



M5STACK

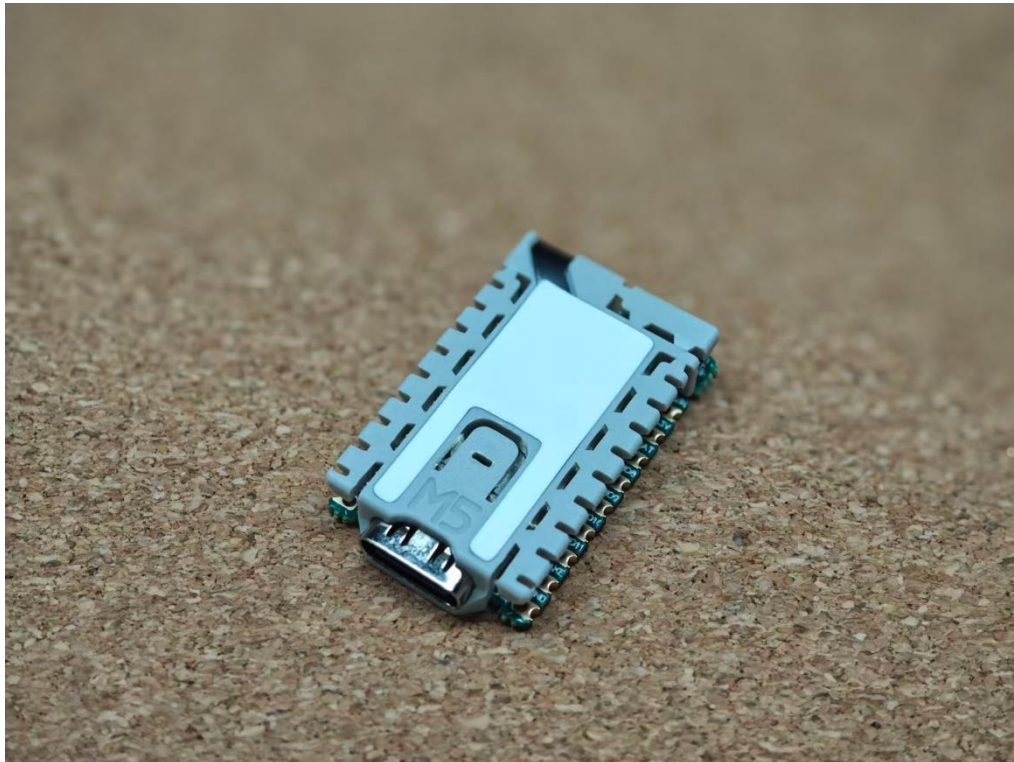
Stamp-S3Bat

1. Description

Stamp-S3Bat is an embedded core module integrated with power management. It utilizes the ESP32-S3-PICO-1-N8R8 as the main control core, supports 2.4GHz Wi-Fi, and comes with built-in 8MB Flash and 8MB PSRAM.

It provides 11 GPIO pins, an onboard battery power interface, and can be directly connected to an external 3.7V lithium battery for power supply.

With an efficient built-in PMIC and multi-level power control design, it supports power input and output control, as well as status monitoring for input voltage and battery voltage. It supports external low-power wake-up. After the main controller shuts down and enters low-power sleep mode, it can be triggered to wake up via an external PMIC wake-up IO. The module features an onboard user button and a programmable RGB LED. With 2.54mm standard-pitch half-hole solder pads, it can be integrated into your applications through SMT, DIP, or other methods, helping developers quickly build IoT applications..



