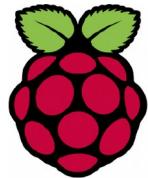


台灣樹莓派

<https://www.raspberrypi.com.tw/>

# 組裝驢車 (Donkey Car)

台灣樹莓派 <[sosorry@raspberrypi.com.tw](mailto:sosorry@raspberrypi.com.tw)>



# CC (Creative Commons)

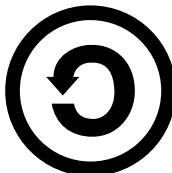
## 姓名標示 — 非商業性 — 相同方式分享



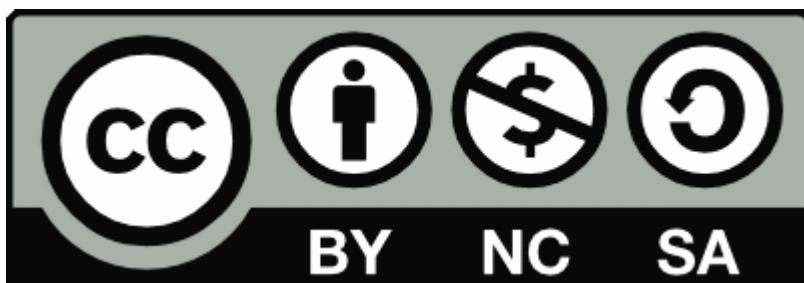
姓名標示 — 你必須給予 適當表彰、提供指向本授權條款的連結，以及 指出（本作品的原始版本）是否已被變更。你可以任何合理方式為前述表彰，但不得以任何方式暗示授權人為你或你的使用方式背書。

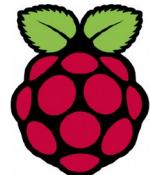


非商業性 — 你不得將本素材進行商業目的之使用。



相同方式分享 — 若你重混、轉換本素材，或依本素材建立新素材，你必須依本素材的授權條款來散布你的貢獻物。





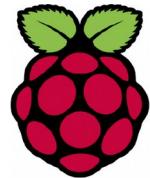
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# 關於我們

- Raspberry Pi 官方經銷商





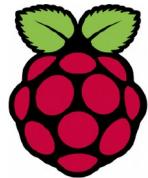
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# about 台灣樹莓派

- 專注於 Raspberry Pi 應用與推廣
- 舉辦社群聚會 / 工作坊 / 讀書會 / 黑客松
- Website:
  - <https://www.raspberrypi.com.tw/>
- Facebook:
  - 搜尋 RaspberryPi.Taiwan
  - <https://www.facebook.com/RaspberryPi.Taiwan>





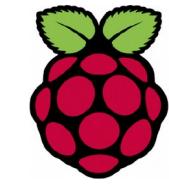
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# 分享 x 教學

- COSCUP , MakerConf , PyCon , HKOSCon 講者
- 投影片
  - <http://www.slideshare.net/raspberrypi-tw/presentations>
- 程式碼
  - <https://github.com/raspberrypi-tw>

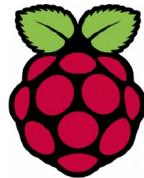




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**開始組裝驢車啦！**



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# Donkey Car 所需零件

HSP 原廠 RC 搖桿



2.4GHz 搖桿



雷射切割車架



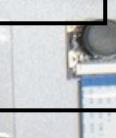
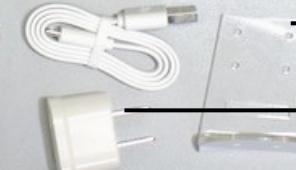
專用鋰電池



Pi 3B+



螺絲包 電源線



相機架

杜邦線

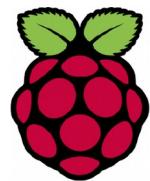
轉接頭

魚眼相機

SD 卡

馬達驅動板





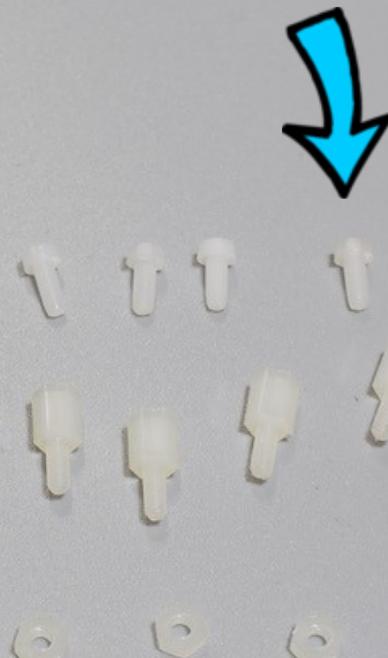
台灣樹莓派

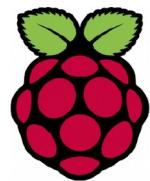
<https://www.raspberrypi.org/tw/>

# 準備樹莓派和四組螺絲



三個一組，共四組

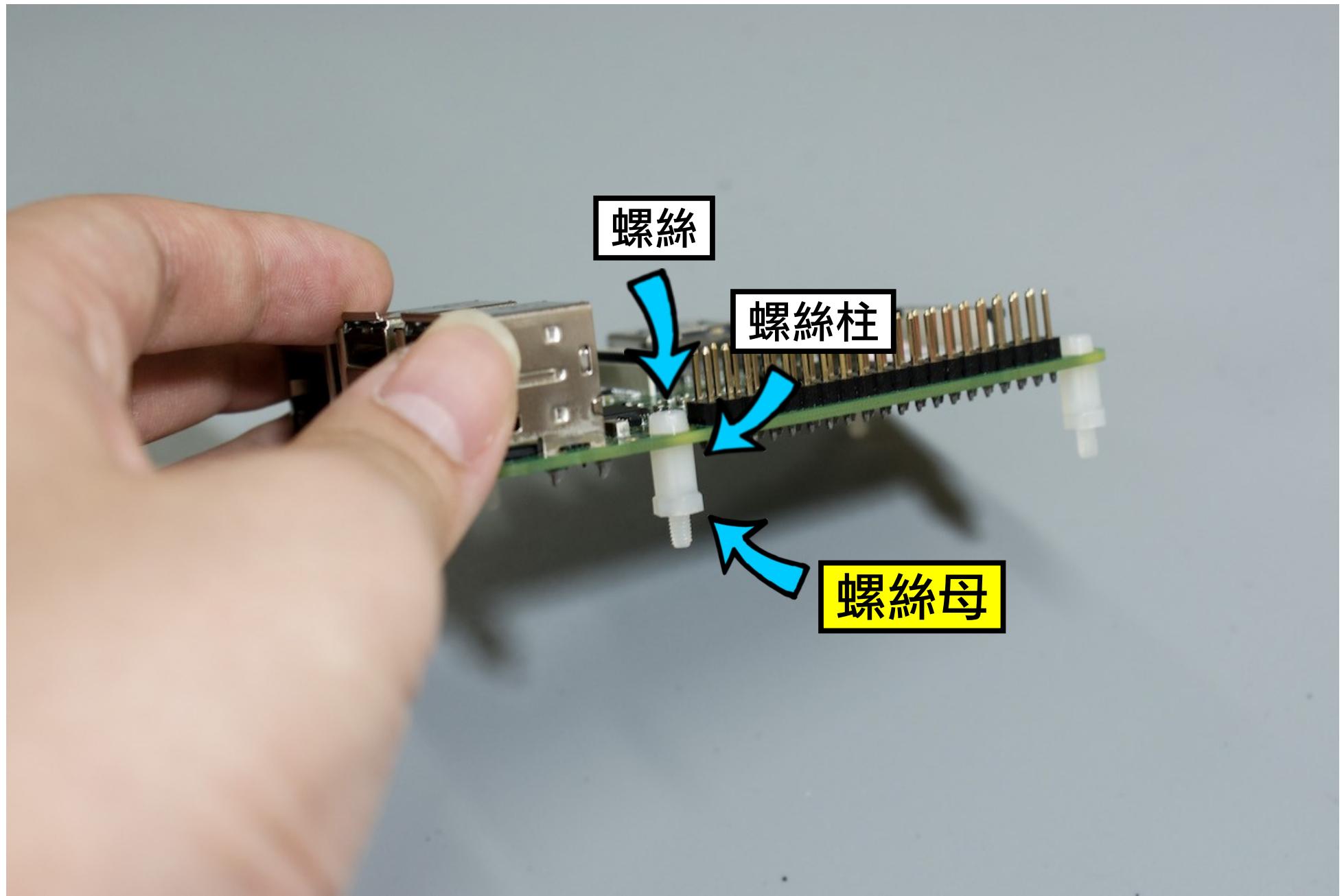


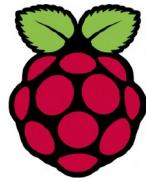


台灣樹莓派

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# 三個一組鎖在 樹莓派 (共四組)

