

The tutorial for installing Arduino IDE on Windows.

I .Arduino IDE

As an open source software, Arduino IDE is developed based on Processing IDE, which is the integrated development environment officially launched by Arduino.

With Arduino IDE, you just write the program code in the IDE and then upload it to the Arduino board and the program will tell the Arduino board what it needs to do.

II .Download the Arduino IDE for Windows

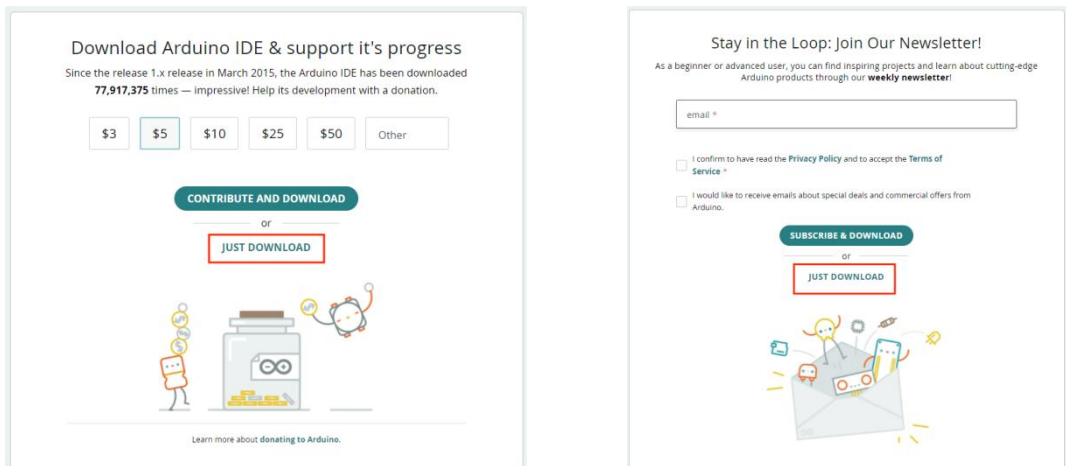
1.Download Arduino IDE

①Download the Arduino IDE's website address: <https://www.arduino.cc/en/Main/Software>, open the url according to the following chart to select the corresponding version in the future.



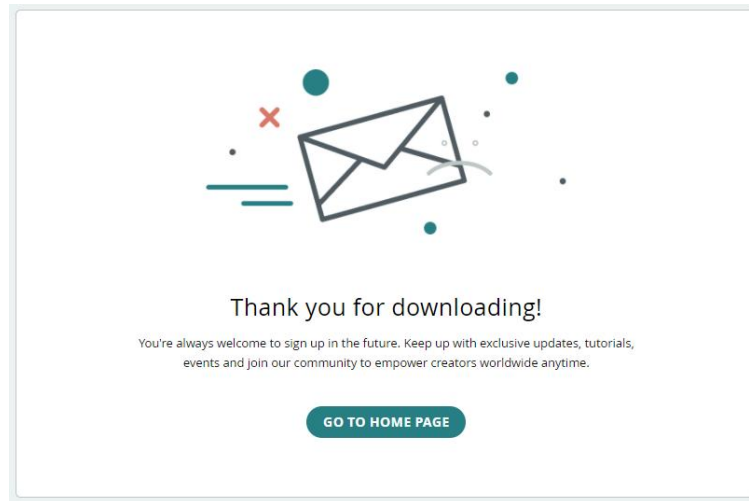
The screenshot shows the Arduino IDE 2.2.1 download page. On the left, there's a section for Arduino IDE 2.2.1 with a description: "The new major release of the Arduino IDE is faster and even more powerful! In addition to a more modern editor and a more responsive interface it features autocompletion, code navigation, and even a live debugger." Below this, it says "For more details, please refer to the [Arduino IDE 2.0 documentation](#)." and "Nightly builds with the latest bugfixes are available through the section below." At the bottom, it mentions "SOURCE CODE" and "The Arduino IDE 2.0 is open source and its source code is hosted on [GitHub](#)." On the right, there's a "DOWNLOAD OPTIONS" section with a table of download links. The "Windows" section is highlighted with a red box, showing "Win 10 and newer, 64 bits", "MSI installer", and "ZIP file". The "Linux" section shows "ApplImage 64 bits (X86-64)" and "ZIP file 64 bits (X86-64)". The "macOS" section shows "Intel, 10.14: 'Mojave' or newer, 64 bits" and "Apple Silicon, 11: 'Big Sur' or newer, 64 bits". There's also a link for "Release Notes".

②Select JUST DOWNLOAD.



