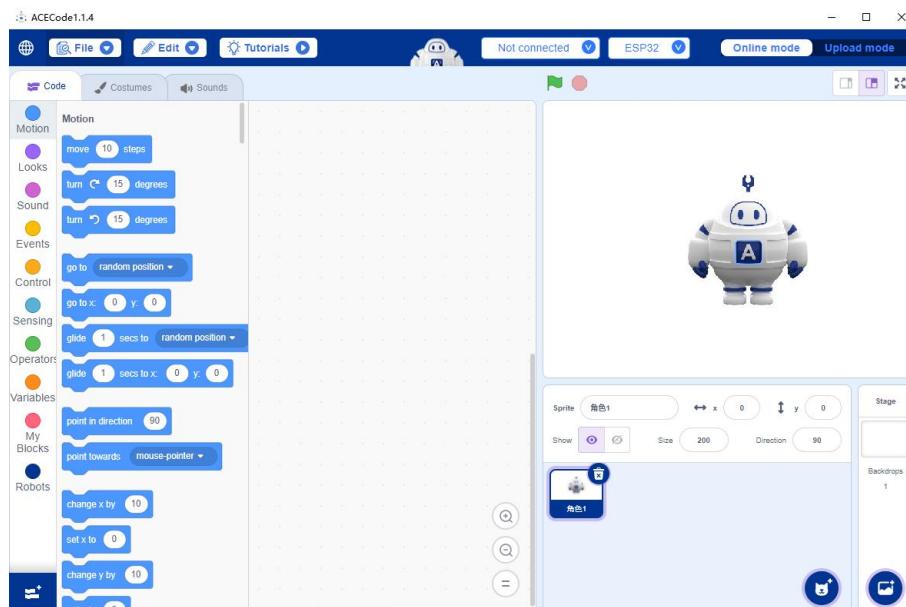




# Getting Started with ACECode

## I .Introduction to ACECode

ACECode is a blockly programming tool that allows users to program by dragging blocks without having to master complex programming languages. ACECode covers all the functions of Scratch and adds a robot control module, which allows users to design their own robot works using graphical programming, reducing the difficulty of robot programming and development.



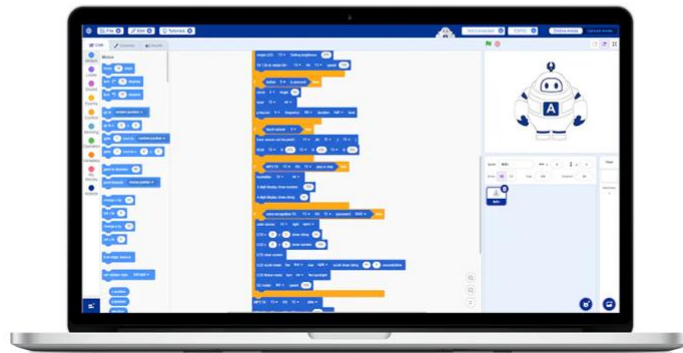
## II .Download and install ACECode

**Step 1:** Download the ACECode installation program from the official website. Log in to the official website of ACECode: <https://www.cebott.com/pages/software>, enter the software download interface, Select the corresponding version of ACECode software for your Mac system,and download it.

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4. Add the weather station extension.

Important: If you previously downloaded ACECode, please uninstall ACECode first and then install ACECode, If you encounter any technical problems, feel free to contact us at [support@acebott.com](mailto:support@acebott.com)

[Download Windows](#)[Download Mac X64](#)[Download Mac ARM64](#)

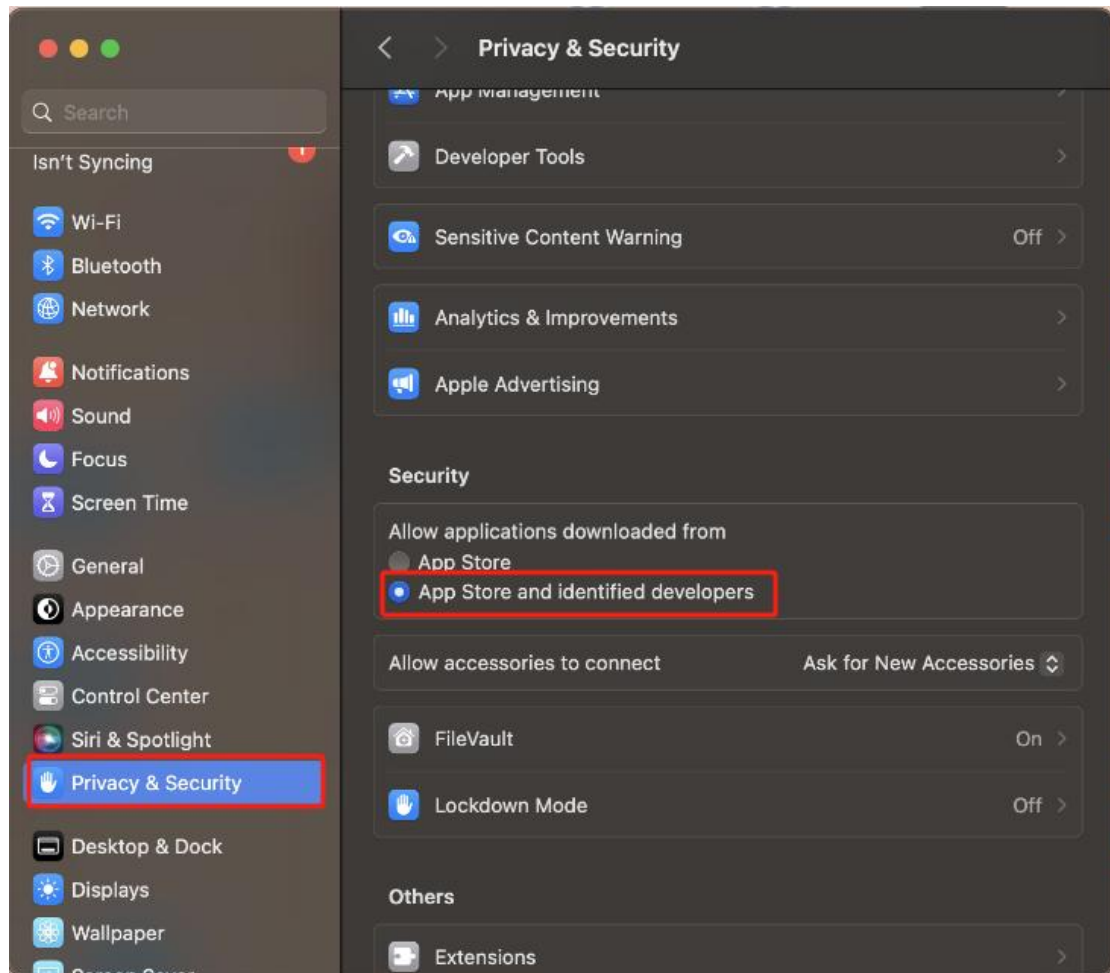
### Note:

1. Please select the appropriate software version for download based on the type of processor (ARM or Intel) installed on your Apple computer. For ARM processors, choose the "Mac ARM64" version; for Intel processors, choose the "Mac X64" version. You can check the processor type by sending the "uname -m" command through the Terminal.

```
huan...ning@hu...:~$ uname -m
arm64
```

2. If you download a compressed package, please decompress it and then proceed to the subsequent installation steps.

3. Before installation, you need to set installation permissions. Click on the "Apple Menu", open "System Settings" -> "Privacy & Security" -> "Security", and set it to "App Store and identified developers".

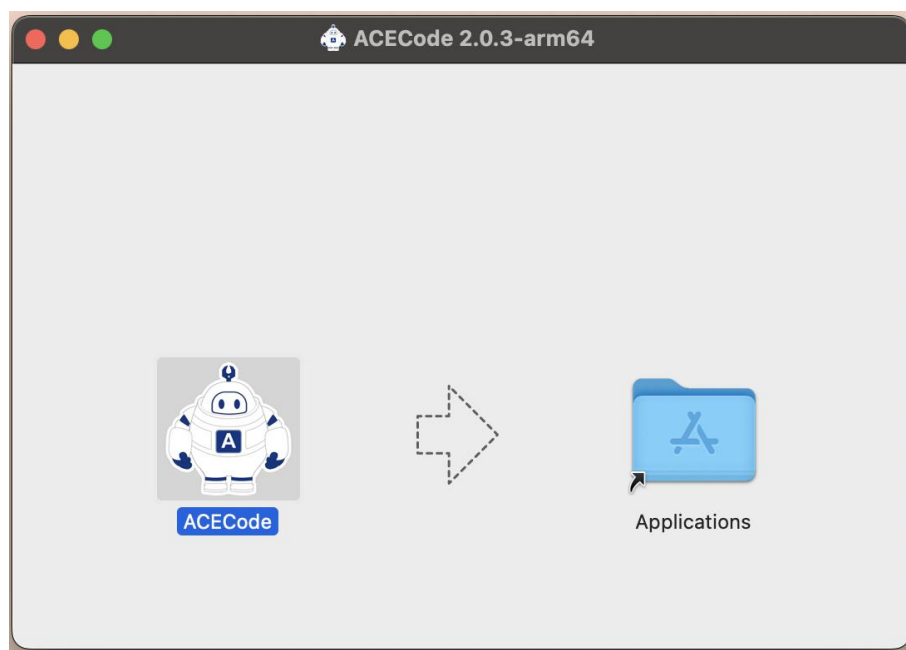


**Step 2:** Click the downloaded installer and follow the instructions to install ACECode. Taking the Mac ARM64 version as an example here.

1. After the download is complete, the installation package file will appear as shown in the figure. Click to install the software.



2. When you double click on the installation package, the installation interface will appear. Simply select the ACECode icon and move it to the Applications folder to install the program.

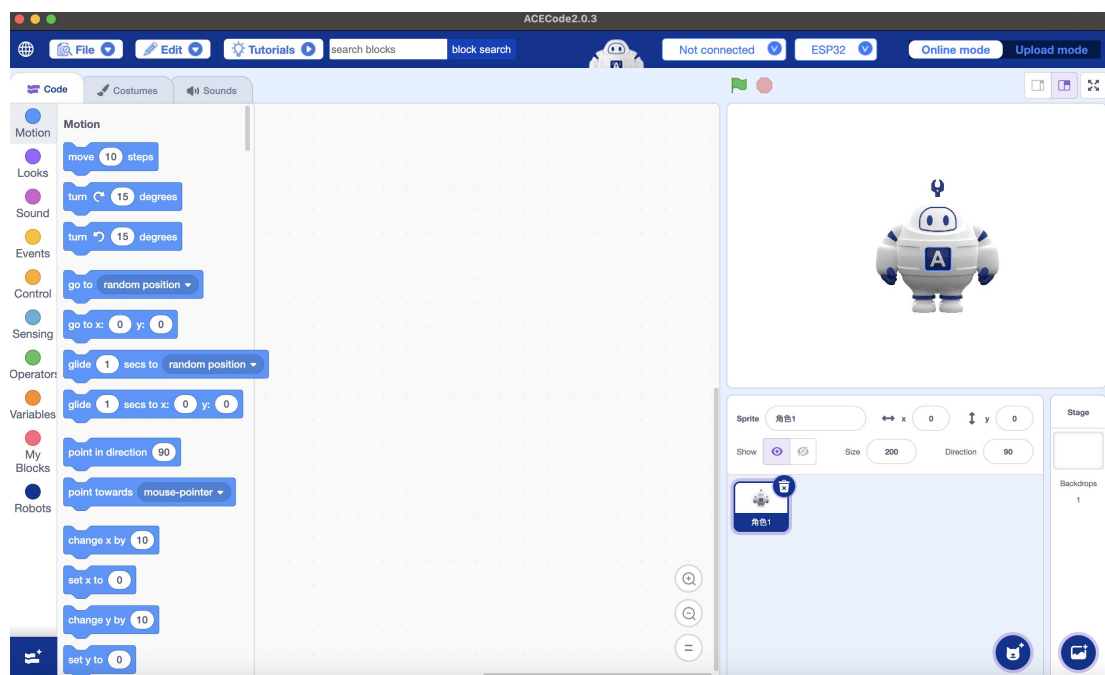


3. After the ACECode software is installed, locate ACECode in the workspace and open it.



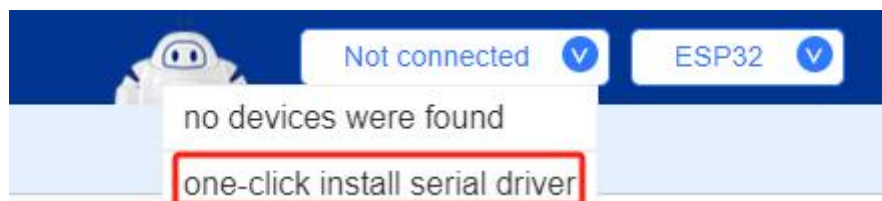


4. After launching the program, you will see the following interface.



**Step 3:** Install the serial driver (skip it if installed)

1. Open ACECode and click on the serial port connection button. In the pop-up options, select "One-click install serial driver". After clicking, it will display the serial port drivers required for the two controller board supported by ACECode, ESP8266 and ESP32.

