

Xilinx Vivado Guide

ECE 3401/CSE 3302 – Spring 2024

***Updated 1/22/2024**

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Getting Started With Xilinx Vivado

Digital designs written with VHDL/Verilog HDL must be synthesized. We will use Xilinx Vivado for the programming assignments in the course. You have 3 options:

1. (Recommended) Install Xilinx Vivado on your personal computer by downloading the Xilinx Webpack (slide 3)
2. Use [UConn Anyware](#), where it is already installed (slide 12)
3. Use the computers in the E2 building rooms 305/306/307 where it is already installed. [Here](#) you can find the computer lab schedule and hours. Labs not in use by other instructors are free to use (slide 13).


Option 1: Installing on Your Own PC

1. If Windows/Linux User, proceed to step 2. If a MAC OSX user, download the free [VirtualBox](#) and create a Windows virtual machine w/ 80GB of drive space (you will need this much in order to download the installer).
2. Open the [Xilinx Vivado Downloads page](#).
3. On the left side, under 'Version,' select '2023.2'

The screenshot shows the Xilinx Vivado Downloads page. At the top, there is a navigation bar with links for Vivado (HW Developer), Vitis (SW Developer), Vitis Embedded Platforms, Power Design Manager, Alveo Packages, PetaLinux, Device Models, and Documentation Navigator. Below this, the 'Version' dropdown menu is open, showing a list of versions: 2023.2 (highlighted with a black background and a black arrow pointing to it), 2023.1, 2022.2, 2022.1, Vivado Archive, ISE Archive, CAE Vendor Libraries Archive, and Libraries Archive. The main content area is titled 'Vivado ML Edition - 2023.2 Full Product Installation'. It contains a section for 'Important Information' stating that Vivado™ ML 2023.2 is now available for download. Below this is a section for 'Meeting Fmax targets' with two bullet points: 'Increase performance of designs in Versal Premium and Versal HBM devices with automatic place & route of SLR crossings' and 'Faster device image generation with multi-threaded support'. To the right of the main content is a table with two columns: 'Download Includes' (Vivado ML Edition), 'Download Type' (Full Product Installation), 'Last Updated' (Oct 19, 2023), 'Answers' (2023.x - Vivado Known Issues), and 'Documentation' (Release Notes, OS Support Update, What's New in Vivado).

Option 1 (Continued)

4. Scroll down and download the installer (Windows or Linux). You will need to sign in and fill out the U.S. government export agreement. If you do not have an AMD/Xilinx account, create one.

 AMD Unified Installer for FPGAs & Adaptive SoCs 2023.2: Windows Self Extracting Web Installer (EXE - 203.13 MB)


MD5 SUM Value : 50e8baea82f54dc8a83b86dce491ee80

Download Verification 

Digests

Signature

Public Key

 AMD Unified Installer for FPGAs & Adaptive SoCs 2023.2: Linux Self Extracting Web Installer (BIN - 270.64 MB)

MD5 SUM Value : b8c785d03b754766538d6cde1277c4f0

Download Verification 

Digests

Signature

Public Key

Option 1 (Continued)

5. Launch the executable that you downloaded. After it launches, enter your AMD/Xilinx credentials and select the 'Download and Install' option, and hit 'next'.

AMD Unified Installer for FPGAs & Adaptive SoCs 2023.2 - Select Install Type

Select Install Type

Please select install type and provide your AMD.com E-mail Address and password for authentication.

User Authentication

Please provide your AMD user account credentials to download the required files.
If you don't have an account, [please create one](#). If you forgot your password, you can [reset it here](#).

E-mail Address: zachary.dimeglio@uconn.edu

Password: [REDACTED]

Download and Install Now

Select your desired device and tool installation options and the installer will download and install just what is required.

Download Image (Install Separately)

