Arduino IDE

Arduino IDE, as an open source software, is developed based on the Processing IDE and is an integrated development environment officially launched by Arduino

The QuadBot-T kit was programmed and debugged using the Arduino IDE

So, where can we download the arduino IDE?

Step 1:

Go to https://www.arduino.cc/en/Main/Software, you will see the following page. The version provided on this website is usually the latest version, the actual version may be more recent than the version in the picture. Version 1.8.19 is recommended.

Step 2:

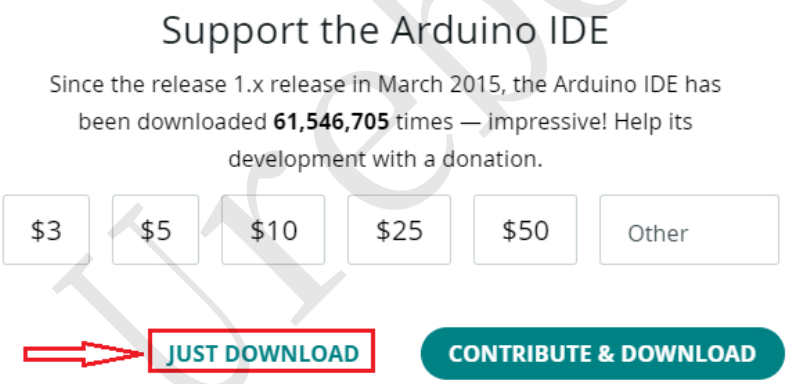
Download development software suitable for your computer's operating system.

Take Windows as an example. If you are a macOS, please pull to the end. You can use the EXE installation package or the green package.

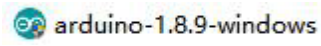
The following is the executable for the installer. Click on "Windows Installer" as shown in the picture below。

Step 3:

The following interface appears. Click the "JUST DOWNLOAD" button to download the software.



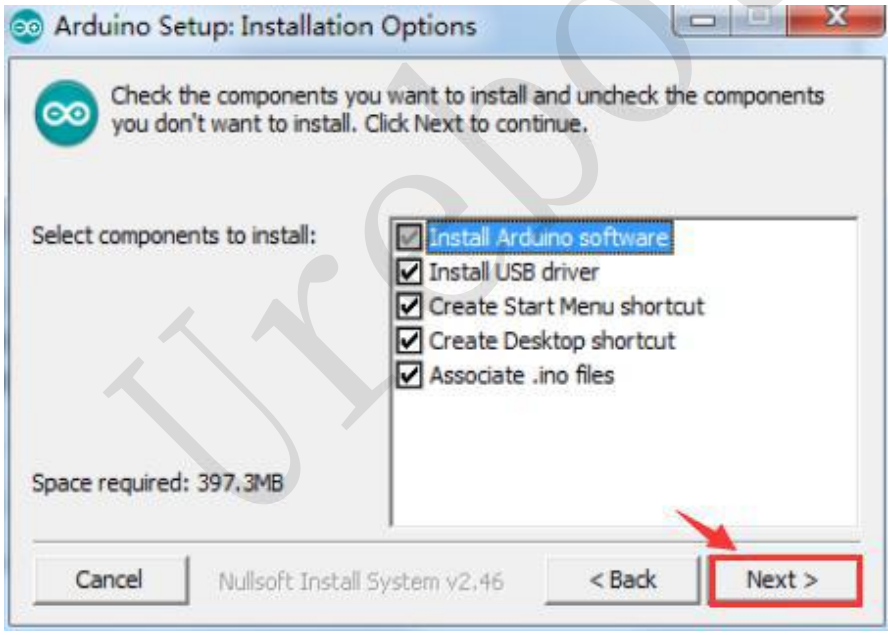
Download file:



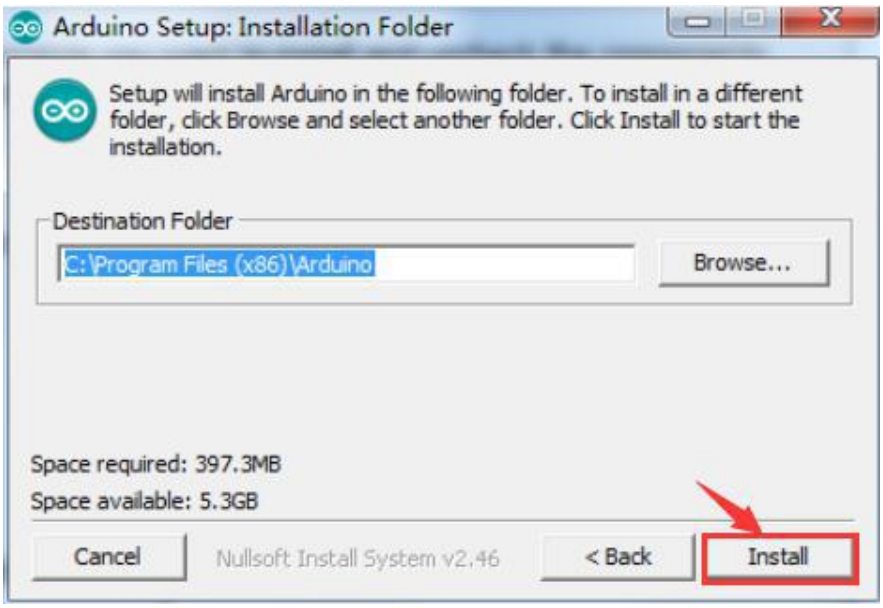
Step 4:

These are available from the tutorials we provide, and the version we provide is the most recent at the time this course was produced. Double-click the exe file. The following interface appears. Select "I Agree".

