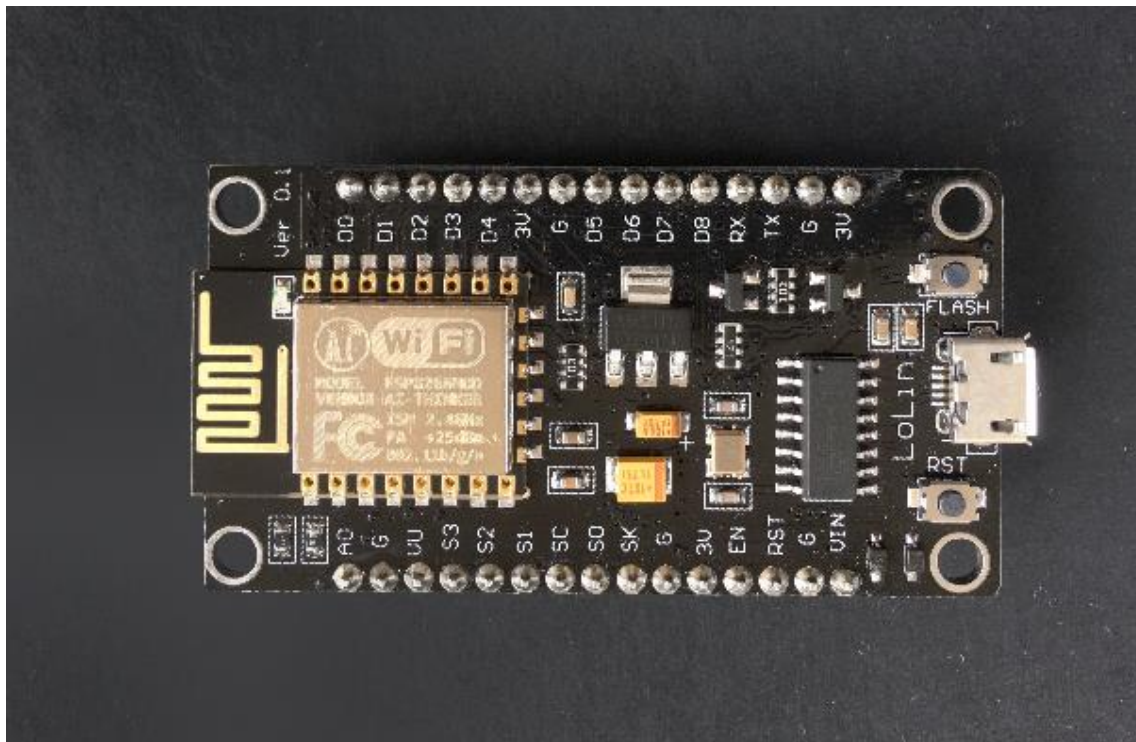


NodeMCU使用介紹

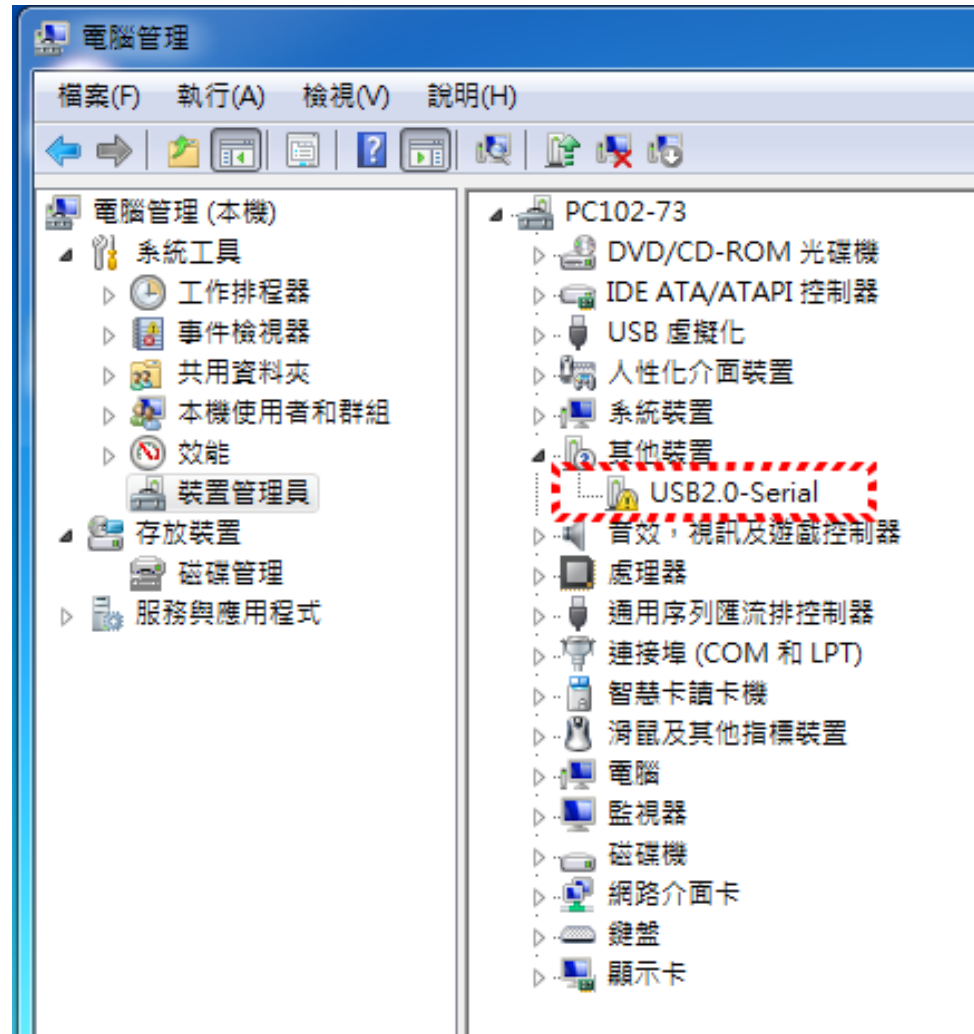


弘道國中
潘建宏

275@htjh.tp.edu.tw

安裝nodeMCU驅動程式

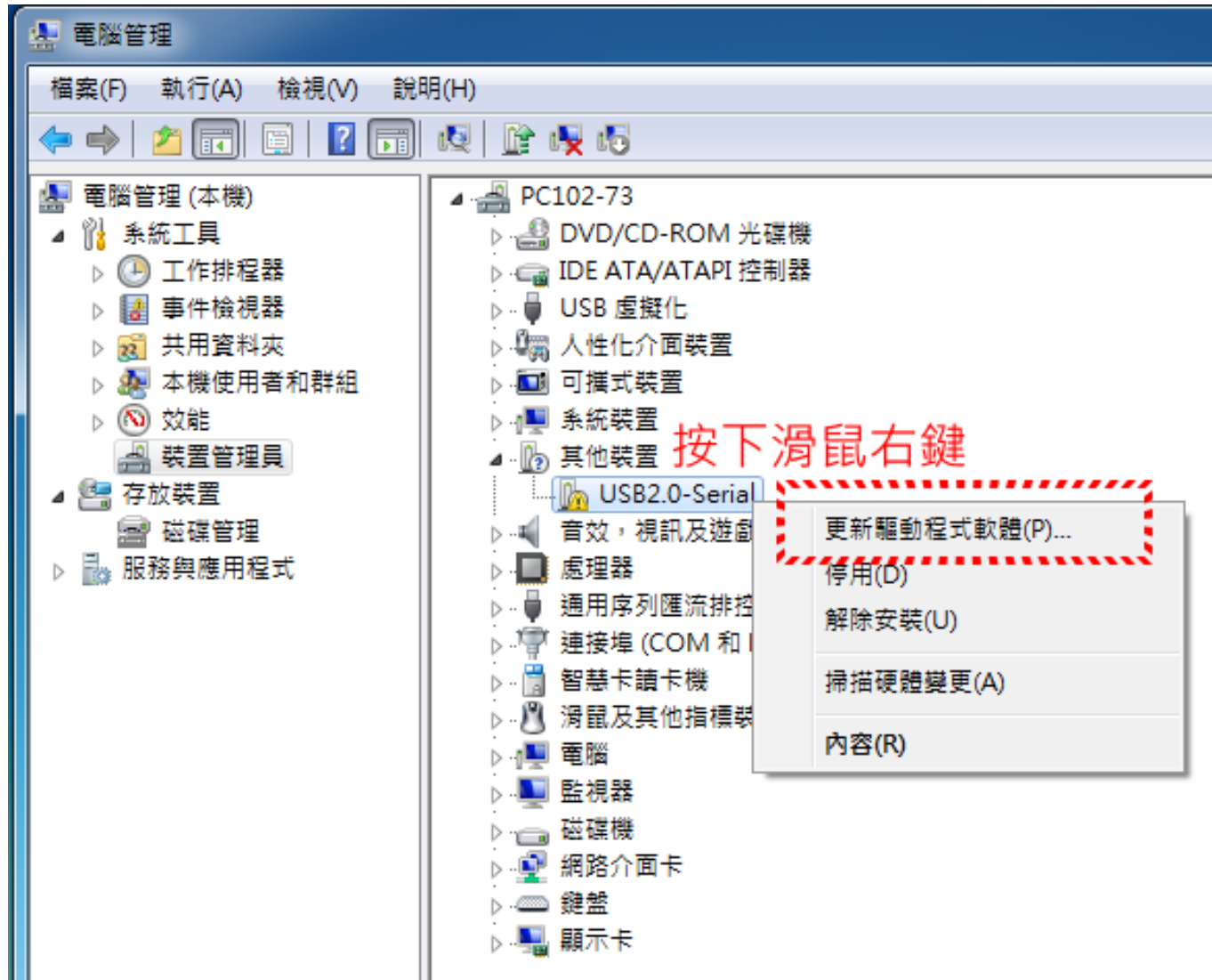
- 將NodeMCU使用Micro USB排線連接電腦。
- 於控制台的裝置管理員看到NodeMCU並未被驅動。



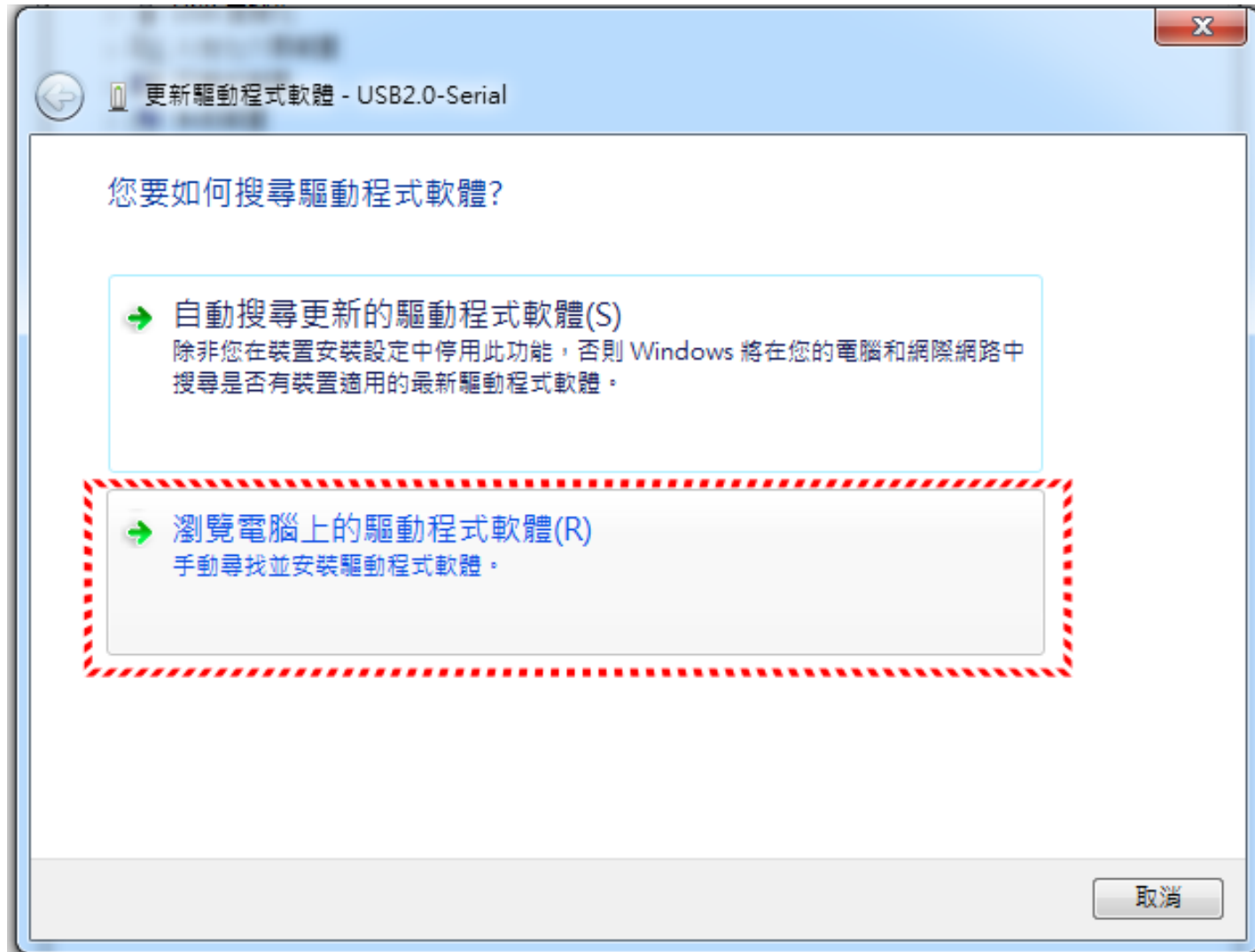
安裝nodeMCU驅動程式

- 對於Windows使用者，若無法自動偵測nodeMCU驅動程式，需要自行下載安裝COM埠驅動程式。
- nodeMCU V3 使用CH340G USB-to-UART橋接晶片組。
 - USB-SERIAL CH340G 驅動程式下載
 - <http://www.arduined.eu/files/CH341SER.zip>
- nodeMCU V2 使用CP2102 USB-to-UART橋接晶片組。
 - USB-SERIAL CP2102 驅動程式下載
 - https://www.silabs.com/documents/public/software/CP210x_Windows_Drivers.zip

