

# DUBEUYEW ESP32-S3

## **Product introduction:**

This product is a development board based on the ESP32-S3-WROOM-1 module, with many IO ports and WS2818RGB onboard, corresponding to IO48. It has two Type-C interfaces, one of which can be used directly and has a COM mark, and the other USB can use OTG or press BOOT to power on to display the port normally and download the program. The factory program is that RGB automatically lights up after connecting to WiFi and goes out after disconnecting.

## **Product parameters:**

Working voltage: 3.3~5V

IO port: 36 IOs

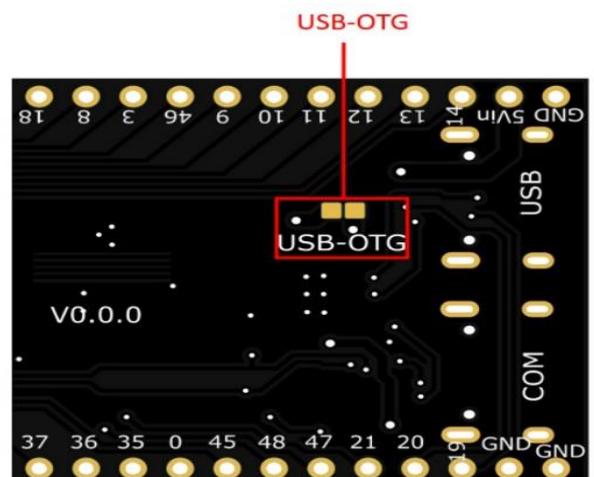
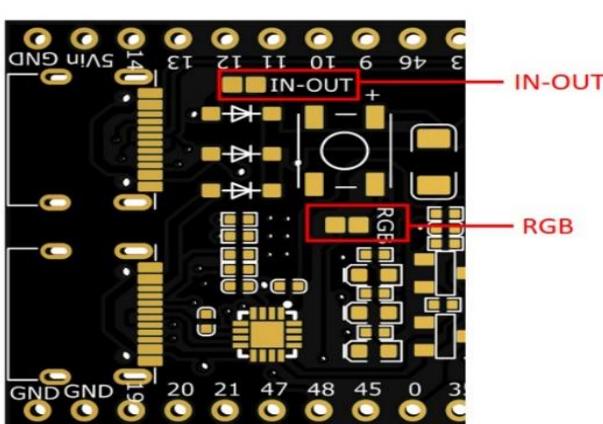
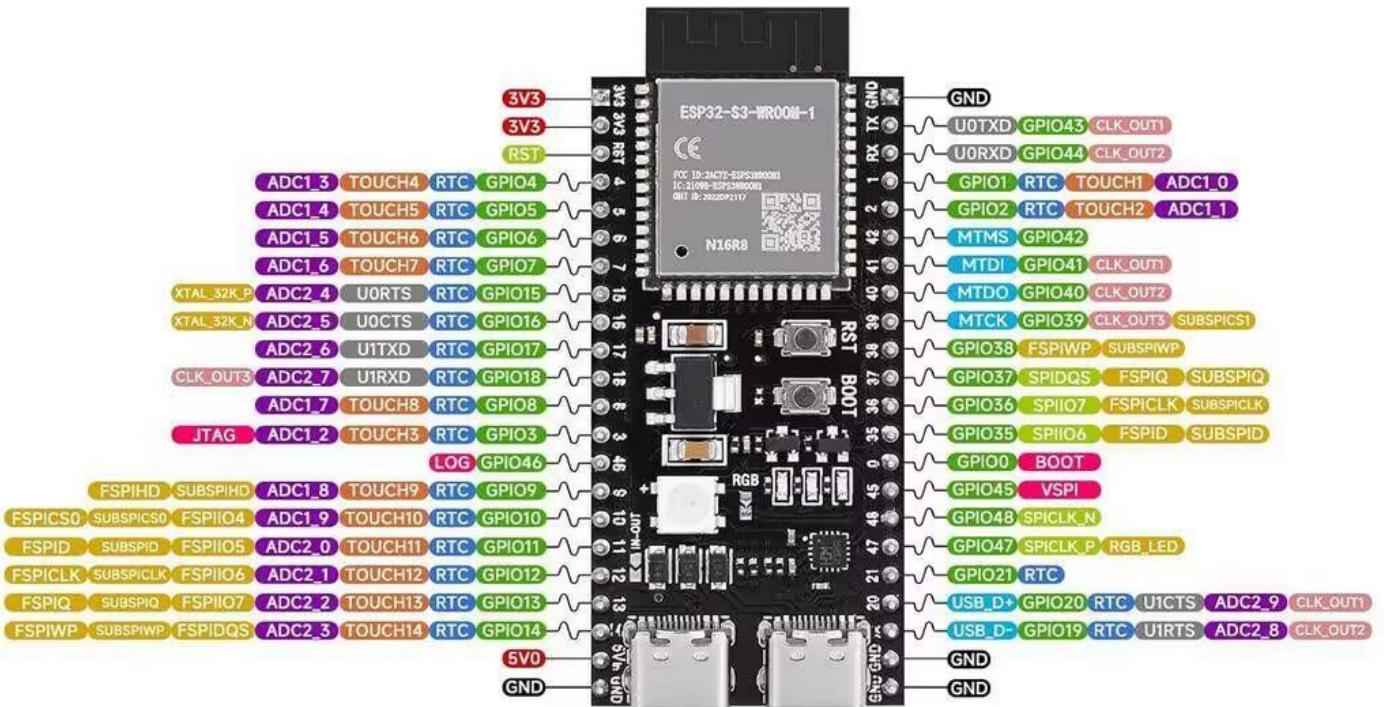
Flash: 16M PSRAM: 8M

