



**QNAP**

# TVS-x72XU

TVS-1672XU-RP

TVS-2472XU-RP

**使用者指南**

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# 1. 前言





## 關於本指南

本指南涵蓋 QNAP TVS-x72XU NAS 的相關資訊，以及安裝硬體的逐步指示。此外，本指南也提供基本操作說明與疑難排解資訊。

## 適用對象

本文件的適用對象為消費者與儲存空間管理員。本指南預設使用者對於儲存與備份概念有基本的認識。

## 慣用符號

符號	說明
	注意事項。用於提供預設組態設定與其他補充資訊。
	重要注意事項。用於提供必要組態設定及其他重要資訊。
	提示。用於提供任務執行或組態設定的建議或替代方式。
	警告。忽略此類資訊可能導致潛在損失、受傷甚至死亡事故。

## 2. 產品概觀

本章介紹 QNAP TVS-x72XU NAS 的基本資訊。

### 關於 TVS-x72XU

TVS-x72XU 搭載 Intel® Core™ i3-8100 處理器，是一款企業級系列 NAS。此系列支援不同硬碟儲存設定，可滿足各類虛擬化和資料儲存需求。其同時配備四個 Long-DIMM 記憶體插槽（記憶體可擴充至 64GB）、數個擴充卡插槽，以及各式輸入/輸出 (I/O) 連接埠，擴充性與靈活度十足。

### 硬體規格



#### 警告






如果您的 QNAP 產品有硬體瑕疵，請將產品寄回 QNAP 或 QNAP 授權服務中心進行維修或換貨。只要您或未經授權的第三方嘗試修復產品或執行產品維修流程，皆會導致產品保固失效。







對於因未獲授權進行修改或安裝不支援之第三方應用程式所導致的任何損害或資料遺失，QNAP 一概不予負責。

如需詳細資訊，請參見：[QNAP 保固條款與條件](#)。

訂購料號	處理器	記憶體	電源供應器
TVS-1672XU-RP-I3-8G	Intel® Core™ i3-8100	8 GB	備援
TVS-2472XU-RP-I5-8G	Intel® Core™ i5-8500	8 GB	備援

元件	TVS-1672XU-RP	TVS-2472XU-RP
處理器		
處理器	Intel® Core™ i3-8100	Intel® Core™ i5-8500
頻率	4 核心 3.6 GHz	6 核心 3.0 GHz
架構	x86 64 位元	
加密引擎	AES-256	
記憶體		
預載記憶體	8 GB RAM : 2 x 4 GB DDR4	
記憶體插槽	4 x Long-DIMM DDR4	
	<b>重要</b> 僅限使用 QNAP 記憶體模組以維護系統效能和穩定性。若是具有一個以上記憶體插槽的 NAS 硬碟，請使用規格相同的 QNAP 記憶體模組。使用不支援的記憶體模組會導致效能降級、產生錯誤，或造成作業系統無法啟動。	
最大記憶體	64 GB RAM : 4 x 16 GB	
快閃記憶體	4 GB (雙啟動作業系統防護)	
儲存		
硬碟插槽	16 個 3.5 吋 SATA 6 Gbps 插槽	24 個 3.5 吋 SATA 6 Gbps 插槽

元件	TVS-1672XU-RP	TVS-2472XU-RP
硬碟相容性	<ul style="list-style-type: none"> <li>• 3.5 吋 SATA 硬碟</li> <li>• 2.5 吋 SATA 硬碟</li> <li>• 2.5 吋 SATA 固態硬碟</li> </ul> <p> <b>重要</b> 2.5 吋硬碟托盤僅可容納高度不超過 9.5 mm 的硬碟。</p>	
網路		
10 個 Gigabit 乙太網路埠	2 x 10 GbE SFP+ SmartNIC	
Gigabit 乙太網路埠	4 x GbE RJ45	
外接 I/O 埠和擴充插槽		
PCIe 插槽	<ul style="list-style-type: none"> <li>• 1 x PCIe 2.0 (x4)</li> <li>• 1 x PCIe 3.0 (x8)</li> <li>• 2 x PCIe 3.0 (x4)</li> </ul> <p> <b>注意</b> PCIe 3.0 插槽 4 已預先安裝一個雙埠 10 GbE SFP+ 網路擴充卡。</p>	<ul style="list-style-type: none"> <li>• 1 x PCIe 3.0 (x8)</li> <li>• 1 x PCIe 3.0 (x4)</li> <li>• 3 x PCIe 2.0 (x4)</li> </ul> <p> <b>注意</b> PCIe 2.0 插槽 5 已預先安裝一個雙埠 10 GbE SFP+ 網路擴充卡。</p>
	<p> <b>提示</b> 請前往 <a href="https://www.qnap.com/compatibility">https://www.qnap.com/compatibility</a> 查看相容的擴充卡清單。</p>	
USB 連接埠	<ul style="list-style-type: none"> <li>• 2 x USB 3.1 Gen2 (10Gbps) 5V/3A Type-C</li> <li>• 4 x USB 3.1 Gen2 (10Gbps) 5V/1A Type-A</li> </ul>	
HDMI 連接埠	1 x HDMI 2.0 (解析度最高 3840 x 2160 · 60 Hz)	
網路介面		
按鈕	<ul style="list-style-type: none"> <li>• 電源</li> <li>• 重設</li> </ul>	
尺寸		
外型	3U 機架式	4U 機架式
尺寸 (高 x 寬 x 深)	130 x 481 x 573.5 mm (5.12 x 18.94 x 22.56 in)	176.15 x 481.04 x 672.02 mm (6.94 x 18.94 x 26.46 in)
淨重	15.35 kg (33.84 lbs)	20.67 kg (45.57 lbs)
其它		
滑軌相容性	RAIL-A03-57	RAIL-A02-90
	<p> <b>注意</b></p> <ul style="list-style-type: none"> <li>• NAS 不含機架滑軌，必須另外購買。如需詳細資訊，請聯絡授權經銷商或前往 <a href="http://shop.qnap.com">http://shop.qnap.com</a>。</li> <li>• 如需安裝機架滑軌的相關資訊，請參見機架滑軌包裝中的安裝指南。</li> </ul>	

元件	TVS-1672XU-RP	TVS-2472XU-RP
電源供應器	2 x 500W · 100-240V AC · 50/60Hz	2 x 800W · 100-240V AC · 50/60Hz
	 <b>警告</b> 為了降低走火或觸電風險，務必只將電源線連接至正確接地的電源插座。	
系統電池	CR2032 鋰電池 (3V · 225 mAh)	
	 <b>警告</b> 更換電池時，請務必使用相同類型的電池，以免電池爆炸造成受傷或元件損壞。	
	 <b>重要</b> 請遵照當地法規或電池製造商的指示處置廢棄電池。	
噪音值	49.7 db(A)	36.3 db(A)
	 <b>注意</b> 從旁觀者位置 (距 NAS 一公尺內) 測試噪音值。在測試用的 NAS 中安裝最多數量的硬碟，並以低速運行。	
風扇	系統：4 x 92 mm · 12V DC	
	 <b>警告</b>  請勿在 NAS 連上電源時觸碰風扇，以免受傷或損壞元件。	
操作溫度	0°C 到 40°C (32°F 到 104°F)	
相對濕度	<ul style="list-style-type: none"> <li>不凝結相對溼度：5% 至 95%</li> <li>濕球溫度：27°C (80.6°F)</li> </ul>	