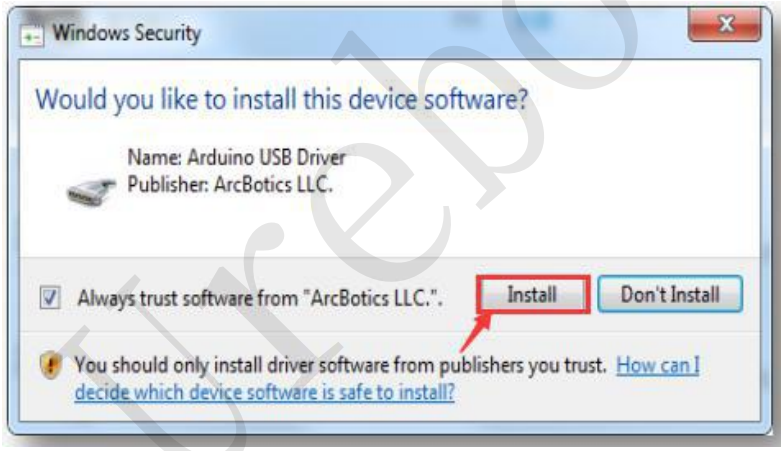
You can see the following interface, select "Next"。



The following interface appears and press "Install" to start the installation。



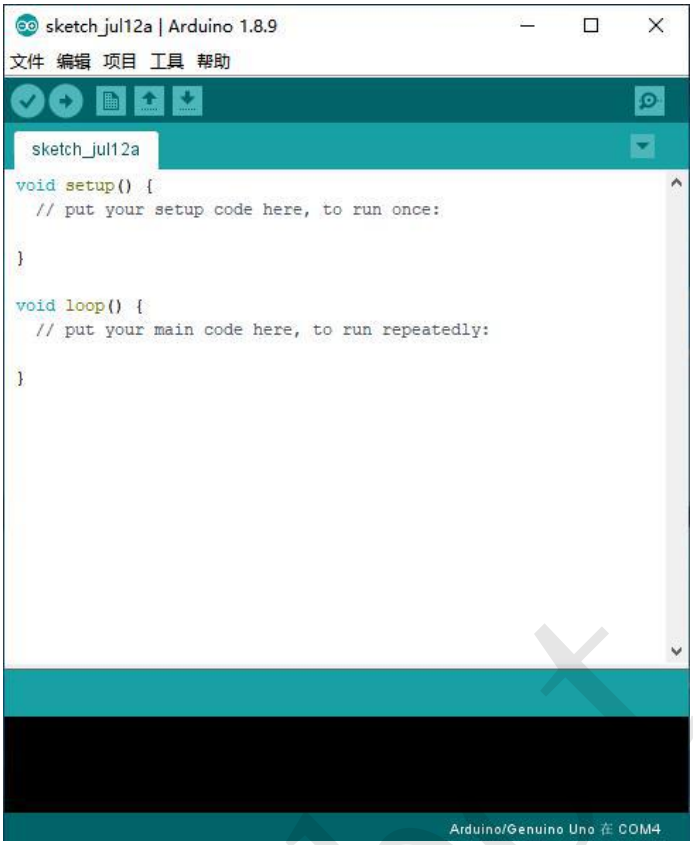
Finally, the following interface appears. Please select "Install" to ensure the correctness of the development environment installation。



Step 5:

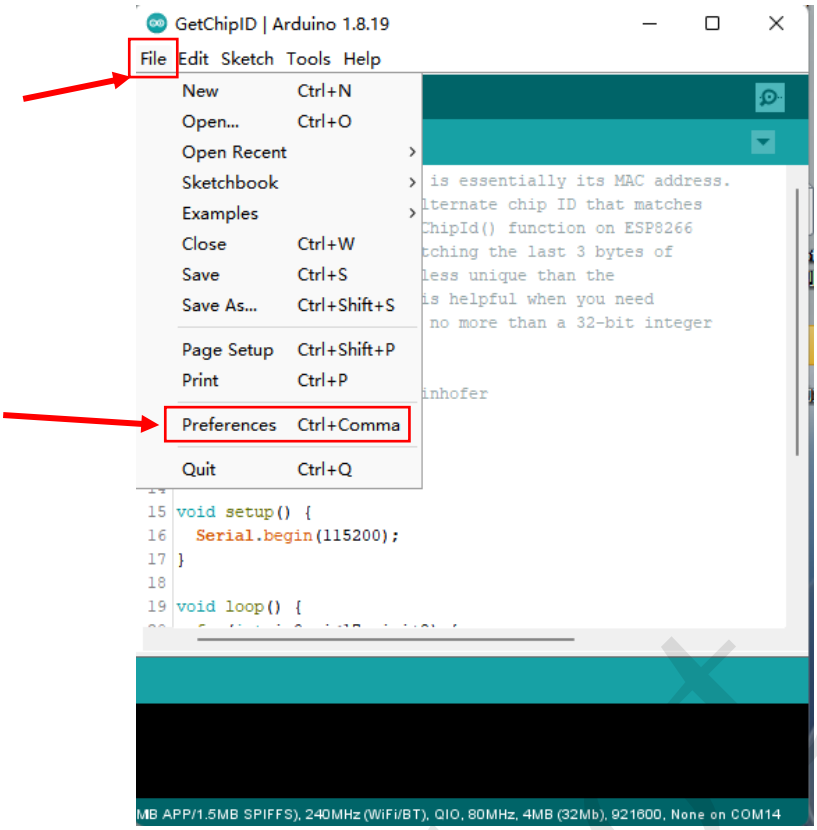
Next, the following icons will appear on the desktop。