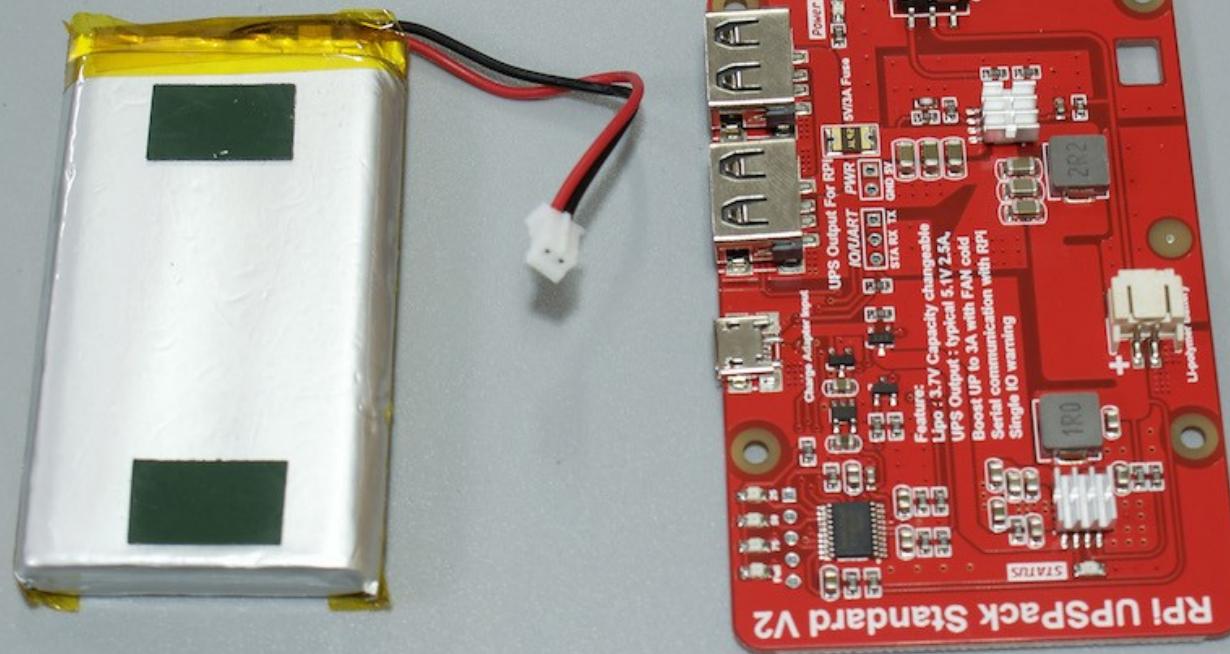


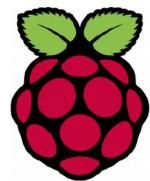


# 台灣樹莓派

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# 安裝鋰電池

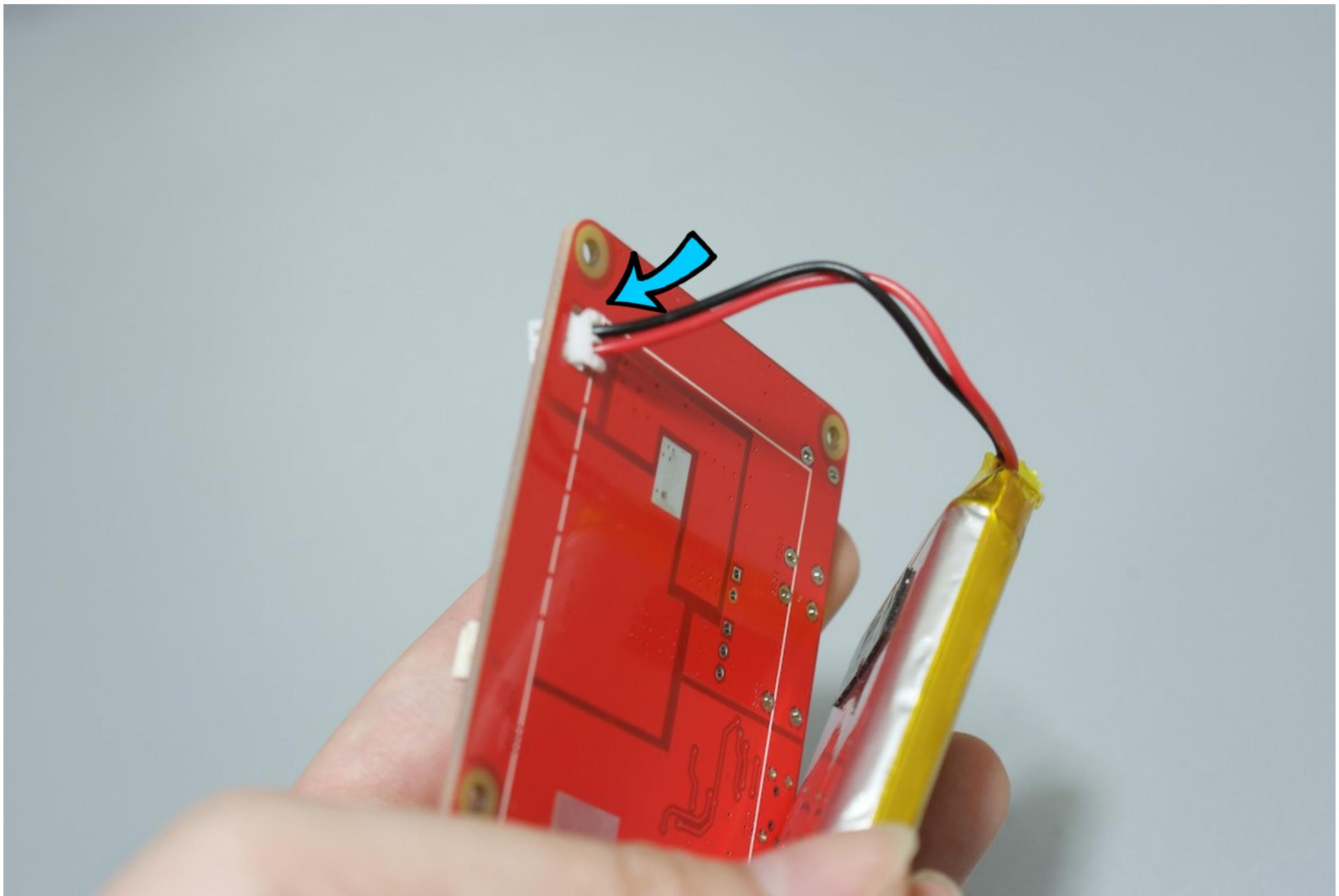


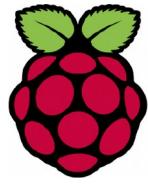


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<https://www.raspberrypi.com.tw/>

# 將鋰電池線穿過孔

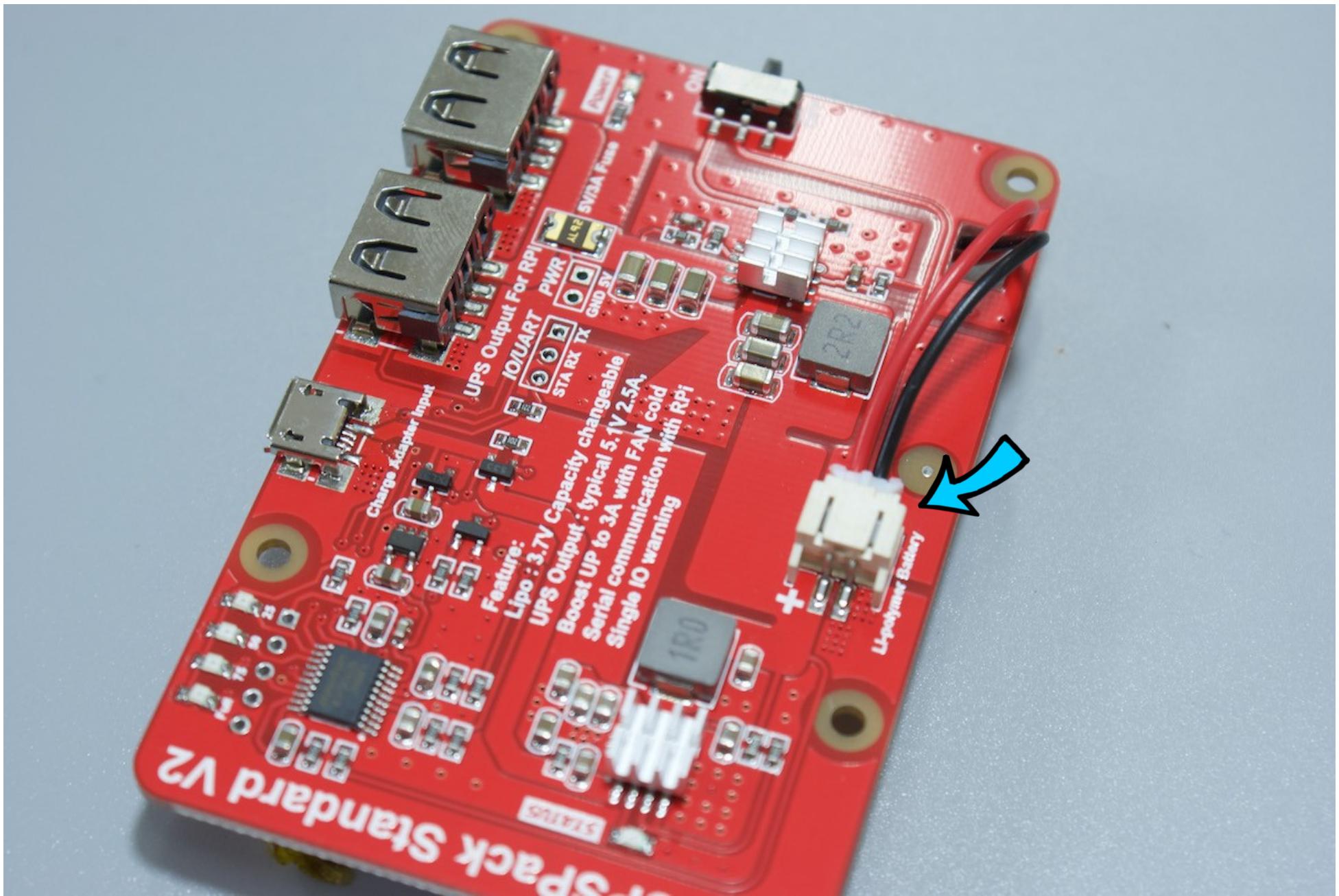


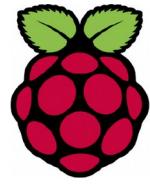


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# 將鋰電池接到控制板上



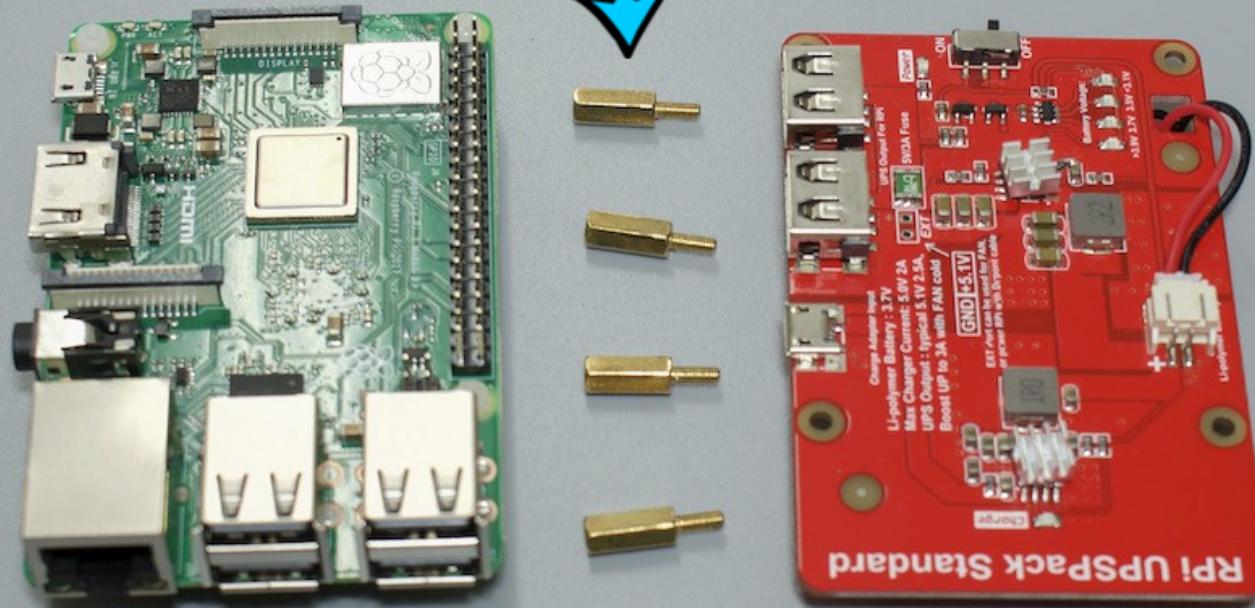


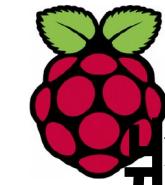
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# 準備樹莓派和鋰電池擴充板

