



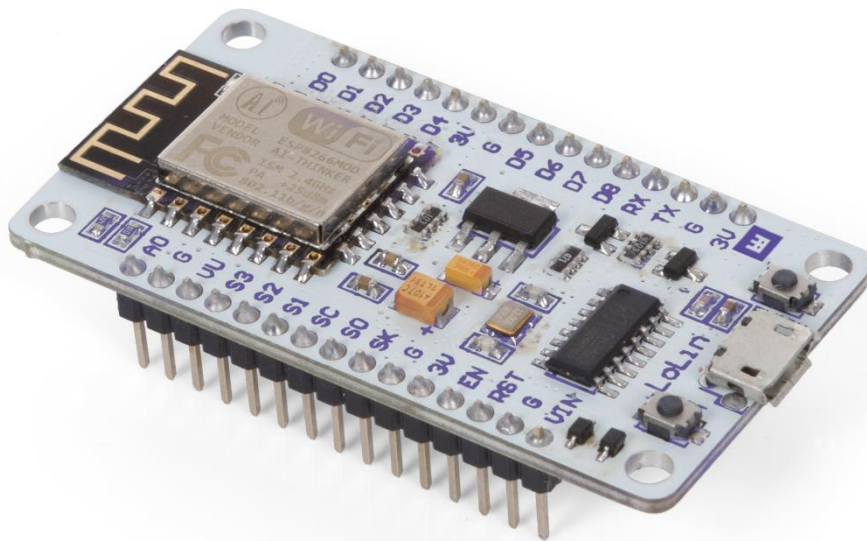
WHADDA

EXCITING ELECTRONICS

USER MANUAL

EN NODEMCU V2 LUA BASED ESP8266 DEVELOPMENT BOARD

WPB107



Introduction



To all residents of the European Union

Important environmental information about this product

This symbol on the device or the package indicates that disposal of the device after its lifecycle could harm the environment. Do not dispose of the unit (or batteries) as unsorted municipal waste; it should be taken to a specialized company for recycling. This device should be returned to your distributor or to a local recycling service. Respect the local environmental rules.

If in doubt, contact your local waste disposal authorities.

Thank you for choosing Whadda! Please read the manual thoroughly before bringing this device into service. If the device was damaged in transit, do not install or use it and contact your dealer.

Safety Instructions



Read and understand this manual and all safety signs before using this appliance.



For indoor use only.

- This device can be used by children aged from 8 years and above, and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning the use of the device in a safe way and understand the hazards involved. Children shall not play with the device. Cleaning and user maintenance shall not be made by children without supervision.

General Guidelines

- Refer to the Velleman® Service and Quality Warranty on the last pages of this manual.
- All modifications of the device are forbidden for safety reasons. Damage caused by user modifications to the device is not covered by the warranty.
- Only use the device for its intended purpose. Using the device in an unauthorised way will void the warranty.
- Damage caused by disregard of certain guidelines in this manual is not covered by the warranty and the dealer will not accept responsibility for any ensuing defects or problems.
- Nor Velleman nv nor its dealers can be held responsible for any damage (extraordinary, incidental or indirect) – of any nature (financial, physical...) arising from the possession, use or failure of this product.
- Keep this manual for future reference.

What is Arduino®

Arduino® is an open-source prototyping platform based on easy-to-use hardware and software. Arduino® boards are able to read inputs – light-on sensor, a finger on a button or a Twitter message – and turn it into an output – activating of a motor, turning on an LED, publishing something online. You can tell your board what to do by sending a set of instructions to the microcontroller on the board. To do so, you use the Arduino programming language (based on Wiring) and the Arduino® software IDE (based on Processing). Additional shields/modules/components are required for reading a twitter message or publishing online. Surf to www.arduino.cc for more information

Overview

WPB107

The NodeMcu is an open-source firmware and development kit that helps you to prototype your IOT product within a few Lua script lines.

chipset.....	ESP8266
general purpose IO	GPIO 10
operating voltage	3.3 VDC
dimensions	5.8 x 3.2 x 1.2 cm
weight	12 g



