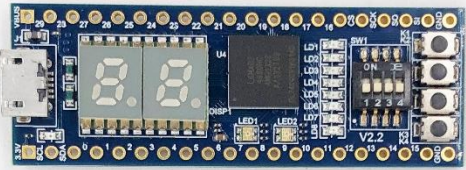
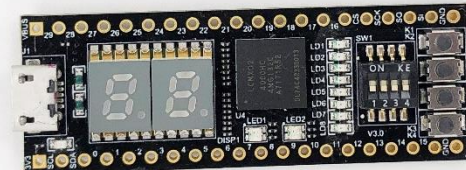


To burn/flash the final program into your board

Currently STEPFPGA series boards are hardware-configured into **TWO** program flashing modes:

1. USB COM port mode
2. Flash Drive mode

The **BLUE** board is -V2 and it utilized traditional USB COM port mode; However if your board is **BLACK**, then it is the -C version, this version uses Flash Drive mode. See pictures below:

STEPFPGA-MX02 Boards	Flash mode
	<p>-MX02-V2 USB COM Port</p>
	<p>-MX02-C Flash Drive</p>

These two versions use the same FPGA chip (Lattice MX02-4000HC), and only differ at the final step when flashing the program into the board. With USB COM port mode (or the **BLUE** board), you can follow every single step in Peter's detailed tutorial:

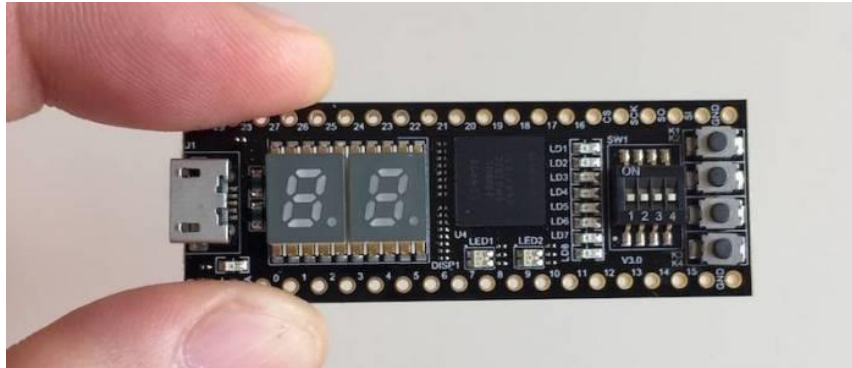
<https://techexplorations.com/blog/technology/fpga-programming-with-verilog-my-first-steps/>

This article mainly illustrates the procedures using Flash Drive mode (the **BLACK** board) to download, and it is very simple.

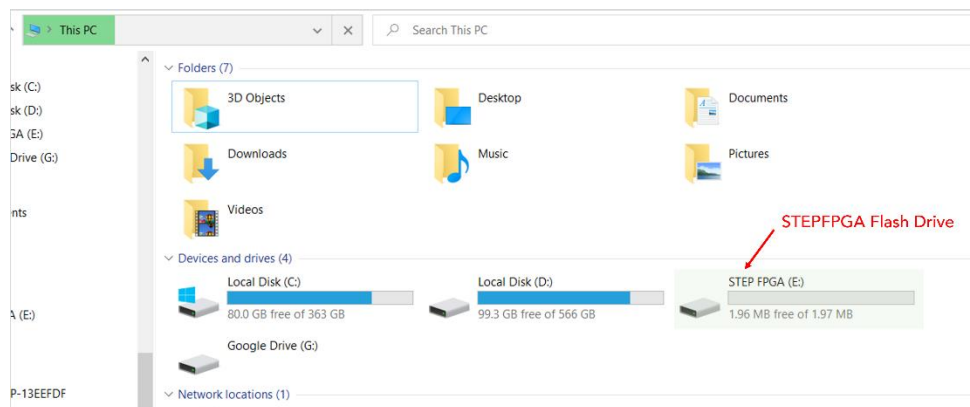
Downloading Procedures with Flash Drive mode

Assuming you read Peter's tech blog and are now familiar with the Diamond IDE and knowing how to create projects, select FPGA chip, adding Verilog design files, synthesis with logic gates, finished pin mapping and implementation, now you will need to flash the program into the hardware board.

