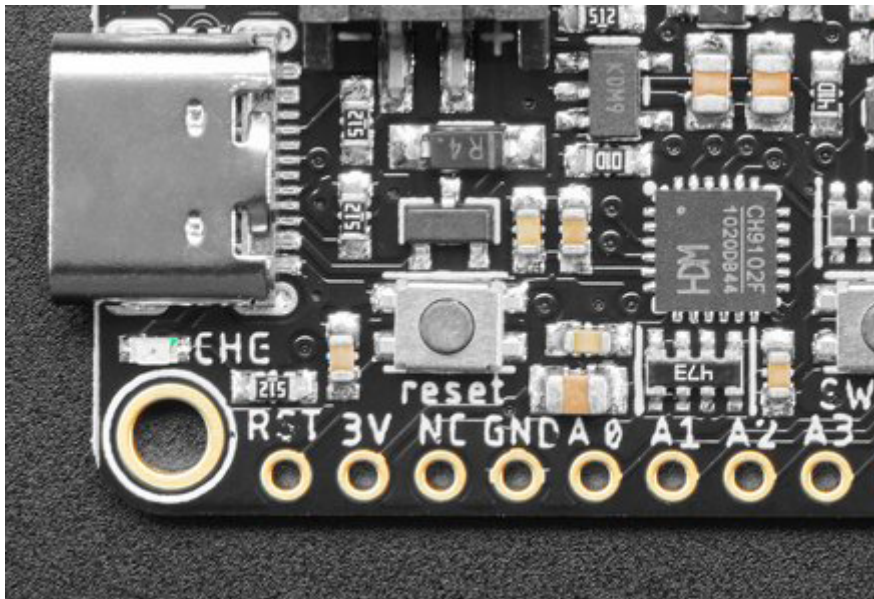




How To Install Drivers for WCH CH9102F USB to Serial Chips

Created by Liz Clark



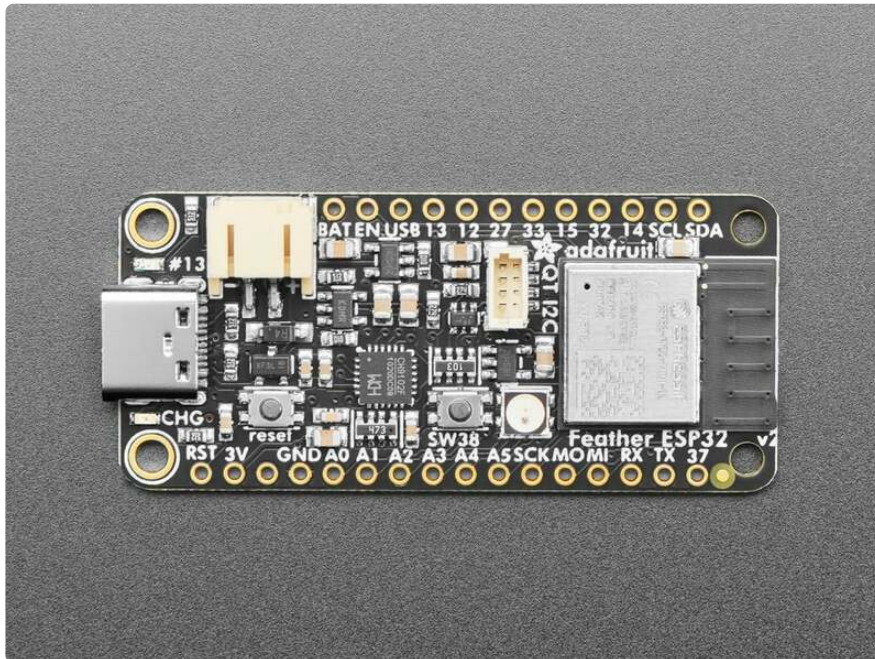
<https://learn.adafruit.com/how-to-install-drivers-for-wch-usb-to-serial-chips-ch9102f-ch9102>

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Overview



Certain boards, like the [ESP32 Feather V2 \(http://adafru.it/5400\)](http://adafru.it/5400), have a USB to serial converter chip that communicates between the processor and your computer. These chips require drivers to be installed on your computer's operating system.