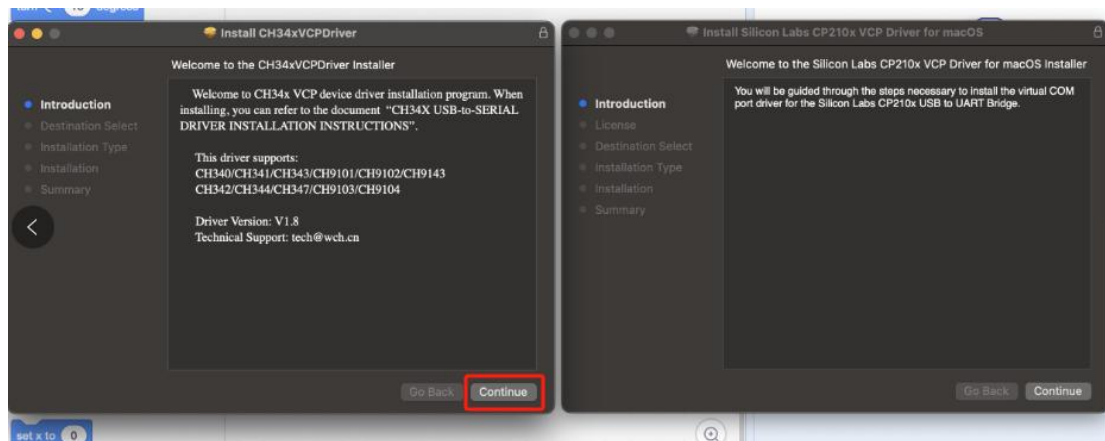


2. Follow the prompts to install the two serial port drivers in sequence. Start by

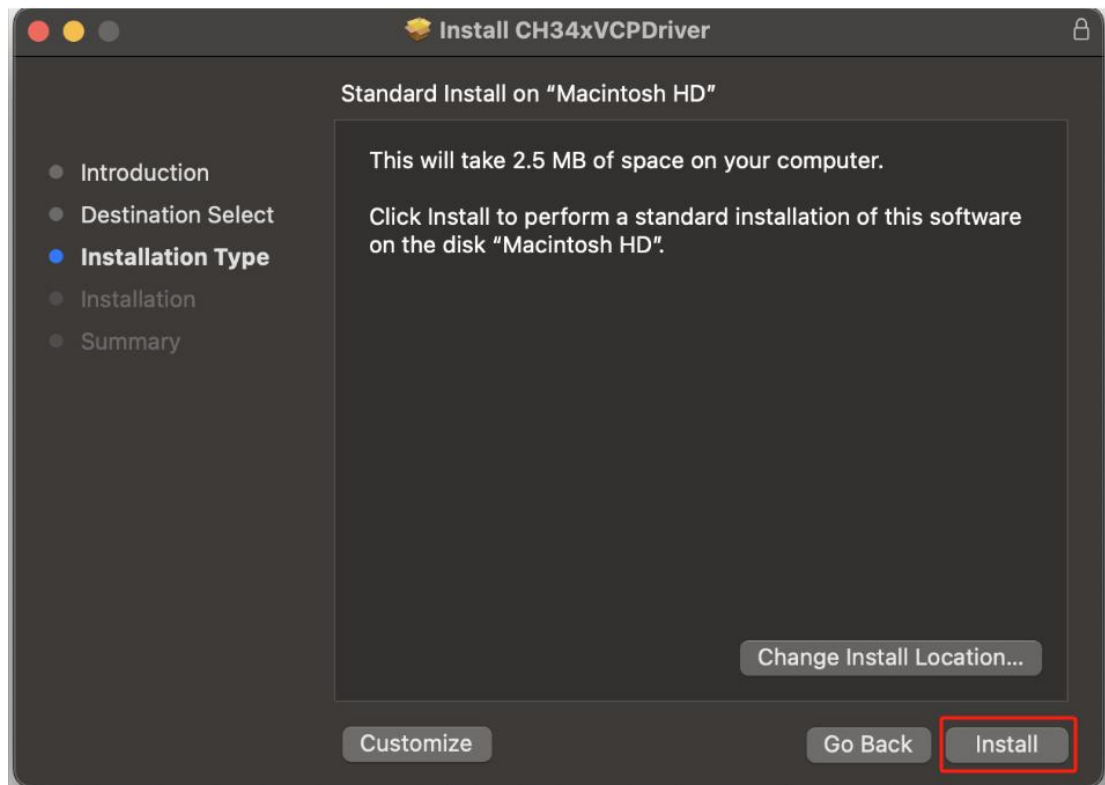
<https://acebott.com/>

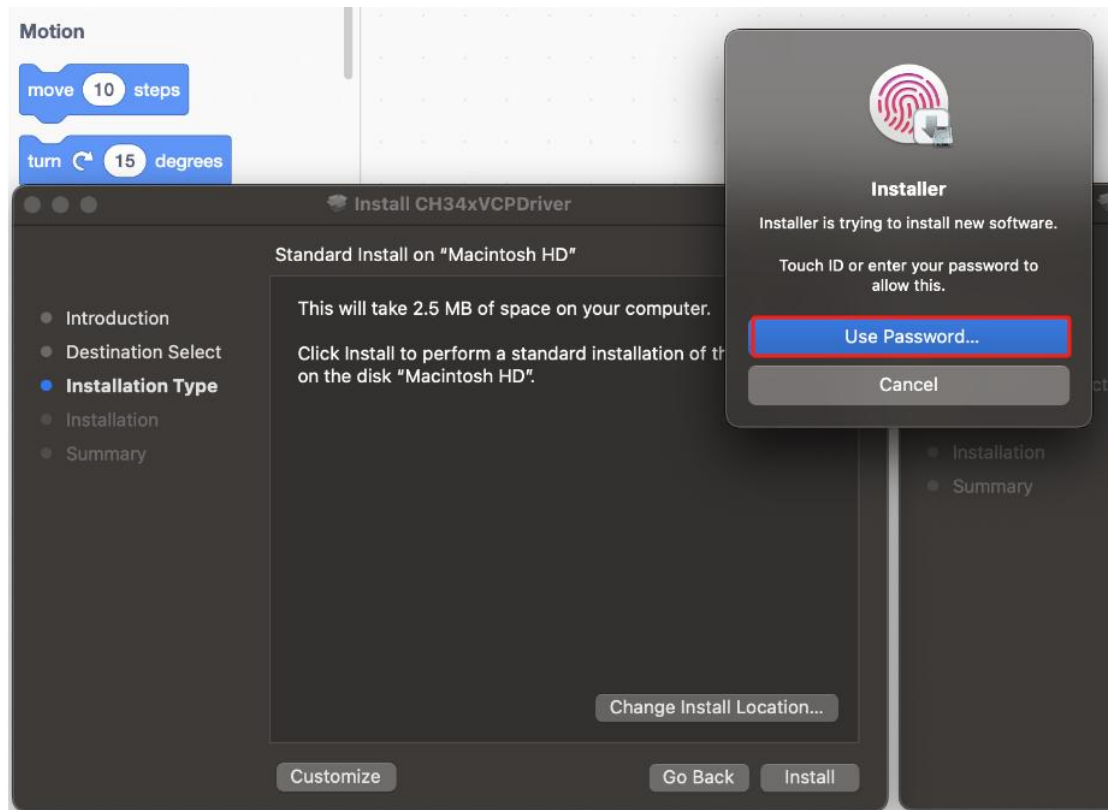


installing the CH340 driver and click "Continue".

