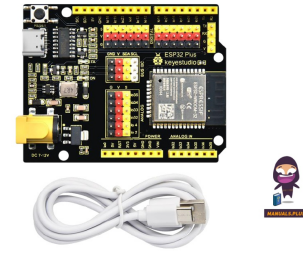**Manuals+** — User Manuals Simplified.

keyestudio ESP32 Development Board

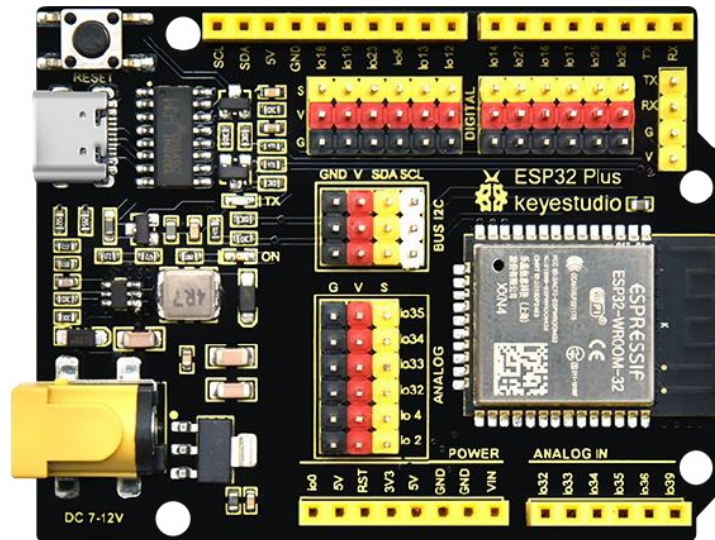# keyestudio ESP32 Development Board Owner's Manual

Contents

keyestudio

keyestudio ESP32 Development Board

Product Information

Specifications

- **Voltage:** 3.3V-5V
- **Current:** Output 1.2A (maximum)
- **Maximum Power:** Output 10W
- **Working Temperature:** -10°C to 50°C
- **Dimension:** 69mm x 54mm x 14.5mm
- **Weight:** 25.5g
- **Environmental Protection Attributes:** ROHS

Product Usage Instructions

Installation and Setup
If you are a beginner, refer to the file "Get Started with Arduino" to install the ESP32 development board driver and Arduino IDE, as well as the ESP32 development environment.

Uploading Test Code
Upload the provided test code to the ESP32 development board. The code will allow the ESP32 to scan for nearby WIFI networks and print their names and signal strengths via the serial port every 5 seconds.

```
#include WiFi.h
void setup() {
  Serial.begin(115200);


  // Set WiFi to station mode and disconnect from an AP if it was previously connected
  WiFi.mode(WIFI_STA);
  WiFi.disconnect();
  delay(100);


  Serial.println("Setup done");
}


void loop() {
  Serial.println("Scan start");


  // WiFi.scanNetworks will return the number of networks found
  int n = WiFi.scanNetworks();
  Serial.println("Scan done");


  if (n == 0) {
    Serial.println("No networks found");
  } else {
    Serial.print(n);
    Serial.println(" networks found");


    for (int i = 0; i < n; ++i) {
      // Print SSID and RSSI for each network found
      Serial.print(i + 1);
      Serial.print(": ");
      Serial.print(WiFi.SSID(i));
      Serial.print(" (");
      Serial.print(WiFi.RSSI(i));
      Serial.print(")");
      Serial.println((WiFi.encryptionType(i) == WIFI_AUTH_OPEN) ? ":*" : "");
      delay(10);
    }
  }


  Serial.println();


  // Wait a bit before scanning again
  delay(5000);
}
```

Viewing Test Results

After uploading the code, open the serial port to view the WIFI networks found by the ESP32.

Frequently Asked Questions (FAQ)

Q: What should I do if I encounter interference while using the ESP32 Development Board?
A: Ensure that the device is operated with a minimum distance of 20cm between the radiator and your body to comply with FCC radiation exposure limits.

Description

- This is a universal WIFI plus Bluetooth development board based on ESP32, integrated with ESP32-WOROOM-32 module and compatible with Arduino.
- It has a hall sensor, high-speed SDIO/SPI, UART, I2S as well as I2C. Furthermore, equipped with a free RTOS operating system, which is quite suitable for the Internet of things and smart homes.

