Install Tutorial:
Quartus 20.1 and ModelSim
or Quartus 23.1 and Questa
for VEEK-MT2 development board

Version V1.1 from Oct 9, 2023

Introductory notes:

Altera / Intel: Altera has been acquired by Intel. Two names, Altera and Intel, are used interchangeably in websites. In this document, we utilize Intel.

USB Port: When connecting VEEK-MT2 board, we recommend using a USB port exclusively for the board VEEK-MT2 and do not share it with other devices/hubs; otherwise, you could encounter USB-related problems.

Versions: The Quartus version 20.1.1.720 is the last one that contains a free ModelSim simulation environment. ModelSim has switched to Siemens Questa in its newer versions, with only a one-year free license that complicates laboratory installations. But in Windows 11Thus, Quartus 20.1 can have difficulties. If you encounter them, you must install Quartus 23.1.
Quartus 20.1 a 23.1 has the same skin, but they differ mostly in its simulation environment. Free ModelSim in 20.1 was replaced by more restricted Questa in 23.1, which require only different EDA tol settings. The installation is the same.

Download and run setup.bat

1st way: From official site:

Download: [Intel® Quartus® Prime Lite Edition Design Software Version 20.1.1 for Windows](#)

[intel.com -> Products -> Intel® Quartus® Development Software & Tools>

  Intel® Quartus® Prime Design Software -> Downloads

-> Download for Windows (free, no license required) - select Version 20.1.1

    Download Quartus-lite-20.1.1.720-windows.tar]

Run Command Prompt in the download directory (In Windows Explorer's, go to the folder.

Click on the Windows Explorer's location bar. Type **cmd**. Hit Enter).

In Command Prompt, create subdirectory tmp in the download directory by entering:

　mkdir tmp

In Command Prompt, write (or copy-paste) the command for unpacking downloaded tar:

　tar -zxvf ./Quartus-lite-20.1.1.720-windows.tar -C ./tmp

After extracting, enter the following commands:

**cd tmp**

setup.bat

2ⁿᵈ way: From our local site

After logging to DCENET with your FelId password, download the zipped version of the tar distribution:
Try first: Quartus-lite-20.1.1.720-windows.zip (6.3 GB] . Unzip it into some directory and run **setup.bat**
If your Win11 encounter problems, install Quartus-lite-23_1_1_CycloneIV.zip (3.9 GB – it was reduced to contain only Cyclone IV)

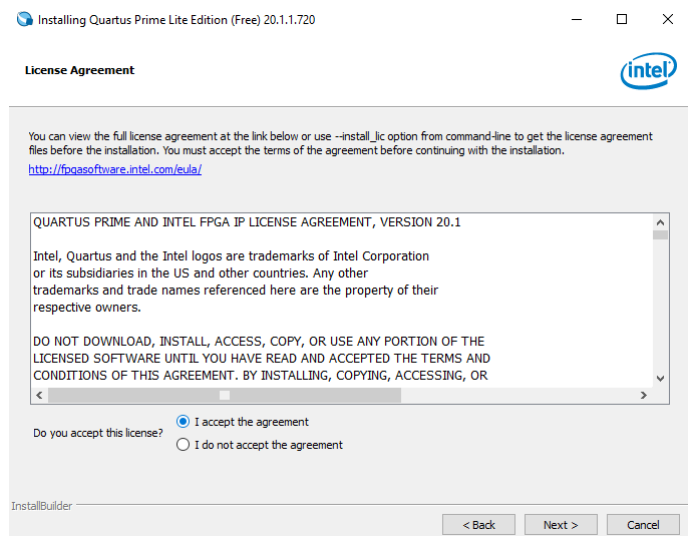# Installation

Run setup.bat and wait approximately 30 seconds.
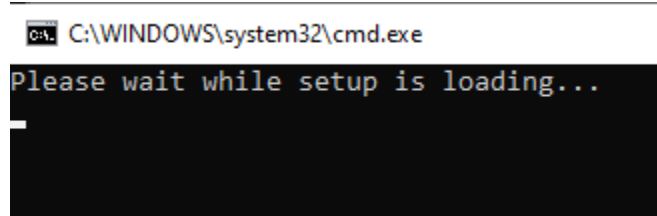
Confirm Windows dialog.
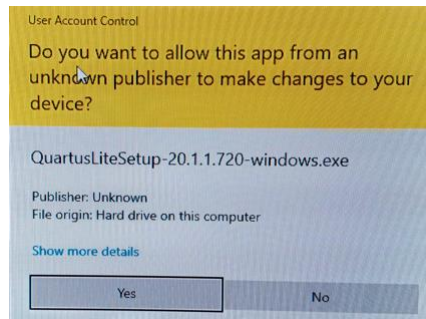
Skip the first screen.   Accept Agreement

Select the installation directory, or leave its default path.

