

組裝驢車 (Donkey Car)

台灣樹莓派 <sosorry@raspberrypi.com.tw>

CC (Creative Commons)

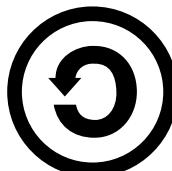
姓名標示 — 非商業性 — 相同方式分享



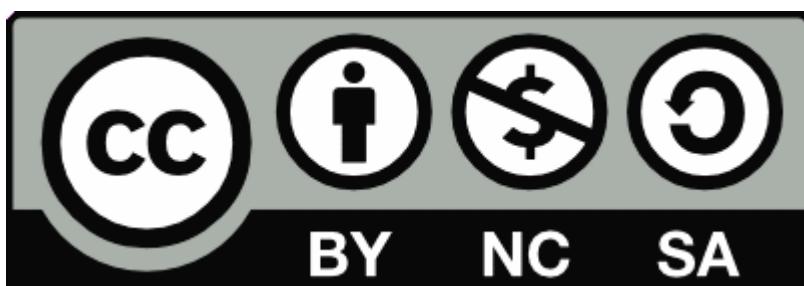
姓名標示 — 你必須給予 適當表彰、提供指向本授權條款的連結，以及 指出（本作品的原始版本）是否已被變更。你可以任何合理方式為前述表彰，但不得以任何方式暗示授權人為你或你的使用方式背書。



