

Application Note ArduiTouch ESP Simple Codelock



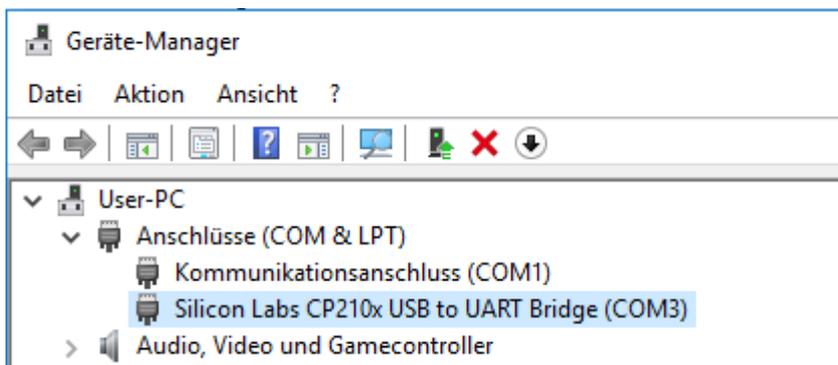
Rev.	Date	Description
A	2019-10-28	First release

1. Install the USB drivers for NodeMCU or Wemos D1

The NodeMCU module includes a CP2102 chip for the USB interface. Usually the driver will be installed automatically if the NodeMCU is connected the first time with the PC. Sometimes this procedure failed. In this case you have to install the driver

<http://www.silabs.com/products/development-tools/software/usb-to-uart-bridge-vcp-drivers>

manually in the Windows device manager.



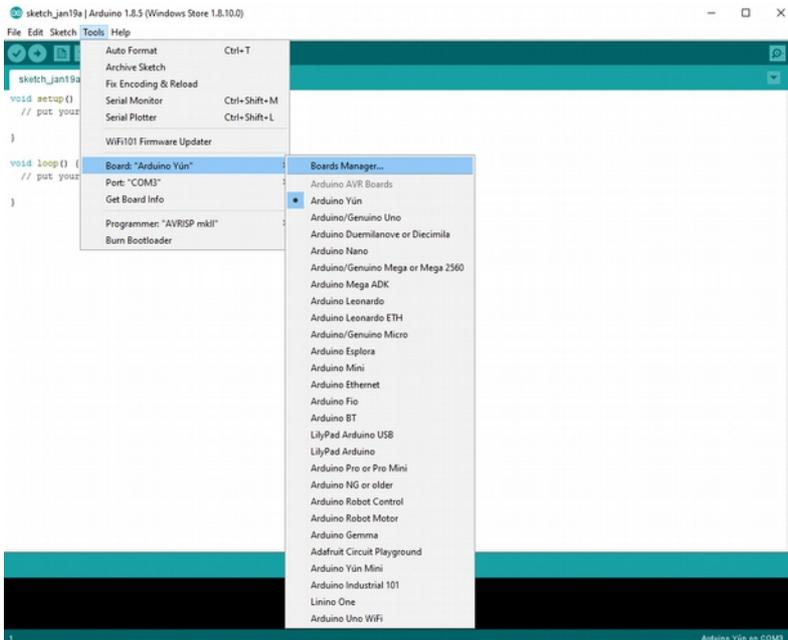
If you want to use the Wemos D1 you have to install the drivers for the CH340 USB interface instead:

http://www.wch.cn/download/CH341SER_ZIP.html

2. Preparation of Arduino IDE

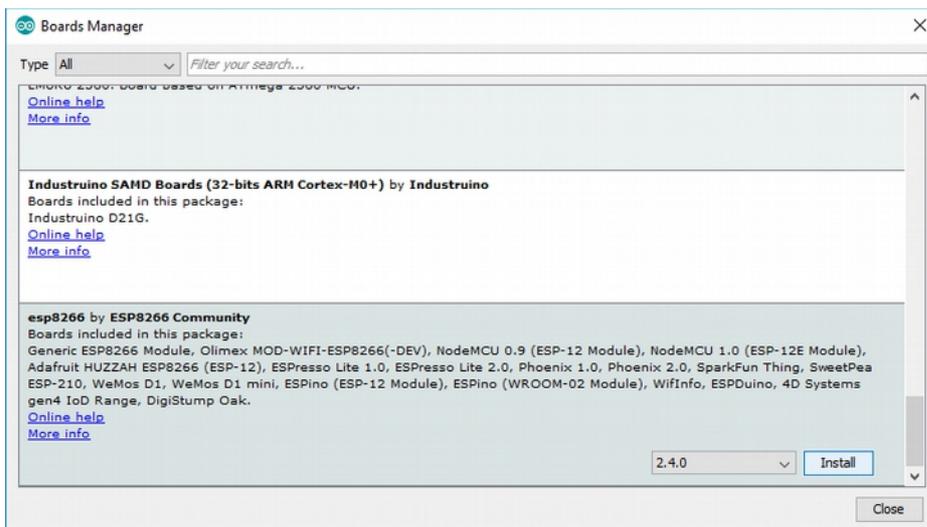
The ESP8266 and/or ESP32 isn't part of the Arduino-IDE. We have to install it first.