**提示**

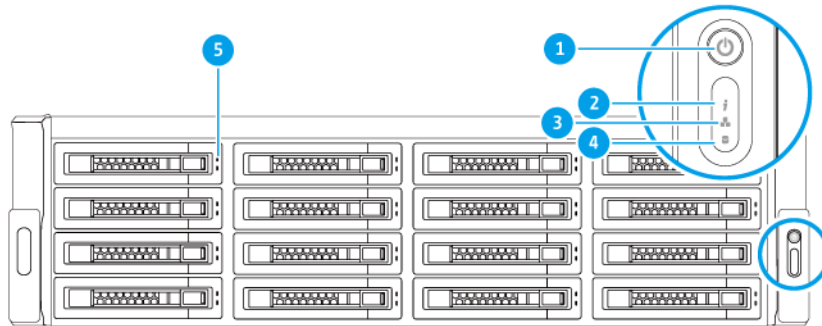
型號規格如有變更，恕不另行通知。若要查看最新規格，請前往 <https://www.qnap.com>。

**包裝內容**

項目	數量
TVS-x72XU NAS	1
電源線	<ul style="list-style-type: none"> <li>TVS-1672XU-RP : 2</li> <li>TVS-2472XU-RP : 2</li> </ul>
乙太網路線	2
2.5 吋硬碟用螺絲	TVS-1672XU-RP : 64 TVS-2472XU-RP : 96
3.5 吋硬碟用螺絲	TVS-1672XU-RP : 64 TVS-2472XU-RP : 96
快速安裝手冊 (QIG)	1

## 元件

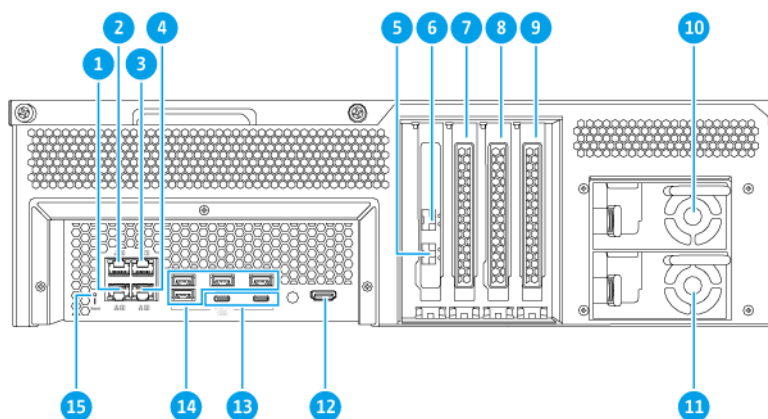
### 前面板



### TVS-1672XU-RP、TVS-2472XU-RP

編號	元件	編號	元件
1	電源按鈕	4	擴充設備 LED 燈
2	狀態 LED 燈	5	硬碟 LED 燈
3	LAN LED 燈	-	-

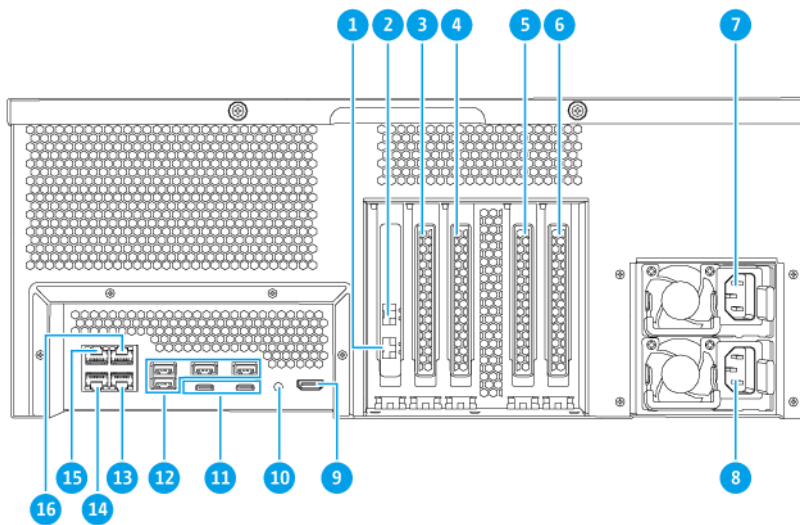
### 背面板



### TVS-1672XU-RP



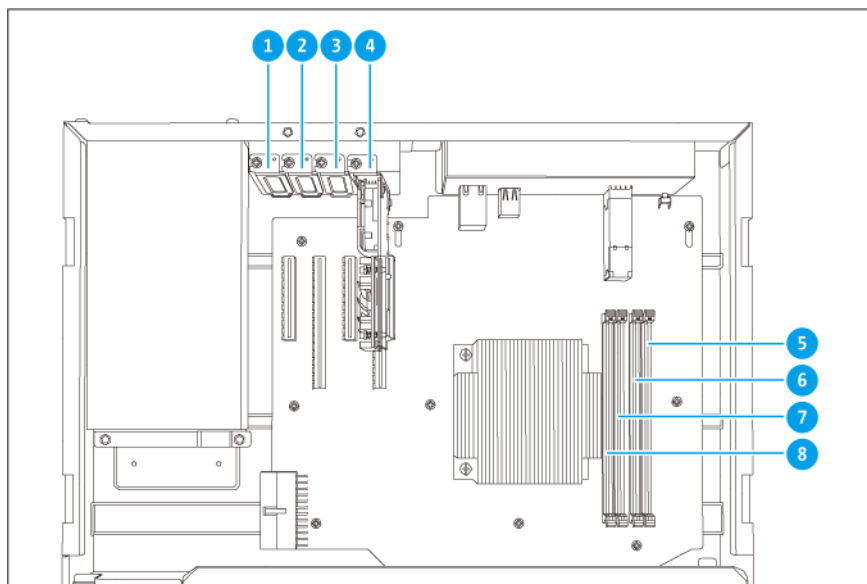
編號	元件	編號	元件
1	乙太網路埠 4 (GbE RJ45)	9	PCIe 2.0 插槽 1 (x4)
2	乙太網路埠 3 (GbE RJ45)	10	電源供應器 1
3	乙太網路埠 1 (GbE RJ45)	11	電源供應器 2
4	乙太網路埠 2 (GbE RJ45)	12	HDMI 連接埠
5	乙太網路埠 6 (10 GbE SFP+)	13	USB 3.1 Gen 2 Type-C 連接埠
6	乙太網路埠 5 (10 GbE SFP+)	14	USB 3.1 Gen 2 Type-A 連接埠
7	PCIe 3.0 插槽 3 (x4)	15	重設按鈕
8	PCIe 3.0 插槽 2 (x8)	-	-