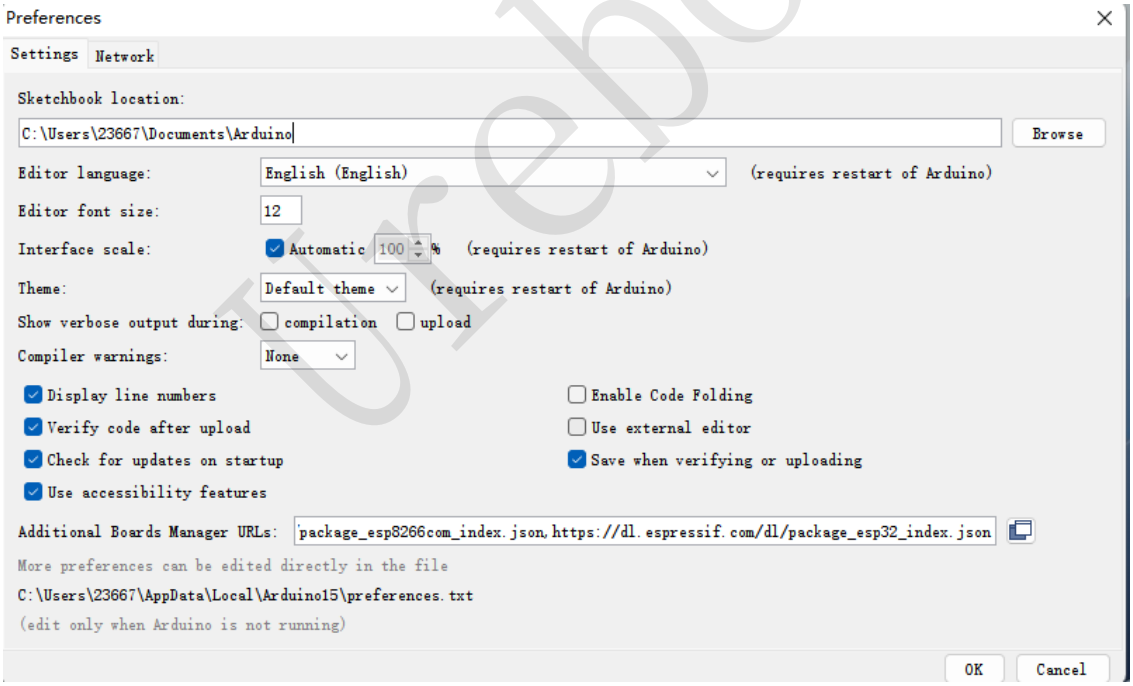
Double-click the icon to enter the development environment。



Step 6:

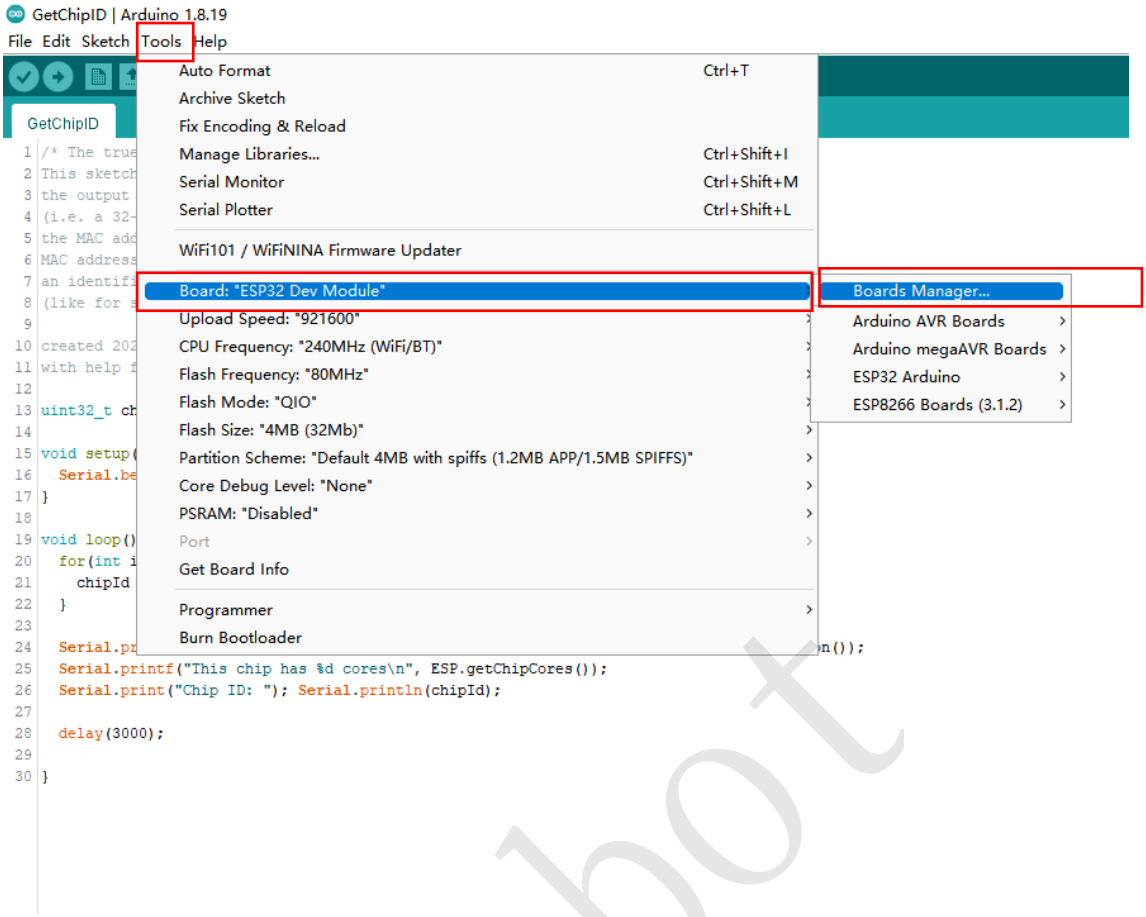
The main controller we use here is ESP32-WROOM-32，so you need to install the ESP32 plug-in，in the Arduino IDE opened in the previous step, find "File ->Preferences"。Add the following web address to the "Add-on Board Manager web address:" **https://raw.githubusercontent.com/espressif/arduino-esp32/gh-pages/package_esp32_index.json**，as shown in the figure below。