Open the board manager: **Tools / Board / Board Manager**



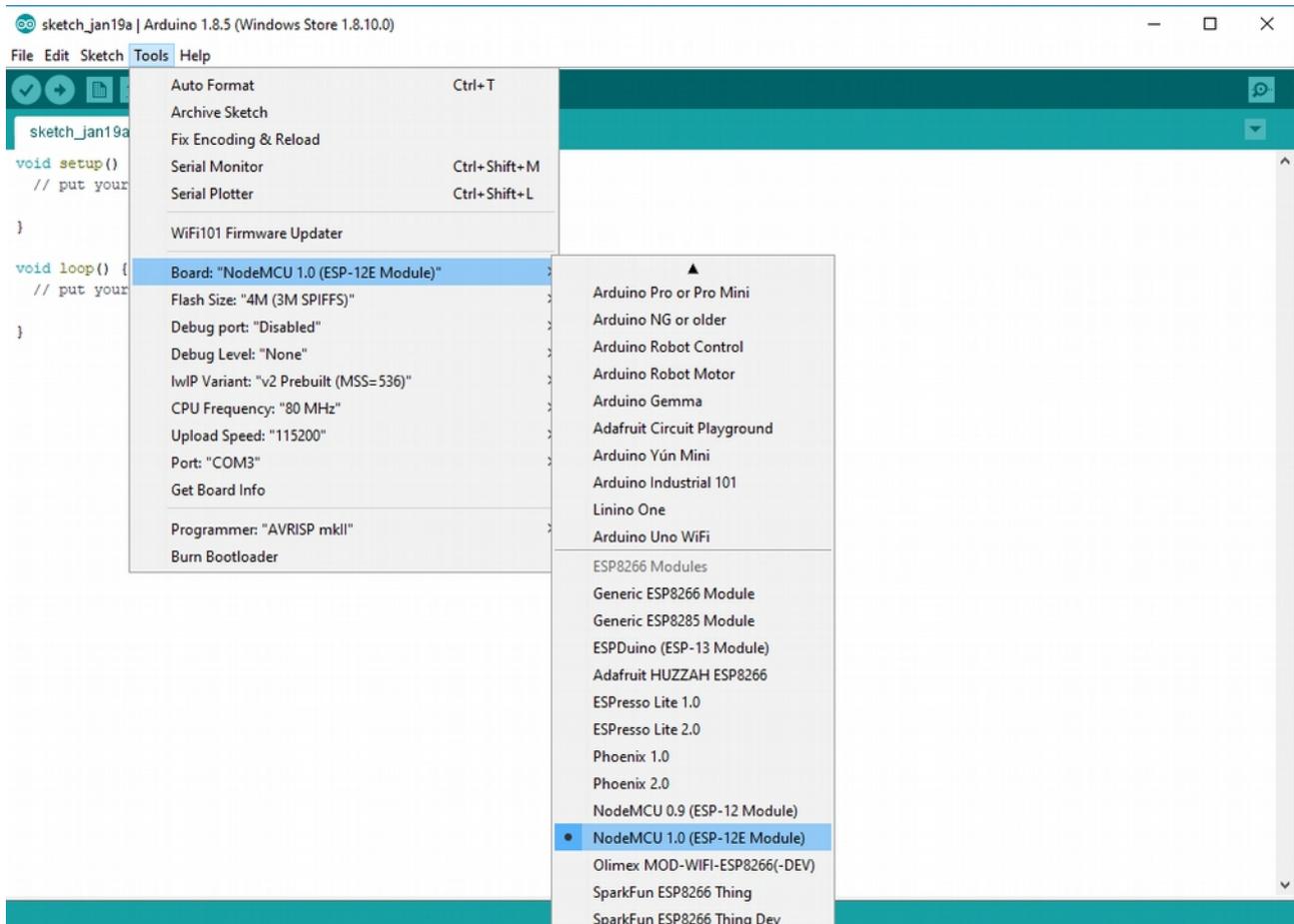
2.1 ESP8266

Go to the ESP8266 entry and install it:



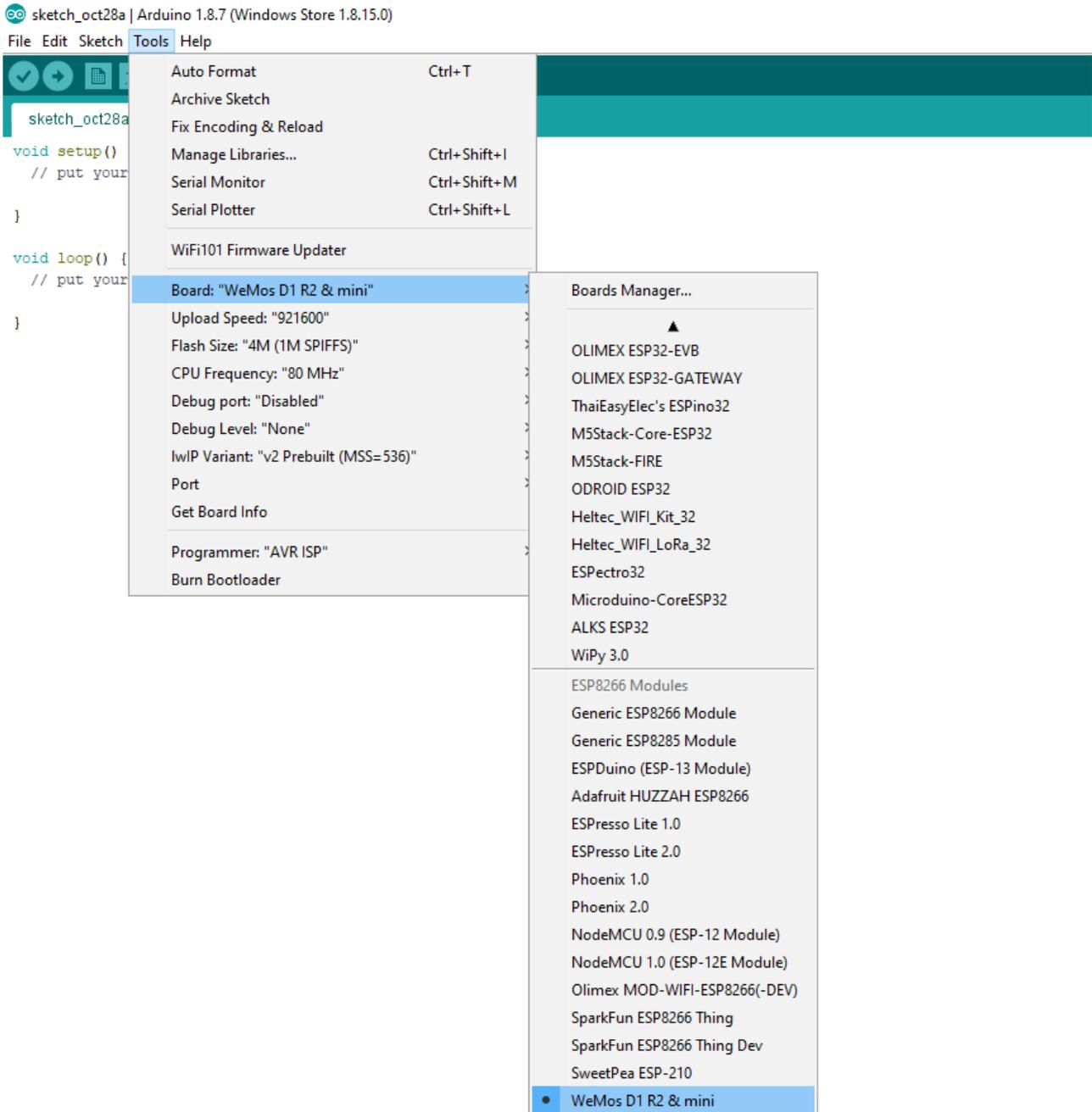
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Now you can choose **NodeMCU 1.0 (ESP-12E Module)**. Set the CPU frequency to 80MHz, Flash Size to „4M (3M SPIFFS)“, the baud rate of your choice and the COM port.