The screenshot shows two side-by-side panels. The left panel is titled "Download Arduino IDE & support it's progress" and mentions "Since the release 1.x release in March 2015, the Arduino IDE has been downloaded 77,917,375 times — impressive! Help its development with a donation." It has buttons for "\$3", "\$5", "\$10", "\$25", "\$50", and "Other". Below these is a "CONTRIBUTE AND DOWNLOAD" button, and then a "JUST DOWNLOAD" button which is highlighted with a red box. The right panel is titled "Stay in the Loop: Join Our Newsletter!" and mentions "As a beginner or advanced user, you can find inspiring projects and learn about cutting-edge Arduino products through our [weekly newsletter](#)!". It has an "email *" input field, two checkboxes for "I confirm to have read the Privacy Policy and to accept the Terms of Service" and "I would like to receive emails about special deals and commercial offers from Arduino.", and then "SUBSCRIBE & DOWNLOAD" and "JUST DOWNLOAD" buttons, with the latter highlighted by a red box.

③When the following screen appears, the Arduino IDE is downloading.

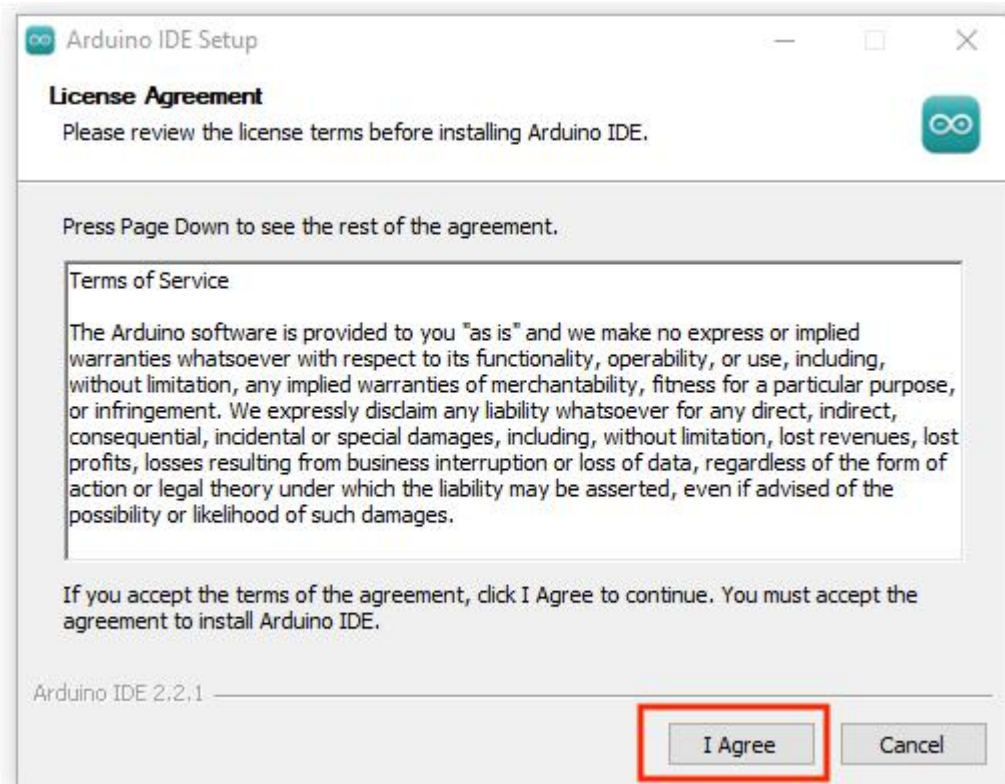


2.Install the Arduino IDE

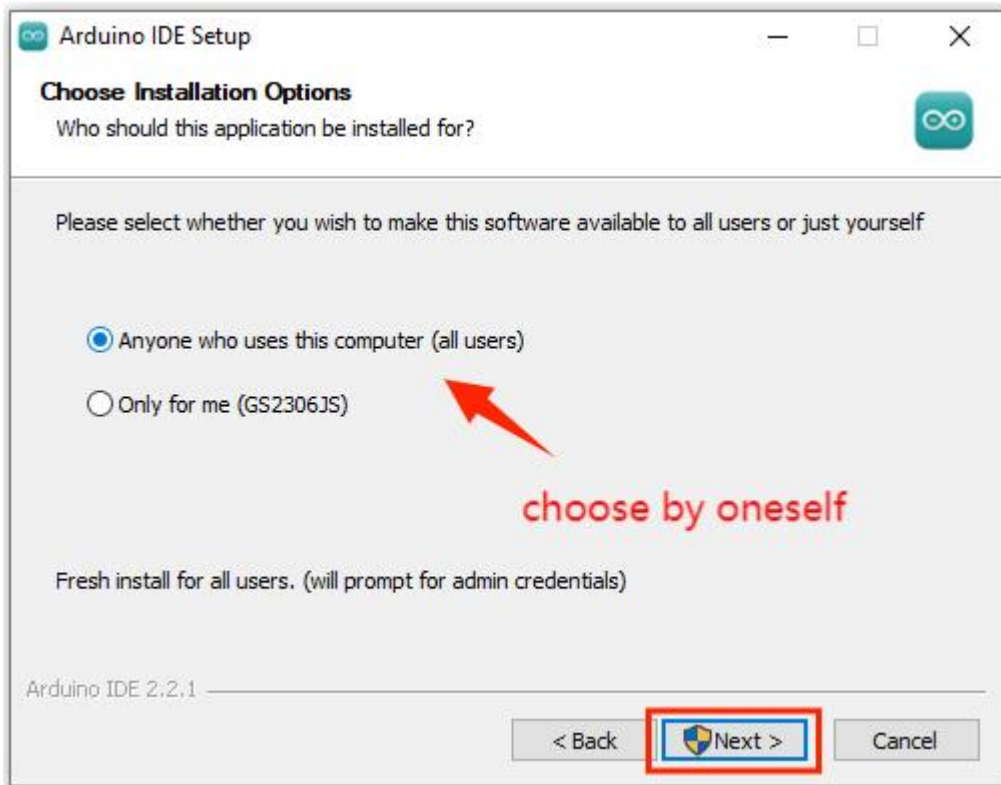
- ①When the download is complete, the icon file will appear. Click Install software.



