PEAK USB CAN Interfaces

All CAN Interfaces from PEAK-System for the USB Port

Firmware Update Guide
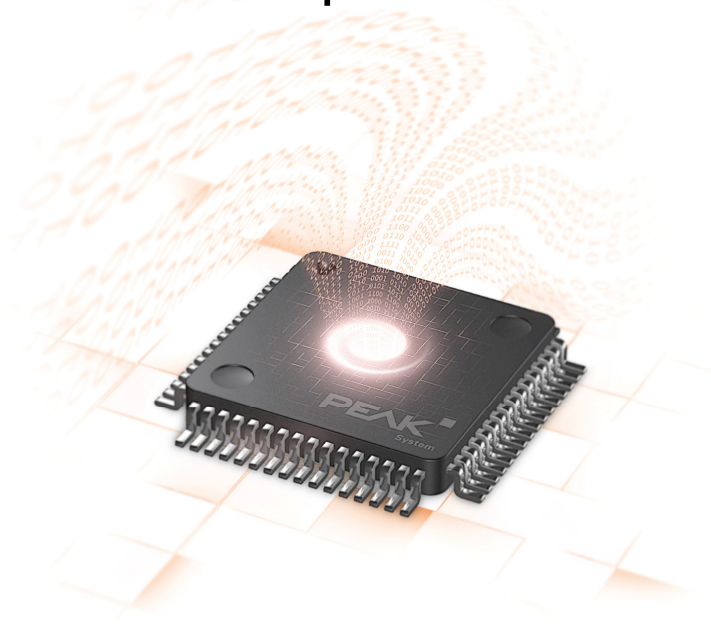
PEAK
System

1 Introduction

This guide is about the update procedure of the firmware on USB CAN interfaces from PEAK-System.

Please, read the each chapter of this guide.

Important note: Incorrect application of this guide may cause the USB CAN interface to stop working.

1.1 Relevant Products

Product Name	Model	Part number
PCAN-Chip USB	incl. Evaluation Board	IPEH-004025 IPEH-004025-EVAL
PCAN-USB	from ser. no. 200000, incl. opto-decoupled	IPEH-002021 IPEH-002022
PCAN-USB FD		IPEH-004022
PCAN-USB Pro FD		IPEH-004061
PCAN-USB X6	all models	IPEH-004062 IPEH-004063 IPEH-004064

1.2 Prerequisites

- Operating system Windows 10, 8.1, or 7 (32/64-bit)

- Windows driver software from PEAK-System for USB CAN interfaces is already installed

Tip: You can download the current version of the driver package from our website:
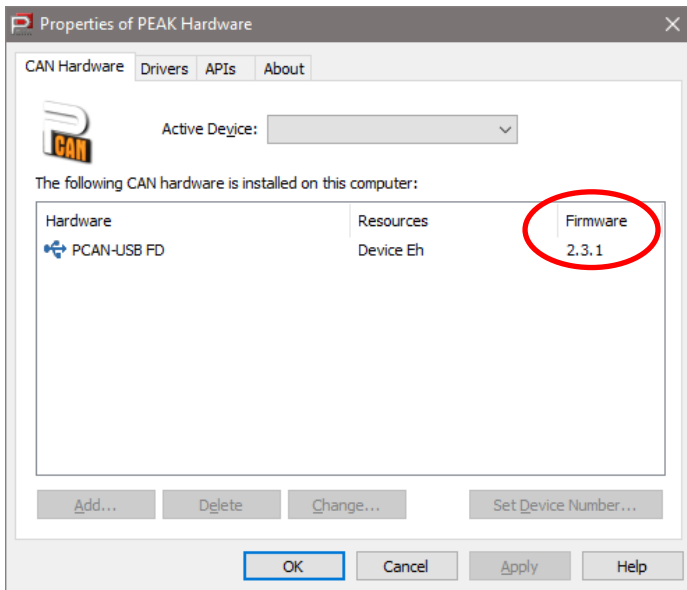www.peak-system.com/quick/DrvSetup

2   Determine Firmware Status

▶ Do the following to determine the version of the firmware on your USB CAN interface:

1. Connect the USB CAN interface to the Windows computer.

2. Open the Windows Start menu, type "peakcpl" into the search field, and press the Enter key.

    The window **Properties of PEAK Hardware** opens.

