



RayCore® Development Kit

FPGA Setting Guide

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1. Hardware Installation

1.1 FPGA Hardware Setup

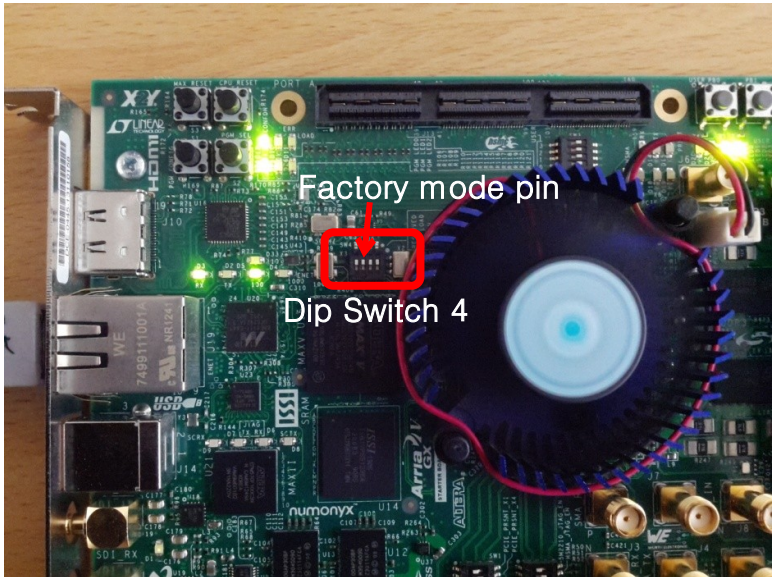
Altera Development Kit (Arria V, Stratix V) can be installed via Board Update Portal Web page. The installation process is similar to uploading flash files through LAN cable from the board to PCs or routers where DHCP server is pre-implemented. A sample installation guide is shown below. For further details, please refer to the following manuals provided by Altera.

- Arria V Starter Board : User Guide
(http://www.altera.com/literature/ug/ug_avgx_starter_dev_kit.pdf)
- Stratix V GX FPGA Development Kit : User Guide
(http://www.altera.com/literature/ug/ug_svgx_fpga_dev_kit.pdf)

1.2 Demonstration: Altera Arria V GX FPGA Development Kit

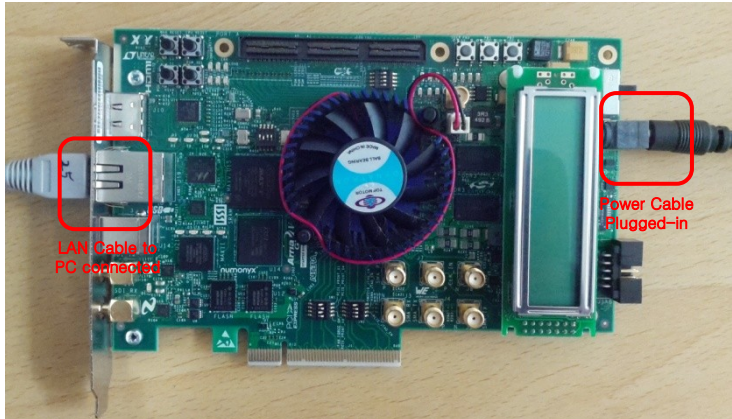
Step. 1

Locate the third switch of “DIP Switch 4(SW4)” box on the FPGA board. Turn the switch to “FACTORY” mode.



