ESP8266 & NodeMCU Getting Started

This tutorial is based on NodeMCU V3 development board (CP2102/CH340 are applicable) and lua programming design. Confirm that the computer has installed the relevant USB driver (CP2102/CH340)，and that this development board is updated to NodeMCU firmware.Follow the instructions below to update.

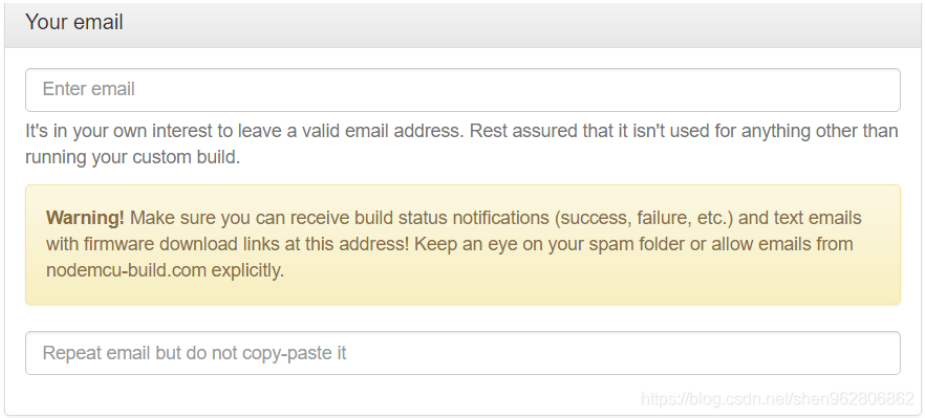
I、Ready to work

1、 Download the firmware of the corresponding configuration

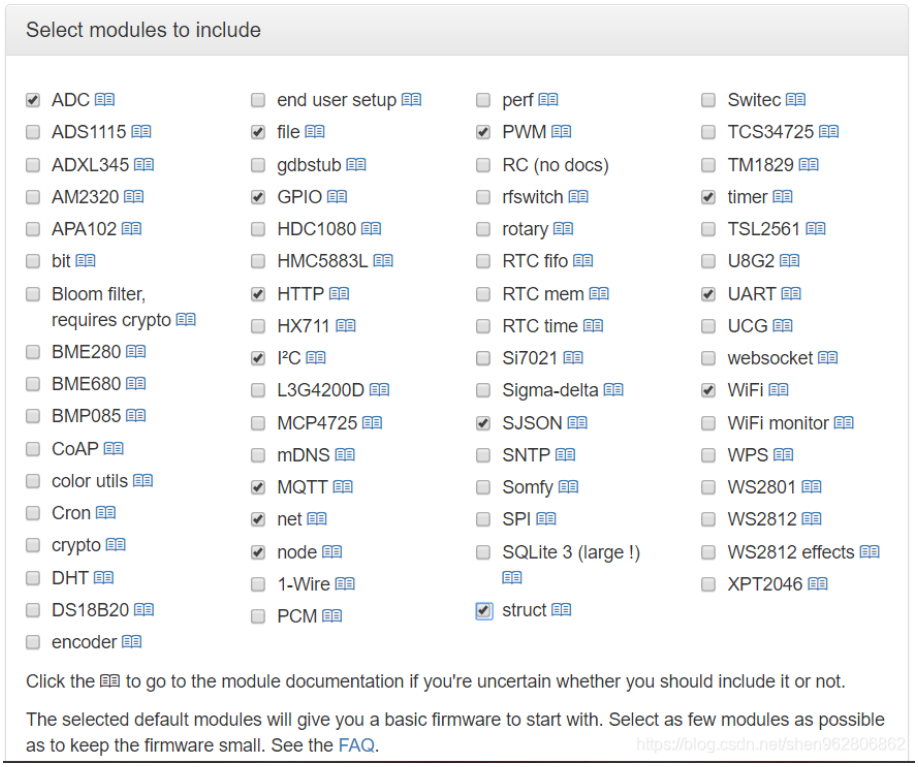
Here we choose the method of cloud compilation and download it through the official website.

https://nodemcu-build.com/ (We provide a fireware in the attachment as well)

Here you need to fill in an available mailbox to receive the firmware download address.