### TVS-2472XU-RP

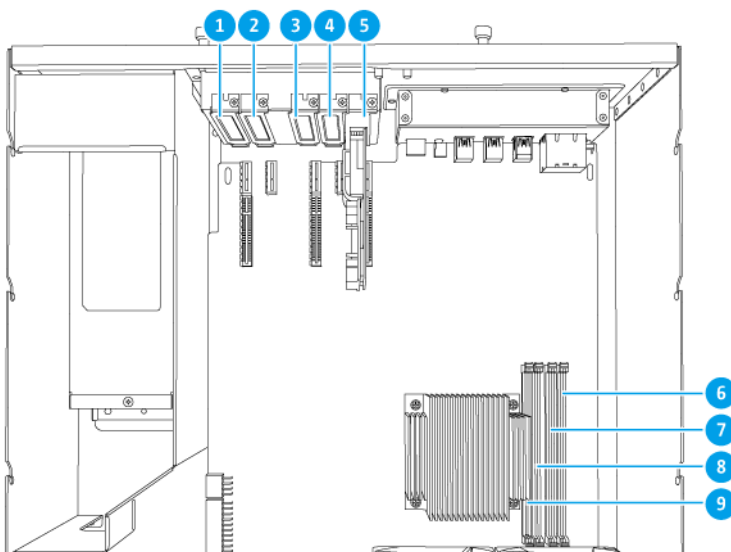
編號	元件	編號	元件
1	乙太網路埠 6 (10 GbE SFP+)	9	HDMI 連接埠
2	乙太網路埠 5 (10 GbE SFP+)	10	重設按鈕
3	PCIe 3.0 插槽 4 (x8)	11	USB 3.1 Gen 2 Type-C 連接埠
4	PCIe 2.0 插槽 3 (x4)	12	USB 3.1 Gen 2 Type-A 連接埠
5	PCIe 3.0 插槽 2 (x4)	13	乙太網路埠 2 (GbE RJ45)
6	PCIe 2.0 插槽 1 (x4)	14	乙太網路埠 4 (GbE RJ45)
7	電源供應器 1	15	乙太網路埠 3 (GbE RJ45)
8	電源供應器 2	16	乙太網路埠 1 (GbE RJ45)

## 系統板




TVS-1672XU-RP

編號	元件	編號	元件
1	PCIe 2.0 插槽 1 (x4)	5	記憶體插槽 1
2	PCIe 3.0 插槽 2 (x8)	6	記憶體插槽 2
3	PCIe 3.0 插槽 3 (x4)	7	記憶體插槽 3
4	PCIe 3.0 插槽 4 (x4)	8	記憶體插槽 4
	 <b>注意</b> 此 PCIe 插槽已預先安裝一個雙埠 10 GbE SFP+ 網路擴充卡。		

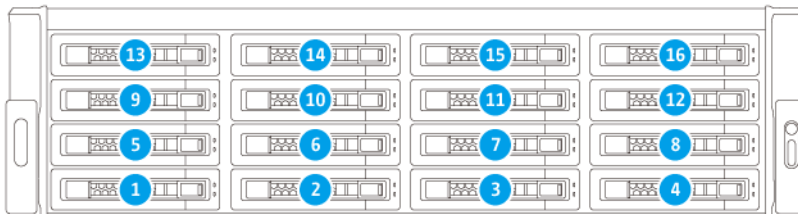


## TVS-2472XU-RP

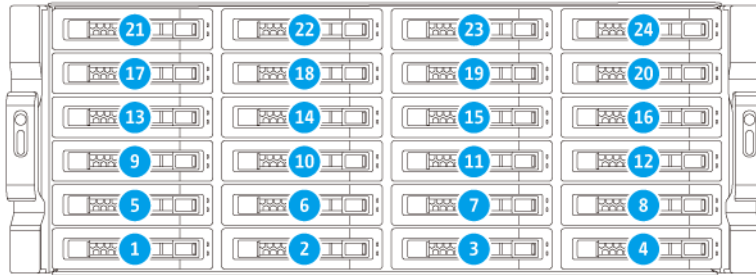
編號	元件	編號	元件
1	PCIe 2.0 插槽 1 (x4)	6	記憶體插槽 1
2	PCIe 3.0 插槽 2 (x4)	7	記憶體插槽 2
3	PCIe 2.0 插槽 3 (x4)	8	記憶體插槽 3
4	PCIe 3.0 插槽 4 (x8)	9	記憶體插槽 4
5	PCIe 2.0 插槽 5 (x4)	-	-


**注意**  
 此 PCIe 插槽已預先安裝一個雙埠 10 GbE SFP+ 網路擴充卡。

## 硬碟編號



## TVS-1672XU-RP



## TVS-2472XU-RP

### 安全資訊

以下指示幫助確保人身安全及環境安全。執行任何操作前，請仔細閱讀本安全指示。

#### 一般指示

- 裝置應放置在實施進出管制的安全場所，控管方式包括工具、鎖鑰或其他安全機制。
- 唯有具技能且獲得授權的合格裝置管理員能夠存取裝置；合格裝置管理員必須熟悉所有管制方法、安全注意事項、安裝及保養程序。
- 為避免受傷或元件損壞，在觸碰硬碟及其他內部系統元件前，請先確認其是否已經冷卻。
- 請遵守靜電放電 (ESD) 程序以防止潛在傷害或元件損壞。

#### 電源

- 為了降低走火或觸電風險，務必只將電源線連接至正確接地的電源插座。



具有備援電源供應器的裝置可能配備一條或多條電源供應器 (PSU) 電源線。為防止嚴重傷害事故發生，在安裝或更換系統元件前，所有 PSU 電源線必須由經訓練之維修技術人員從裝置拔除。

#### 系統電池

- 更換電池時，請務必使用相同類型的電池，以免電池爆炸造成受傷或元件損壞。
- 請遵照當地法規或電池製造商的指示妥善處置廢棄電池。

## 移動的零件

•



**轉動的風扇葉片：**裝置連接至電源時，請使身體部位遠離正在轉動的風扇葉片。

•



**移動的元件：**使身體部位遠離正在移動的其他元件。

## 安裝需求

類別	項目
環境	<ul style="list-style-type: none"> <li>室溫：0°C 到 40°C ( 32°F 到 104°F )</li> <li>不凝結相對溼度：5% 到 95%</li> <li>濕球溫度：27°C (80.6°F)</li> <li>平坦且防靜電的表面，不受陽光直射，亦不與液體或化學物質接觸</li> </ul>
硬體和週邊設備	<ul style="list-style-type: none"> <li>儲存硬碟 如需相容硬碟的詳細資訊，請前往：<a href="https://www.qnap.com/compatibility/">https://www.qnap.com/compatibility/</a>。</li> <li>網路線</li> </ul>
工具	<ul style="list-style-type: none"> <li>1 號或 2 號十字螺絲起子</li> <li>防靜電腕帶</li> </ul>

## 設定 NAS



### 重要

設定 NAS 或安裝 NAS 元件前，請詳閱[安全資訊](#)中所有安全要求及資訊。

- 將 NAS 裝置放置在符合需求的環境。  
如需詳細資訊，請參見：[安裝需求](#)。
- 安裝硬碟。  
如需詳細資訊，請參見下列主題：
  - [在 3.5 吋托盤上安裝 3.5 吋硬碟](#)
  - [在 3.5 吋托盤上安裝 2.5 吋硬碟或固態硬碟](#)
- 連接電源線與所有適用的網路線。
- 打開 NAS 電源。
- 安裝 QTS。  
如需詳細資訊，請參見：[QTS 安裝](#)。
- 登入 QTS。