This guide will show you how to install the drivers for the WCH USB to serial chips - also known as CH9102F or CH9102. These chips are replacing the SiLabs chips, like the [CP2104 \(http://adafru.it/3309\)](http://adafru.it/3309) and [CP2102N \(http://adafru.it/5335\)](http://adafru.it/5335), that have been used on Adafruit boards in the past. There are drivers for Windows and Mac computers available. If you're on Linux, the drivers are built-in.

Windows Driver Installation

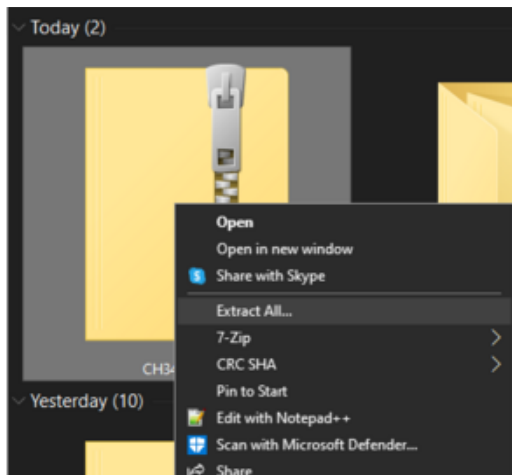
Begin by downloading the zip folder for Windows either from the WCH website or directly below.

CH343SER.ZIP

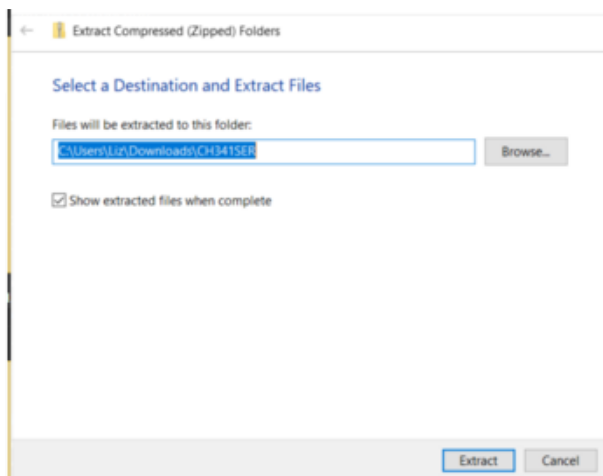
<https://adafru.it/18fk>

WCH website

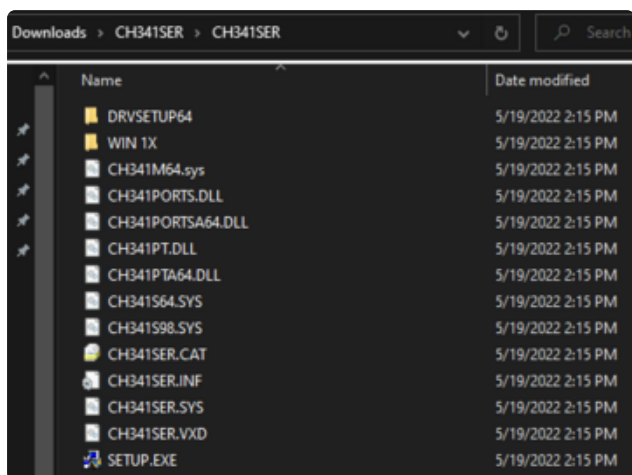
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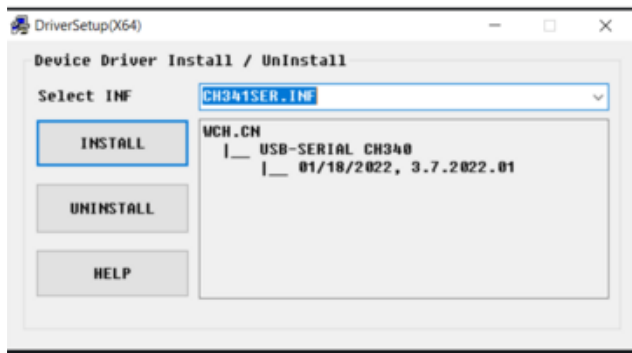
Right-click on the downloaded zipped folder and click **Extract All...**