安裝nodeMCU驅動程式

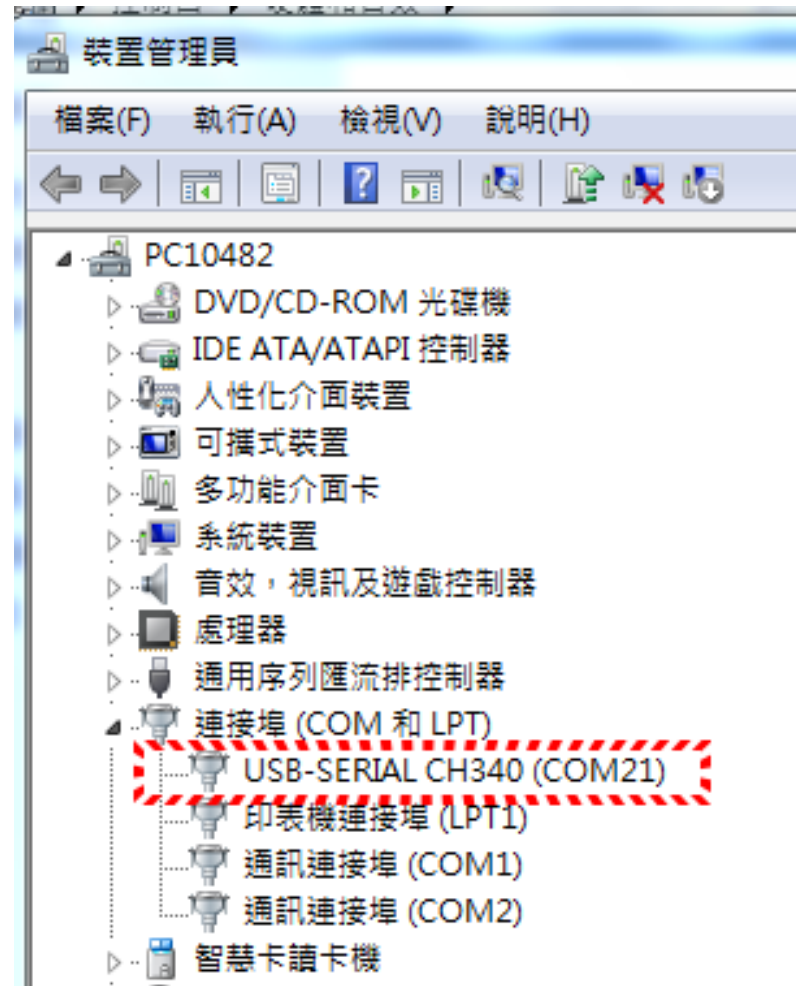


安裝nodeMCU驅動程式



查看NodeMCU連接埠編號

- 安裝驅動程式，於控制台的裝置管理員查看NodeMCU連接埠編號。



下載Arduino IDE

- <https://www.arduino.cc/en/Main/Software>

Download the Arduino IDE



ARDUINO 1.8.4

The open-source Arduino Software (IDE) makes it easy to write code and upload it to the board. It runs on Windows, Mac OS X, and Linux. The environment is written in Java and based on Processing and other open-source software.

This software can be used with any Arduino board. Refer to the [Getting Started](#) page for installation instructions.

Windows Installer

Windows ZIP file for non admin install

Windows app 

Mac OS X 10.7 Lion or newer

Linux 32 bits

Linux 64 bits

Linux ARM

[Release Notes](#)

[Source Code](#)

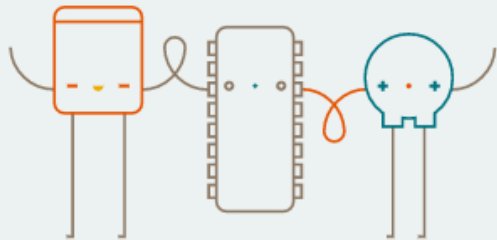
[Checksums \(sha512\)](#)

下載Arduino IDE

- 選擇JUST DOWNLOAD，僅下載不捐助

Contribute to the Arduino Software

Consider supporting the Arduino Software by contributing to its development. (US tax payers, please note this contribution is not tax deductible). [Learn more on how your contribution will be used.](#)



SINCE MARCH 2015, THE ARDUINO IDE HAS BEEN DOWNLOADED **17,896,354** TIMES. (IMPRESSIVE!) NO LONGER JUST FOR ARDUINO AND GENUINO BOARDS, HUNDREDS OF COMPANIES AROUND THE WORLD ARE USING THE IDE TO PROGRAM THEIR DEVICES, INCLUDING COMPATIBLES, CLONES, AND EVEN COUNTERFEITS. HELP ACCELERATE ITS DEVELOPMENT WITH A SMALL CONTRIBUTION! REMEMBER: OPEN SOURCE IS LOVE!