Specifications

Voltage	3.3V-5V
Current	Output 1.2A(maximum)
Maximum power	Output 10W
Working temperature	-10°C~50°C
Dimension	69*54*14.5mm
Weight	25.5g
Environmental protection attributes	ROHS

Pin out
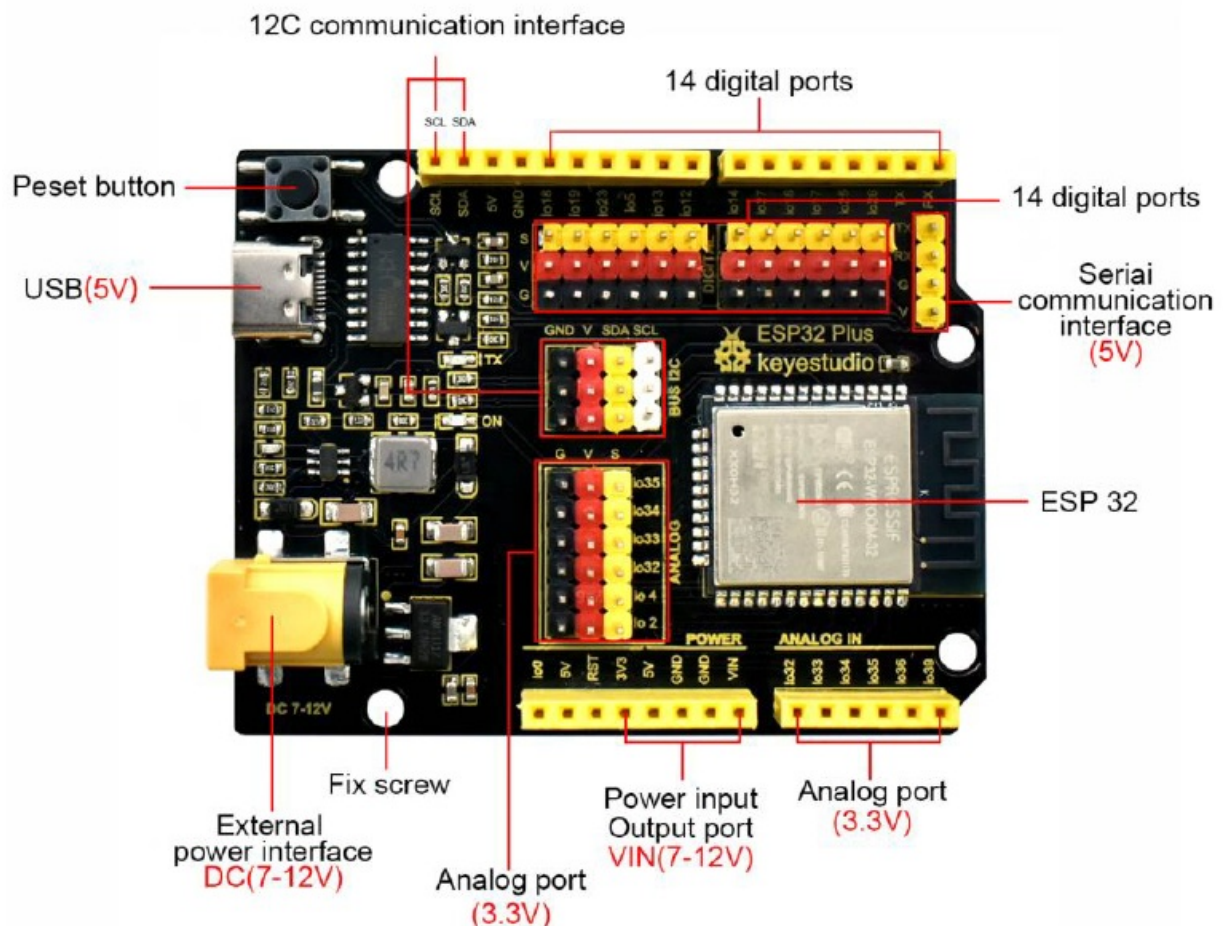
Schematic Diagram

If you are a beginner, please refer to the file Get Started with Arduino to install the ESP32 development board driver and Arduino IDE as well as the ESP32 development environment.
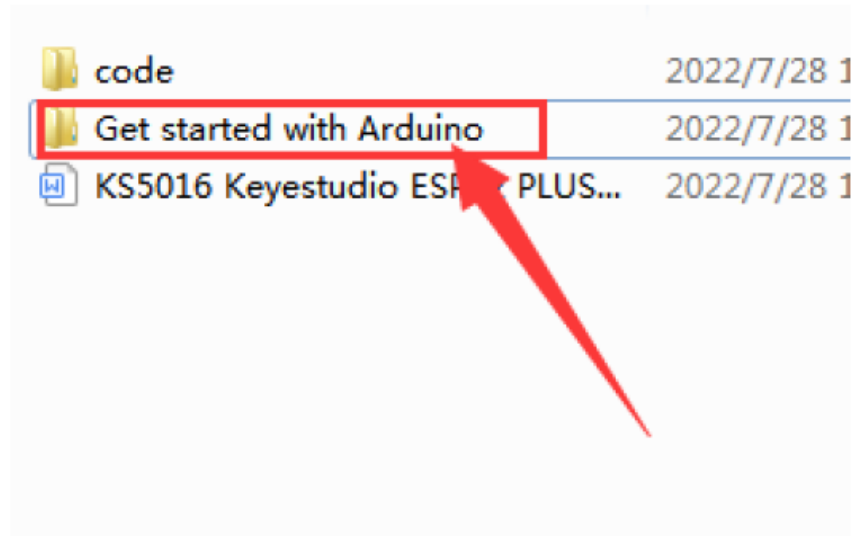
Test Code