## 3. 安裝與設定

本章介紹特定硬體及韌體的安裝與設定步驟。

### 硬體安裝

本節介紹安裝硬碟、記憶體模組以及擴充卡的相關資訊。

### 硬碟安裝

TVS-x72XU 與 3.5 吋 和 2.5 吋硬碟以及 2.5 吋固態硬碟相容。

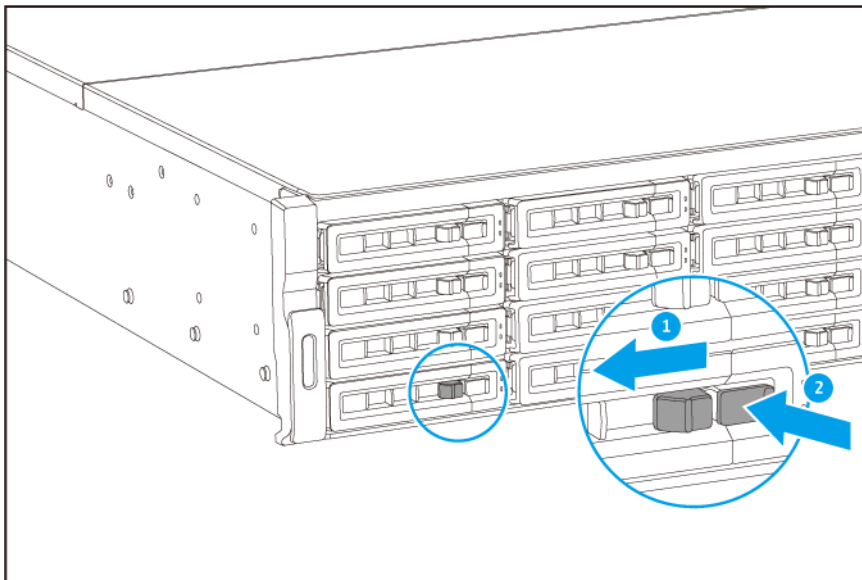
#### 在 3.5 吋托盤上安裝 3.5 吋硬碟



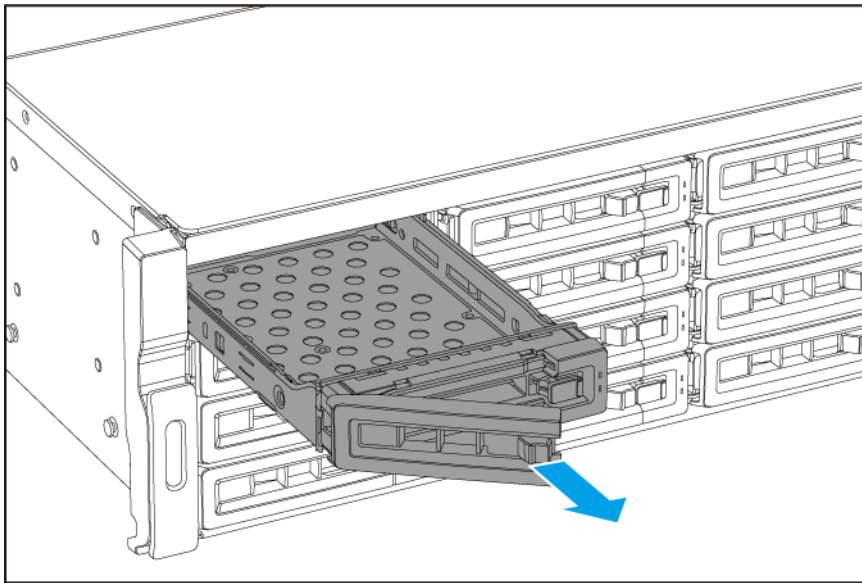
#### 警告

- 安裝硬碟會刪除硬碟上的所有資料。
- 請遵守靜電放電 (ESD) 程序以防止元件損壞。

1. 關閉 NAS 電源。
2. 取出硬碟托盤。
  - a. 找到固定鎖的位置。
  - b. 將固定鎖向左推。

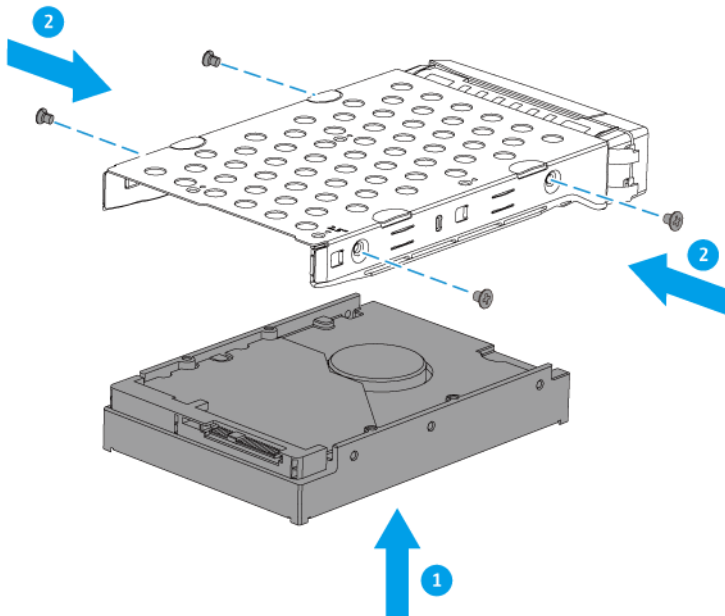


- c. 按下灰色按鈕以鬆開把手。
- d. 將托盤拉出。



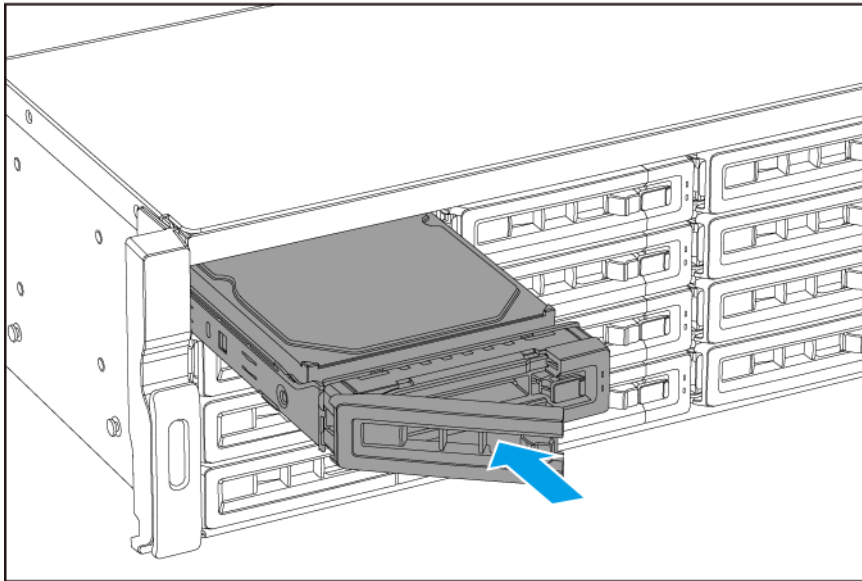
**3. 在托盤上安裝硬碟。**

- a. 將硬碟放在托盤上，讓硬碟側邊的孔洞與托盤側邊的孔洞對齊。
- b. 裝上螺絲，將硬碟鎖定在托盤上。

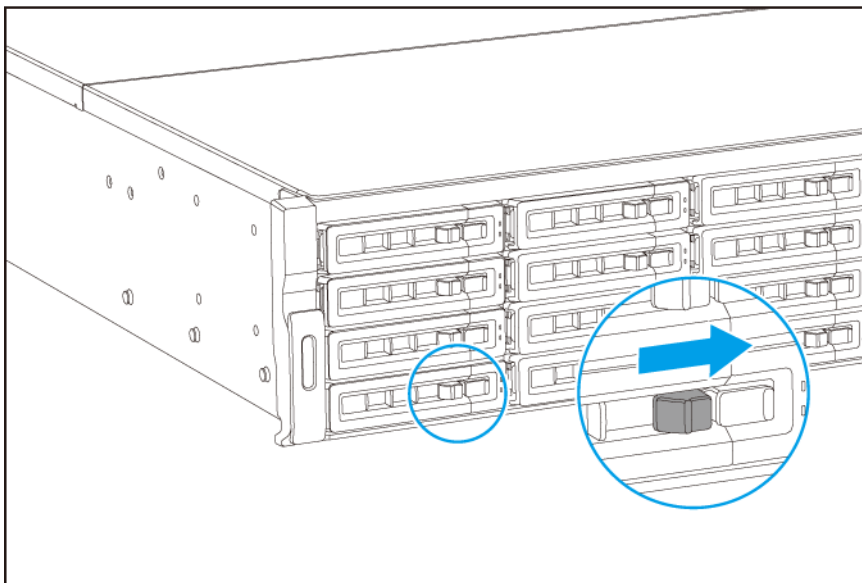