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。



關於我們

- Raspberry Pi 官方經銷商



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>



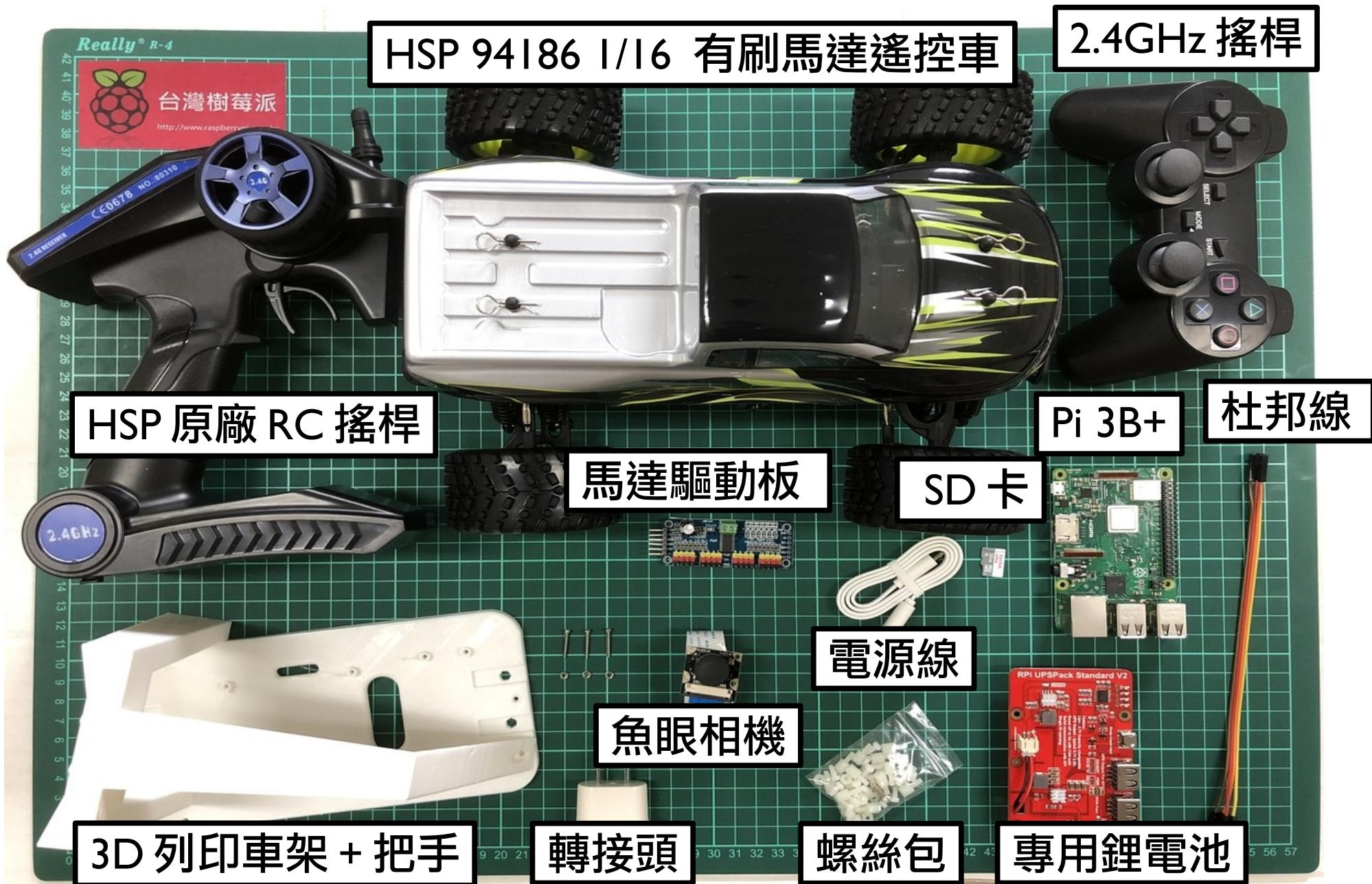
分享 x 教學

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

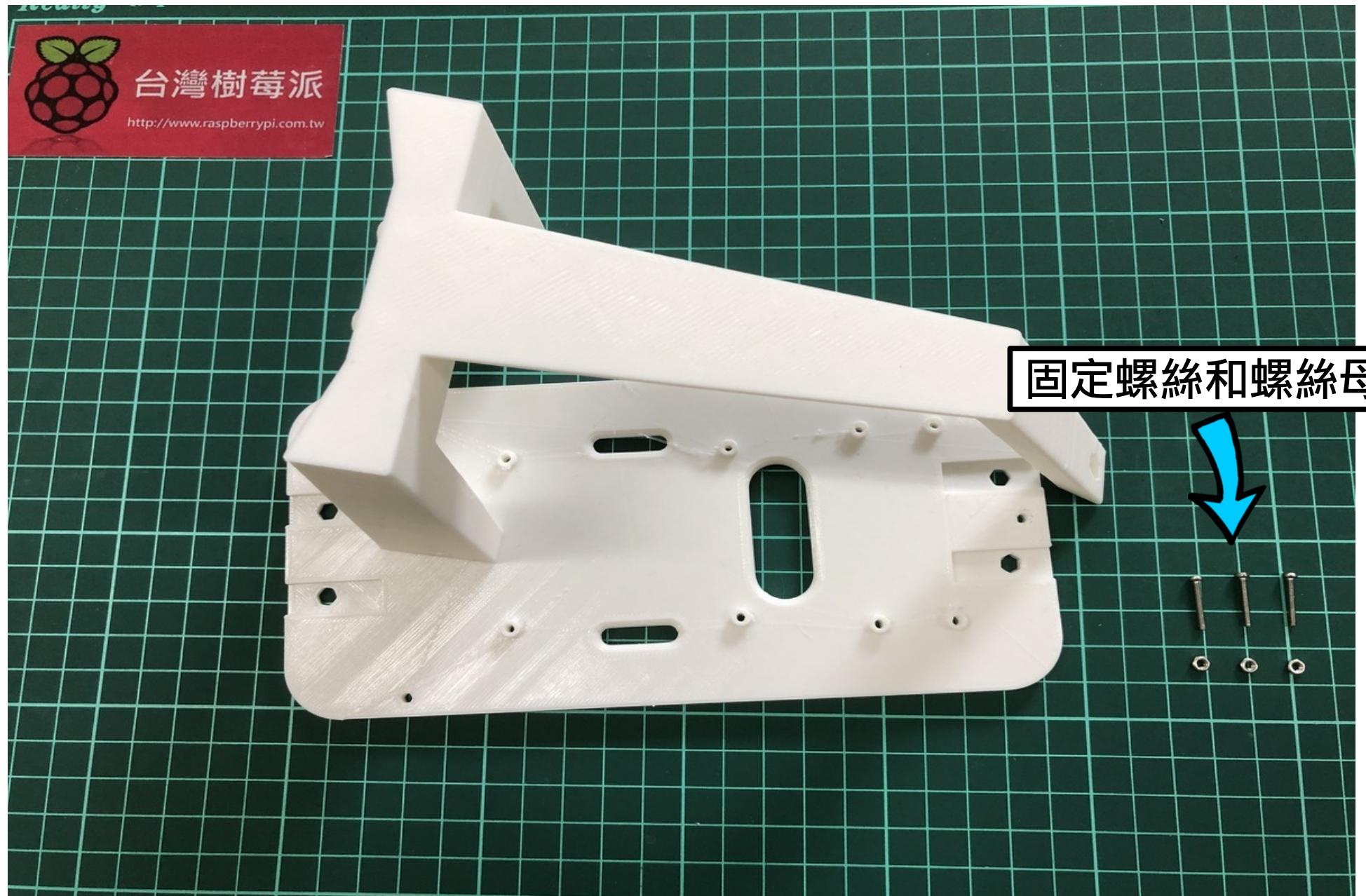


開始組裝驢車啦！

Donkey Car 所需零件



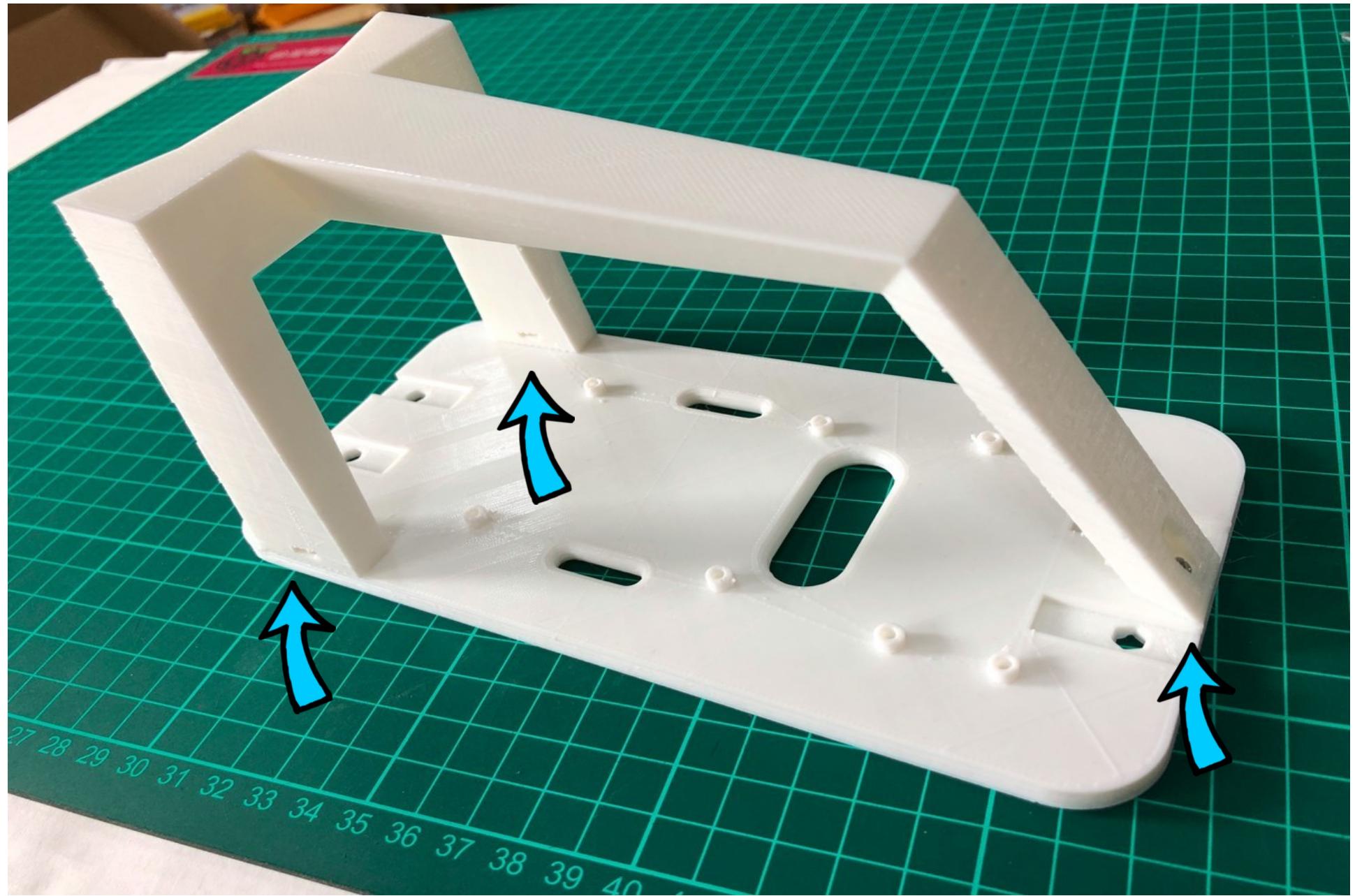
3D 列印車架和把手與螺絲



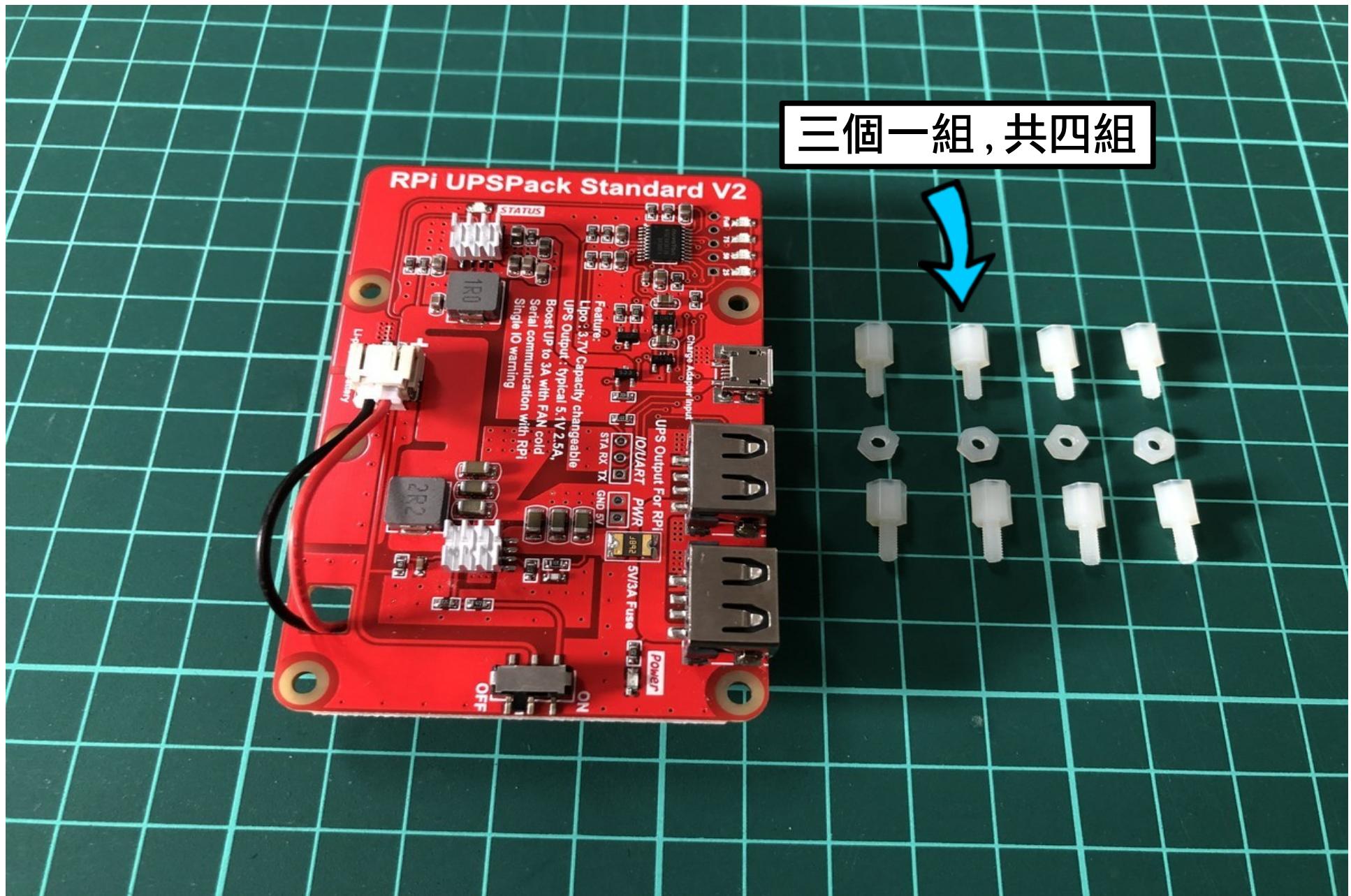
可能會需要清理洞口



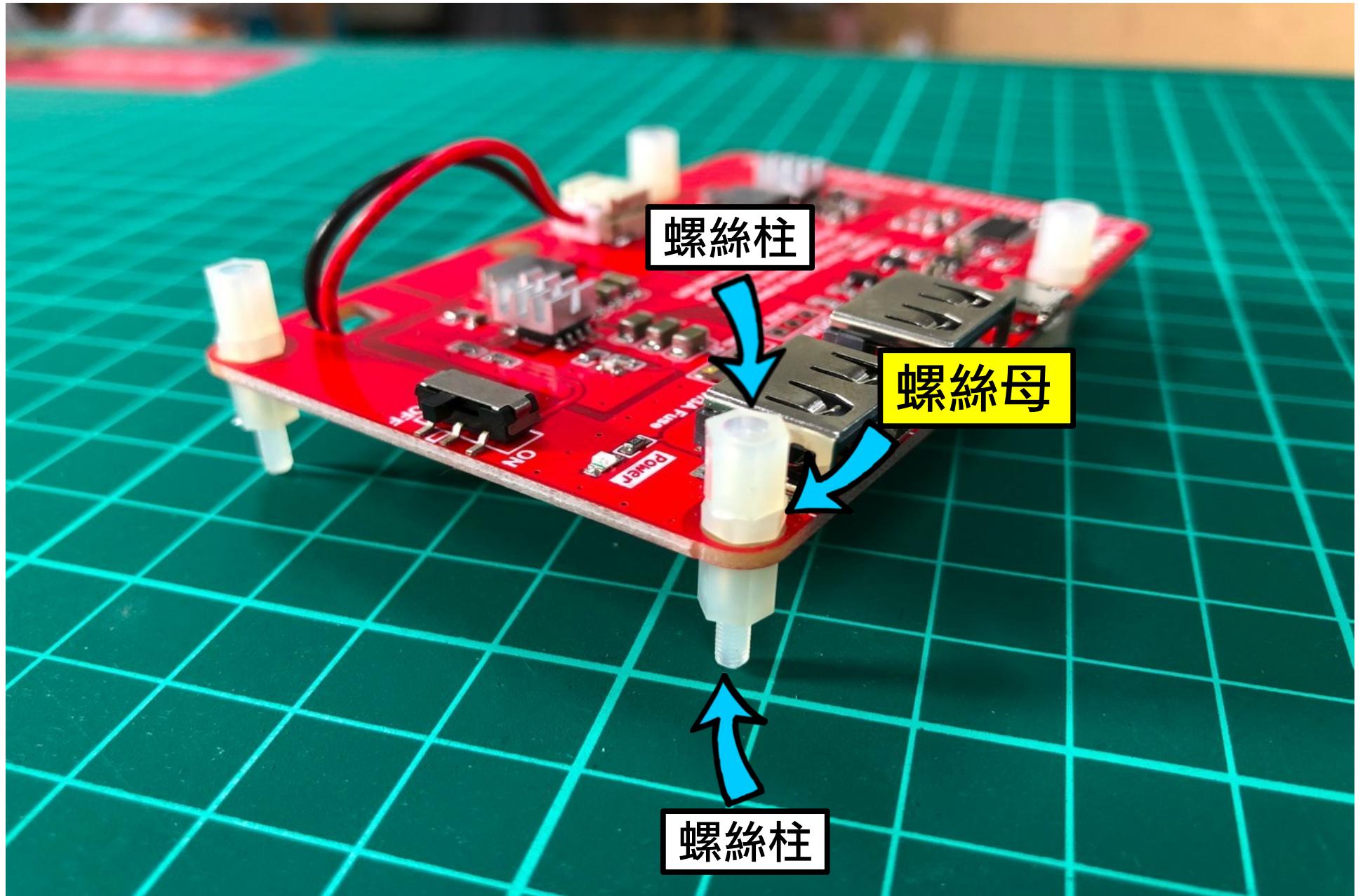
固定螺絲有三處



準備鋰電池擴充板和螺絲



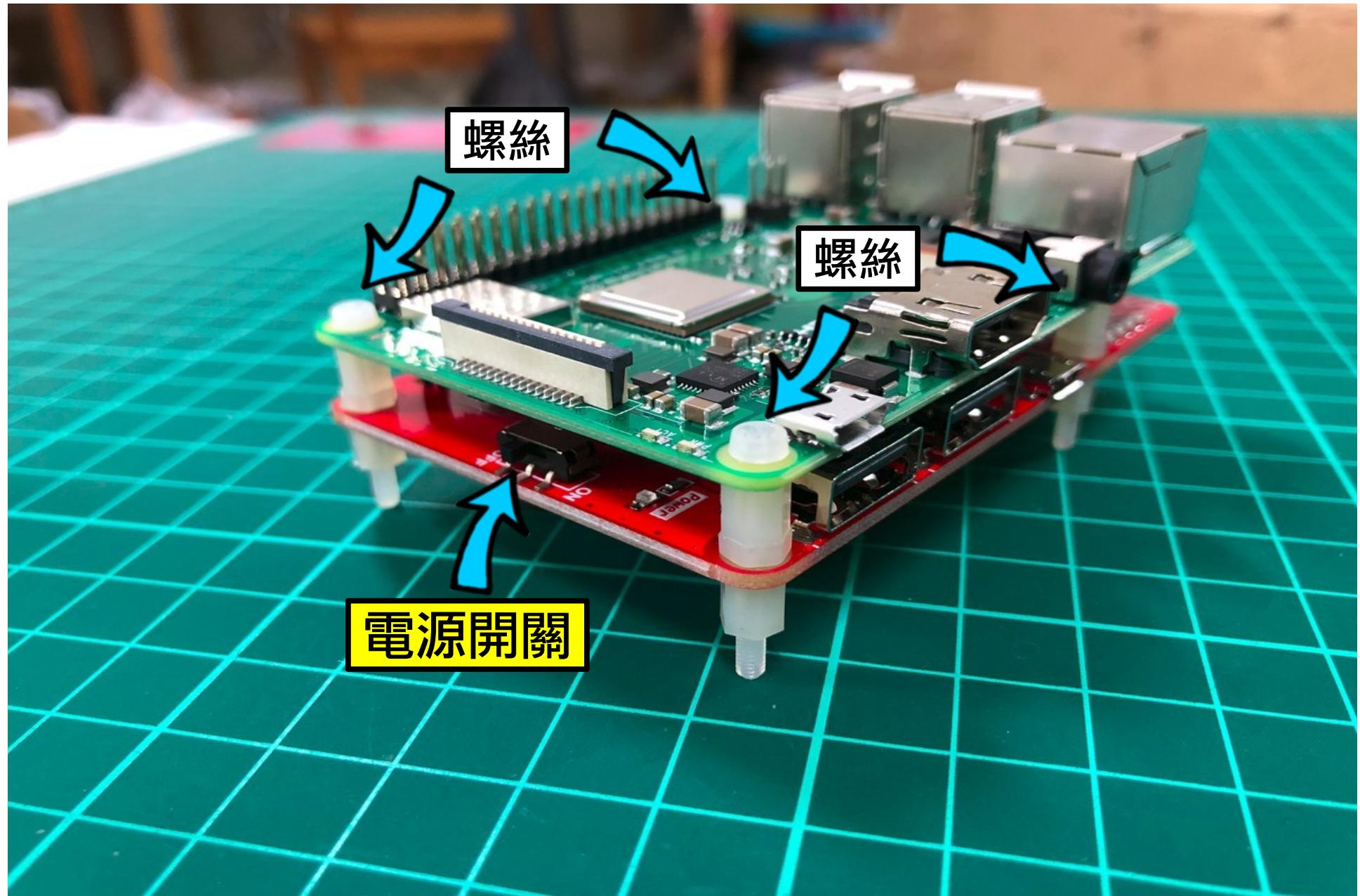
三個一組鎖在鋰電池擴充板 (共四組)