After uploading the code, the ESP32 will find nearby WIFI and print the name and signal strength via the serial port each 5s.

```
#include "WiFi.h"


void setup()

{

    Serial.begin(115200);
```

```cpp
    // Set WiFi to station mode and disconnect from an AP if it was previously
connected

    WiFi.mode(WIFI_STA);

    WiFi.disconnect();

    delay(100);


    Serial.println("Setup done");

}


void loop()

{

    Serial.println("scan start");
```

```
// WiFi.scanNetworks will return the number of networks found

int n = WiFi.scanNetworks();

Serial.println("scan done");

if (n == 0) {

    Serial.println("no networks found");

} else {

    Serial.print(n);

    Serial.println(" networks found");

    for (int i = 0; i < n; ++i) {
```

```
        // Print SSID and RSSI for each network found

        Serial.print(i + 1);

        Serial.print(": ");

        Serial.print(WiFi.SSID(i));

        Serial.print(" (");

        Serial.print(WiFi.RSSI(i));

        Serial.print(")");

        Serial.println((WiFi.encryptionType(i) == WIFI_AUTH_OPEN)?" ":"*");

        delay(10);

      }

    }

    Serial.println("");



    // Wait a bit before scanning again

    delay(5000);

}
```
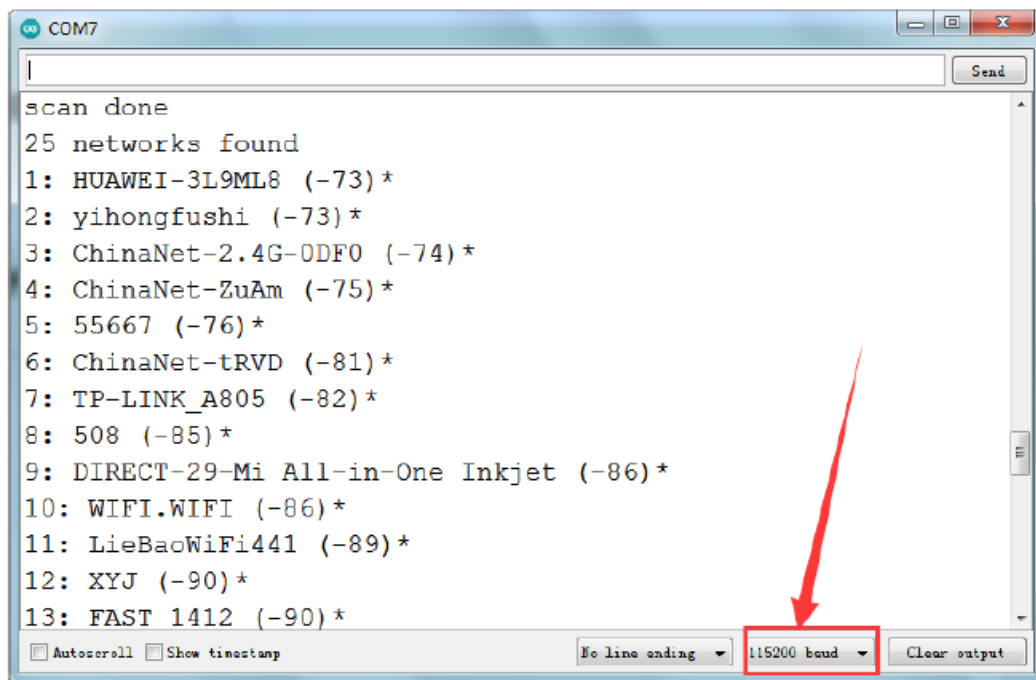
Test Result

After uploading the code, open the serial port and we can see the wifi found by ESP32.

```
scan done
25 networks found
1: HUAWEI-3L9ML8 (-73)*
2: yihongfushi (-73)*
3: ChinaNet-2.4G-0DF0 (-74)*
4: ChinaNet-ZuAm (-75)*
5: 55667 (-76)*
6: ChinaNet-tRVD (-81)*
7: TP-LINK_A805 (-82)*
8: 508 (-85)*
9: DIRECT-29-Mi All-in-One Inkjet (-86)*
10: WIFI.WIFI (-86)*
11: LieBaoWiFi441 (-89)*
12: XYJ (-90)*
13: FAST_1412 (-90)*
```

FCC Warning Statements

This equipment has been tested and found to comply with the limits for a Class B digital device, according 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 under 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 the receiver.
- Connect the equipment to 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.

Caution:
Any changes or modifications to this device not explicitly approved by the manufacturer could void your authority to operate this equipment.
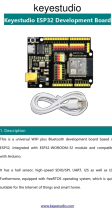
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

The device has been evaluated to meet general RF exposure requirements This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator & your body.

www.keyestudio.com.

Documents / Resources

keyestudio ESP32 Development Board [pdf] Owner's Manual
ESP32 Development Board, ESP32, Development Board, Board

References

- 🐞 **Fun starter kit and robot for Arduino, Raspberry pi and Micro bit**
- 🐞 **Fun starter kit and robot for Arduino, Raspberry pi and Micro bit**
- **User Manual**