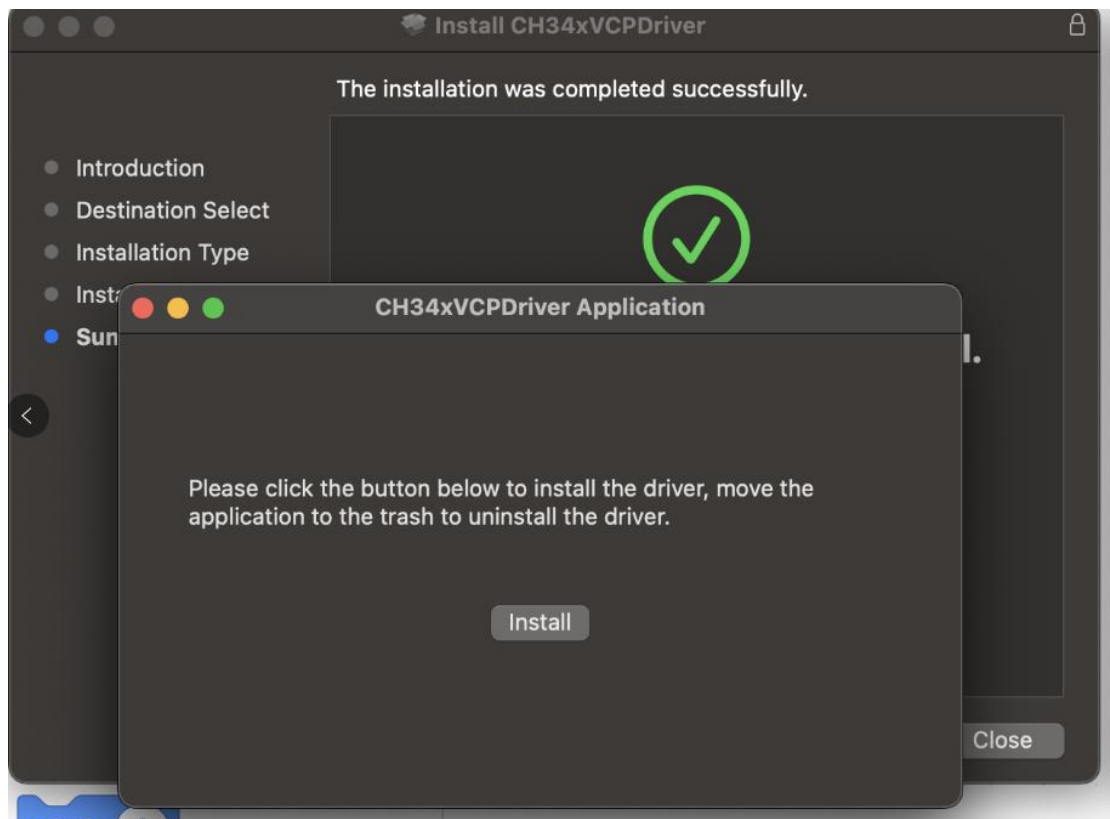


3. Click "Install" and, as prompted, enter your fingerprint or password.



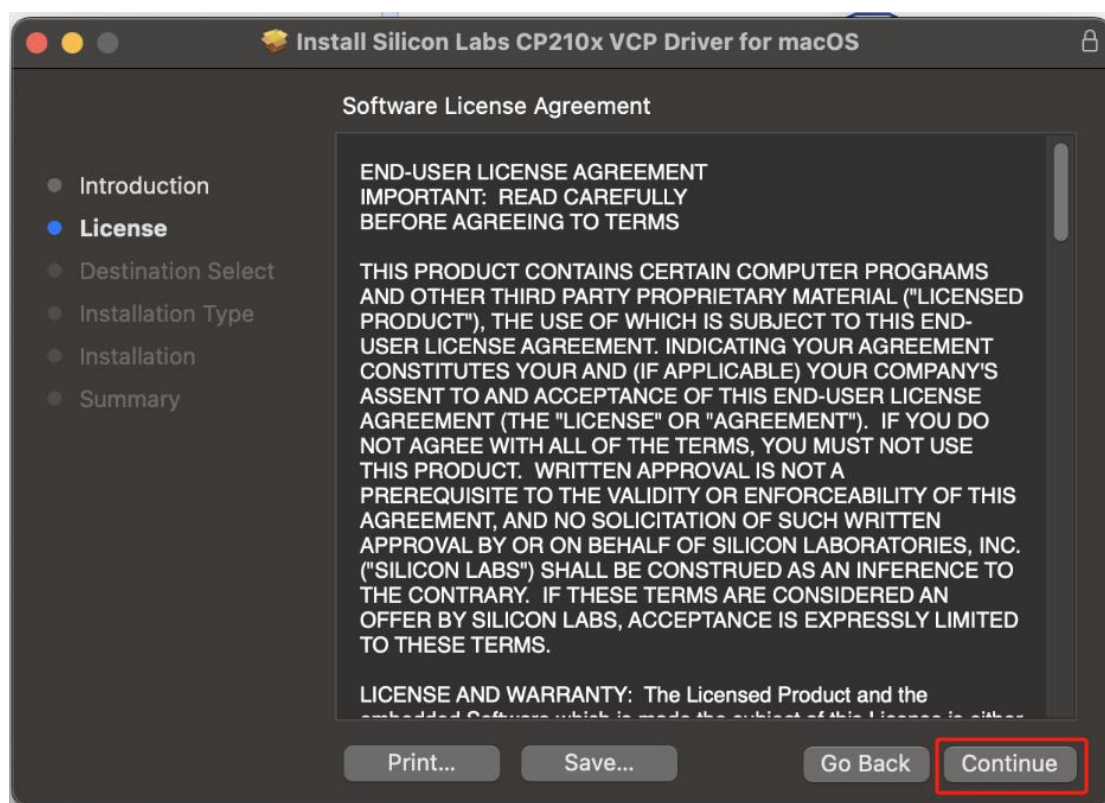
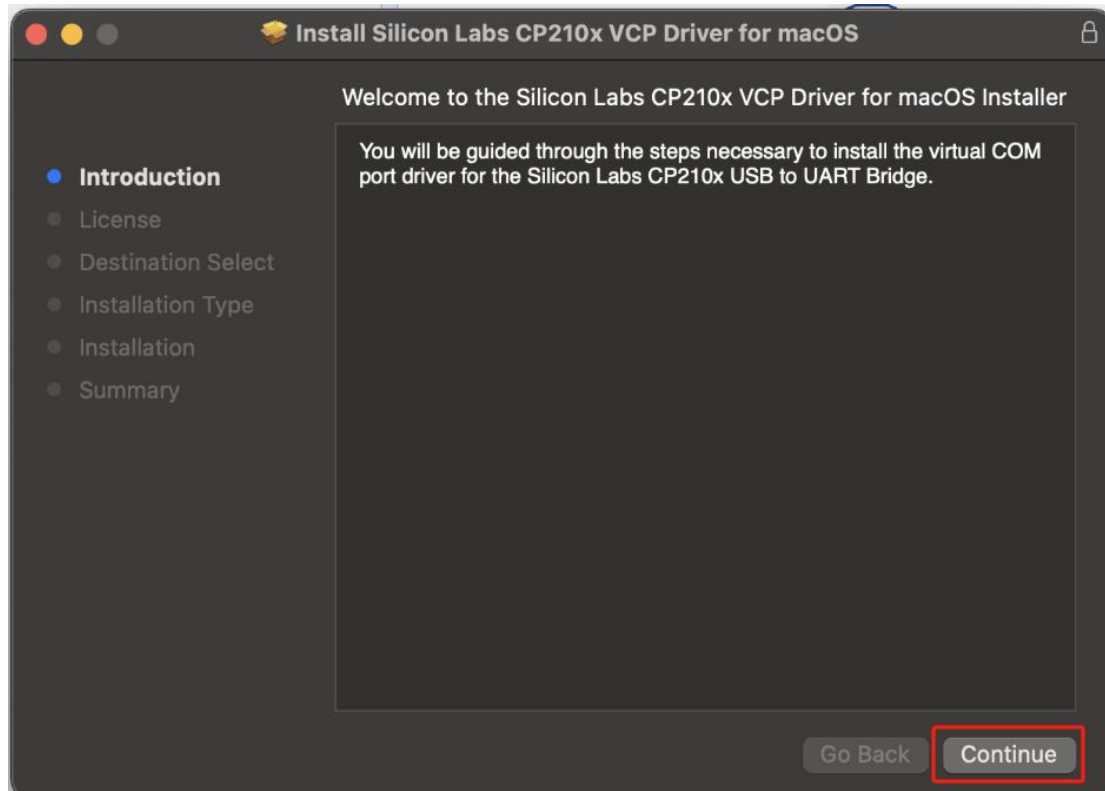


