

CREATOR pro Use WEB page wireless control LED light (STA , HTTP Sever)

Shenzhen Rakwireless Technology Co., Ltd.

www.rakwireless.com

info@rakwireless.com

© RAK copyright. All rights reserved.

Companies and product names referred in the instruction belong to trademarks of their respective owners.

Any part of this document may not be reproduced, and may not be stored in any retrieval system, or delivered without RAK's written permission.

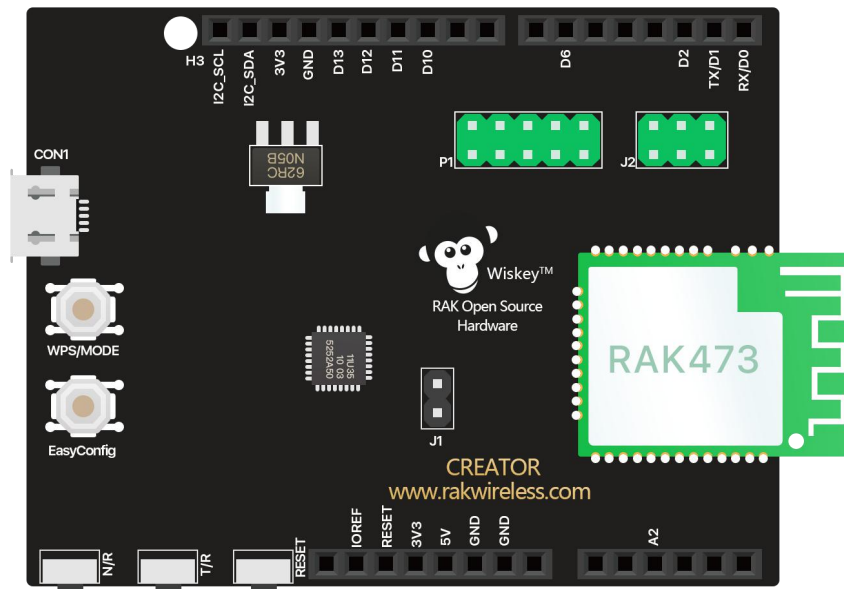
The document will be updated without prior notice.

1. Required materials (hardware, tools)

- CREATOR pro x 1
- LED x1
- Computer x1

CREATOR pro is a programmable platform for developing all kind of IoT applications. CREATOR pro is equipped with various peripheral interfaces, including Wifi, GPIO, I2C, UART, SPI, PWM, ADC. Through these interfaces, CREATOR pro can connect with electronic components such as LED, switches, manometer, hygrometer, PM2.5 dust sensors, ...etc.

The collected data can be uploaded via WiFi, and be utilized by applications on smart devices to realize IoT implementation.



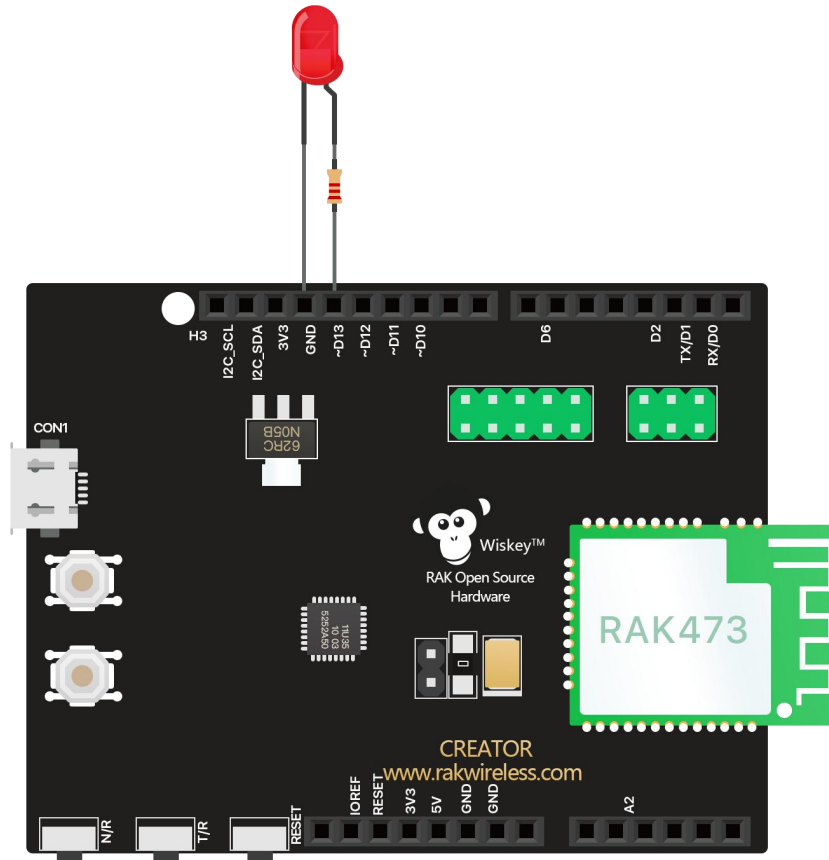
CREATOR pro and Arduino Uno have similar size, and the pins on CREATOR pro are compatible with Arduino Uno.

