



M5STACK

KANTAN Play Core

1. Description

KANTAN Play Core is a handheld electronic instrument based on the M5Stack CoreS3-SE, featuring a numeric key playing method that allows easy performance without sheet music, enabling even those with no musical experience to play drums, bass, guitar, and other instruments through numeric chords with automatic accompaniment, equipped with an ES8388 audio codec, SAM2695 MIDI synthesis chip, NS4150B amplifier chip, 2.0" IPS display, microSD card slot, 3.5mm audio output, and 1500mAh lithium battery, supporting USB, Bluetooth, and Wi-Fi connectivity, expandable via HY2.0-4P interfaces for sensors and switches, and customizable through open-source programming, making it an instrument anyone can play and enjoy creating music with ease.



2. Specifications

Specification	Parameters
SoC	ESP32-S3 @ Dual-core Xtensa LX7 processor, up to 240MHz main frequency
Flash	16MB
PSRAM	8MB
MIDI	SAM2695
Codec	ES8388
Wi-Fi	2.4 GHz
Input Power	USB: DC 5V
Operating Temperature	0 ~ 40°C
Frequency Range For CE	BLE 1M/2M: 2402-2480MHz 2.4G WiFi: 2412-2472MHz,2422-2462MHz
Maximum EIRP for CE	BLE: 9.28dBm 2.4G WiFi: 12.70dBm
Company Name	M5Stack Technology Co., Ltd
Address	Block A10, Expo Bay South Coast, Fuhai Street, Bao'an District, Shenzhen, China