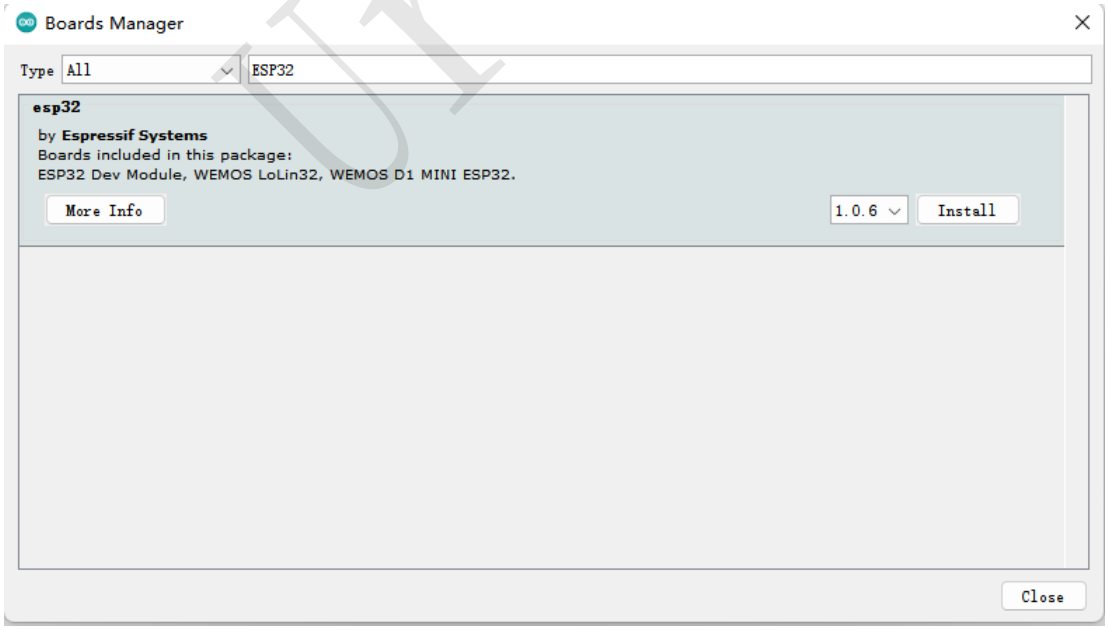
Step 7:

Install the ESP32 development board, open the menu → Tools →Board→Boards Manager...:

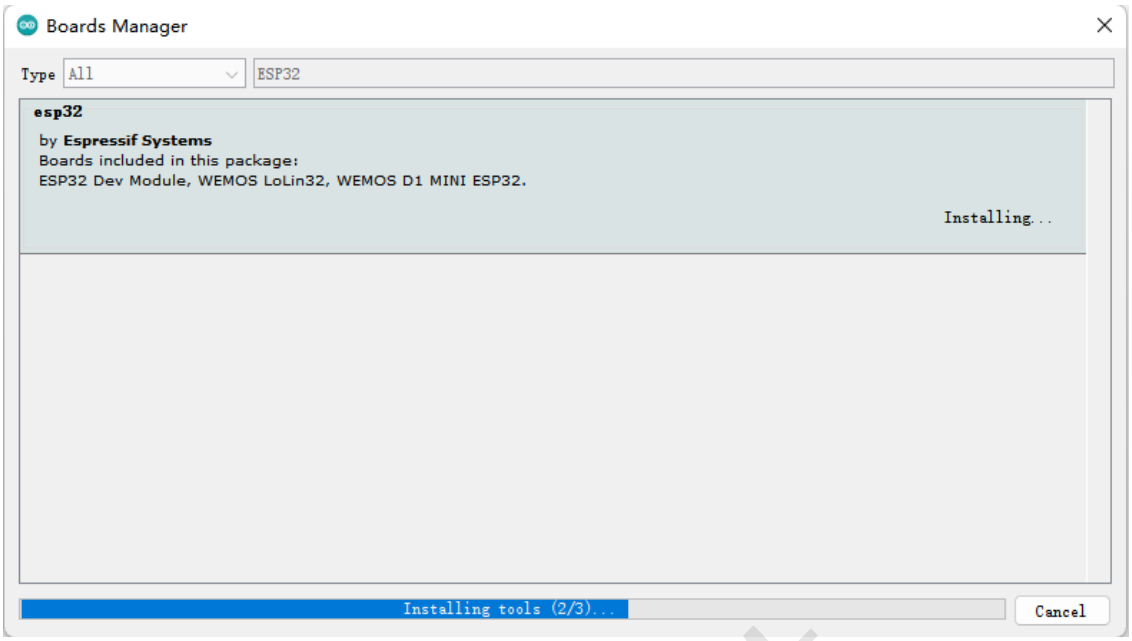


Development Board Manager Entry

Enter esp32 in the boards manager to search for the esp32 development board, and then click Install, as shown in the following figure