2. Specifications

Specification	Parameters
SoC	ESP32-S3-PICO-1-N8R8 @ Dual-core Xtensa LX7 processor, up to 240MHz main frequency
PSRAM	8MB
Flash	8MB
Input Power	USB: DC 5V
Battery Interface	SH1.0
GPIO Pins	G1/G2/G3/G4/G5/G6/G7/G8/G9/G10/G11
Operating Temperature	0 ~ 40°C

3. Quick Start

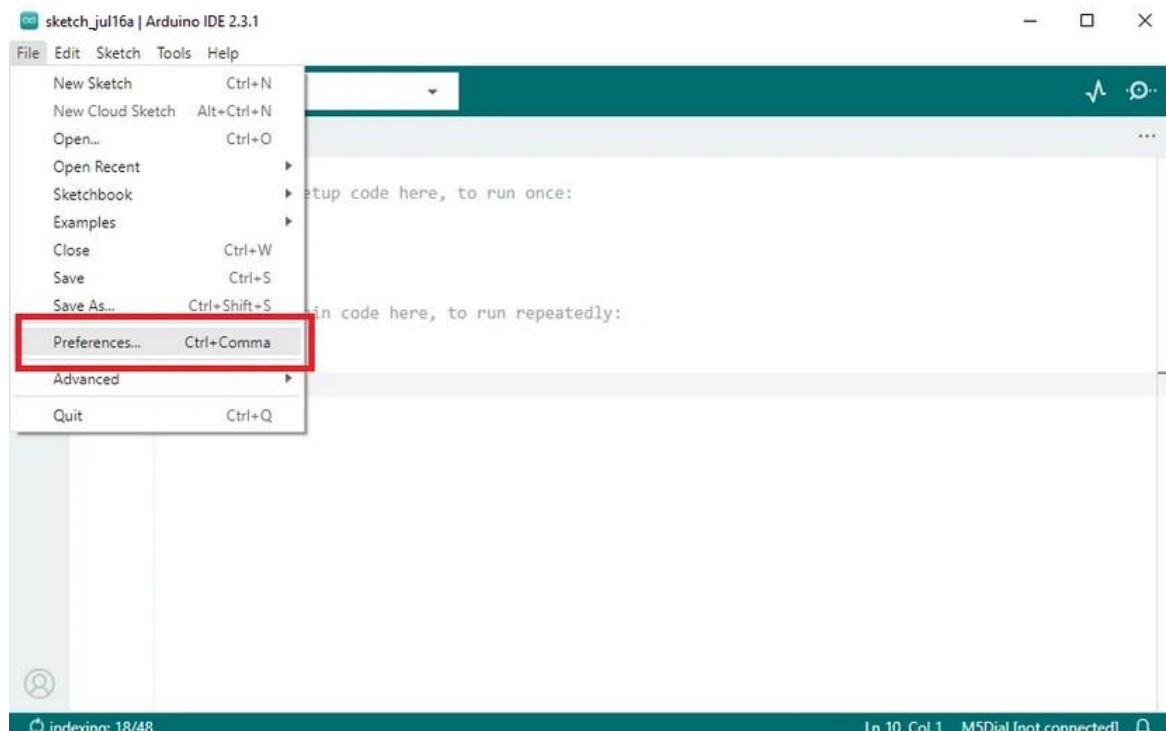
