

# Xilinx Vivado Design Suite installation

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This page provides step-by-step guidance to install **Xilinx Vivado Design Suite**, the tool used to program the FPGA of imperix [B-Box RCP](#) and [B-Board PRO](#) power converter controllers.

The Xilinx Vivado Design Suite includes:

- **Vivado**: the tool that synthesizes HDL designs so they can be loaded into the FPGA. It is the only mandatory tool to program the FPGA.
- **Vitis HLS** (formerly Vivado HLS): a high-level synthesis tool which allows creating FPGA algorithms using C/C++ code. More information are available on the [Vitis HLS introduction](#) page.
- **Vitis Model Composer**: an add-on for MATLAB & Simulink which includes [Model Composer](#) and [System Generator](#). This tool is not free and requires a license. For more information please refer to the [Xilinx Add-on for MATLAB & Simulink](#) page.

To find all FPGA-related notes, you can visit [FPGA development homepage](#).

## Is Xilinx Vivado free?

Xilinx Vivado is available for free under the name *Vivado ML Standard* (formerly Vivado HL WebPACK). [This Xilinx page](#) summaries the differences between Vivado

ML Standard and Vivado ML Enterprise. Basically, the no-cost version (Vivado ML Standard) supports a limited set of devices, which includes the one used in imperix controllers (the Zynq XC7Z030).

## Downloading Vivado Design Suite

A Xilinx account is required to download and install the Xilinx Vivado Design Suite. It can be created by following the link <https://www.xilinx.com/registration/create-account.html>.

The [imperix firmware IP](#) versions 3.8 and 3.9 require Vivado 2022.1 (or higher).

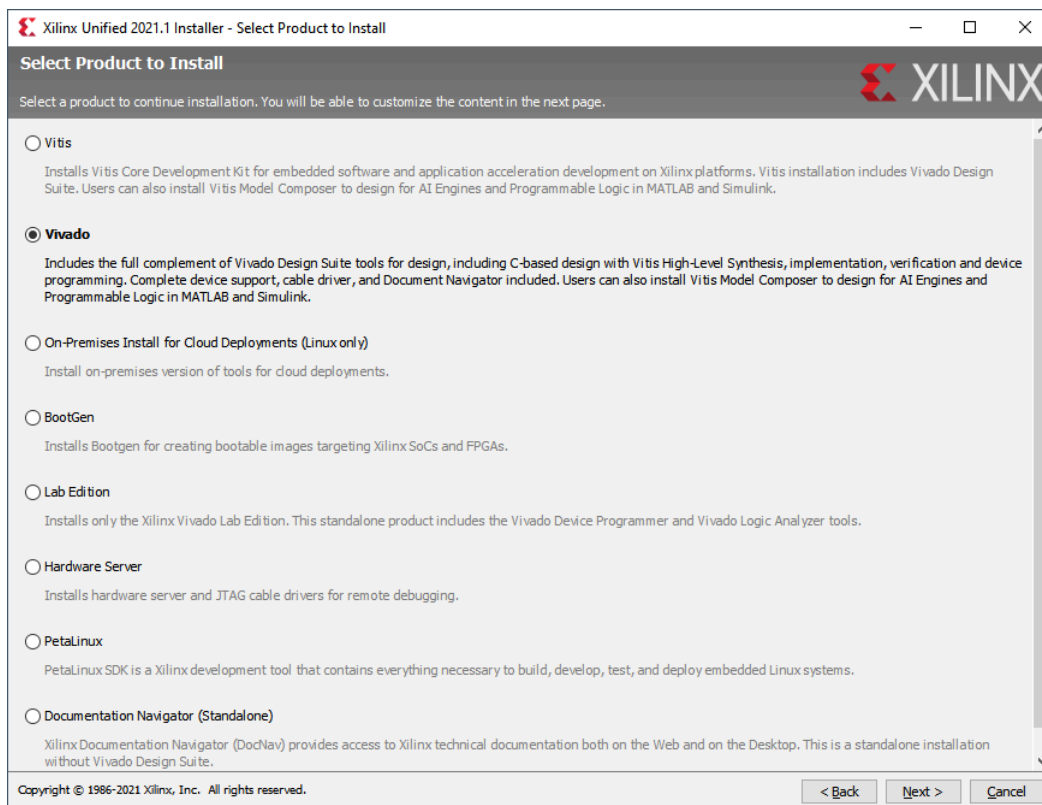
1. Go to the [Xilinx download page](#)
2. Select the **Windows Self Extracting Web Installer**
3. Enter your login credentials
4. Fill up the name and address verification form, and click **Download**