2 I2C, 4 SPI interfaces

## **Note:**

Be careful not to short-circuit the pins, which may burn the module

## Functional diagram



IN-OUT: Short or use 0 ohm resistor to connect to make the 5Vin pin output 5V.

RGB: Short or use 0 ohm resistor to connect the RGB light can be used normally (default connection).

USB-OTG: short or use 0-ohm resistor to connect, the Type-C port of the silkscreen USB can be used to use the OTG function.

## Product usage:

Take ArduinolDE to light up RGB as an example

### Step 1: Download and install the CH343 driver

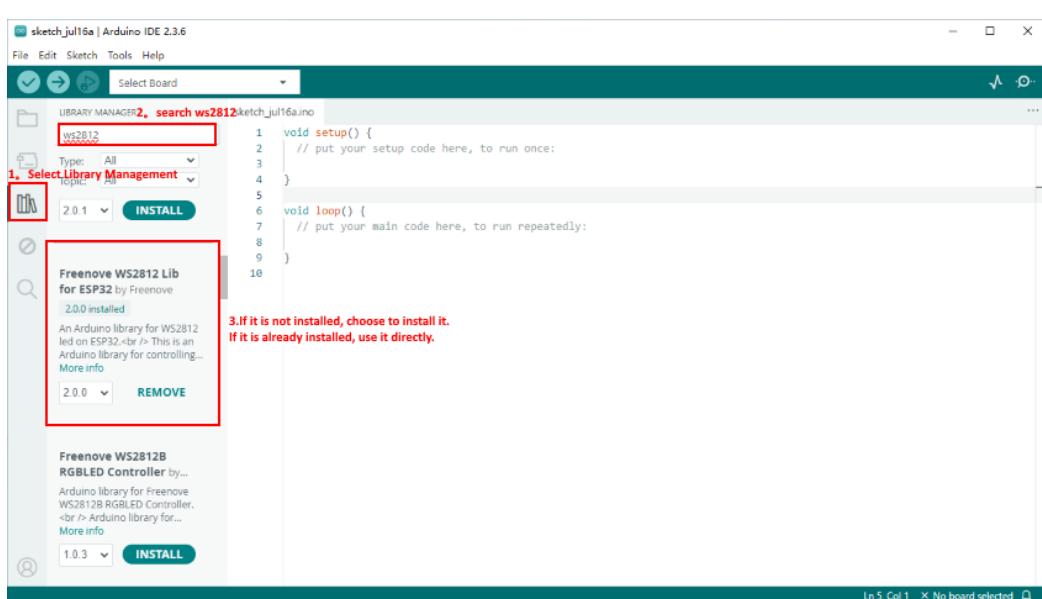
1. If the computer system does not automatically install the driver, and the product does not respond after being connected to the computer, please Click the website below to enter the download interface

[https://www.wch-ic.com/downloads/CH343SER\\_EXE.html](https://www.wch-ic.com/downloads/CH343SER_EXE.html)