鋰電池銅柱

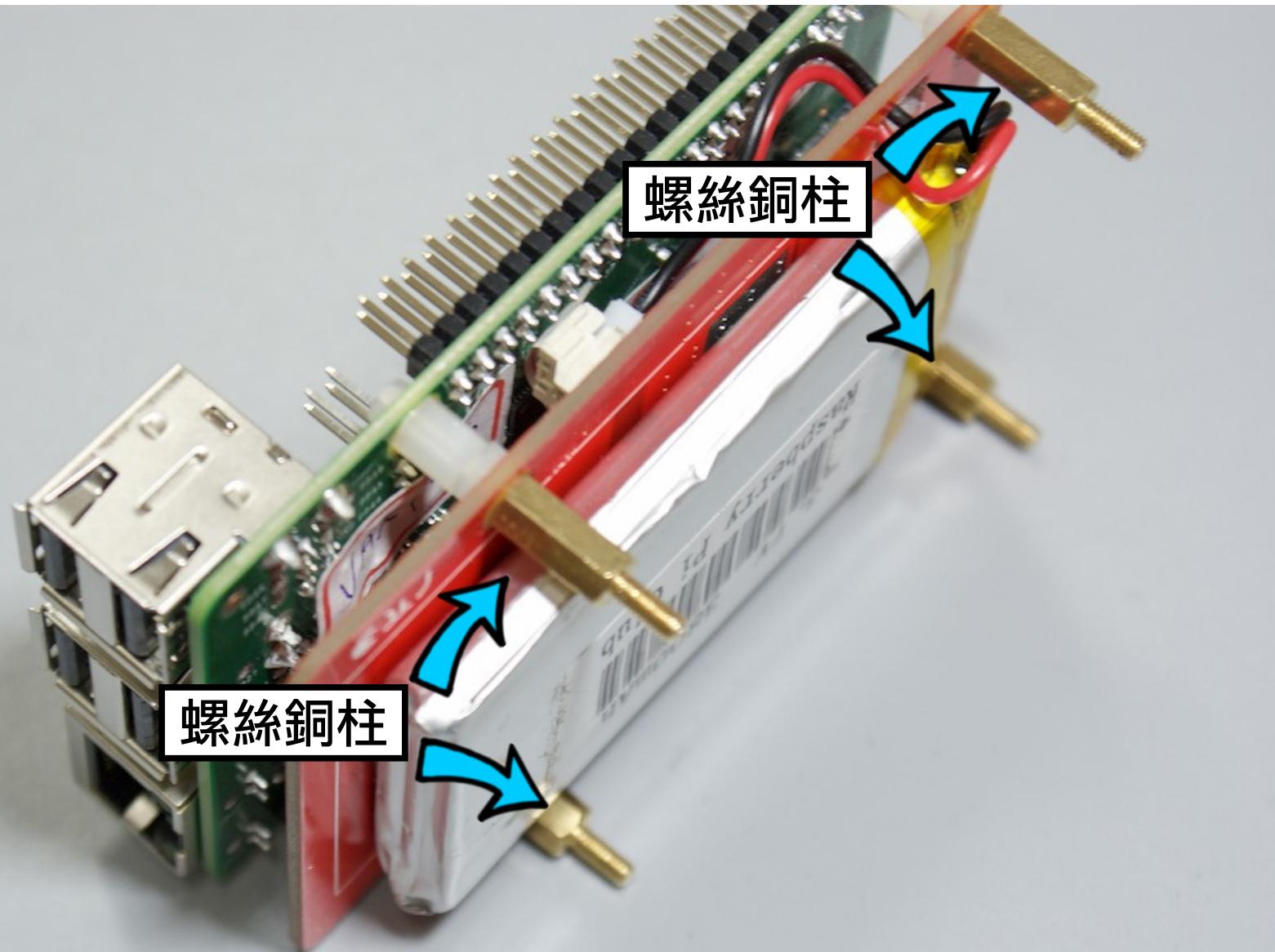


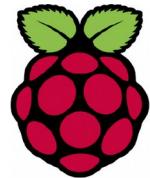


台灣樹莓派

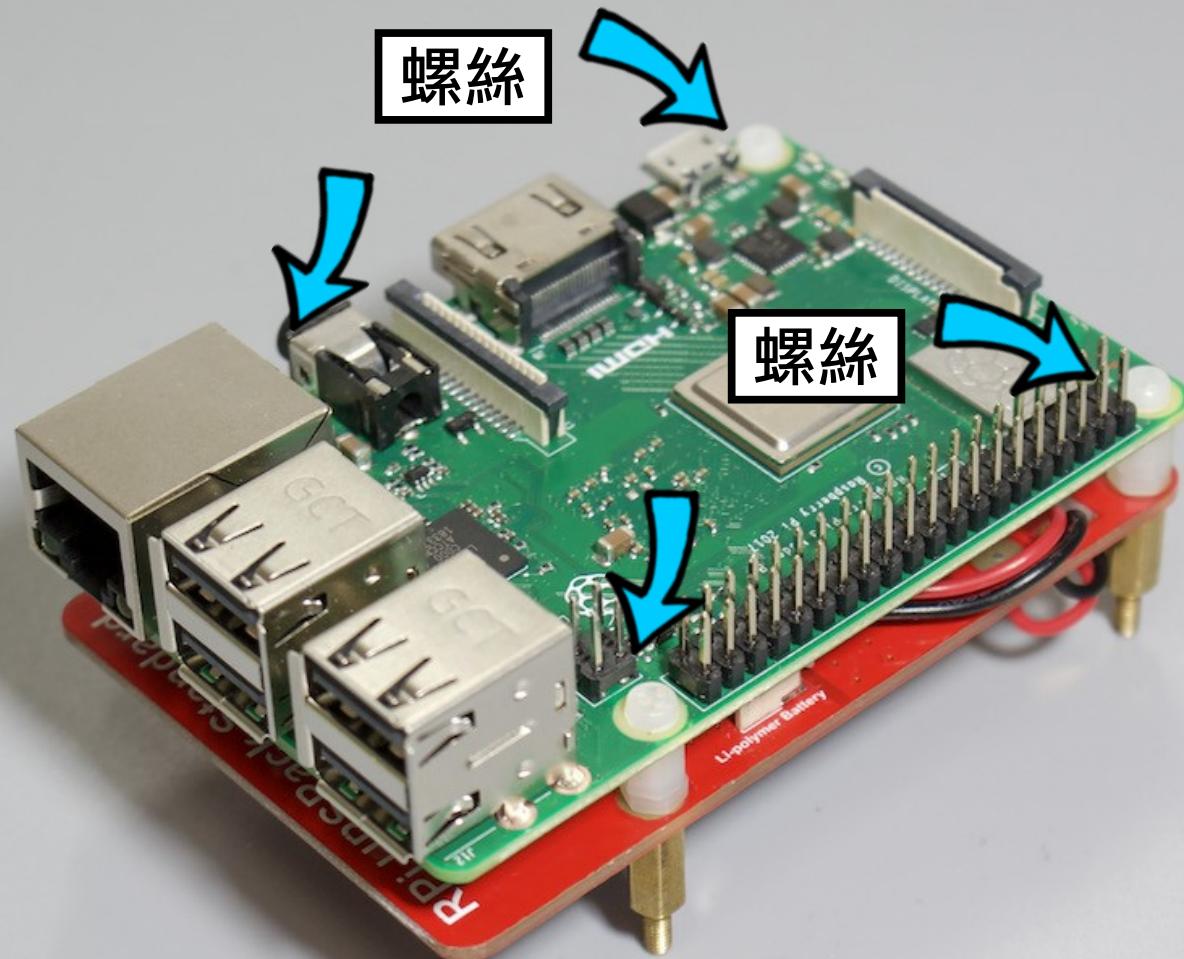
<http://www.raspberrypi.com.tw/>

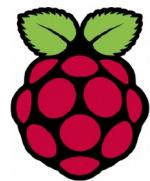
# 將樹莓派和鋰電池擴充板固定在一起





# 用螺絲固定完成

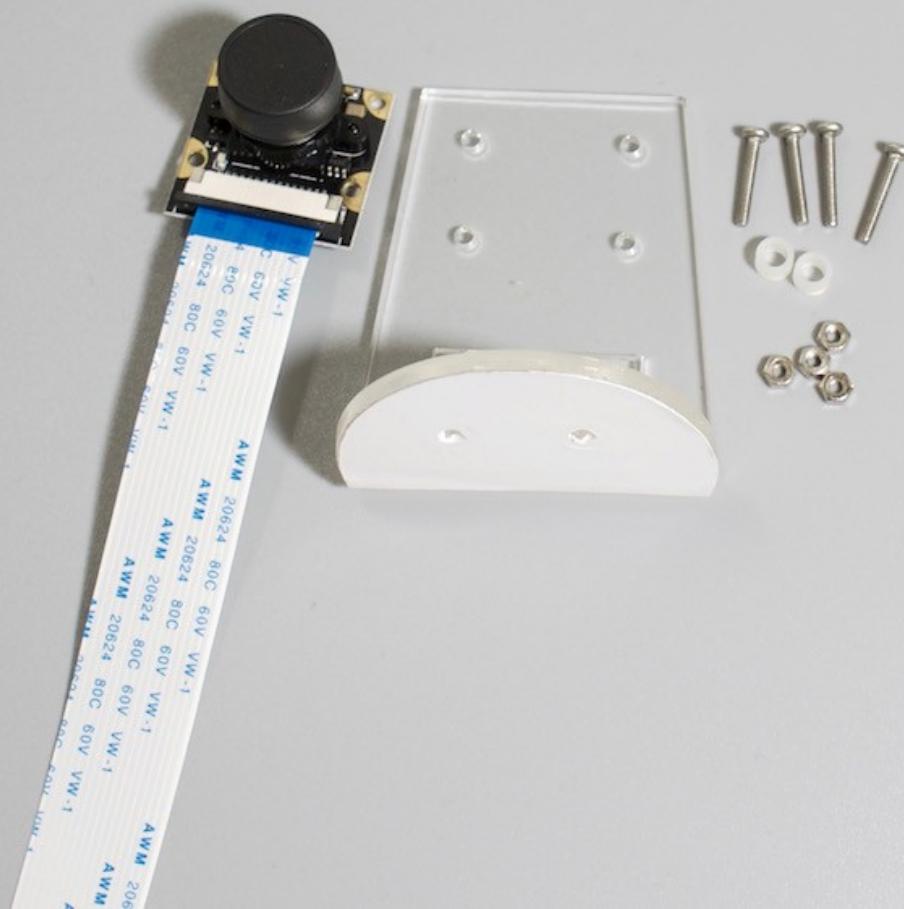


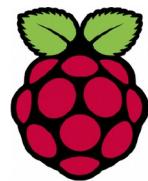


台灣樹莓派

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

# 準備魚眼相機和排線

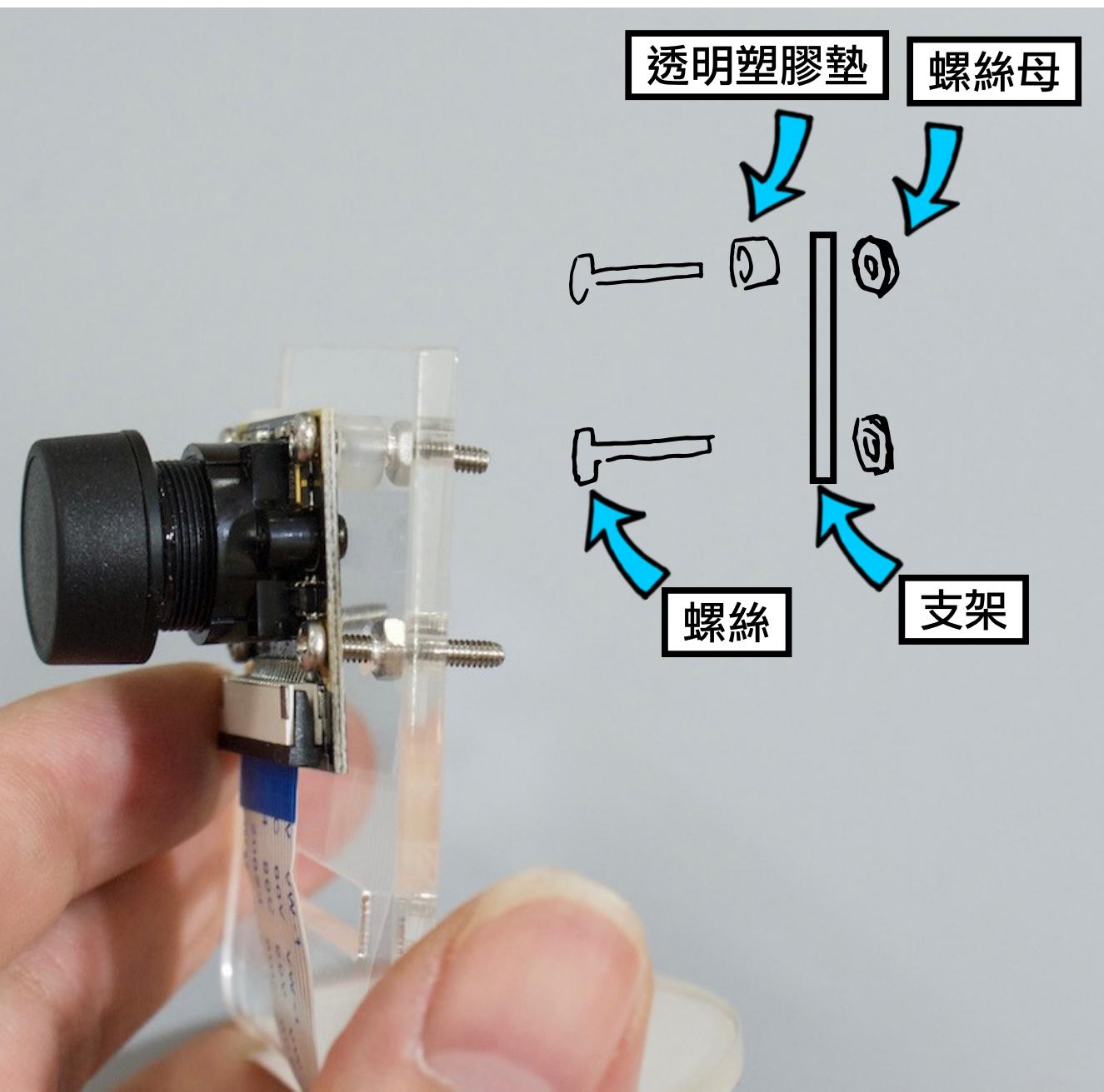


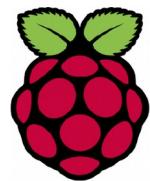