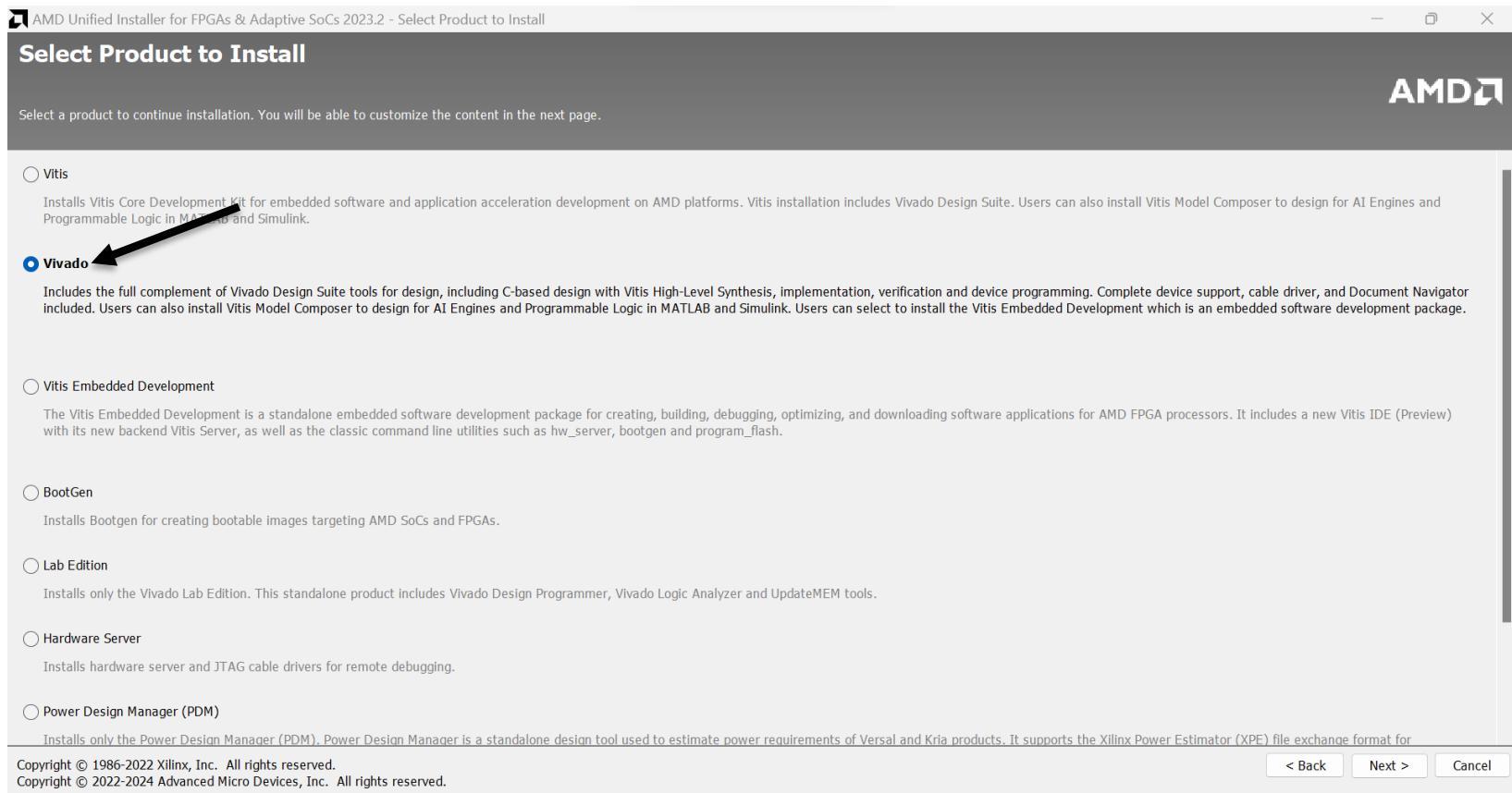
The installer will download an image containing all devices and tool options for later installation. Use this option if you wish to install a full image on a network drive or allow different users maximum flexibility when installing.