3. On the **CAN Hardware** tab, in the right column, read the **Firmware** version of your connected USB CAN interface.

Sample view for PCAN-USB FD with Firmware-Version 2.3.1

4. On the following website, you can check the version of the currently available firmware for your USB CAN interface

(table at the end of the page):
www.peak-system.com/quick/HW-Info

5. If the firmware version on the website is higher than the one of your USB CAN interface, continue with the following chapters.

Note: You get the current firmware files for the update of your USB CAN interface (`*.bin`) from our support.

3 Prepare PCAN-USB (Pro) FD

This chapter refers to <u>only</u> the following USB CAN interfaces having the mentioned version of the firmware:

- PCAN-USB FD (IPEH-004022), <u>up to</u> firmware version 2.2.1

- PCAN-USB Pro FD (IPEH-004061), <u>up to</u> firmware version 2.2.1

If you use other USB CAN interfaces or if a later firmware version is already installed, skip this chapter and continue directly with chapter 4 on page 8.

The mentioned products with the relevant firmware status must be updated with a new bootloader in order to enable the following firmware update process. This is done with the PCAN-Flash program.

Important note: The guide of this chapter <u>does not</u> work under Windows 10. Please, use Windows 8.1 or 7.

3.1 Prepare PCAN-Flash

You can download the current version of the PCAN-Flash program from our website:
www.peak-system.com/quick/DLPFlash

Unzip the downloaded file to a directory of your choice.

3.2   Update the Bootloader

➡️ Do the following to update the bootloader:

1. Execute the program `PcanFlash.exe.`

2. Select the menu command **Application** > **Option**.

    The **Options** dialog window opens.

3. In the **Hardware Profile** list, select your USB CAN interface
    (**PCAN-USB FD** or **PCAN-USB Pro FD**).

4. Click on the **…** button next to the **File name** field in order to
    select the file for updating the bootloader. According to the
    USB CAN interface, use on the following two files:
    `PCAN-USB_FD__MSD_loader_upgrade.bin`
    or
    `PCAN-USB_Pro_FD__MSD_loader_upgrade.bin`

5. Confirm with **OK**.

6. Select the menu command **PCAN** > **Connect** in order to
    establish a connection to the USB CAN interface in the
    corresponding dialog window. Use the preset bitrate of 500
    kbit/s. Confirm with **OK**.

7. Select the menu command **PCAN** > **Set USB to flash mode**.

    After a few seconds, one or several LEDs on the USB CAN
    interface flicker orange.

8. Select the menu command **Module** > **Detect** in order to
    detect the USB CAN interface.

    An entry for your interface appears in the main window.
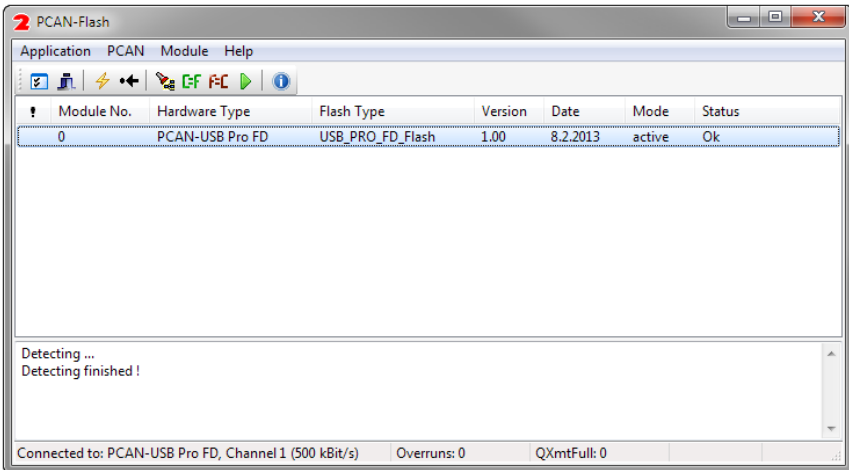
Example of the PCAN-Flash windows with detected PCAN-USB Pro FD

9.   Select the entry.

10. Select the menu command **Module** > **Program** in order to initiate the update process.

     Observe the status indication at the bottom of the window. The process was successful if the last message to appear is "Flashing of module(s) finished!".

11. Close the PCAN-Flash program.

12. Disconnect the USB CAN interface from the PC, wait a few seconds, and connect it again to the PC.

     One or several LEDS on the USB CAN interface flicker orange (activated bootloader). A new mass storage device with a drive letter appears on Windows.