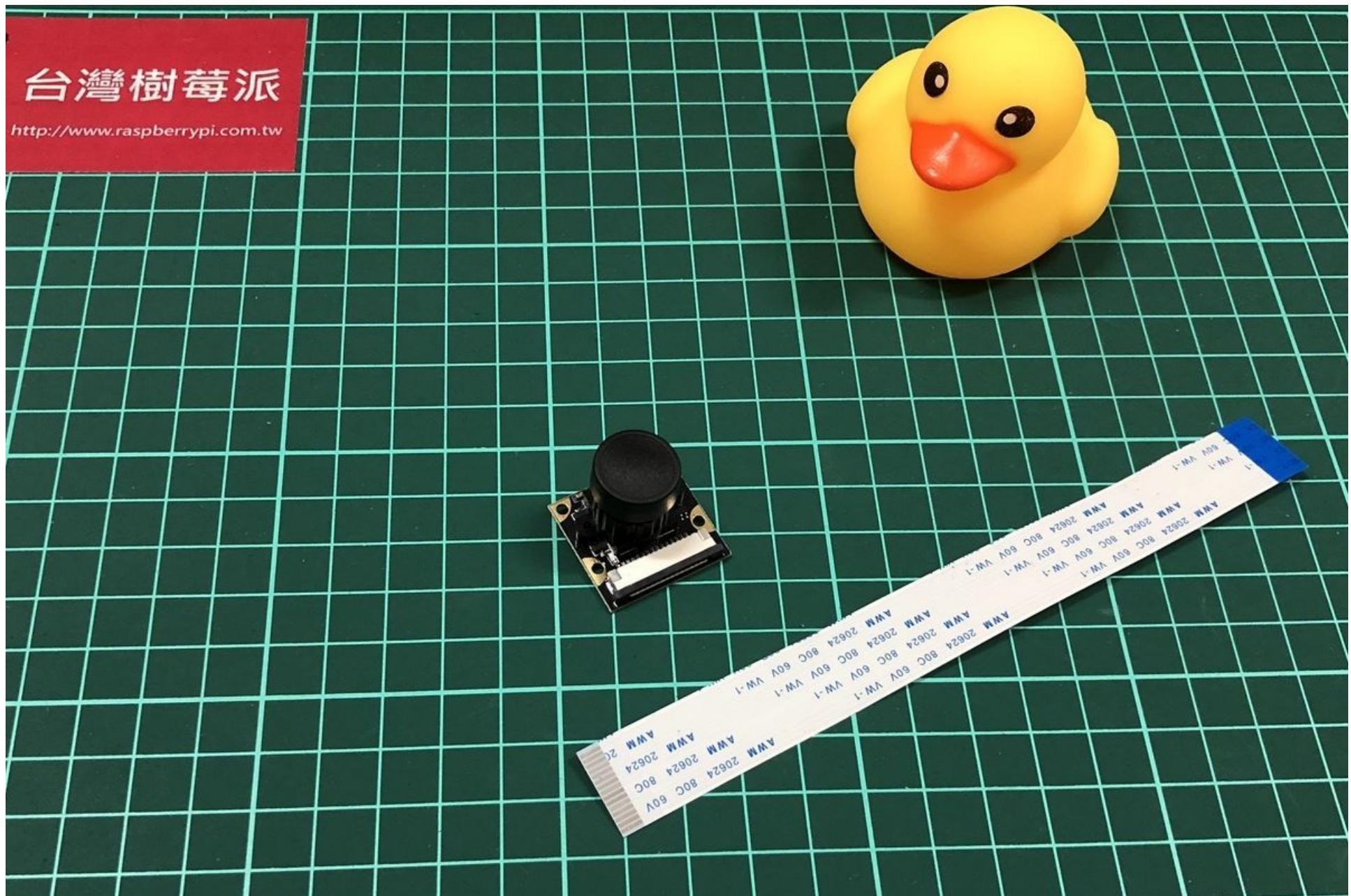
準備樹莓派和四顆螺絲



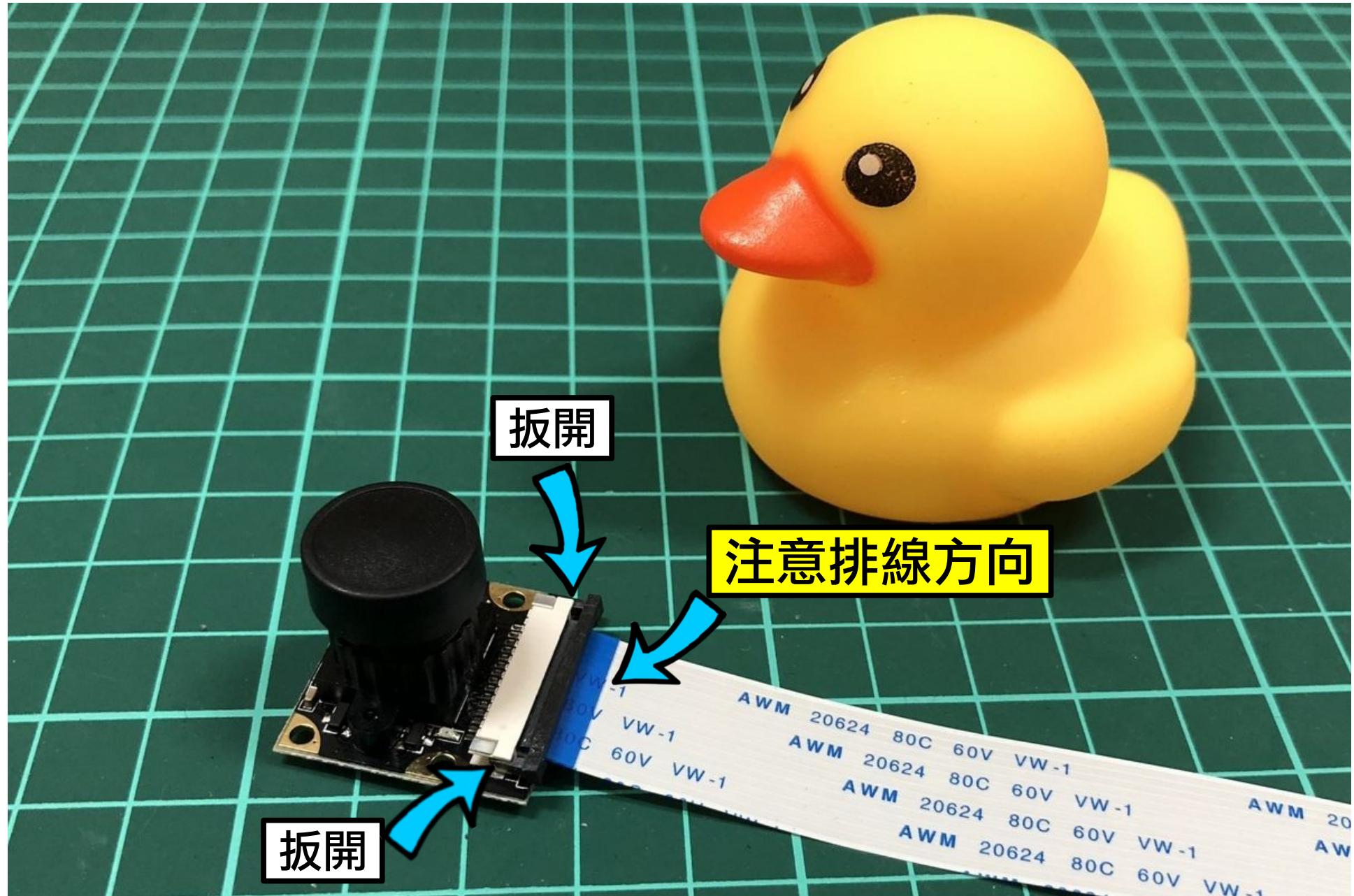
將樹莓派和鋰電池擴充板固定在一起



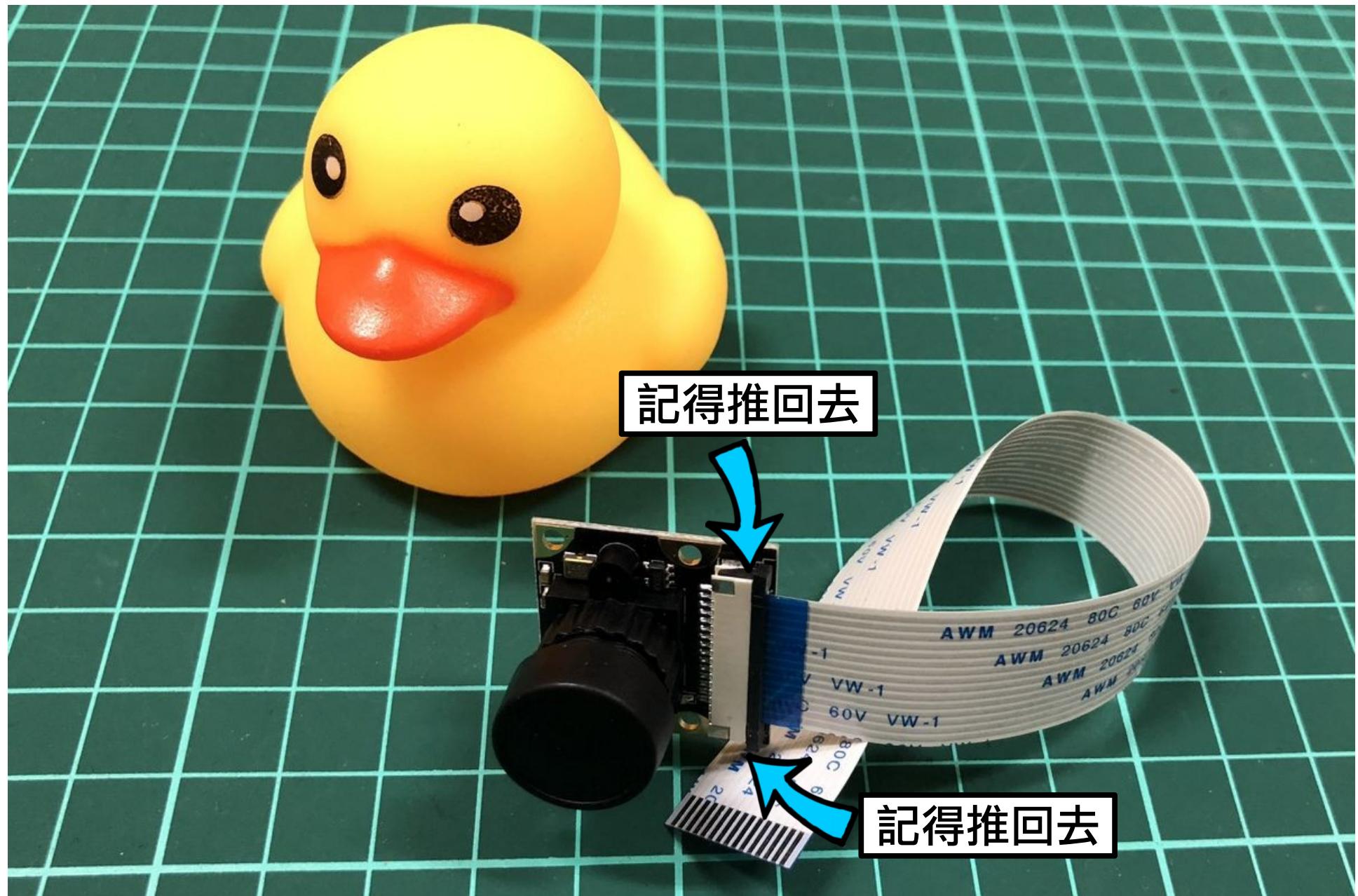
準備魚眼相機和排線



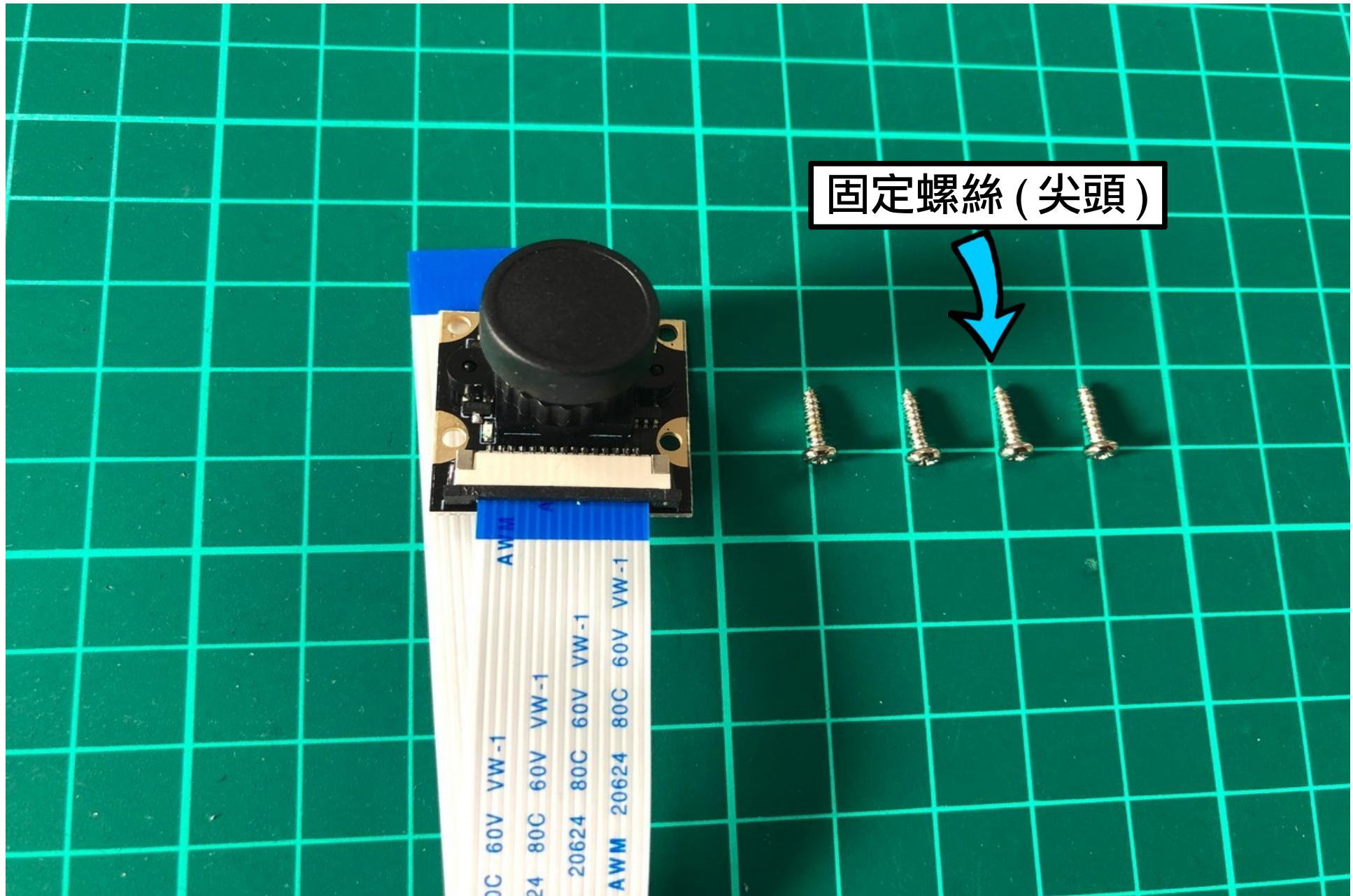
將排線接到魚眼相機 PCB 板



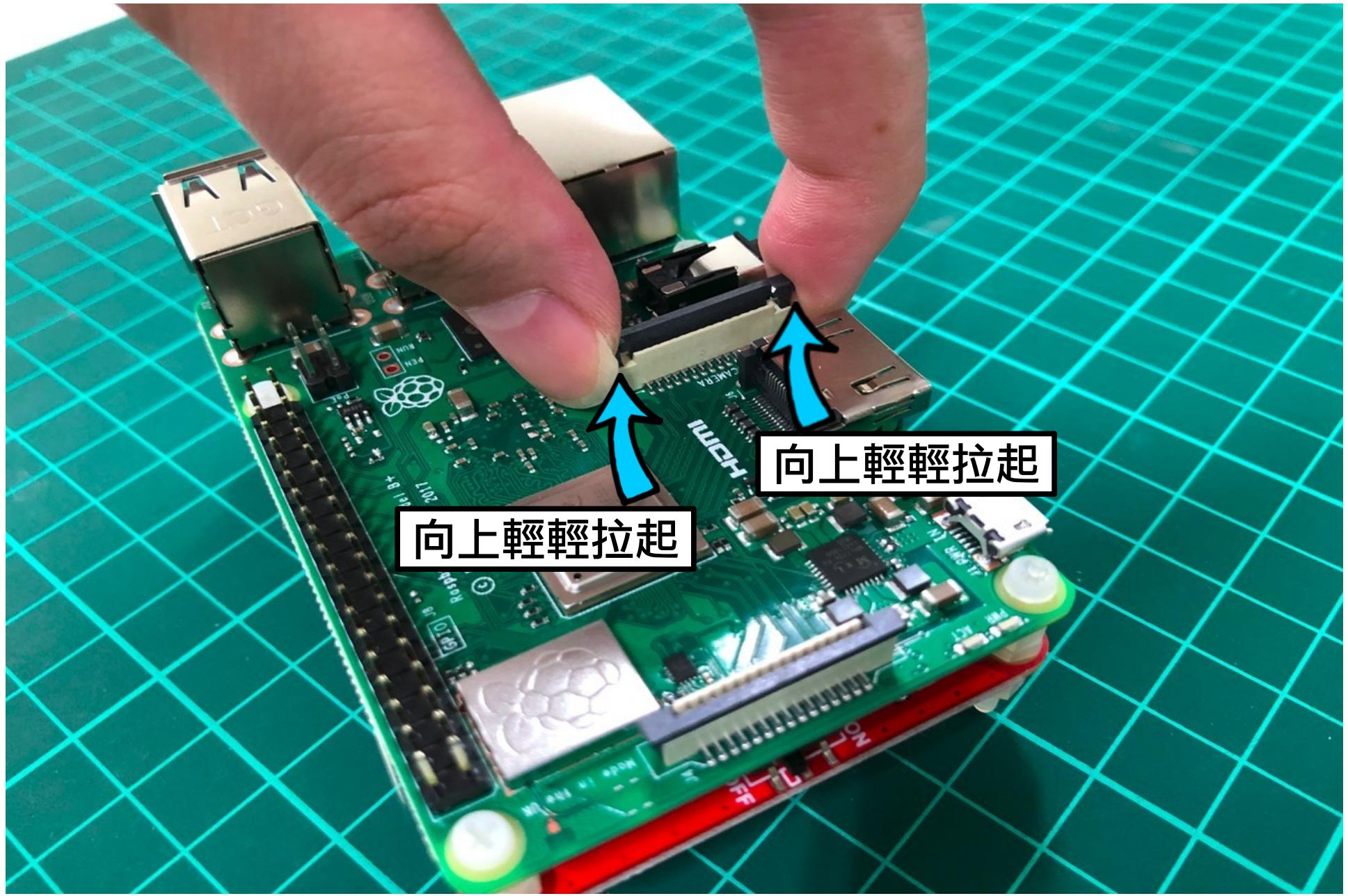
排線和魚眼相機安裝完成



準備魚眼相機和固定螺絲



拉起相機卡榫



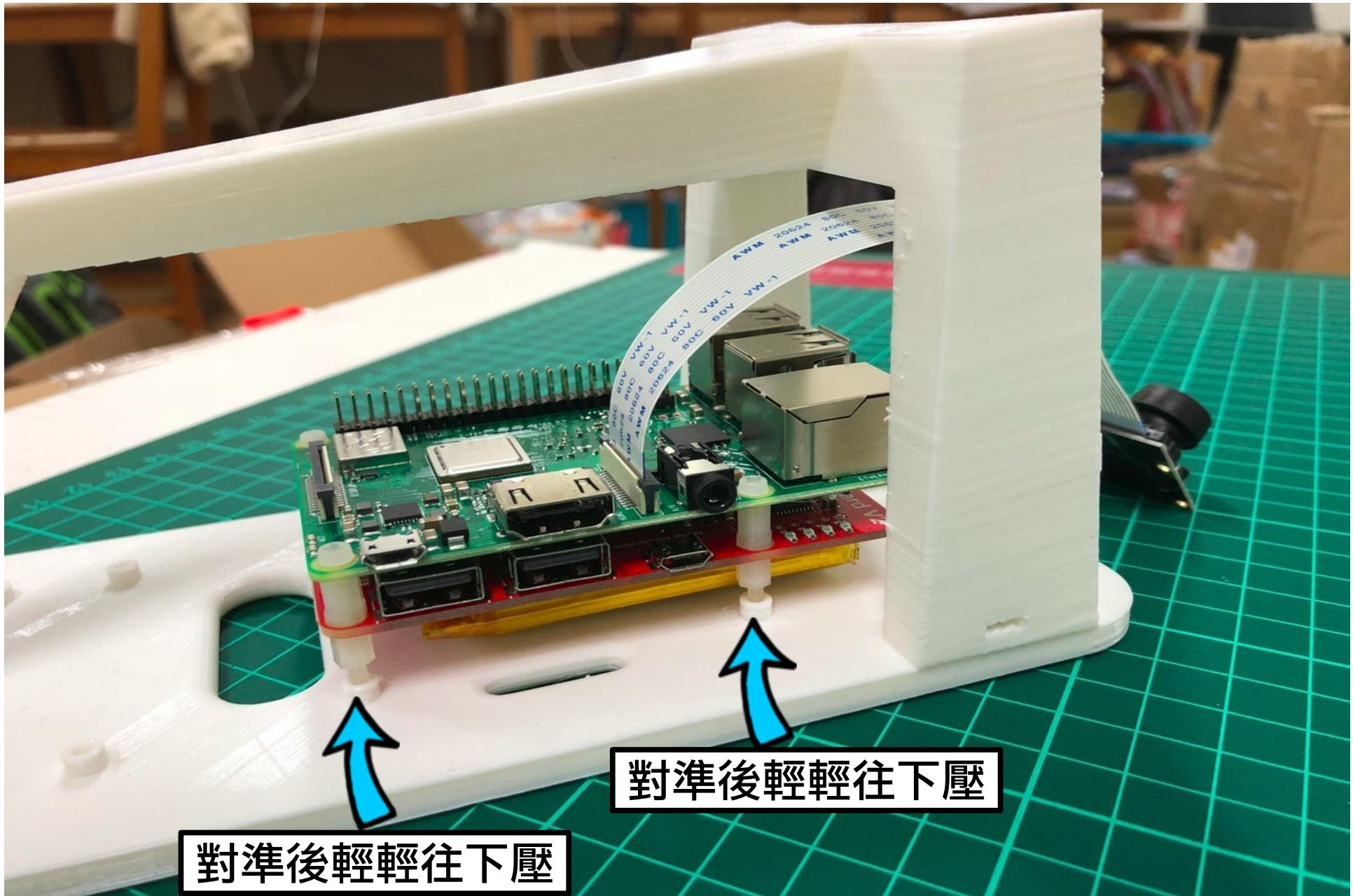