CREATOR pro uses Micro USB to supply power, which is common in many smart devices.

Currently, CREATOR pro currently supports Windows XP/7/8/8.1/10 32 and 64 bits and MAC OS operating systems. In this example, please use Arduino IDE with version 1.6.7 or later.

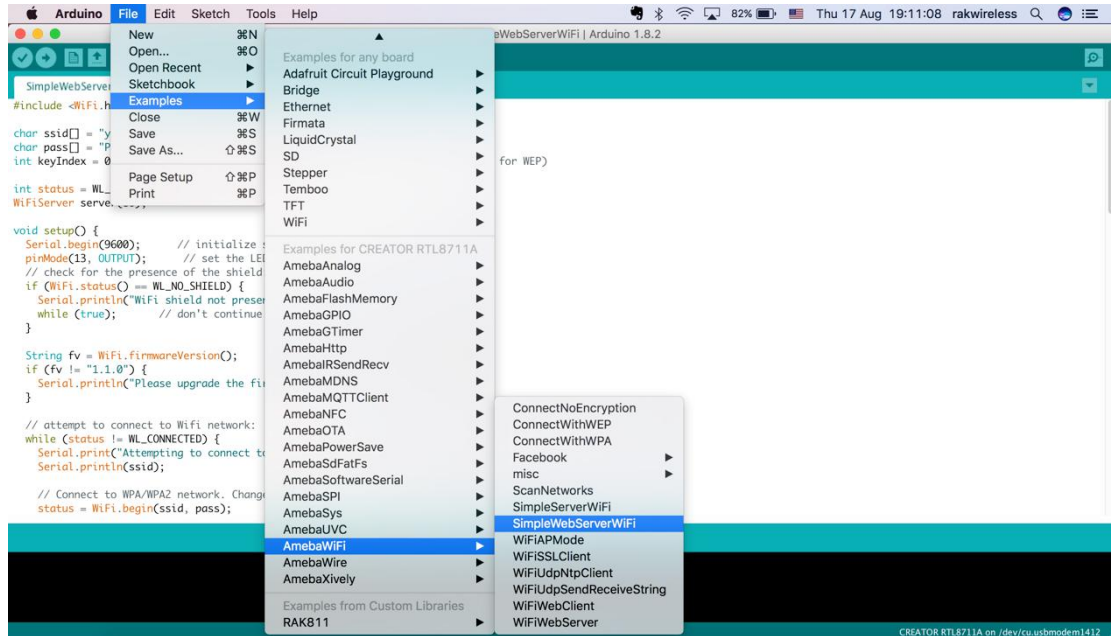
2. Hardware connection

This case uses the 13th pin as the LED connection pin, the hardware connection see below:

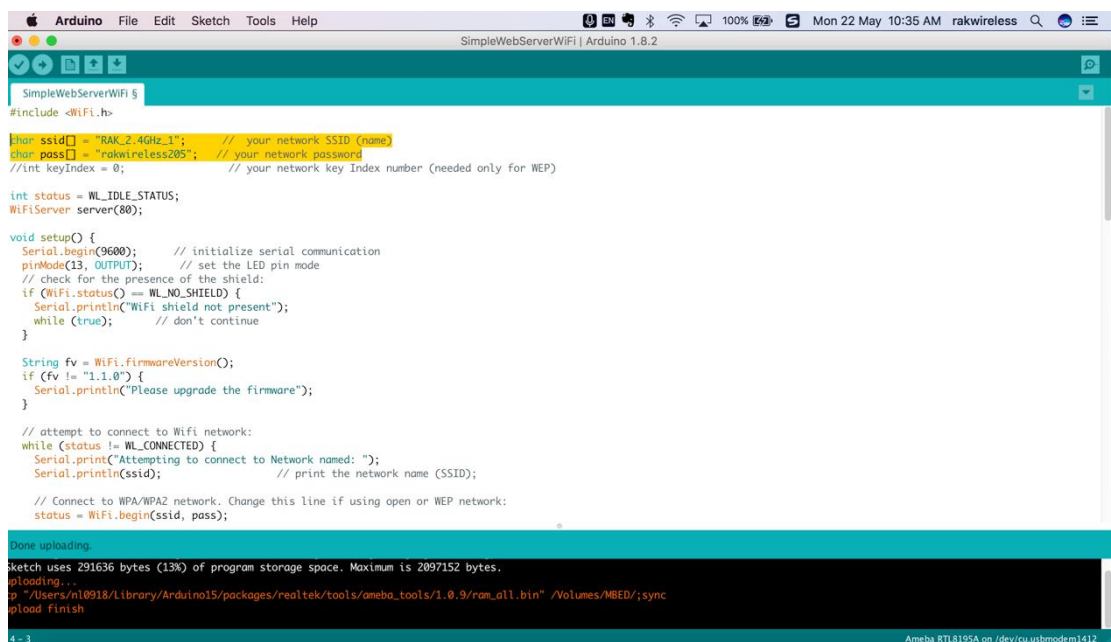


3. Example details

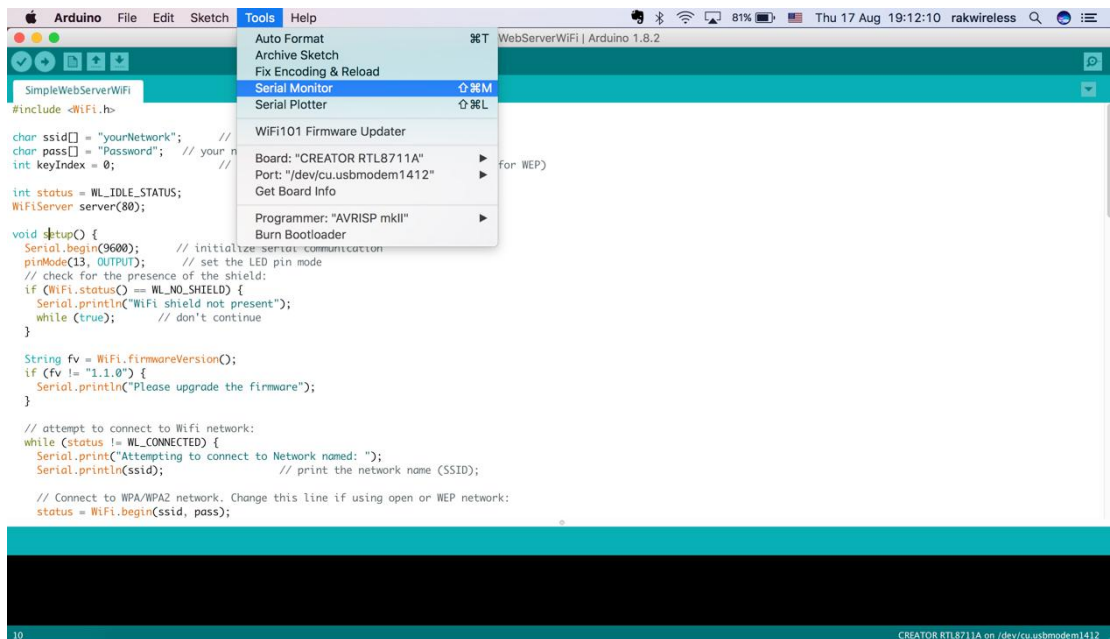
① First, Open the example, "File" -> "Examples" -> "AmebaWiFi" -> "SimpleWebServerWiFi"