\$3

\$5

\$10

\$25

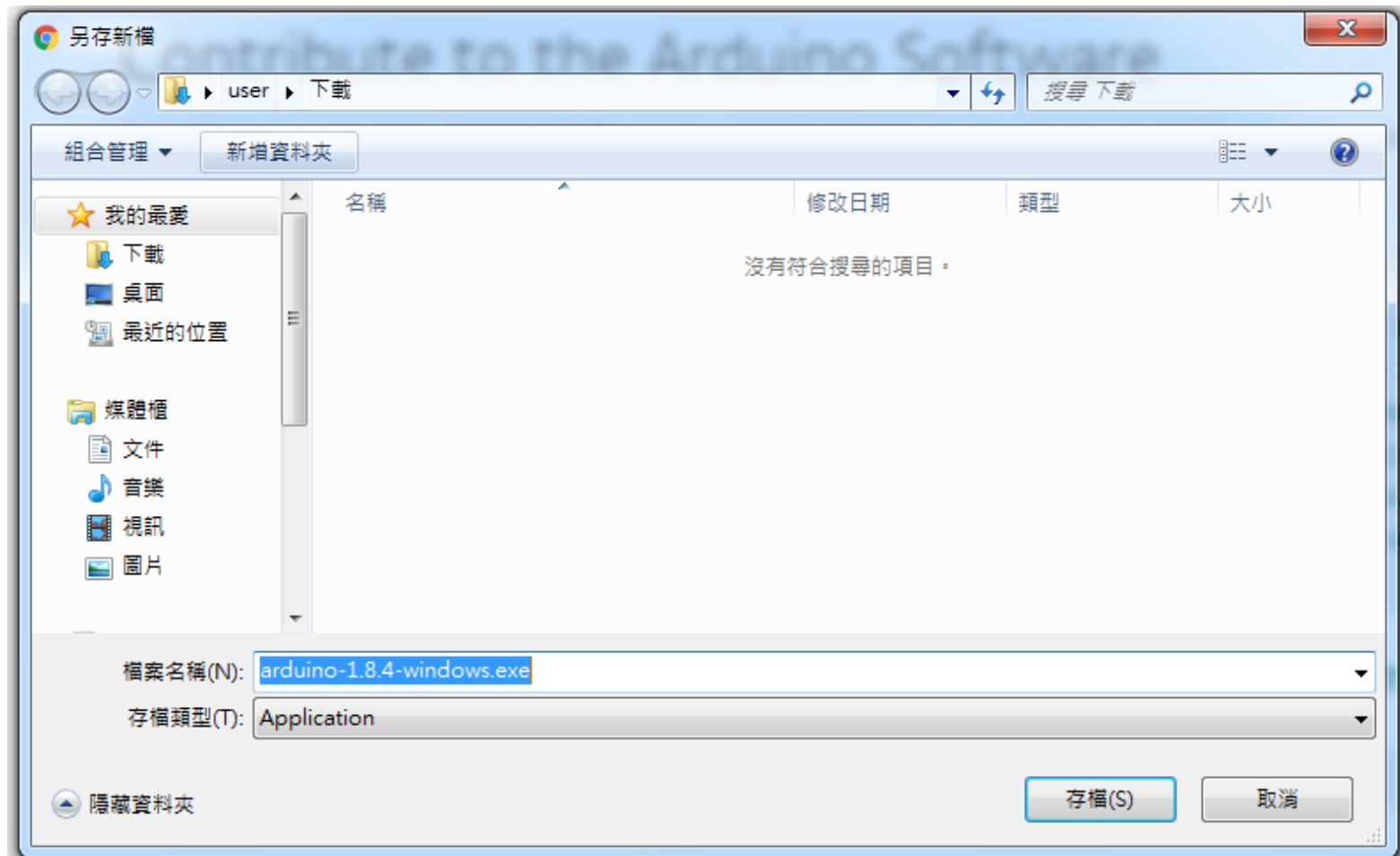
\$50

OTHER

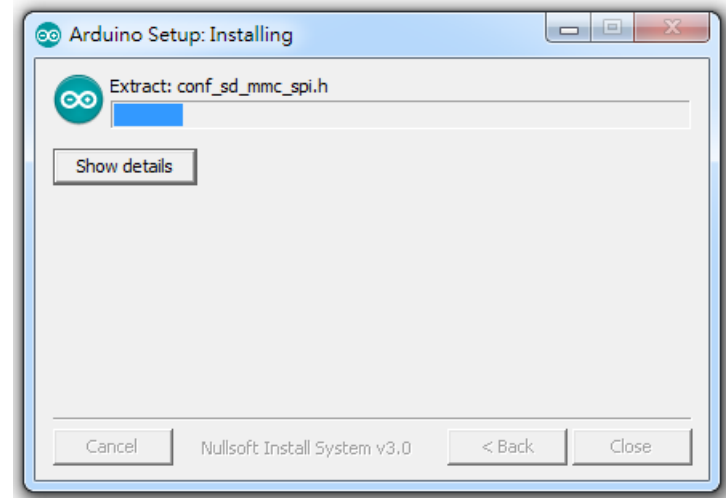
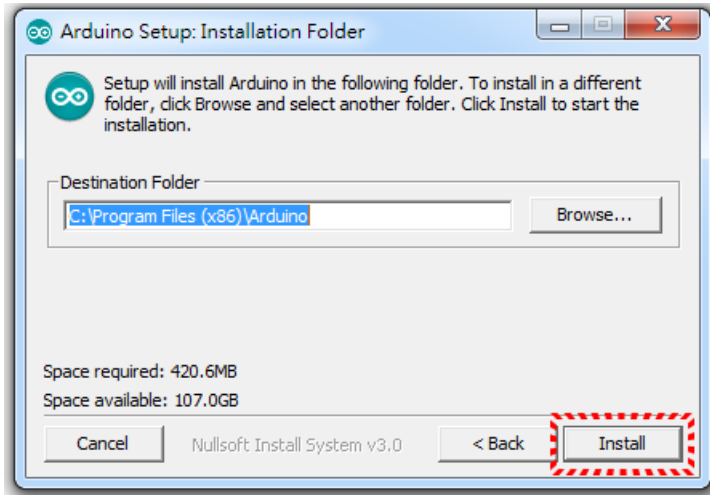
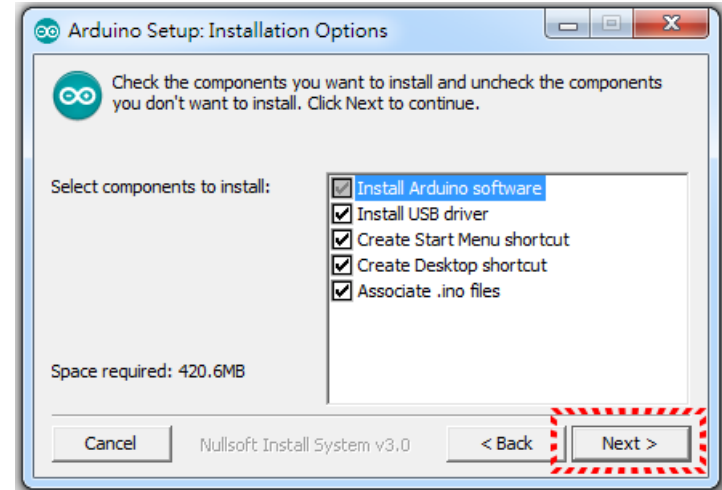
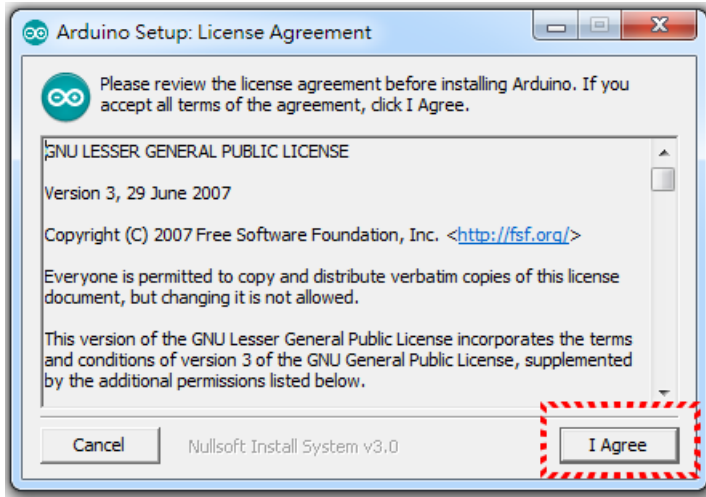
JUST DOWNLOAD