**4. 將托盤裝入插槽。**

- a. 將托盤插入硬碟插槽。
- b. 推入把手。



c. 將固定鎖向右推。



5. 打開 NAS 電源。

### 在 3.5 吋托盤上安裝 2.5 吋硬碟或固態硬碟



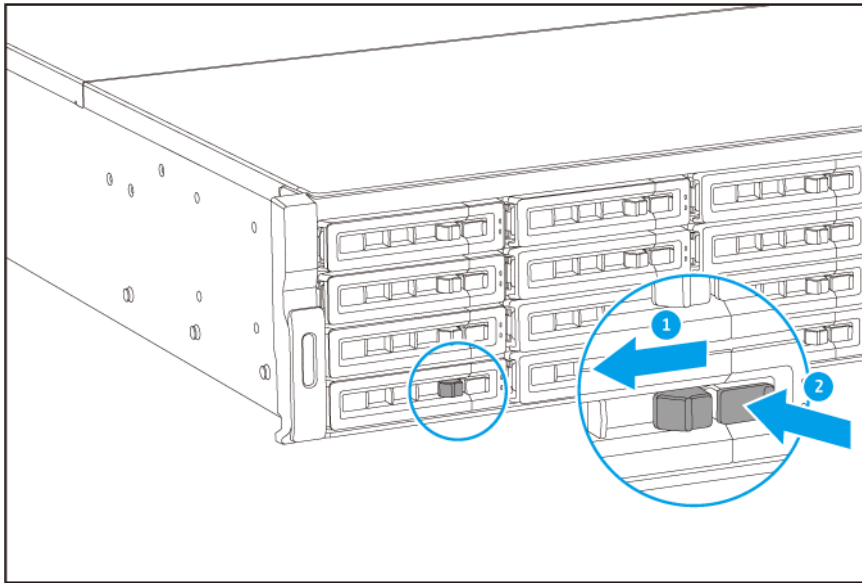
#### 警告

- 安裝硬碟會刪除硬碟上的所有資料。
- 請遵守靜電放電 (ESD) 程序以防止元件損壞。

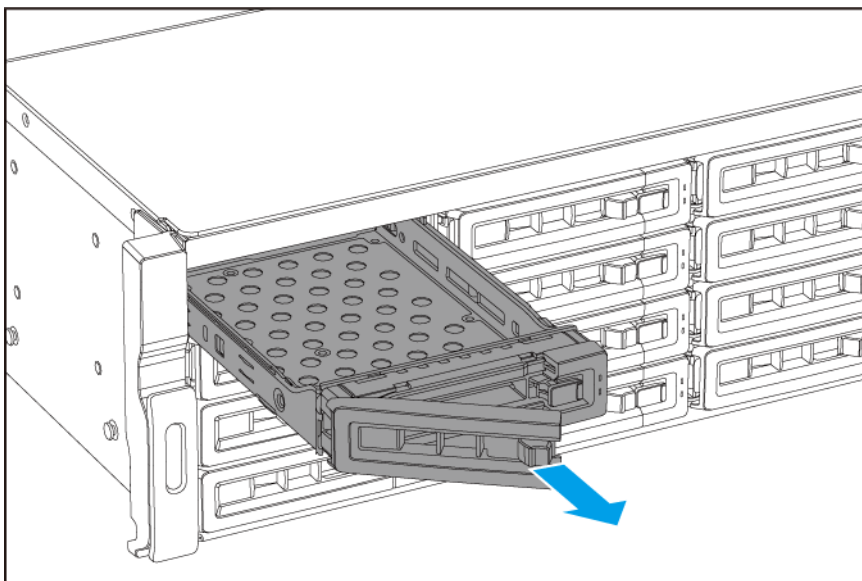
1. 關閉 NAS 電源。
2. 取出硬碟托盤。



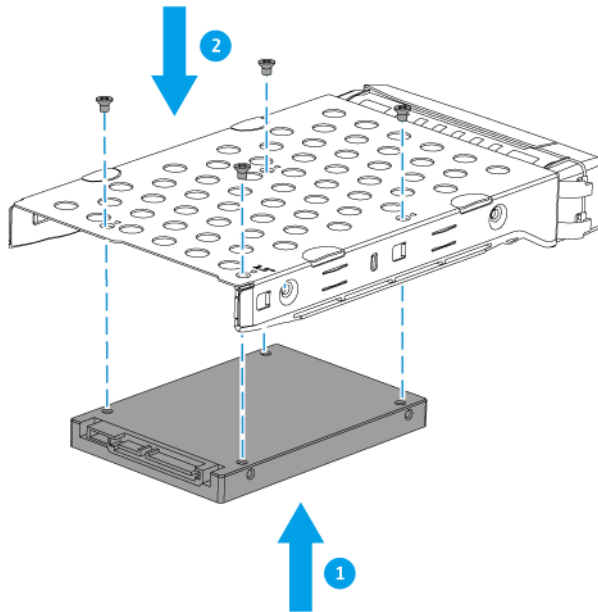
- a. 找到固定鎖的位置。
- b. 將固定鎖向左推。



- c. 按下灰色按鈕以鬆開把手。
- d. 將托盤拉出。

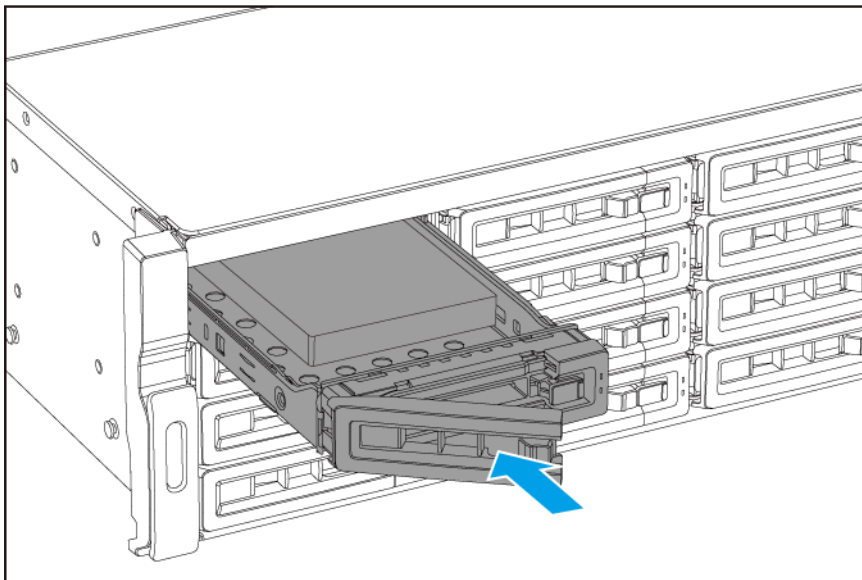


3. 在托盤上安裝硬碟。
  - a. 將硬碟放在托盤上，讓硬碟側邊的孔洞與托盤側邊的孔洞對齊。
  - b. 裝上螺絲，將硬碟鎖定在托盤上。

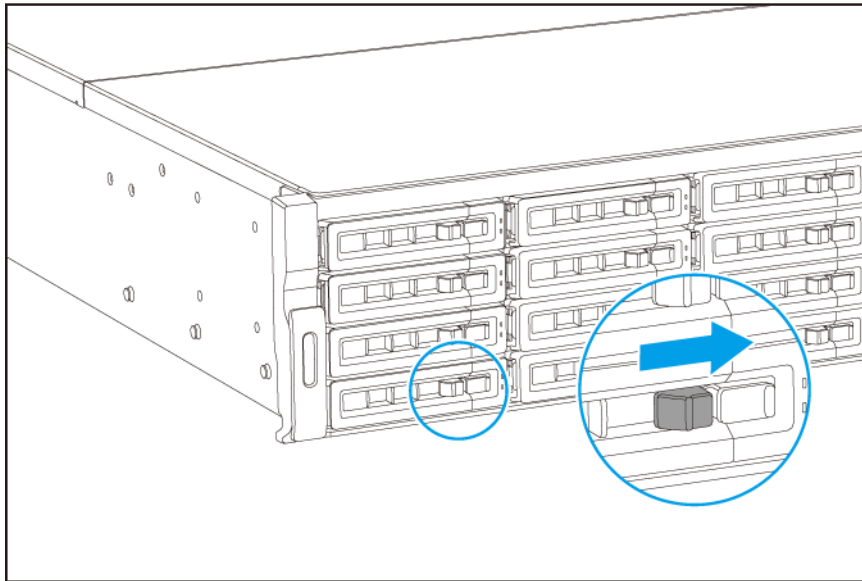


**4. 將托盤裝入插槽。**

- a. 將托盤插入硬碟插槽。
- b. 推入把手。



- c. 將固定鎖向右推。