3.1 Preparation

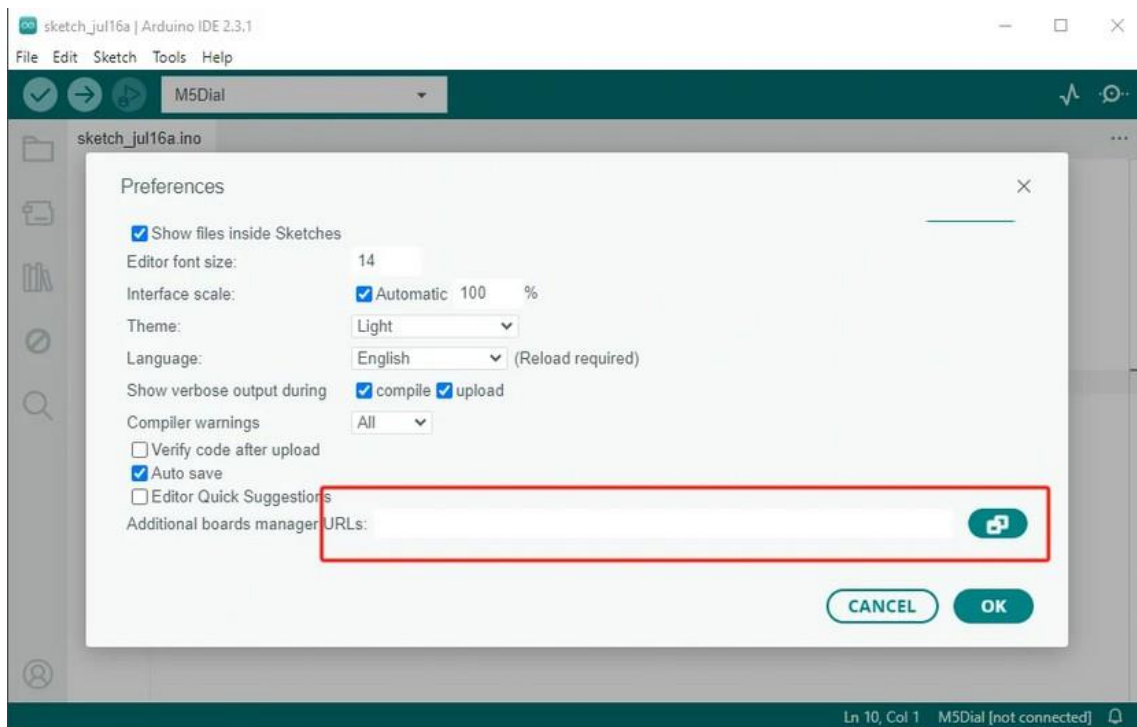
1. Visit the official Arduino website and install the Arduino IDE

<https://www.arduino.cc/en/Main/Software>

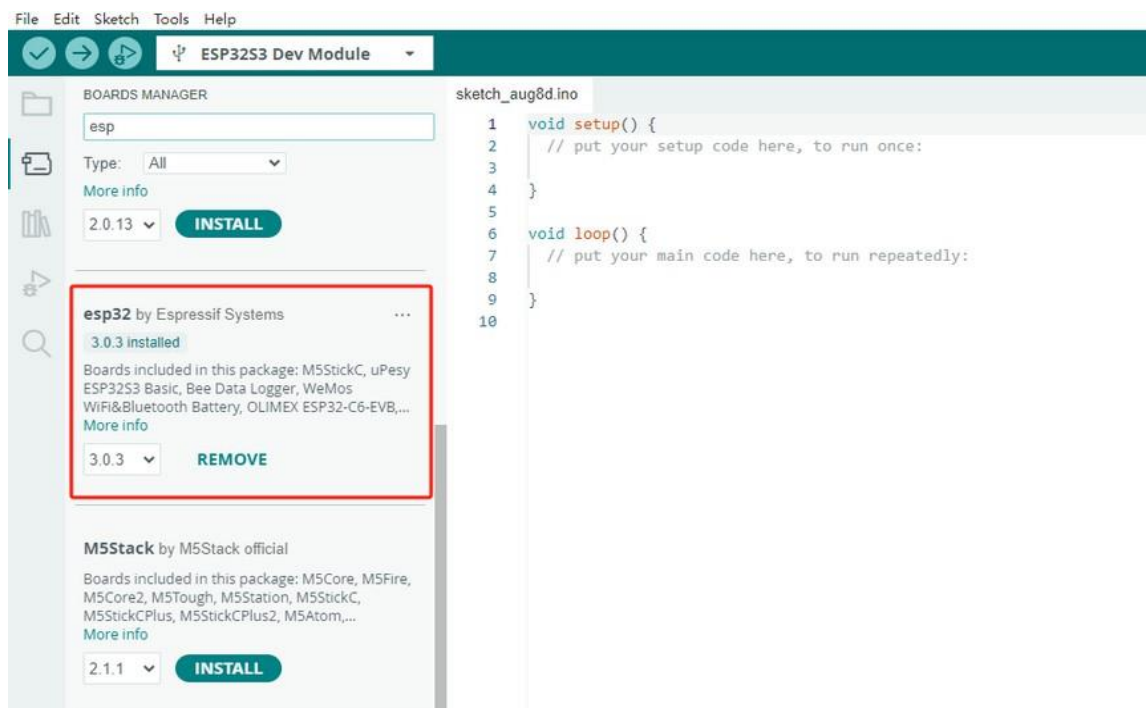
2. Add the following Board Manager URL to File → Preferences → Additional Boards Manager URLs:

https://espressif.github.io/arduino-esp32/package_esp32_dev_index.json



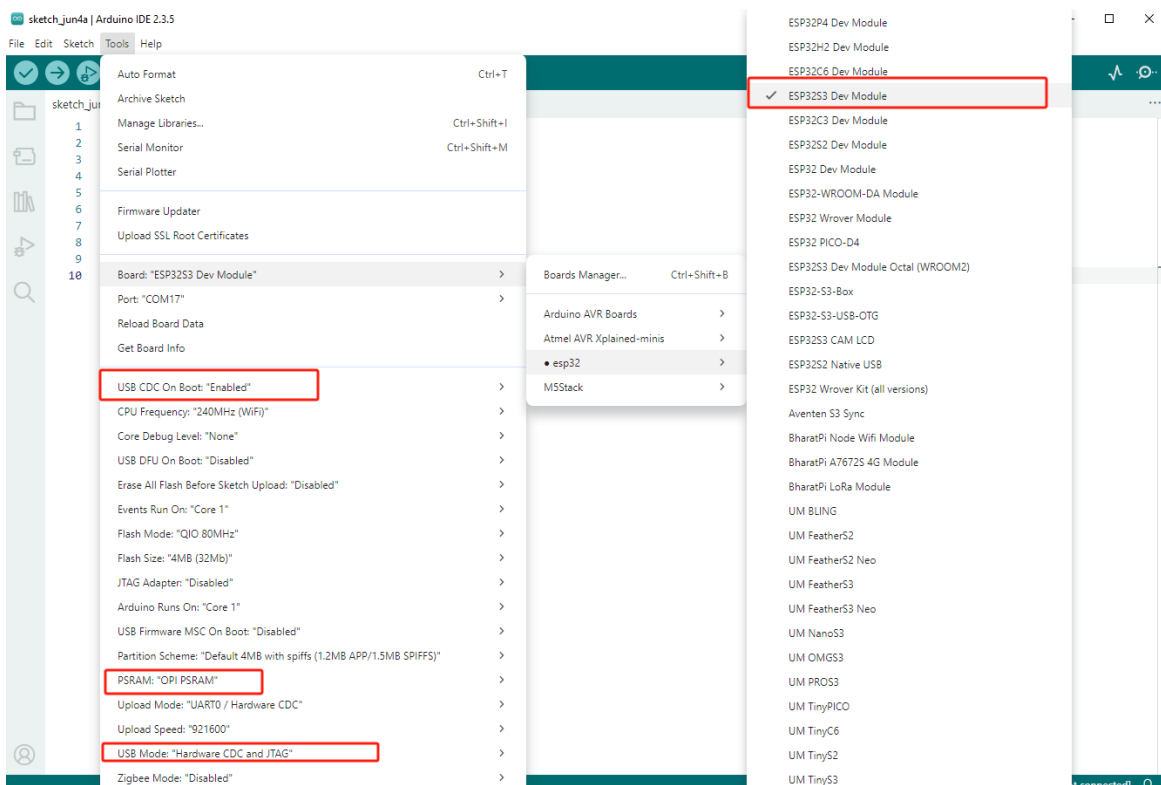


3. Open the Boards Manager, search for "ESP32", and click install.