3. Quick Start

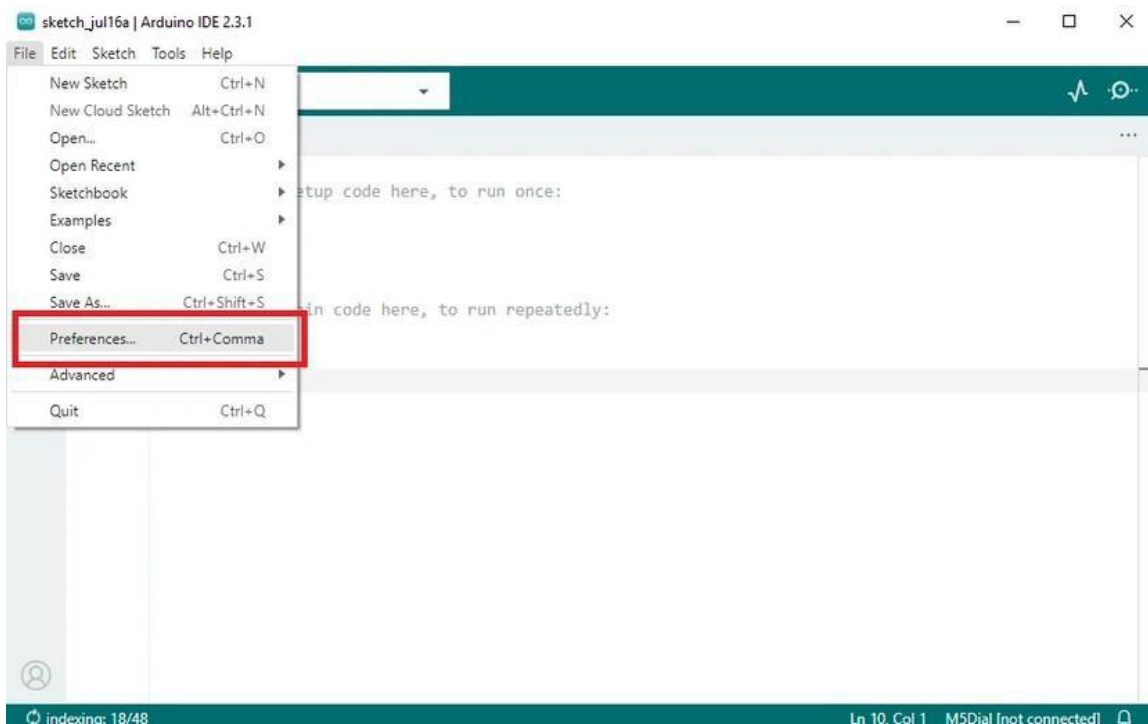
3.1 Preparation

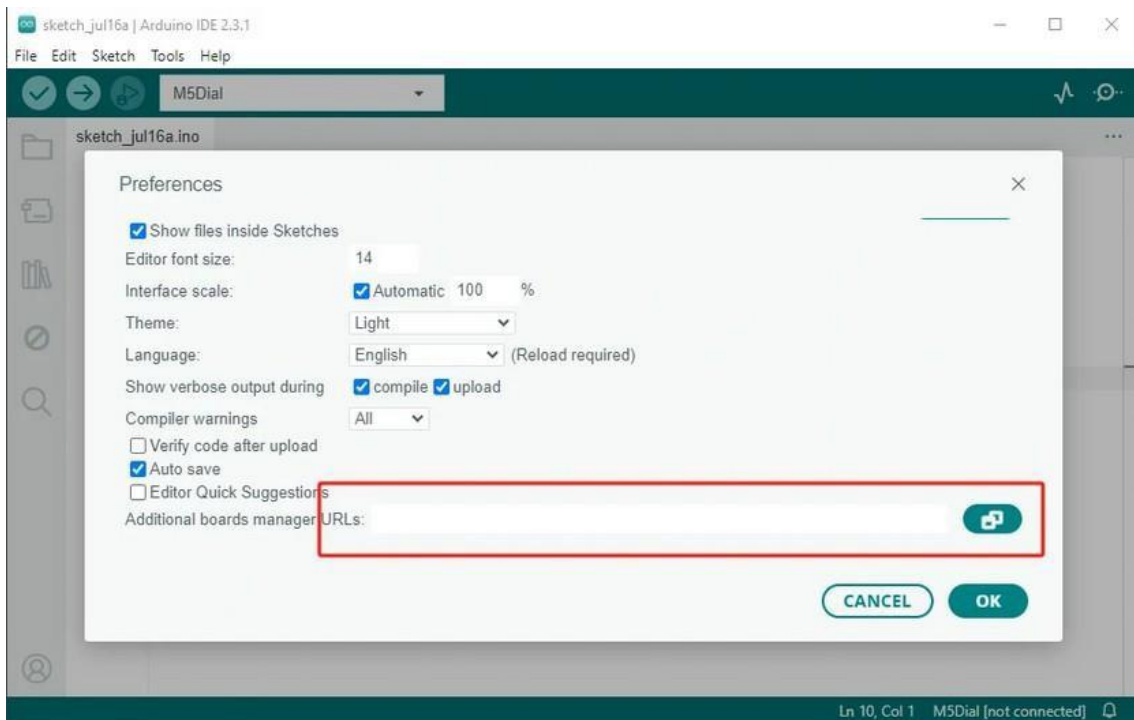
1. Visit the official Arduino website and install the Arduino IDE