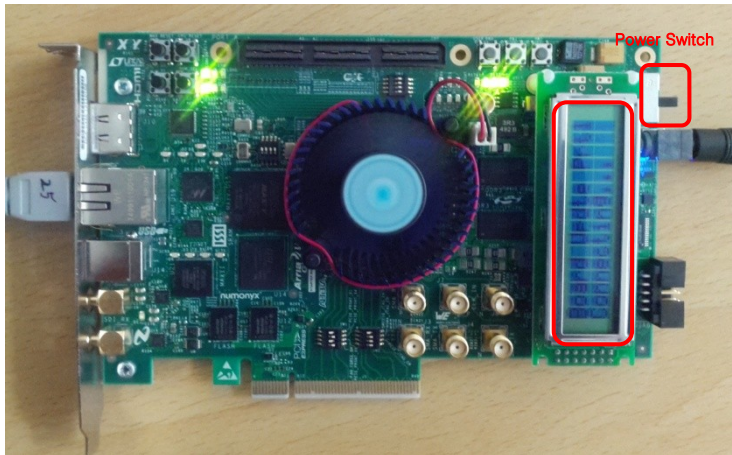
Step. 2

Plug the LAN cable from the PC with DHCP server installed into the matched connector of the board. Also, plug-in the power cable to the board.



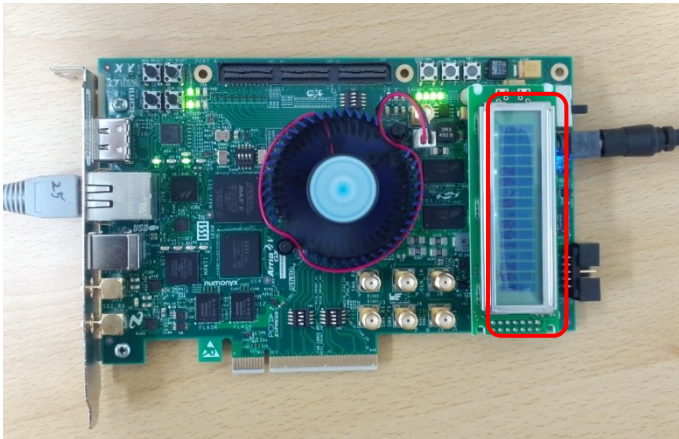
Step. 3

When you switch on the FPGA board, the green lights turn on, and "Board Update Prt1 Connecting..." will display on the LED screen.



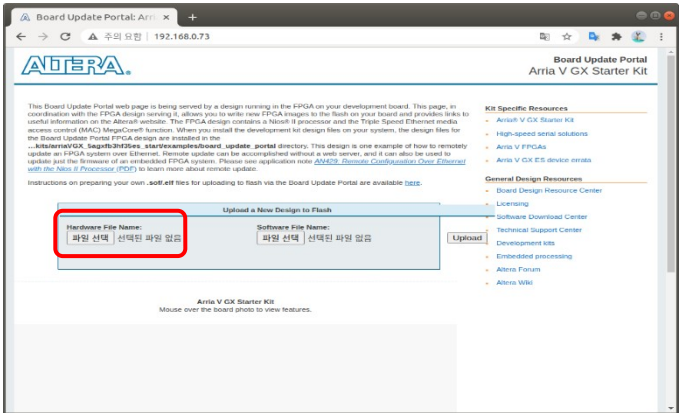
Step. 4

In a while, an IP address will display on the LED screen. (e.g.: 192.168.0.92)



Step. 5

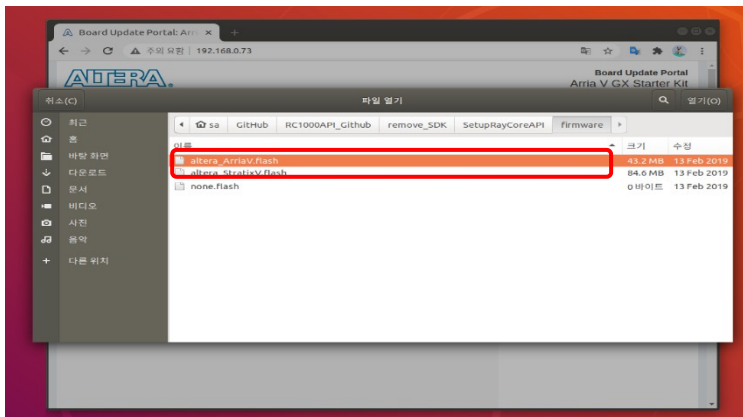
In the address bar of your web browser, type the same IP address you have identified in the previous step. In this stage, your computer should have access to the Internet. When you get to the page shown below, click “Search” right next to “Hardware File Name.” Locate RayCore® driver from the directory, <User Directory>/RC1000API_linux/SDK/Firmware”