5. 打開 NAS 電源。

## 安裝擴充設備

TVS-x72XU 支援 SAS 擴充設備。

類型	說明	必要配件
SAS	<ul style="list-style-type: none"> <li>• 使用 SAS 12 Gbps 介面</li> <li>• 支援最多八個擴充設備</li> <li>• 支援 SAS/SATA HDD/SSD</li> </ul>	<ul style="list-style-type: none"> <li>• SAS-12G2E 儲存擴充卡</li> <li>• Mini-SAS SFF-8644 連接線</li> <li>• RAIL-A03-57 機架滑軌</li> </ul>

## 連接 SAS 擴充設備

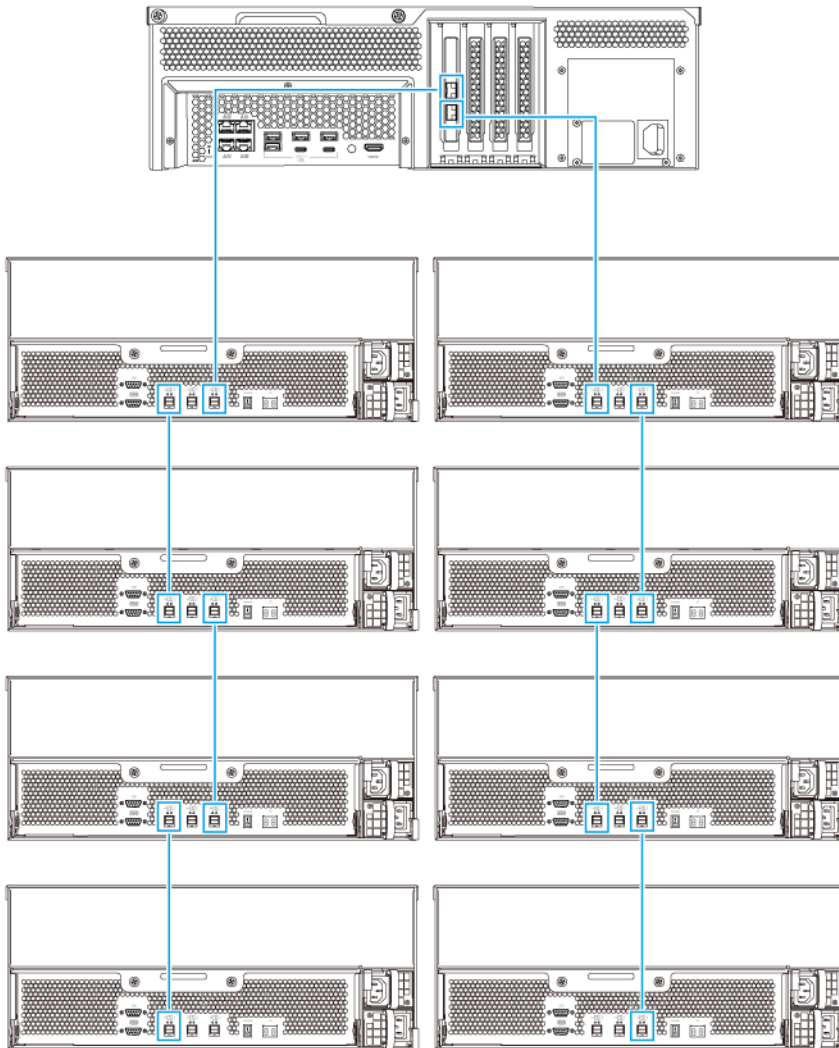
TVS-x72XU 最多支援八個 SAS 擴充設備；以下為相容的型號：

- REXP-1210U-RP
- REXP-1220U-RP
- REXP-1610U-RP
- REXP-1620U-RP

若要使用 SAS 擴充設備，您必須在 NAS 上安裝 SAS-12G2E 儲存擴充卡，並使用 Mini-SAS SFF-8644 連接線將擴充卡與擴充設備連接起來。您可以向 QNAP 或授權經銷商購買儲存擴充配件。