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< Back Next > Cancel

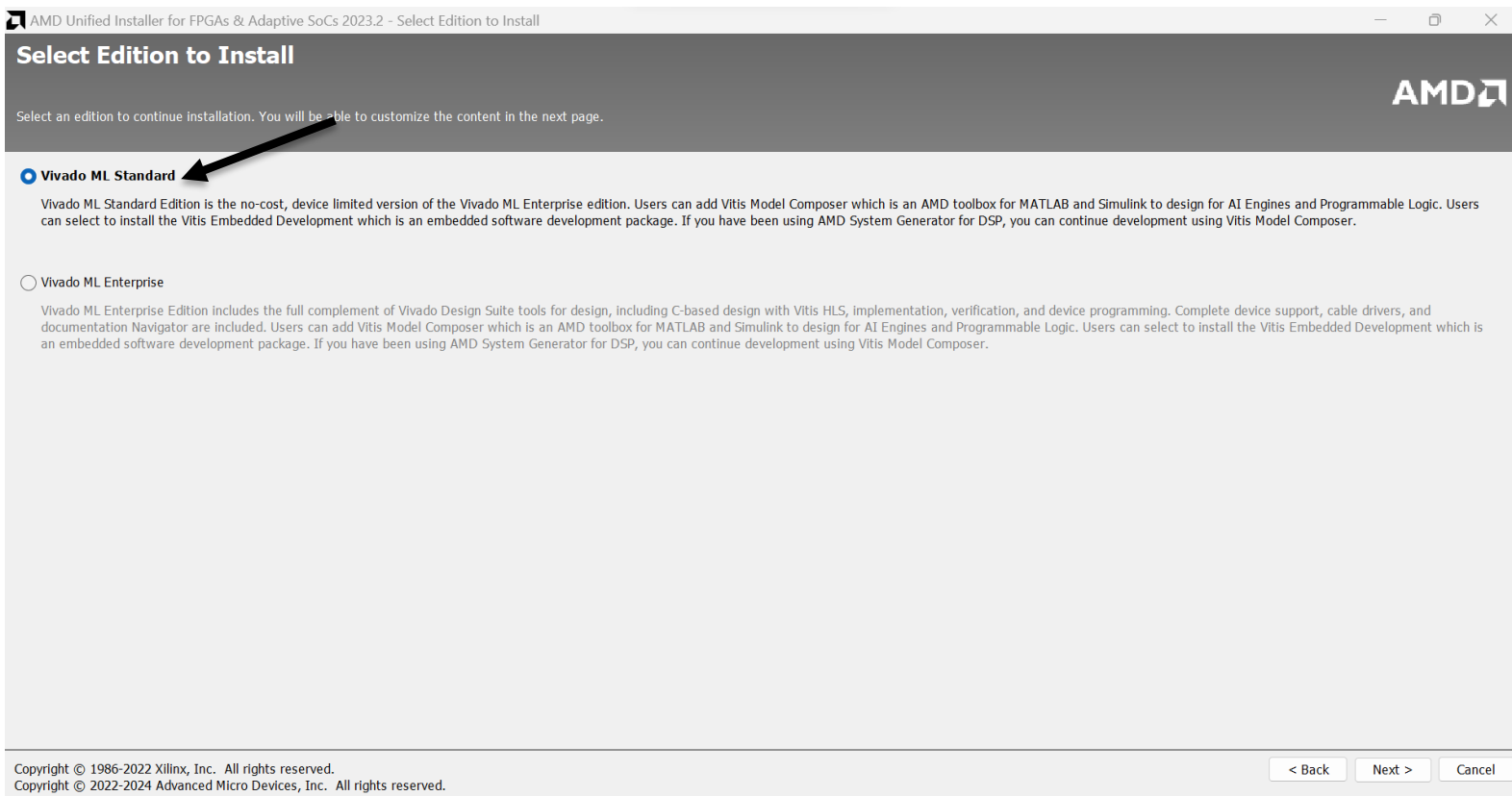
Option 1 (Continued)

- On 'Select Product to Install' menu, choose 'Vivado' and hit 'next.'