CONTRIBUTE & DOWNLOAD

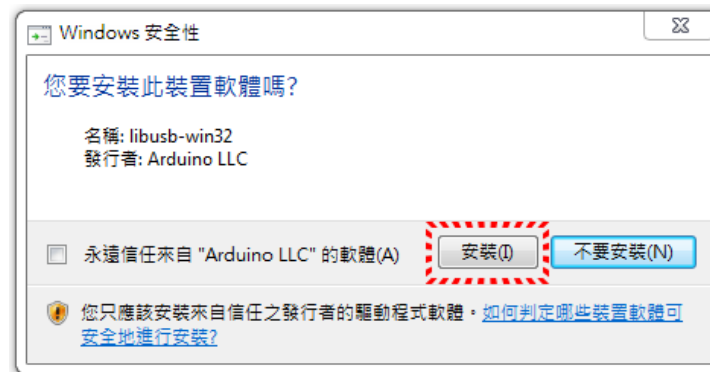
記住存檔位置與名稱



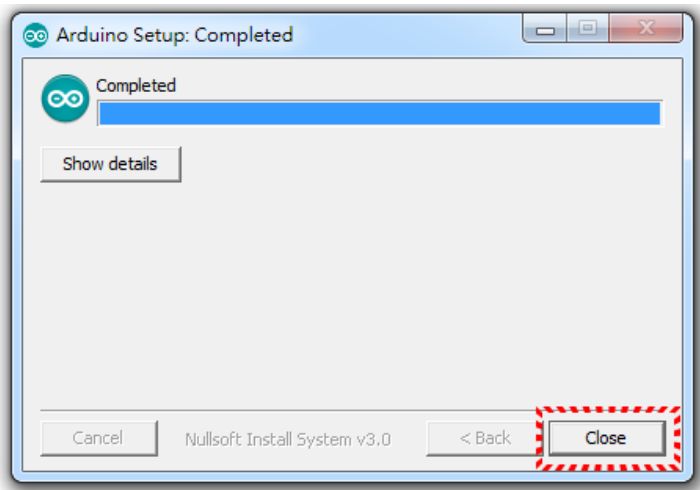
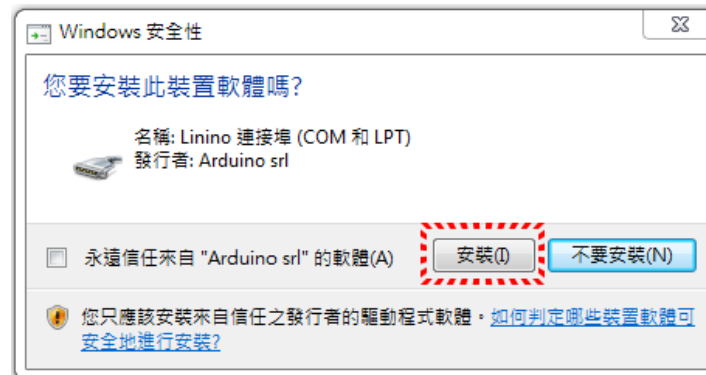
Arduino IDE安裝(一)



Arduino IDE安裝(二)

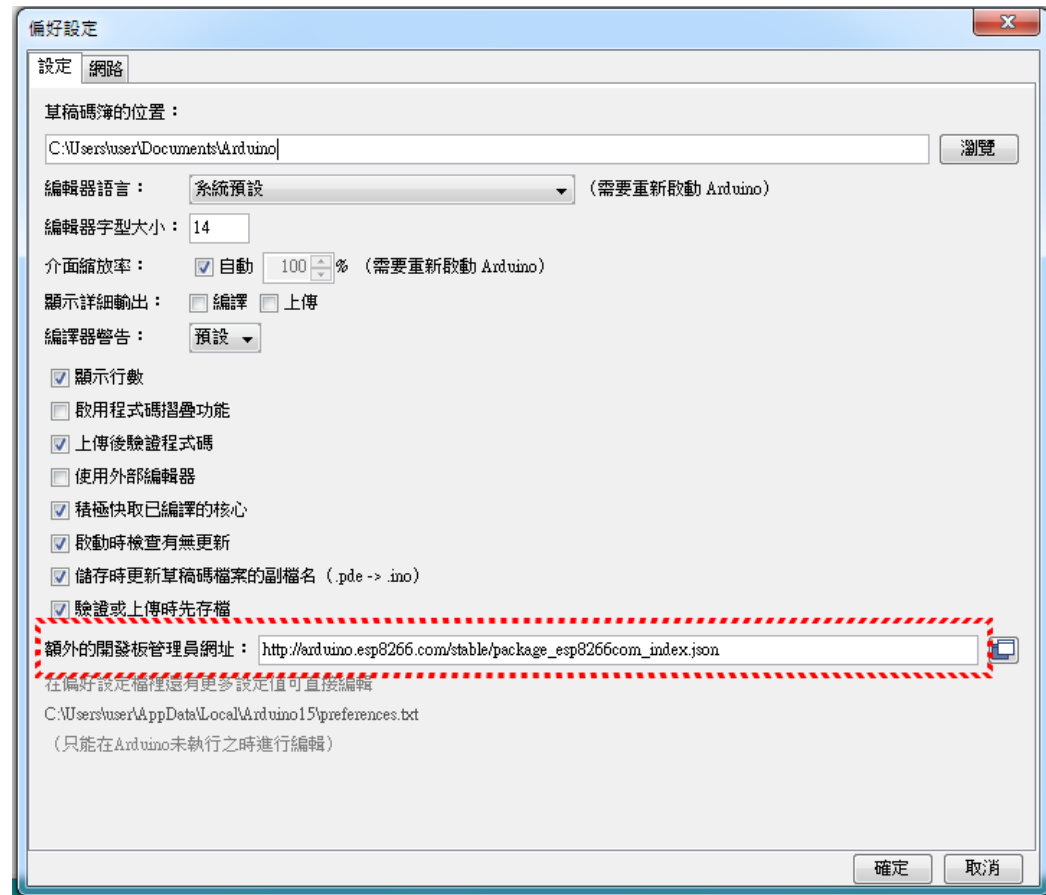


Arduino IDE安裝(三)



