Software Installation Tutorial for Windows for HaHa v3.0 Board

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- 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.

	×
Windows protected your PC	
Microsoft Defender SmartScreen prevented an unrecognized app from starting. Running this app might put your PC at risk. More info	
Don't run	

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 >.

🐏 Gowin V1.9.8.11 Setup	– 🗆 X
Choose Components Choose which features of Gowin V1.9.8.11 you want to	o install.
Check the components you want to install and uncheck install. Click Next to continue.	the components you don't want to
Select components to install: Gowin Gowin programmer	Description Position your mouse over a component to see its description,
Space required: 846.8 MB	
GOWIN Semiconductor Corp	
<8	ack Next > Cancel

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.

🗊 GWU2X Setup			×
Choose Install Location Choose the folder in which to install GWU2X.			
Setup will install GWU2X in the following folder. To install in a differer select another folder. Click Install to start the installation.	nt folder, o	click Brows	e and
Destination Folder GNProgram Files (x86)/GWU2X	Br	owse	
Space required: 6.3 MB Space available: 379.5 GB			
Nullsoft Install System v3.081	install	Ca	ncel

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**.

💠 License Manager	—		×
License Configuration			
O Use Local License File ○ Use F	loating License S	erver	
License File: C:/Gowin/gowin.lic		Brow	vse
Check	k		64
Apply for License 申请 License	Save	Cl	ose

19. Press Check. Your license information will appear. Press OK.

🐳 License Manager	_		×
License Configuration Use Local License File Use Eloating License Server		Prove	
License is OK. Host-ID: Exp. date:		biows	
Apply for License 申请 License	Save	Clos	e

20. Click **Save**. The following prompt will pop up. Press **OK**.

🐳 License Manager				—		\times
License Configuration						
💿 Use Local License File 🛛 U	se Floating	g License Serve	er			
License File:	**	×		.lic	Brows	e
		Done.				
Apply for License 申请 License			S	ave	Clos	se

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

👯 License Manager			×
License Configuration Use Local License File Use Floating License Server License File:	lic.	Browse	2
Check			
Apply for License 申请 License S	ave	Clos	e

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.

Microchip Studio for AVR and SAM Devices	_ ×
Microchip Studio	
Select Architecture	
AVR	
UC3	
SAM	
Back Next	Cancel

4. The following extensions are optional. Press Next.



5. If any issues arises, 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**.



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

8. There should only be one license type option (Free). Press **Next**.

リ Setup		—	
License Type			MPLAB COMMELER
MPLAB XC8 C Compiler can be installed to ru with a workstation license, or as a network cli	ın in Free mod ent.	le,	
O Free			
O Workstation			
O Network Client			
nstallBuilder	< Back	Next >	Cancel

9. Specify installation directory. You may leave it as it is. Press **Next**.

🔱 Setup	—		×
Installation Directory			MPLAB OMPLER
Please specify the directory where MPLAB XC8 C Compiler will	be installed.		
Installation Directory C:\Program Files\Microchip\xc8\v2.36	12		
InstallDuilder			
< Back	Next >	Ci	ancel

10. Leave the Compiler Settings as they are (see below). Press Next.



11. Press Next.

🕖 Setup		—		×
Ready to Install Compiler				MPLAB
Setup is now ready to begin installing MPLAB XC8 C C	Compiler on yo	our comp	uter.	
InstallBuilder				
< B	ack N	ext >	Ca	ancel

12. MPLAB XC8 installation is complete. Press Next.

Setup			
Installation Complete - Licensing Information			MPLAB COMPILER
If you want to use the FREE MPLAB XC8 C Compiler, Click Next. If your Compiler is already licensed, Click Next.			
Click to purchase a PRO license			
Click here to get a free, 60-day evaluation of PRO			
If you have an Activation Key:			
Click here to activate your license			
Your Host ID is:			
InstallBuilder			
< Back	ext >	C	ancel

13. Click Finish.



14. Another prompt will show up for installing Visual Studio. This will be done automatically.



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



16. Microchip Studio installation is now complete. Press **Close**.

Microchip Studio for AVR and SAM Devices	-	×
Microchip Studio		
Installation complete Thank you for choosing Microchip Studio!		
Warning: Atmel LibUSB0 Driver (x64)		
✓ Launch Microchip Studio		
	Close	3

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.