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

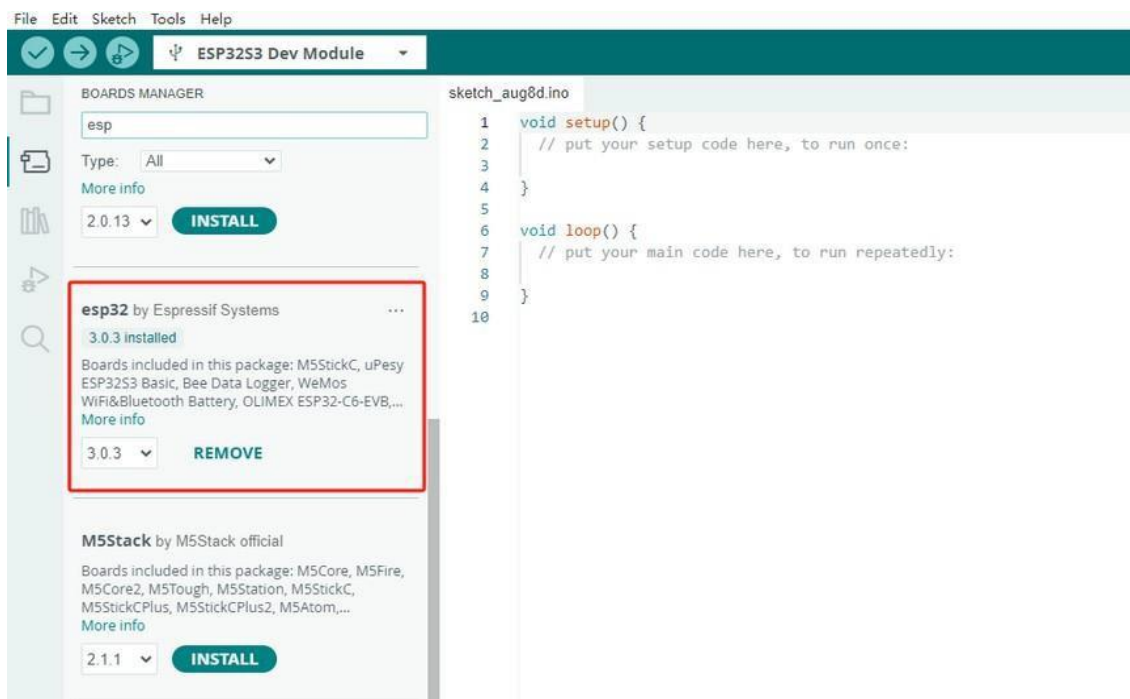
2. Add the following Board Manager URL to File → Preferences → Additional Boards Manager URLs:

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



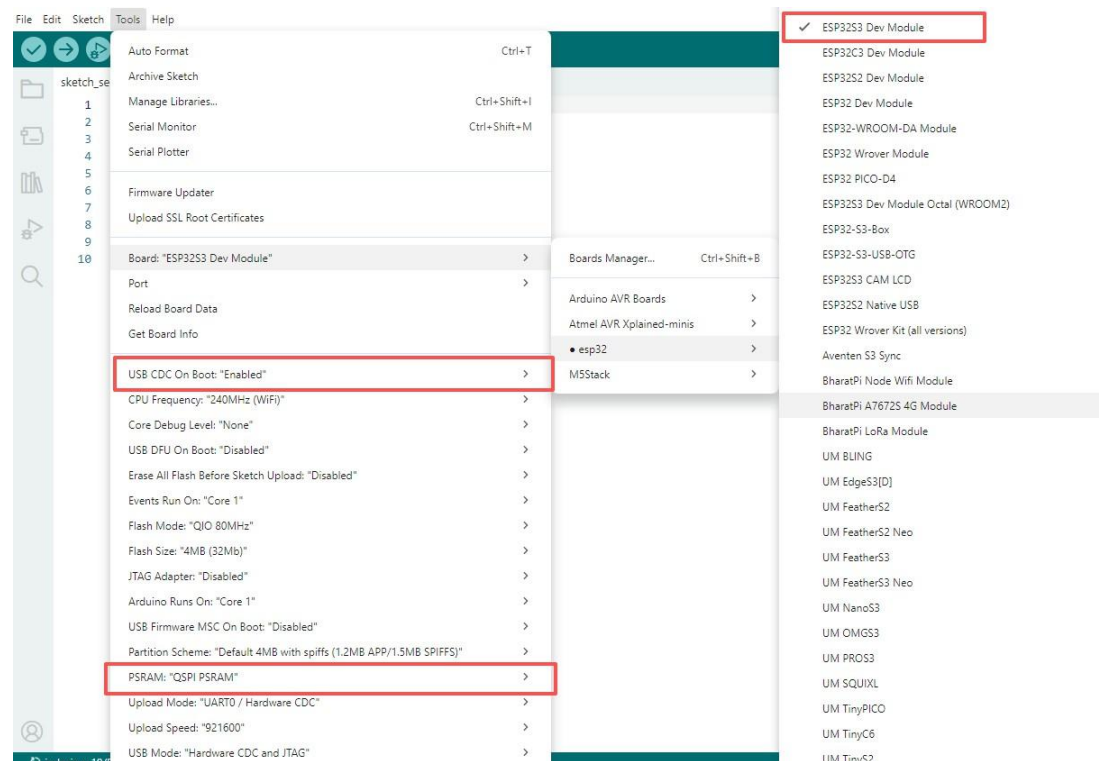


3. Open the Boards Manager, search for "ESP32", and click install.



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

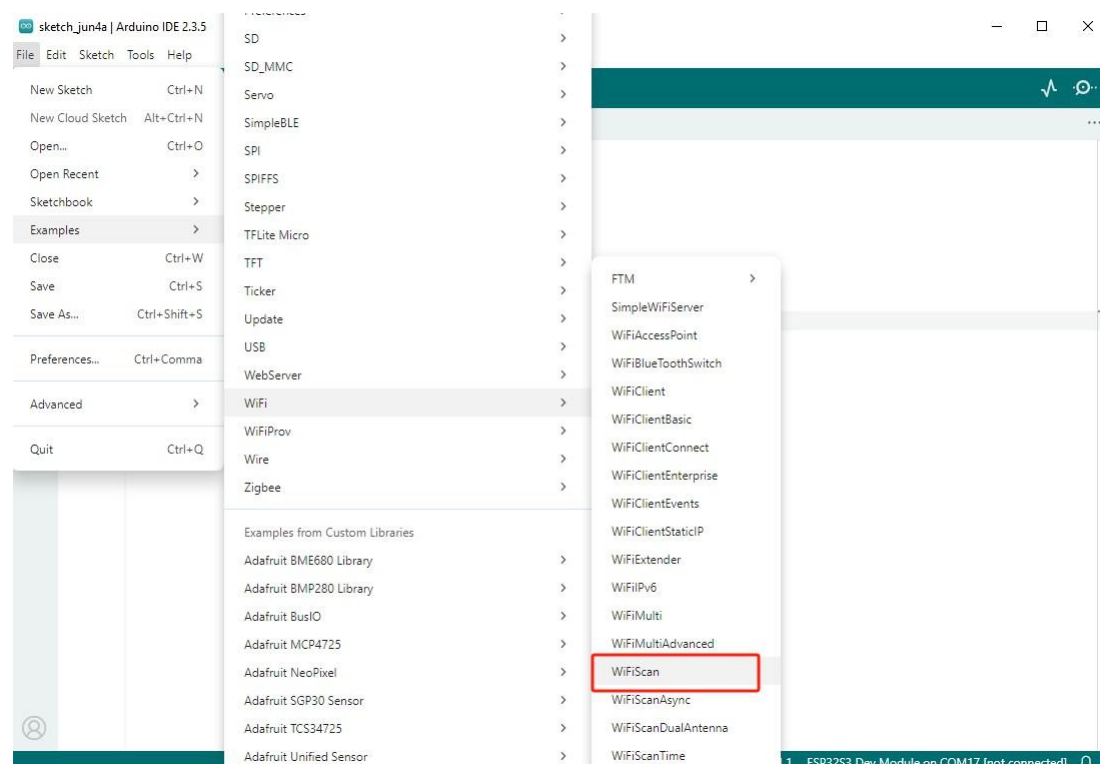
5. Configure the following options. USB CDC On Boot: "Enabled", USB Mode: "Hardware CDC and JTAG"