These options are optional features, choose according to your needs

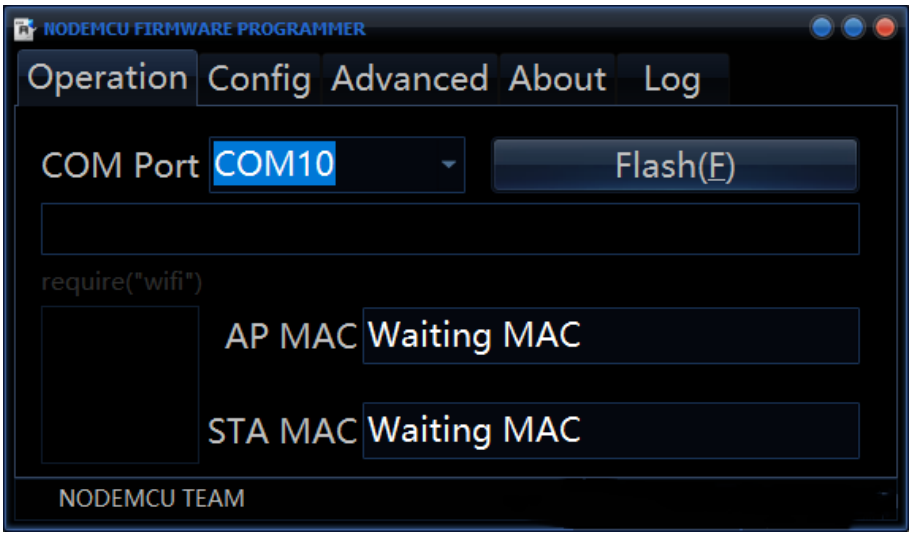


Then follow the address in the mailbox to download

2、Download the software to burn the firmware and burn it in

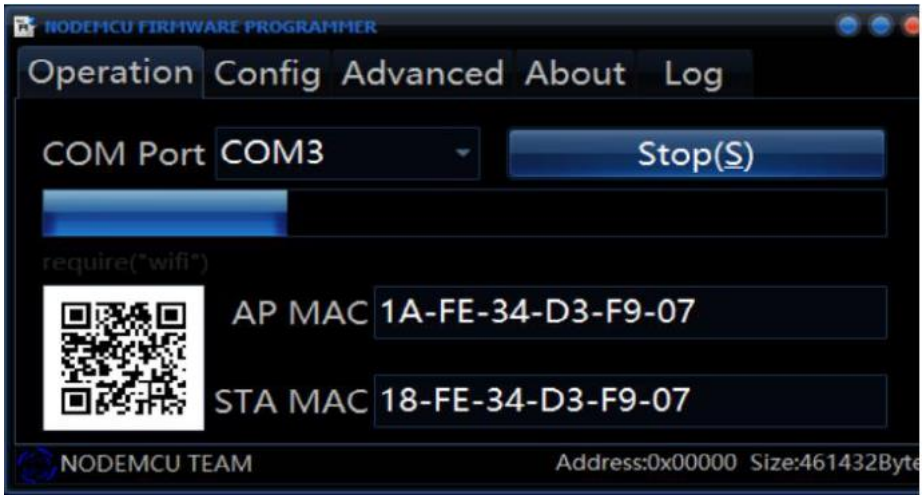
Firmware burning software recommended NodeMCU Flasher.