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# 將魚眼相機固定在支架上

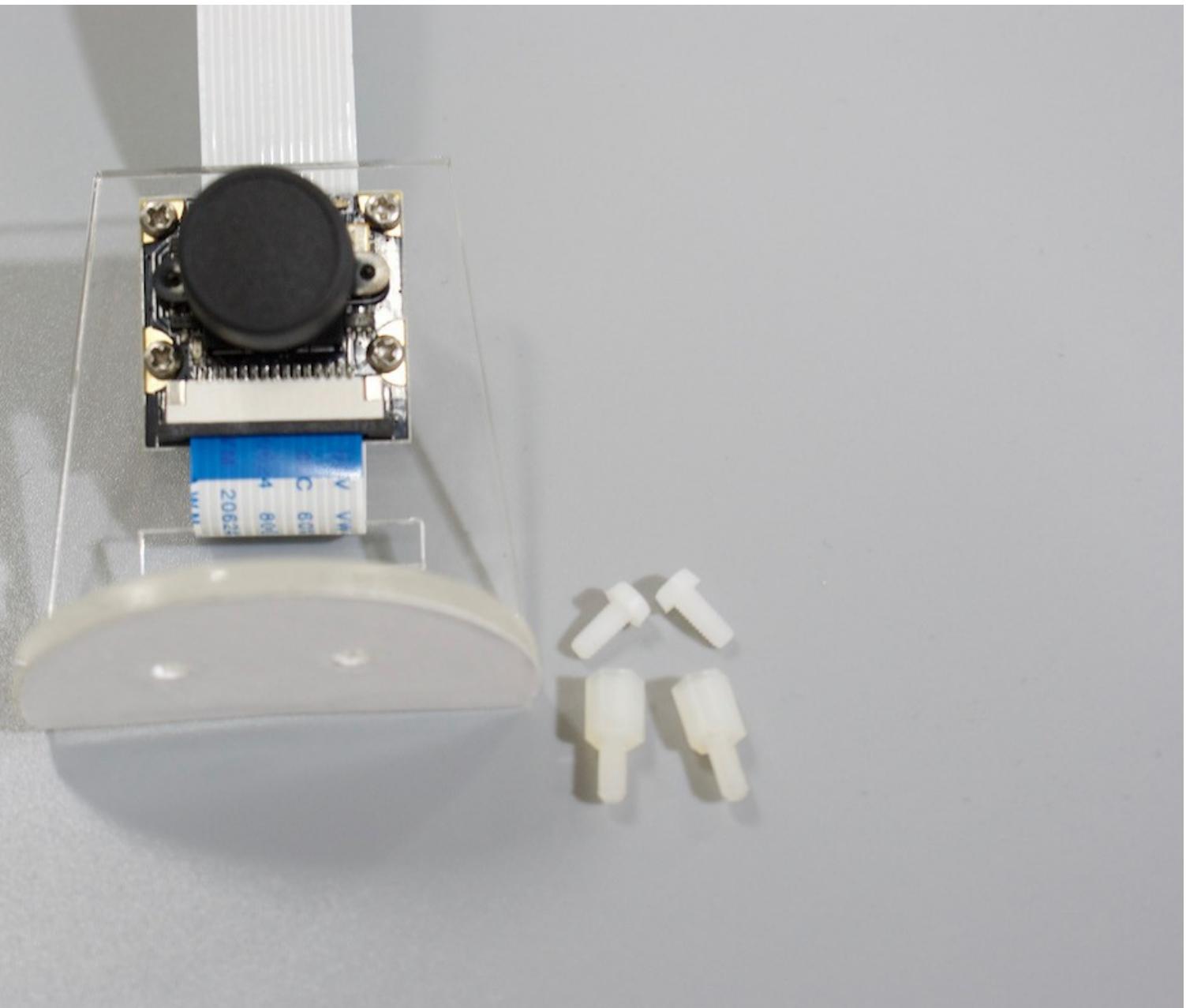


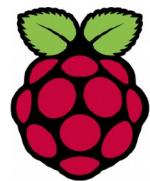


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# 相機腳安裝

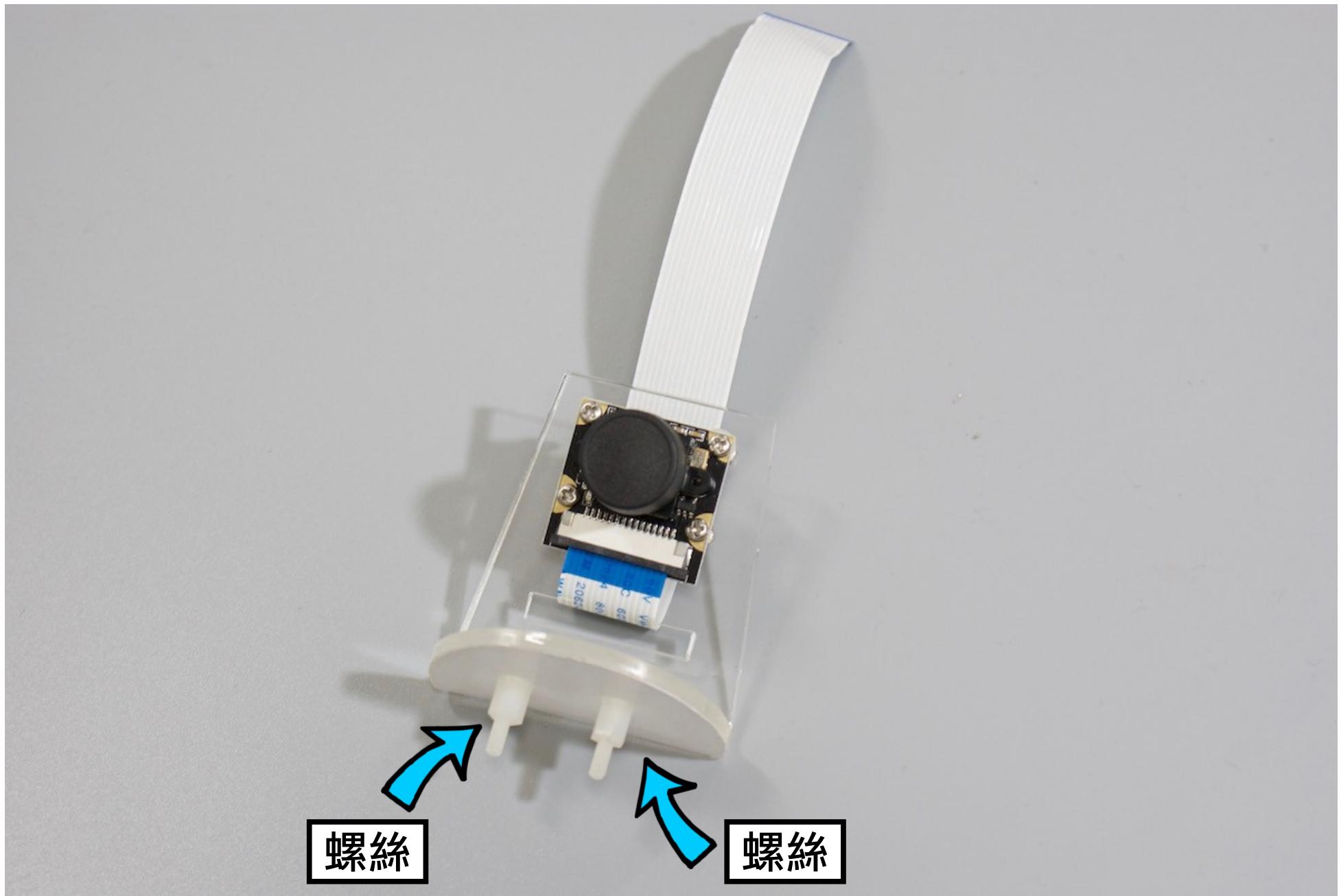


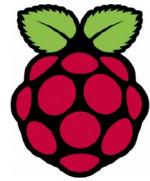


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<https://www.raspberrypi.com.tw/>

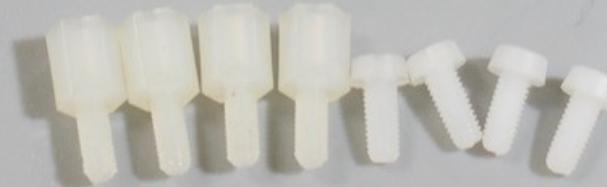
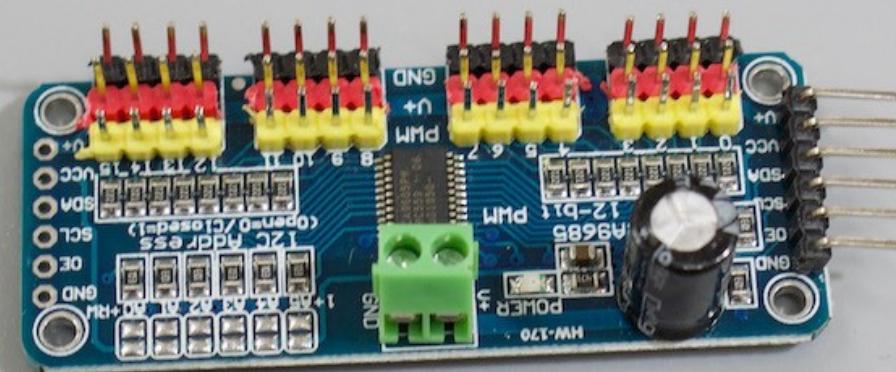
# 魚眼相機固定完成

