



EPT JTAG Blaster

EPT JTAG Blaster Using Quartus Programmer

1.1 JTAG DLL Insert to Quartus II

The JTAG DLL Insert to Quartus II allows the Programmer Tool under Quartus to recognize the EPT-JTAG-Blaster. The EPT-JTAG-Blaster can then be selected and perform programming of Altera FPGAs and CPLDs. The file, jtag_hw_mbfldi_blaster.dll must be placed into the folder that hosts the jtag_server for Quartus. This dll is available for Windows 7, 8.1 and 10 64-bit.

1.1.1 Installing Quartus

The EPT-JTAG-Blaster is compatible with the latest Quartus II Prime (version 16.0) You can download the Quartus II by following the directions in the Section Downloading Quartus.

1.1.2 Downloading Quartus

The first thing to do in order build a project in Quartus is to download and install the application. You can find the latest version of Quartus at:

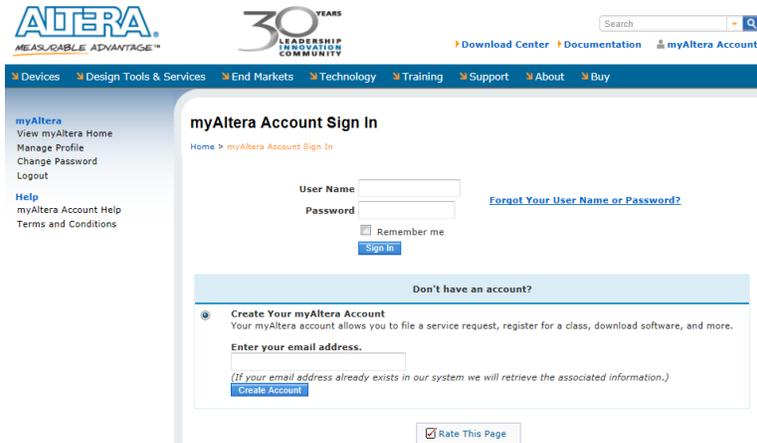
<https://www.altera.com/download/dnl-index.jsp>

Click on the Download Windows Version.

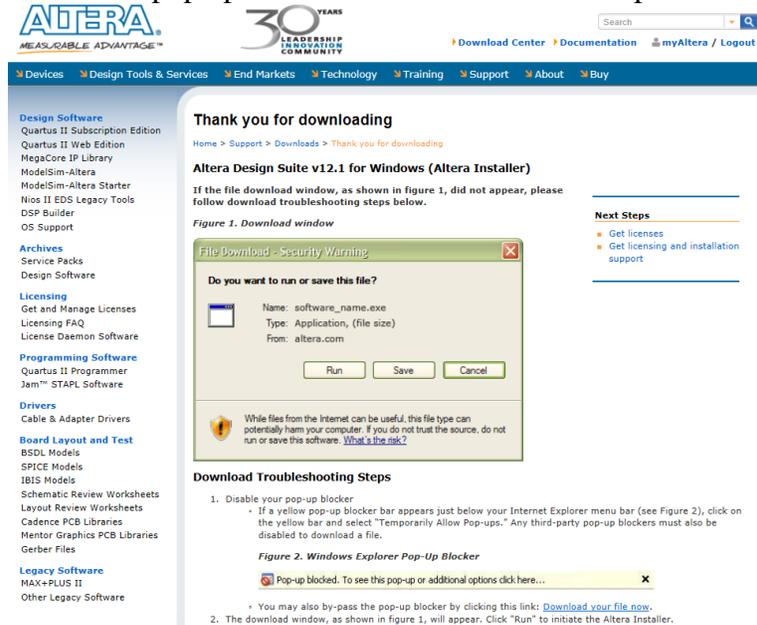
The screenshot shows the Altera website's Download Center. The page is titled "Download Center" and features a navigation menu with options like "Devices", "Design Tools & Services", "End Markets", "Technology", "Training", "Support", "About", and "Buy". The main content area is divided into sections for "Design Software", "Archives", "Licensing", "Programming Software", "Drivers", and "Board Layout and Test". The "Design Software" section lists various tools like Quartus II, MegaCore IP Library, ModelSim-Altera, and Nios II EDS Legacy Tools. The "Programming Software" section lists Quartus II Programmer and Jam™ STAPL Software. The "Drivers" section lists Cable & Adapter Drivers. The "Board Layout and Test" section lists BSDL Models, SPICE Models, and Test Models. The "Download Center" section is highlighted, showing a list of design software options: Quartus® II software v12.1, ModelSim-Altera software, and DSP Builder. The Quartus II software v12.1 option is expanded, showing a list of sub-options: Subscription Edition (30-day free trial), Web Edition (free) - Compare with Subscription Edition (PDF), and Nios II EDS v12.1. The ModelSim-Altera software option is expanded, showing a list of sub-options: ModelSim-Altera Starter Edition (free), ModelSim-Altera Edition - Compare with ModelSim-Altera Starter Edition, and ModelSim-Altera Starter Edition. The DSP Builder option is expanded, showing a list of sub-options: DSP Builder. The page also features a search bar and a "myAltera / Logout" link.

The next page will require you to sign into your “myAltera” account. If you do not have one, follow the directions under the box, “Don’t have an account?”

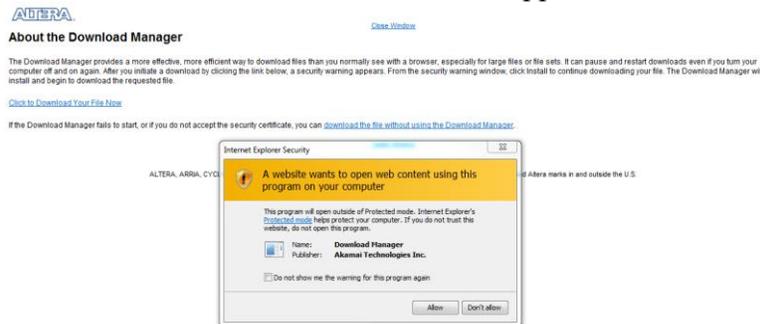
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Once you have created your myAltera account, enter the User Name and Password. The next window will ask you to allow pop ups so that the file download can proceed.