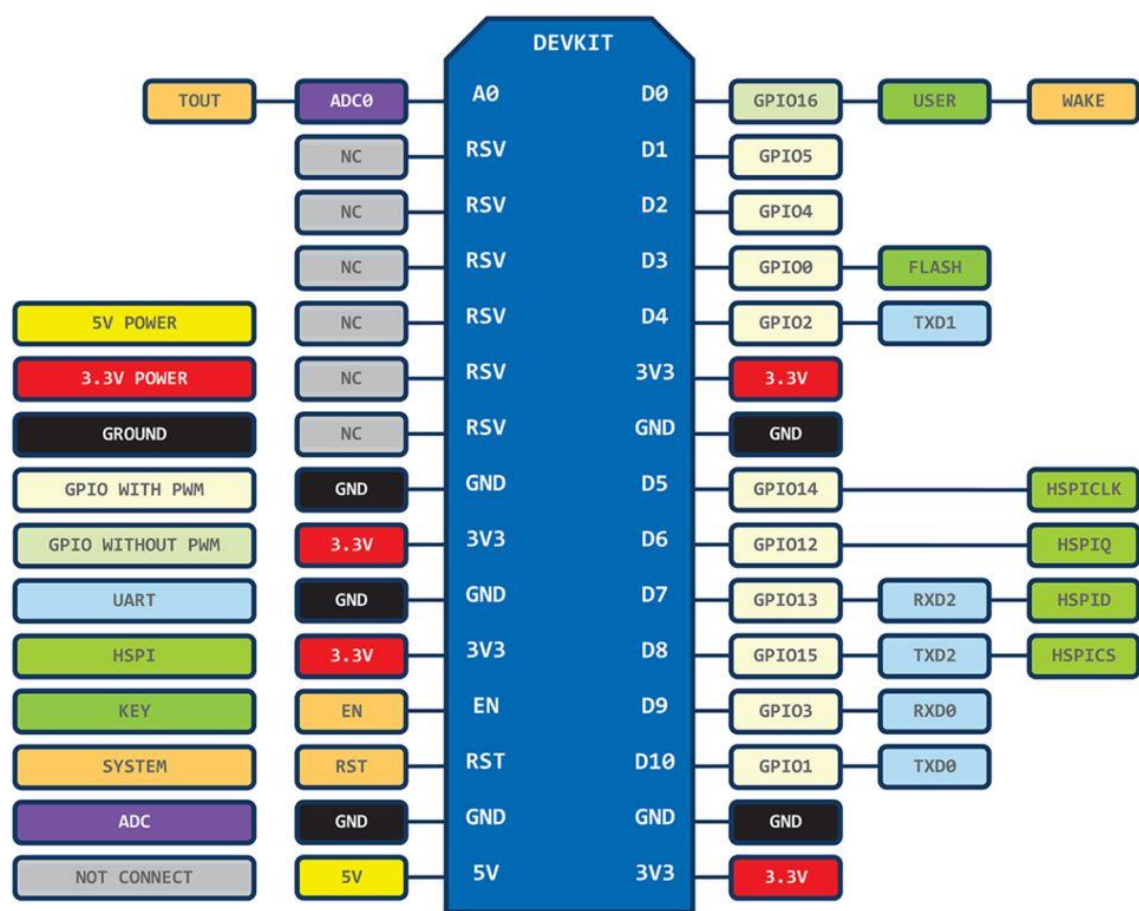
WARNING



The ESP8266 module requires a power supply of 3.3 V. However, as the WPB107 contains a 3.3 V regulator, it can be connected by using the 5 V Micro-USB or the 5 V VIN pin of the board.

The I/O pins of the WPB107 communicate **with 3.3 V only**. They do not tolerate 5 V. If interfacing with 5 V I/O pins is needed, we recommend using our VMA410 level shifter.