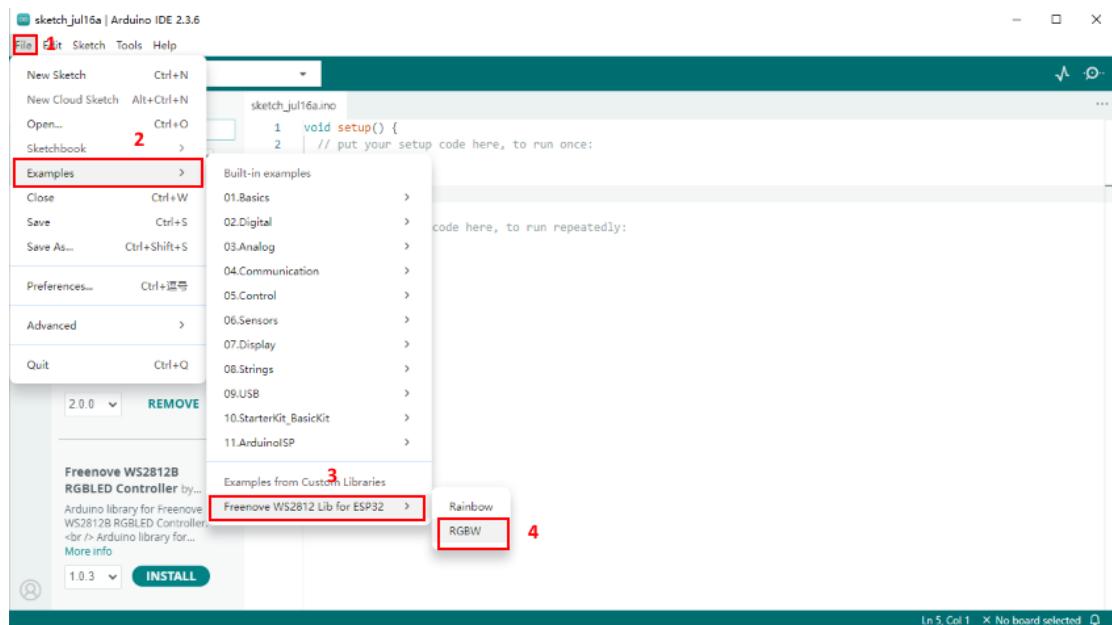
If it still doesn't work and the port cannot be found, please check the tutorial link :

[https://www.youtube.com/watch?v=k2-K6\\_SvRCQ&t=13s](https://www.youtube.com/watch?v=k2-K6_SvRCQ&t=13s)