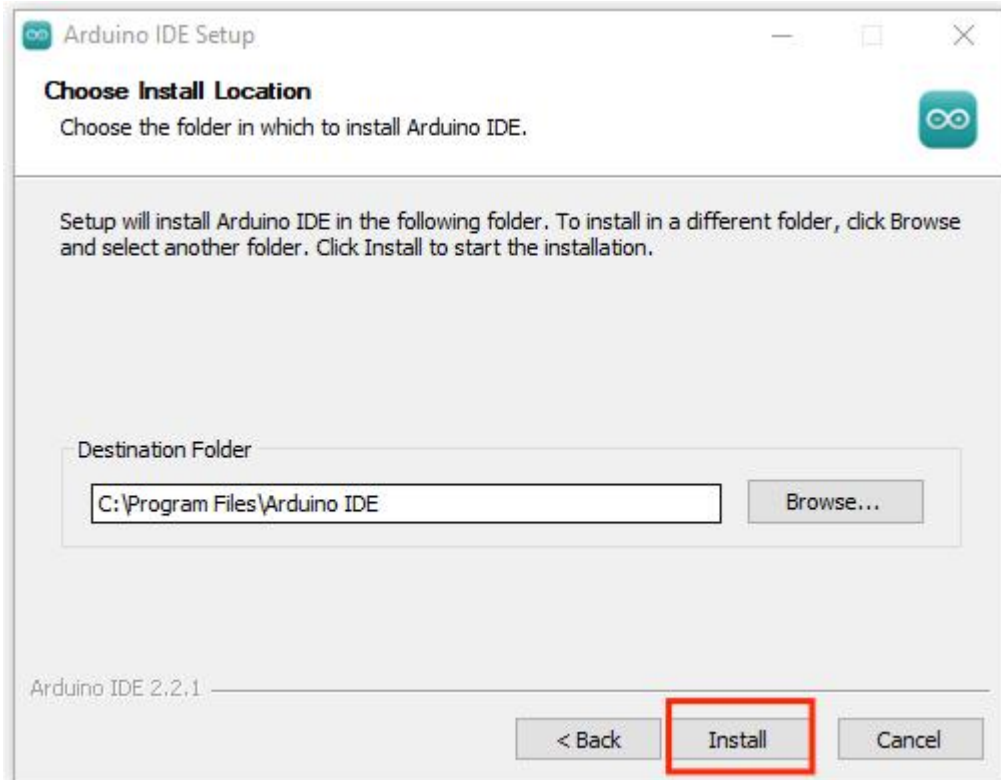
- ②After installation, the following screen appears and select "I Agree".