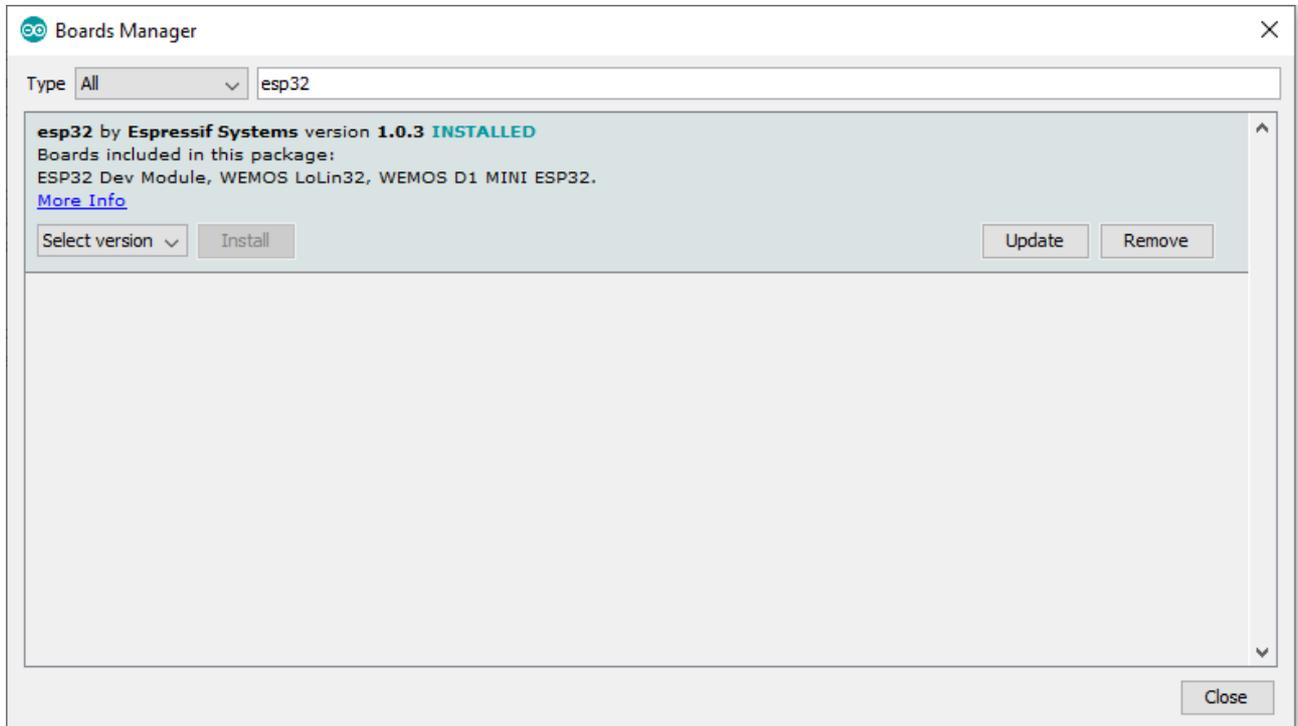
For the Wemos D1 Mini you have to choose **WeMos D1 R2 & mini**. Set the CPU frequency to 80MHz, Flash Size to „4M (3M SPIFFS)“, the baud rate of your choice and the COM port.

