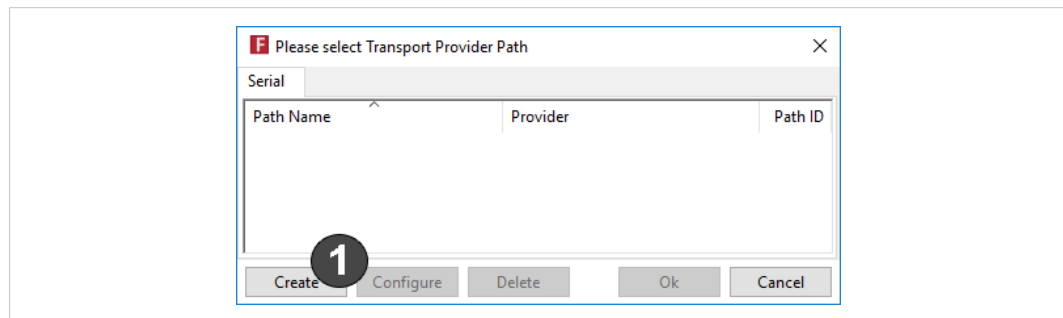


Fig. 6 Select connection method

- In window **Select Transport Provider Path** click button **Create**.

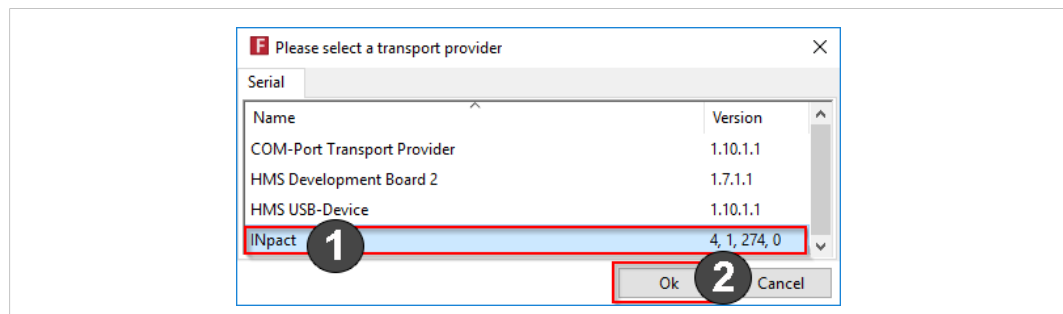


**Fig. 7 Create Transport Provider**

- Select **INpact** and click button **OK**.



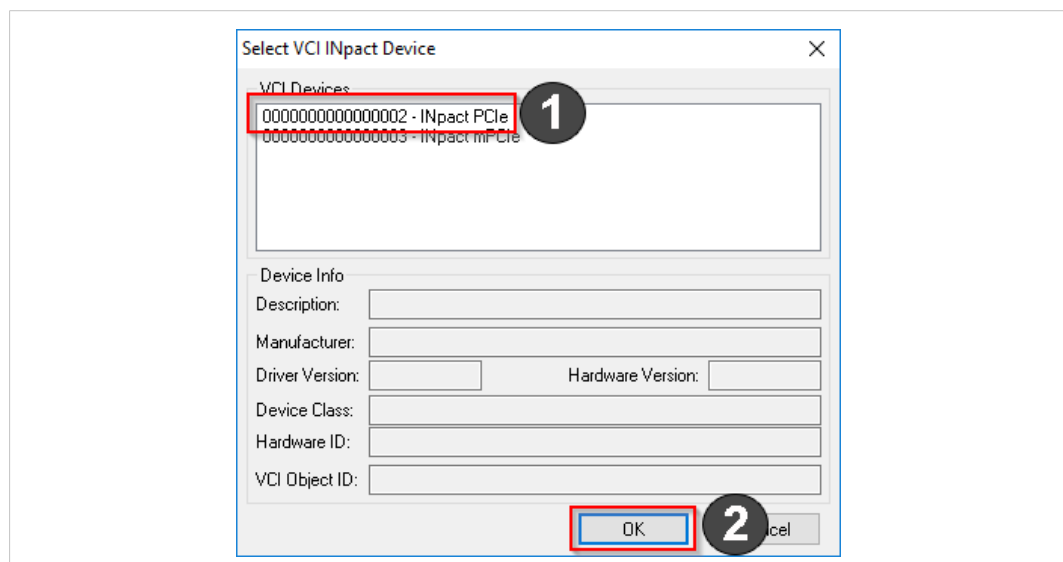
*If there is not INpact entry, make sure that the latest Anybus Firmware Manager II is installed.*



**Fig. 8 Select a transport provider**

→ Window to name the path opens.