4. After installation, select the board "ESP32S3 Dev Module"

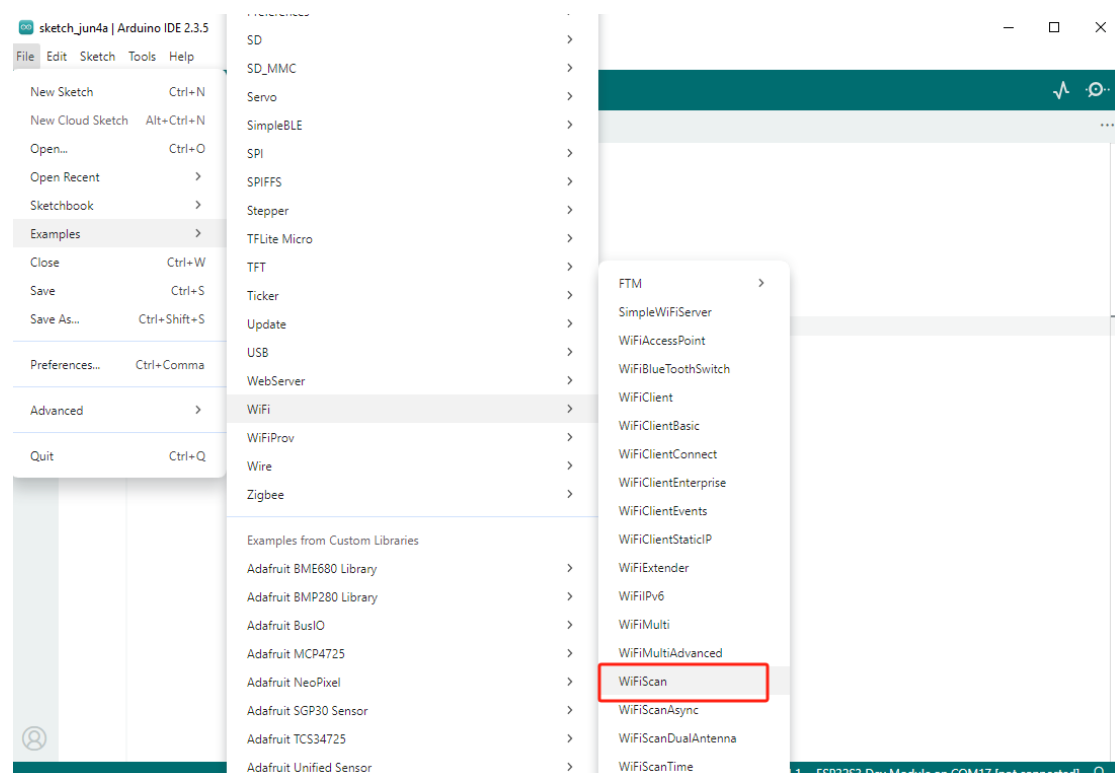
5. Configure the following options. USB CDC On Boot: "Enabled", PSRAM: "OPI PSRAM", USB Mode: "Hardware CDC and JTAG"