In the Select Components, you need only parts in the figure below. Eventually, you can also check off Quartus Prime Help to save HD space.

In Quartus 23.1, the installation from DCENET was reduced to Cyclone IV to be smaller, so it contains only:

You can add RiscFree, if you wish, but it is too advance for our beginner course. We will not deal with it.

Then, confirm the installation directory summary or return by [<Back] button to make corrections.

Quartus 23.1 needs 13.05 GB disc space without RiscFree, 15.1 GB with Risc-Free.

The installation steps start and will run depending on your hard drive speed. The fast computer with an SSD drive takes about 15 minutes.
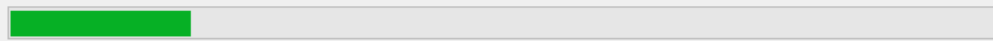

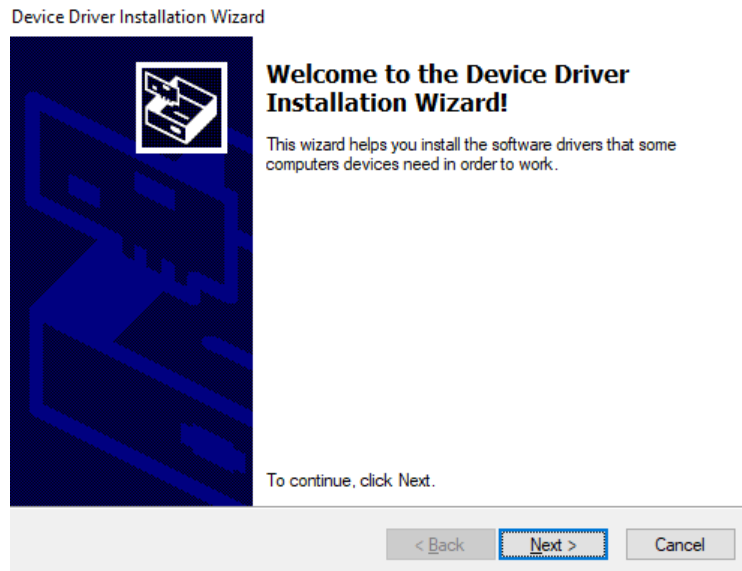You need the "Launch USB Blaster II driver installation" selection on the final screen. The others are optional.
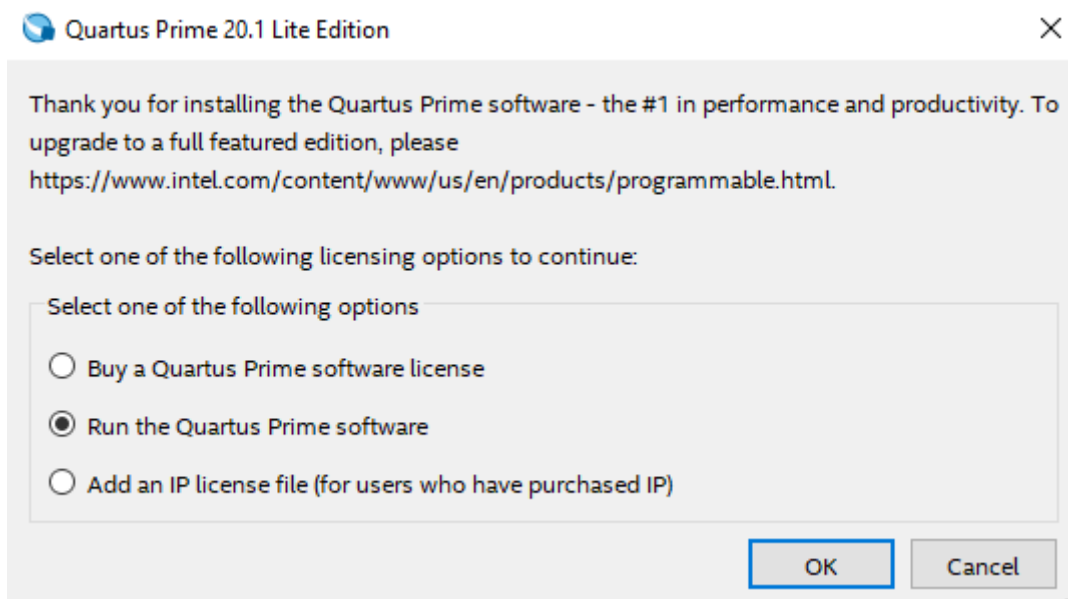

The driver installation is critical for communications with the board.

