WEMOS D1 R2 WIFI ESP8266 Shield Arduino Compatible
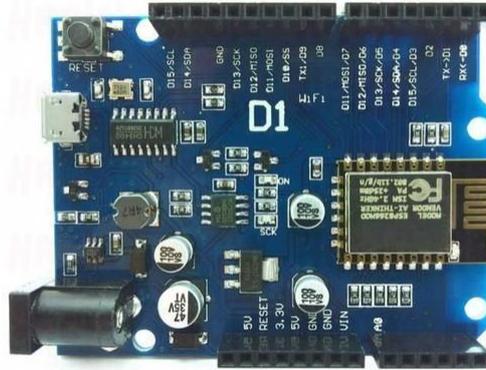
WeMos-D1R2 is an ESP8266-12 based WiFi enabled microprocessor unit on a Arduino-UNO footprint. That means the board looks and works (in most cases) like an UNO. Apparently several shields, sensors and output devices that are manufactured for the Arduino platform will work on the WeMos-D1R2 with the added advantage of built-in WiFi.

The D1 R2 is a WiFi capable ESP8266EX based development board in the form of the common Arduino UNO board format. This board is compatible with the Arduino IDE and with NodeMCU. The D1 R2 also features an on-board switching power supply which allows you to power the board from a power supply up to 12V.

***Note:** The D1 R2 is a 3.3V device. If you connect it to 5V digital sensors or devices you will need a logic level converter.

Specifications:
- Microcontroller: ESP8266EX
- Operating Voltage: 3.3V
- Digital I/O Pins: 11 (all I/O pins have interrupt/pwm/I2C/one-wire capability, except for D0)
- Analog Input Pins: 1 (3.2V max input)
- Flash Memory: 4MB
- On-Board Switching Power Supply
- Input Voltage Range: 9V to 12V
- Output: 5V at 1A Max
- Board Dimensions: 68.6mm x 53.4mm (2.701" x 2.102") / Long x Wide
- Weight: 21.8g (0.769oz)

Technical specs:

Pin	Function	ESP-8266 Pin
TX	TXD	TXD
RX	RXD	RXD
A0	Analog input, max 3.3V input	A0
D0	IO	GPIO16
D1	IO, SCL	GPIO5
D2	IO, SDA	GPIO4
D3	IO, Pull-up	GPIO0
D4	IO, pull-up, BUILTIN_LED	GPIO2
D5	IO, SCK	GPIO14
D6	IO, MISO	GPIO12
D7	IO, MOSI	GPIO13
D8	IO, pull-down, SS	GPIO15
G	Ground	GND
5V	5V	-
3V3	3.3V	3.3V
RST	Reset	RST

*All IO have interrupt/pwm/I2C/one-wire supported (except D0)

Programming:

The D1 R2 has a micro USB for auto programming.

Also you can program it using OTA

Warnings:

All IO is work at 3.3V.