



RayCore® MC Development Kit

Quick Start Guide

Siliconarts, Inc.
5F, 532, Eonju-ro, Gangnam-gu,
Seoul, Republic of Korea (06147)
Tel. +82-2-470-2829
Fax. +82-2-6008-1991
URL. <http://www.siliconarts.com>

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Hardware Installation

FPGA Hardware Setup

Currently set up the Altera Development Kit (Arria 10, Arria 10 PAC) is used Intel Quartus Programmer(20.1) tool. This method is connected with PC between FPGA Board using jtag for upload sof file. User can be set up Hardware follow below steps. For specific information, Please refer Altera user Guide.

- Arria 10 Starter Board : User Guide
(https://www.intel.com/content/dam/www/programmable/us/en/pdfs/literature/ug/ug_a10-fpga-prod-devkit.pdf#page=75&zoom=100,0,673)

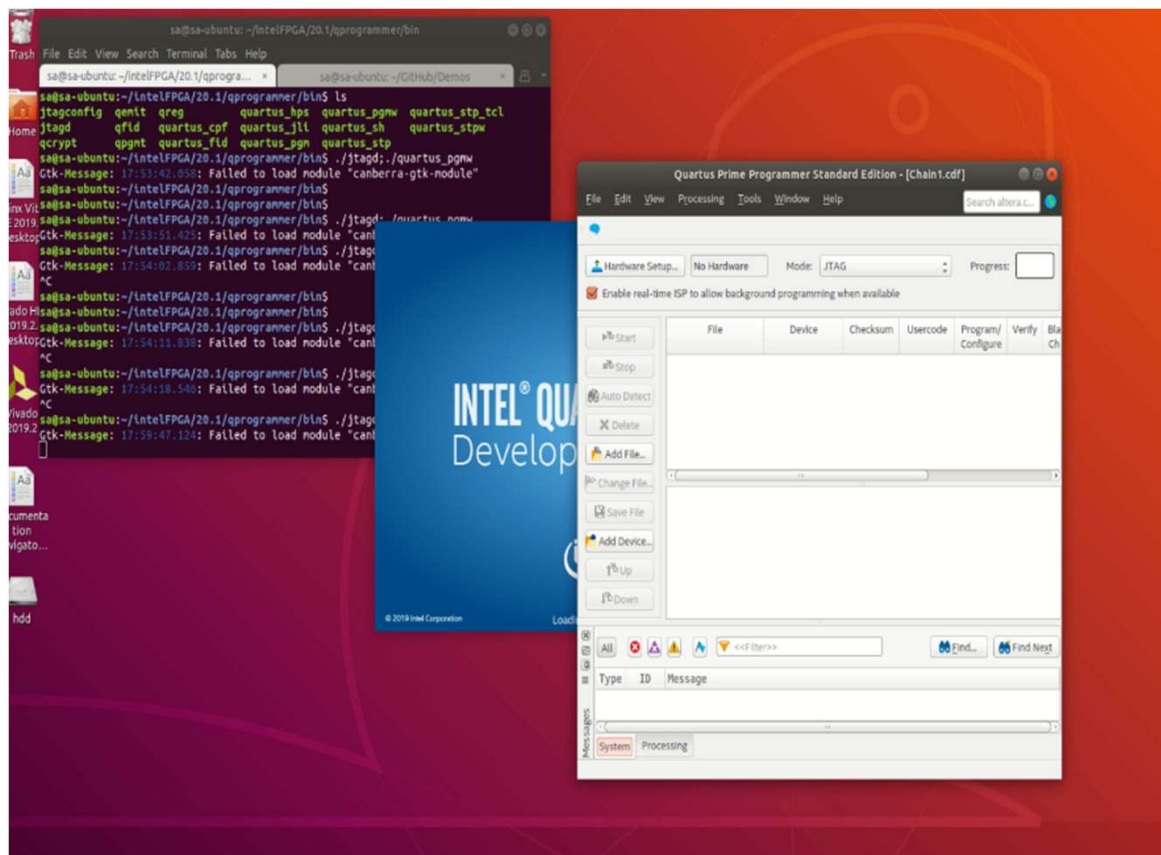
Step. 1

First, install the Quartus Prime Programmer 20.1 by below link. And then go to installation directory and execute 2 files 'jtagd', 'quartus_pgmw'.

