



# **Software Download and Test of *Intel's Quartus and ModelSim***

Martin J. W. Schubert, Elektroniklabor

Ostbayerische Technische Hochschule Regensburg

Regensburg

# 1 Download and Install of Quartus and ModelSim, Intel Version 18.1

From

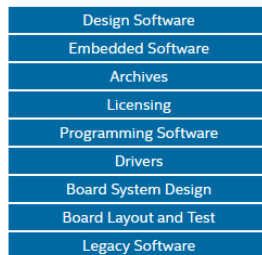
<https://www.intel.com/content/www/us/en/programmable/downloads/download-center.html>  
[1] do not forget so click “Select by Software” and click “Download”:

Download Center for FPGAs

The screenshot shows the Intel Download Center's 'Software Selector' interface. On the left is a vertical sidebar with blue buttons for navigation: Design Software, Embedded Software, Archives, Licensing, Programming Software, Drivers, Board System Design, Board Layout and Test, and Legacy Software. The main content area is titled 'Software Selector' and features three tabs: 'Select by Version', 'Select by Device', and 'Select by Software'. The 'Select by Software' tab is selected. Below the tabs are three columns: '1. Select Software Products' (listing various editions like Quartus Prime Pro, Standard, Lite, and ModelSim-Intel), '2. Select Version or Product' (listing versions from 15.1 to 20.1.1, with 18.1 highlighted), and '3. Download Selected File' (containing a blue 'Download' button).

Click on Download to get

## Download Center for FPGAs



### Quartus Prime Lite Edition

Release date: September, 2018  
Latest Release: v20.1.1

**Intel® Quartus® Prime**  
Design Software

Select edition:   
Select release:

Operating System Windows Linux

- ✓ A newer version of the Quartus Prime Design Software is available. Users should upgrade to the latest version of the [Quartus Prime Design Software](#). This version does not include the latest functional and security updates. If you must use this version of software, follow the [technical recommendations](#) to help improve security. For critical support requests, please contact our [support team](#).
- ✓ The Quartus Prime Lite Edition Design Software, Version 18.1 is subject to removal from the web when support for all devices in this release are available in a newer version, or all devices supported by this version are obsolete. If you would like to receive customer notifications by e-mail, please subscribe to our [subscribe to our customer notification mailing list](#).
- ✓ The Quartus Prime Lite Edition Design Software, Version 18.1 supports the following device families: Arria II, Cyclone 10 LP, Cyclone IV, Cyclone V, MAX II, MAX V, and MAX 10 FPGA. [- More](#)

Combined Files
Individual Files
Additional Software
Updates !

**Download and install instructions:** [- More](#)  
[Read Intel FPGA Software v18.1 Installation FAQ](#)  
[Quick Start Guide](#)

Updates Available

**Quartus Prime Lite Edition (Free)**

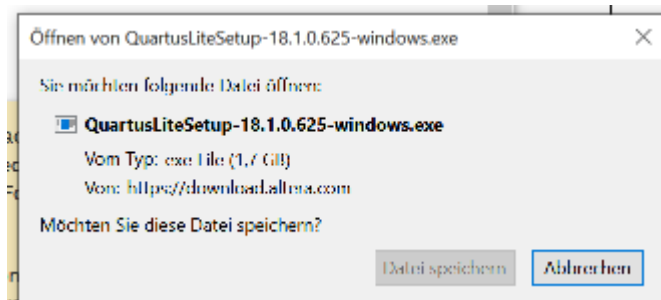
**Quartus Prime (includes Nios II EDS)** ↓  
 Size: 1.7 GB MD5: F0D752D67B18C89FBC0043CEE676896D

**ModelSim-Intel FPGA Edition (includes Starter Edition)** ↓  
 Size: 1.1 GB MD5: 7FDBE5899A9929AEDD517F410079AA35

**Devices**  
 You must install device support for at least one device family to use the Quartus Prime software.

When you have to register the first time at *Intel*, you may give address “Germany, Bavaria, 93053 Regensburg, Seybothstr. 2”.

Click on the Download arrow after „Quartus Prime



Allow to install Quartus Delaware driver (P.S.: I am not sure if you really need it)

Select checkbox “Run the Quartus Prime Software”. (Do not select a license or anything to pay for.)

There is no need to download and install the *ModelSim*, as there es a *ModelSim* executable available after installation of the Quartus software in subdirectory  
<installation\_directory>\modelsim\_ASE\win32aloem\modelsim.exe

## 2 Test Quartus and ModelSim, Intel Version 18.1

From [https://hps.hs-regensburg.de/~scm39115/homepage/education/labs/Lab\\_ElectronicBoards/Lab\\_ElectronicBoards.htm](https://hps.hs-regensburg.de/~scm39115/homepage/education/labs/Lab_ElectronicBoards/Lab_ElectronicBoards.htm) download [VHDL\\_Files\\_4\\_Labs](#) und upack it.

### 2.1 Test *Quartus 18.1*

Navigate to ...\\VHDL\_Files\_4\_Labs\\VHDL\\lib\_struct\\QuartusII\\ci\_de1soc\_DCDCbuck and double-click on file *ci\_de1soc\_DCDCbuck.qpf*. Quartus Prime Lite Edition 18.1 should open.

Select *Processing > Start Compilation*. Some VHDL code should compile without errors. Select *Tools > Programmer*. A programmer window should come up.

### 2.2 Test *ModelSim 10.5b* of Package 18.1

Navigate to \\VHDL\\lib\_struct\\ModelSim\\tb\_de1soc\_DCDCbuck\_pcb00\\, select *wstart.mpf* and open it with <installation\_directory>\modelsim\_ASE\win32aloem\modelsim.exe. ModelSim 10.5b should come up. Write “do work.do” into the transcript window. ModelSim should run and deliver a “wave” (=graphics) window as shown below.

## 3 References

[1] Available 20.03.2021:

<https://www.intel.com/content/www/us/en/programmable/downloads/download-center.html>.

[2] Available 22.03.2021 : [https://hps.hs-](https://hps.hs-regensburg.de/~scm39115/homepage/education/labs/Lab_ElectronicBoards/Lab_ElectronicBoards.htm)

[regensburg.de/~scm39115/homepage/education/labs/Lab\\_ElectronicBoards/Lab\\_ElectronicBoards.htm](https://hps.hs-regensburg.de/~scm39115/homepage/education/labs/Lab_ElectronicBoards/Lab_ElectronicBoards.htm).