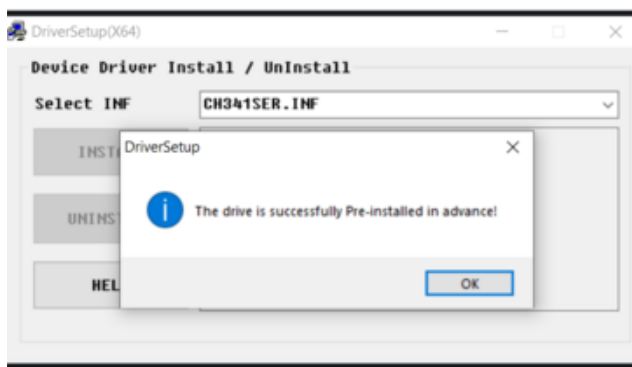
Select a file destination for the unzipped folder and click **Extract**.



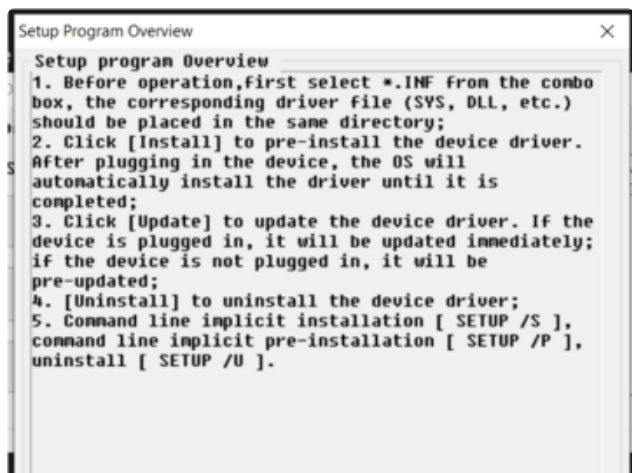
Navigate to your unzipped folder. Double click on **SETUP.EXE** to launch the installation program.



A dialog box titled **DriverSetup(X64)** will open. Click **INSTALL** to begin the installation of the driver.



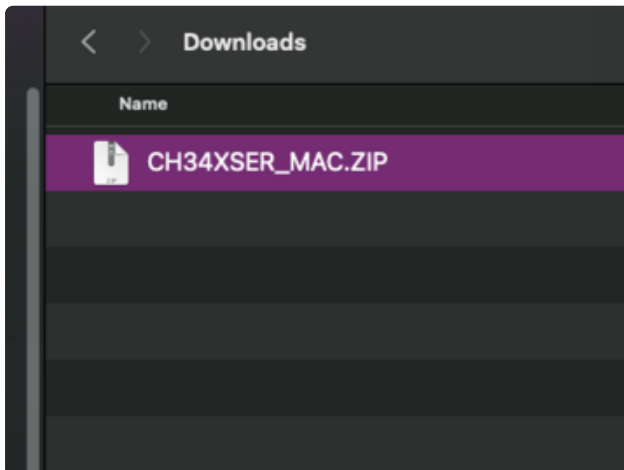
Once the installation is complete, a pop-up window will appear letting you know that the installation was successful. Click **OK** to close the window.



If you click **HELP** in the **DriverSetup(X64)** dialog window, you will get more details on the driver installation process.

Once you plug in your device over USB, the driver will complete its installation. That's all there is to installing the WCH USB to serial driver on Windows!

Mac Driver Installation



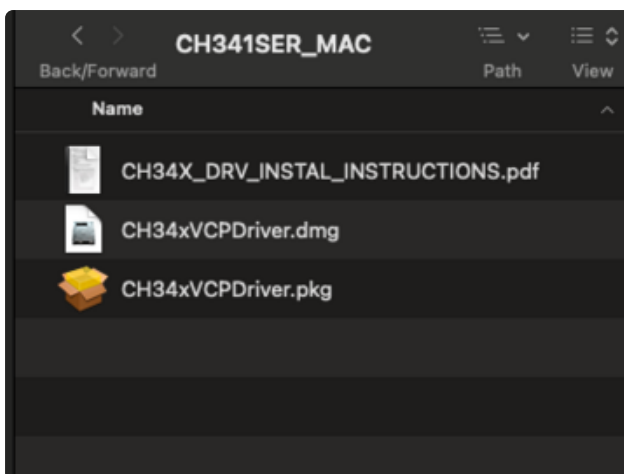
Begin by downloading the zip folder for Mac either from the WCH website or directly below.