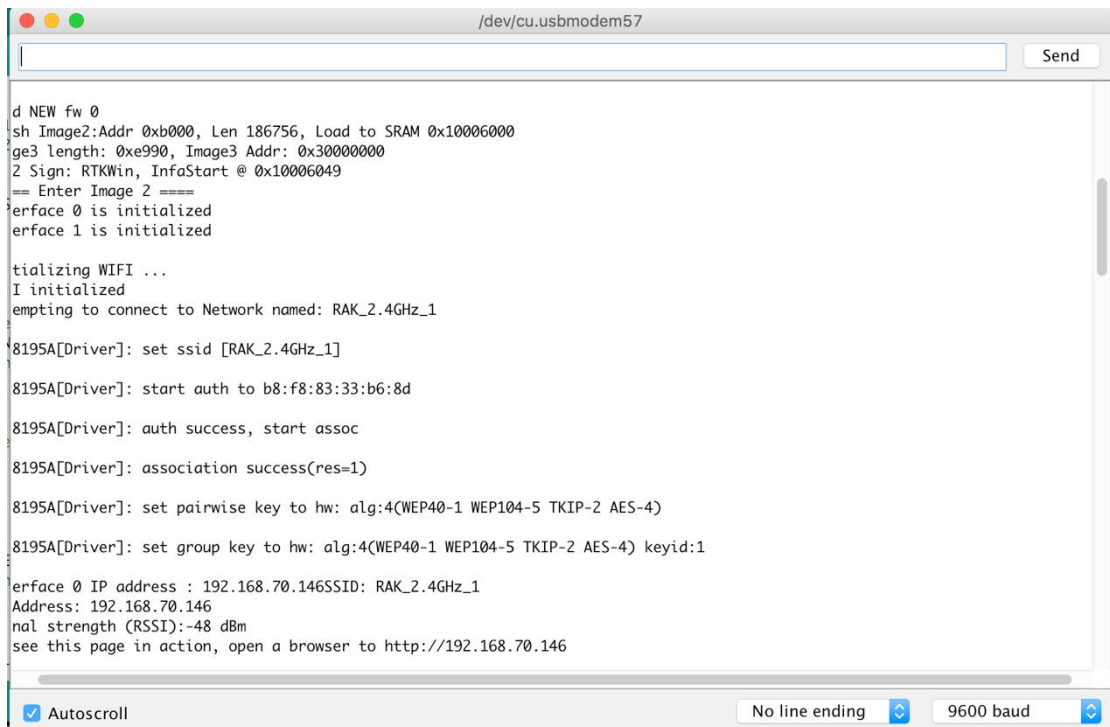
② Modify the tag part of the SSID and password, so that CREATOR pro connected to the router.



