Quick Guide

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EMCR - Installation

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Revision History

Date	Version	Description
29 Oct 2025	1.5	Added troubleshooting for missing protocols
27 Sep 2024	1.4	Added troubleshooting for missing protocols
10 Sep 2024	1.3	Added link to eNPR 10MHz manual calibration procedure
20 Aug 2024	1.2	Updated FW upgrade: manual procedure section
20 May 2024	1.1	Improved troubleshooting section
23 Apr 2024	1.0	First version of document

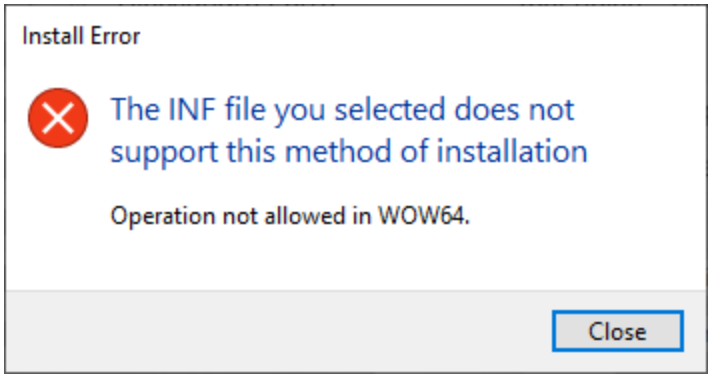
Installation

Download the EMCR installer for Windows from Elements' website Downloads - Elements.

At the end of the software installation, plug the device to a USB3.0 port and launch the software executable.

Installation troubleshooting

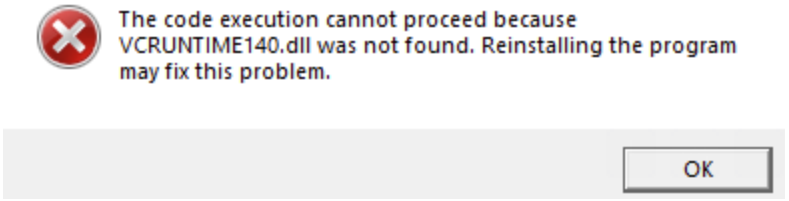
If at the end of the installation you get the error below

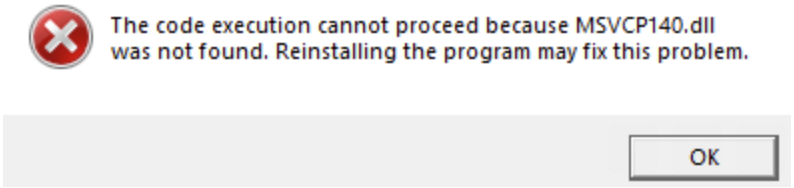


Go to the installation folder (default: C:\Program Files (x86)\Elements - EMCR) and into subfolders driversFX3\bin\Win10: there right click on the file cyusb3.inf and click "Install". In Windows 11 the option "Install" might be hidden in the "Show more properties".

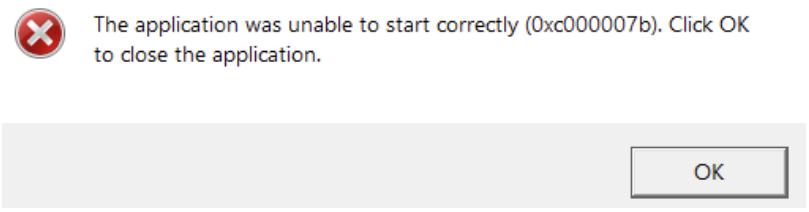
If the software:

- Doesn't start and reports an error of a missing .dll such as the ones below;





- Doesn't start and reports the error with code 0xc000007b;

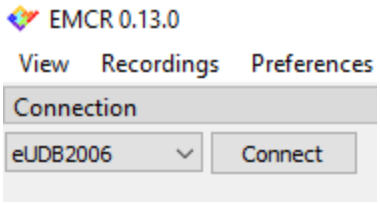


- Crashes after clicking the "Connect" button;

Please, download the latest Visual C++ redistributable package
https://aka.ms/vs/17/release/vc_redist.x64.exe
from Microsoft website
https://learn.microsoft.com/en-us/cpp/windows/latest-supported-vc-redist?view=msvc-170#latest-supported-redistributable-version
Then launch the VC_redist.x64.exe file, which will launch the package installer.

Connection

As soon as the device is recognized its serial number will appear and the connect button will be enabled.



To actually start controlling the device and acquiring data click "connect".

Connection troubleshooting

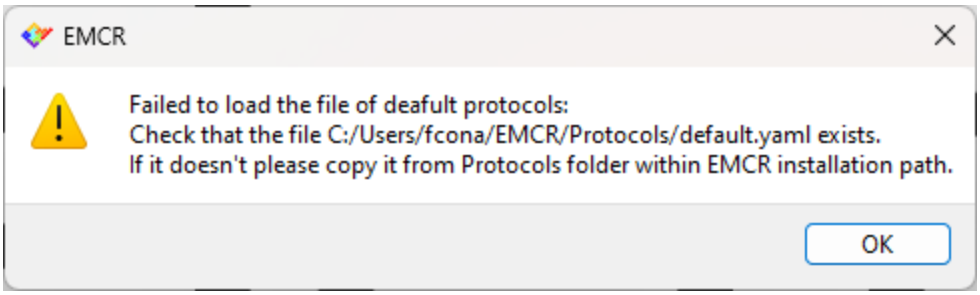
If this doesn't happen the more probable causes are:

- Improper device connection: be sure the device is connected to a USB 3.0 port via the provided cable.
- If the device has a separate power supply (e.g. eNPR 10MHz), make sure that the device is connected to its power supply.
- Installing Connection driver: it is possible that the device driver takes a while to properly recognize the device the first time it is connected to the computer, so try to turn off the EMCR software and wait 5-10 minutes before launching the software again.