## Installing Vivado Design Suite

1. Launch the downloaded executable.
2. Enter your login credentials and select **Download and Install Now**.

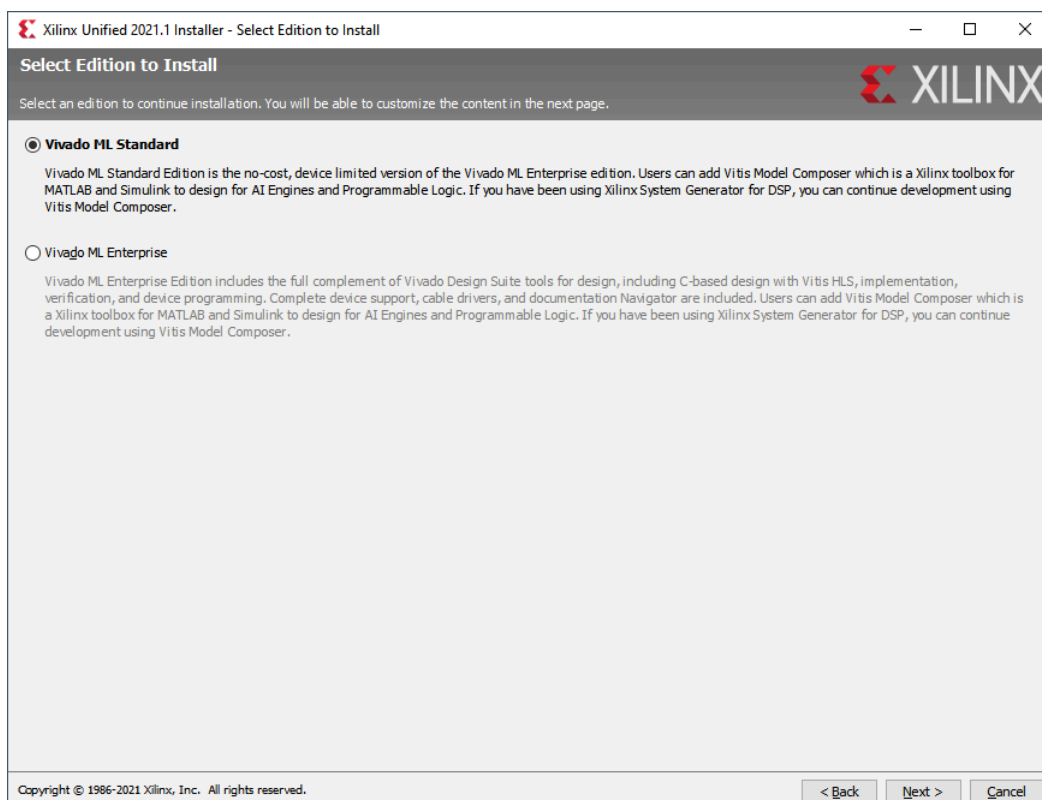
Install Type

3. Select **Vivado**.



## Product to Install

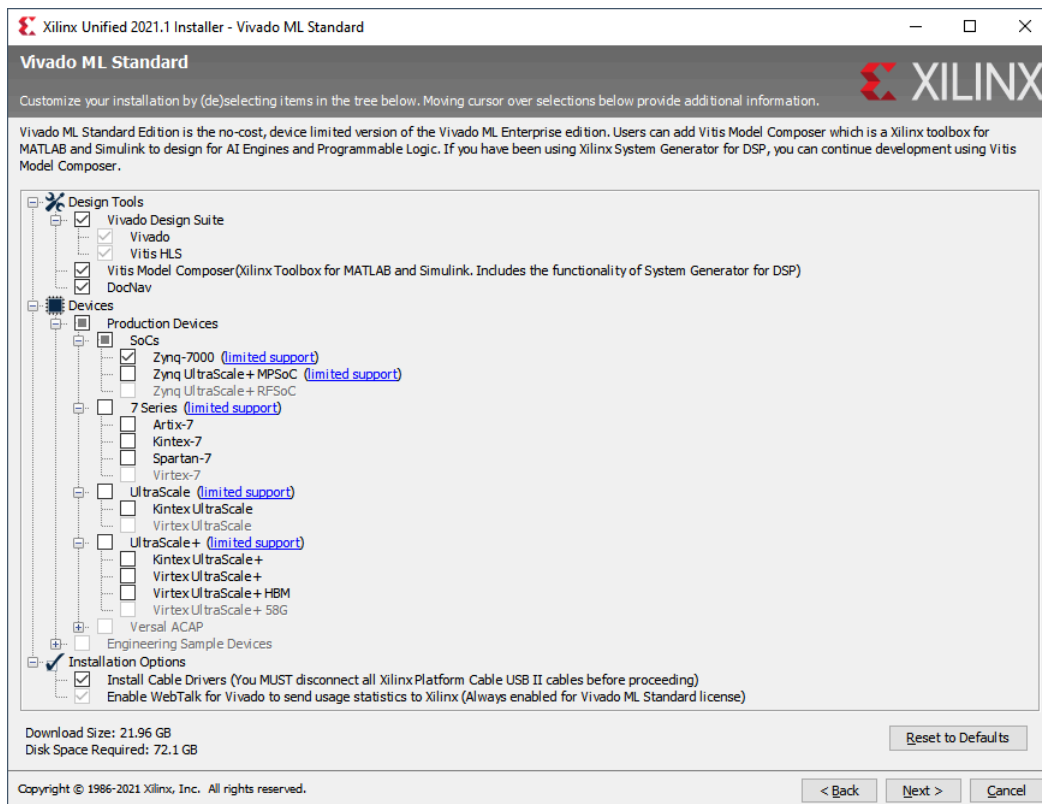