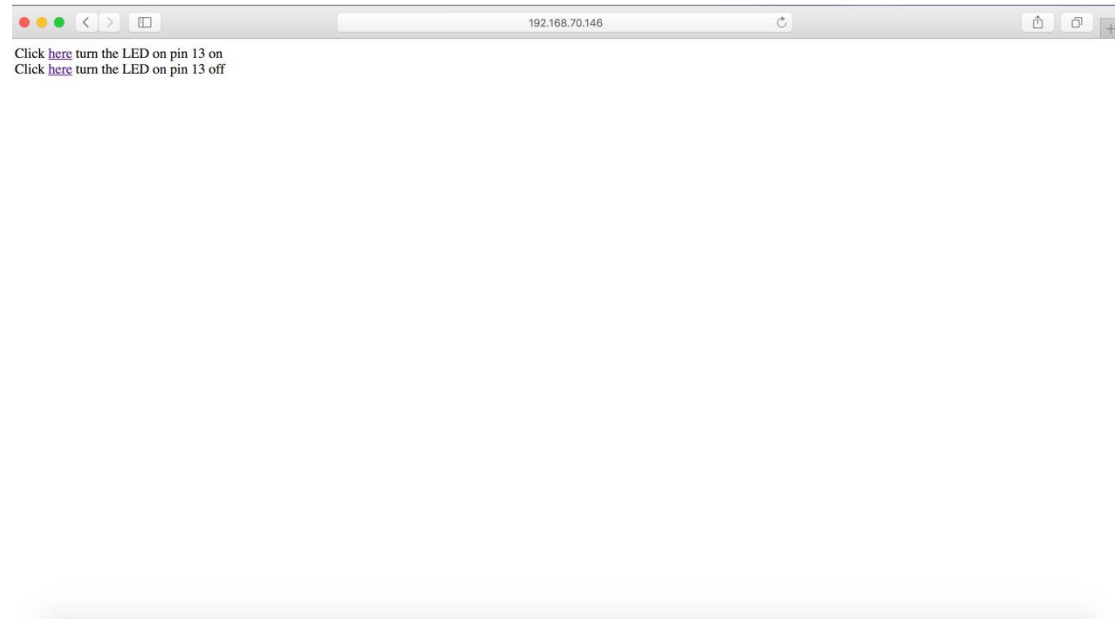
③ Compile upload firmware, upload success, open the Arduino IDE built-in serial debugging tool.



④ Reset the module, you can see the information printed out, you need to find the information in the router to the module assigned to the IP address.



⑤ Open the browser, enter the module's IP address, you can see the page as shown below.
And then click on "here", the module connected to the LED lights will be a corresponding change.



4. Code Reference

Use `WiFi.begin()` to establish WiFi connection.

<https://www.arduino.cc/en/Reference/WiFiBegin>

To get the information of a WiFi connection:

Use `WiFi.SSID()` to get SSID of the current connected network.

<https://www.arduino.cc/en/Reference/WiFiSSID>

Use `WiFi.RSSI()` to get the signal strength of the connection.

<https://www.arduino.cc/en/Reference/WiFiRSSI>

Use `WiFi.localIP()` to get the IP address of CREATOR pro.

<https://www.arduino.cc/en/Reference/WiFiLocalIP>

Use `WiFiServer server()` to create a server that listens on the specified port.

<https://www.arduino.cc/en/Reference/WiFiServer>

Use `server.begin()` to tell the server to begin listening for incoming connections.

<https://www.arduino.cc/en/Reference/WiFiServerBegin>

Use `server.available()` to get a client that is connected to the server and has data available for reading.

<https://www.arduino.cc/en/Reference/WiFiServerAvailable>

Use `client.connected` to get whether or not the client is connected.

<https://www.arduino.cc/en/Reference/WiFiClientConnected>

Use `client.println()` to print data followed by a carriage return and newline.

<https://www.arduino.cc/en/Reference/WiFiClientPrintln>

Use `client.print()` to print data to the server that a client is connected to.

<https://www.arduino.cc/en/Reference/WiFiClientPrint>

Use `client.available()` to return the number of bytes available for reading.

<https://www.arduino.cc/en/Reference/WiFiClientAvailable>

Use `client.read()` to read the next byte received from the server the client is connected to.

<https://www.arduino.cc/en/Reference/WiFiClientRead>

Use `client.stop()` to disconnect from the server the client is connected to.

<https://www.arduino.cc/en/Reference/WiFiClientStop>

If you encounter any problem, Please go to our technical forum: <http://support.rakwireless.com/>.

Or you can also send an email: ken.yu@rakwireless.com

5. Version

Version	Author	Date	Content modification
V1.0	Chace.cao	2017/06/15	Create document
V1.1	Chace.cao	2017/08/17	Update the library