CH34XSER_MAC.ZIP

<https://adafru.it/1ado>

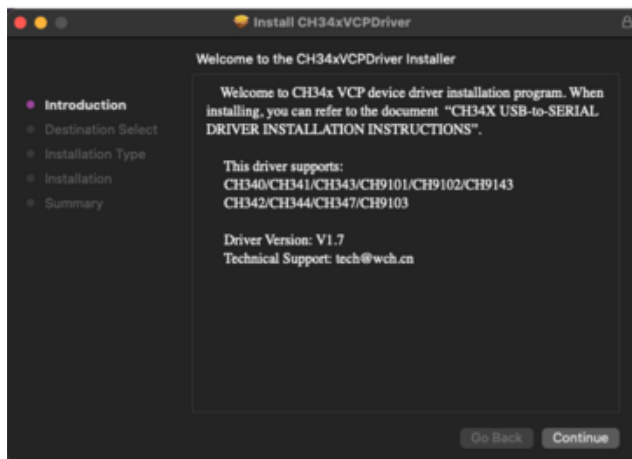
WCH website

<https://adafru.it/-ed>

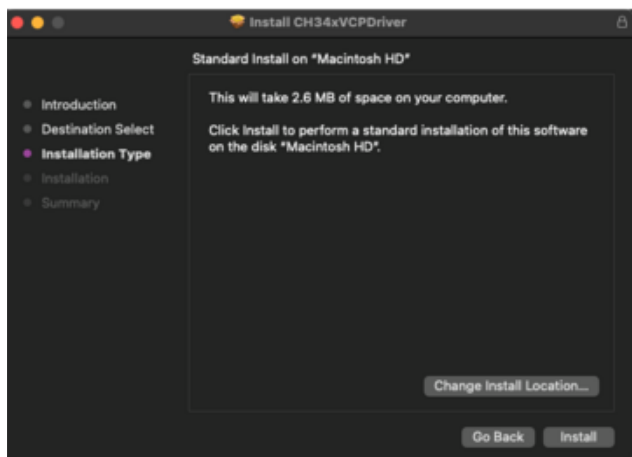


After unzipping the folder, double click on the **CH34xVCPDriver.pkg** file.

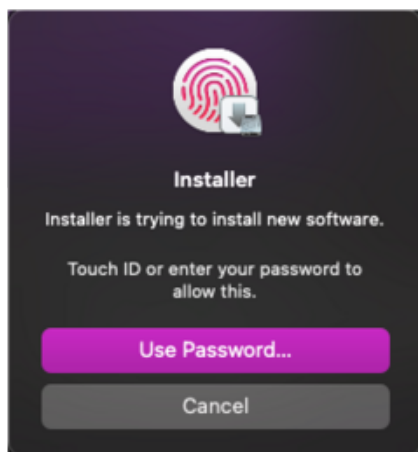
Alternatively you may use the DMG file, which mounts a disk image, then goto the mounted drive in finder and drag the CH34XVCPDriver app into the Applications folder to install it. Then skip down to the next section for OSX version 11 and later.



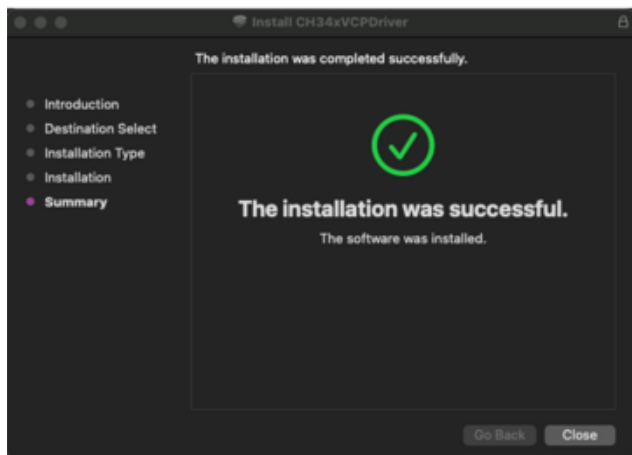
This will launch the Installer dialog window. Click **Continue**.



Click **Install** to begin the installation.