Install the ESP32

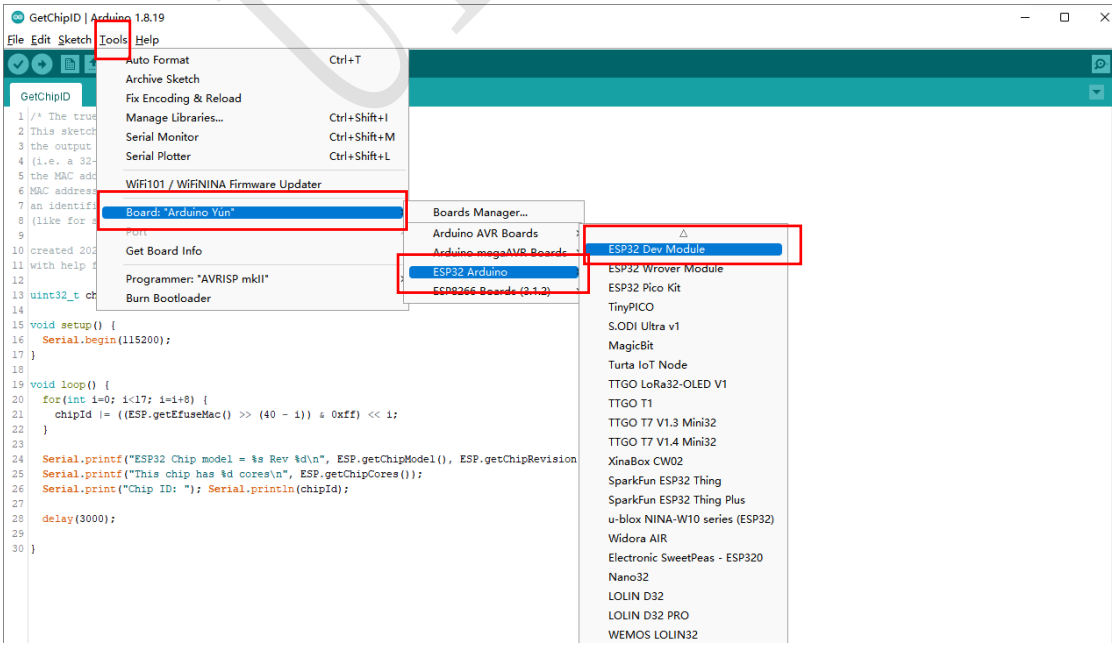


Downloading

Arduino ID Because you need to connect to github when downloading, you may need to click to download several times. Restart Arduino IDE after successful installation.

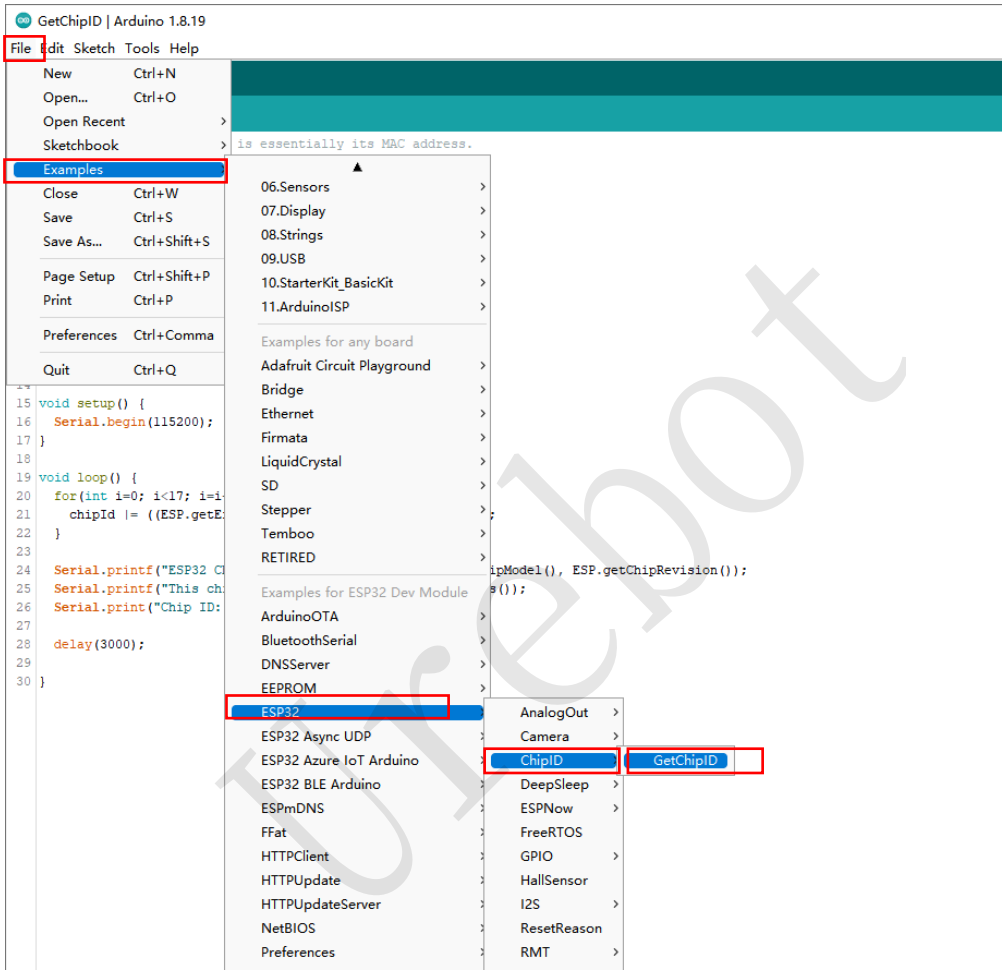
Step 8:

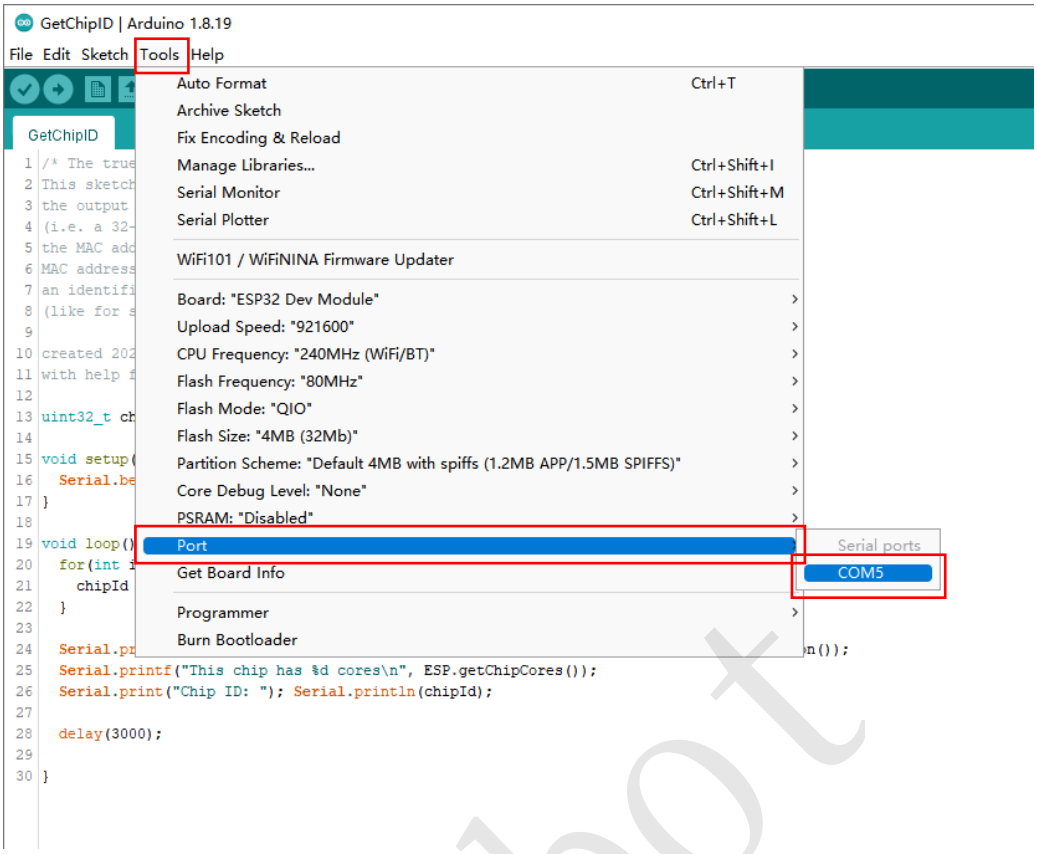
Connect the USB port of the development board and the computer with the USB data cable. Select ESP32 Dev Module as the development board in Arduino IDE::



Step 9:

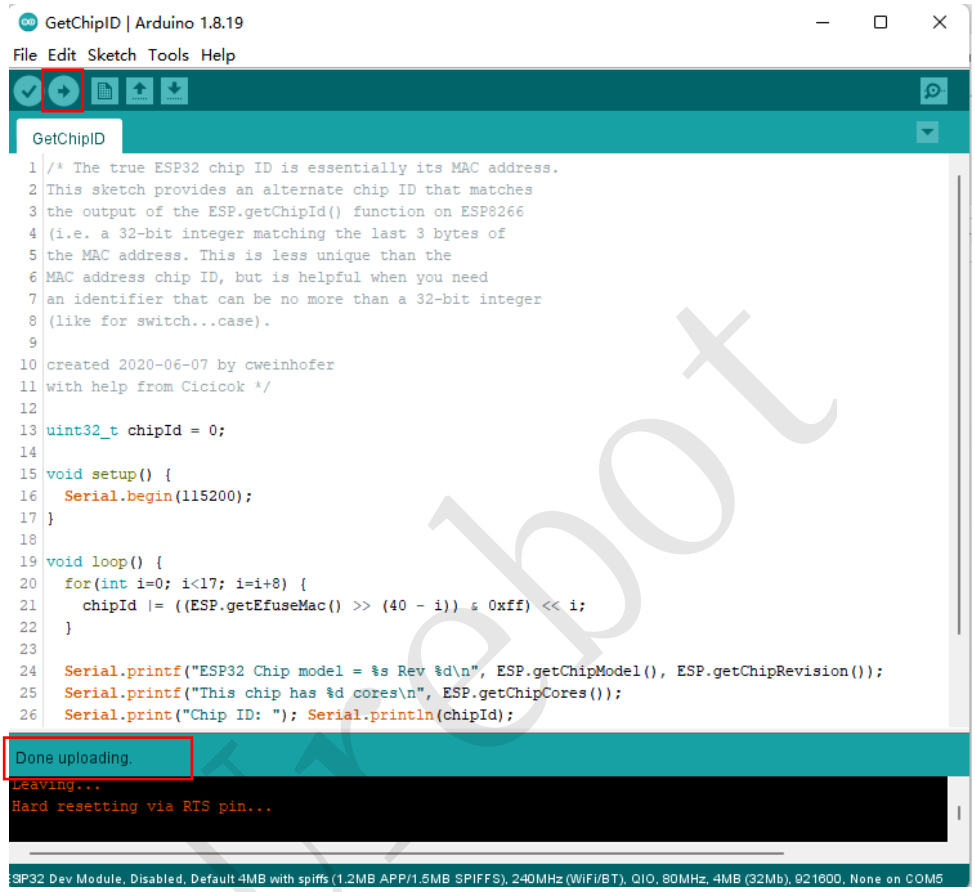
Test whether the software is installed successfully. Click "File → Example → ESP32 → ChipID → GetChipID" in turn. Select "COM9" in "Tools" ->"Port". (On the same computer in Arduino 1.8.9, each ESP32 development board has a different COM number. You should select the COM number actually displayed.)