Interl Quartus Prime Programmer 20.1:

(<https://fpgasoftware.intel.com/20.1/?edition=pro&platform=linux>)

```
$cd <User Dirtctory>/ /intelFPGA/20.1/qprogrammer/bin
$.jtagd
$.quartus_pgmw
```



It can be found in the below directory

The image is a composite of three screenshots related to Intel Quartus Prime development.

- Top Left:** A terminal window on a Linux system (Ubuntu) showing the execution of various commands to set up the environment for Quartus Prime. The commands include setting the path to the Quartus Prime bin directory and running the JTAG configuration utility. The output shows the successful execution of these commands.
- Top Right:** The Intel Quartus Prime Developer Edition logo, featuring the text "INTEL® QUARTUS® PRIME Developer Edition" in white on a blue background.
- Bottom:** A screenshot of the Quartus Prime Programmer Standard Edition - [Chain1.cdf] window. The window displays the hardware setup options, including the hardware type (No Hardware), mode (JTAG), and progress bar. The "Save File" button is highlighted with a red box.



Step. 2 (※ Intel Arria10 FPGA)

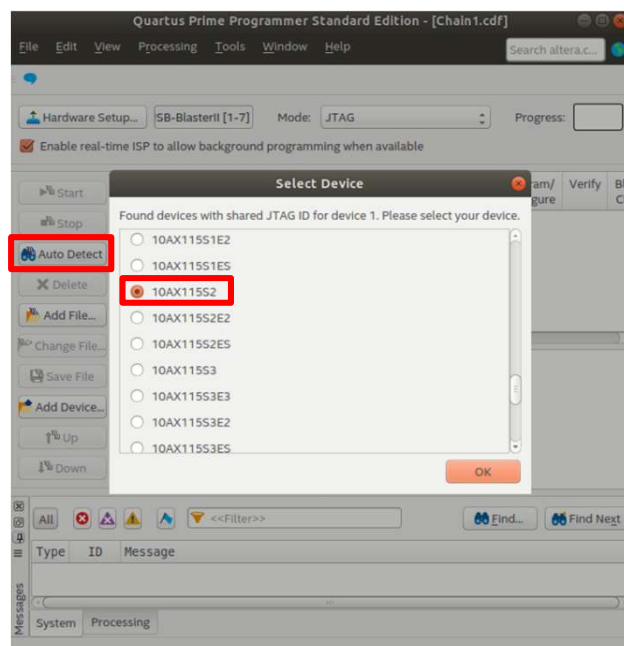
In arria 10 FPGA case, For detect FPGA device, to click the icon 'Auto Detect' then select '10AX115S2'.

Import FPGA sof file, to click the icon 'Add file..'