將魚眼相機安裝到樹莓派上



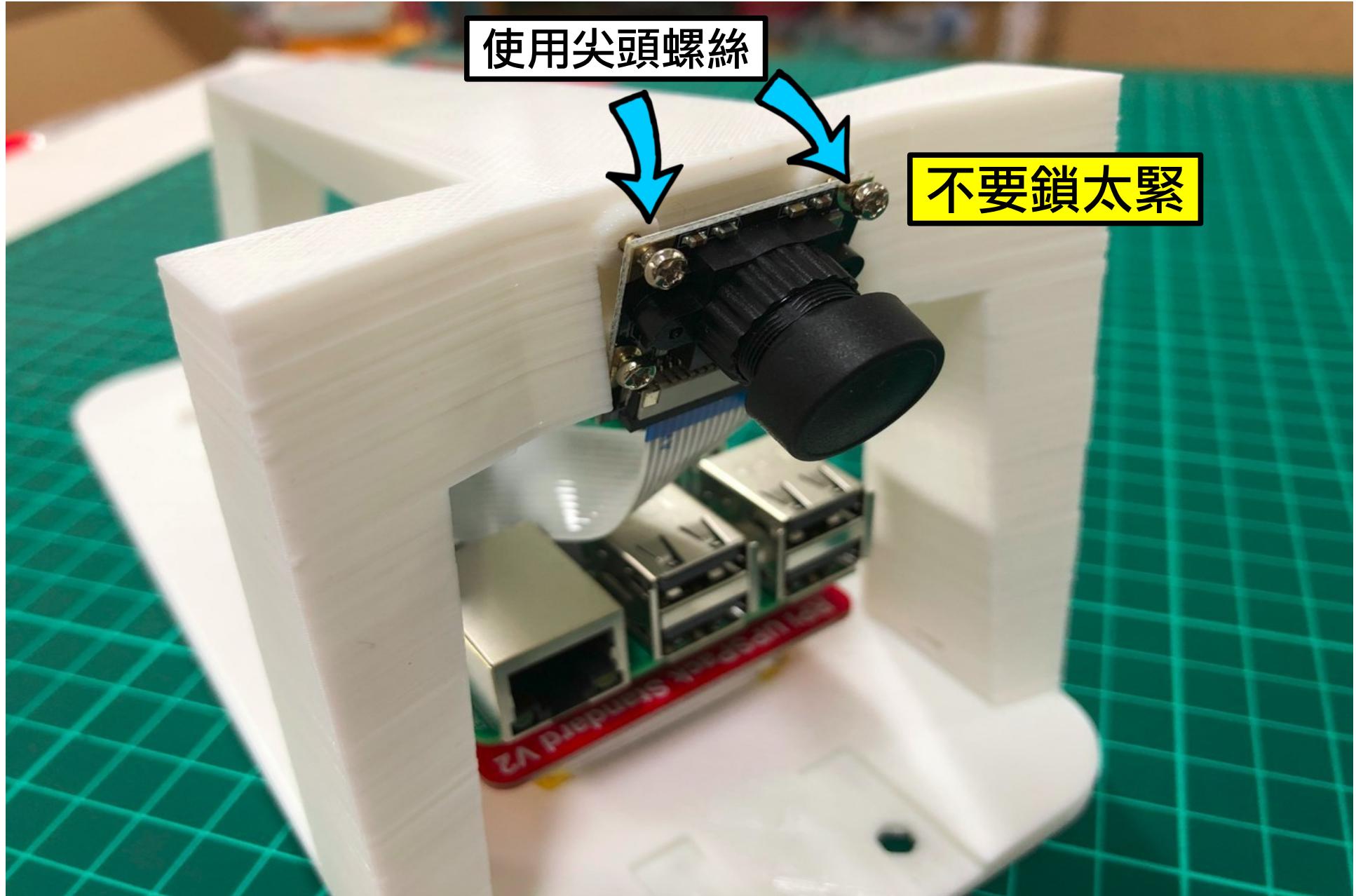
安裝完畢標準：

1. 排線已經插到底
2. 排線不能一拉就起來
3. 露出的金屬線和卡隼是水平的

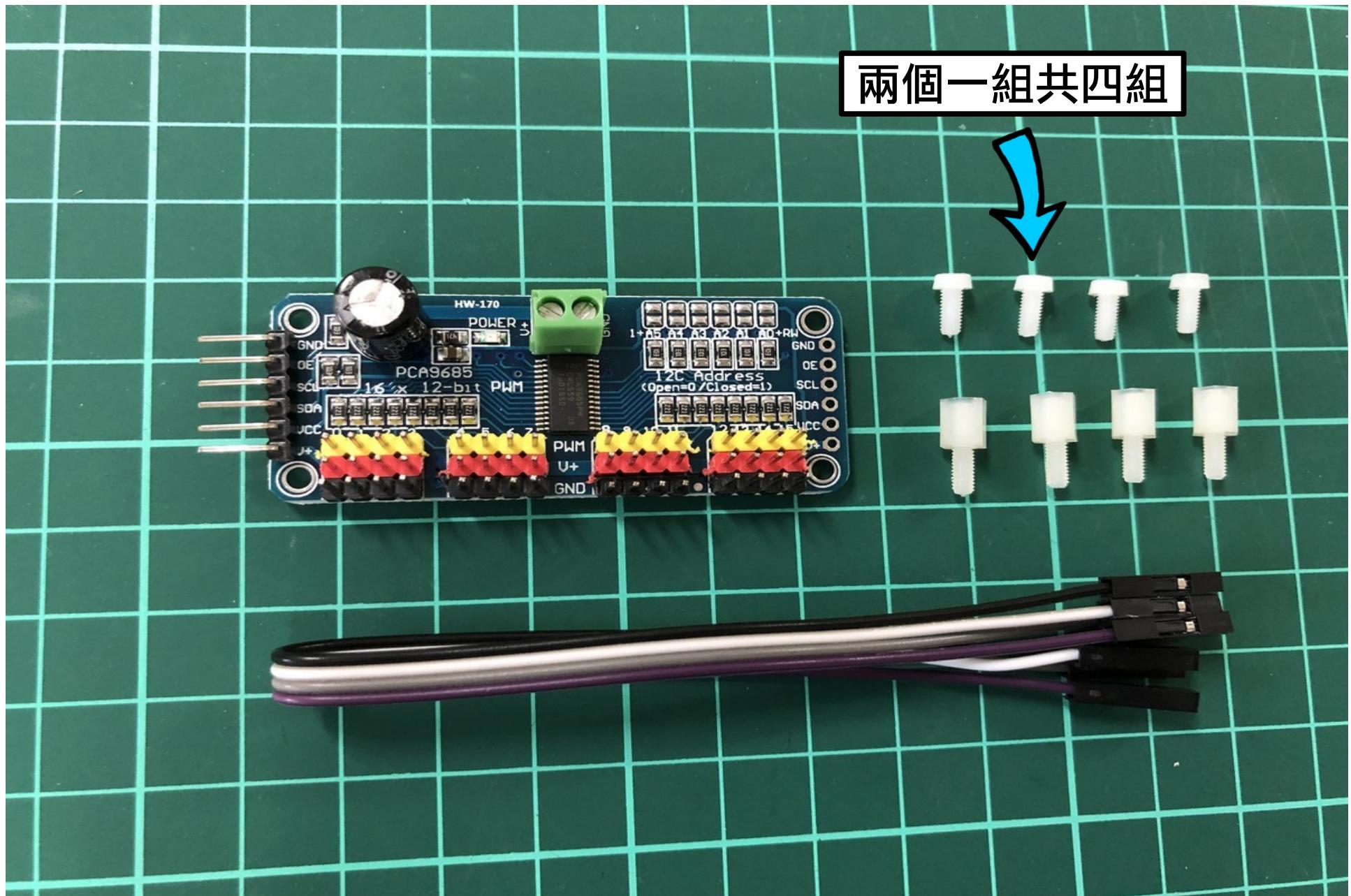
將樹莓派輕壓在 3D 底板螺絲孔



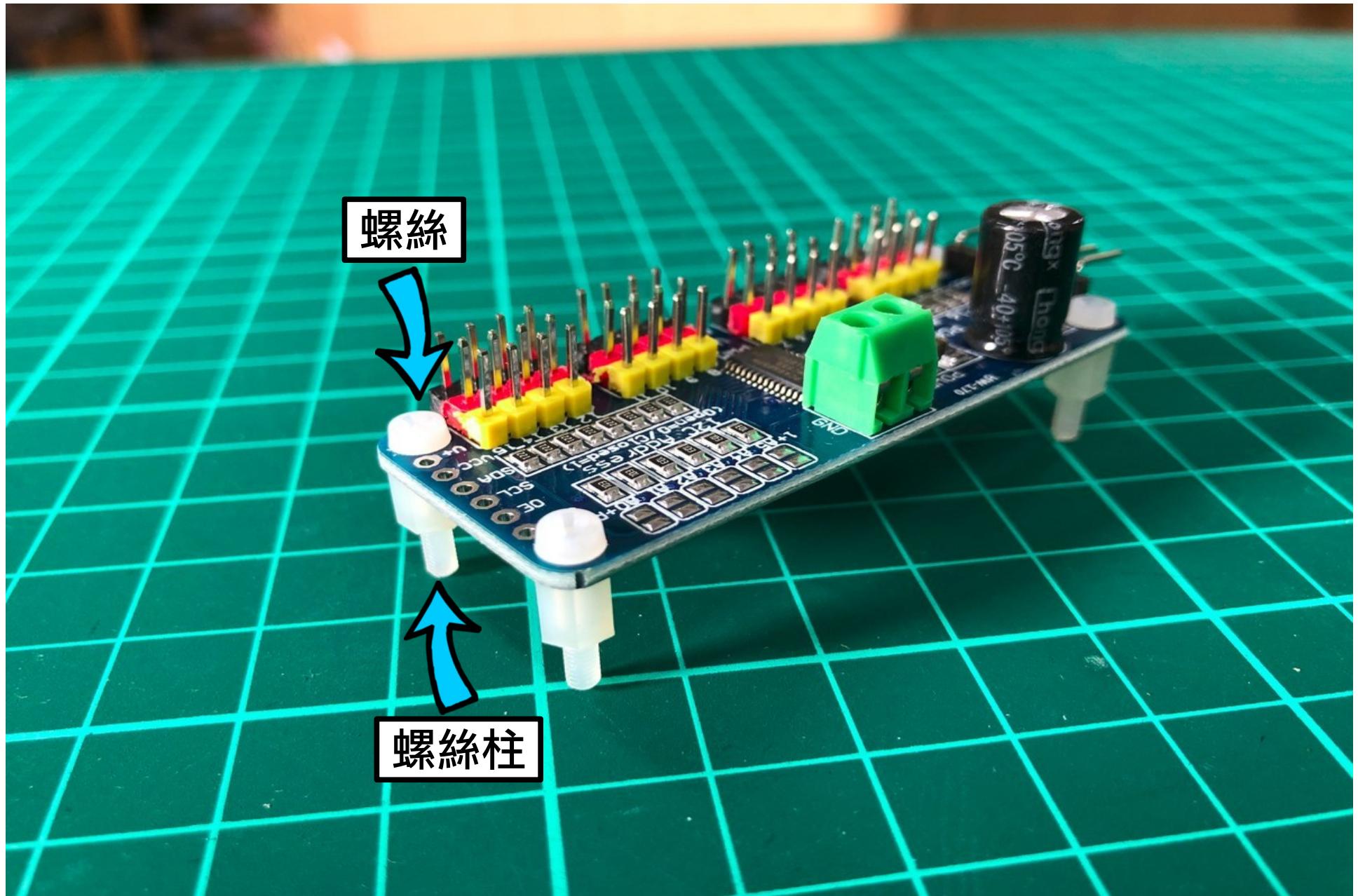
將相機鎖在 3D 把手



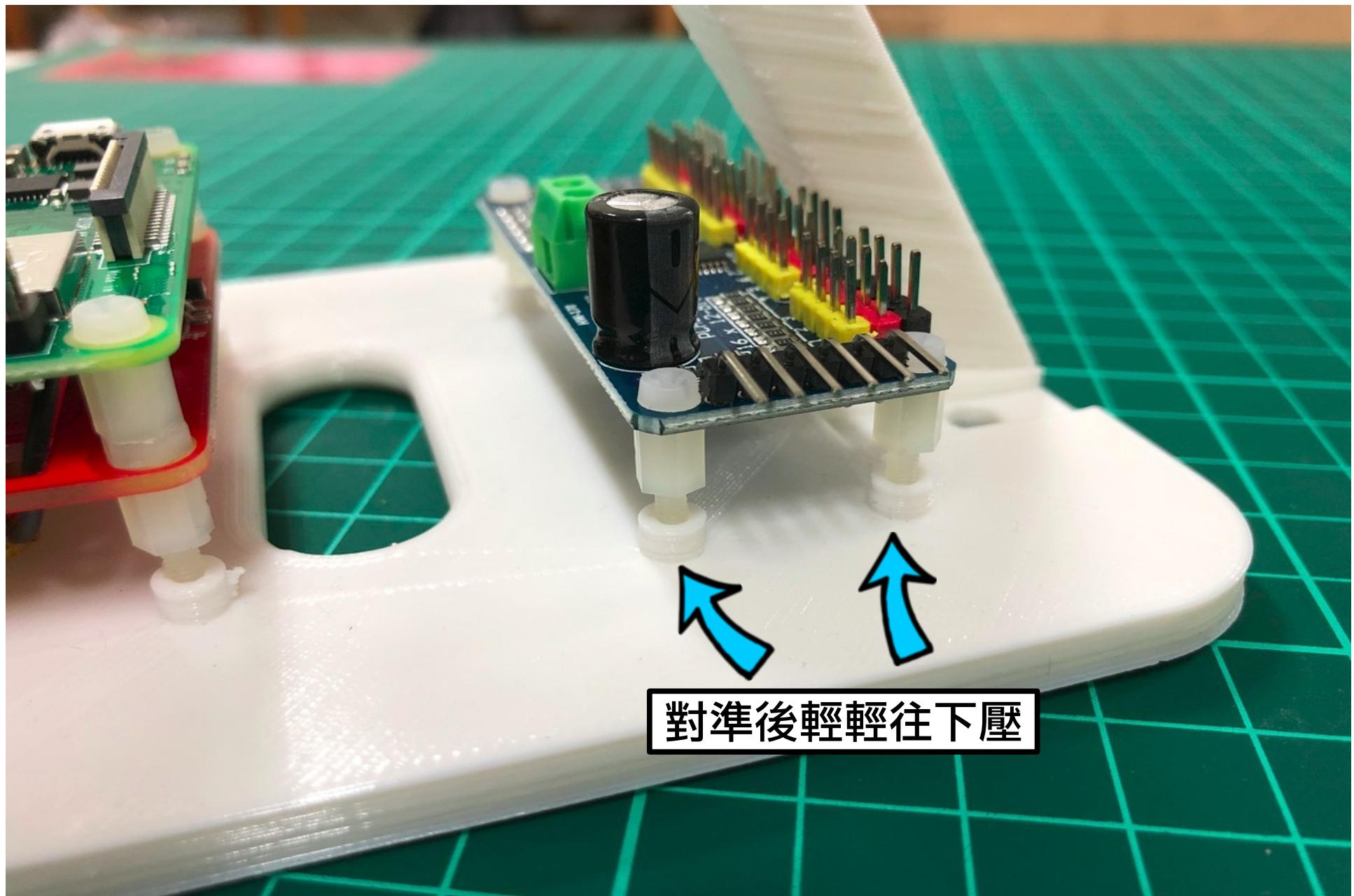
準備馬達驅動板和螺絲與杜邦線



將螺絲和螺絲柱鎖在控制板上（共四組）

