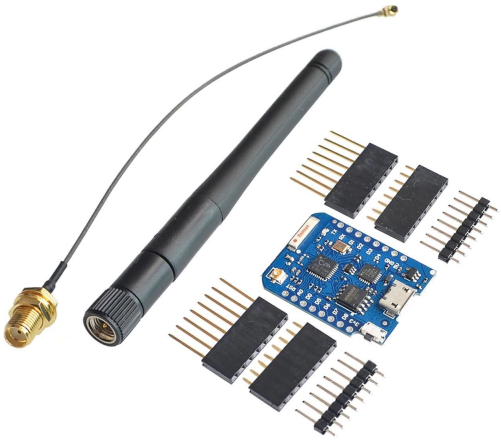
D1 Mini Pro NodeMCU and Arduino WiFi LUA ESP8266 ESP-12 WeMos Microcontroller with Antenna



The D1 Mini Pro is an Arduino compatible microcontroller based on the WiFi-SoC ESP8266EX and is made for fast Internet-of-Things (IoT) prototyping. 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.

It is based on the WiFi-SoC ESP8266EX and is made for fast Internet-of-Things (IoT) prototyping. It is flashed with the NodeMCU firmware and can be set up and programmed right away with the on-board microUSB connection. With only few lines of code the NodeMCU Dev Kit is connected to your local network and ready to be controlled by other network members like computers and smartphones..

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/PWMI2C/one-wire support except D0
Analog Input: 1 (3.2V max input)
Connector: MicroUSB
Clock Speed: 80MHz/160MHz
Flash: 16M bytes
USB Interface: CP2104 USB-TO-UART IC
Antenna: Built-in ceramic antenna and connector for external U.FL antenna (included)
Dimensions: 34mm x 25.5mm x 3.6mm excluding antenna
Weight: Approx. 2.5g excluding connectors and external antenna
Same dimensions as D1 Mini, but lighter
Compatible with Arduino, Nodemcu and MicroPython

This D1 Mini Pro 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 Pro 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 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