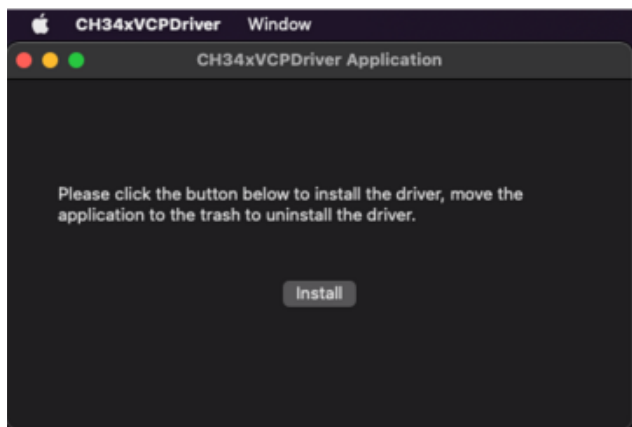


A security notification may open after the installation begins. Use Touch ID or enter your password to allow the installation to continue.



You'll see a progress bar. Once the installation has completed you'll see a message in the dialog box that the installation was successful. Click **Close** to exit the box.

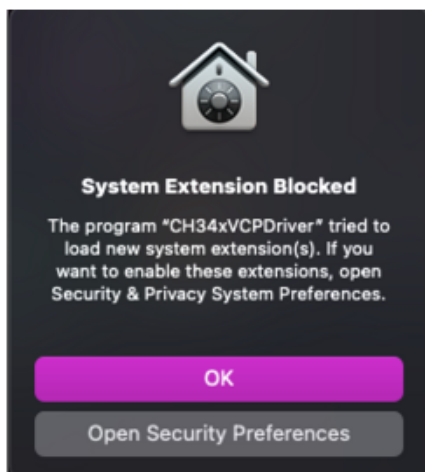
Additional Step for OS X 11.0 and Above



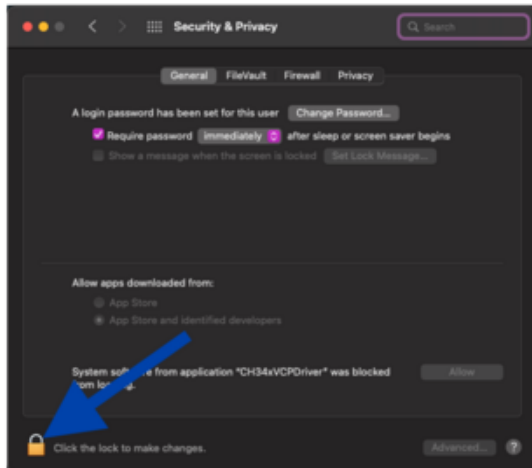
This driver application may open automatically following the successful install above.

If it does not, open LaunchPad, find CH34xVCPDriver Application, and open the App.

Click **Install** to install the driver.

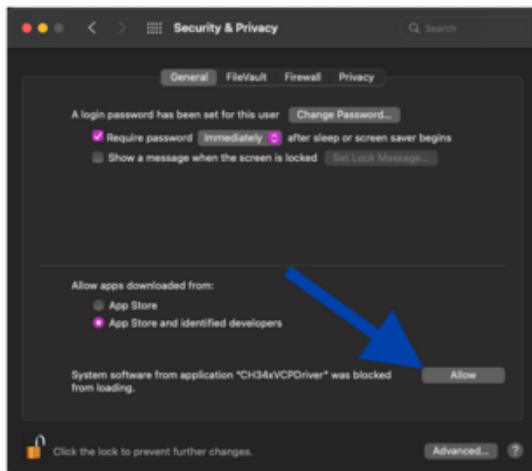


A security warning may open. If so, click on **Open Security Preferences**.