如需詳細資訊，請瀏覽：<https://shop.qnap.com/>。

1. 在 PCIe 插槽安裝儲存擴充卡。  
如需詳細資訊，請參見：[安裝擴充卡](#)
2. 請按照下列拓樸圖，將擴充設備連接到 NAS。



3. 開啟擴充設備的電源。
4. 確認 NAS 可辨識所有擴充設備。
  - a. 以管理員身份登入 QTS。
  - b. 前往 [ 主選單 ] > [ 儲存與快照總管 ] > [ 總覽 ] > [ 系統 ]。
  - c. 確認畫面列出擴充設備。

### 熱抽換備援電源供應器

隨附備援電源供應器 (PSU) 的 NAS 裝置支援熱抽換。

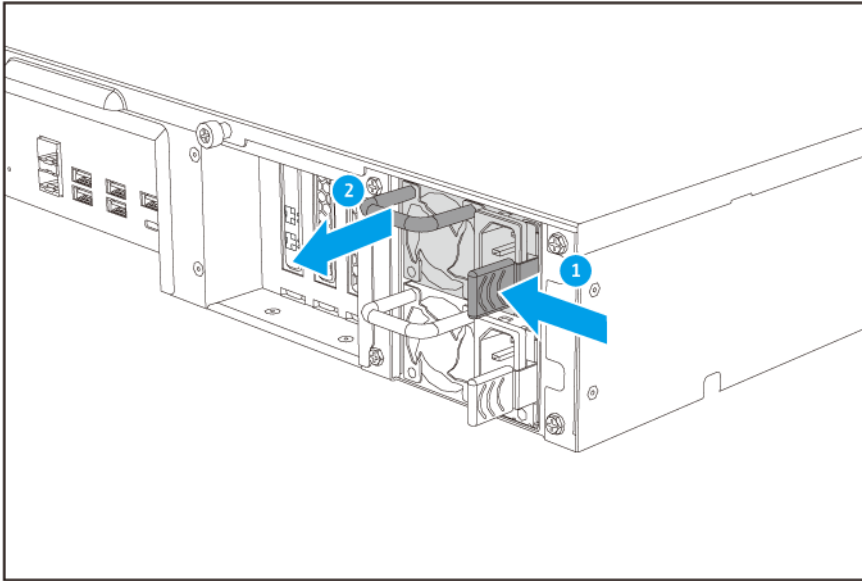


**警告**

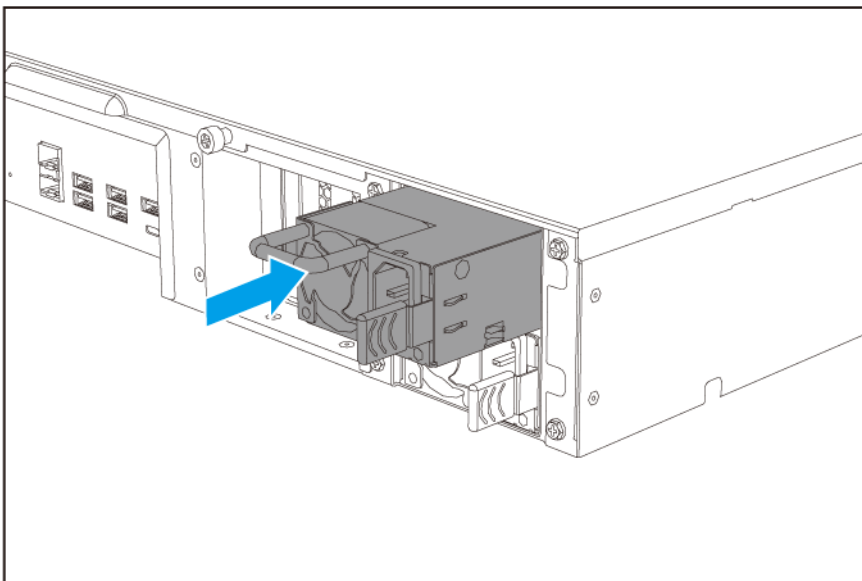


NAS 至少配備一條電源供應器 (PSU) 的電源線。為防止嚴重傷害事故發生，在安裝或替換系統元件前，應由受過訓練的技術人員拔下所有 PSU 電源線。

1. 關閉 NAS 電源。
2. 從電源插座和被更換的電源供應器上拔下電源線。
3. 朝把手方向按住門門，然後拉出電源供應器。



4. 插入新的電源供應器。



5. 將電源線連上電源供應器並插入電源插座。

6. 打開 NAS 電源。
7. 啟用電源供應器故障警訊。
  - a. 以管理員身份登入 QTS。
  - b. 前往 [ 控制台 ] > [ 系統 ] > [ 硬體 ] > [ 一般 ]。
  - c. 選擇 [ 啟動備援電源模式 ]。
  - d. 點擊 [ 全部套用 ]。

## 取下擴充卡

NAS 支援特定的擴充卡，其中部分需要使用 QNAP PCIe 固定片。在公司網站購買的 QNAP 品牌擴充卡會隨附所有 QNAP NAS 型號適用的必要固定片。



### 注意

- TVS-1672XU-RP：PCIe 3.0 插槽 4 已預先安裝一個雙埠 10 GbE SFP+ 網路擴充卡。
- TVS-2472XU-RP：PCIe 3.0 插槽 5 已預先安裝一個雙埠 10 GbE SFP+ 網路擴充卡。