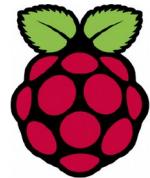




台灣樹莓派  
<https://www.raspberrypi.com.tw/>

# 馬達和螺絲組裝

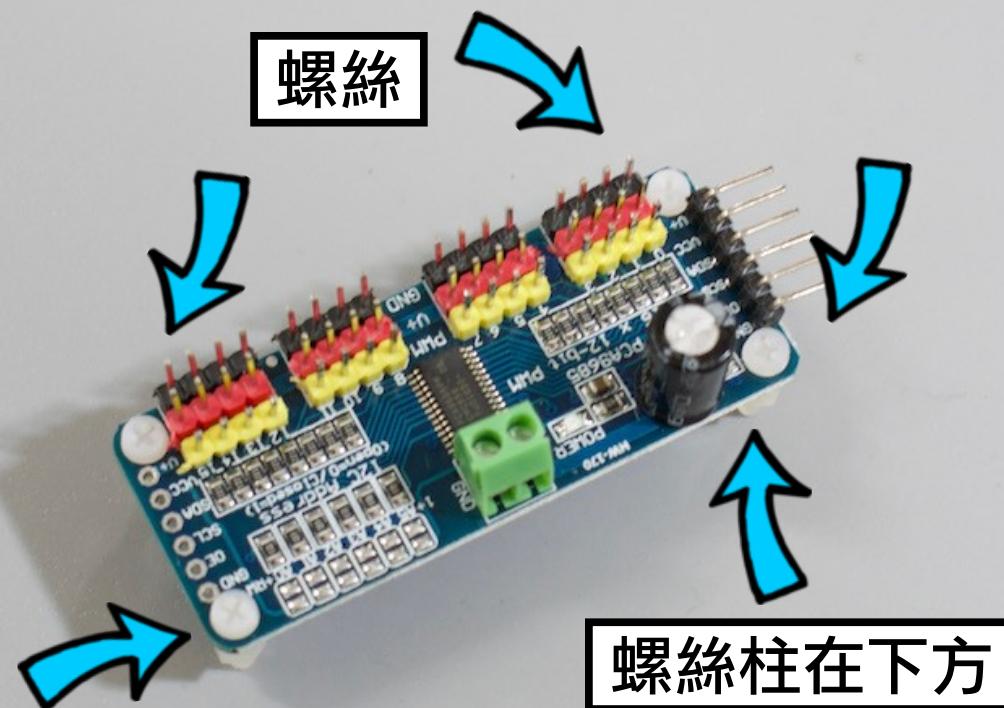


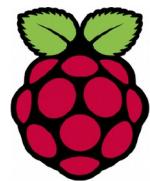


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# 兩個一組鎖上馬達

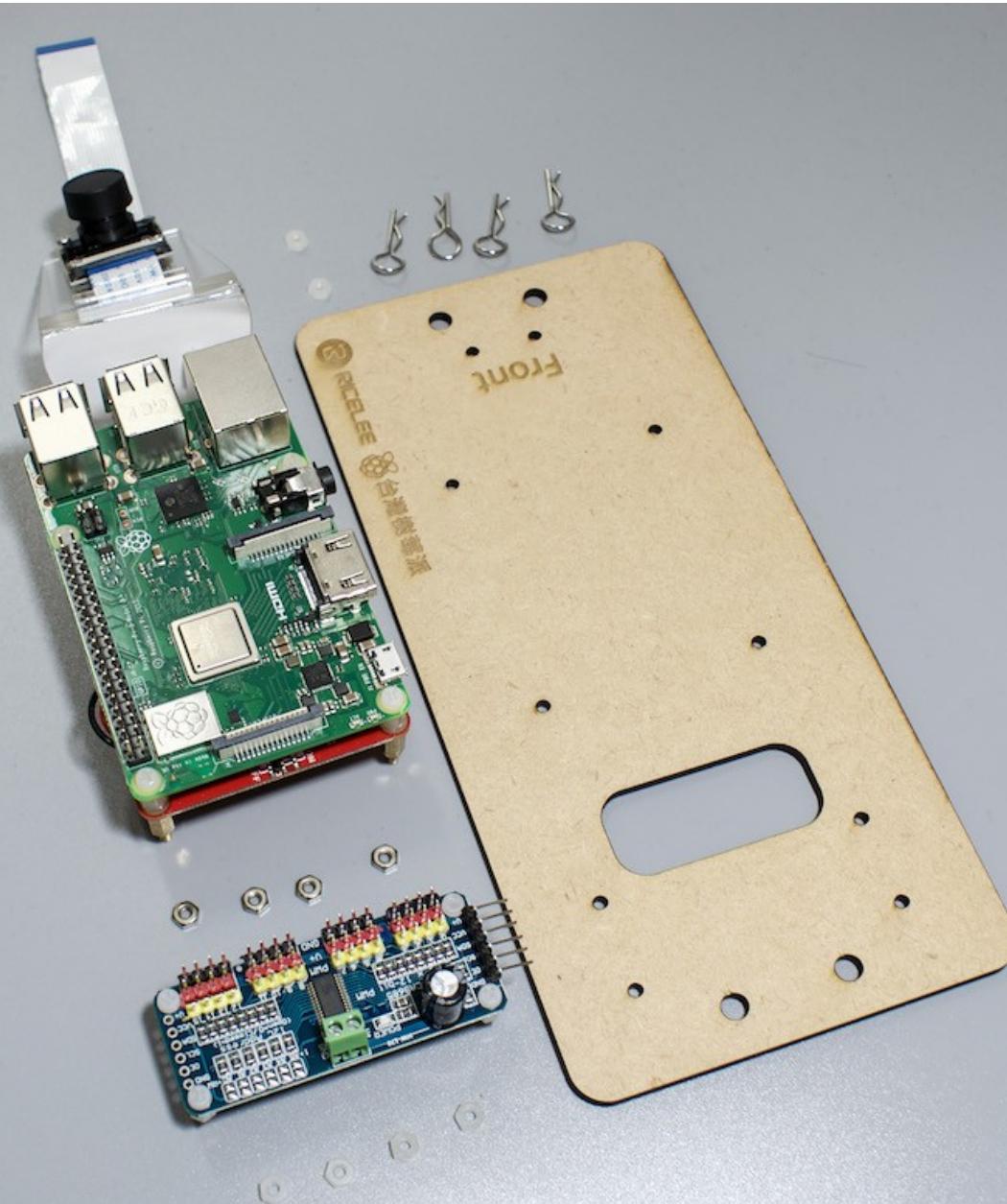


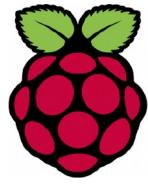


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# 將零件鎖上板子





台灣樹莓派

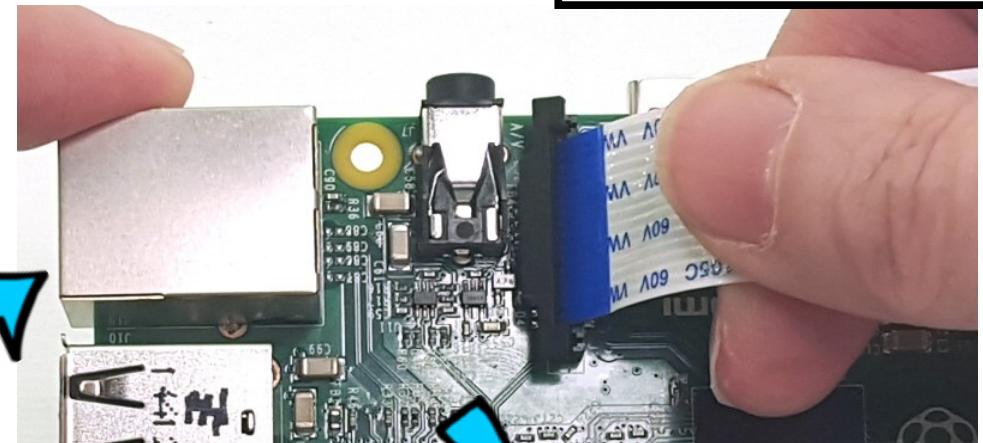
<https://www.raspberrypi.tw/>

# 在關機的狀態下安裝 Camera

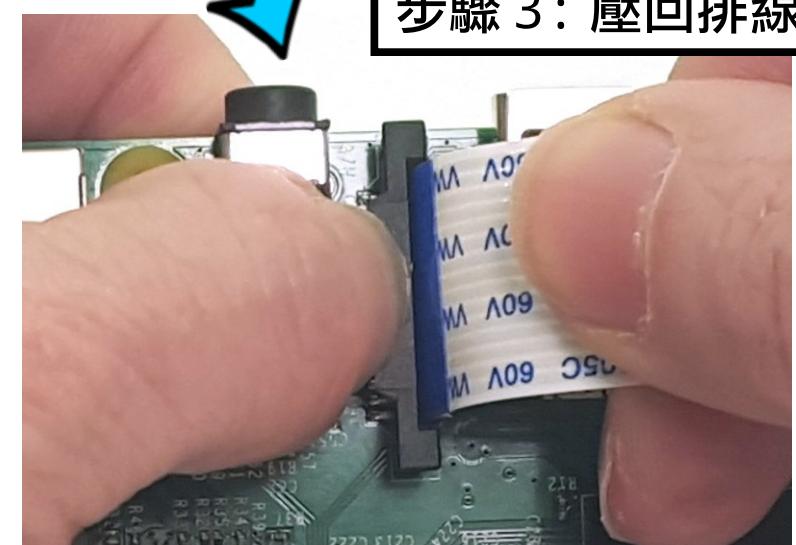
關機指令：\$ sudo poweroff