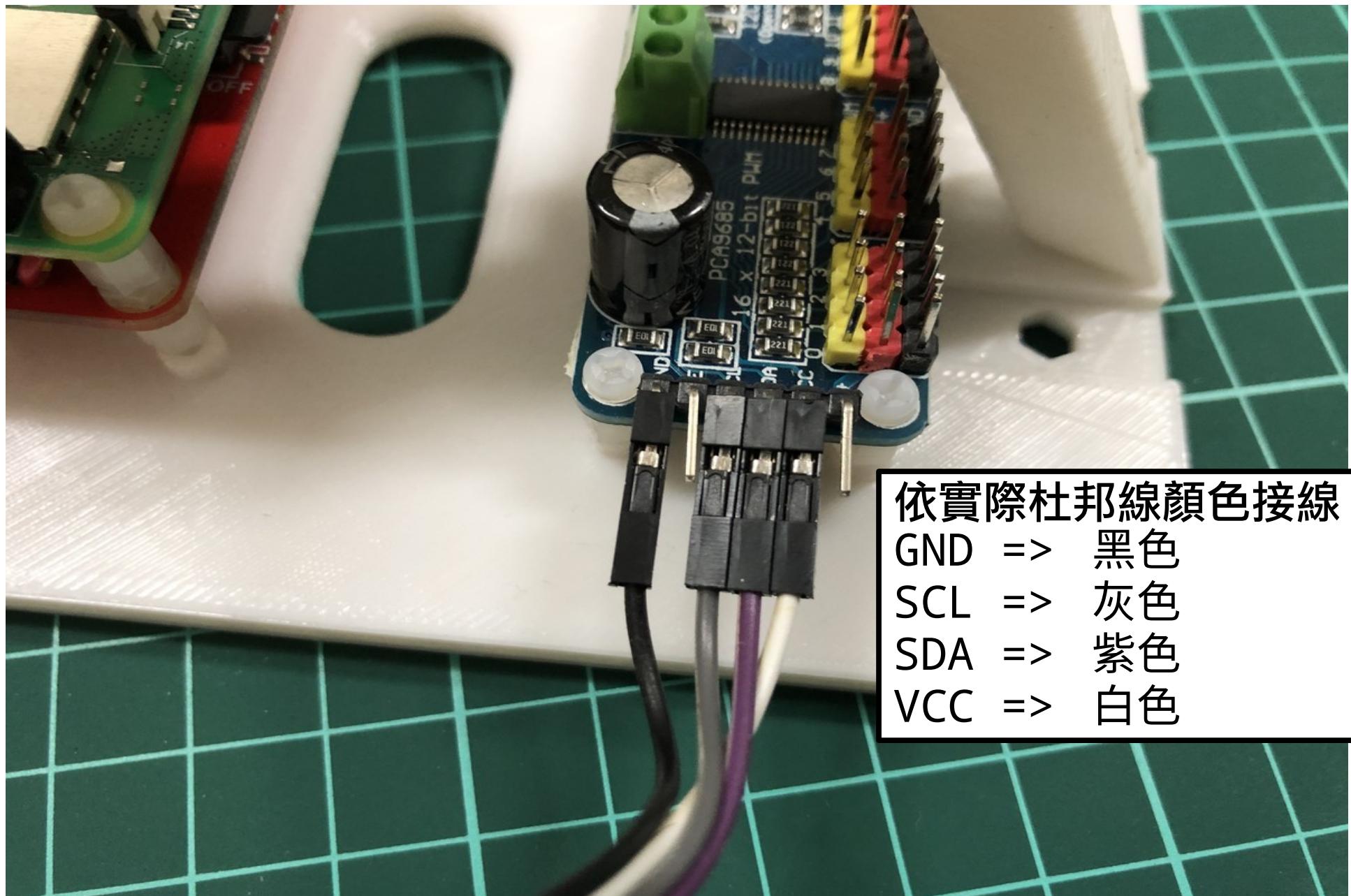


將馬達控制板壓在螺絲孔



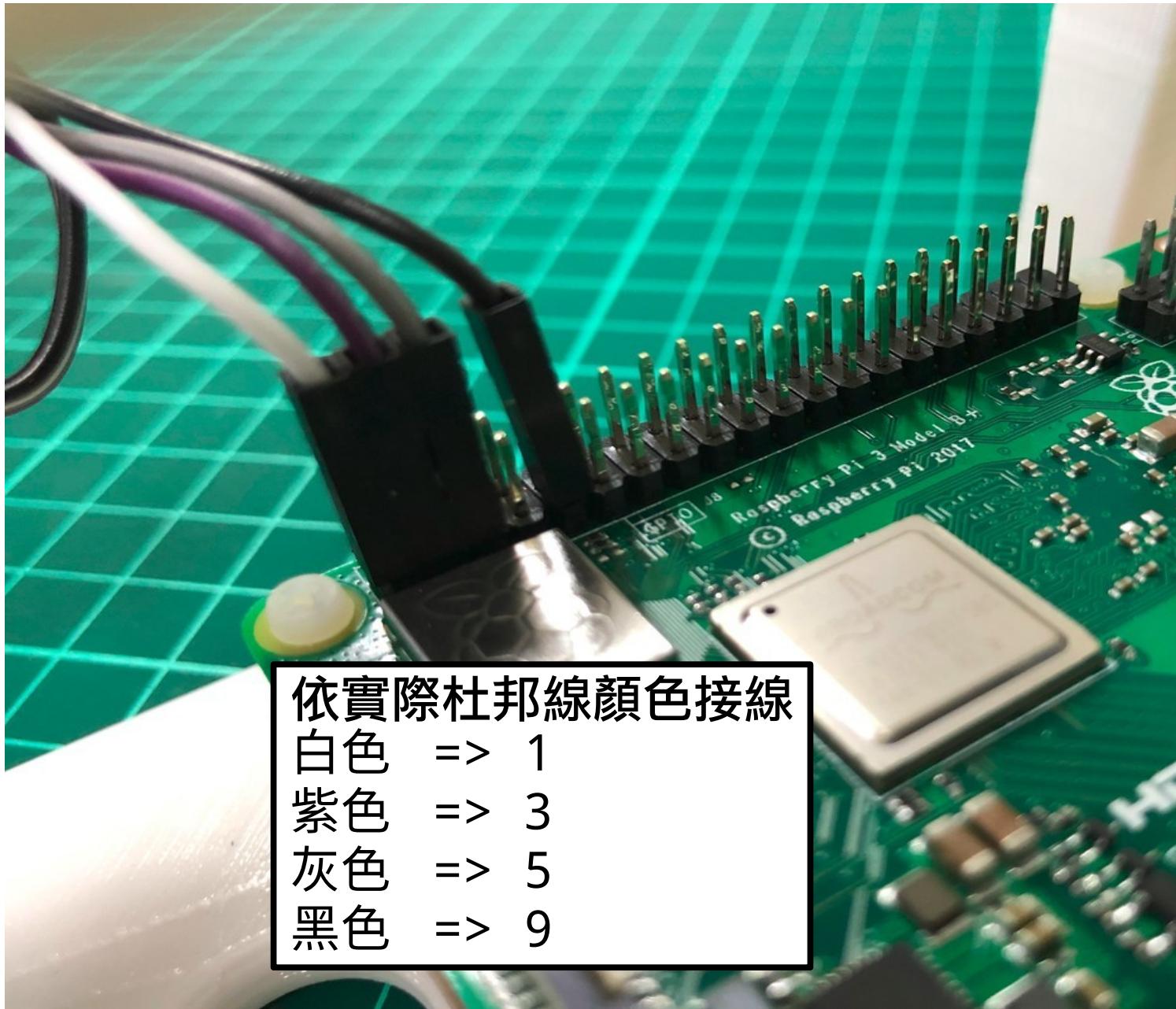
對準後輕輕往下壓

將杜邦線接到馬達控制板



依實際杜邦線顏色接線
GND => 黑色
SCL => 灰色
SDA => 紫色
VCC => 白色

將杜邦線接到 Pi

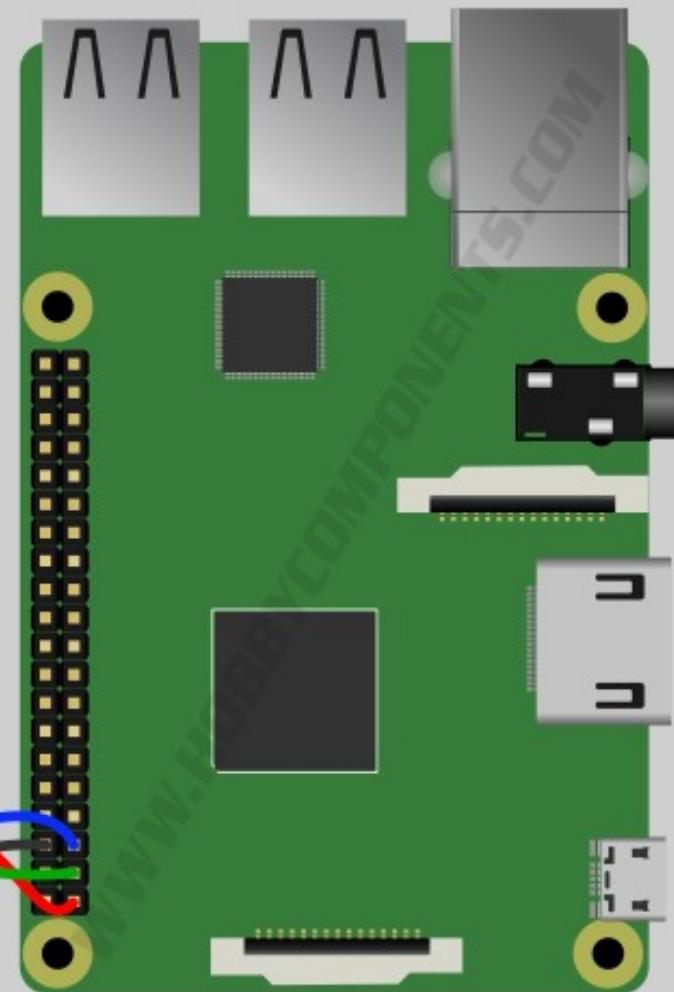
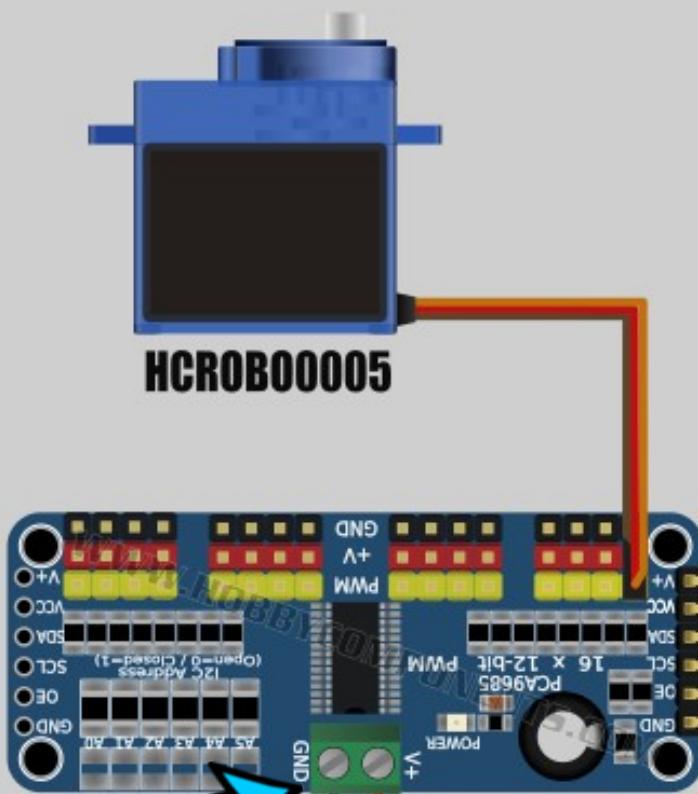


依實際杜邦線顏色接線
白色 => 1
紫色 => 3
灰色 => 5
黑色 => 9

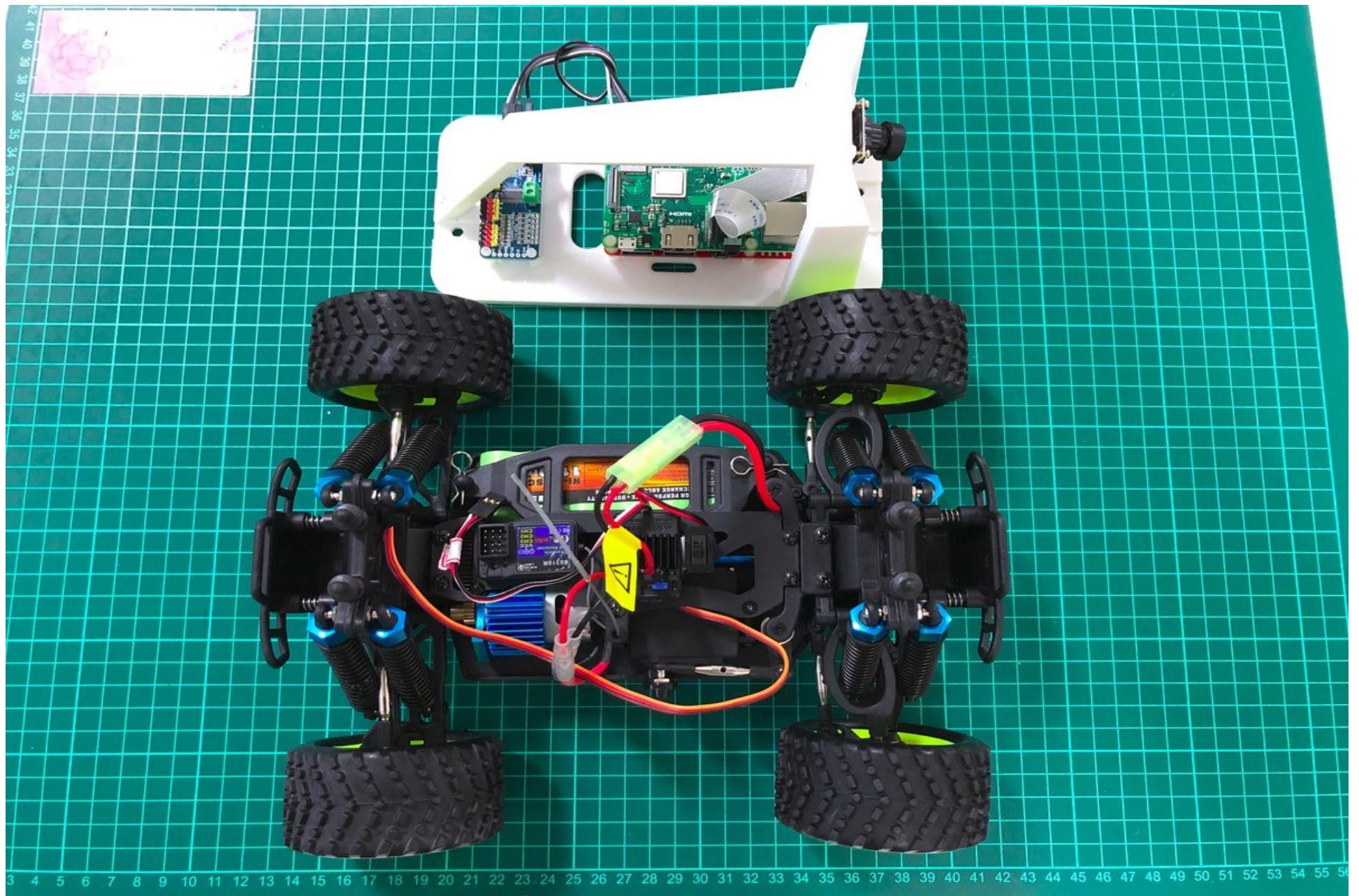
Pi Model B/B+	
3V3	Power
GPIO2	SDA1 I2C
GPIO3	SCL1 I2C
GPIO4	
Ground	
GPIO14	UART0_TXD
GPIO15	UART0_RXD
GPIO18	PCM_CLK
Ground	
GPIO23	
GPIO24	
Ground	
GPIO25	
GPIO08	SPI0_CE0_N
GPIO07	SPI0_CE1_N
ID_SD	I2C ID EEPROM
GPIO5	
GPIO6	
GPIO13	
GPIO19	
GPIO26	
Ground	
27	28
29	30
31	32
33	34
35	36
37	38
39	40
Pi Model B+	