GetChipID | Arduino 1.8.19
File Edit Sketch Tools Help
GetChipID
Auto Format Ctrl+T
Archive Sketch
Fix Encoding & Reload
Manage Libraries... Ctrl+Shift+I
Serial Monitor Ctrl+Shift+M
Serial Plotter Ctrl+Shift+L
WiFi101 / WiFiNINA Firmware Updater
Board: "ESP32 Dev Module"
Upload Speed: "921600"
CPU Frequency: "240MHz (WiFi/BT)"
Flash Frequency: "80MHz"
Flash Mode: "QIO"
Flash Size: "4MB (32Mb)"
Partition Scheme: "Default 4MB with spiffs (1.2MB APP/1.5MB SPIFFS)"
Core Debug Level: "None"
PSRAM: "Disabled"
Port
Get Board Info
Programmer
Burn Bootloader
Serial ports
COM5
Serial.printf("This chip has %d cores\n", ESP.getChipCores());
Serial.print("Chip ID: "); Serial.println(chipId);
delay(3000);

Step 10:

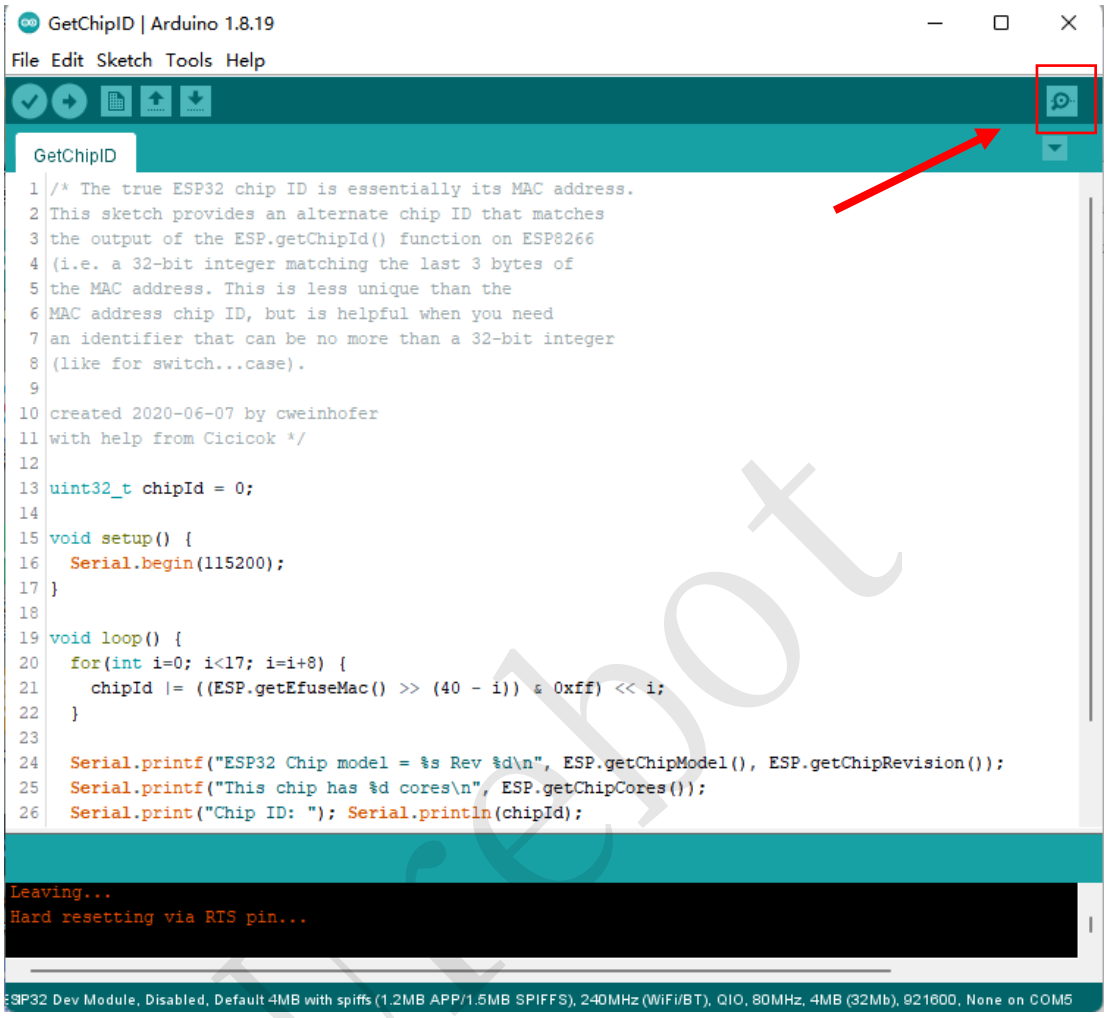
Click the download button to download the program into ESP32. As shown in the figure below.