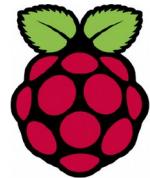
步驟 2：插入排線

步驟 1：拉起卡榫



步驟 3：壓回排線

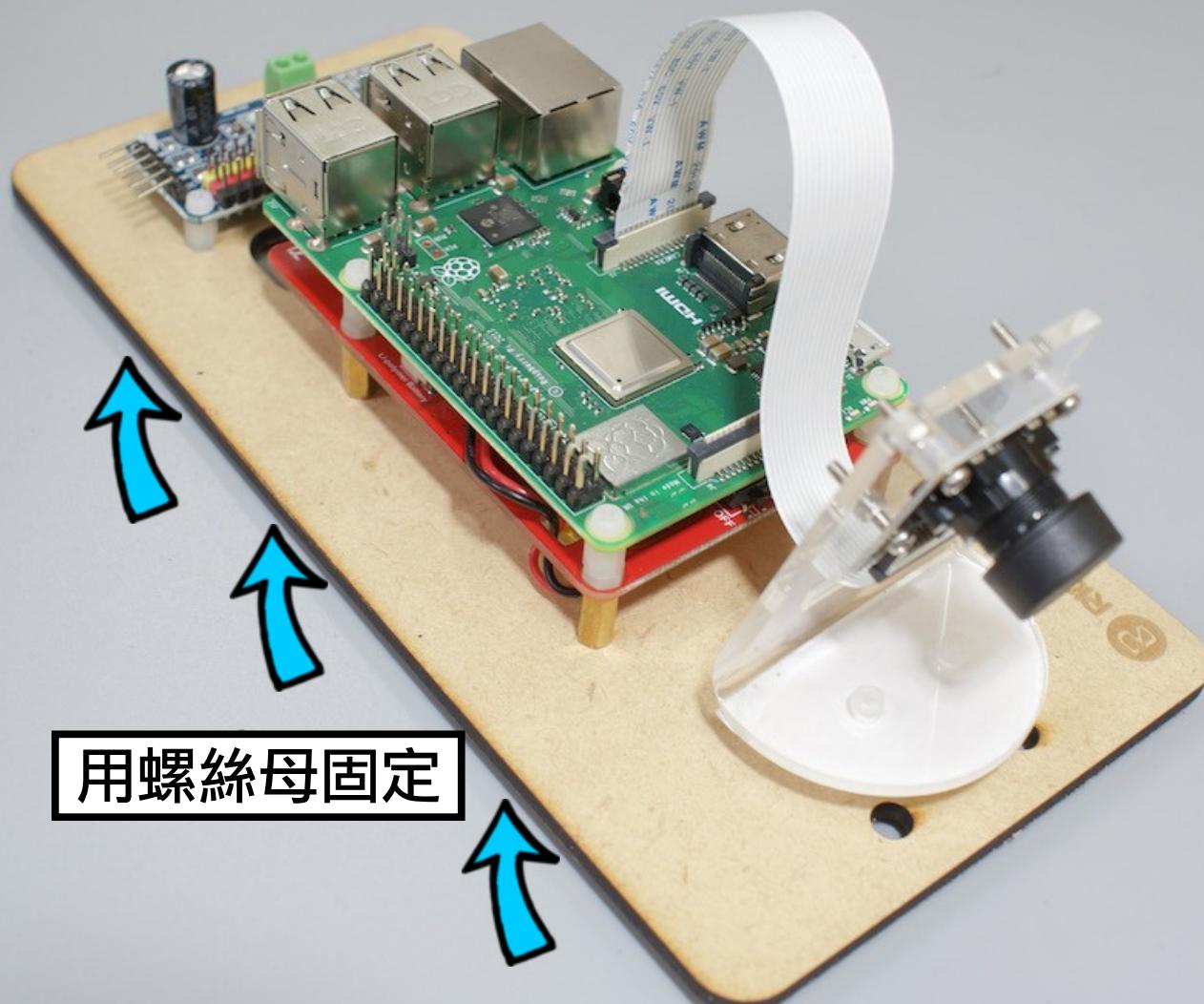


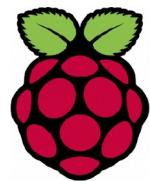


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# 將所有零件鎖上完成

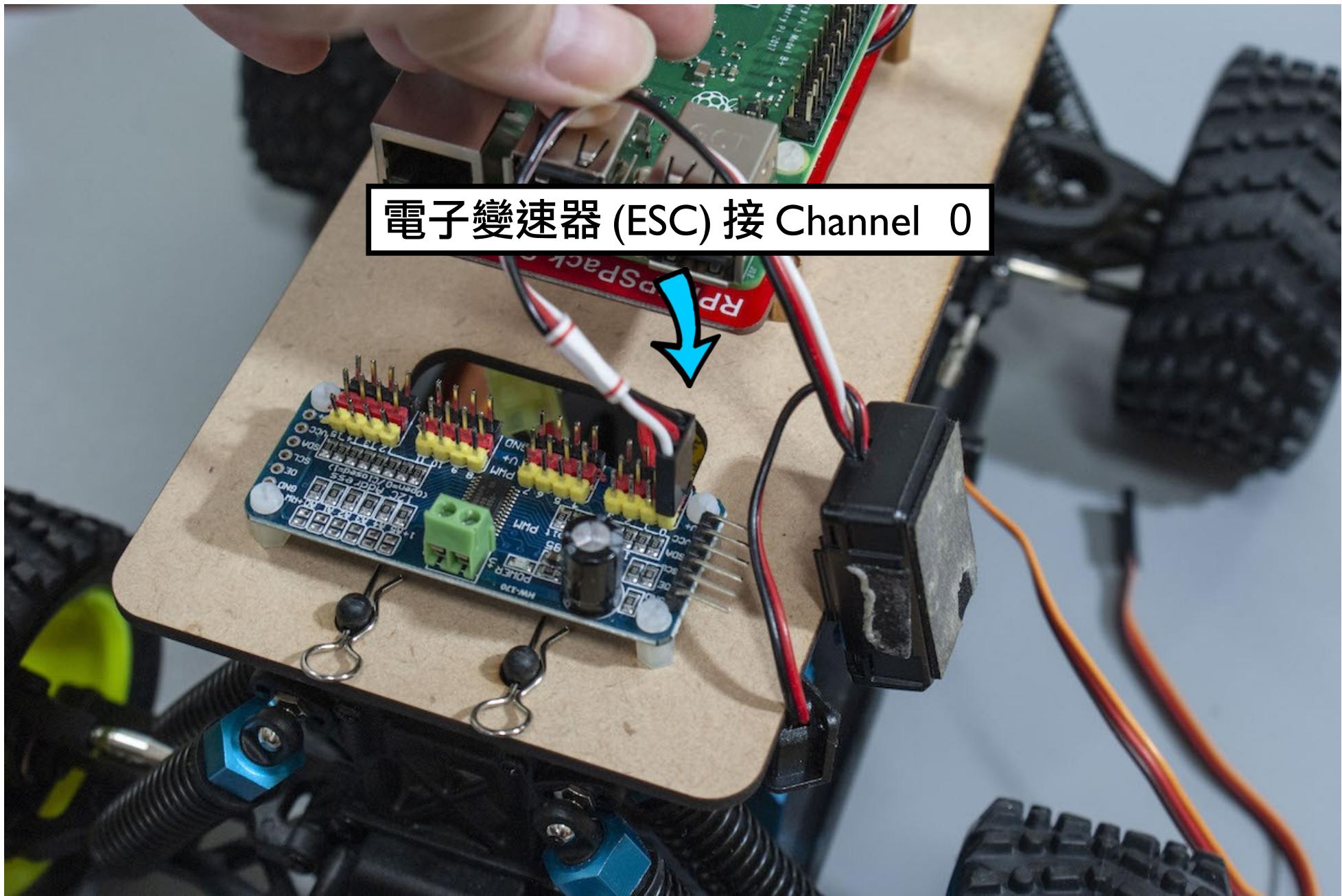


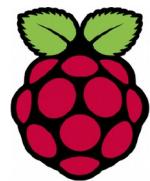


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<https://www.raspberrypi-taiwan.org.tw>

# 連接馬達驅動板和杜邦線

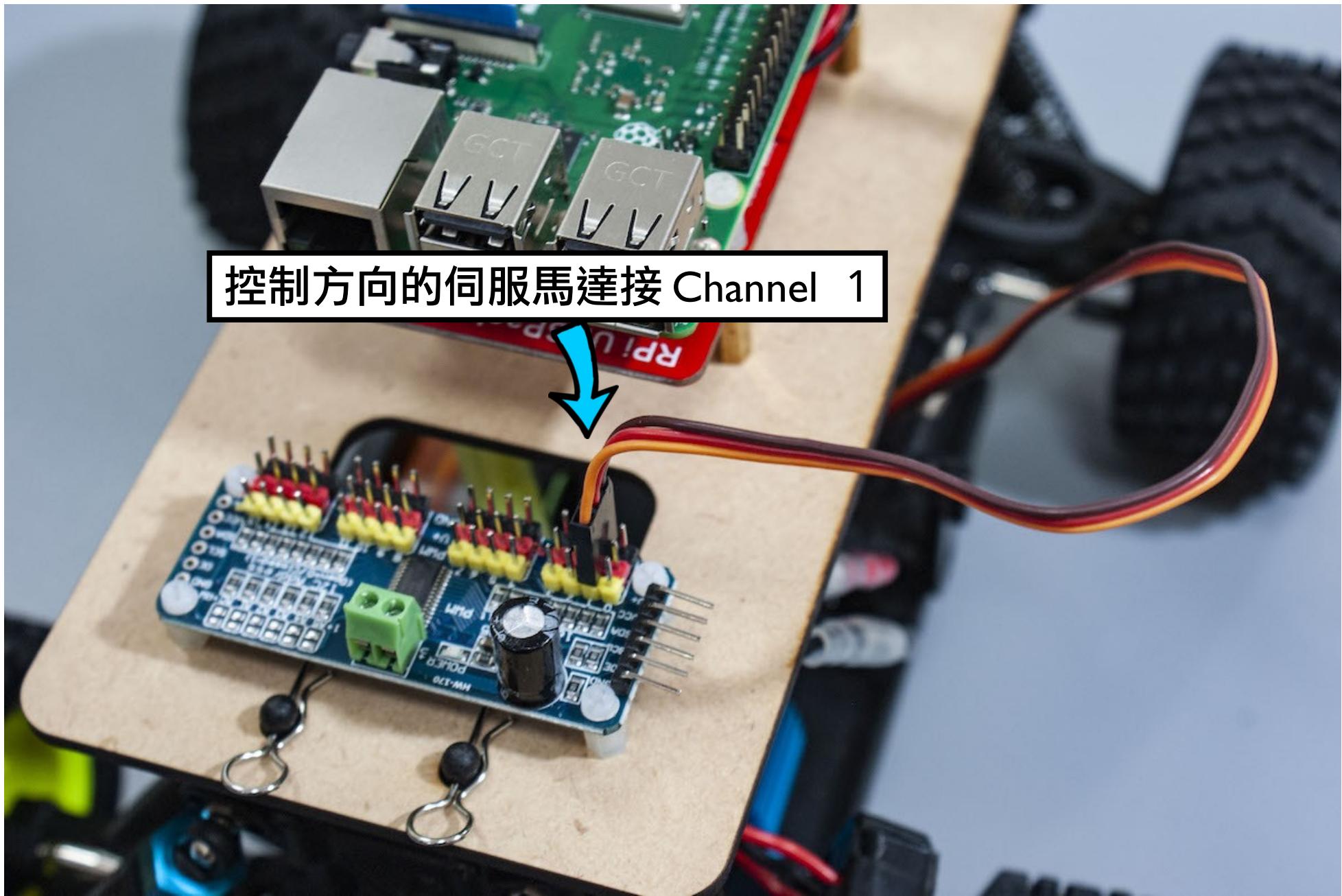


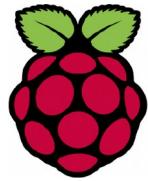


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<https://www.raspberrypi.com.tw>