Connect the Nodemcu to the computer and run NodeMCU Flasher



Under the config tab, configure the path of your own firmware

Then go back to operation, click Flash



II、Test with ESPlorer

1、 Download and install lua programming and debugging tools ESPlorer

Official website https://esp8266.ru/esplorer/

The supporting software folder has a free installation version

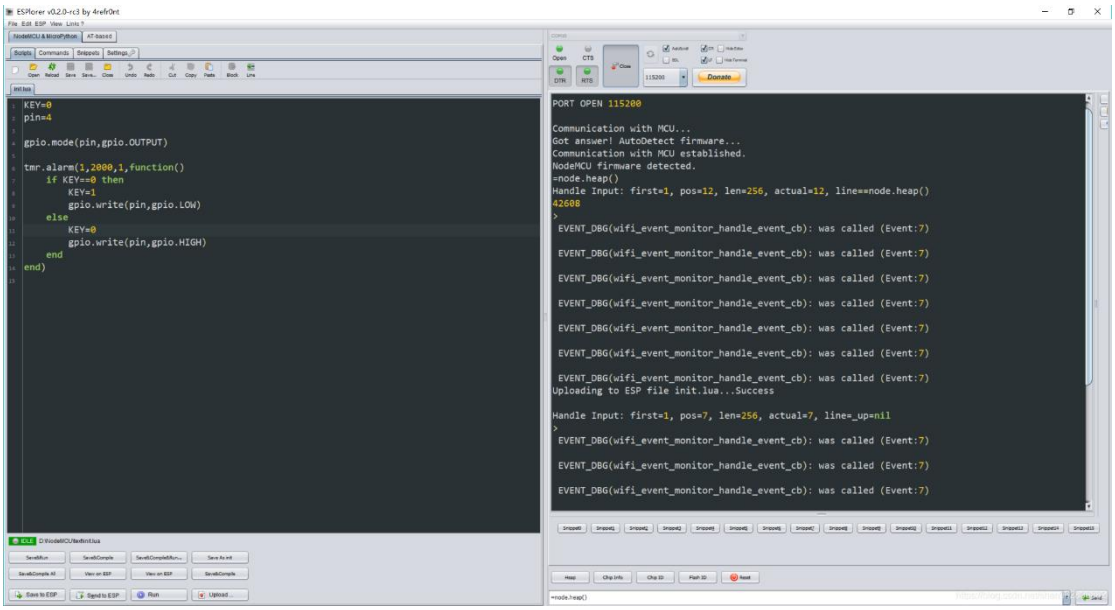
After the software compression package is opened, these things can be used directly by clicking on the .bat file (Note: In addition to the software will open a cmd window, it cannot be closed, otherwise the software will also be closed together)

_lua	2016/4/27 23:43	文件夹	
_micropython	2016/4/27 23:44	文件夹	
lib	2016/4/25 18:05	文件夹	
ESPlorer.bat	2016/4/21 23:04	Windows 批处理...	1 KB
ESPlorer.jar	2016/4/25 18:05	Executable Jar File	2,150 KB
ESPlorer.Log	2018/12/7 22:34	文本文档	0 KB
ESPlorer.Log.lck	2018/12/7 22:34	LCK 文件	0 KB
README.TXT	2016/4/25 18:05	文本文档	2 KB

Note: ESPlorer requires Java SE7 and above, please configure the computer environment by yourself.

2、 Start ESPlorer and set the serial port baudrate to 9600

After setting, click open to connect with nodemcu



Briefly introduce:

1) The right part is used to display the status of the microcontroller.

2) The open button on the upper right is the serial port, and the number on the right is the baud rate, which is set during programming (usually 9600 or 115200). After adjusting, press the open button to connect. The first 8 lines of text in the figure show that the connection is successful, and three of the four lights on the software will turn green.

3) Below the right side is the function area. Can you perform certain operations on the MCU inputting some functions.

4) The left part is the code area, which is used for programming.
5) The upper line of patterns on the left part are: new file, open file, reload, save file and close file. After creating a new file and saving the program, the file extension is .lua.
6) After clicking Upload at the bottom right corner on the left, select the corresponding file to open it and it will be automatically downloaded into the microcontroller.

3、Simple routine operation

Paste the code below [2s dark and 2s light] (just as simple as 51 lighting a water lamp)

```
KEY=0
pin=4

gpio.mode(pin,gpio.OUTPUT)

tmr.alarm(1,2000,1,function()
    if KEY==0 then
        KEY=1
        gpio.write(pin,gpio.LOW)
    else
        KEY=0
        gpio.write(pin,gpio.HIGH)
    end
end)
```

Then save and upload, download the software into the microcontroller.

For more learning, please refer to the website
https://nodemcu.readthedocs.io/en/release/getting-started/