Step. 6

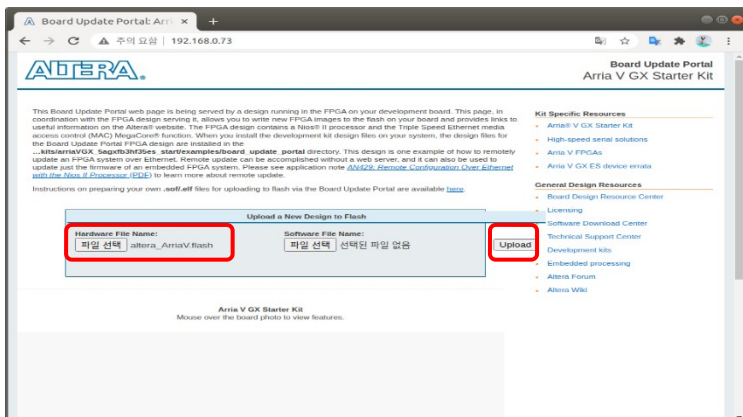
Select RayCore® file that supports ArriaV FPGA board.

<User Directory>/RC1000APL/linux/SDK/Firmware"



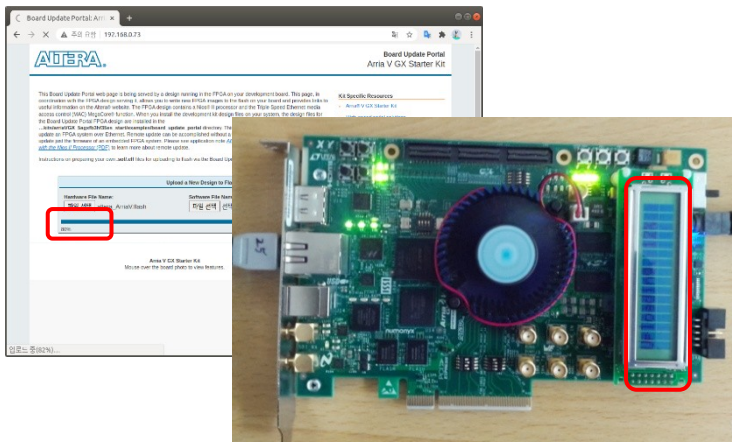
Step. 7

Click "Upload"



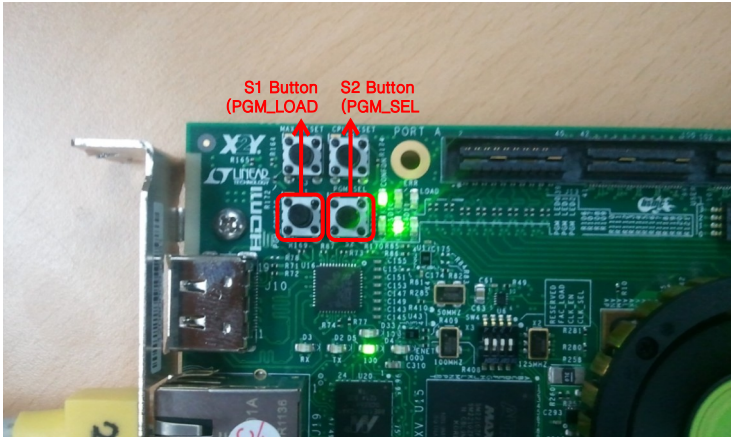
Step. 8

Uploading status is shown in your web browser as well as on the LED screen.



Step. 9

If uploading is complete, the message "Upload Complete!" will be shown on the LED screen. Click the PGM_SEL(S2) button and PGM_LOAD(S1) button in the order and install the Flash File. Remove the power cable and turn off the 3rd pin in DIP Switch(SW4).



Step. 10

After installing the FPGA board in the PC, confirm if the green light turns on. The green light tells if the FPGA board is installed properly.