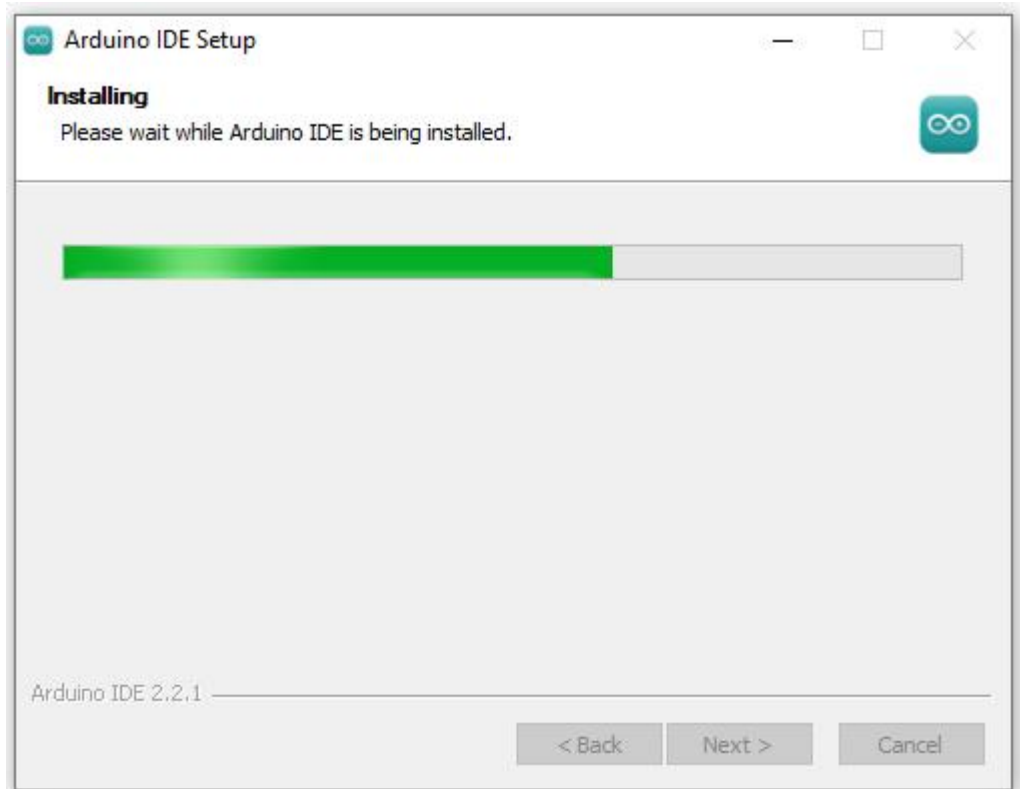
- ③After selecting "I Agree", the following screen will appear and select "Next".



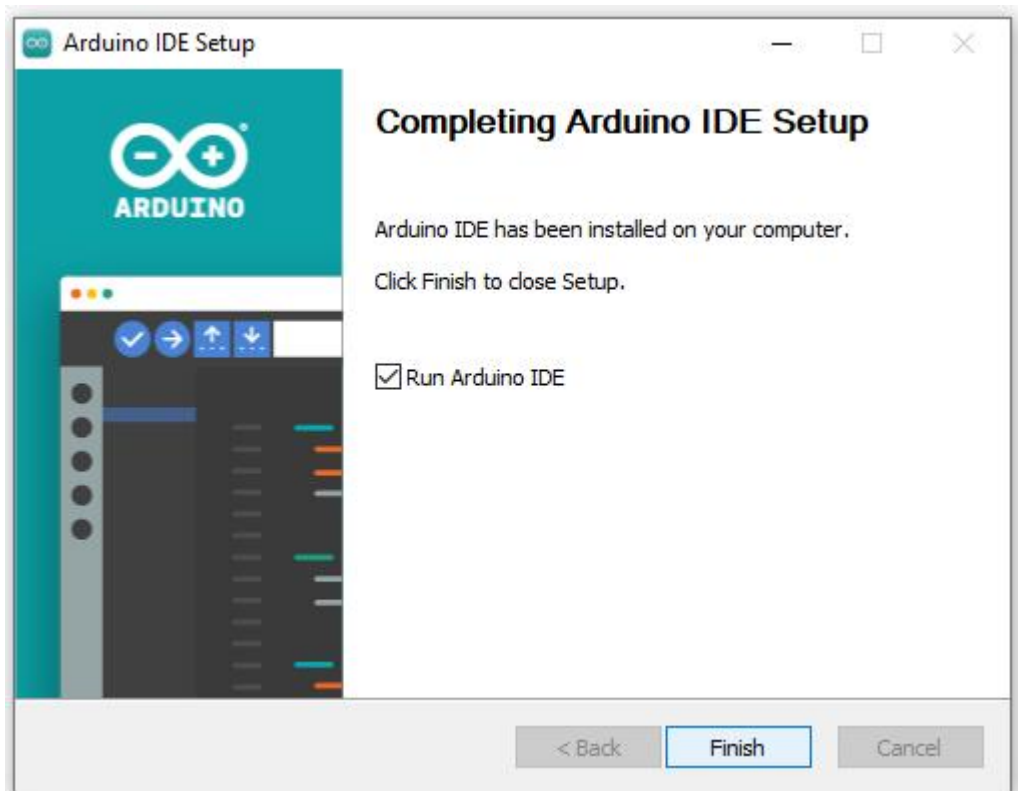
④ Select "Next" and the following screen will appear. Select "Install".



⑤ Arduino IDE software installed.



⑥ Installation is complete.