- Connection driver not installed: it is possible that due to limited privileges the driver does not get installed properly. Go to the installation folder (default: C:\Program Files (x86)\EMCR) and into subfolders driversFX3\bin\Win10: there right click on the file cyusb3.inf and click “Install”. In Windows 11 the option “Install” might be hidden in the “Show more properties”.

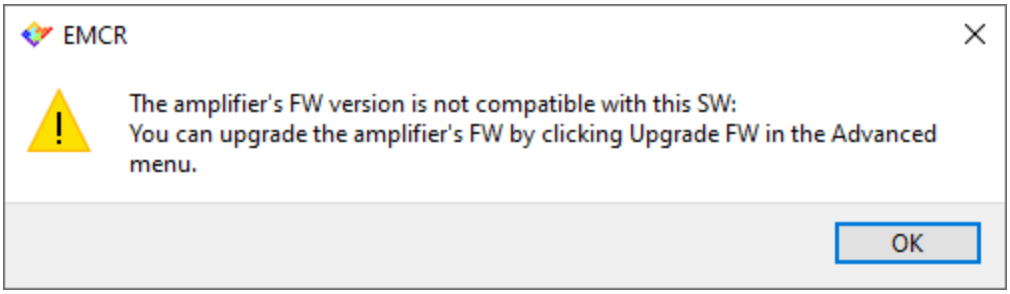
Missing Protocols

If during the connection the software complains about the missing default protocols, please copy the folder Protocols from the installation folder (default path: C:\Program Files (x86)\Elements - EMCR) into the EMCR local folder C:\Users\<username>\EMCR and restart the software.



FW Upgrade

After clicking “connect” the software will complain if the connected device has an incompatible FW. In some cases EMCR will be able to perform the upgrade itself, as shown in the image below:



If the firmware upgrade fails from EMCR it might be possible to manually upgrade the FW, depending on the device. Below are reported the instructions for manual FW upgrade in the supported devices.

If you don’t feel comfortable performing the upgrade on your own, or if you tried but it didn’t work please contact support@elements-ic.com to get remote support.

FW upgrade (manual procedure): eNPR 10MHz

Connect the device to the USB port of your computer

Double click the UDBFlashUpdater.exe software available in the installation folder.

The Serial Number of the device should appear under the “refresh button”

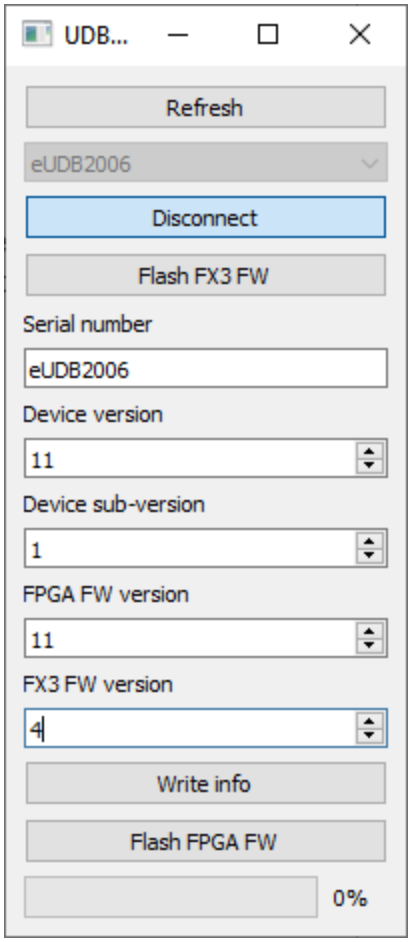
Click “Connect”

Click on Flash FX3 FW; the SW will prompt you to find a .img file and select the UDB-FX3_V04.img file that is inside the FW folder. The loading bar on the bottom will load a few times while the controls become grayed out. Wait until the controls are enabled again.

Type 11 in the Device version field, 1 in the Device sub-version, 11 in the FPGA FW version and 4 in the FX3 FW version, and click Write info. Again wait for the bar to load and for the controls to become enabled again.

Finally, click Flash FPGA FW, the SW will prompt you to find a .bin file and select the 10MHz_V11.bin file that is inside the FW folder.

Wait for the loading bar and for the controls to be enabled once more (this will take longer than the previous executions), and then close the UDBFlashUpdater and unplug and replug the device.



Now you can open the EMCR SW and check if the “connect” button works.

Calibration

Some devices (e.g. the eNPR 10MHz) load their calibration values from an external file. In such cases Elements will provide you with the files you need together with the instructions on how to save them on your disk. Alternatively these devices can be manually calibrated by following the guides available at these links:

- eNPR 10MHz Manual Calibration: https://elements-ic.com/nanopore-reader-10-mhz/#howto

Note for 10MHz Controller users

If you are switching from the SW 10MHz Controller to EMCR please check that the calibration file has correctly been exported following the steps below:

- Open the 10MHz controller installation folder (default path C:\Program Files (x86)\Elements - 10MHz controller).
- Check if you have a calibration file named <serialnumber>.csv, for example if you have the device eUDB2006 the calibration file should be eUDB2006.csv. If there's no such file then your device was loading the default calibration and you can ignore the following steps. Please note that the file might be named simply eUDB2006 if you have the file extensions hidden.
- If the <serialnumber>.csv file exists check that:
    1) The folder C:\EMCR_calib_folder\<serialnumber> exists, e.g. C:\EMCR_calib_folder\eUDB2006
    2) That it contains two files named boardMapping.csv and EL_board0.csv

  If any of the above points is not true the calibration file was not correctly exported, so please contact support@elements-ic.com to report the issue.