Software Installation Tutorial for Windows for HaHa v3.0 Board

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Install GOWIN FPGA Designer

1. Get a free license to use GOWIN FPGA Designer using link [1]. Please note that this will take one or more business days. You will need your computer’s Ethernet/Wi-Fi MAC address.
   a. Use the command in Command Prompt: `ipconfig /all`
2. Go to link [2] and download the zip file. Unzip the installer.
   a. If you would like the latest version, go to link [3] and create a GOWIN account.
3. Open the GOWIN FPGA Designer installer. The following prompt may come up. Press More Info. Otherwise, proceed to Step 5.
4. Click on Run anyway.
5. Gowin installer will now open. Click **Open**.

6. Read the license agreement. Click **I Agree** button if you would like to proceed.
7. Make sure all components below are checked. Press **Next**.

8. Choose the installation location. You may leave this as it is. Click **Install**.
9. After installation, it will prompt you to install FTDI and USB drivers. Click **Finish**.

10. The UAC prompts for both FTDI and USB drivers will come up. For this tutorial, let’s install the FTDI CDM drivers first. Find the window that looks like this. Click **Extract**.
11. A new window pops up that looks like the following. Click **Next**.

12. Read the license agreement. Click **Next** if you would like to proceed.
13. The FTDI drivers finished installing. Click **Finish**.

14. Find the other driver installation window, which looks like this. Click **Install**.
15. The USB driver finished installing. Click **Close**.

16. Locate your installation of Gowin FPGA Designer and open it.

17. If this is your first installation of GOWIN FPGA Designer, you will get this prompt. Press **OK**.
18. GOWIN License Manager will open. Click **Browse** to locate your local license file that was provided to you. Then, press **OK**.

19. Press **Check**. Your license information will appear. Press **OK**.
20. Click **Save**. The following prompt will pop up. Press **OK**.

21. Press **Close**. GOWIN FPGA Designer installation is now complete.
Install Microchip Studio

1. Go to link [4] and download the installer file.
   a. If you would like the latest version, go to link [5]
2. Open the Microchip Studio installer. Check the agreement statement if you would like to proceed. Optionally, you can opt out of anonymous information collection. Press Next.

3. At a minimum, you need to check AVR. The rest is up to you. Press Next.
4. The following extensions are optional. Press **Next**.

5. If any issues arise, this screen will let you know. Address all of them first. Afterwards, press **Next**.
6. During installation, the installer will install some dependencies. The first of these is MPLAB XC8 compiler, which will not be used. However, Microchip Studio requires this. Press **Next**.

![MPLAB XC8 Compiler Setup Wizard](image)

7. Read the license agreement. Select the first button and press **Next** if you would like to proceed.

![License Agreement](image)
8. There should only be one license type option (Free). Press **Next**.

9. Specify installation directory. You may leave it as it is. Press **Next**.
10. Leave the Compiler Settings as they are (see below). Press **Next**.

11. Press **Next**.
12. MPLAB XC8 installation is complete. Press **Next**.

![MPLAB XC8 installation complete](image)

13. Click **Finish**.

![MPLAB XC8 setup complete](image)
14. Another prompt will show up for installing Visual Studio. This will be done automatically.

![Visual Studio Installation Prompt](image1.png)

15. A series of device driver installation prompts will appear. Press **Install** for all of them.

![Device Driver Installation Prompt](image2.png)
16. Microchip Studio installation is now complete. Press **Close**.
Install Atmel FLIP

1. Go to link [6] and download the installer file. If you would like the latest version, go to link [7]
2. Open the Atmel FLIP installer. If JRE is not installed, please install it by clicking Install. If it is already installed, proceed to Step 5.

3. Read the license agreement. Press Accept if you would like to proceed.
4. JRE is now installed. Click Finish.

5. Atmel FLIP installer will start. Click Next.
6. Read the license agreement. Check the box and press **Next** if you would like to proceed.

![License Agreement]

7. Choose the Atmel FLIP installation location. You may leave as it is. Press **Next**.

![Choose Install Location]
8. Choose the Atmel FLIP Start Menu Folder. You may leave as it is. Press **Next**.

9. Atmel FLIP is now installed. Press **Next**.
10. Press **Finish** to close the installation wizard.
Install Digilent Waveforms (Only if you have AD2 board)

1. Go to [8] and download the installer file. If it does not, go to [9] and provide your information to get the download link.
2. Open the Digilent Waveforms installer. Click Next.

3. Read the license agreement. Check the box and press Next if you would like to proceed.
4. Choose the installation components. You may leave it as it is. Click **Next**.

5. Select a shortcut option. You may leave it as it is. Press **Next**.
6. Specify the installation location. You may leave it as it is. Press **Install**.

7. During installation, a device driver installation window will pop up. Press **Install**.

8. Waveforms installation is done. You can change the options below or leave as it is. Press **Finish**.
References