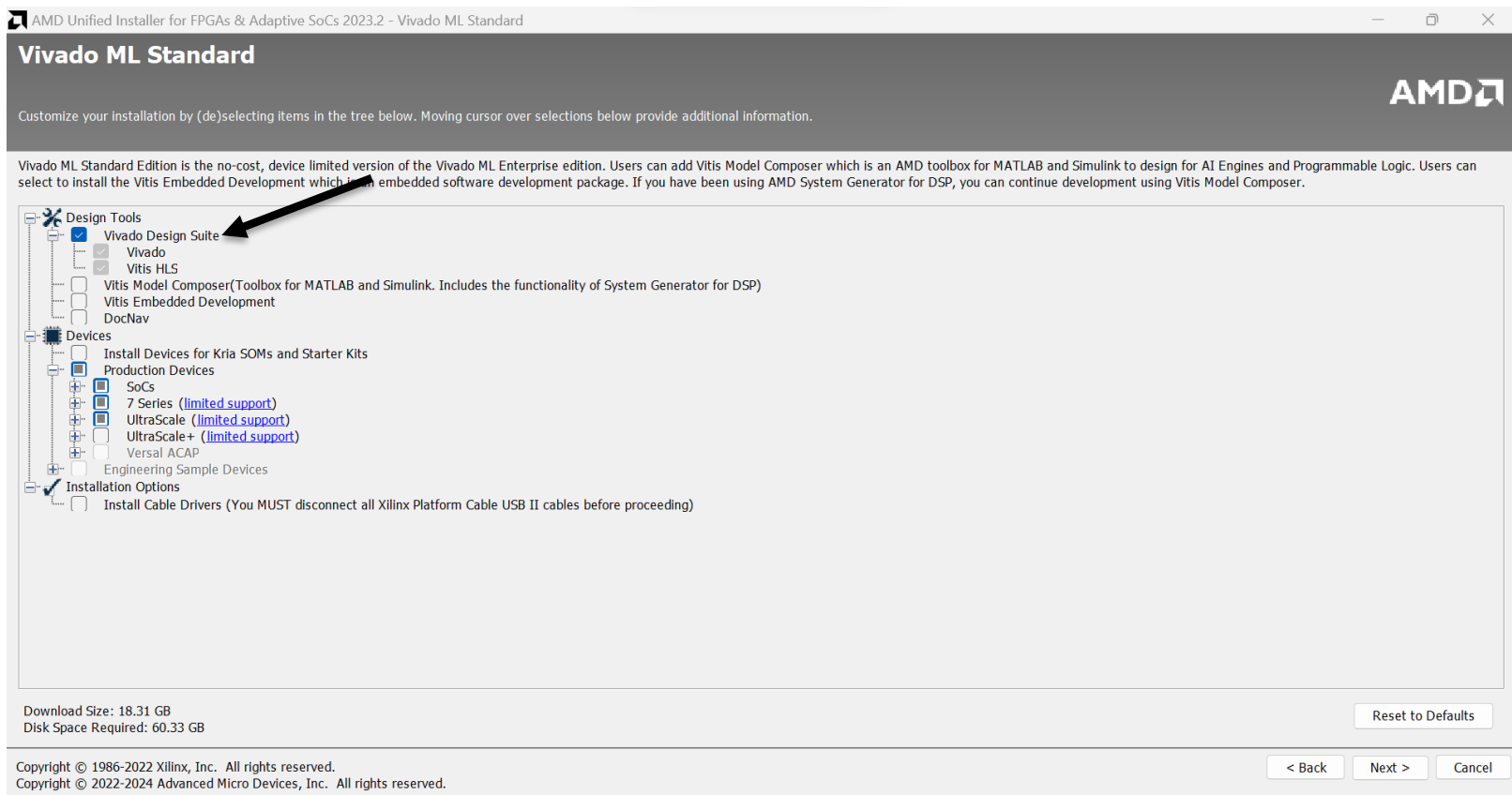
Option 1 (Continued)

7. On 'Select Edition to Install' menu, choose 'Vivado ML Standard' and hit 'next.'



Option 1 (Continued)

- On the 'Vivado ML Standard' page, select 'Vivado Design Suite' and 'Production Devices' and uncheck all other boxes. Hit 'next'.



Option 1 (Continued)

9. Agree to the 'End User License Agreement for Vivado' and the "Third Party Software End User License Agreement for Vivado' and hit 'next'
10. Select an installation directory to keep the download and (default is fine) and hit 'next.'
11. Review the installation summary and install the program.

****Note: the installer requires a massive amount of drive space (~60GB) and takes up ~35GB. Once Vivado is installed, you can remove the installer to free up more space.**

Option 1 (Continued)

12. After opening Vivado for the first time, the license manager should open. If it doesn't, navigate to the top toolbar on the Vivado home screen and click "Help → Obtain a license key." Under 'Obtain License', choose 'Get My Full or Purchased Certificate-Based License,' and click 'Connect Now.' The webpage for downloading the license will launch.

13. You may need to sign in again with your AMD/Xilinx credentials and fill out the U.S. government export agreement again. Choose 'ISE WebPACK License,' then navigate through the prompts until you can download it.

Option 1 (Continued)

14. The file 'Xilinx.lic' should now be downloaded. Make sure it's in a folder you can find easily. Going back to the license manager, under 'Load License,' click on 'Copy License' navigate to the 'Xilinx.lic' file. After loading it, you should get the prompt that it was successful. You should now be all set to use Vivado on your personal machine.

Option 2: Use UConn Anyware

1. Go to the [UConn Anyware webpage](#)
2. Click on the 'Launch Anyware' and log in with your NetID/Password
3. Click 'Engineering Desktop' → 'Open'
4. Search 'Vivado 2020.1' in the Windows search bar and launch the program.

Option 3: Use PCs in E2 305/306/307

1. Sign into the desktop with your NetID/Password.
2. Search 'Vivado 2020.1' in the Windows search bar and launch the program.

***As of 1/22/2023, the correct edition of Vivado is not yet on the E2 PCs. ITS is aware of the issue and is working on it. You must use option 1 or 2 until it is resolved.**