

ECEN 313

Switching Circuits Theory

Manual: Laboratory # 1

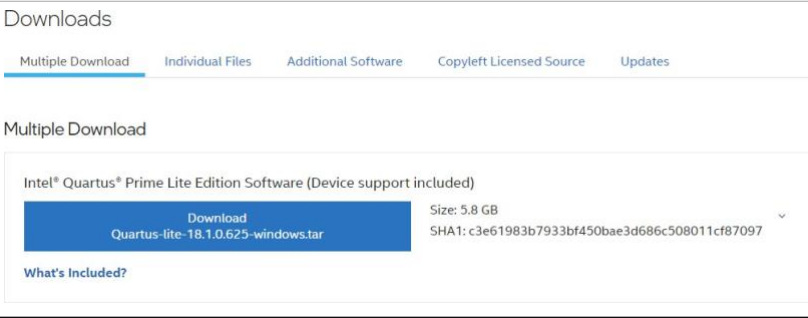
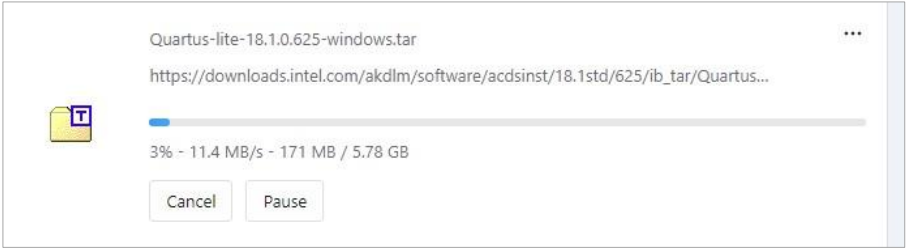
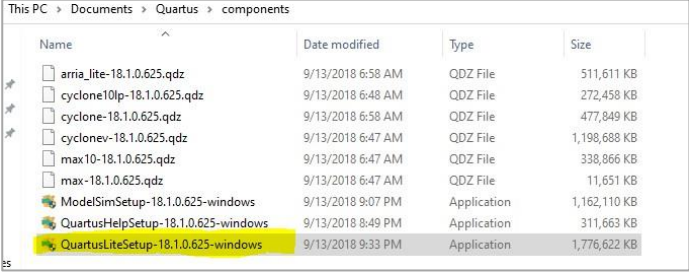

Getting started with Quartus Prime

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A. Guide to Quartus Installation

Procedure 1 Quartus Installation	
Objective:	Quartus Downloading and Installation
Result:	Successful installation of Quartus Prime Lite Edition 18.1 on your computer
1:	Click this hyperlink
2:	Select Intel® Quartus® Prime Lite Edition Design Software Version 18.1 for Windows
3:	Click Download on your webpage. It should appear as below. 
4:	Wait for the file to be downloaded. It will take some time to download. You can read further steps while it gets finished. 
5:	Extract the files. Then install Quartus using the following highlighted file. 
6:	Upon Successful installation you will find this launcher file in your computer. 

B. Your first Verilog programming

Problem

Design following circuit using Quartus Prime Lite Edition.

$$\mathbf{A + B + C = Y}$$

‘+’ refers to the OR operation and Y is the output. Note that in Verilog programming $A + B$ is written as $A \parallel B$.

Please follow the video instruction to start with Quartus, write your first Verilog code, and then simulate it. Similar problem is solved in the recording. You may follow the same instruction to solve the given problem.

[Video link: Click Here](#)

Requirements for lab report:

1. Lab report should follow the lab report format. (Refer to “Files” in Canvas)
2. It should include your Verilog code.
3. It should include Truth table for the given problem.
4. It should include your block diagram.
5. It should include your generated waveforms.