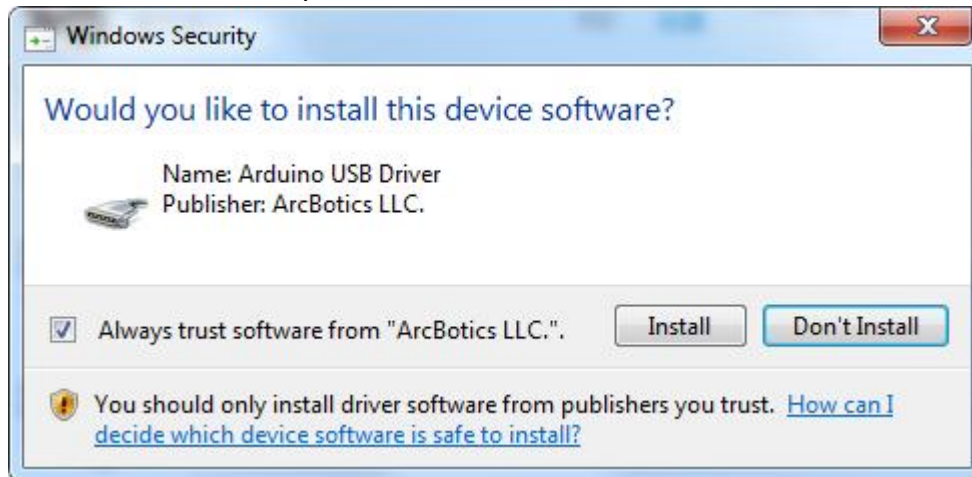


3.The Arduino IDE installation is complete

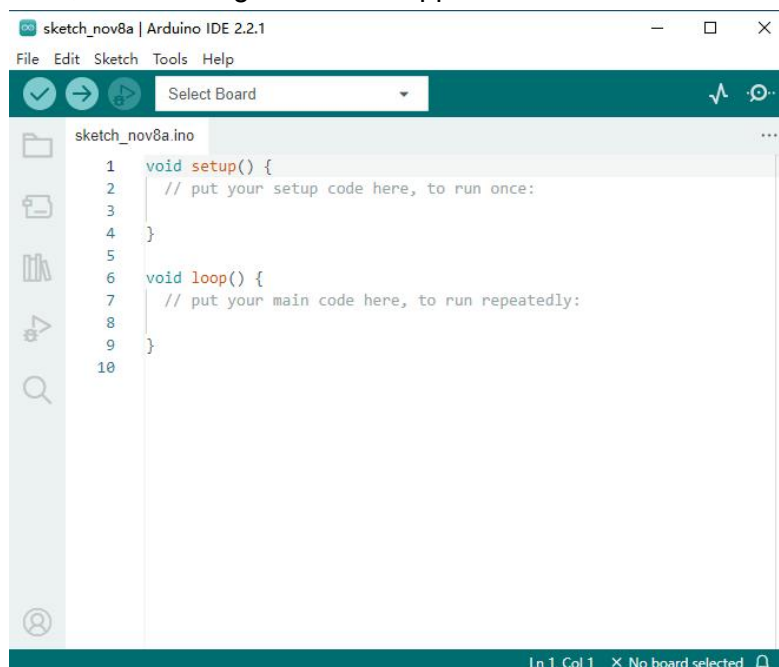
① After installation, a shortcut icon of Arduino IDE will appear on your desktop.



- ② If an instruction to install the Arduino driver appears, click Install and follow the recommended steps.



- ③ When opened, the following screen will appear.



III. How to install CH340 serial port driver

Connect the main control board to your computer with a USB cable, and the driver will be installed automatically on MacOS and Windows systems. If the driver installation fails, you need to install the driver manually.

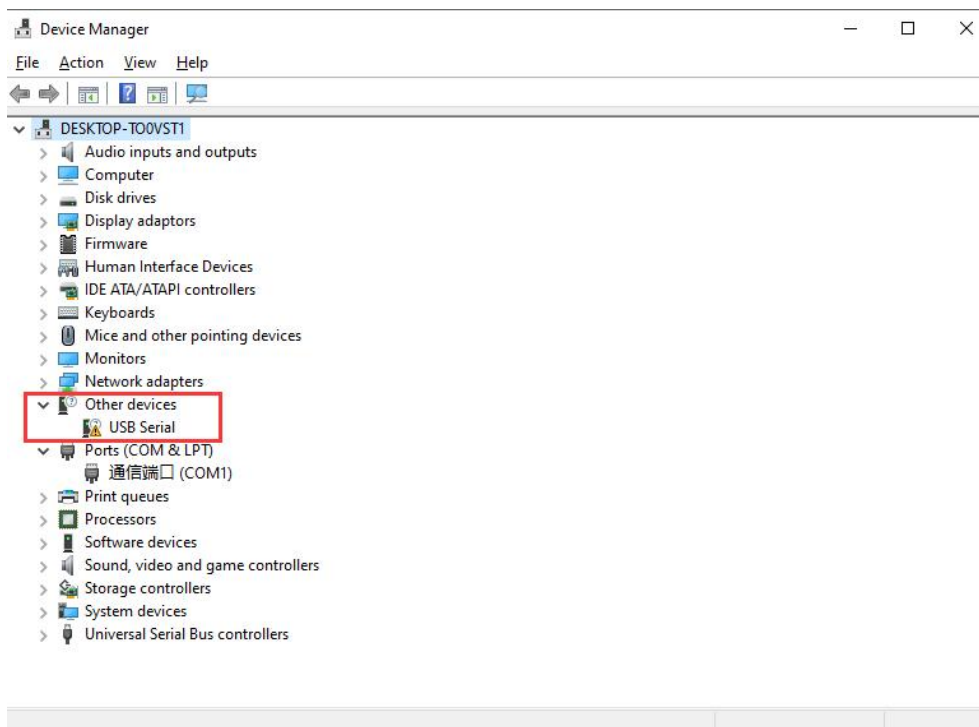
The USB to serial port chip of ESP32 control board is CH340C. Therefore, you need to install the driver for the chip.