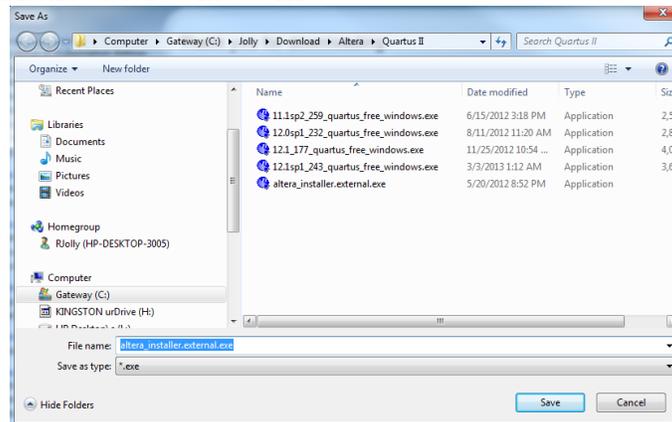


Click on the “Allow Once” button. The next window will appear. It is the Download Manager.

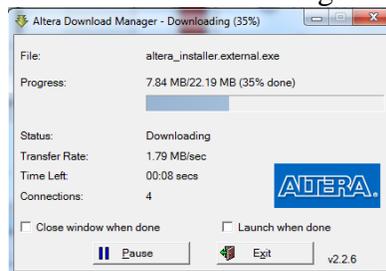


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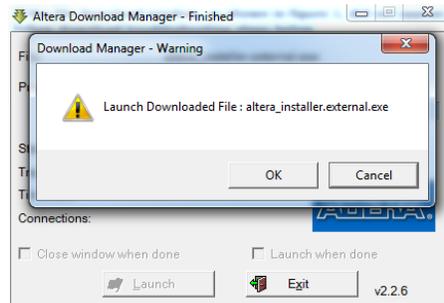
Click on the "Allow" button. This will bring up the Save As dialog box. Save the altera_installer.external.exe to a download folder.



Click the Save button. This will start the Download Manager.



When it finishes, click the "Launch" button.

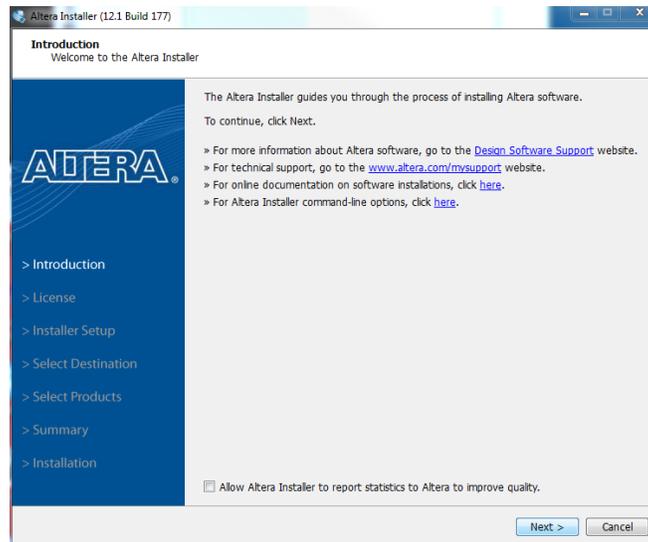


Click "Ok" and "Yes" to the following screen.

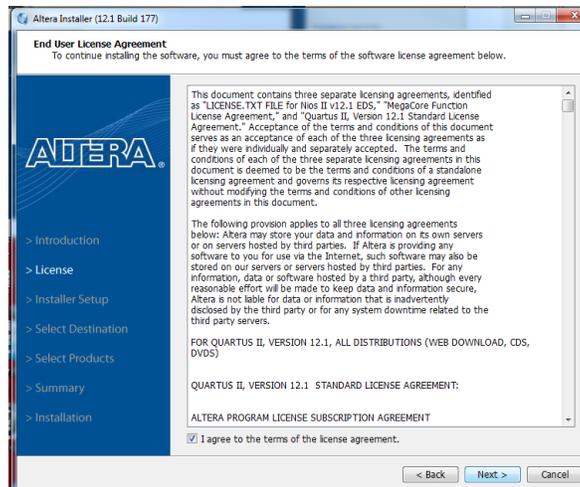
1.1.3 Quartus Installer

Click "Next" on the Introduction Window.

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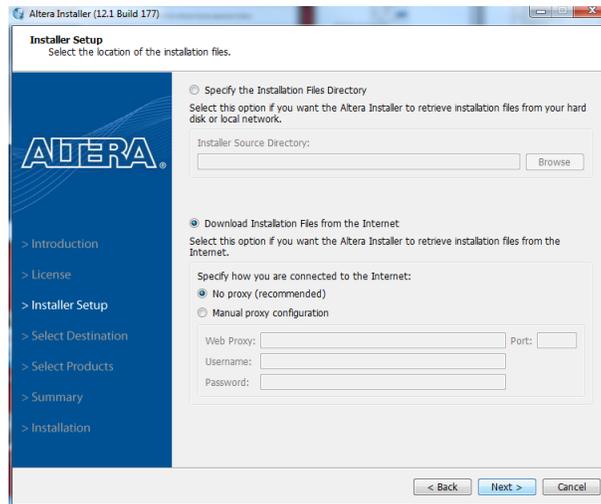


Click the checkbox to agree to the license terms. Then click “Next”.