4. The CH340 driver has been successfully installed. Close the window.

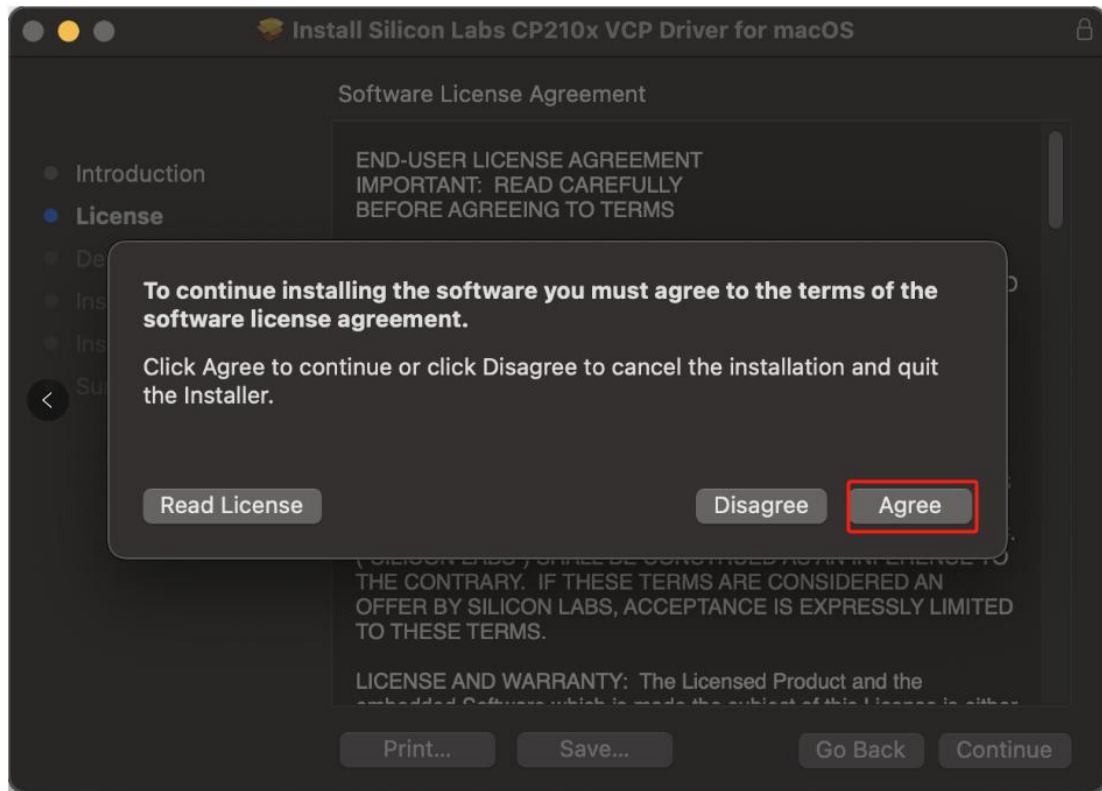


5. Next, install the CP210 serial port driver. After clicking "Continue," click the "Agree" button again.

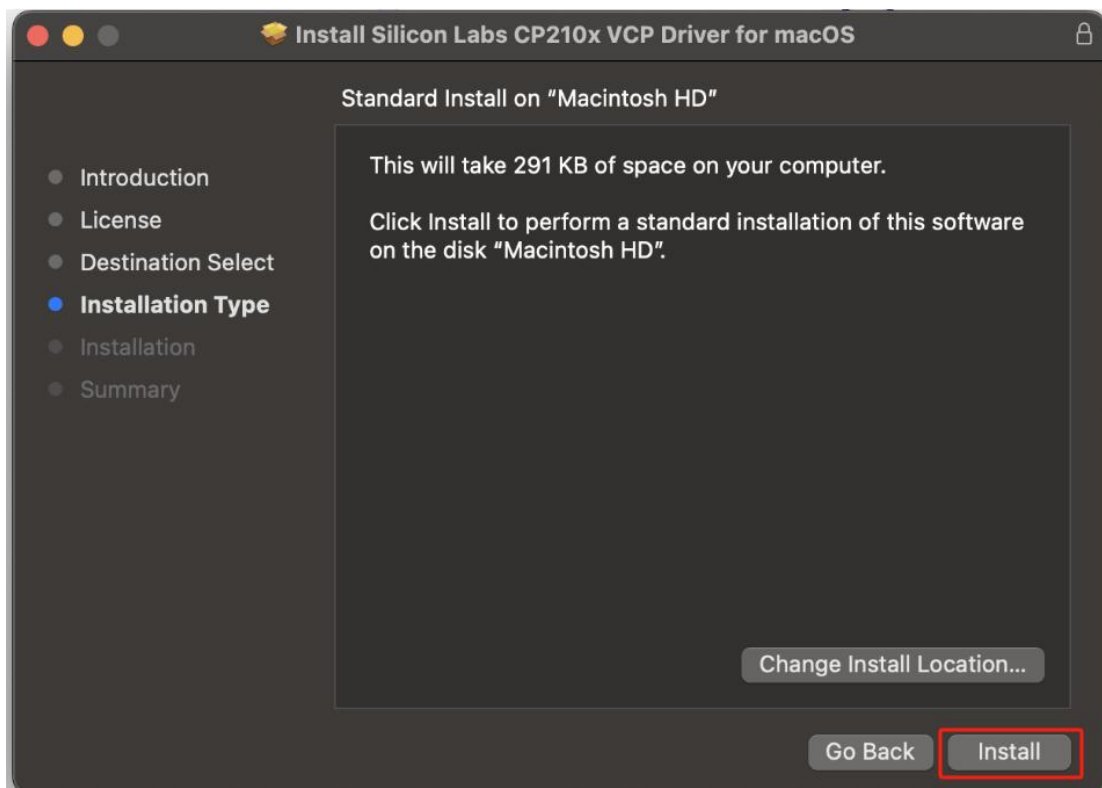


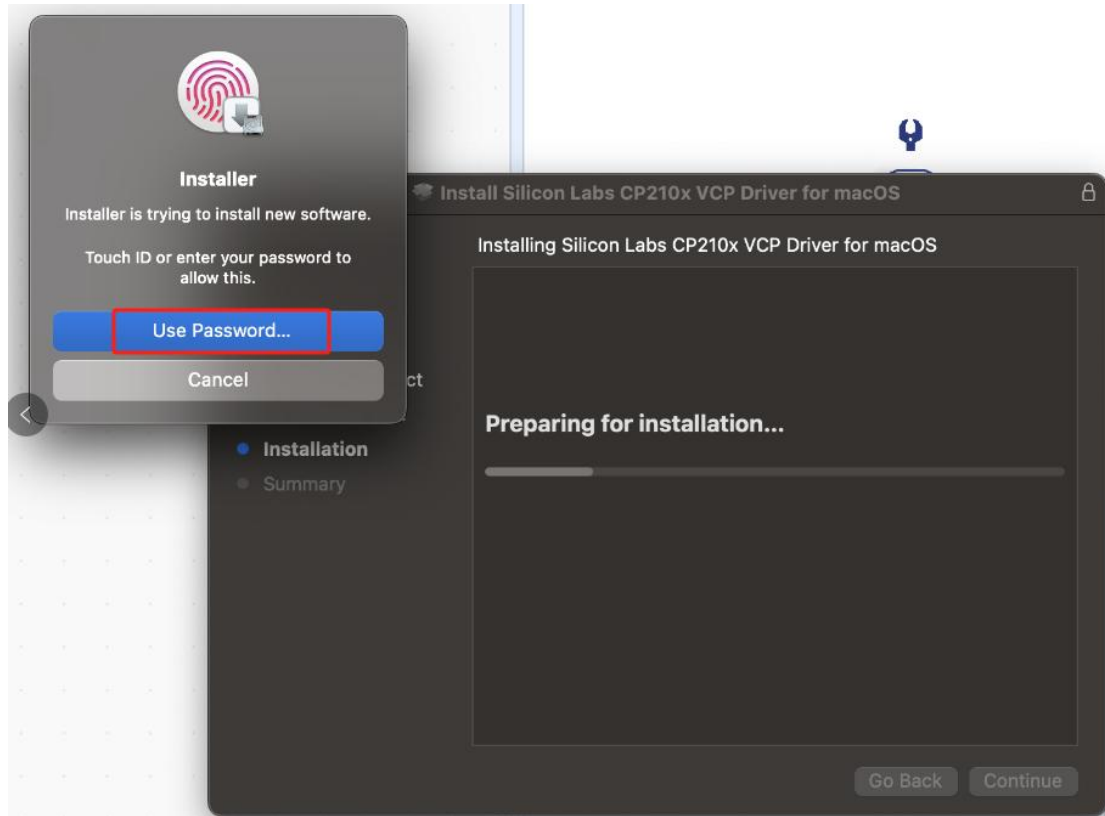




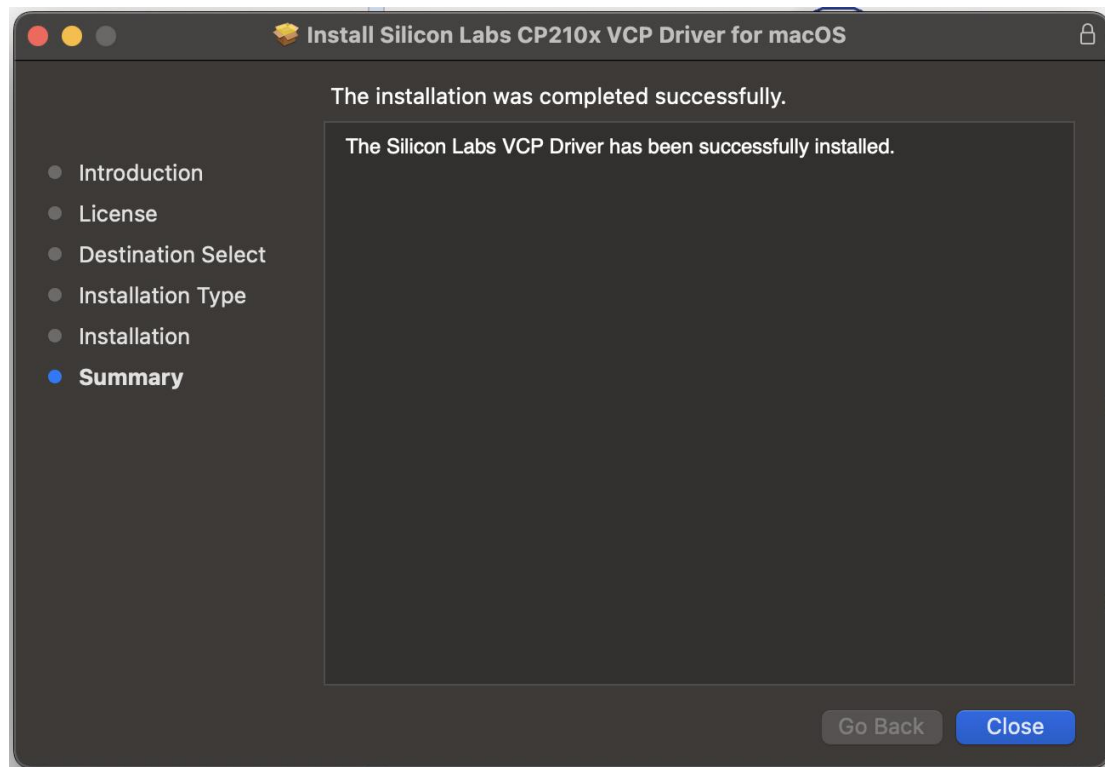


6. Click the "Install" button and, following the prompts, enter your fingerprint or password.





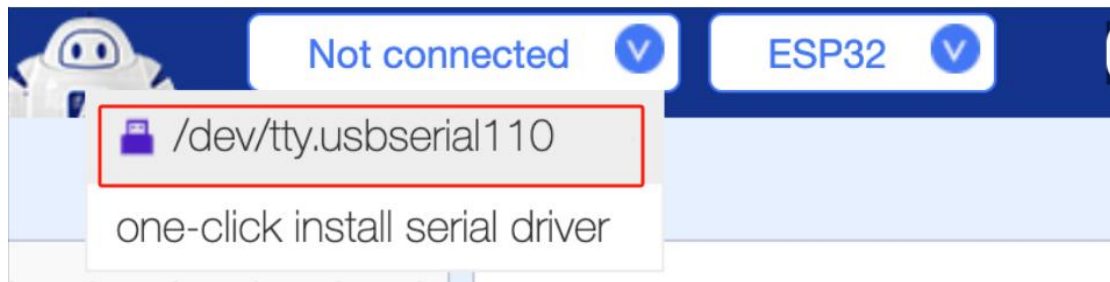
7. After the installation is complete, you will be prompted that the installation was successful. Close the page.



8. To confirm whether the installation was successful, plug one end of the USB cable into the ESP32 controller board and the other end into a USB port on



your computer. Then, check the serial port connection button in ACECode. If a new serial port appears, representing the connected control board, this indicates that the serial port drivers have been successfully installed.



