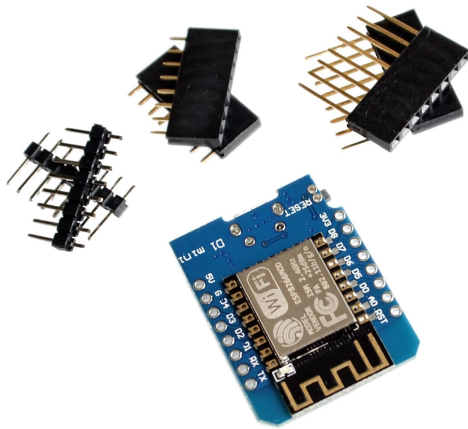




D1 Mini NodeMCU and Arduino WiFi LUA ESP8266 ESP-12 WeMos Microcontroller



This D1 Mini is a WeMos and Arduino compatible ESP8266EX-based microcontroller featuring 11 digital input/output pins, a single analog input pin. It offers the convenience of a micro-USB connection for both power and data (running at 3.3V), and despite its size has built-in WiFi and 4MB of flash memory. It can be programmed with Arduino or LUA, and supports both serial and OTA programming.

Features and Specifications:

Microcontroller: ESP-8266EX

Operating Voltage: 3.3V Max (5V power from MicroUSB connector is internally converted to 3.3V)

Digital I/O Pins: 11, all pins have interrupt/PWM/I2C/one-wire support except D0

Analog Input: 1 (3.2V max input)

Connector: MicroUSB

Clock Speed: 80MHz/160MHz

Flash: 4M bytes

Dimensions: 34mm x 25,5mm x 6.8mm

Weight: Approx. 5g excluding connectors

This D1 Mini comes with 3 different types of header connectors to support various configurations: Female, Male, and Female/Male (long female). In most cases, the female headers are the best choice as they allow you to install the various shields that are available.

In order to use the D1 Mini with the Arduino IDE, you must first:

1. Install the CH340G Drivers. The CH340G drivers can be downloaded here: <https://wiki.wemos.cc/downloads>
2. Install the Arduino IDE software: <http://envistia.info/arduinoide>
3. Install the ESP8266 Board Manager in the Arduino IDE *
4. Install the ESP8266 Library *
5. Install the Board *
6. Connect & Select the D1 Mini *

* The installation and setup process is well documented in the following tutorial and Youtube videos:

D1 Mini setup tutorial on Averagemaker:

<https://envistia.info/averagemaker-d1-mini-setup>

WeMos Getting Started Guide on Instructables:

<https://envistia.info/instructables-wemos-getting-started-101>

WeMos D1 Mini ESP8266 Getting Started with Arduino on Youtube:

<https://envistia.info/wemos-d1-mini-getting-started-youtube>

Additional Resources and Guides:

Espressif Resources:

<https://www.espressif.com/en/products/hardware/esp8266ex/resources>

NodeMCU Firmware: <https://github.com/nodemcu/nodemcu-firmware>

ESP8266 Arduino Core's Documentation:

<http://arduino-esp8266.readthedocs.io/en/latest/index.html>

ESP8266 and Arduino on Github: <http://envistia.info/esp8266-arduino-github>

Lua Loader: <http://benlo.com/esp8266/>

ESP8266 Datasheet: https://nurdspace.nl/ESP8266#Translated_datasheet

ESP8266 Chipset Datasheet: <http://envistia.info/esp8266-chipset-datasheet>

Getting Started with Arduino: <http://envistia.info/ardgetstarted>