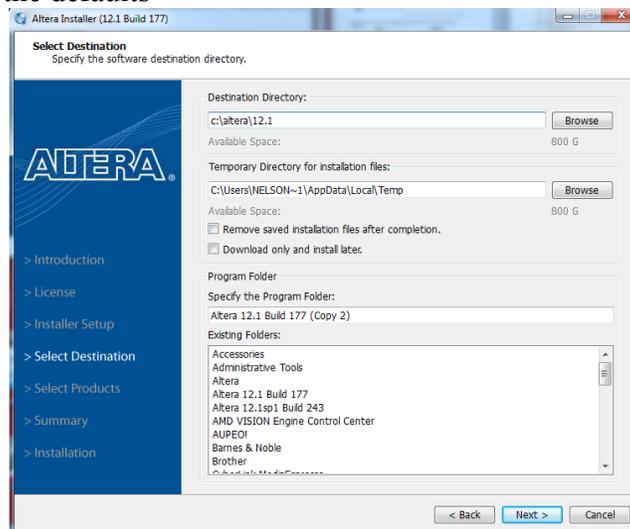


Click “Next” and accept the defaults.

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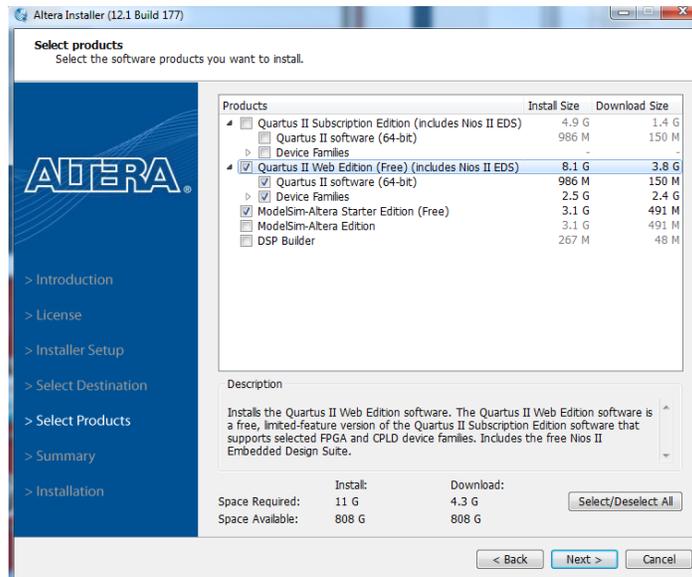


Click “Next” to accept the defaults

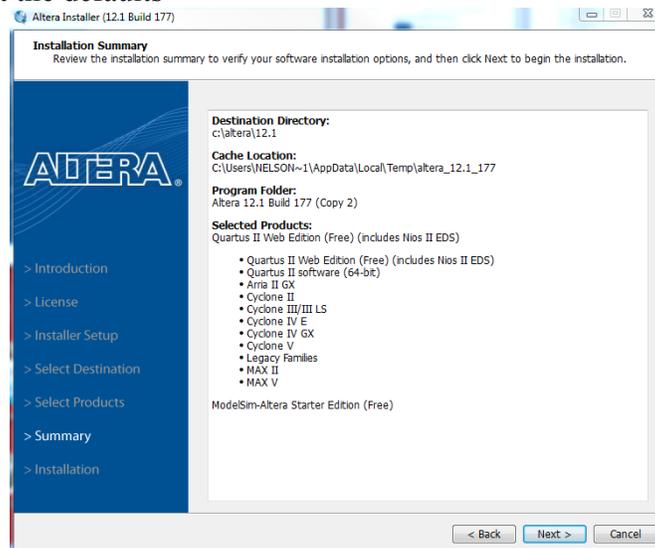


At the Select Products Window, de-select the Quartus II Subscription Edition by clicking on its check box so that the box is not checked. Then click on the check box by the Quartus II Web Edition (Free).

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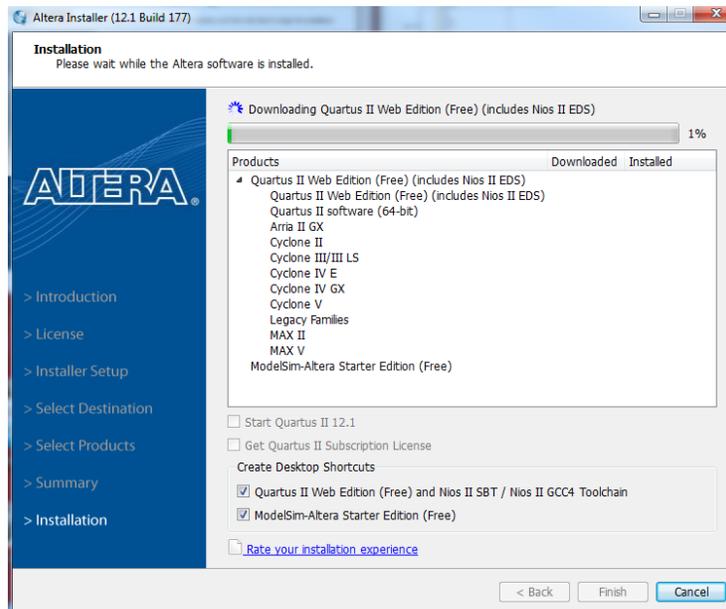


Click “Next” to accept the defaults

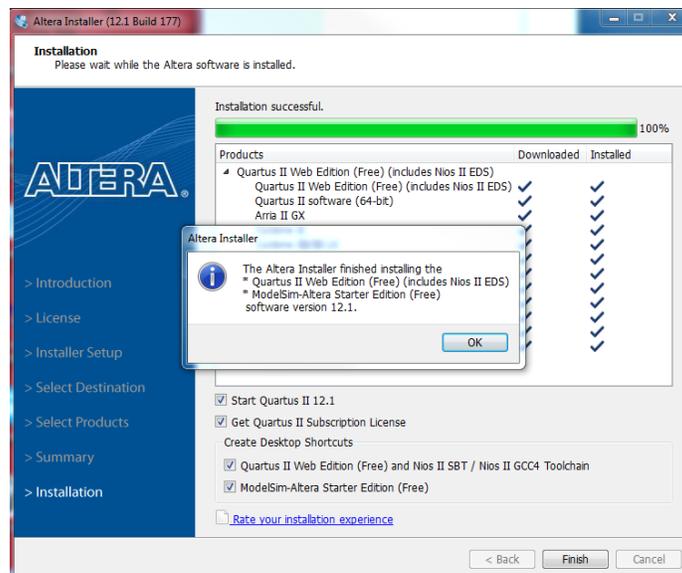


Click “Next” to accept the defaults

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Wait for the download to complete. The file is 3.5 GB, so this could take a couple of hours depending on your internet connection. When installation is complete, the following window appears.