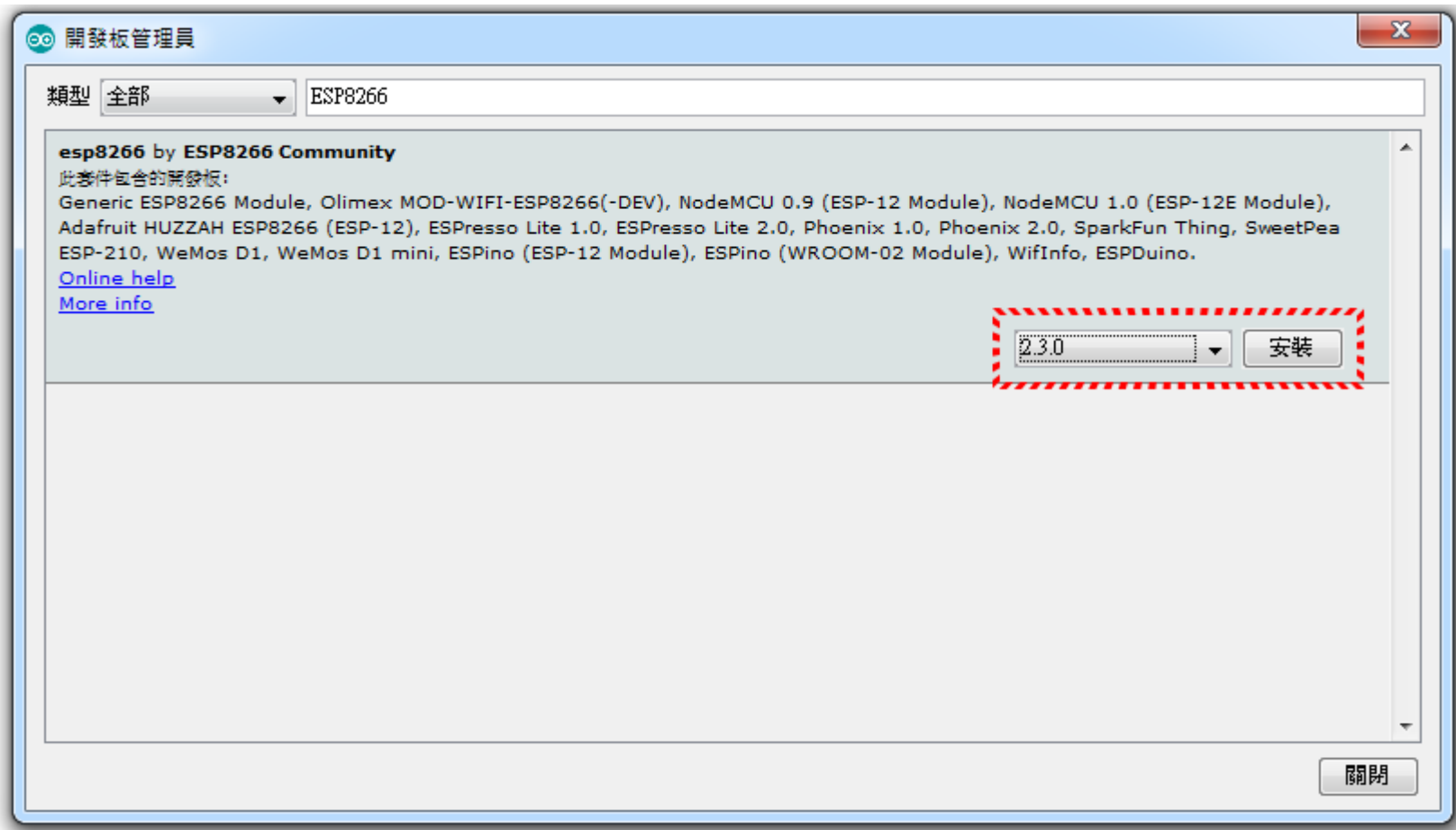
在 Arduino IDE 設定 NodeMCU

- 檔案/偏好設定 => 額外的開發板管理員網址，加入
- http://arduino.esp8266.com/stable/package_esp8266com_index.json