### III. Online Mode and Upload Mode

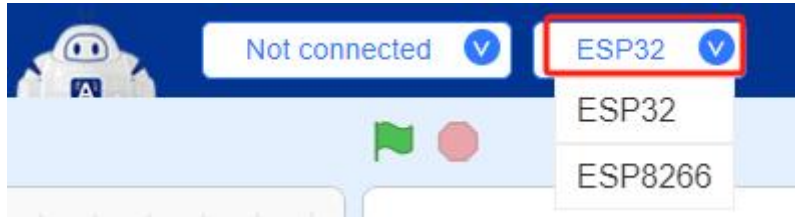
Currently, ACECode supports two development modes: online mode and upload mode. The online mode supports online debugging, which can debug the program in real time, which is convenient and fast; the upload mode is to upload the written program to the ESP32 (or other controller board) controller board. After the upload is successful, the program can be run on the ESP32 without the computer (the controller board needs to be powered externally).



The following uses the ESP32 controller board as an example to demonstrate how to use ACECode in online mode and upload mode.

#### Step 1: Connect ACECode and ESP32 controller board

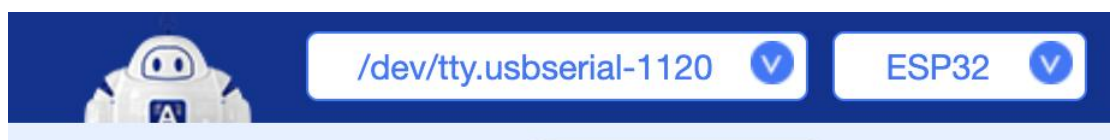
1. In the ACECode controller board list, select the ESP32 controller board. The software selects ESP32 by default.



2. Find the serial communication connection button in the ACECode interface. The connection status of the serial communication will be displayed on the button. Move the mouse to the serial communication connection button position, and the information list of the serial communication port in the computer will pop up automatically; when no device is detected, it will prompt "No device were found".



3. When we connect ESP32 to the computer with a data cable, a new port will be added to the serial communication port information list. The port number is random and will change according to the actual situation. Click the newly added port to establish a communication connection between ACECode and ESP32. After the connection is successful, the connection status display on the connection button will switch from "Not connected" to the information of the connected port.



**Note:** USB power supply may be insufficient, external power supply is required, please connect ESP32 with sufficient power supply and turn on the power switch.