Click “Ok”, then click “Finish”. The Quartus II is now installed and ready to be used.

1.1.4 Adding the EPT_Blaster to Quartus II

Close out the Quartus II application. Access the latest EPT-JTAG-Blaster driver from http://www.earthpeopletechnology.com/wp-content/uploads/2016/09/jtag_hw_mbftdi_blaster64.dll

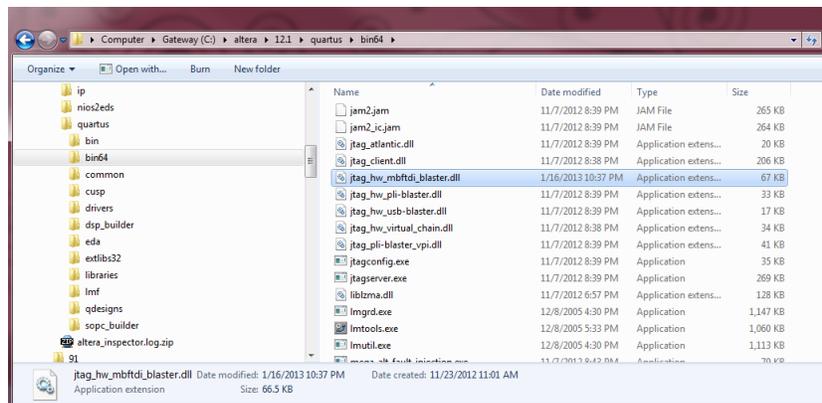
Save it to your local drive.



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Windows 64 bit

1. Open the location of the driver `$:\\Drivers\EPT_Blaster\x64` folder.
2. Select the file “jtag_hw_mbftdi_blaster64.dll” and copy it.
3. Browse over to `C:\altera\16.0\quartus\bin64`.
4. Right click in the folder and select Paste
5. Click Ok.
6. Open the Quartus II application.



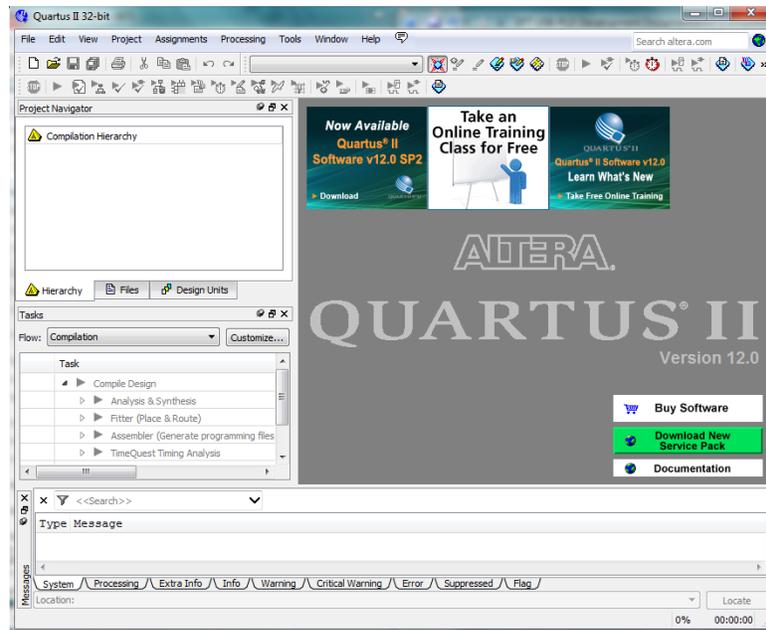
The DLL is installed and the JTAG server should recognize it.

The following is a guide to get the EPT JTAG BLASTER programmed using the Quartus Application.

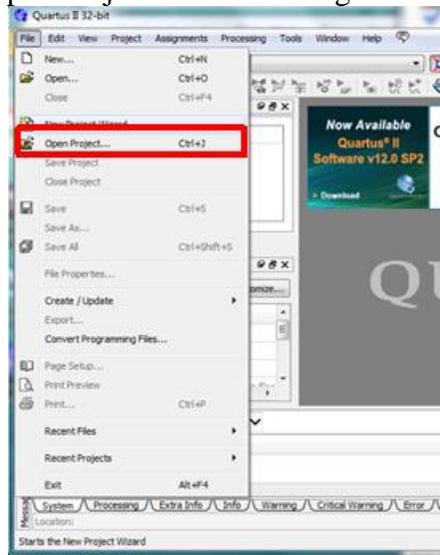


Open Quartus II by clicking on the icon .