- Name the path and click button **OK**.
- Select the INpact interface to be updated and click button **OK**.



**Fig. 9 Select INpact Device**

→ INpact interface is created and available.

- Select the newly created Transport Provider for the INpact and click button **OK**.

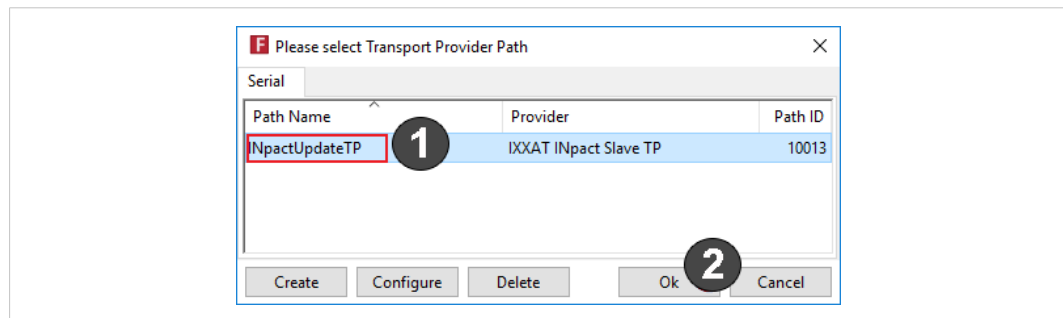


Fig. 10 Select Transport Provider

- Select the desired protocol firmware and click button **Update**.

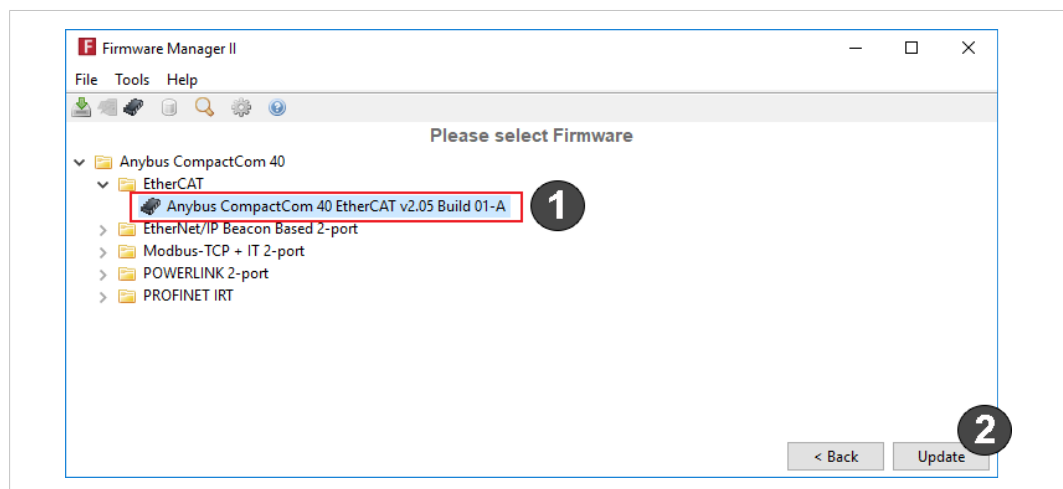


Fig. 11 Select firmware

- Firmware is downloaded to the interface.
- LED **MS** is flashing red and green.



Do not interrupt the download process! If the download is interrupted, the download is corrupted. Use the INpact Recovery Helper to restart.

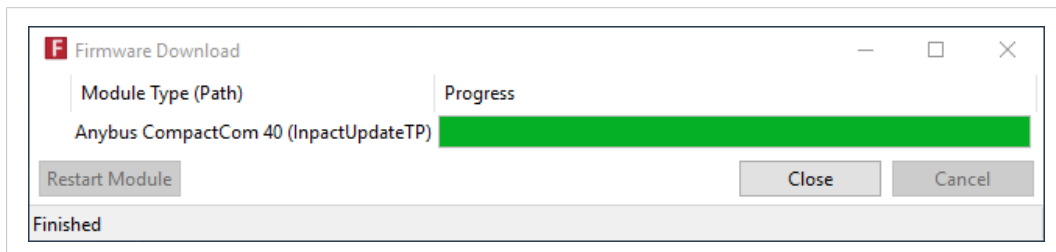


Fig. 12 Finished download

- ▶ When the download is finished click button **Close**.
- ▶ If the download is corrupted, run the **INpact Recovery Helper** in folder **Installation**.