安裝ESP8266開發板

- 工具/開發板/開發板管理員



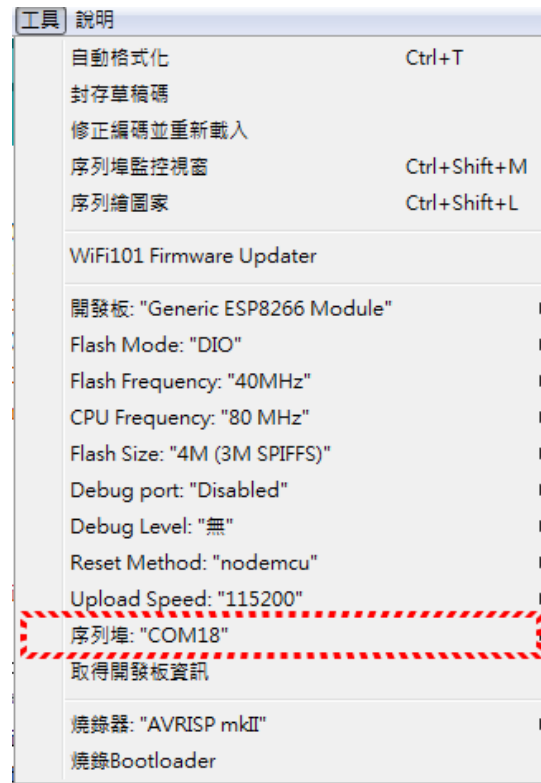
選擇開發板

- 工具/開發板 =>Generic ESP8266 Module

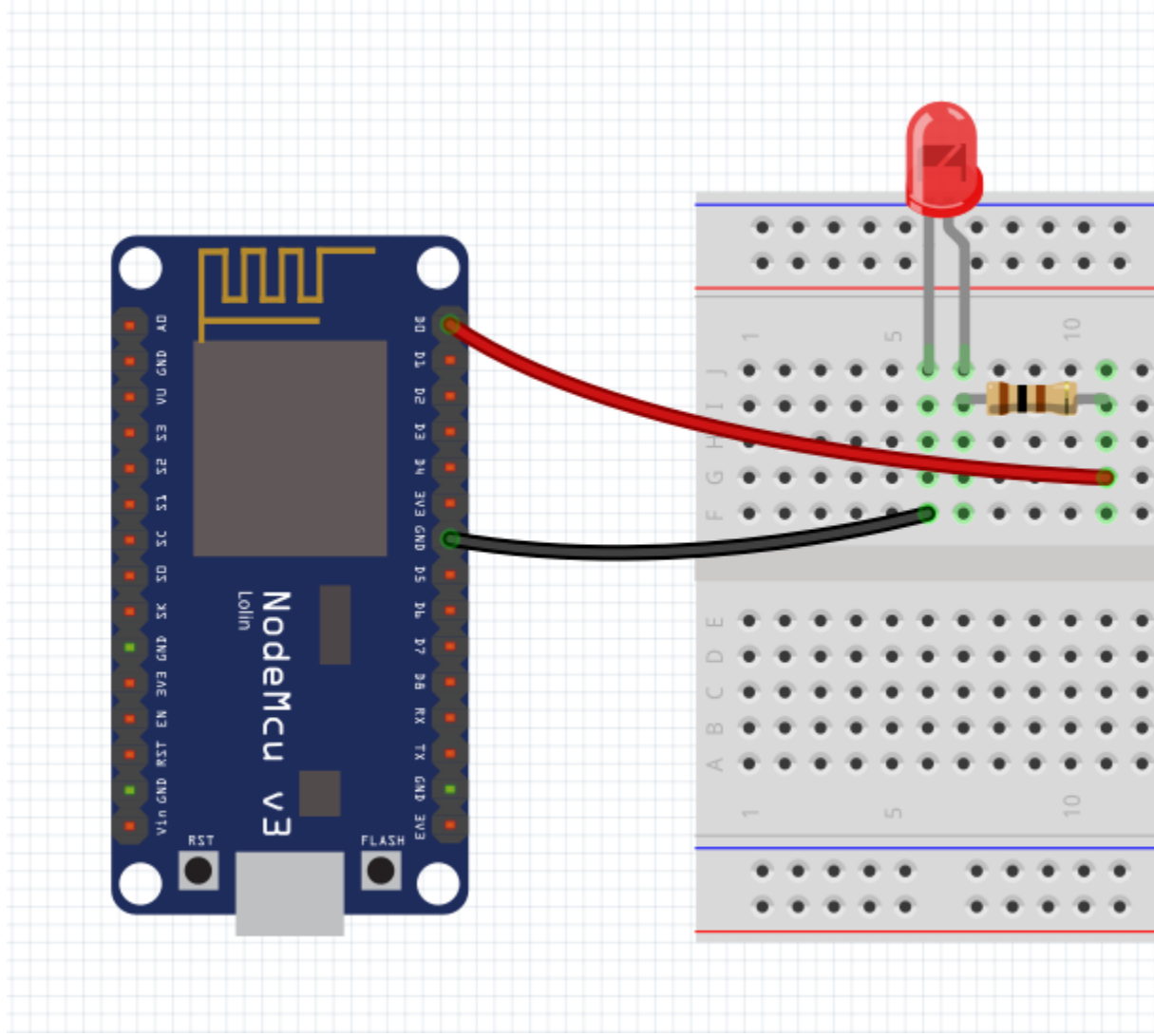


序列埠設定

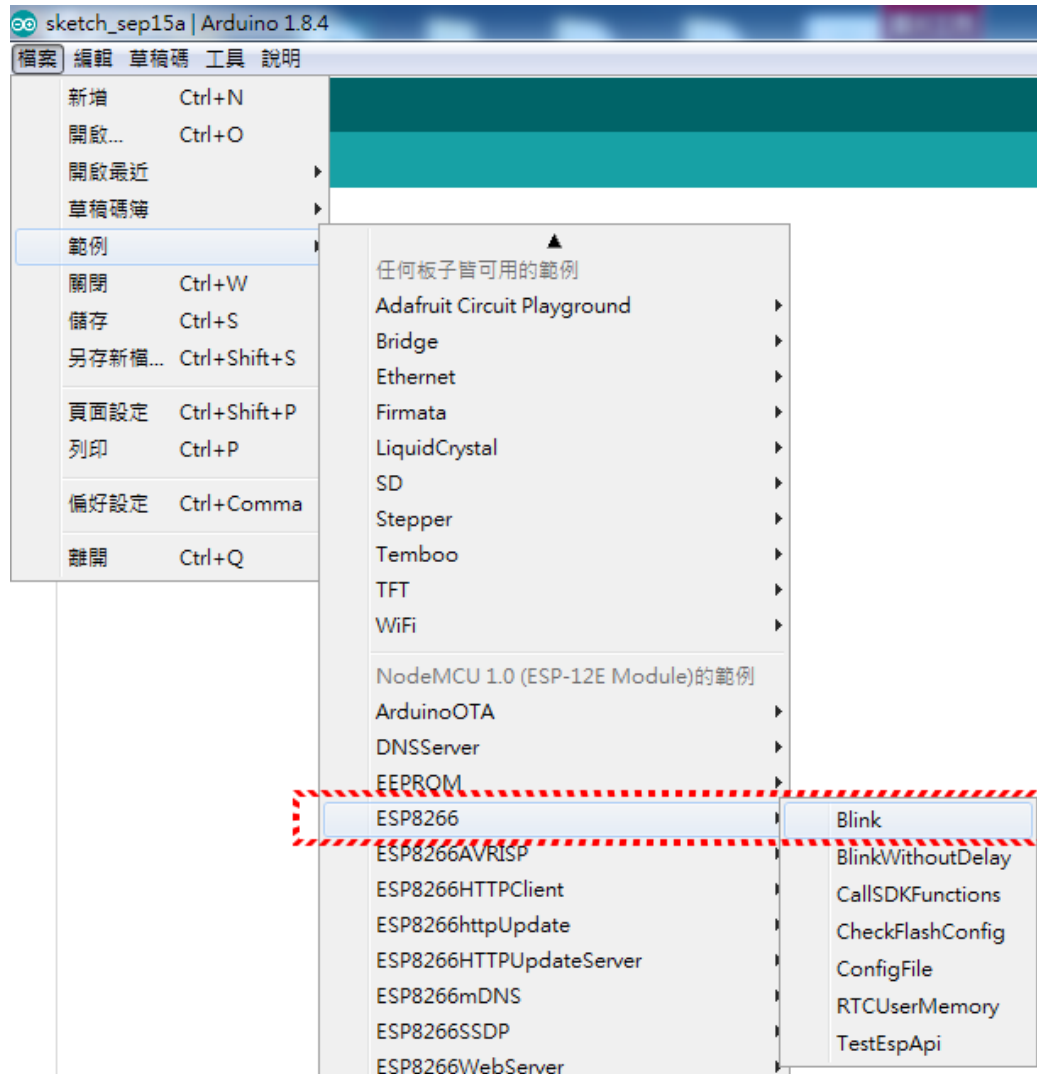
- 於裝置管理員查出的nodeMCU COM編號



連結電子零件



以Blink測試nodeMCU是否正常



上傳程式到nodeMCU



上傳完畢。

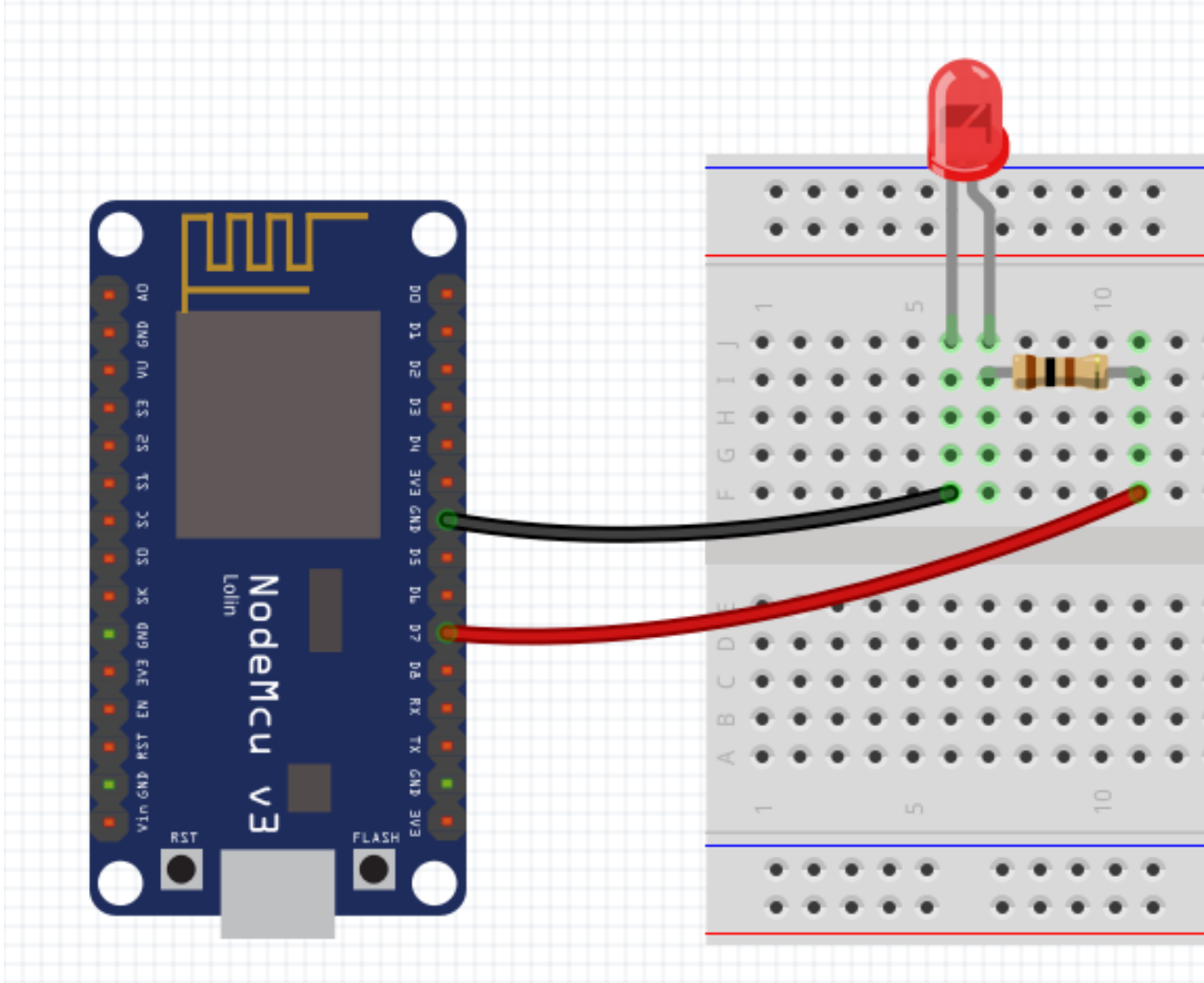
草稿碼使用了 222201 bytes (21%) 的程式儲存空間。上限為 1044464 bytes。

全域變數使用了 31576 bytes (38%) 的動態記憶體，剩餘 50344 bytes 給區域變數。上限為 81920 bytes。