The driver installation process is much the same on different systems. Here, we demonstrate the driver installation on a Win10 system. You can find the "USB_Drive_CH341_3_1" folder in the resources package we provided. This is the driver file we want to install.

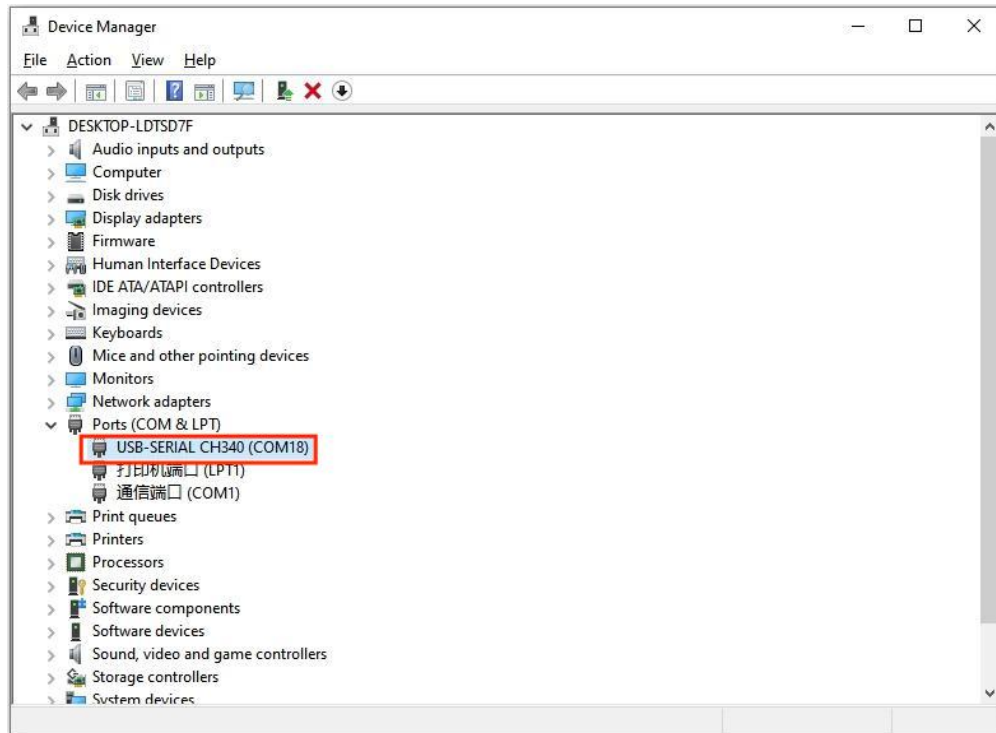
1. Check whether CH340 serial port driver is installed (if it is installed, skip it)

① Plug one end of the USB cable into the ESP32 control board and the other end into the USB port on the computer.

② The first time you connect the ESP32 console to your computer, right-click "My Computer" -> "Attribute" -> Click Device Manager, and under Other Devices, you will see either USB-Serial or Unknown Device.