The installation might also fail in some Windows versions, which is frequent incompatibility. We need only a cable connection to the development board, then we can correct it from the Windows Device Manager.
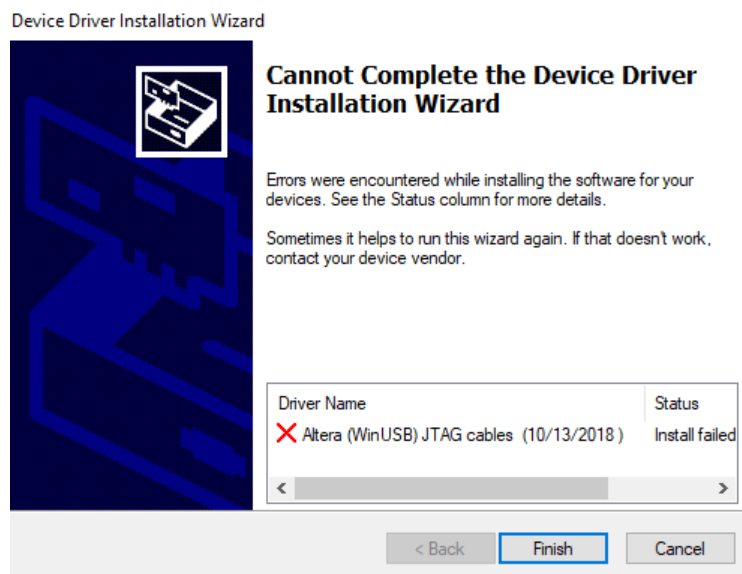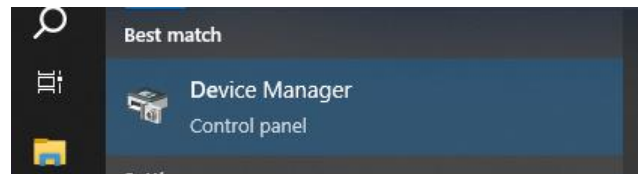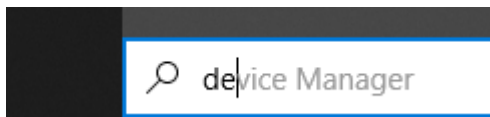

At the final dialog, select the middle option:

Correcting Altera USB driver

Connect your computer by USB cable to the VEEK-MT2 development board. Open Device Manager by typing its name in Application menu