Uploading 226352 bytes from C:\Users\user\AppData\Local\Temp\arduino_build_760189\Blink.ino.bin to flash at 0x00000000

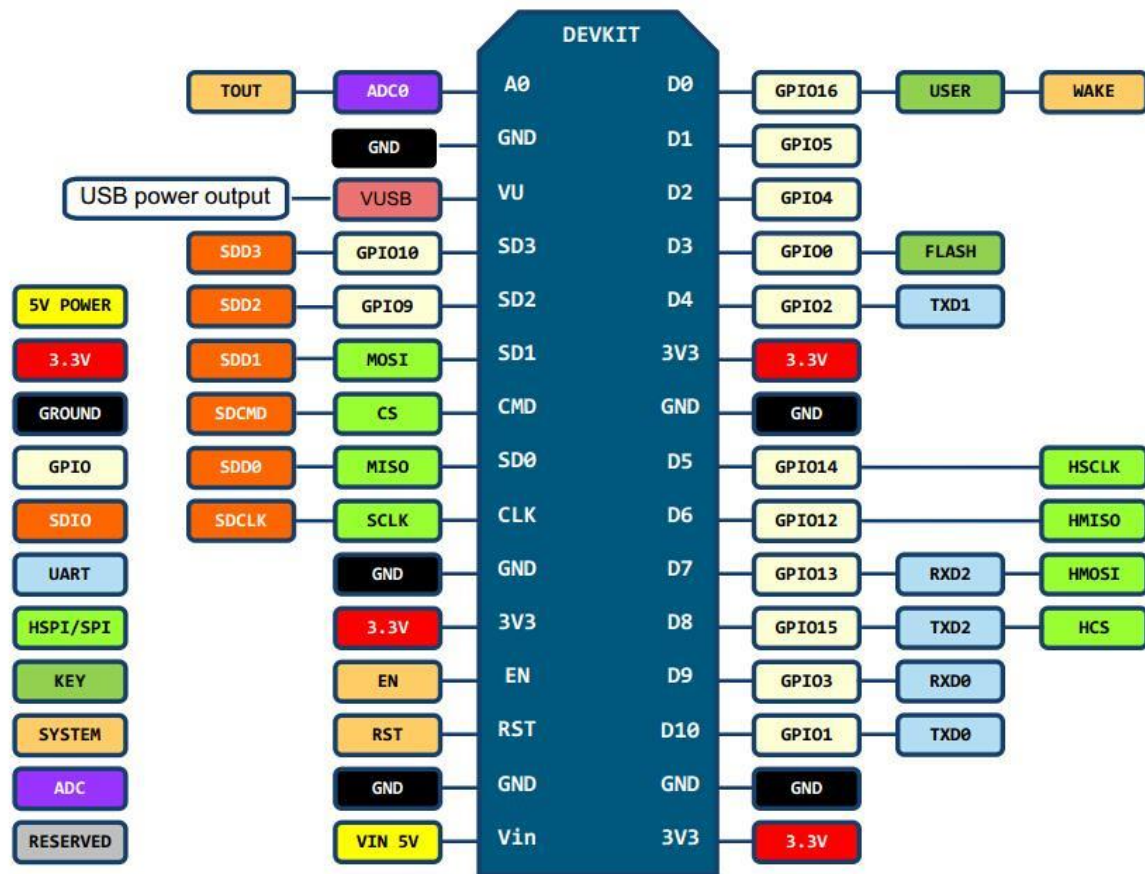
..... [36%]
..... [72%]
..... [100%]

思考程式如何修改？



nodeMCU腳位定義

PIN DEFINITION



D0(GPI016) can only be used as gpio read/write, no interrupt supported, no pwm/i2c/ow supported.

nodeMCU的輸出類型

- 數位輸出
 - HIGH, LOW ◦
 - 語法：digitalWrite(pin, value) ◦
- 模擬類比輸出（PWM輸出）
 - D0(GPIO16)不支援PWM輸出◦
 - nodeMCU的PWM輸出為10位元解析度◦
 - 數值範圍 0~1023 ◦
 - 語法：analogWrite(pin, value) ◦