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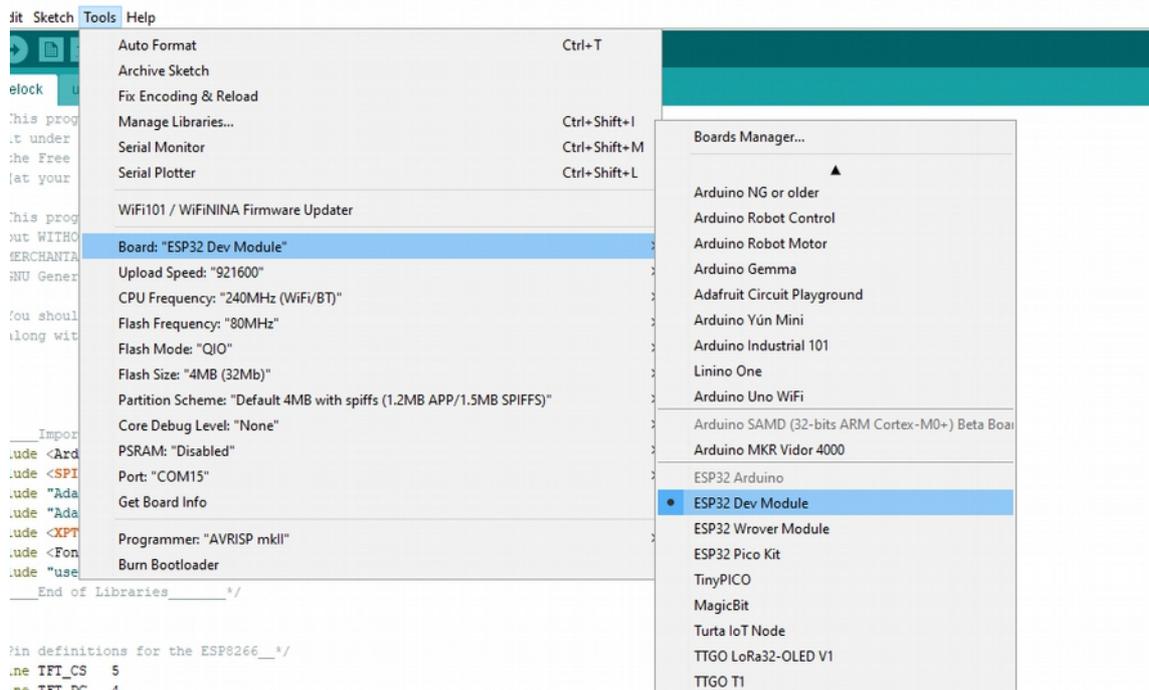


2.1 ESP32

Go to the *ESP32* entry and install it:



Now you can choose **ESP32 Dev Module**. Set the baud rate of your choice and the COM port.



3. Programming

3.1 Installation of additional libraries

Install the following libraries through Arduino Library Manager

Adafruit GFX Library

<https://github.com/adafruit/Adafruit-GFX-Library/archive/master.zip>

Adafruit ILI9341 Library

https://github.com/adafruit/Adafruit_ILI9341

XPT2046_Touchscreen by Paul Stoffregen

https://github.com/PaulStoffregen/XPT2046_Touchscreen/blob/master/XPT2046_Touchscreen.h

You can also download the library also directly as ZIP file and uncompress the folder under yourarduinofolder/libraries/

After installing the Adafruit libraries, restart the Arduino IDE.

3.2 Source Code

You will find the source code on our website.

<https://www.hwhardsoft.de/english/projects/arduitouch-esp/>

3.3 Custom settings in settings.h

In the source code you can set the code number :

```
#define codenum 42
```

42 is the answer for everything, but you can change this to any number between 0 and 999999.

3.4 Run the demo

Please open this sample in the Arduino IDE. After compilation and upload you will see the keypad. Now you can enter a code number and confirm with „OK“ button.