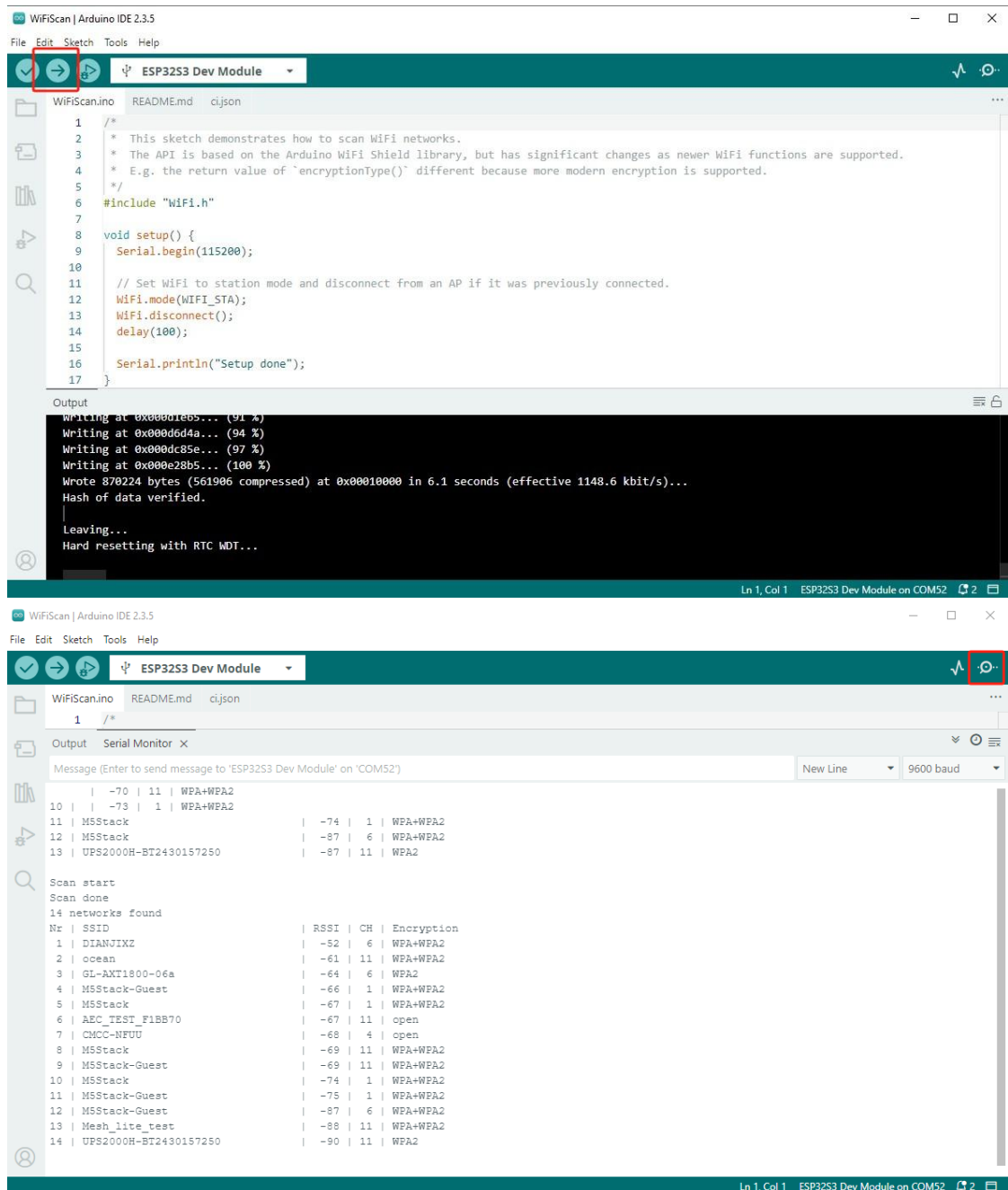


3.2 Wi-Fi Scan

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.