Pin Layout



Installing the WPB107

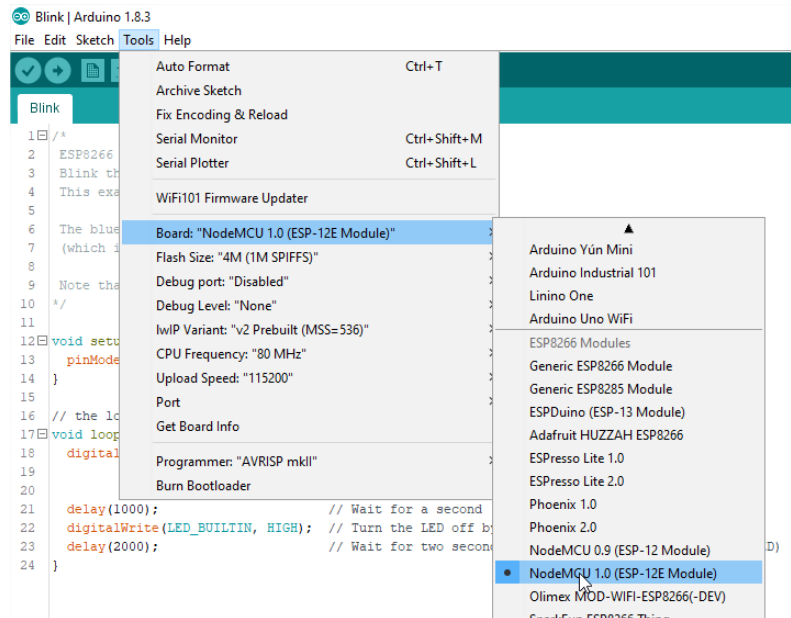
Download and install the latest Arduino® IDE on <https://www.arduino.cc/en/Main/Software>.

Start the Arduino® IDE and open the preference window (File → Preferences).

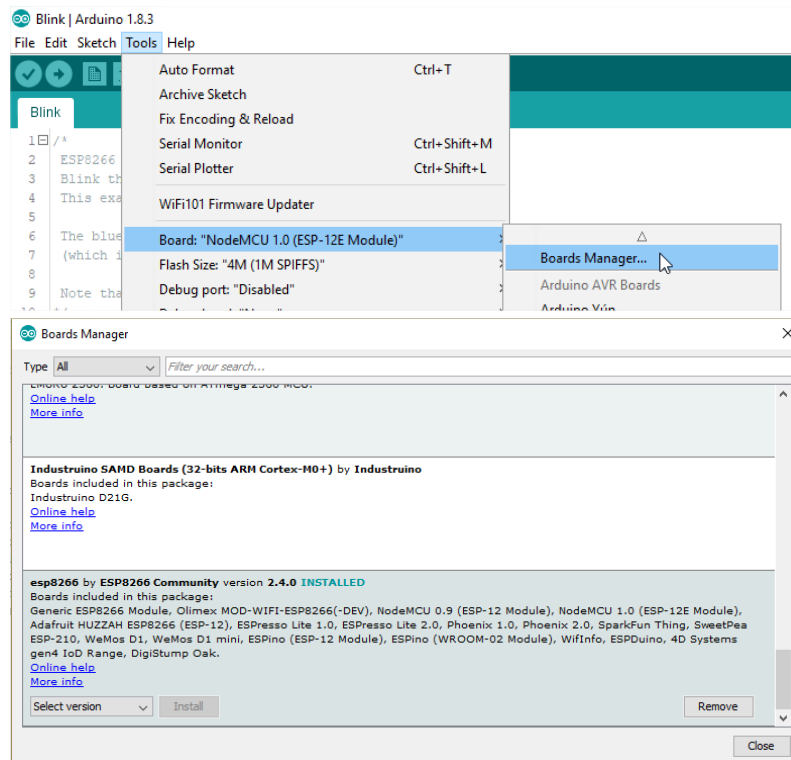
Enter http://arduino.esp8266.com/stable/package_esp8266com_index.json in the Additional Boards Manager URL's field.