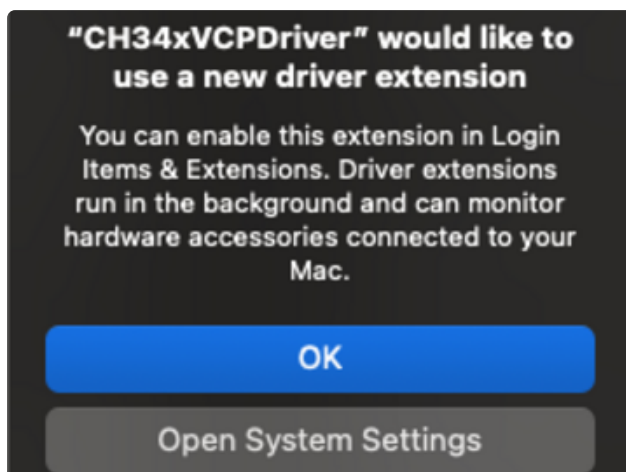


If the page that loads looks like the image on the left then follow the next two steps, otherwise jump down two steps.

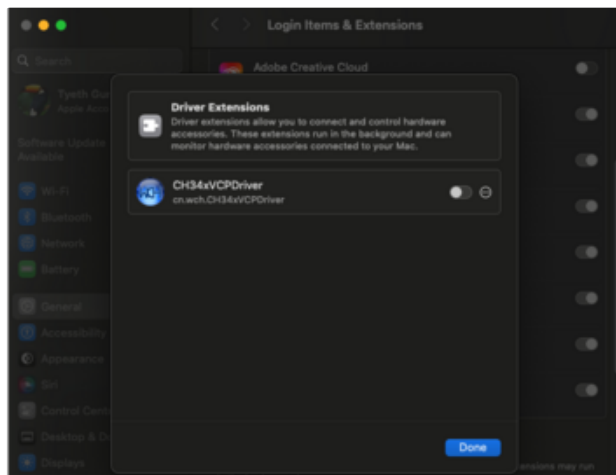
In Security and Privacy, click on the lock icon in the lower-left corner to make changes.



Click **Allow** to allow the installation to continue.



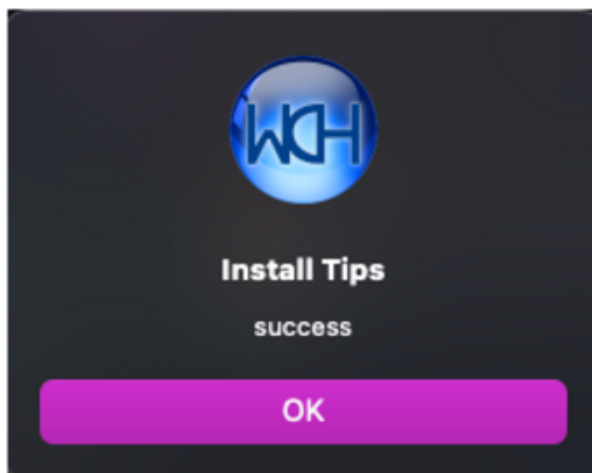
Or if you are running **OSX 13** or above, the dialog will be slightly different and the Open System Settings button will take you to the Driver Extensions page. There you will need to toggle the CH34xVCPDriver to enabled.



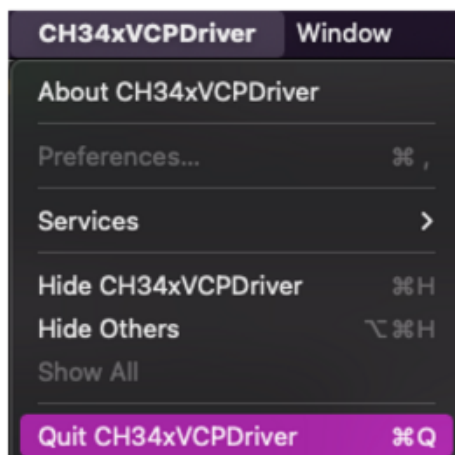
If you missed the previous step then you will have to manually find the page in System Settings. Goto the General section, then Login Items and Extensions, scroll to near the end and goto Driver Extensions.

System Settings -> General -> Login Items and Extensions -> Driver Extensions

Then click the toggle to enable the CH34xVCPDriver.



Once the installation finishes, you'll see a dialog box open that says "success". Click OK.



Finally, quit the application. That's all there is to installing the WCH USB to serial driver for Mac OS X 11.0 and above!

Final Steps for Installing on OS X 10.9 to 10.15

If you are running the older supported version of Mac OS X 10.9 to 10.15, then you will need to restart your computer and follow the steps detailed on pages 3 and 4 in the [PDF included in the zip folder \(https://adafru.it/-ee\)](https://adafru.it/-ee).