### Step 2:First install the WS2812 library corresponding to ESP32 in Arduino IDE



## Step 3: Select Example, find the corresponding library and open the RGBW example

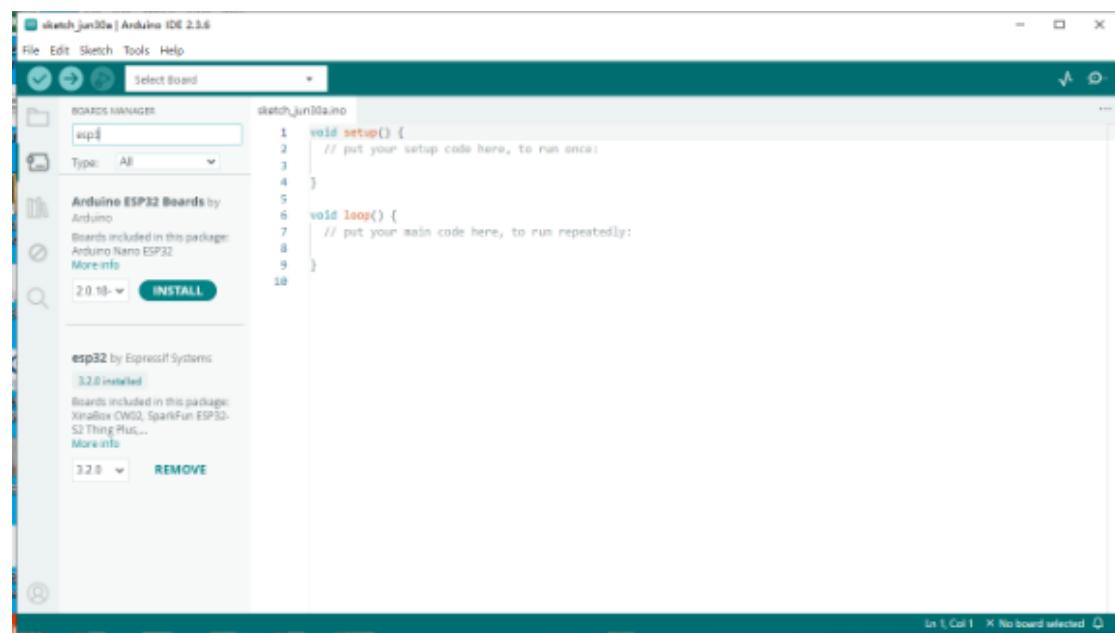


## Step 4: Change the LEDS\_PIN defined in line 4 of the program to 48

The screenshot shows the Arduino IDE with the file 'RGBW.ino' open. The code editor contains the following C++ code:#include "Freenove\_WS2812\_Lib\_for\_ESP32.h"  
#define LEDS\_COUNT 8  
#define LEDS\_PIN 2 Change the LED pin 2 of the original program to 48  
#define CHANNEL 0  
  
Freenove\_ESP32\_WS2812 strip = Freenove\_ESP32\_WS2812(LEDS\_COUNT, LEDS\_PIN, CHANNEL, TYPE\_GRB);  
  
uint8\_t m\_color[5][3] = { {255, 0, 0}, {0, 255, 0}, {0, 0, 255}, {255, 255, 255}, {0, 0, 0} };  
int delayval = 100;  
  
void setup() {  
 strip.begin();  
 strip.setBrightness(10);  
}  
void loop() {  
 for (int j = 0; j < 5; j++) {  
 for (int i = 0; i < LEDS\_COUNT; i++) {  
 strip.setPixelColor(i, m\_color[j][0], m\_color[j][1], m\_color[j][2]);  
 }  
 strip.show();  
 delay(delayval);  
 }  
 delay(500);  
}The line '#define LEDS\_PIN 2' is highlighted with a red box and has a red annotation 'Change the LED pin 2 of the original program to 48' placed next to it.