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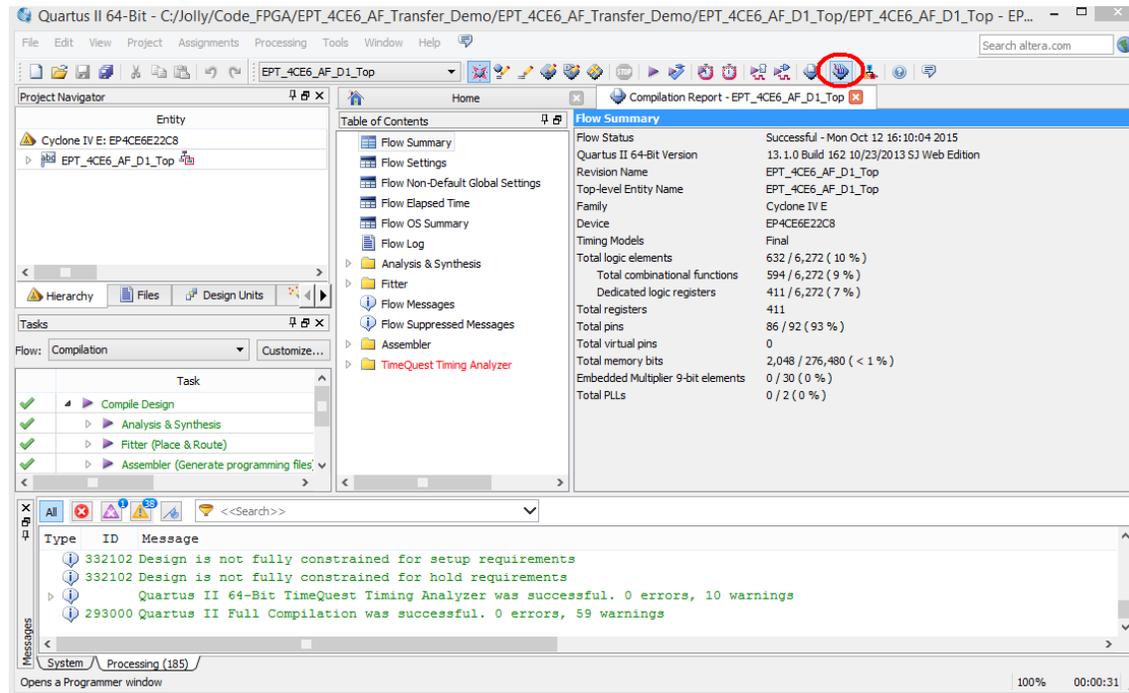


Under Quartus, Select File->Open Project. Use the dialog box to browse for your project.

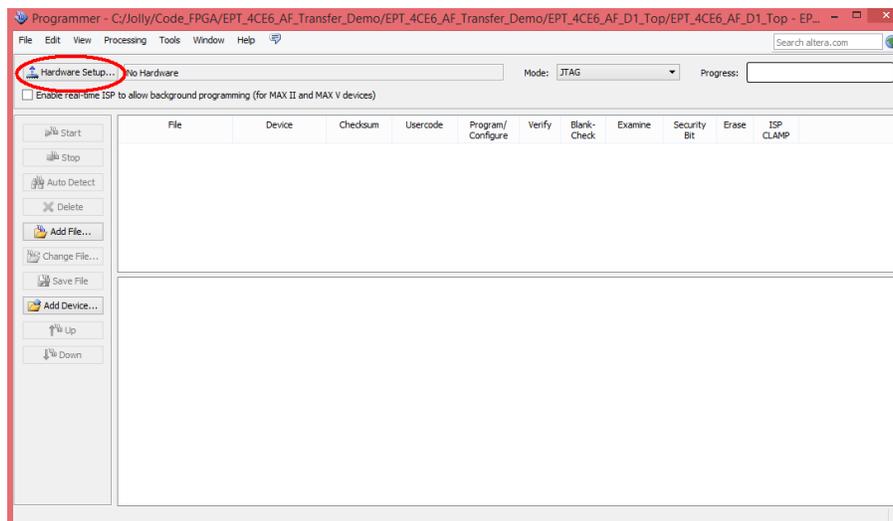


Once your project is found and opened, click on the Programmer button.

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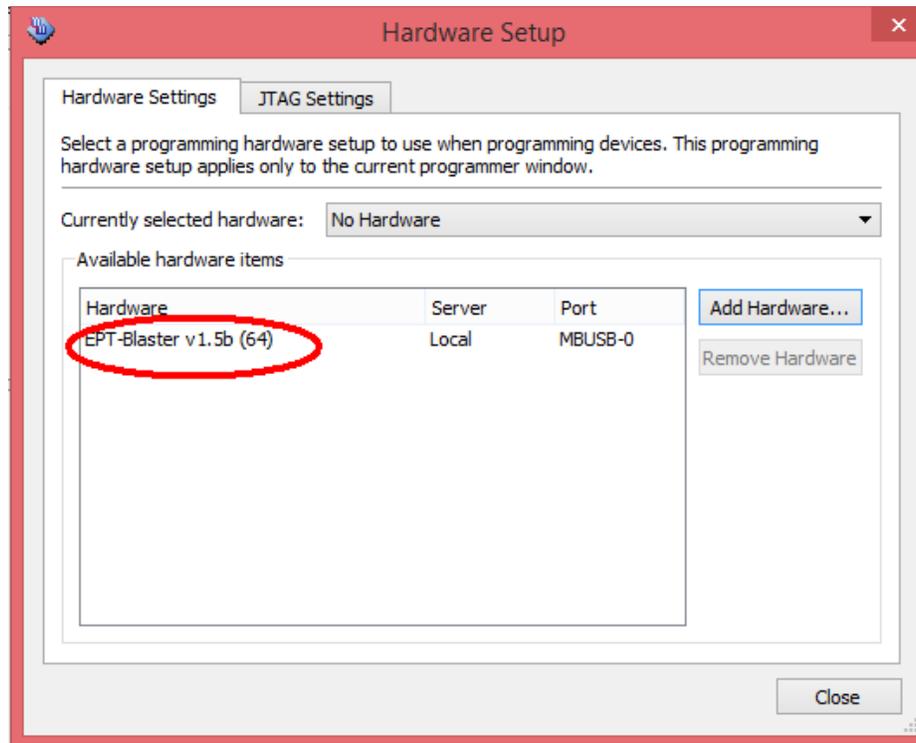


The Programmer Window will open up with the programming file selected. Click on the Hardware Setup button in the upper left corner.