# 連接馬達驅動板和杜邦線

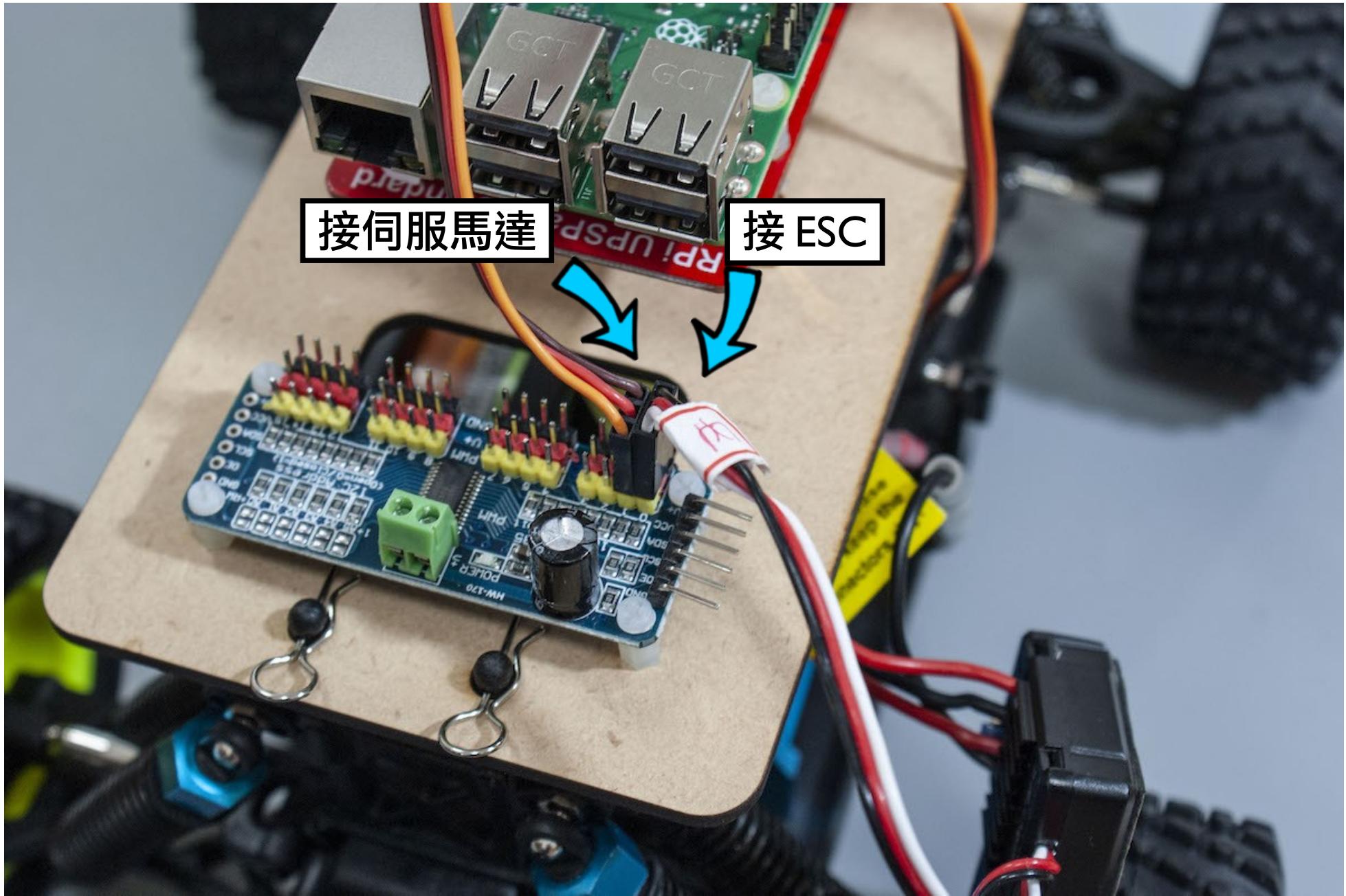


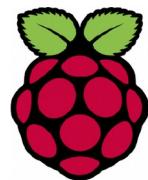


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# 接線完成

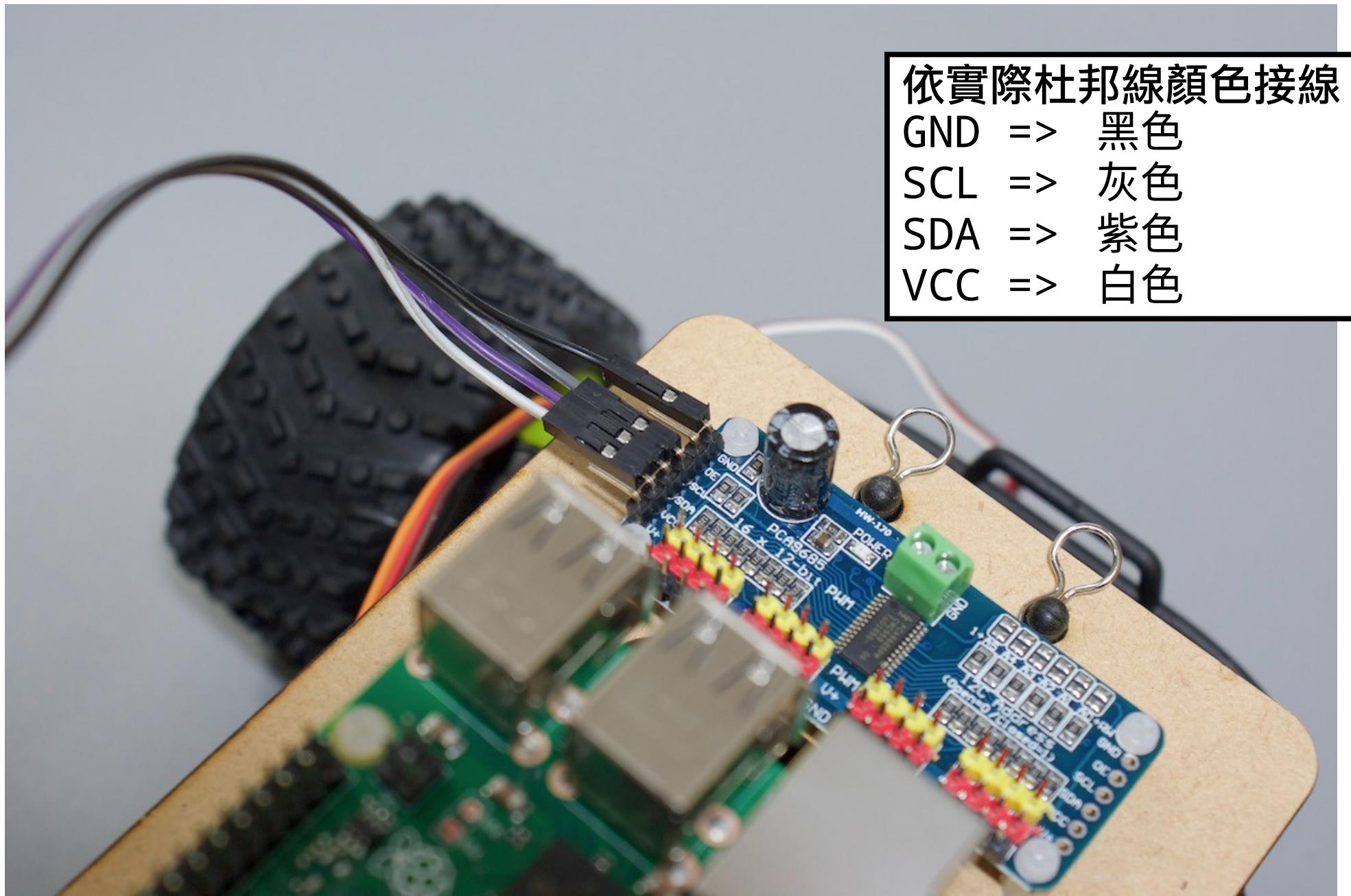


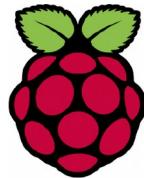


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# 將杜邦線接到馬達控制板





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# 將杜邦線接到 Pi

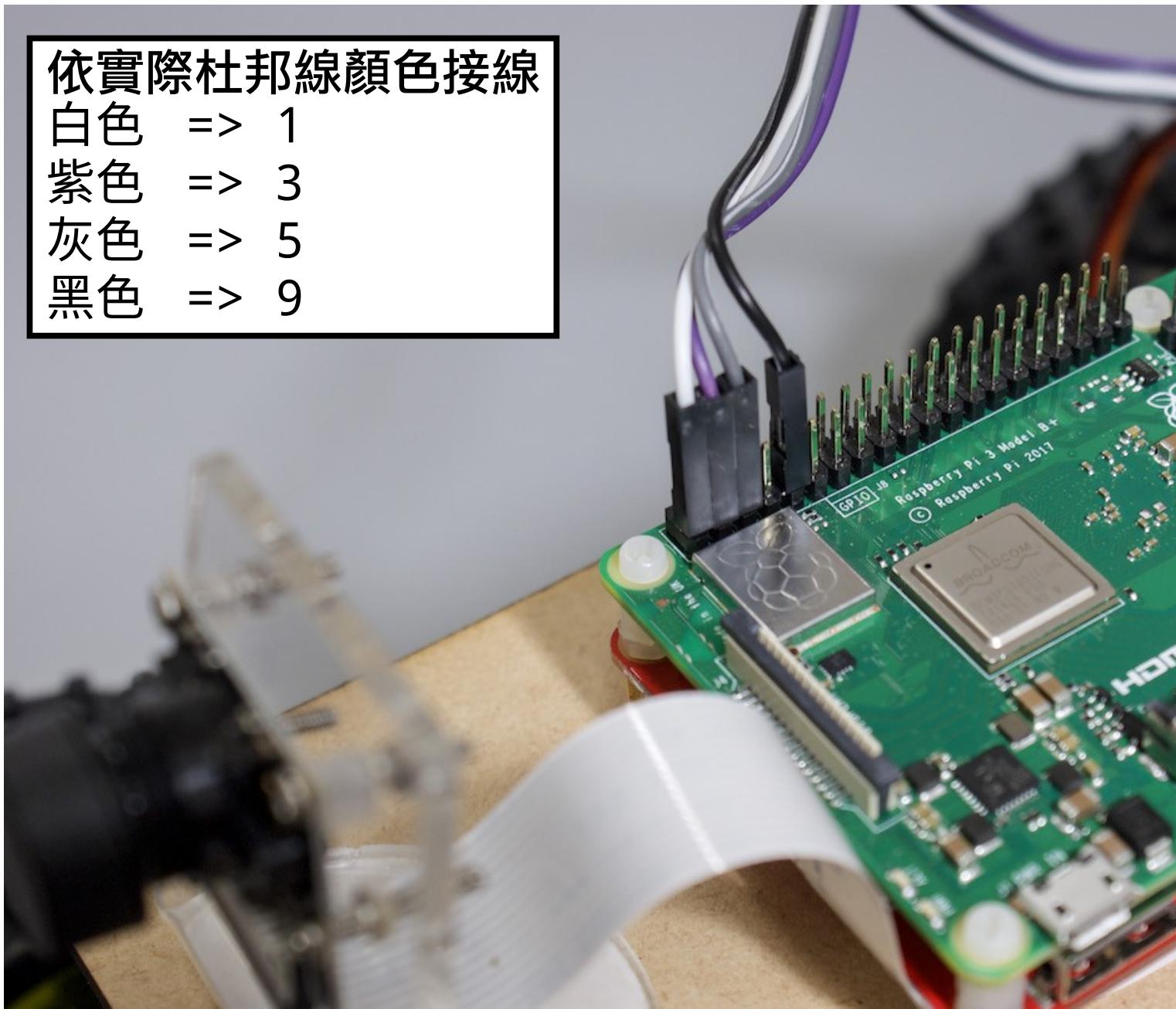
依實際杜邦線顏色接線

白色 => 1

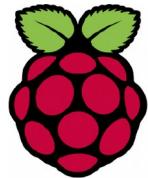
紫色 => 3

灰色 => 5

黑色 => 9



Pi Model B/B+	
3V3 Power	1 2 5V Power
GPIO2 SDA1 I2C	3 4 5V Power
GPIO3 SCL1 I2C	5 6 Ground
GPIO4	7 8 GPIO14 UART0_TXD
Ground	9 10 GPIO15 UART0_RXD
GPIO17	11 12 GPIO18 PCM_CLK
GPIO27	13 14 Ground
GPIO22	15 16 GPIO23
3V3 Power	17 18 GPIO24
GPIO10 SPI0_MOSI	19 20 Ground
GPIO9 SPI0_MISO	21 22 GPIO25
GPIO11 SPI0_SCLK	23 24 GPIO08 SPI0_CE0_N
Ground	25 26 GPIO07 SPI0_CE1_N
ID_SD I2C ID EEPROM	27 28 ID_SC I2C ID EEPROM
GPIO5	29 30 Ground
GPIO6	31 32 GPIO12
GPIO13	33 34 Ground
GPIO19	35 36 GPIO16
GPIO26	37 38 GPIO20
Ground	39 40 GPIO21