Close and re-start the Arduino® IDE.

Open the Boards Manager and select the "NodeMCU 1.0(ESP-12E Module)".

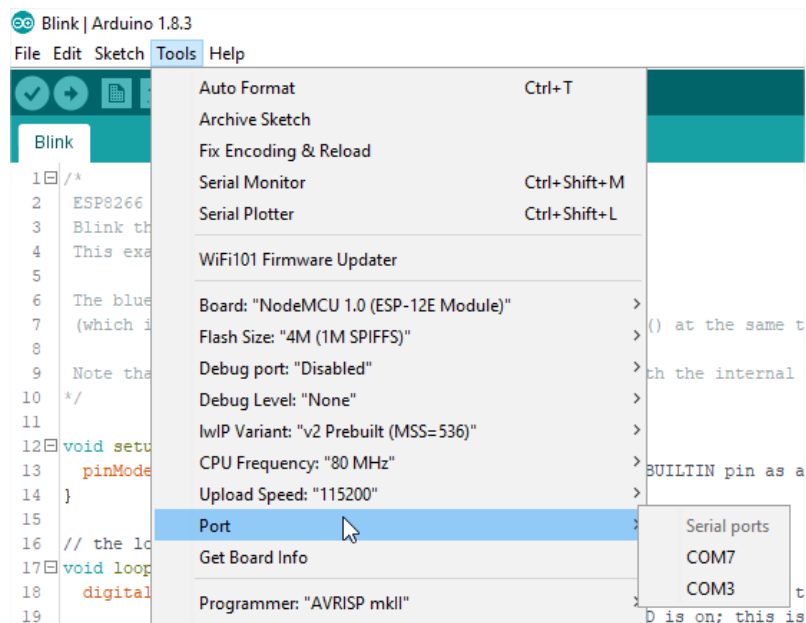


Open the Boards Manager again and install the ESP8266 software.



Restart the Arduino® IDE again.

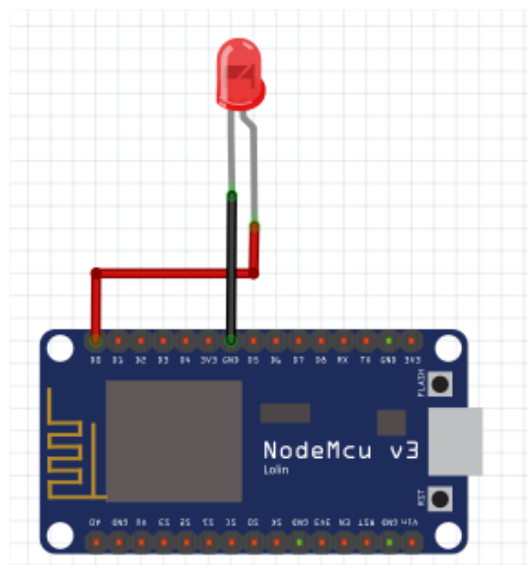
Connect your WPB107 by using the micro USB and select the communications port of your computer.

