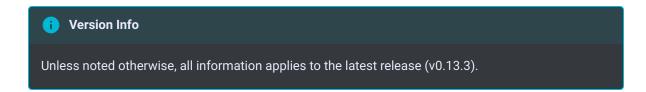
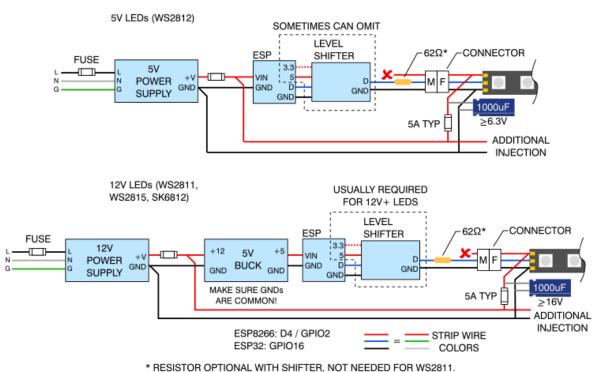
Getting Started

Welcome to the WLED wiki



Quick start guide

1. Connect a WS2812B-compatible RGB(W) led strip to GPI02 On most ESP8266 based development boards, this pin is labeled D4 on ESP32 based boards, use I016 or G16 or 16 If the connecting wire cannot be kept short, use a level shifter/translator. Optionally, connect a normally open pushbutton to GPI00 (NodeMCU/Wemos pin D3 on ESP32 use I017) and ground for configurable actions. Note: Board pin naming varies depending on the manufacturer. Please use the board pinout from the specific board you purchased and use the GPI0 pins to reference this guide. Make sure to connect ESP and LED-strip grounds together!



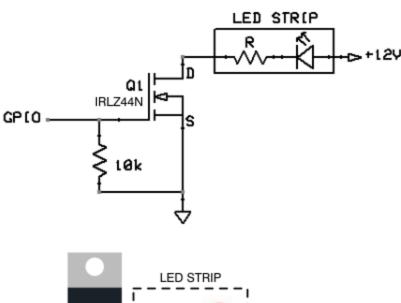
VALUE DEPENDS ON WIRING CONFIGURATION

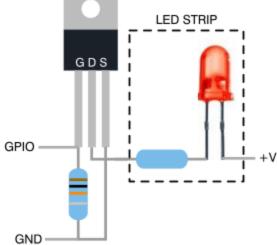
While using an ESP8266 and LEDs that have clock and data, you can either use hardware SPI (mostly faster) or software SPI.

- hardware SPI: use GPI014 (SCLK) for clock and GPI013 (MOSI) for data.
- software SPI: since all pins can be changed in the Hardware section of LED settings, you can use any pins. Recommend is to use GPI01 (TxD) for clock and GPI02 (D4) for data.

For safe operation, it is recommended to size your power wires correctly and to integrate fuses. For reference, you may use this LED power, wiring and fuse calculator.

For analog LEDs, the MOSFETs IRLZ44N or STP55NF06L are good candidates. Partial, example circuit:





Flash the software to your ESP module! There are two options for this step

I just want to use WLED! (install release binary)

I want to modify WLED (compile from source code)

If everything worked the first thirty LEDs will light up in bright orange to stimulate courage friendliness and success!

3. Use a WiFi device to connect to the access point WLED-AP using the default password wled1234 You can also just scan this QR code:





WLED-AP is not showing up!

If you do not see the WLED-AP SSID, the default SSID may have been changed at compile time.

Go to the IP 4.3.2.1 in your browser to control your lights! You should also be able to connect to wled.me if in access point mode (embedded DNS server).

Wifi Setup

To connect your WLED module to your home Wifi:

- Click on the Config (gear) icon to edit your WLED module settings and choose "Wifi Setup"
- 2. For most home networks, simply enter your Wifi network's name and network password. You can also change the mDNS address for your WLED module here.
- Click Save & Connect at the bottom of the page.
- Reconnect your device to your home's Wifi network.
- 5. Check the device list in your router's user interface for the IP of the WLED device within your local network. For easy automatic discovery, use the WLED app! Have fun with the WLED software!

Default GPIO Usage

0

These are only defaults

All pins can be changed in the Hardware section of LED settings. Please note that these are GPIO numbers, please consult a pinout for your board to find the labeled pin (e.g D4 = GPIO2 on most ESP8266 boards). When using an ESP8266 board, it's recommended to use pins GPIO1, GPIO2, or GPIO3 for LED Data; using other pins will require *bit-banging* and may cause slow performance and/or issues elsewhere (such as with IR decoding).

Function	GPI0	Suggested pin
LED Data	2	ESP8266: 1, 2 (3 if <= 100 LEDs), ESP32: 1, 2, 3, 4, 16
Button	0	
IR Remote	None	4
Relay	None	12

Software update procedure

Method 1: Reflashing the new update like a new install (see above)

Method 2: The software has an integrated *OTA* software update capability. First you have to enable it by typing in the correct OTA passphrase (default: "wledota") in the settings menu. Remove the tick in the checkbox "OTA locked". Then save settings and reboot the ESP. Then you can select "Manual OTA update" in Security settings and upload a **release binary**. After you are done, it is recommended to lock the OTA function again. To do so, tick the checkbox again (you can change the passphrase by typing in a new one now). Reboot. If you try to access the update page now, you should see the message "OTA lock active".

Method 3: ArduinoOTA is also supported.

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If you own multiple devices and want to update them

Since v0.13 of WLED source code includes shell/command prompt scripts which is allow you to update multiple devices with a single command. Please check tools subfolder for multi-update scripts (.cmd or .sh). You will need to modify them to include IP addresses of your WLED devices and assign firmware binary file for each device. If you are using Windows, make sure you install curl utility somewhere in your PATH (curl is included with Windows 10 since build 17063). This will only work if "OTA Lock" is disabled.