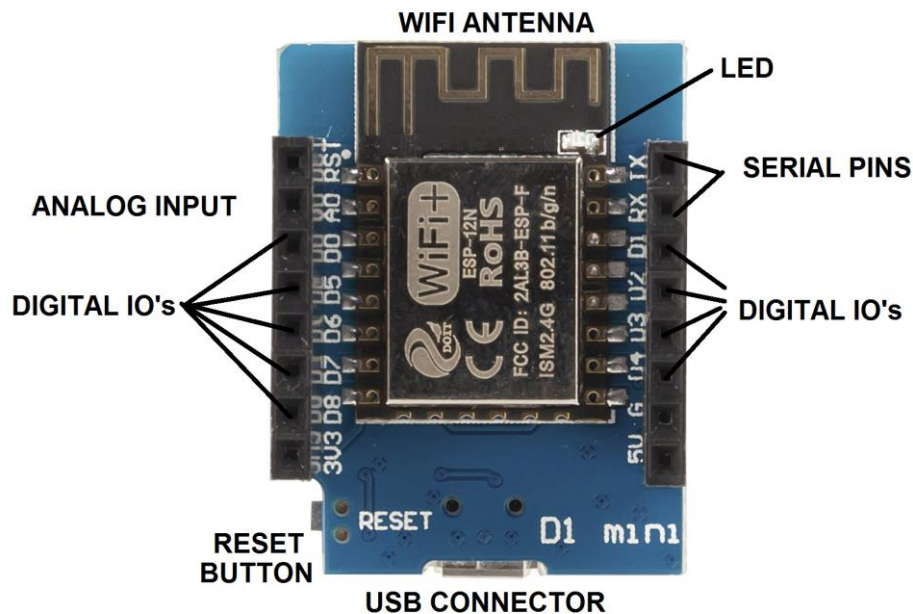


XC3802 WiFi Mini ESP8266 Main Board

The XC3802 WiFi Mini ESP8266 Main Board packs an 80MHz microcontroller with WiFi into a board not much bigger than a coin. With easy-to-add support for the Arduino IDE, the WiFi Mini is the perfect compact solution to your IoT sensor node problem. Includes 4MB of flash memory for your program and 11 digital IO pins and one analog input pin to interface to the world. All the IOs (including the analog input) are limited to 3.3V, although 5V power can be supplied to the board via the 5V pin or USB connector, with the on-board regulator providing the necessary 3.3V. The board is fitted with stackable headers, so it can be prototyped by pushing into a breadboard, have shields such as the XC3850 Prototyping Shield stacked on top, or even used by itself. With a WiFi interface, much can be achieved without external components connected.



Drivers:

The WiFi Mini uses a CH340G USB-Serial IC- drivers for this can be downloaded from the IC manufacturer's website: http://www.wch.cn/download/CH341SER_ZIP.html

Arduino:

To use with the Arduino IDE, it is recommended to use version 1.6.4 or later so that the Boards Manager can handle the installation. To install board support for ESP8266, in File>Preferences>Additional Board Manager URLs add:

http://arduino.esp8266.com/stable/package_esp8266com_index.json

separating from existing entries with a comma, then go to Tools>Boards>Boards Manager and type 'esp' in the search box- install ESP8266 by ESP8266 Community (this is about 150MB download and can take a while). An entry for 'D1 Mini' will appear in the boards list, which is compatible with the WiFi Mini ESP8266 Main Board.

Note: Under the Arduino IDE, the pins do not have a standard numbering, so aliases have been provided. For example, to access the pin labelled 'D1', do not use '1', but rather 'D1' in your sketch. The full list of aliases is listed here:

https://github.com/esp8266/Arduino/blob/master/variants/d1_mini/pins_arduino.h#L49-L61

Other Firmwares:

Note that many of these other firmwares (as well as the Arduino IDE) are provided by third parties, so ongoing support is not guaranteed.

Apart from the Arduino IDE, other firmware can be directly loaded onto the board to give options such as MicroPython or even BASIC. If you are not comfortable using the command line options that are available, there is an uploader program for Windows located here:

<https://github.com/nodemcu/nodemcu-flasher>

Some of the available firmware images are listed in this forum thread:

<https://forum.shmakerspace.org/t/list-of-esp8266-firmware/98>

ESP8266 Basic:

<https://www.esp8266basic.com/>

MicroPython for ESP8266:

<http://micropython.org/download#esp8266>

Loading a firmware image will replace an existing sketch uploaded by Arduino, and can simply be replaced by uploading from the Arduino IDE again.