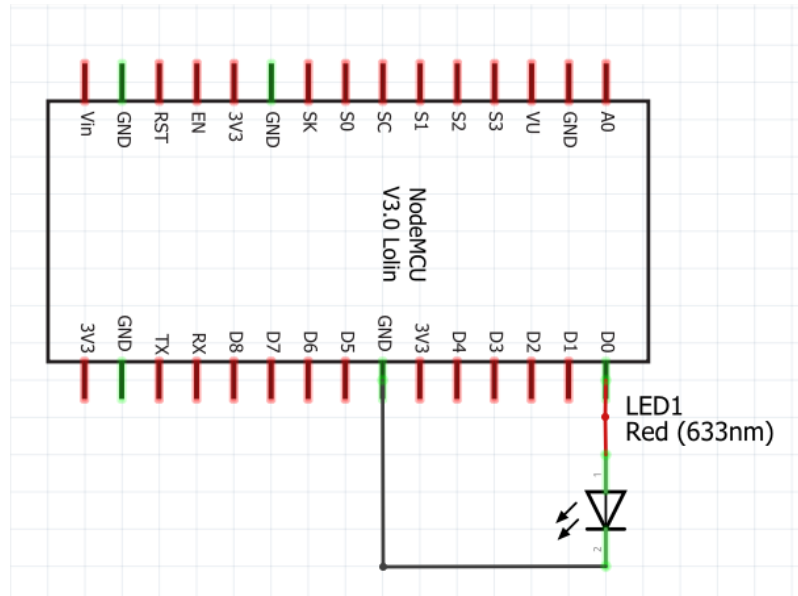


Wiring and Software for the Blink Example

Connect an LED to your WPB107. A resistor is not needed as the I/O's of the WPB107 are current-limited.

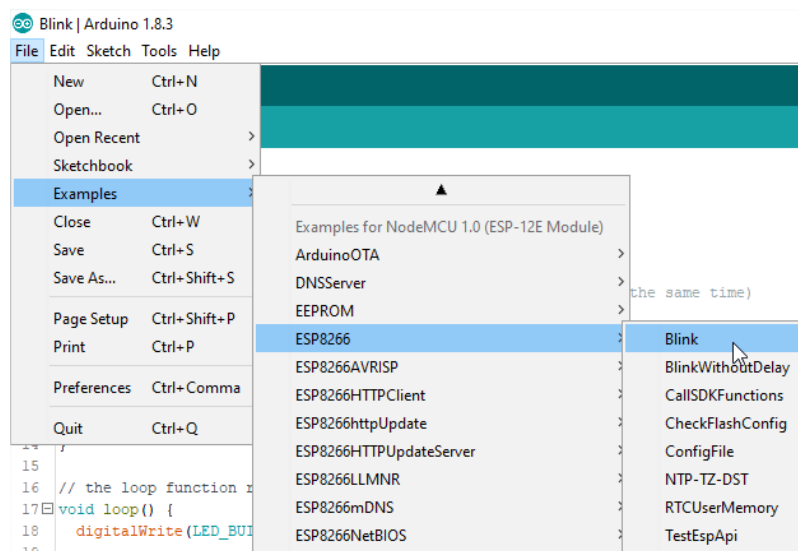
The LED can be replaced by for example the VMA331 so a relay can be controlled.





The sketch for this Blink example is integrated in the ESP8266 board information, which you already installed in the Arduino® IDE.

In your Arduino® IDE, open the examples and select ESP8266 and the example Blink.



Now, the following code is loaded in your IDE. Please take note that the WPB107 has no on-board LED.

Compile and send the code to your WPB107, and enjoy the flashing LED!

```
/* CODE BEGIN
```

Blink the blue LED on the ESP-01 module

This example code is in the public domain

The blue LED on the ESP-01 module is connected to GPIO1

(which is also the TXD pin; so we cannot use Serial.print() at the same time)

Note that this sketch uses LED_BUILTIN to find the pin with the internal LED

```
*/
```

```
void setup() {
```

```
  pinMode(LED_BUILTIN, OUTPUT);  // Initialize the LED_BUILTIN pin as an output
}
```

```
// the loop function runs over and over again forever
```

```
void loop() {
```

```
  digitalWrite(LED_BUILTIN, LOW);  // Turn the LED on (Note that LOW is the voltage level
                                   // but actually the LED is on; this is because
                                   // it is active low on the ESP-01)
```

```
  delay(1000);                      // Wait for a second
```

```
  digitalWrite(LED_BUILTIN, HIGH); // Turn the LED off by making the voltage HIGH
```

```
  delay(2000);                      // Wait for two seconds (to demonstrate the active low LED)
}
```

More Information

For more information, please follow these links:

www.esp8266.com

<https://www.esp8266.com/wiki/doku.php>

<http://www.nodemcu.com>

RED Declaration of Conformity

Hereby, Velleman NV declares that the radio equipment type WPB107 is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address: www.velleman.eu.



whadda.com



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