4. For the no-cost version, select **Vivado ML Standard** (equivalent to the former WebPACK edition).



## Edition to Install

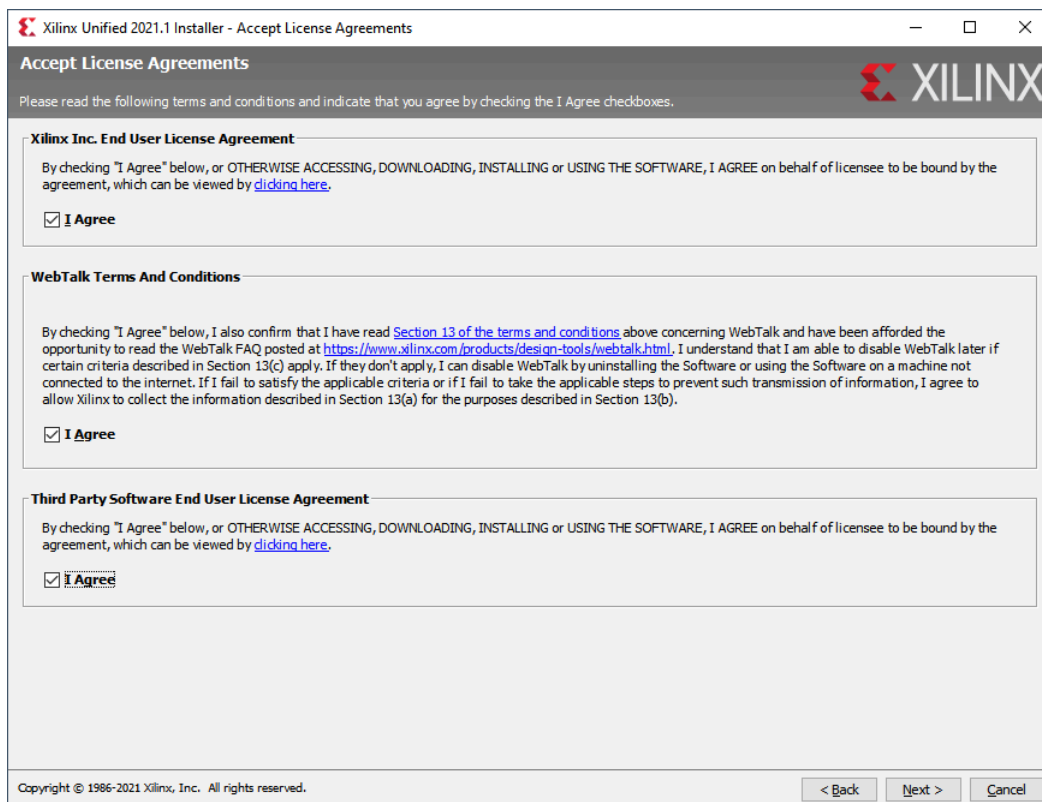
5. Select the items to install. The only required items are **Vivado** and the **Zynq-7000 support**. If required, the other tools can be installed later on, using the