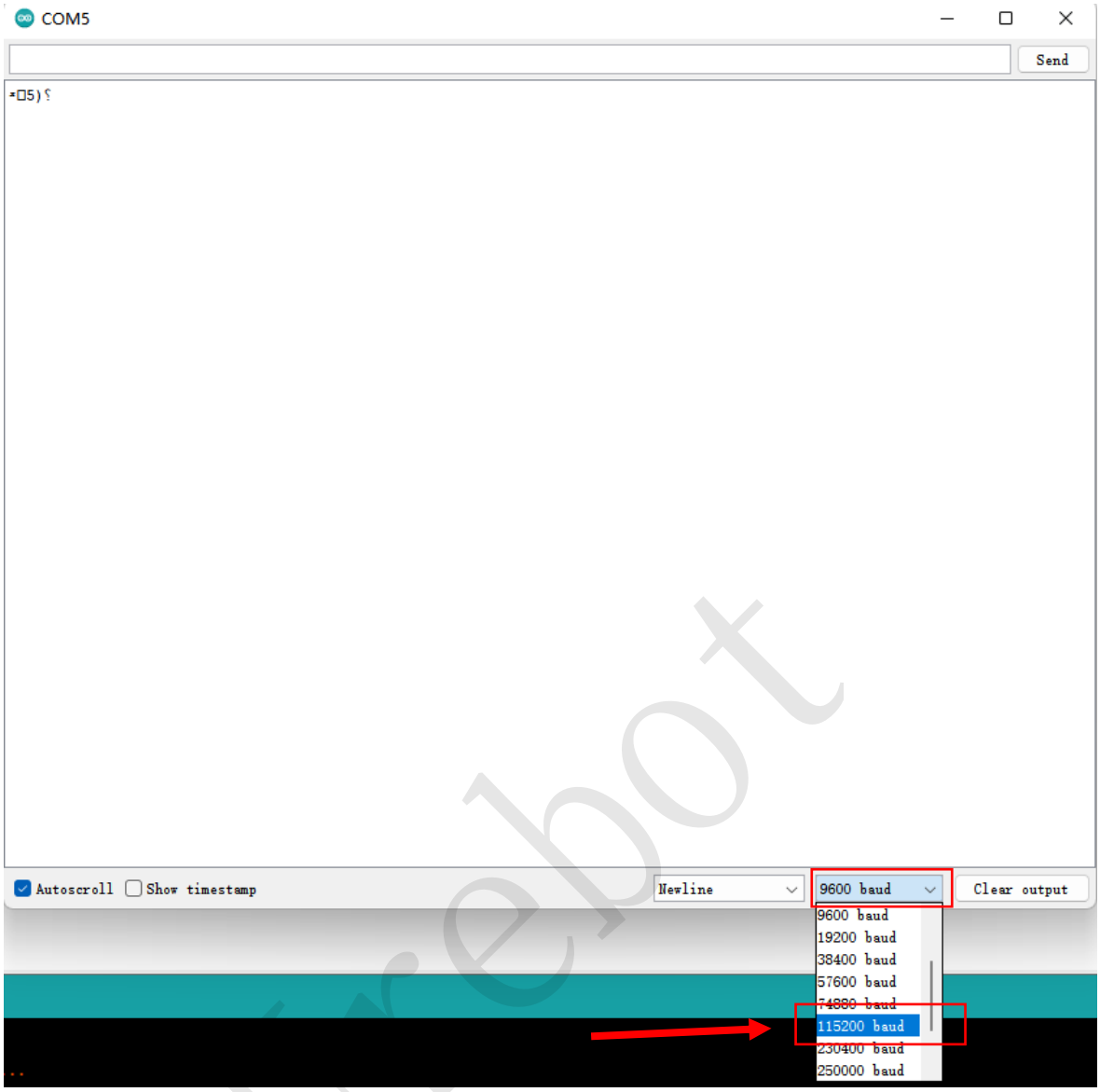
When you see the prompt "Upload succeeded" in prompt 2, the download is completed.

Step 11:

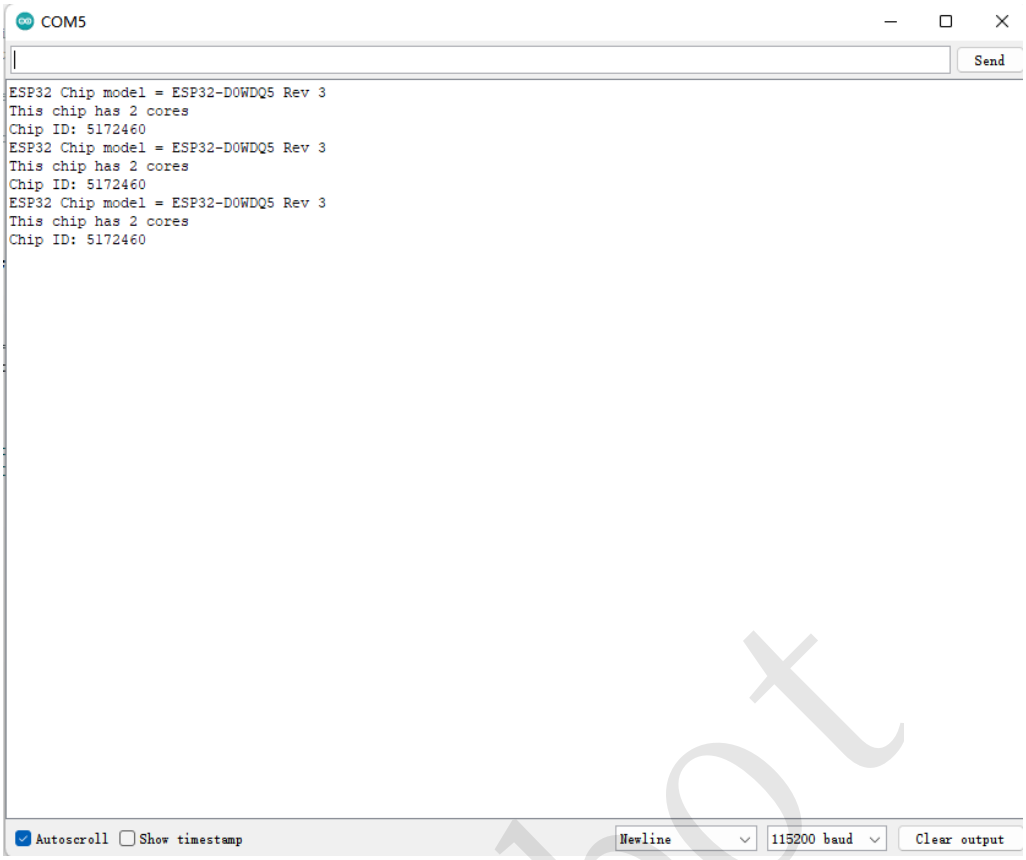
Click the Serial Monitor button in the upper right corner. As shown in the figure below:



Select 115200 baud rate in the pop-up Serial Monitor window, as shown below:



Under normal circumstances, you can see that the ID information of the chip is displayed correctly in the window. So far, the Arduino IDE software has been successfully installed.


COM5
Send
ESP32 Chip model = ESP32-D0WDQ5 Rev 3
This chip has 2 cores
Chip ID: 5172460
ESP32 Chip model = ESP32-D0WDQ5 Rev 3
This chip has 2 cores
Chip ID: 5172460
ESP32 Chip model = ESP32-D0WDQ5 Rev 3
This chip has 2 cores
Chip ID: 5172460
Autoscroll
Show timestamp
Newline
115200 baud
Clear output