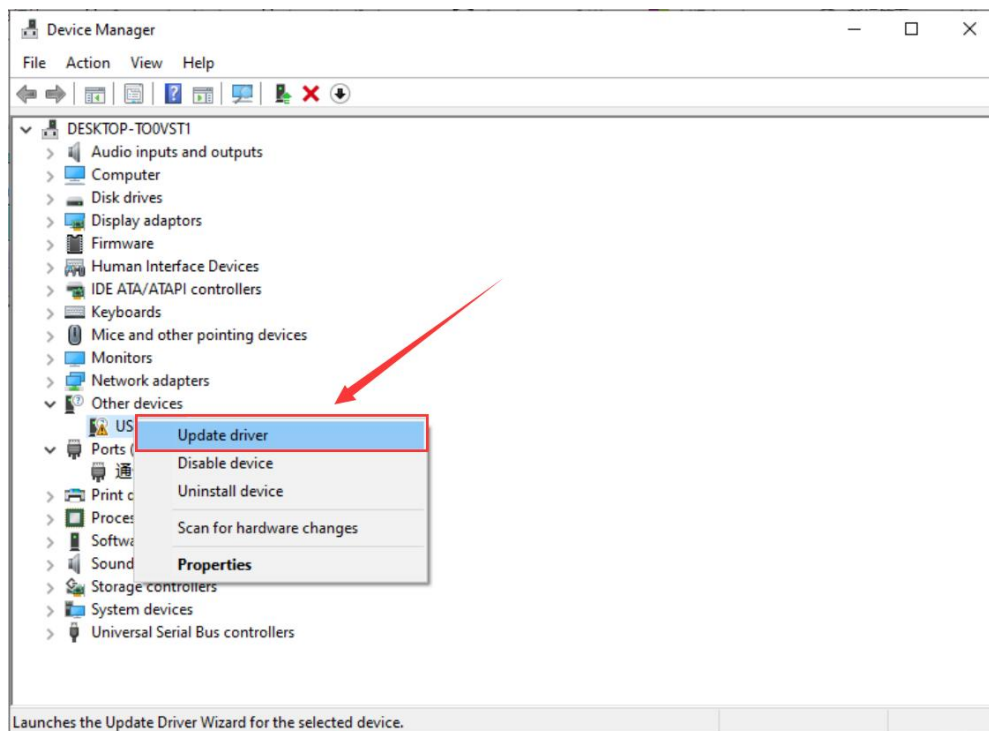


③ The CH340 driver may also be installed automatically when you connect the ESP32 control board to your computer. Also in the "Device Manager", under "Ports", you will see "USB-Serial CH340". At this point, it means that the CH340 serial driver has been successfully installed and you can skip this installation step.