### 3.3 Updating the Protocol via Ethernet Connection

Via Ethernet connection downloading and updating of firmware for Linux and other real-time operating systems is possible and several interfaces can be updated simultaneously.



Powerlink can only be downloaded once via Ethernet. To update the Powerlink firmware use the Transport Provider or update via the application.

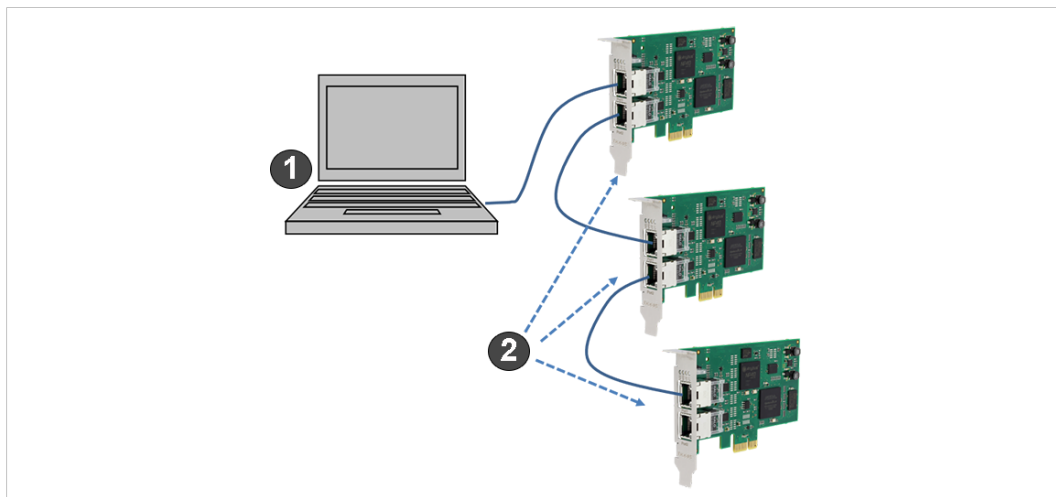


Fig. 13 Configure protocol

#### System conditions

1	Windows computer with HMS firmware manager and ETH protocol files
2	Target systems with installed driver and installed INpact interface with a running application (e.g. example application described in the <i>Ixxat INpact Slave Getting Started</i> ).



The step-by-step video *Firmware Manager for Anybus CompactCom* shows a configuration on Anybus CompactCom hardware. The steps for the INpact interface are the same.

- ▶ From [www.anybus.com](http://www.anybus.com) download and install the latest Anybus Firmware Manager II to a windows computer (1).

- ▶ Make sure, that the latest protocol specific firmware files are loaded in the firmware repository (see [Loading the Protocol Specific Firmware Files, p. 6](#)).
- ▶ Connect all interfaces to be updated via Ethernet.
- ▶ Make sure, that an application is running on the INpact interfaces to be updated.
- ▶ Make sure via **IPconfig**, that INpact interface and network interface (**1**) are located in the same IP address domain (IP and subnet).
- ▶ Observe the step-by-step video Firmware Manager for Anybus CompactCom on [www.anybus.com](http://www.anybus.com).
- ▶ Observe, that the displayed process in the Firmware Manager only shows the state of the download to the internal memory of the interface.
- ▶ When the protocol is downloaded to internal memory, restart the application or the computer.
- ▶ After the restart wait until the protocol is downloaded to the INpact interface. This can take up to two minutes. Do not interrupt the download.
  - LED **MS** is flashing red and green when the download is finished.
- ▶ With changed protocol, observe the protocol specific LED indications.
- ▶ If necessary, relabel LED **NS** and LED **MS** to conform to specific network certification requirements.



If the download is interrupted, the download is corrupted! Use the INpact Recovery Helper to restart.

- ▶ If the download is corrupted, run the **INpact Recovery Helper** in the VCI installation folder.
- ▶ Observe, that the **INpact Recovery Helper** can only be run on the Windows computer with installed VCI driver.
- ▶ Restart the download of the protocol firmware.