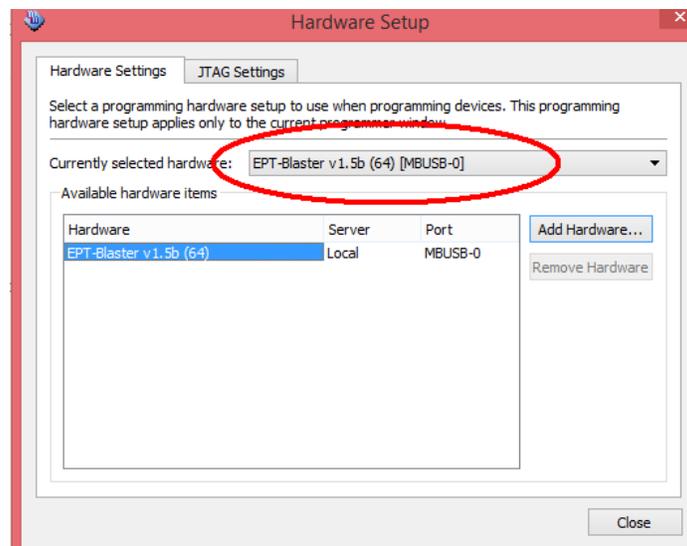


The Hardware Setup Window will open. In the “Available hardware items”, double click on “EPT-Blaster v1.5b”.

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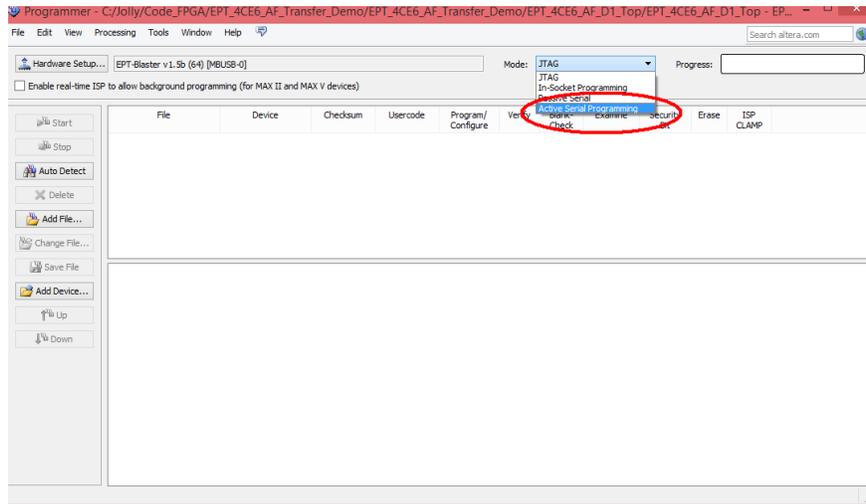
If you successfully double clicked, the “Currently selected hardware:” dropdown box will show the “EPT-Blaster v1.5b”.



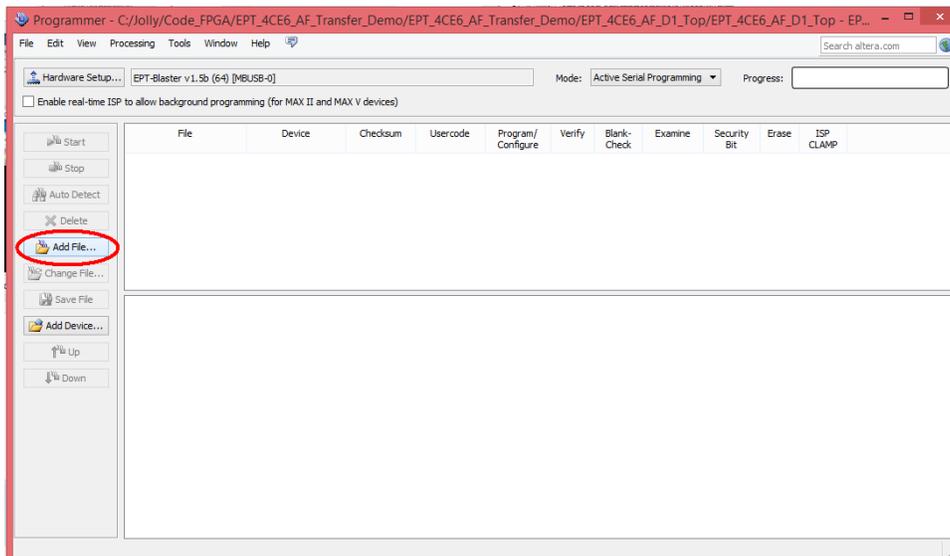
Click on the “Mode:” drop down box. Select the “Active Serial Programming” option.