## Step 2: Online Mode

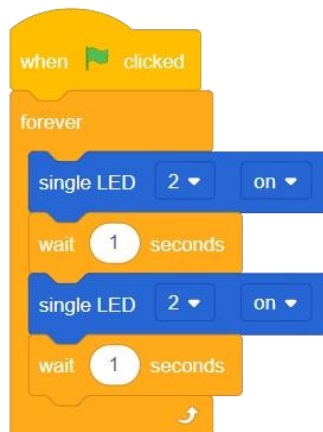


1. Write the following code in online mode to make the built-in LED light on ESP32 flash.

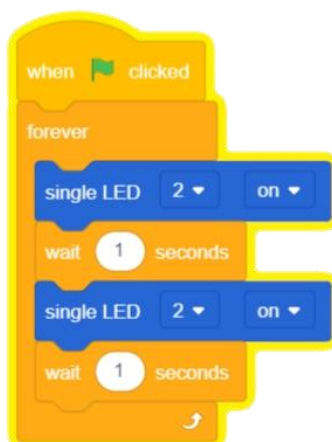
**Note:**

1. The LED light is integrated on the ESP32 controller board and connected to I/O port 2. The effect of this instruction can make the LED light flash for 1 second on and 1 second off.

2. ACECode Software upper left corner has search function, can use this function to quickly find the required building block instructions.



2. After writing, debug the code online. Click the code to run it. The code will turn yellow, indicating that the code is running. The LED on the ESP32 will repeatedly light up for 1 second and then go off for 1 second. Click on the code again to stop running it.

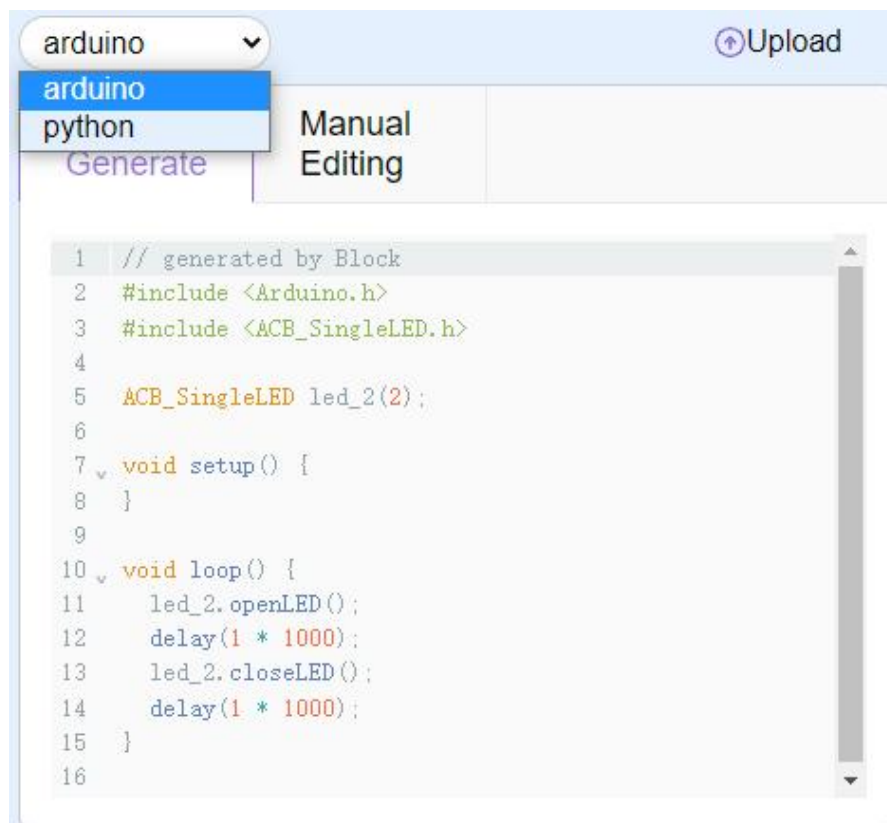


### Step 3: Upload Mode

1. After debugging is completed, switch to "upload mode" and change the program startup command to "start the program". In "upload mode", you need to use this command to start the program.



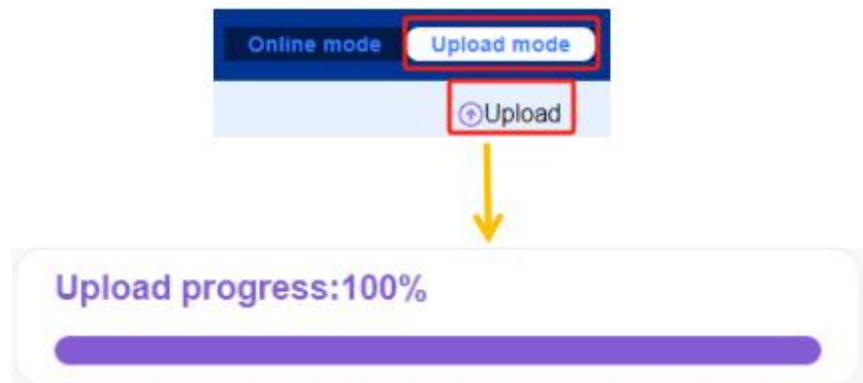
2. At this point, you can see that in ACECode's "Upload Mode", the corresponding C language code and Python code will be generated synchronously to meet the different needs of users.



```
1 // generated by Block
2 #include <Arduino.h>
3 #include <ACB_SingleLED.h>
4
5 ACB_SingleLED led_2(2);
6
7 void setup() {
8 }
9
10 void loop() {
11     led_2.openLED();
12     delay(1 * 1000);
13     led_2.closeLED();
14     delay(1 * 1000);
15 }
16
```



3. Click the "Upload" button to upload the program. When the upload progress reaches 100%, it is successful. After the upload is successful, the program can be run on the ESP32 controller board without the computer, that is, you can unplug the data cable and let the program run independently on the ESP32 (connect the ESP32 to an external power supply).



4. If the upload fails, you can debug according to the error prompt in the lower right corner of the console. If prompted here, you can check whether ACECode and ESP32 are connected.

```
ESC[93mSPIESC[0m 2.0.0 ESC[90mC:\User
ESC[93mAdafruit GFX LibraryESC[0m 1.11.9 ESC[90mD:\aceb
ESC[93mAdafruit BusIOESC[0m 1.15.0 ESC[90mD:\aceb
ESC[93mAdafruit SSD1306ESC[0m 2.5.9 ESC[90mD:\aceb
ESC[93msrcESC[0m ESC[90mD:\aceb
ESC[93mAdafruit NeoPixelESC[0m 1.12.0 ESC[90mD:\aceb
ESC[93msrcESC[0m ESC[90mD:\aceb

ESC[92mUsed platformESC[0m ESC[92mVersionESC[0m ESC[90mPathESC[
ESC[93mesp32:esp32ESC[0m 2.0.14 ESC[90mC:\Users\GS2306JS
esptool.py v4.5.1
Serial port COM11

A fatal error occurred: Could not open COM11, the port
Failed uploading: uploading error: exit status 2
```