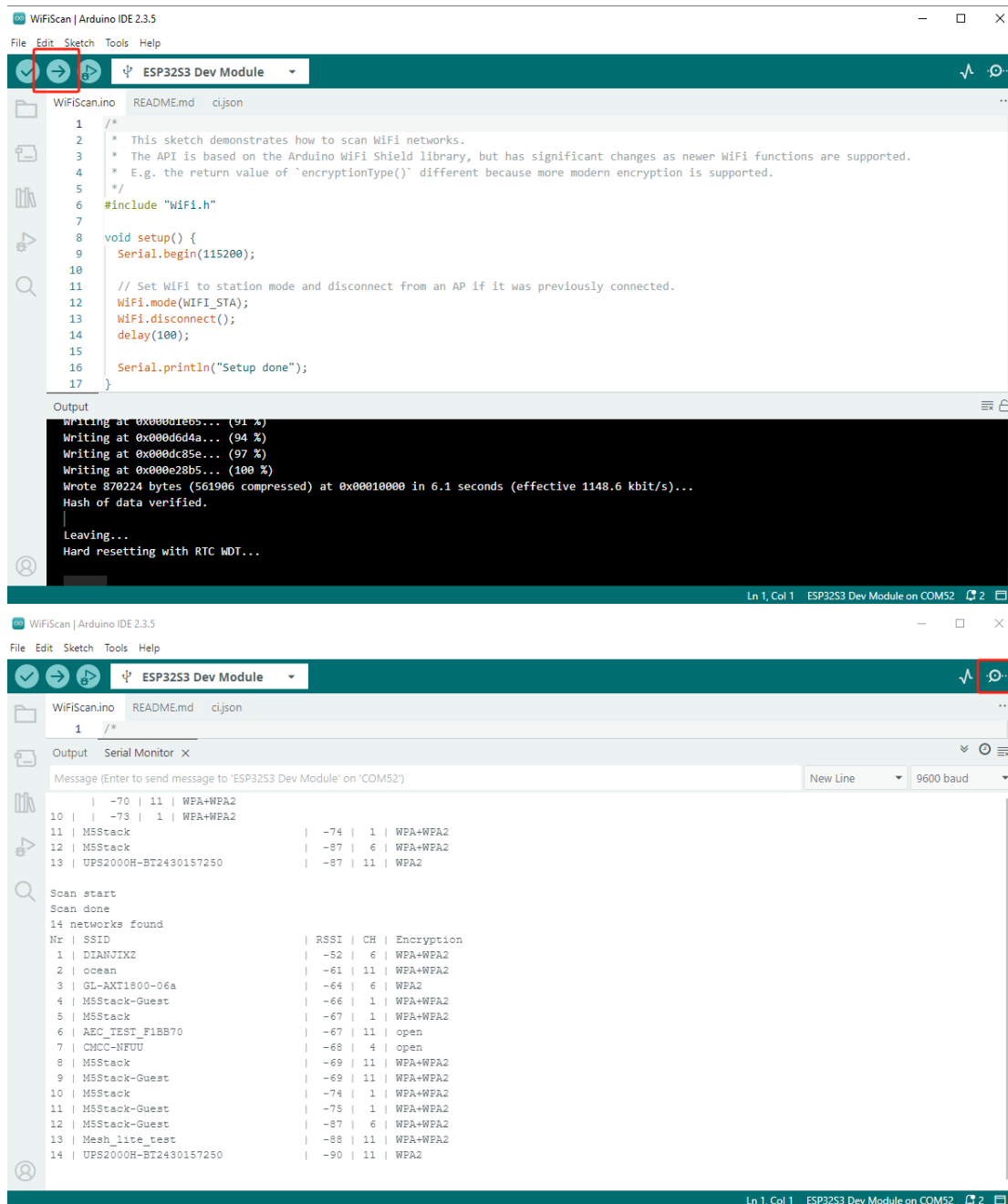


3.2 Wi-Fi Scan

Select the example program "Examples" → "WiFi" → "WiFiScan", choose the port corresponding to your device, and click the compile and upload button in the top-left corner.