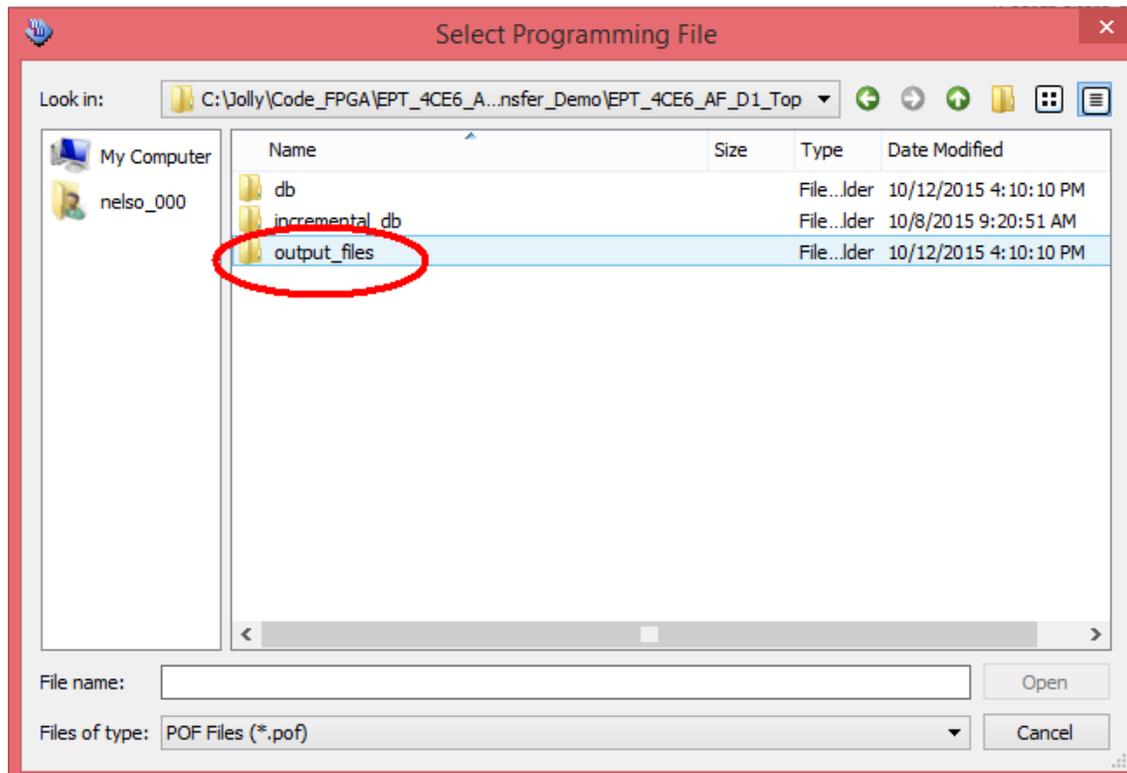
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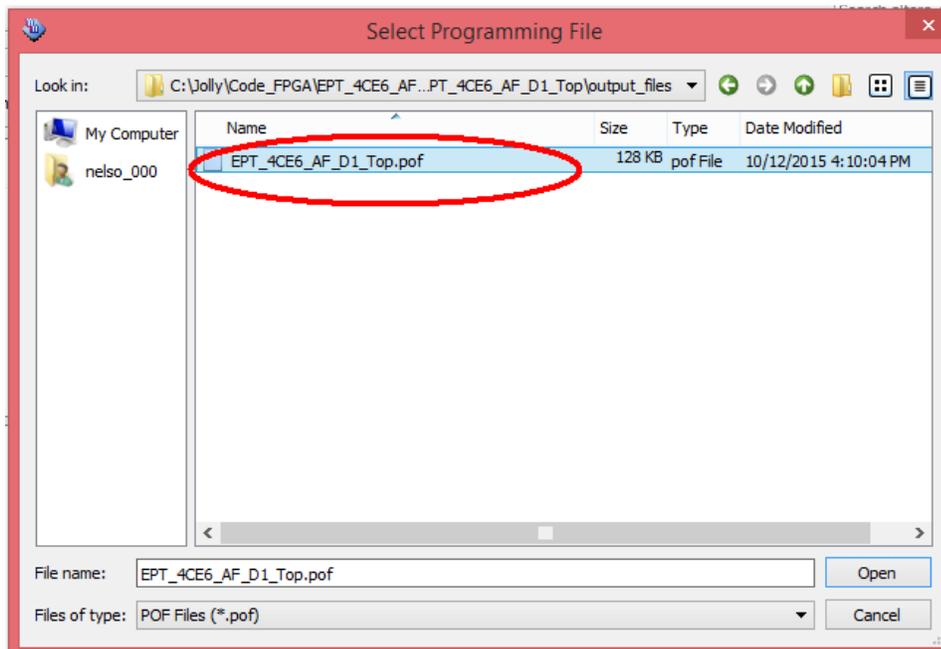
Click on the “Add File” button



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At the Browse window, double click on the output files folder.

