Troubleshooting guide

elements
enabling technologies for Life Science

EDR4 troubleshooting and best practices

ELEMENTS srl - ITALY - C.F/P.IVA/VAT 04113900403 - www.elements-ic.com

commercial info: info@elements-ic.com - technical support: support@elements-ic.com

Revision History

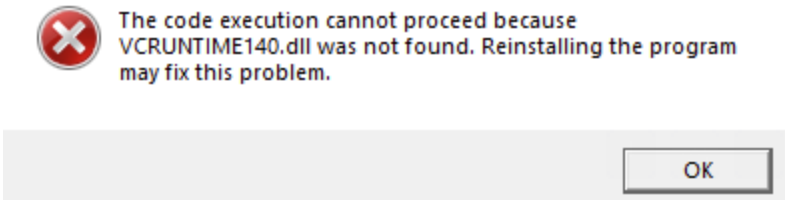
Date	Version	Description
29 Oct 2025	1.2	Link to Visual C++ redistributable package on windows website Removed error related to ftd2xx.dll
13 Mar 2025	1.1	Added issue related to missing Visual C++ redistributable package
3 Sep 2024	1.0	First version of document

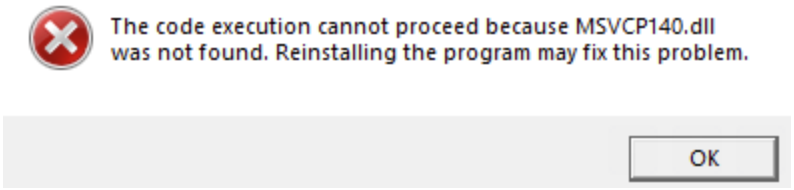
Installation issues

Missing Visual C++ Redistributable

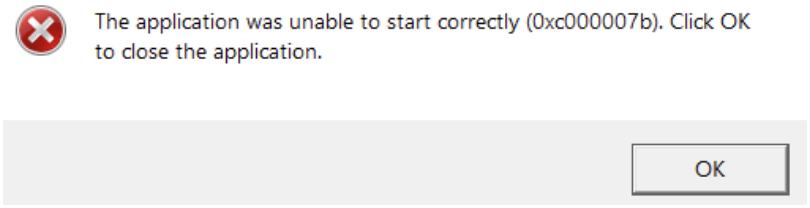
If the software:

- 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.

Data loss

If your device generates more data than the computer can handle you will experience data loss, i.e. not all of the acquired data is plotted on screen or saved on the disk during recording.

Quick check

If you're unsure about the data you're recording, check the **samples per seconds** which by default is located in the upper part of the software.

The number could oscillate a bit, but it's a good indicator about the integrity of the data.

If the numbers that you see averages to the selected sampling rate, then you're almost certain to be receiving all the data from the device.

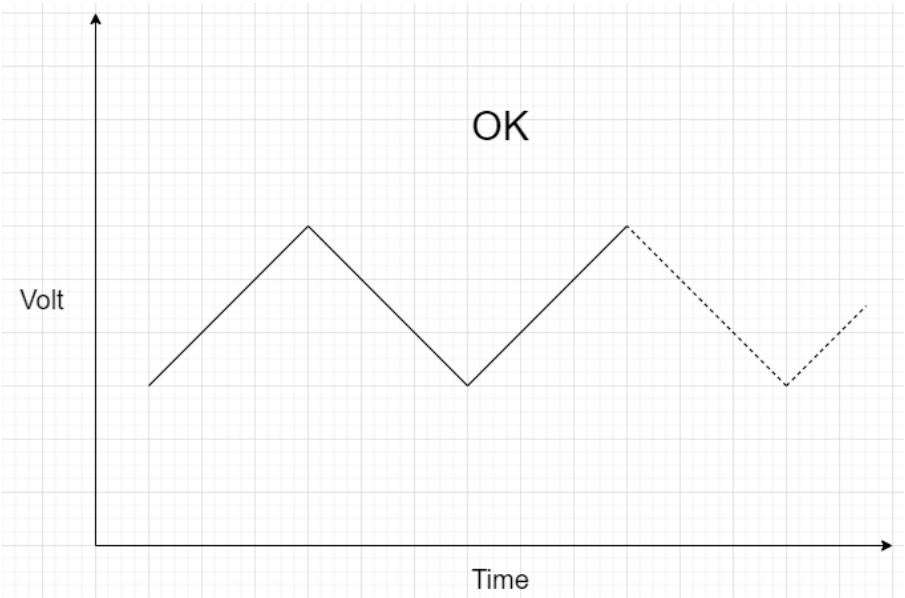
For example, if you select **200kHz** as the sampling frequency for your device and the estimated sampling rate is ~200ksps everything should be fine. If that number is constantly lower, for example ~140ksps you could be losing data.

When the estimated sampling rate is systematically lower than the selected sampling rate you might also experience some lag in the commands, e.g. if you apply a voltage protocol, it might appear in the plots several seconds later.

Further checks

To check more thoroughly if you're losing data or not, perform the following steps:

1. Select the desired sampling frequency
2. Start a triangular protocol
3. Start a recording
4. Open the recording with **EDA** or a software program of your choice
5. Check the voltage for strange patterns: if you're not losing any data you should see a proper triangular pattern, while if you're losing data the triangular pattern will be broken with abrupt jumps. Examples of recordings with and without data loss are shown in the figure below


OK
Volt
Time


DATA LOSS
Volt
Time

Possible Fixes

Update the software

Remember to check periodically for new updates on our website. If you find any bugs in your version of EDR4 or if it seems like something is not working, the first step will always be to update the software.

Newer releases of EDR4 could also improve performances hence they might also solve problems regarding data loss.

To update your software just install the latest version from our website.

Keep the software in foreground

Windows is always trying to optimize resources and give priority to the application that has the "**focus**". To ensure that EDR4 gets the most resources (parparticularly useful during recordings at high sampling rates and with multiple channels selected) just click on the software and leave it open in foreground.

You can also set higher priority by following this guide.

Close unnecessary applications

If your pc is struggling to keep up with the data flow, try closing all the applications, but EDR4 to minimize the computational usage of the other programs. Nowadays, browsers can be particularly demanding, especially if they have a lot of tabs open.

Change the power setting

Especially if you plan to record with EDR4 while you're not at the PC (e.g. while doing other things in the lab, or during lunch time or night time), change the power settings of your so that the screen never turns off and disable the automatic standby/sleep feature.

Recording locations

Make sure to record your data locally on your machine.

Don't record directly to external hard drives or cloud storage, and if possible use an SSD local drive.

Saving to a local fast SSD removes communication bottlenecks, and the recordings can be moved to another location afterwards.

Avoid USB hubs

If possible connect the device directly to a dedicated USB port on your PC. If you need to use a HUB for lack of USB ports, it might help using a powered USB HUB.