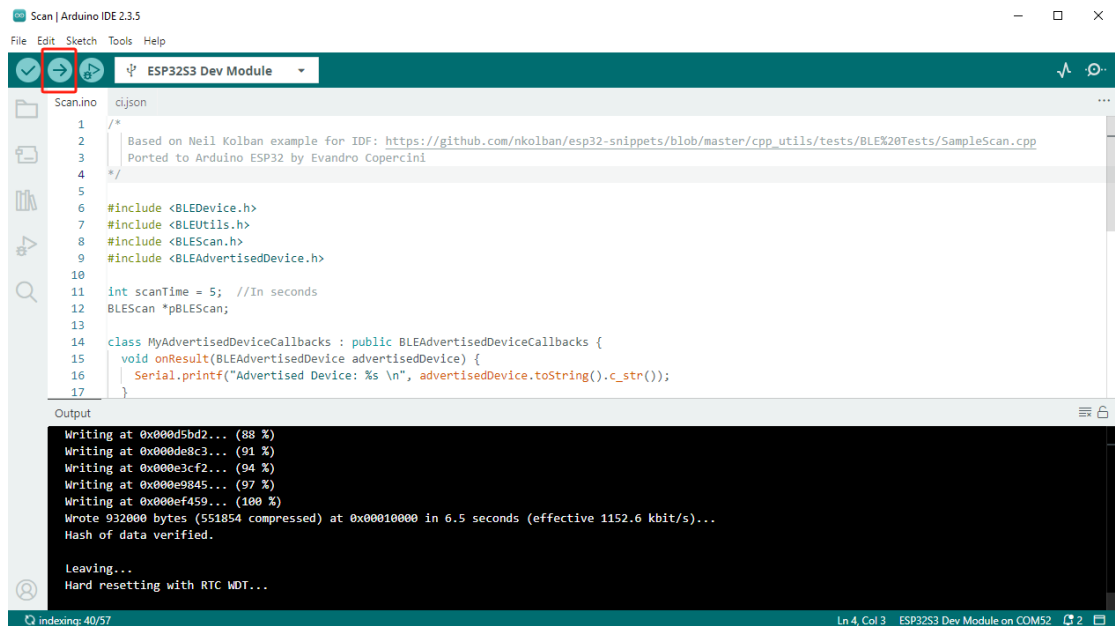
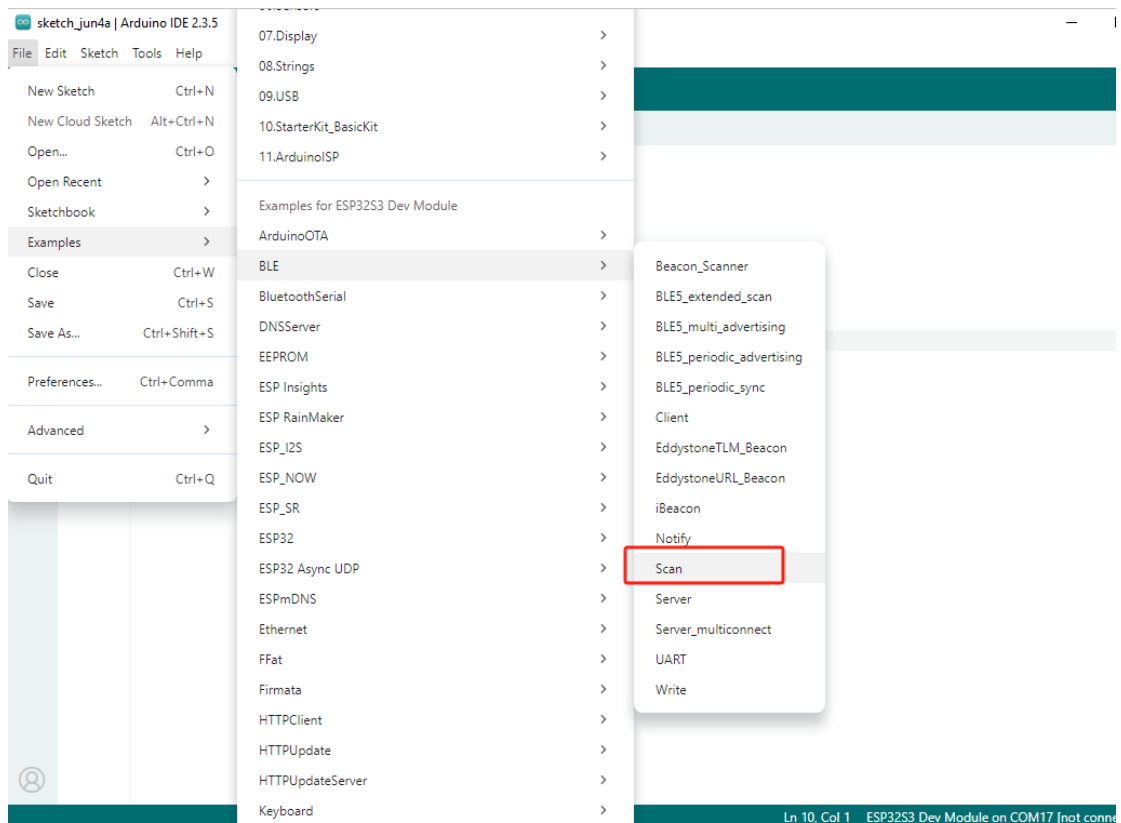
After uploading is complete, open the Serial Monitor to view Wi-Fi scan information.