詳細安裝線路圖

PCA8596 PWM Module Raspberry Pi Connections



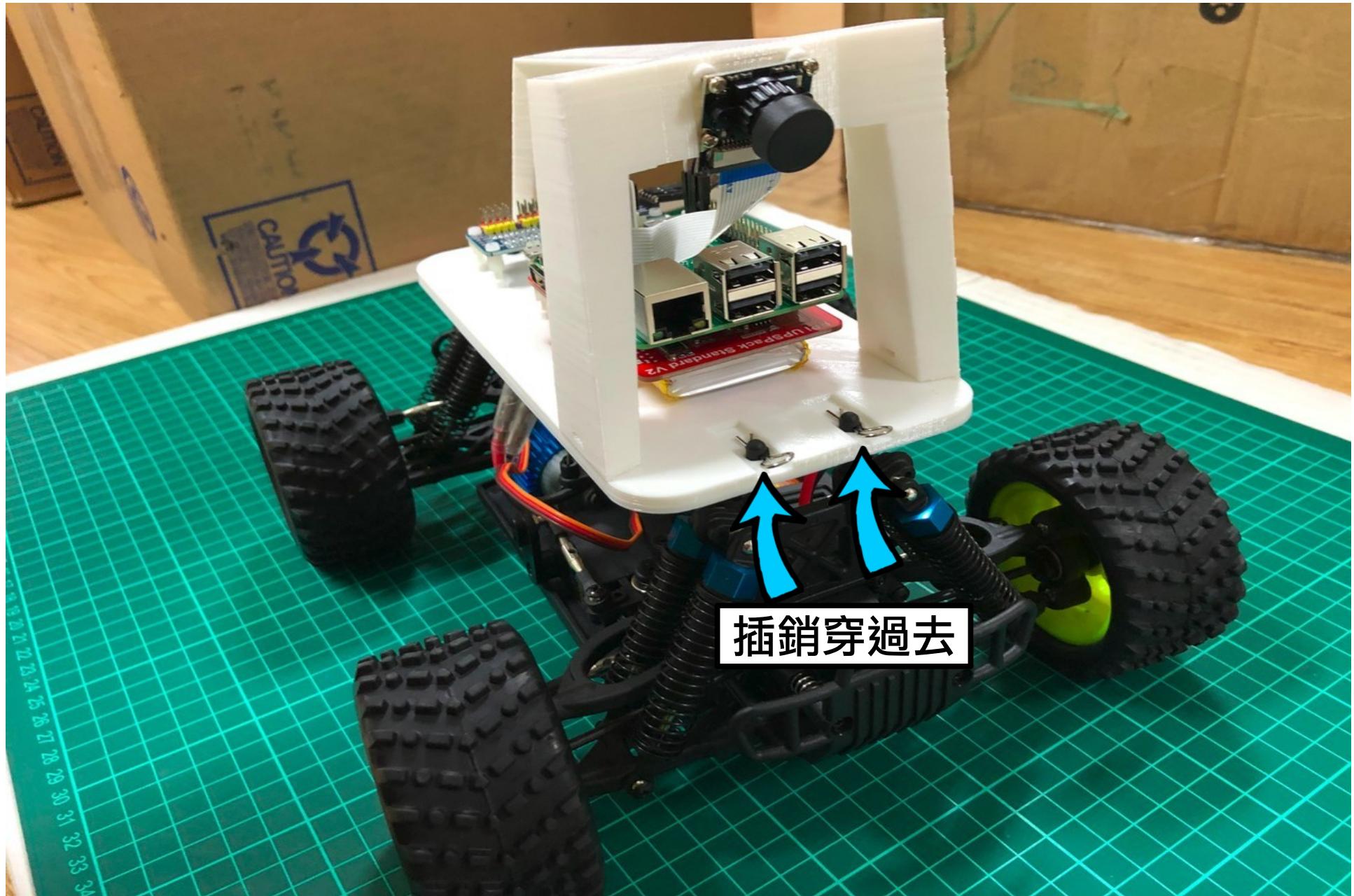
準備結合 Pi 車架和 HSP 車體



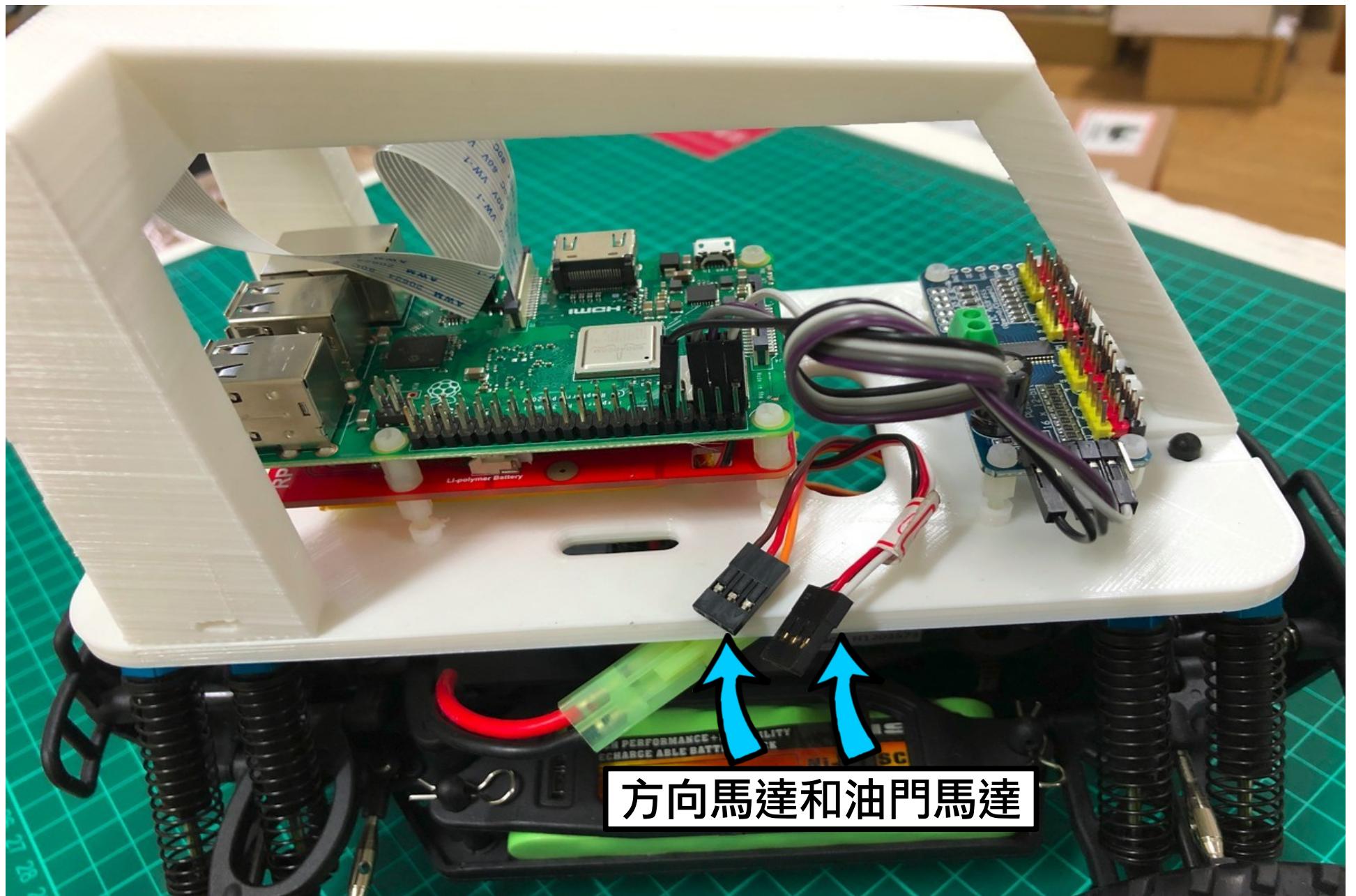
將車架安裝在 HSP 車體 (注意方向)



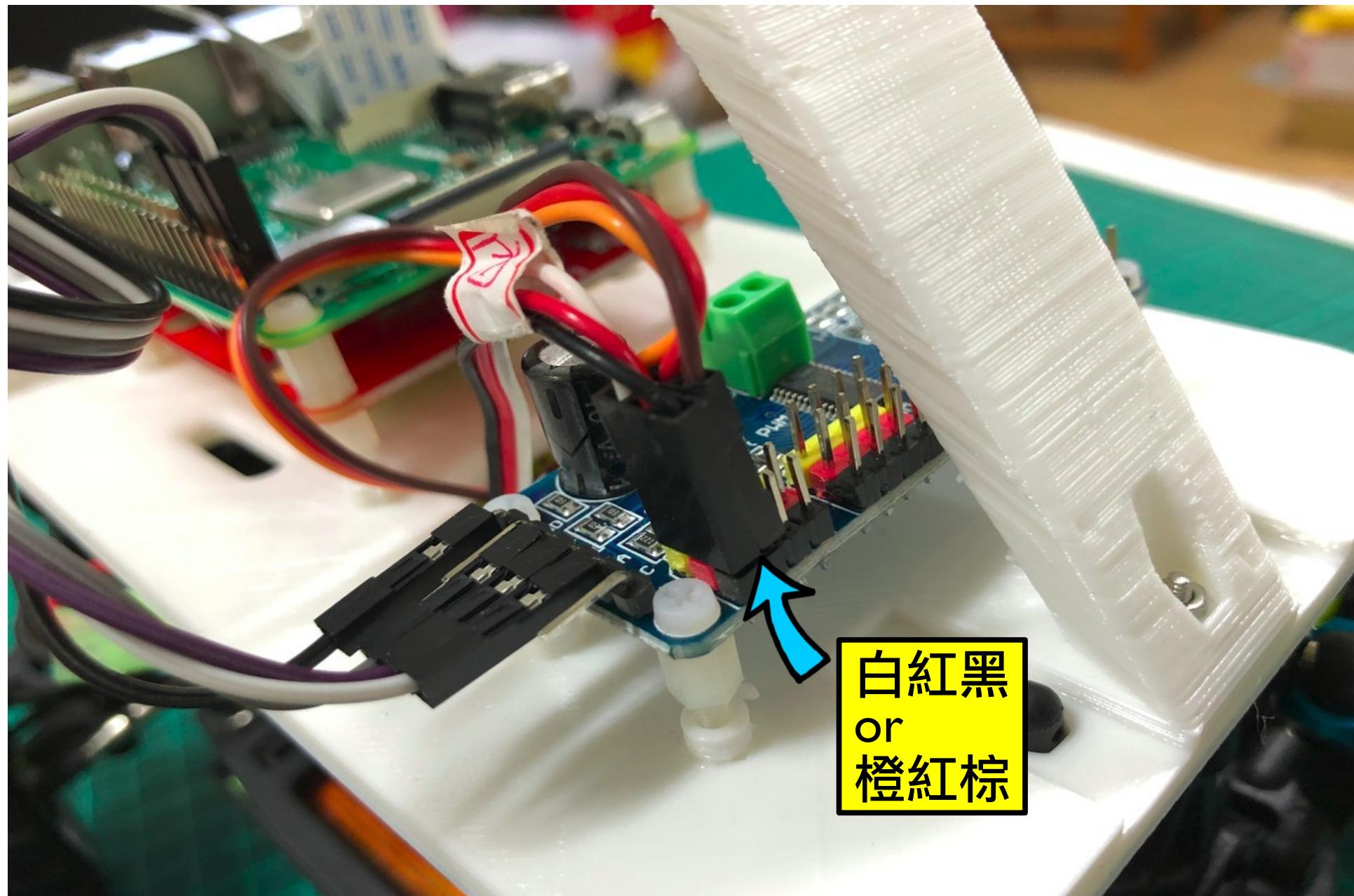
將插銷穿過去固定 (共四支)