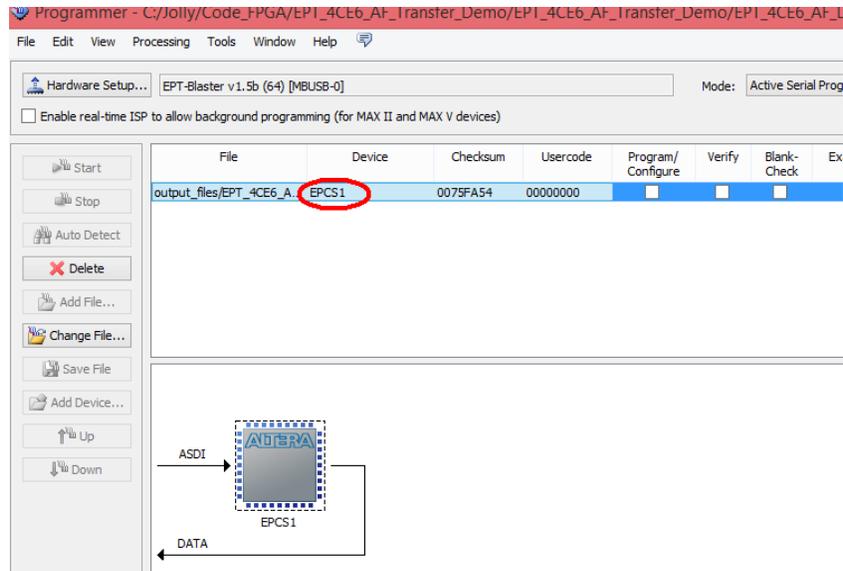




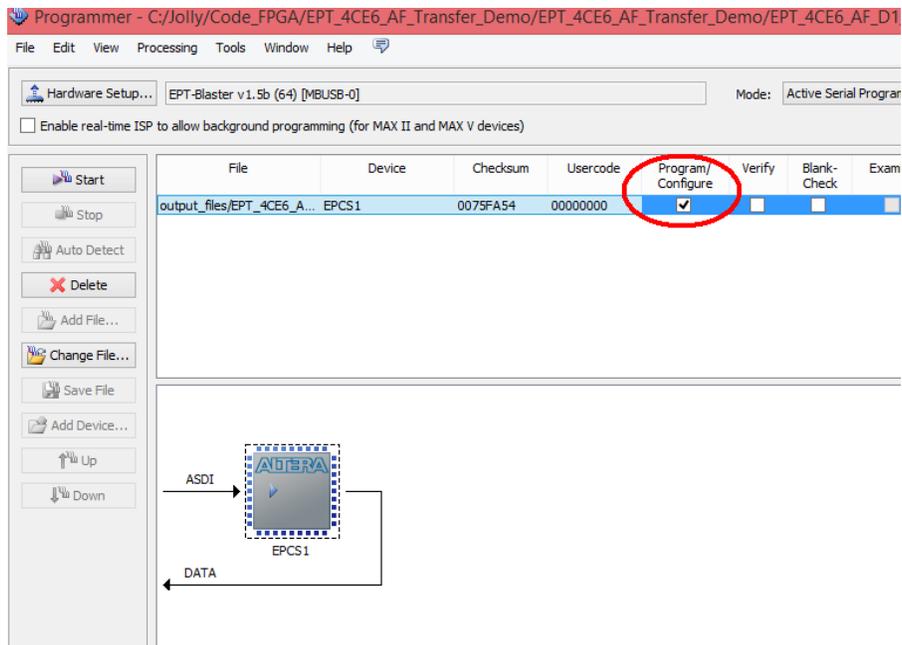
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Double click on the “EPT_4CE6_D1_Top.pof” file. Click the Open button in the lower right corner.

Select the EPCS1 under “Device”.

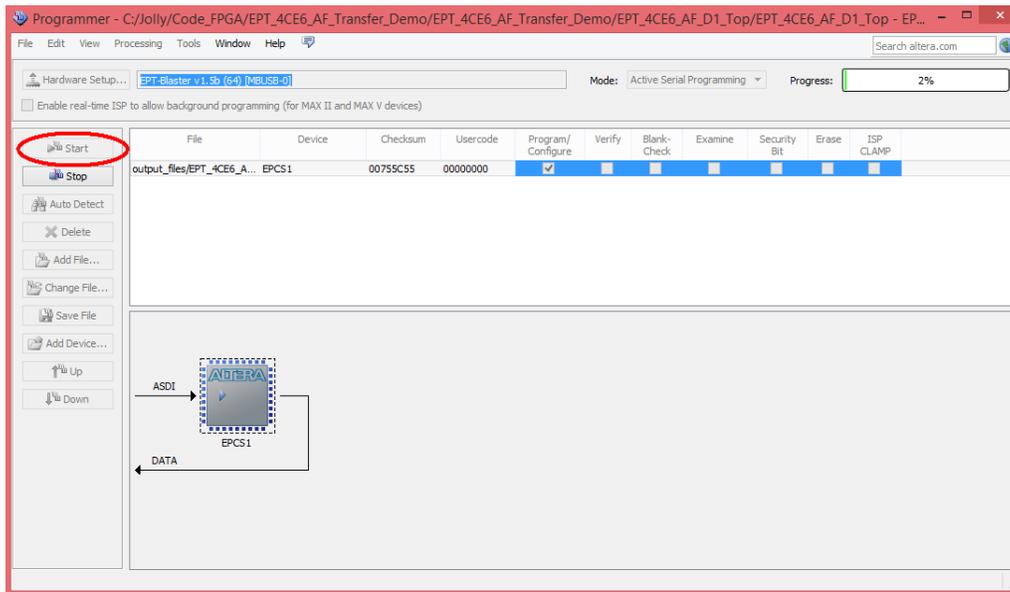


Next, select the checkbox under the “Program/Configure” of the Programmer Tool.

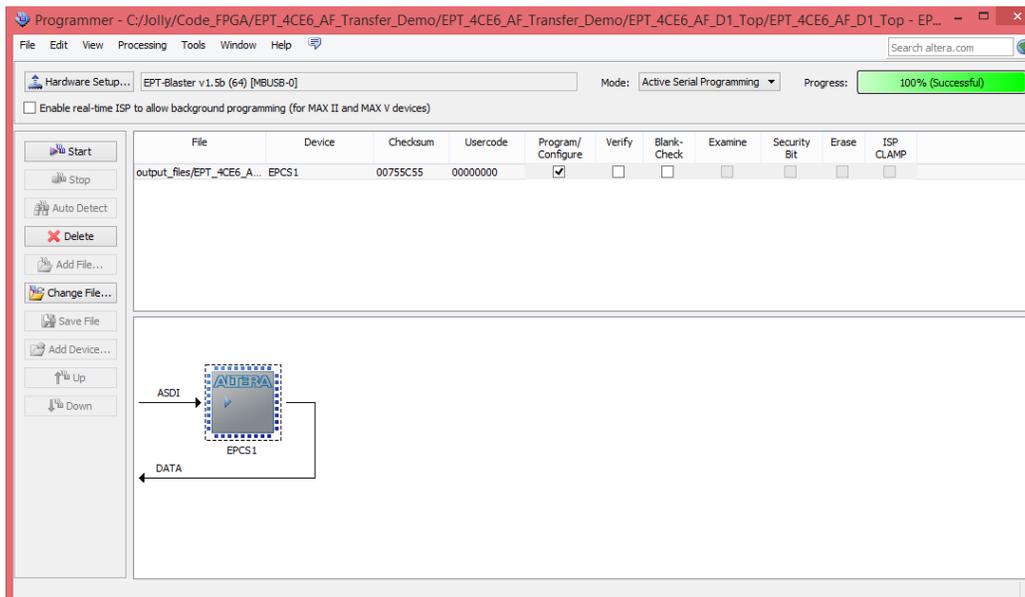


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Click on the Start button to start programming the FPGA. The Progress bar will indicate the progress of programming.



When the programming is complete, the Progress bar will indicate success.



At this point, the EPT-4CE6-AF-D1 is programmed and ready for use.