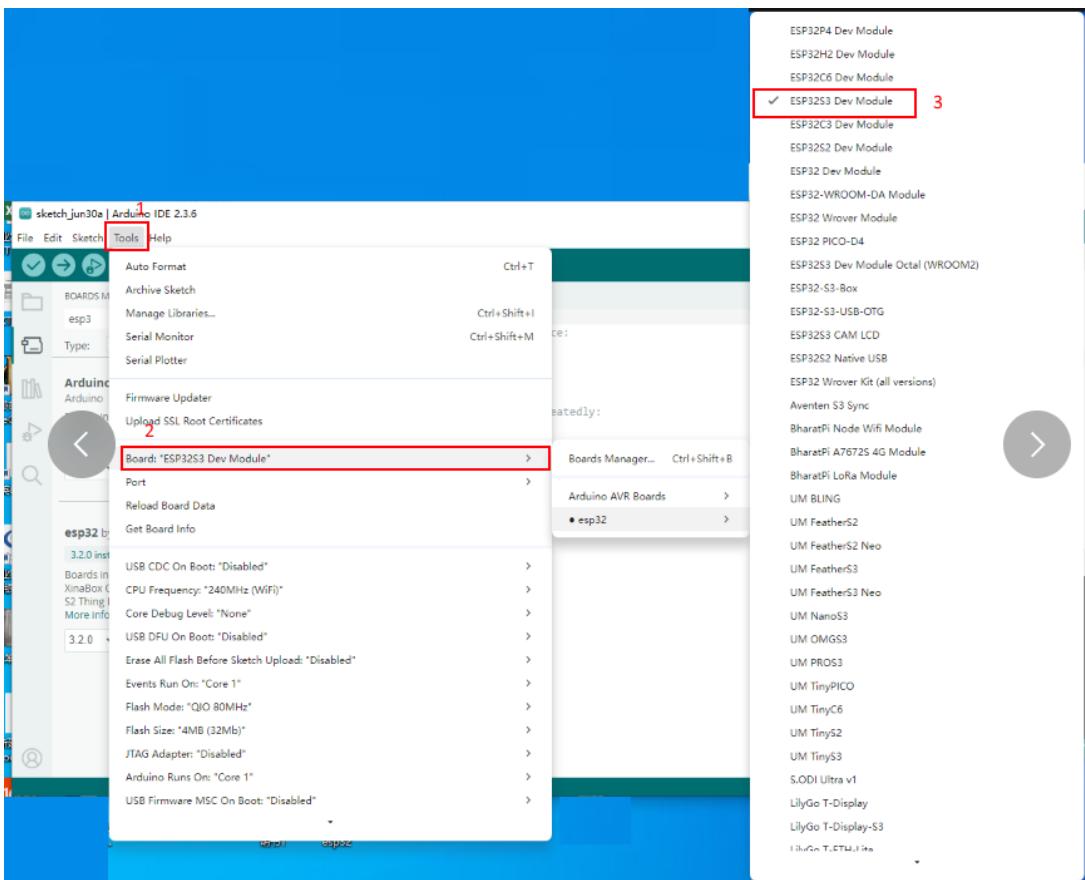
48

## Step5:

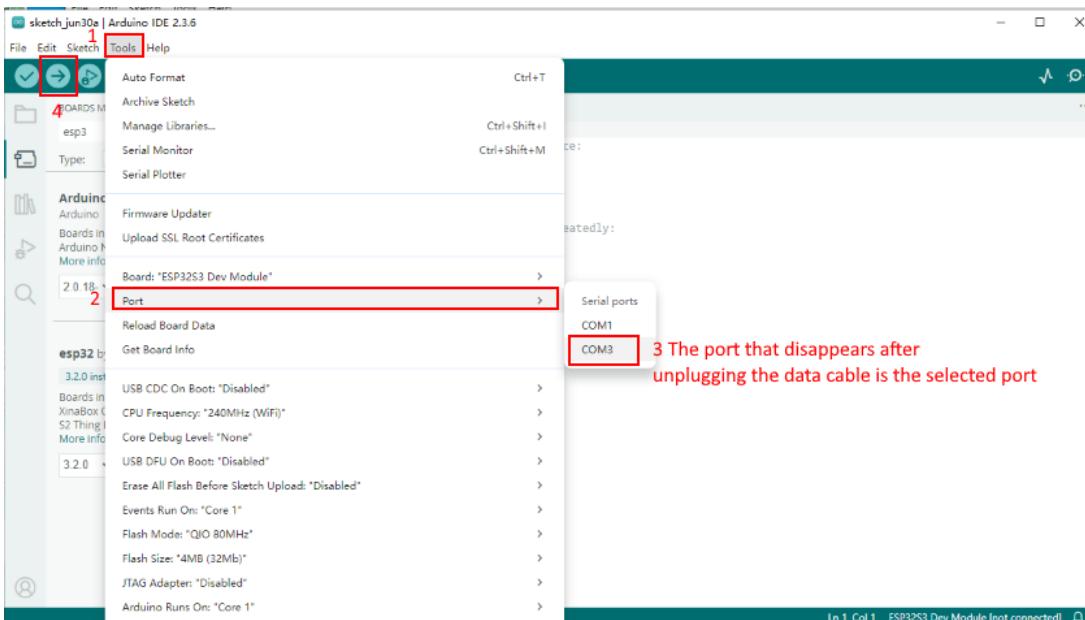


If the esp32 installation fails, please contact customer service directly to get the data package for installation

## Step6: Select the port and development version and click Upload.



If there is no development board selection, it means that the fifth step was not installed successfully. Please contact customer service.



If there is no display port, the driver has not been installed successfully, please go back to the first step

The screenshot shows the Arduino IDE 2.3.6 interface. The title bar reads "RGBW | Arduino IDE 2.3.6". The main window displays a sketch named "RGBW.ino" which includes code for an Freenove WS2812 library. The code defines a strip of 8 LEDs on pin 48 with channel 0, initializes it with a color palette, and sets brightness to 10. The loop function loops through the first 5 LEDs. The bottom right panel, titled "Output", shows the upload progress: "Writing at 0x00044317... (72 %)", "Writing at 0x0004acd5... (81 %)", "Writing at 0x00054bd1... (98 %)", "Writing at 0x0005abfb... (100 %)", followed by "Wrote 310128 bytes (166682 compressed) at 0x00010000 in 3.0 seconds (effective 823.7 kbit/s)... Hash of data verified." Below the output, status messages say "Leaving...", "Hard resetting via RTS pin...", and "NEW SKETCH".

If the upload fails, please press the RST reset button or unplug the USB and replug it.

## Tips:

If there is any problem during the process, please contact us, we will do our best to help solve it, wish you a happy life。