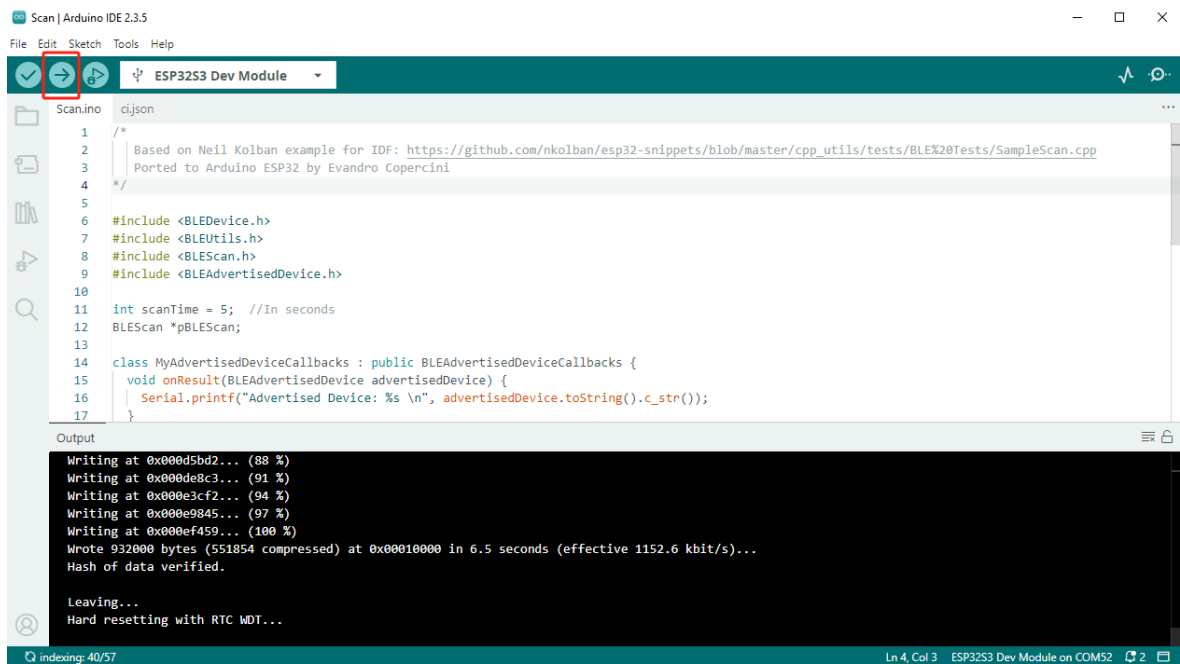
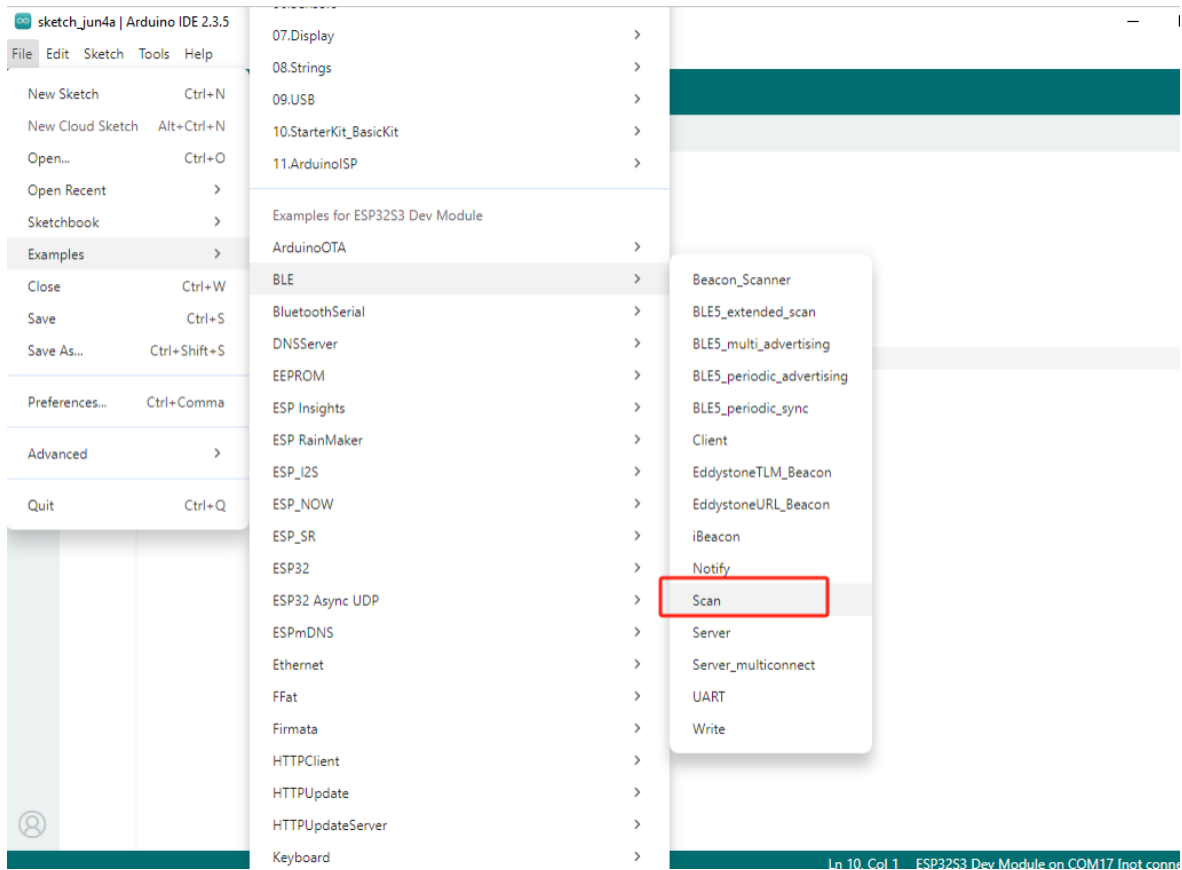




3.3 BLE Scan

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.



