

Computer Assignment #0
Due We. 9/16

Quartus II Software Setup

Total Points: 10

1 Introduction

This week's hands-on exercise will help you get ready to use the Quartus II Web Edition software, a powerful commercial suite that will enable you to design, simulate, and test digital circuits. To use this software, you can either:

1. Install the software on your own laptop or computer, and/or
2. Use the software located on the PCs located in the Electrical and Computer Engineering Laboratories, located in TBE B-311 or TBE B-350.

The preferred method is to use software in the ECE labs to avoid the large file download (v13.1 or v14.1 [2+GB]). Remote access is provided by OIT through the Virtual Computer Labs (<https://www.it.unlv.edu/rebelapps>). For more information read the RebelApps Introduction Guide.

You will be using the Quartus II software in this and future hands-on exercises. **Unless you are confident in installing software and drivers on your own, it is highly recommended that you use the software in the ECE labs.** If you are using the ECE lab computers, you will need an ACE account (see: <https://ace.unlv.edu/>).

2 Lab Usage

Verify you can log into a ECE lab computer using your ACE account. Find Quartus II (use Windows key search) and ModelSim are both available and open.

2.1 RebelApps Remote Access

RebelApps Virtual Computer Labs service allows students to connect to a virtual desktop in a computer lab to access 40+ software titles (including Quartus II and Matlab) from their own device. Students can interact with the desktop as if the data and programs were stored on their home computer.

In order to log into a TBE B-311 or TBE B-350, you will need to follow the RebelApps Introduction Guide to install the VMware Horizon Client and setup the UNLV workspace (workspaces.unlv.edu). Once connected, you can enter a virtual lab and log into a computer using your ACE account.

3 (Optional) Quartus II Software Installation

If you would like to install the Quartus II software on your own laptop or computer, follow these instructions. Note that a newer versions of the software exists, however, these direction will have you install version 13.1 (or 14.1) to be consistent with the version in the ECE labs. **Fall 2019 was the first semester to transition to version 14.1**, you can install this version and it should not be any different than 13.1.

3.1 Intel Download Center for FPGA

Browse to: <http://fpgasoftware.intel.com/13.1/?edition=web>. Select release 13.1, the operating system of choice (Windows or Linux), (recommended) use the Akamai download method and leave the **Select All** box selected, as shown in Figure 1. Then click on **Download Selected Files**.

The screenshot displays the Intel Quartus II Download Center interface. At the top, there is a navigation bar with the Intel logo and links for FPGA, PRODUCTS, SOLUTIONS, SUPPORT, ABOUT, and BUY. A search bar and 'LOG IN' button are also present. The main heading is 'Download Center' with the subtext 'Get the complete suite of Intel® design tools'. On the left, a sidebar menu lists various software categories. The main content area is titled 'Quartus II Web Edition' and includes a 'Select release' dropdown menu set to '13.1'. Below this, there are radio buttons for 'Operating System' (Windows selected) and 'Download Method' (Akamai DLM3 Download Manager selected). A section titled 'Download and install instructions' provides links for more information. The 'Select All' checkbox is checked, and a list of software components and device support options is shown, all with checked boxes. A 'Download Selected Files' button is located at the bottom of the selection area.

Figure 1: Quartus II Download Page

You will now be directed to the Intel FPGA Program login page. Select **Register now for an individual account**. Follow the steps to create a free account. Enter your email address and use UNLV for your business and 250-499 for number of employees. Finally click on **Submit** after the Terms and Conditions.

After you have successfully created an account and logged in, the download will begin, as shown in Figure 2. If for some reason the download does not begin, you can click on **Show direct links** to download the individual files manually. Depending on your internet connection speed, downloading the files can take a while – so if you decide to install the software on your own computer, **do not attempt at the last minute**.

After completing the download of all of the files, click on the **QuartusSetupWeb-13.1.0.162.exe** file to install the software.

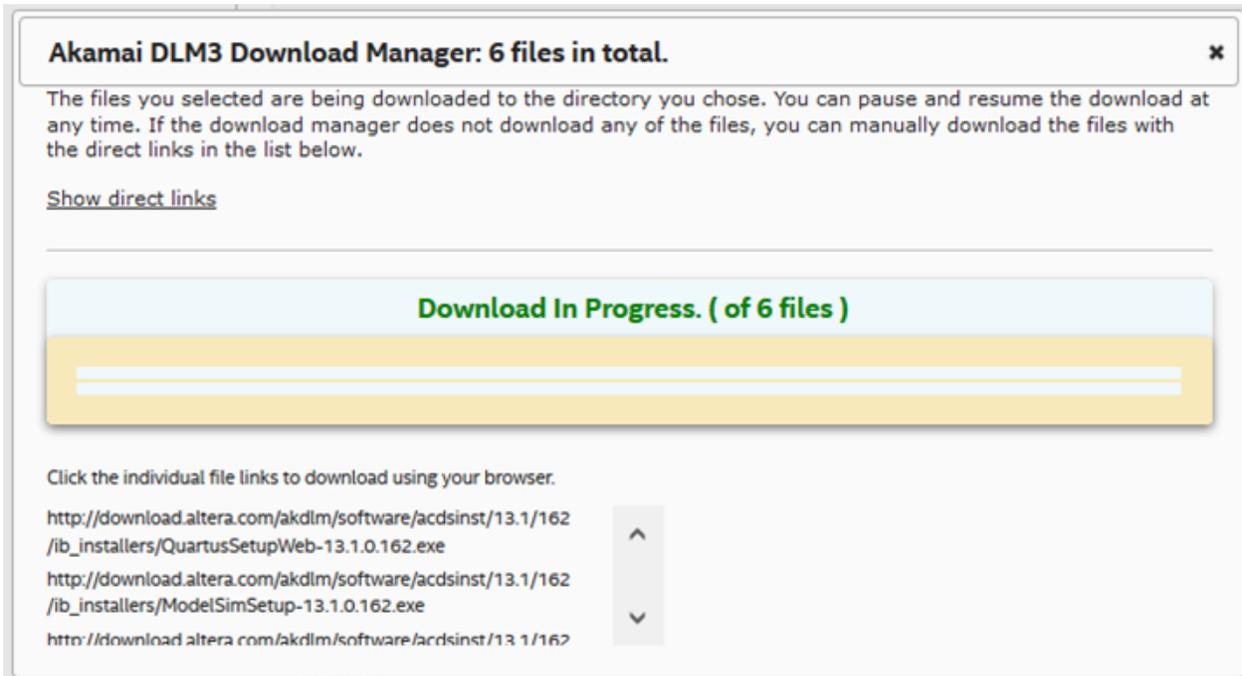


Figure 2: Akamai Download Manager

3.2 ECE Lab Direct Download

Many students have issues getting Intel accounts and using the download page. Direct links are made available at the very bottom of the ECE Lab Equipment page. This is likely the best way to do the download.

4 Hands-On

Either install the Quartus II software (optional) and/or make sure you have an ACE account and confirm that you can log into the computers in TBE B-311 or TBE B-350. **Use of lab computers is highly recommended.**

5 What to Turn In

1. (10 points) Quartus II Software Setup

After you have completed this hands-on portion, **write a single statement at the bottom of your homework** that says one of the following:

1. I successfully installed Quartus II vXX.X on my own computer. (Fill in your version)
2. I successfully logged into a computer in one of the ECE labs using my ACE account.
3. I both installed Quartus II vXX.X on my own computer and logged into a computer in one of the ECE labs using my ACE account.