

Jaycar ESP8266 Wi-Fi Mini Main Board



# Jaycar ESP8266 Wi-Fi Mini Main Board Instructions

[Home](#) » [Jaycar](#) » Jaycar ESP8266 Wi-Fi Mini Main Board Instructions 

## Contents

- 1 [Jaycar ESP8266 Wi-Fi Mini Main Board](#)
- 2 [Product Usage Instructions](#)
- 3 [ESP8266 WiFi Mini](#)
- 4 [Documents / Resources](#)
  - 4.1 [References](#)
- 5 [Related Posts](#)



## Jaycar ESP8266 Wi-Fi Mini Main Board



## Product Specifications:

- **Product Name:** ESP8266 WiFi Mini
- **Features:** WiFi compatibility, 80Mhz microcontroller, 4 MB on-board flash

## Product Usage Instructions

### Computer Drivers Installation (Windows):

1. Download the driver package from the website.
2. Extract the zip file into a folder on your desktop.
3. Run SETUP.EXE in the folder and install the drivers.
4. Delete the folder after installation.

### Arduino Setup:

1. Add the index URL in Arduino IDE preferences.
2. Install the board type by searching for 'esp8266' in the Board Manager.
3. Select LOLIN(WEMOS) D1 R2 & mini as the board in the boards menu.
4. Upload the blink sketch to test functionality.

### Using On-Board Flash:

1. Download the zip file from the provided GitHub repository.
2. Extract it into Documents/Arduino/tools directory.
3. Restart Arduino IDE and find ESP8266 Sketch Data Upload in Tools menu.
4. Create a 'data' folder in your sketch directory and upload desired data into it.

### Source Code for On-Board Flash:

```
#include
void setup() {
    Serial.begin(9600);
    SPIFFS.begin();

    File f = SPIFFS.open("/hello.txt", "r");
    if(!f){
        Serial.println("failed to open hello.txt, did you upload data?");
    } else {
        String firstLine = f.readStringUntil('\n');
        Serial.println("first line of hello.text :");
        Serial. println(firstLine);
    }
}

void loop() {
}
```

### Frequently Asked Questions (FAQ):

1. **Q: Can I use the ESP8266 WiFi Mini without Arduino IDE?**

A: While the Arduino IDE is recommended for programming, you can use other platforms compatible with ESP8266.

## ESP8266 WiFi Mini

### Hardware

The main focus of the ESP8266 is the WiFi compatibility in a small form factor. It also has an 80Mhz microcontroller and 4 MB of on-board flash.

- Computer Drivers (Windows)
- Linux and Mac computers will have the drivers installed already.
- To use the TA0840 on windows, you must first download the driver package on our website, and fully extract the zip file into a folder on your desktop.
- In that folder, you will find SETUP.EXE which you can run and click 'OK' to install the drivers.
- Once the drivers have been installed, you can now delete the folder on your desktop.

### Arduino Setup

To set it up in the Arduino IDE software, you must first add the index, then install the board type:

- Open File > Preferences  
In the "Additional Boards Manager URLs, place the following:
  - [http://arduino.esp8266.com/stable/package\\_esp8266com\\_index.json](http://arduino.esp8266.com/stable/package_esp8266com_index.json)
- Click OK to save.
- Click Tools > Board > Board Manager
- In the new window that shows up, type in "esp8266" in the search bar.
- Install esp8266 by ESP8266 Community.
- Once the boards have been installed, you can now select ESP8266 boards in the boards menu.
- The board to select for TA0840 is "LOLIN(WEMOS) D1 R2 & mini"
- Once you have selected the board and selected the correct port, you can go File > Examples and upload the blink sketch to test. There are more examples to try as well.

### Using on-board Flash

- The ESP8266 has 4MB flash on board; this can be useful if you want to upload static website data or images to the ESP. The Data is sharing the same memory as code.
- The easiest way is to download the zip file from this GitHub repository:
  - <https://github.com/esp8266/arduino-esp8266fs-plugin/releases/latest>
- Then extract the zip into your Documents/Arduino/tools directory, creating it if it does not already exist.
- The final path of the tool should be:
  - Documents\Arduino\tools\ESP8266FS\tool\esp8266fs.jar

Restart your Arduino IDE and you should find "ESP8266 Sketch Data Upload" in your Tools menu.

- Create a folder in your sketch directory called "data" and put what data you want to upload into this folder.
- In the latest version of the ESP8266 WEMOS board, the default value in the Arduino IDE reserves 2MB of flash

for the data folder. You can use the Sketch Data Upload command to push the data folder onto the memory.

- Source Code to use on-board flash

```
#include <FS.h>

void setup() {
  // put your setup code here, to run once:
  Serial.begin(9600);
  SPIFFS.begin(); // must always begin() SPIFFS

  File f = SPIFFS.open("/hello.txt", "r");
  if(!f){
    Serial.println("failed to open hello.txt, did you upload data?");
  } else {
    String firstLine = f.readStringUntil('\n');
    Serial.println("first line of hello.txt :");
    Serial.println(firstLine);
  }
}

void loop() {
  // put your main code here, to run repeatedly:
}
```

- **Australia**

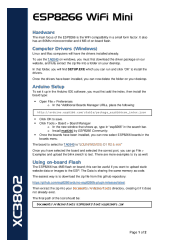
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## Documents / Resources

 <p>ESP8266 WiFi Mini</p> <p>Documentation</p> <p>ESP8266 WiFi Mini is a small, powerful, and easy-to-use microcontroller board. It features a single-chip solution with a powerful 80MHz processor and a built-in 1MB flash memory. The board is designed to be a drop-in replacement for the Arduino Uno, making it easy to get started with. It also features a variety of pins for connecting sensors and other components.</p> <p>Key features include:</p> <ul style="list-style-type: none"><li>• 80MHz processor</li><li>• 1MB flash memory</li><li>• 115200 baud rate serial interface</li><li>• 5V and GND pins</li><li>• 3.3V and GND pins</li><li>• 10k pull-up resistor</li><li>• 10k pull-down resistor</li></ul> <p>For more information, please visit the Jaycar website.</p>	<p><a href="#">Jaycar ESP8266 Wi-Fi Mini Main Board</a> [pdf] Instructions</p> <p>TA0840, LOLIN WEMOS D1 R2 mini, ESP8266 Wi-Fi Mini Main Board, ESP8266, Wi-Fi Mini Main Board, Mini Main Board, Main Board, Board</p>
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## References

- [arduino.esp8266.com/stable/package\\_esp8266com\\_index.json](https://arduino.esp8266.com/stable/package_esp8266com_index.json)

- [!\[\]\(83eb2aa26b610eb6a9dca7cf4702d681\_img.jpg\) Jaycar Electronics New Zealand | Tech, Electronics & More](#)
- [!\[\]\(94dfacbf937cdd7da4837a6fcd8fc785\_img.jpg\) Jaycar Electronics | Tech, Electronics & More | Shop Online](#)
- [!\[\]\(dae8c3c5fa7c80febd6526a5e8a853bf\_img.jpg\) Release Add support for python 3 for Arduino-ESP8266 2.6.x · esp8266/arduino-esp8266fs-plugin · GitHub](#)
- [!\[\]\(8f38ab9775d1331a4e1fd6648d0a83f1\_img.jpg\) Wi-Fi Mini ESP8266 Main Board | Jaycar Electronics](#)
- [User Manual](#)

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