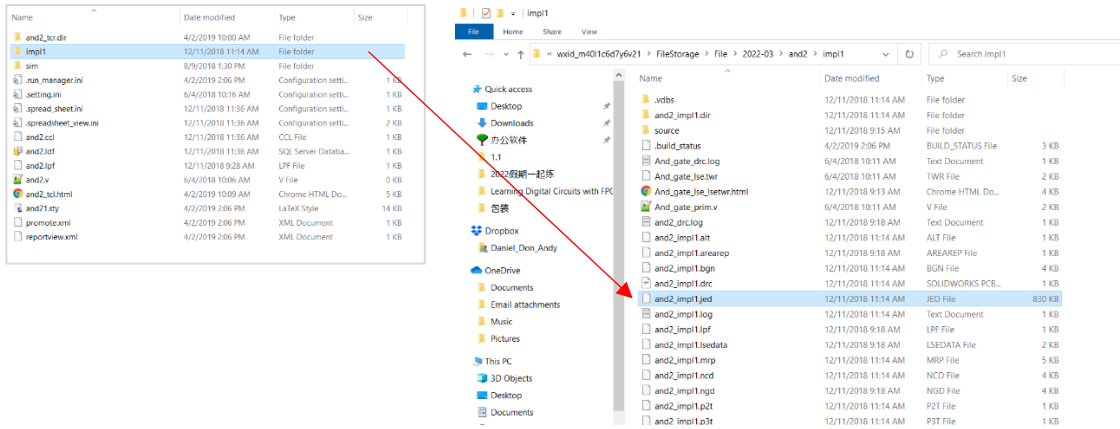
STEP 1: Connect the MXO2-C board to your computer's USB port



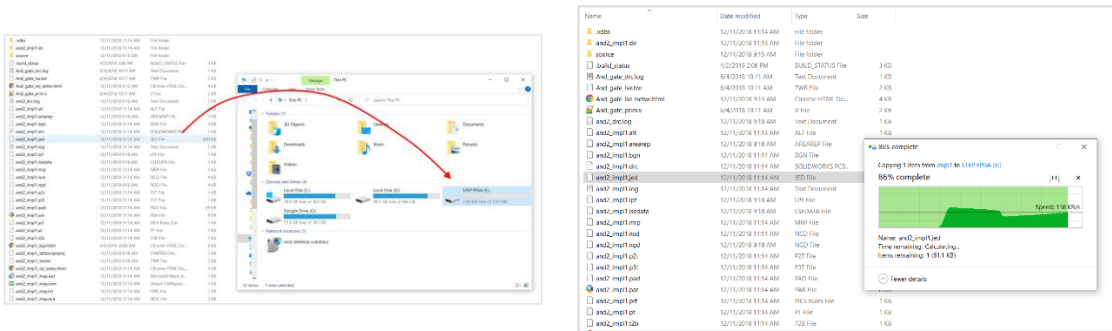
STEP 2: Open "This PC", you should see a new flash drive appears:



STEP 3: Go to the project folder, and find the implementation file with extension of "xxxxx.jed"



STEP 4: Drag this file into the STEPPFGA flash drive to finish flashing. Usually takes 5-10s.



Once completed, the program has been flashed into the board and now it's time to rock and roll.

Why do we launch Flash drive mode version?

As you may see, the Flash Drive mode is simply like a normal USB Flash drive. You will no longer bother the incompatibility among Windows, Mac and Linux whatsoever. No driver installation is needed. If your computer can read a USB Flash drive, then you are good to go.

Another strong incentive for us to launch the Flash Drive mode is **to accommodate with our cloud based WebIDE tool, which allows FPGA beginners to learn, code and flash the program using a browser-based tool.** Our WebIDE utilizes an opensource FPGA configuration tool and integrates all handy features on website; so even if you have no prior knowledge with FPGAs, you can start off and get things working real quick! And you don't even need bother getting license from Diamond (and it's only available on Windows), MAC users can learn and play FPGAs! We will officially launch the new system most likely in April. Please stay tuned!