## Xilinx “Add Design Tools or Devices”.



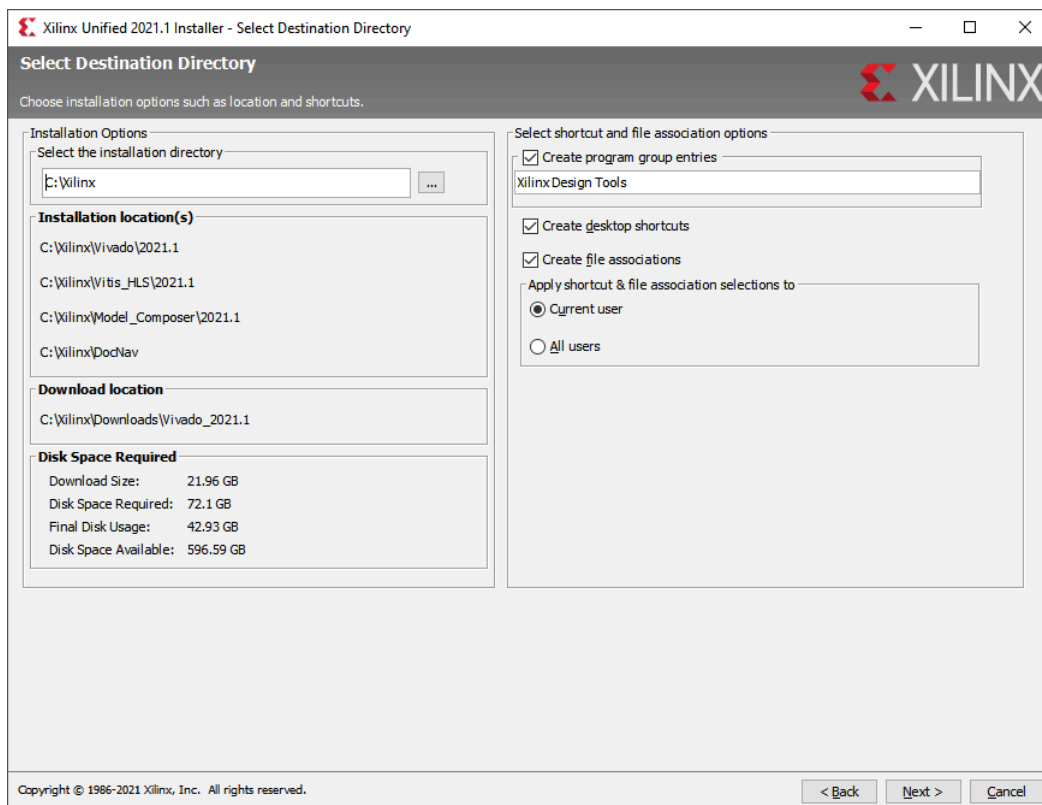
## Vivado Design Suite ML Standard Edition

### 6. Accept the license agreements.



## License Agreements

### 7. Chose an installation directory. We recommend keeping the default one.



Destination Directory

8. And finally hit **install**.

To learn how to program the imperix controller FPGA, please refer to the [Getting started with the FPGA control implementation](#) page.

## Going further

Automated code generation tools such as [Xilinx System Generator](#), [Model Composer](#), [Vitis HLS](#), and [MATLAB HDL Coder](#) can be used to facilitate the development of FPGA modules.

The [FPGA development on imperix controllers](#) summarizes all the FPGA-related pages.

Back to [FPGA development homepage](#)