Scan | Arduino IDE 2.3.5

File Edit Sketch Tools Help

ESP32S3 Dev Module



Scanino

cijson

1 /*
2 Based on Neil Kolban example for IDF: https://github.com/nkolban/esp32-snippets/blob/master/cpp_utils/tests/BLE%20Tests/SampleScan.cpp
3 Ported to Arduino ESP32 by Evandro Copercini

Output Serial Monitor X

Message (Enter to send message to 'ESP32S3 Dev Module' on 'COM52')

New Line 9600 baud

Advertised Device: Name: , Address: 6b:39:91:29:1b:80, manufacturer data: 4c00160800be/6b/cbe2e43, rssi: -96
Advertised Device: Name: , Address: f7:93:96:51:c5:6f, manufacturer data: 4c0012020002, rssi: -80
Advertised Device: Name: , Address: 71:e2:f3:bb:0f:6d, manufacturer data: 4c0010064a1d69e1a518, txPower: 12, rssi: -79
Advertised Device: Name: , Address: da:b3:2a:12:20:ee, manufacturer data: 4c0012020000, rssi: -76
Advertised Device: Name: , Address: f9:cd:8c:f4:0f:ee, manufacturer data: 4c0012020000, rssi: -90
Advertised Device: Name: , Address: e5:f4:6d:8e:a6:ce, manufacturer data: 4c0012020003, rssi: -82
Advertised Device: Name: , Address: cd:9e:67:a0:8d:45, manufacturer data: 4c0012027500, rssi: -89
Advertised Device: Name: , Address: 78:3b:f6:81:95:cc, manufacturer data: 4c000908131ec0a814a01b58160800cae5c3bca66d0c, rssi: -96
Advertised Device: Name: , Address: 64:38:30:ad:9b:aa, manufacturer data: 4c0010073f1fe9e8ec8338, txPower: 8, rssi: -87
Advertised Device: Name: , Address: f6:d7:fd:5c:45:02, manufacturer data: 4c0012020000, rssi: -82
Advertised Device: Name: , Address: 63:8c:39:28:c4:cb, manufacturer data: 4c0016080042b28489d1d613, rssi: -90
Advertised Device: Name: , Address: cc:83:a7:48:9d:7d, manufacturer data: 4c0012020001, rssi: -74
Advertised Device: Name: , Address: c9:5a:ae:64:30:ed, manufacturer data: 4c0012020003, rssi: -88
Advertised Device: Name: , Address: ea:d5:8f:e0:fa:0d, manufacturer data: 4c0012020000, rssi: -78
Advertised Device: Name: , Address: de:27:77:32:e9:a9, manufacturer data: 4c0012020002, rssi: -79
Advertised Device: Name: , Address: cb:00:1d:96:2c:24, manufacturer data: 4c0012020003, rssi: -87
Advertised Device: Name: , Address: da:5d:38:1d:ef:f8, manufacturer data: 4c0012020001, rssi: -95
Advertised Device: Name: , Address: 0c:79:8c:e0:02:45, manufacturer data: 0600010920229a8745eb11457cdbe9a082643dfac48939ecda7bc5d905, rssi: -93
Advertised Device: Name: , Address: ea:d8:d8:52:cc:37, manufacturer data: 4c0012020002, rssi: -93
Advertised Device: Name: , Address: f8:59:b8:58:87:4b, manufacturer data: 4c0012022c03, rssi: -88
Advertised Device: Name: , Address: 70:05:af:2d:e6:c1, manufacturer data: 4c001608004be2fe3f0828c2, rssi: -84
Advertised Device: Name: , Address: d9:ef:f6:ac:35:41, manufacturer data: 4c0012020003, rssi: -93
Advertised Device: Name: , Address: ff:e1:5b:94:05:26, manufacturer data: 4c0012020000, rssi: -91

Ln 4, Col 3 ESP32S3 Dev Module on COM52 2

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.