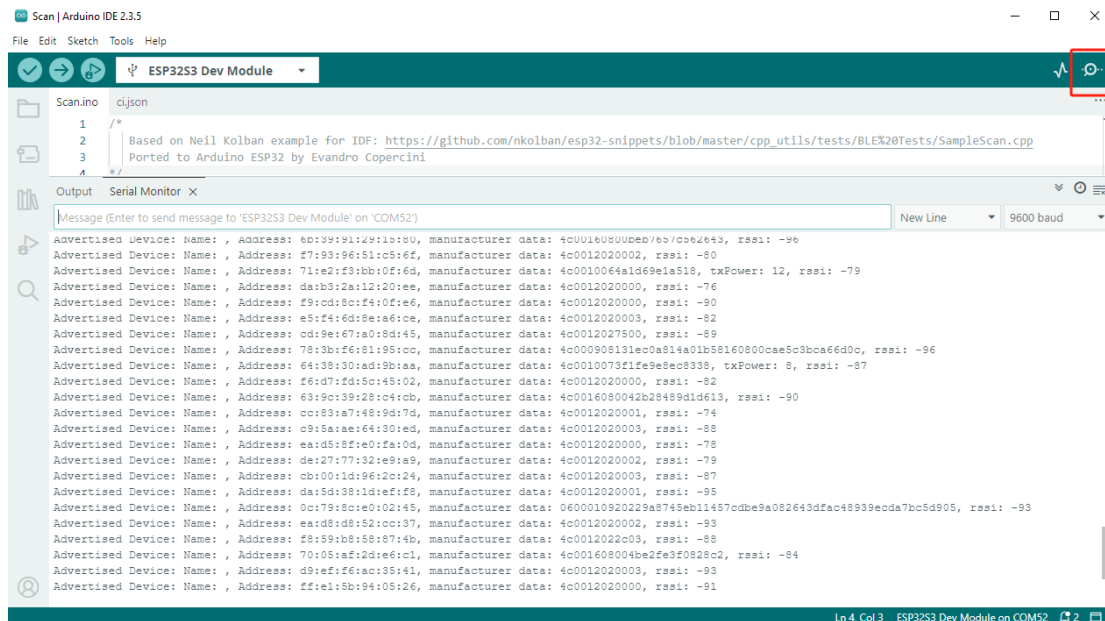




3.3 BLE Scan

Select the example program "Examples" → "BLE" → "Scan", choose the port corresponding to your device, and click the compile and upload button in the top-left corner. After uploading is complete, open the Serial Monitor to view BLE scan information.





4. FCC Warning

FCC Caution:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna. — Increase the separation between the equipment and receiver. — Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement: This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.