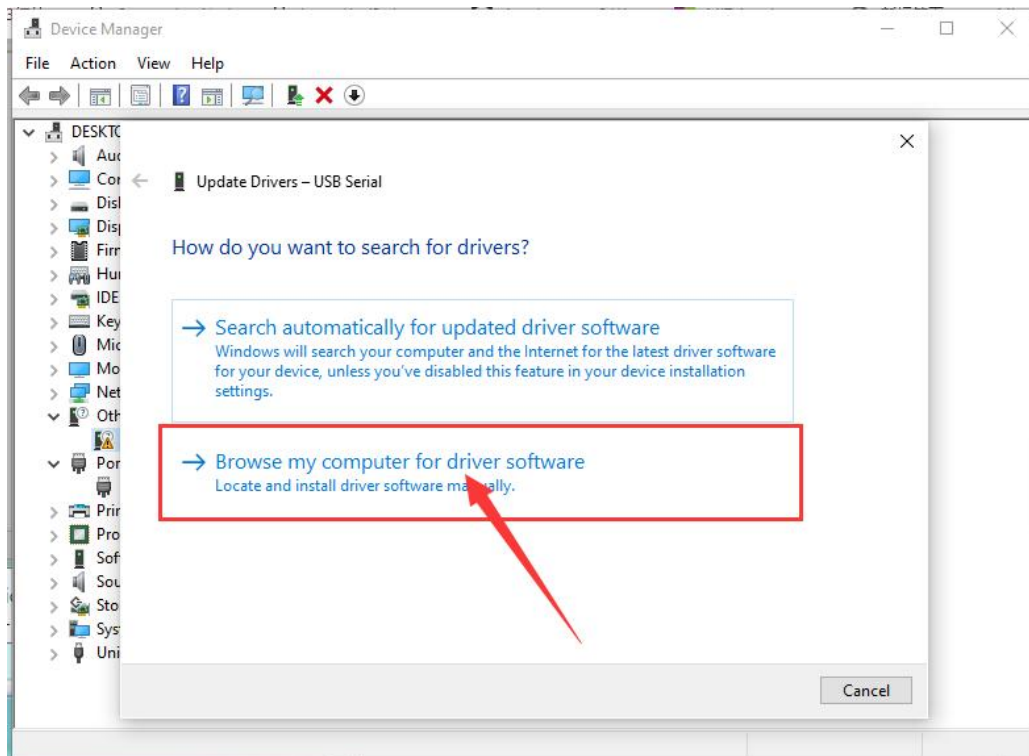


2. Install CH340 serial port driver

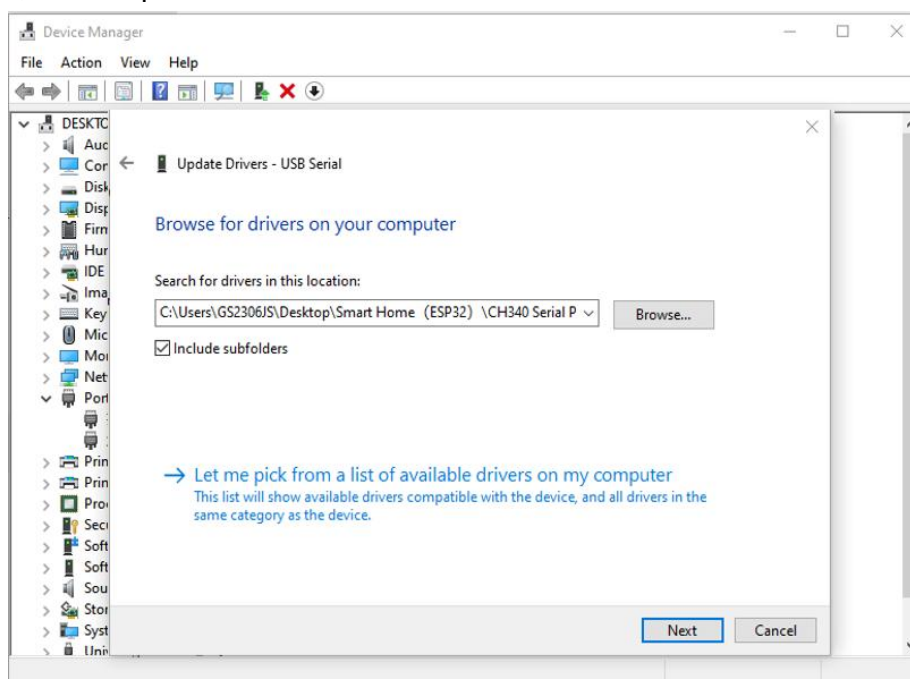
① First right click on the device and select the top menu option (Update Driver Software) as shown below.



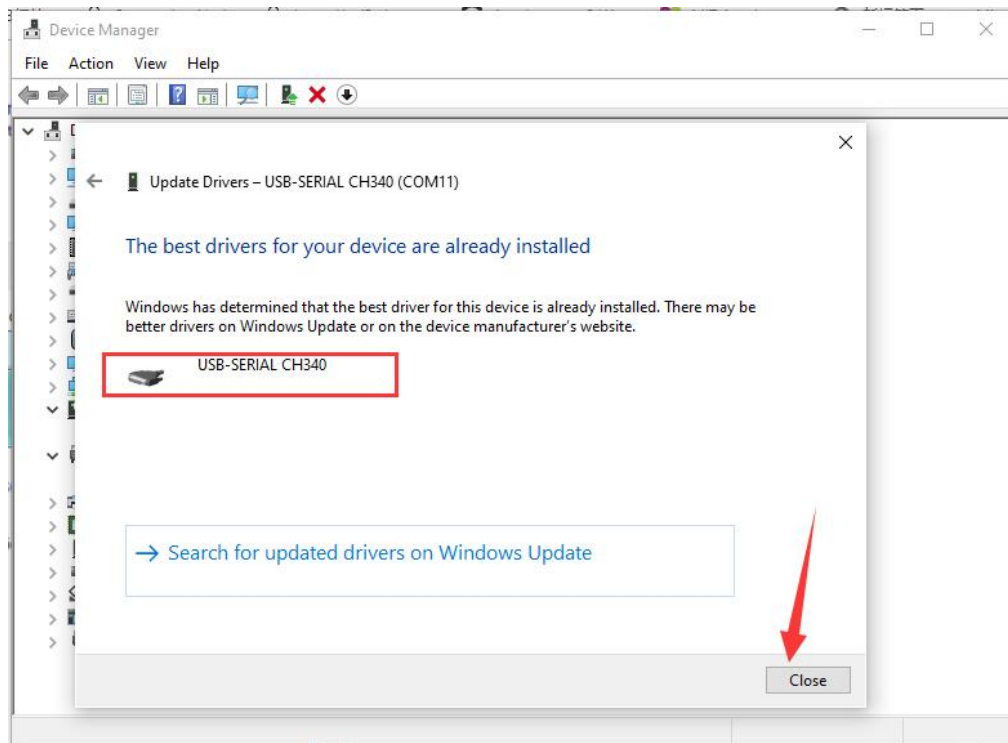
② Then you will be prompted to "Automatically search for updated driver software" or "Browse my computer to find driver software" as shown below. On this page, select "Browse My Computer to find driver software".



③ Then, add the path to the driver file.



④ You will receive a confirmation message after the software installation is complete. Once the installation is complete, click "Close".



3. Confirm that the CH340 serial port driver has been installed successfully

Plug one end of the USB cable into the ESP32 control board and the other end into the USB port on the computer. Right click "My Computer" -> "Attribute" -> Click "Device Manager" and connect to the control panel. The following picture shows that the installation is successful.