😚 Application Setup	—		×
Java Runtime Environment Installation			
No Java Runtime Environment could be found on your computer. Click Install to start the installation of JRE 1.5.0.			
Nullsoft Install System v2.26	tall	Са	ncel

3. Read the license agreement. Press **Accept** if you would like to proceed.

J2SE Runtime Environment 5.0 Update 11 - License	
License Agreement Please read the following license agreement carefully.	un.
Sun Microsystems, Inc. Binary Code License Agreement	
for the JAVA 2 PLATFORM STANDARD EDITION RUNTIME ENVIRONMENT 5.0	I
SUN MICROSYSTEMS, INC. ("SUN") IS WILLING TO LICENSE THE SOFTWARE IDENTIFIED BELOW TO YOU ONLY UPON THE CONDITION THAT YOU ACCEPT ALL OF THE TERMS CONTAINED IN THIS BINARY CODE LICENSE AGREEMENT AND SUPPLEMENTAL LICENSE TERMS (COLLECTIVELY "AGREEMENT"). PLEASE READ THE AGREEMENT CAREFULLY. BY DOWNLOADING OR INSTALLING THIS SOFTWARE, YOU ACCEPT THE TERMS OF THE AGREEMENT. INDICATE ACCEPTANCE BY SELECTING THE "ACCEPT" BUTTON AT THE BOTTOM OF THE AGREEMENT. IF YOU ARE NOT WILLING TO BE BOUND BY ALL THE TERMS,	
Typical setup - All recommended features will be installed.	
\bigcirc Custom setup - Specify the features to install. For advanced users.	
InstallShield	
Decline Accept >	

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.

闭 Flip 3.4.7 Setup — 🗆	×
License Agreement Please review the license terms before installing Flip 3.4.7.	
Press Page Down to see the rest of the agreement.	
SOFTWARE LICENSE AGREEMENT	
This is a legally binding agreement between Atmel Corporation, including its subsidiaries and affiliates ("Atmel") and You ("You"). In return for acquiring a license to use the Software and related documentation and hardware peripherals ("Software"), You agree to the following terms and conditions.	
If you accept the terms of the agreement, dick the check box below. You must accept the agreement to install Flip 3.4.7. Click Next to continue.	
✓ I accept the terms in the License Agreement Nullsoft Install System v2.26 —	
< Back Next > Cancel	

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

🌍 Flip 3.4.7 Setup	>	×
Choose Install Location Choose the folder in which to install Flip 3.4.7.	e	
Setup will install Flip 3.4.7 in the following folder. To install in a diff and select another folder. Click Next to continue.	erent folder, click Browse	
Destination Folder <u>C:\Program Files (x86)\Atmel\Flip 3.4.7</u>	Browse	
Space required: 17.1MB Space available: 188.0GB Nullsoft Install System v2.26		
< Back	Next > Cancel	

8. Choose the Atmel FLIP Start Menu Folder. You may leave as it is. Press Next.



9. Atmel FLIP is now installed. Press Next.

💝 Flip 3.4.7 Setup		
Installation Complete Setup was completed successfully.		
Completed		
Show details		
Nullsoft Install System v2.26		
< Back N	ext >	Cancel

22 | EEE6744 Hands-On Hardware Security

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**.

😯 Digilent WaveForms 64-bit Setup	—		×
Choose Components Choose which features of Digilent WaveForms 64-bit you want to install.			7
Check the components you want to install and uncheck the components install. Click Next to continue.	you dor	n't want to	
Select components to install:	7.8) .0.7) all 3.19 1stall 3 19.5)	9.5) 3.19.5)	
Space required: 198.7MB			
< Back Next	> 2	Cano	el

5. Select a shortcut option. You may leave it as it is. Press **Next**.

🌱 Digilent WaveForms 64-bit Setup		
Shortcut options Choose for which users you want to create shortcuts.		\mathbf{W}
Select whether you want to create shortcuts for yourself only or for a computer. Click Next to continue.	ll users of	fthis
Create Shortcuts		
○ For anyone using this computer		
O Just for me		
< Back Net	xt >	Cancel

6. Specify the installation location. You may leave it as it is. Press Install.

➢ Digilent WaveForms 64-bit Setup	– 🗆 X
Choose Install Location Choose the folder in which to install Digilent Software.	\mathbf{W}
Setup will install Digilent Software in the following folder.) To install in a different folder, click Browse and select another folder. Click Next to continue.	
Destination folder Ct Program Files (v:86) Digilent	Browse
Space required: 198.7MB Space available: 187.8GB	
< Back Inst	tall Cancel

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

- [1] <u>https://www.gowinsemi.com/en/support/license/</u>
- [2] https://cdn.gowinsemi.com.cn/Gowin_V1.9.8.11_win.zip
- [3] https://www.gowinsemi.com/en/support/download_eda/
- [4] <u>https://ww1.microchip.com/downloads/aemDocuments/documents/DEV/ProductDocuments/SoftwareTools/as-installer-7.0.2594-full.exe</u>
- [5] https://www.microchip.com/en-us/tools-resources/develop/microchip-studio
- [6] <u>https://ww1.microchip.com/downloads/aemDocuments/documents/DEV/ProductDocuments/SoftwareTools/JRE-Flip-Installer-</u>

3.4.7.112.exe

- [7] https://www.microchip.com/en-us/development-tool/flip
- [8] https://mautic.digilentinc.com/asset/110:waveforms-windows-64-bit-download
- [9] https://mautic.digilentinc.com/waveforms-download