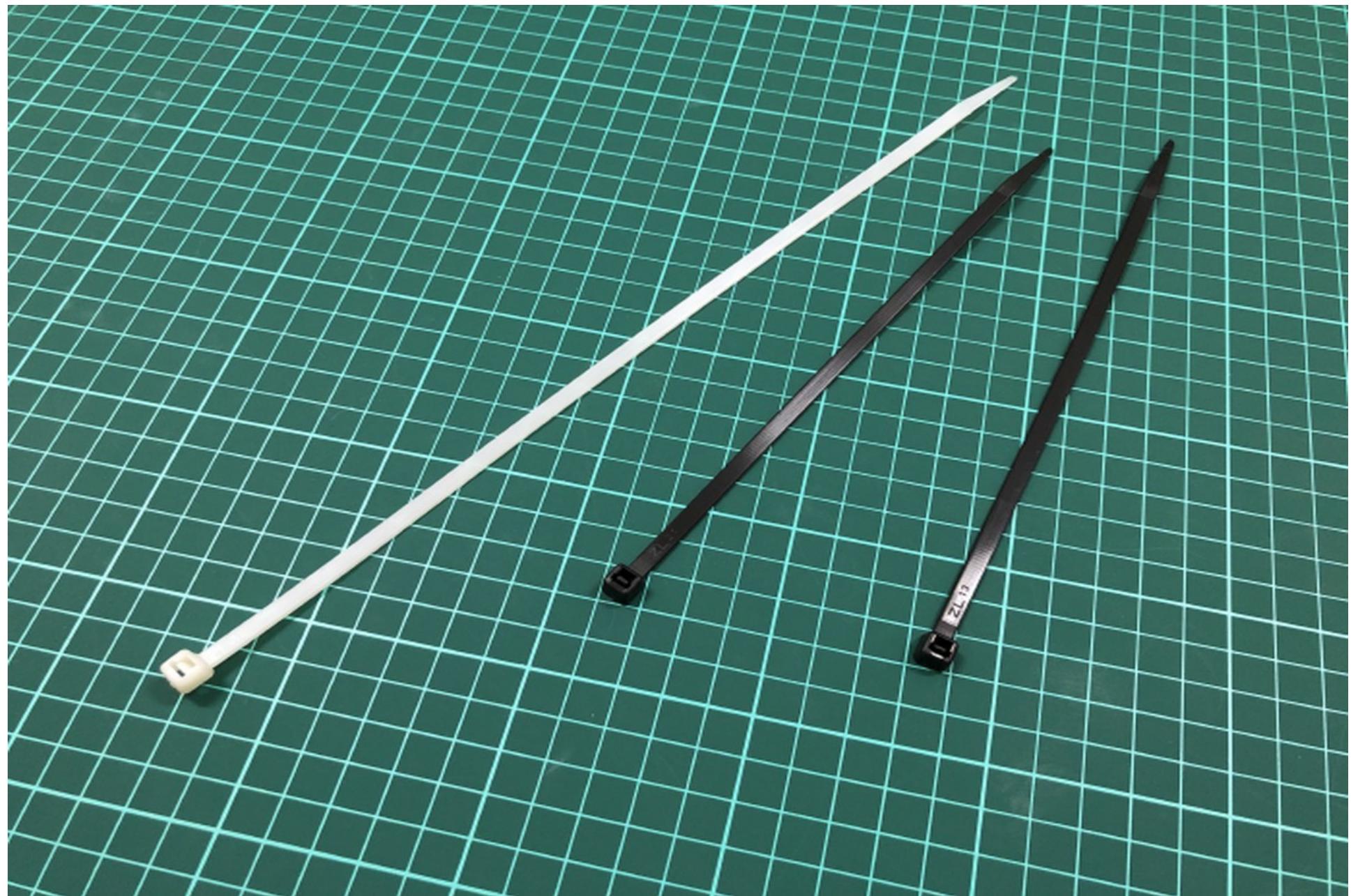
將 HSP 車體的兩條馬達線穿出來



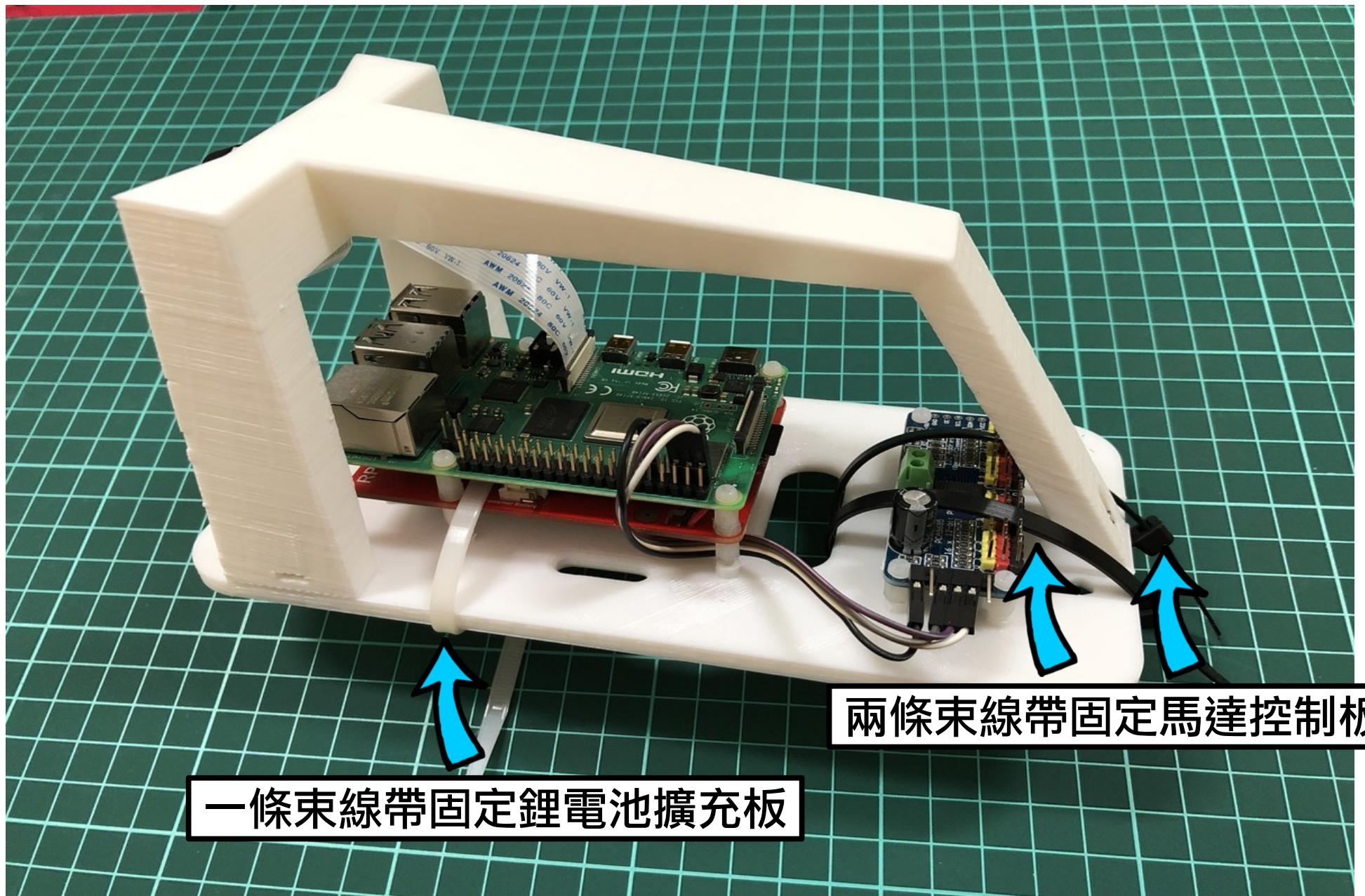
將馬達線接到馬達控制板上（注意腳位）



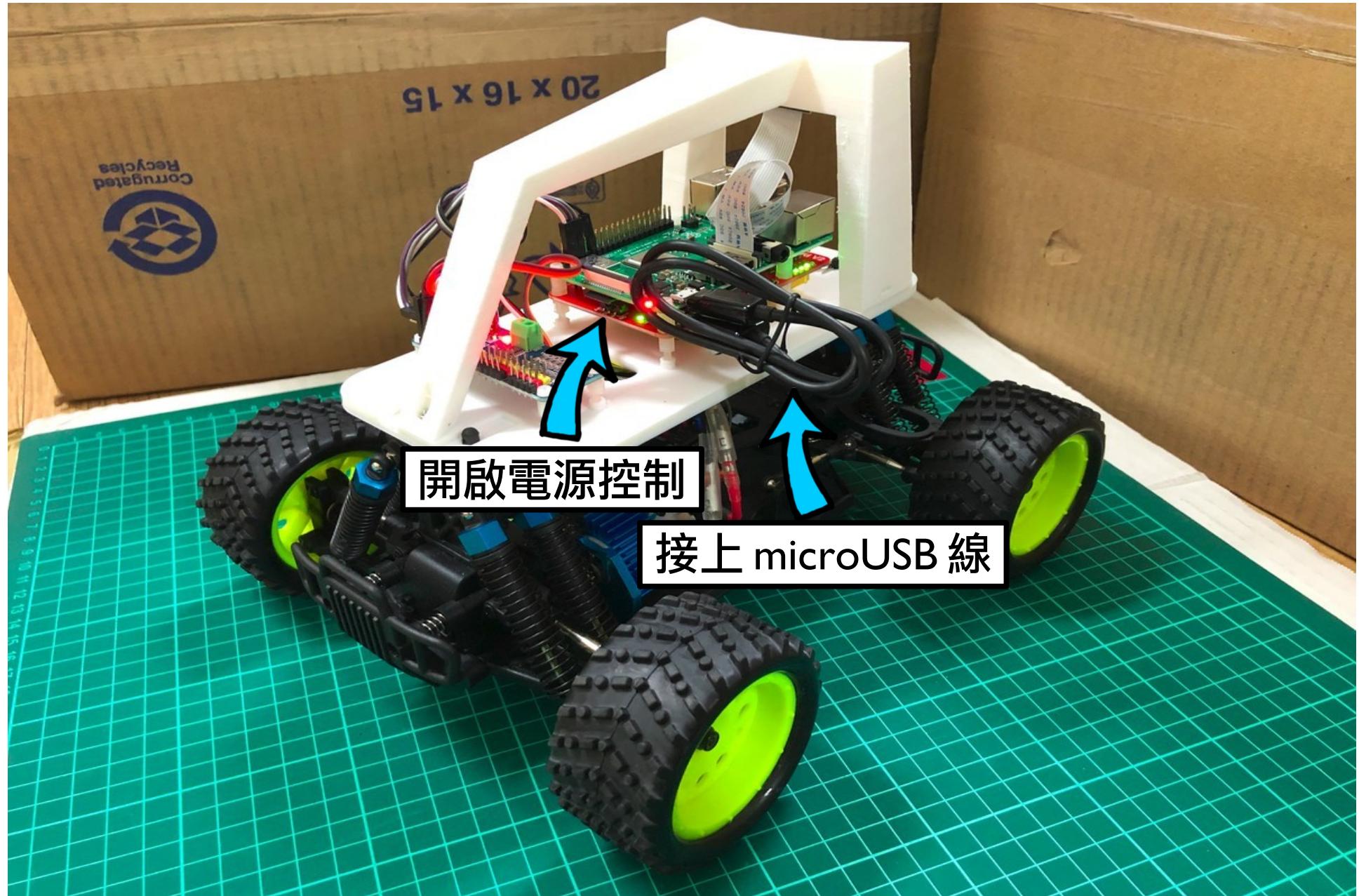
準備束線帶



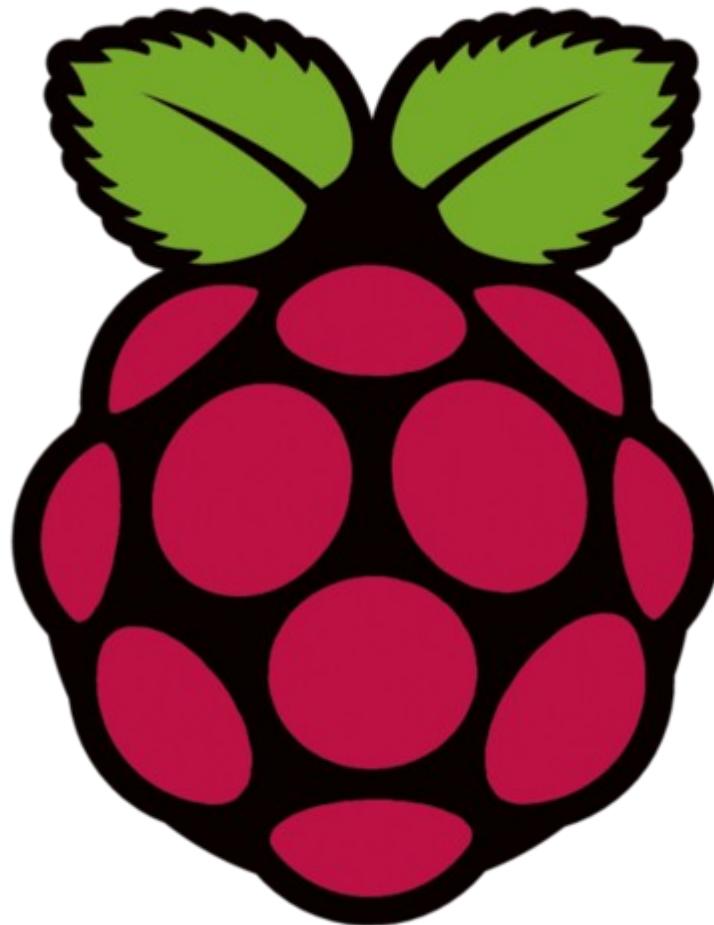
用束線帶固定控制板和鋰電池擴充板



組裝完成準備開機測試



Raspberry Pi Rocks the World



Thanks