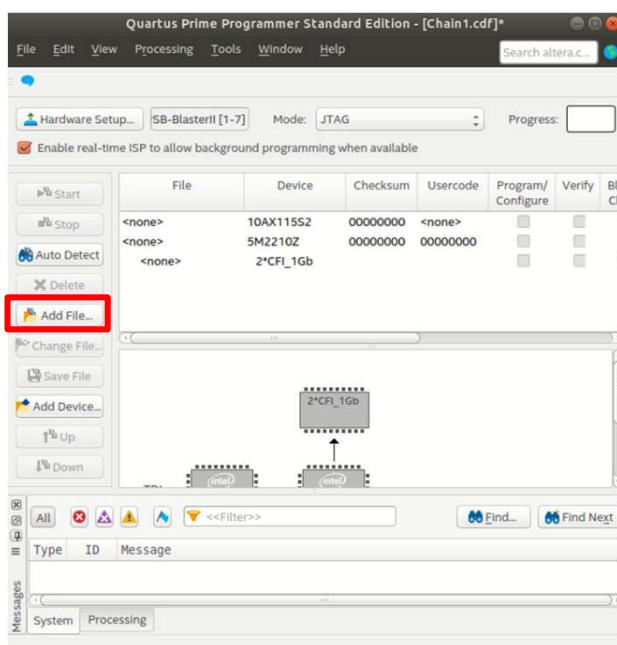
It can be found in the below directory

Intel Arria10 : <User Directory>/Demos/sof/GitHub_A10_RCMC_KD.sof

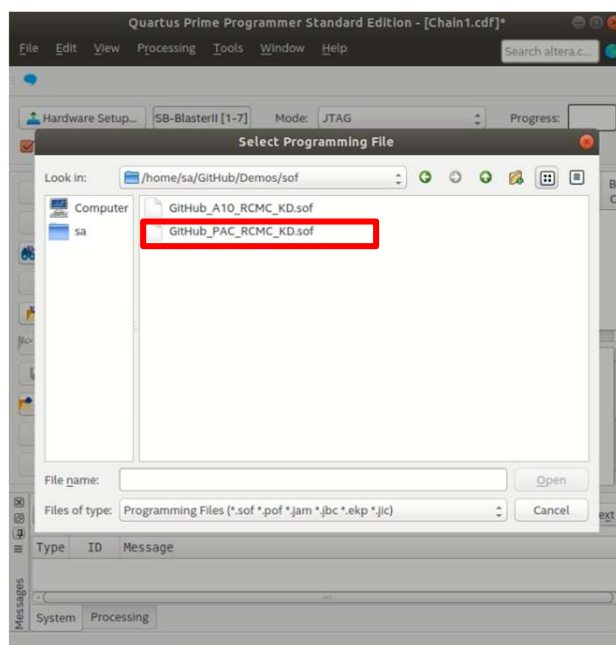
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②

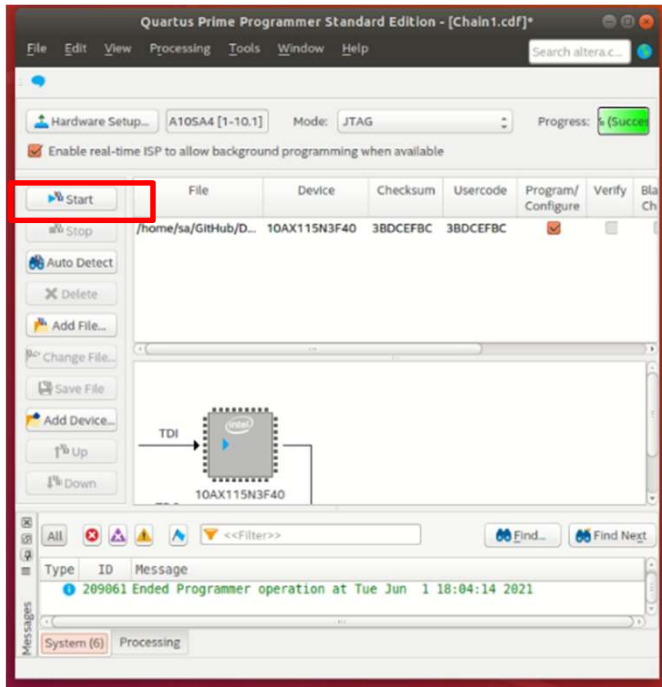


③



Step. 3

And then click 'Start' icon for upload sof file to FPGA development kit.

**Step. 4**

After upload finish, then reboot PC. This is the end of the FPGA Hardware setup. After that build RayCore® MC API and run Example scenes.

```
$cd <User Directory>/Demos
$sh build.sh
$cd <User Directory>/Demos/bin
$./<Demo Scene>
(For Example : $./rc_car
```