Locate Altera USB Blaster in the list of devices and select Update drive from the right mouse context menu. It need not be necessary in Universal Serial Bus Controllers, but, e.g., in Other Devices, and so on.
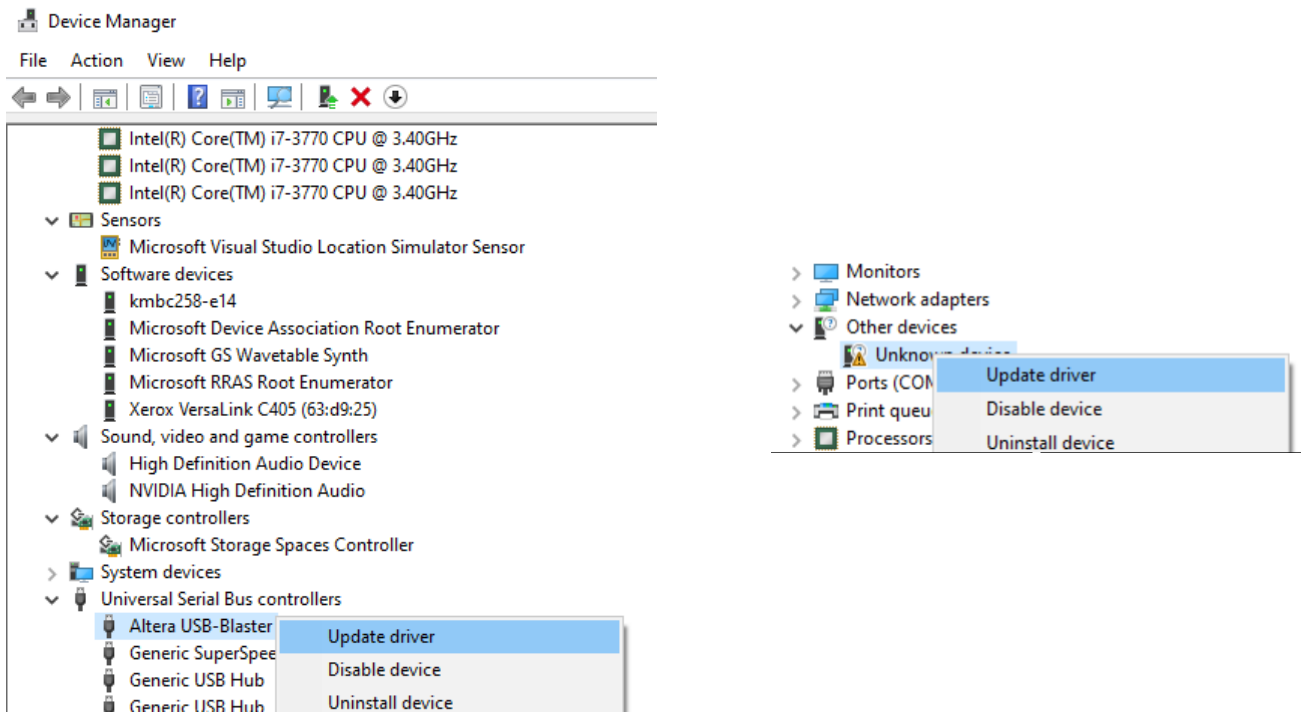
Select Browse my computer…
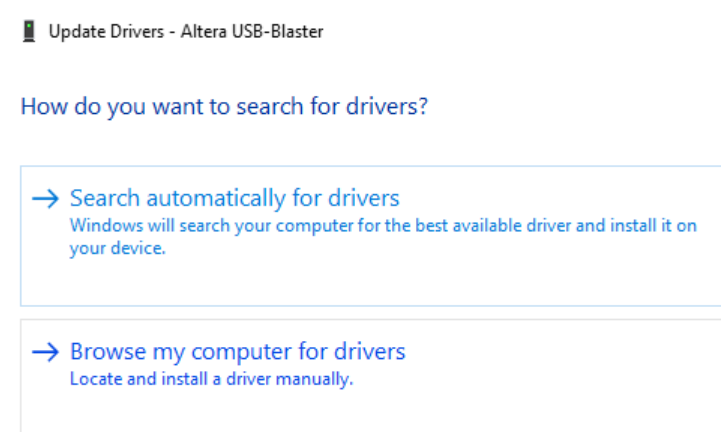
In your installation path, select folder quartus/drivers. If you have used the default path, it is located in **C:\intelFPGA_lite\20.1\quartus\drivers** or in **C:\intelFPGA_lite\23.1std\quartus\drivers** and press OK
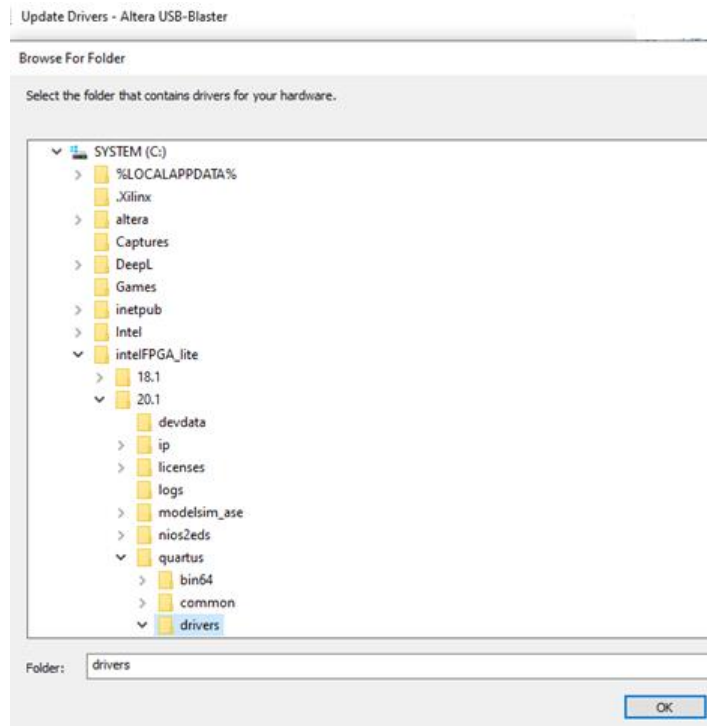
Check Include subfolders option and click Next. Windows chose the driver and installed it.