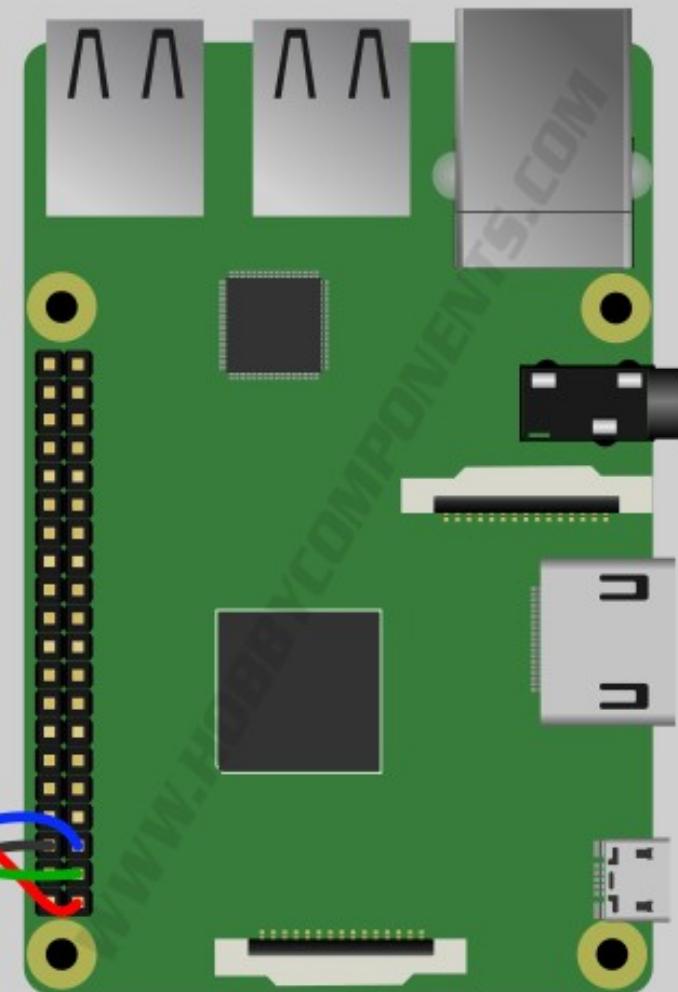
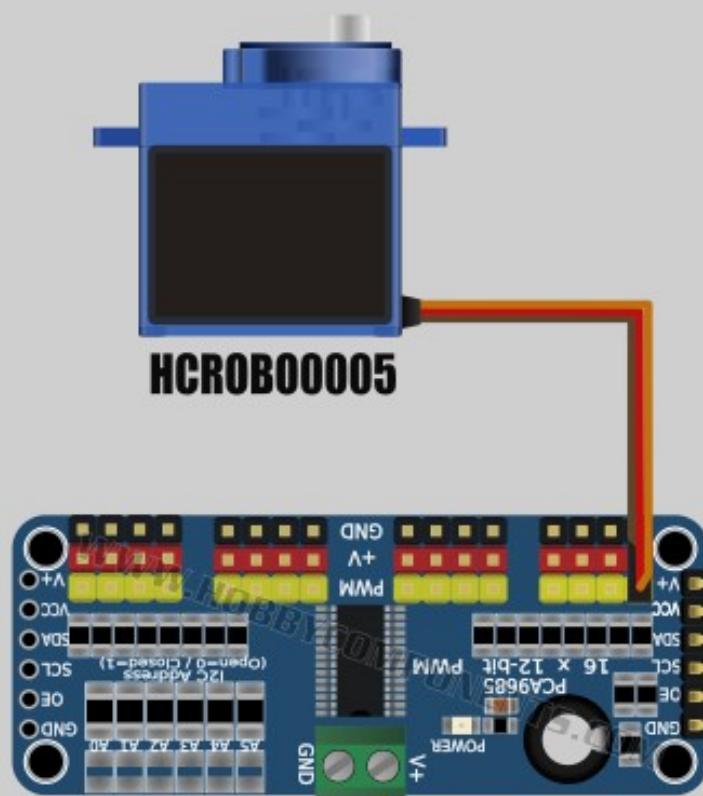


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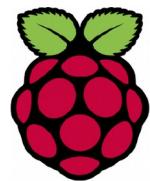
<https://www.raspberrypi.com.tw/>

# 詳細安裝線路圖

## PCA8596 PWM Module Raspberry Pi Connections



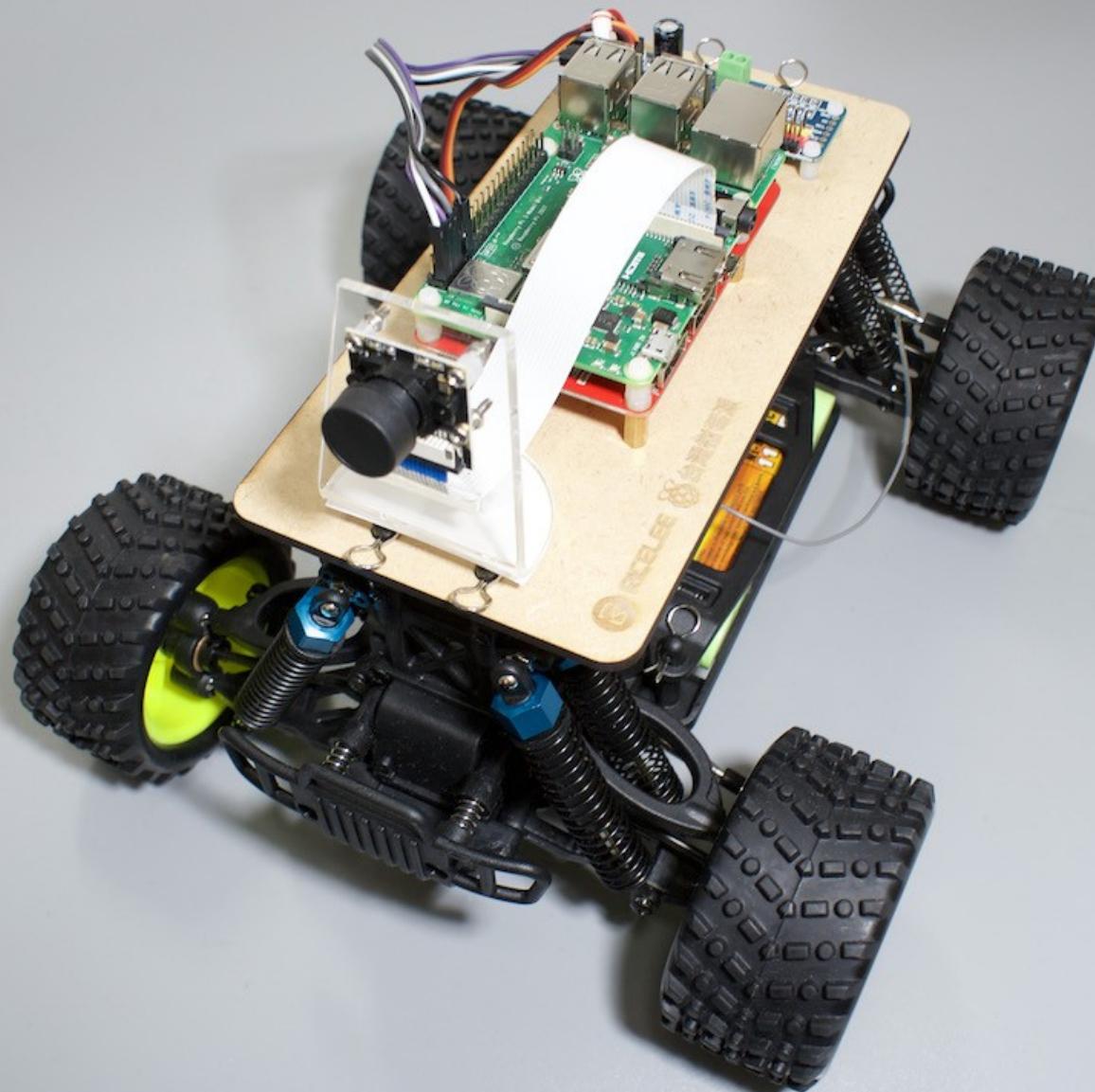
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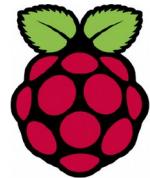


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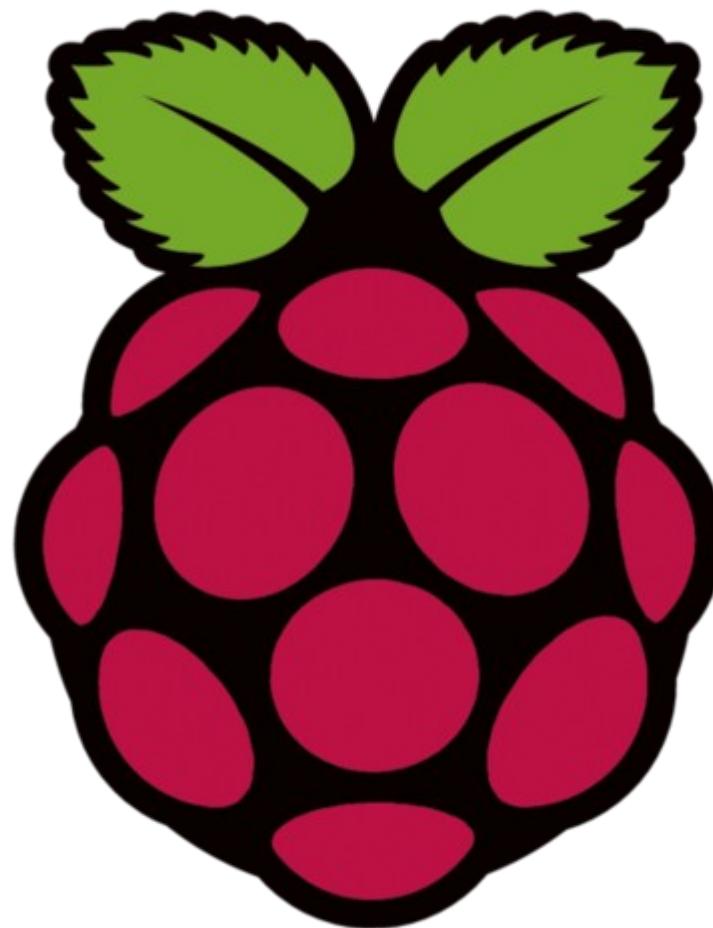
<https://www.raspberrypi.com.tw/>

# 組裝完成





# Raspberry Pi Rocks the World



Thanks