13.

4 Update Firmware

In order to perform a firmware update, the bootloader in the USB CAN interface must be activated. Then, the interface appears as mass storage with a drive letter on Windows. The new firmware is transferred to the USB CAN interface by an easy-to-do copy action.

> **Important note:** For the PCAN-USB X6 (IPEH-004062/63/64), the firmware update must be performed three times (Channel 1, Channel 3, Channel 5).
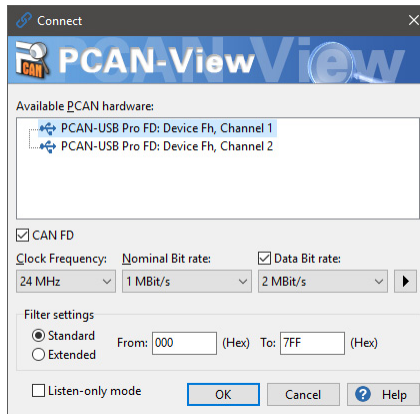
4.1 Activate Bootloader

For the activation of the bootloader, you need the Windows software PCAN-View from version 4.1.0.

▶ Do the following to activate the bootloader:

1. Connect the USB CAN interface to the Windows computer.

2. Start the PCAN-View program.

   The **Connect** dialog window appears (here with PCAN-USB Pro FD as example).

Example dialog window for connecting (here: PCAN-USB Pro FD)

3. Select CAN interface used by you (channel 1 for several channels, for PCAN-USB X6 channels 3 and 5 in further passes) and confirm with **OK**. Further settings are not relevant for this guide.

    The main windows of PCAN-View shows the connection at the bottom in the status bar.

4. In the upper area, change to the tab which has your USB CAN interface's designation, e.g. **PCAN-USB FD**.

5. While keeping the Ctrl key pressed, do a double click with the mouse into an empty area of the window.

    The **Update** button appears on the right of the firmware information.
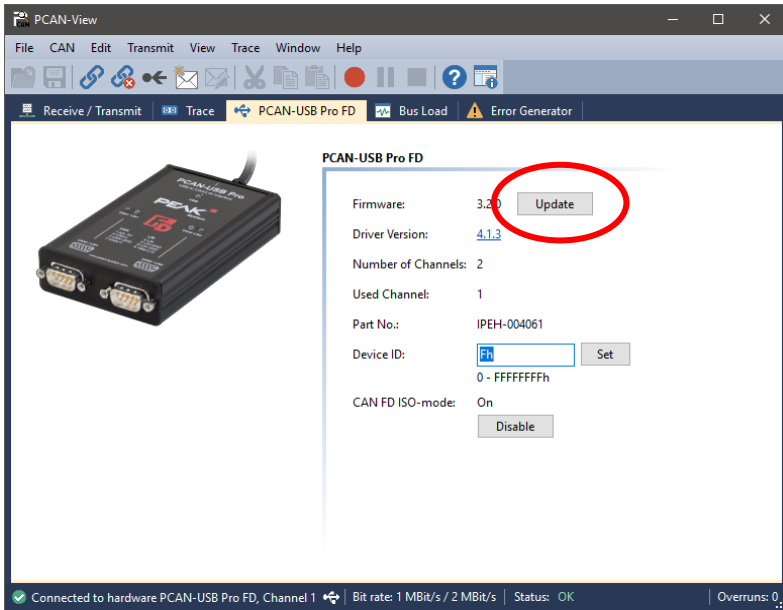
Update button after Ctrl + double-click

6. Click on the **Update** button.

   After a few seconds, one or several LEDs on the USB CAN interface flicker. A new mass storage device with a drive letter appears on Windows (USB drive).

The bootloader is now activated.

4.2   Transfer New Firmware

In order to transfer the firmware to the USB CAN interface, you need the file with the image of the new firmware (`*.bin`).

▶ Do the following to transfer the firmware to the USB CAN interface:

1. On Windows, open a window with the contents of the USB drive that is provided by the USB CAN interface in bootloader mode.

2. Delete the existing file on the USB drive.

3. Copy the new firmware file (`*.bin`) onto the USB drive. This process takes a few seconds.

4. After the copy process is finished, disconnect the USB CAN interface from the PC.

5. After a few seconds, reconnect the USB CAN interface.

Now, you can use the USB CAN interface as usual.