### 警告

- 僅限合格人員可執行下列步驟。未遵照指示操作可能導致嚴重傷害或死亡。
- 請遵守靜電放電 (ESD) 程序以防止元件損壞。

- 



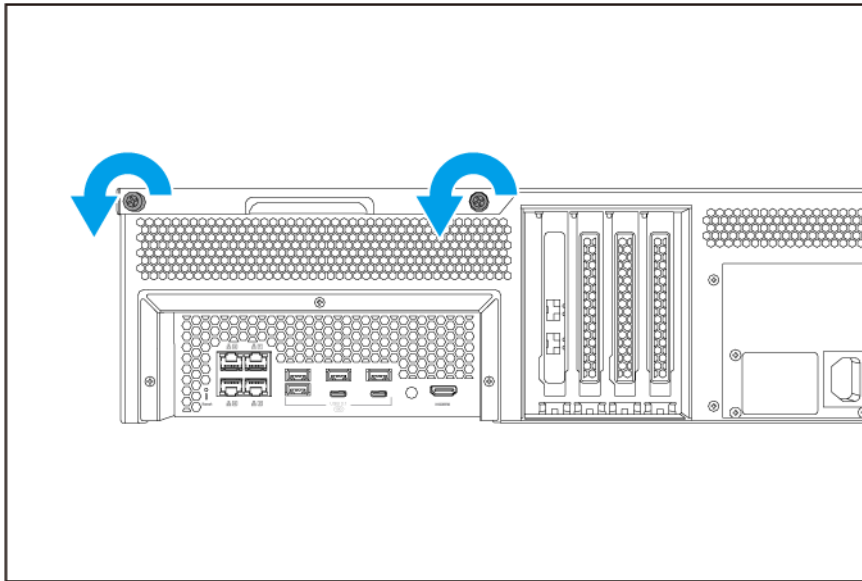
**轉動的風扇葉片：**使雙手及身體其他部位遠離正在轉動的風扇葉片。

- 

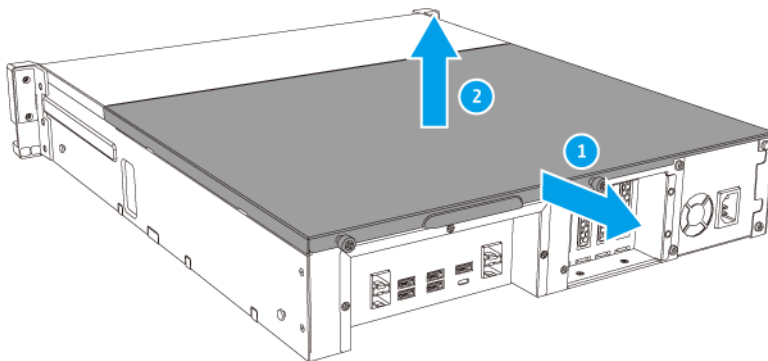


**其他移動的元件：**使雙手及身體其他部位遠離正在移動的其他元件。

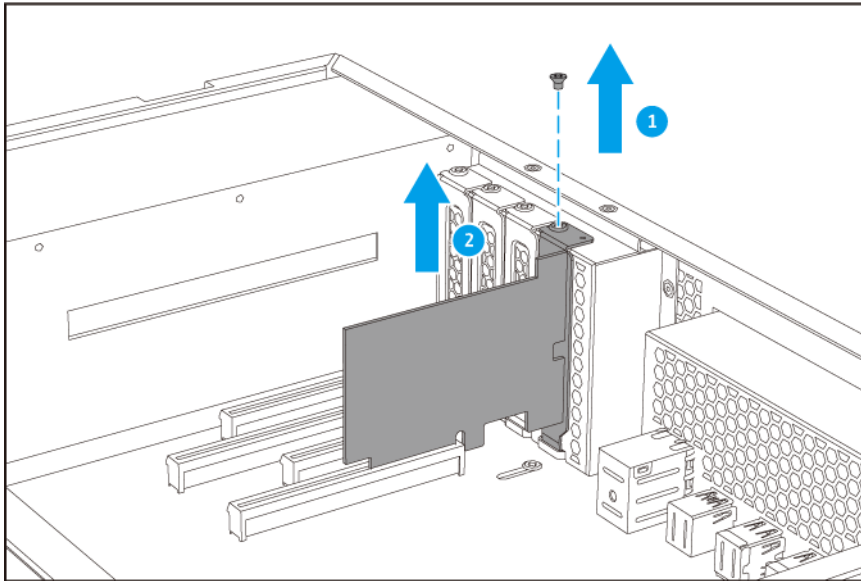
1. 關閉 NAS 電源。
2. 從電源插座拔下電源線。
3. 中斷所有連接線和外接裝置的連線。
4. 卸除上蓋。
  - a. 鬆開上蓋背面的兩顆螺絲。



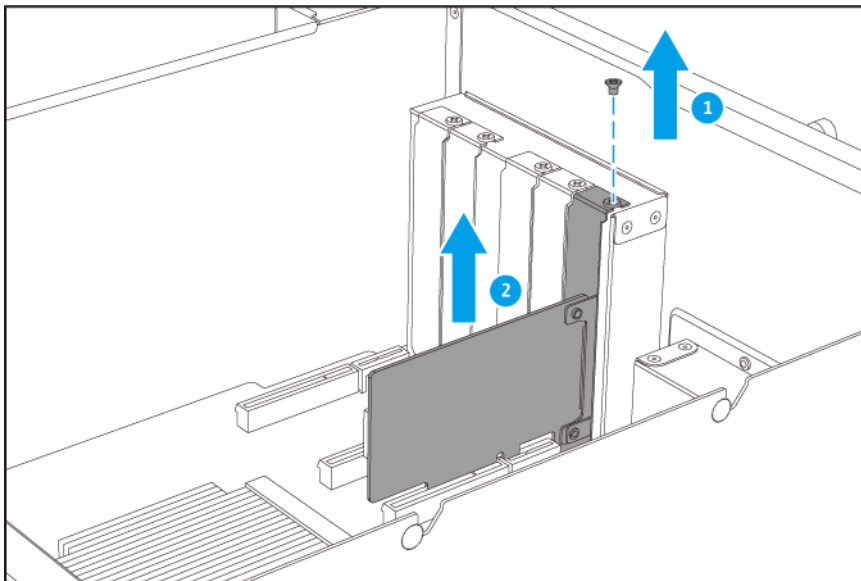
- b. 用把手將上蓋往外拉。
- c. 拿起上蓋。



- 5. 取下現有的擴充卡。
  - a. 取下用於固定 PCIe 檔板和機殼的螺絲。
  - b. 握住擴充卡的邊緣，然後小心地將它從插槽拉出。



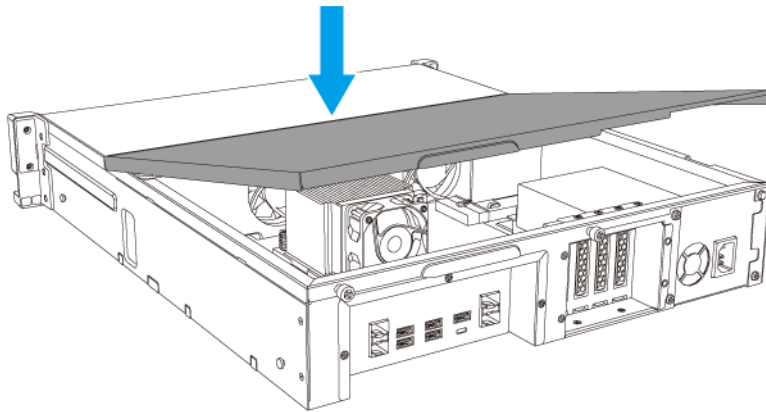
TVS-1672XU-RP



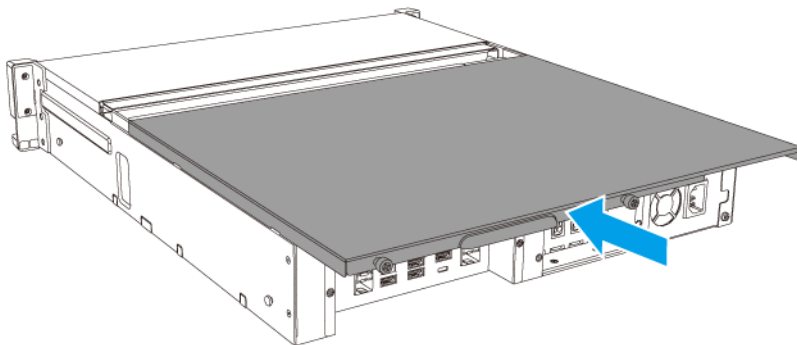
TVS-2472XU-RP

6. 選擇性: 安裝新的擴充卡。如需詳細資訊，請參見：[安裝擴充卡](#)。
7. 安裝上蓋。
  - a. 將上蓋放在 NAS 上。

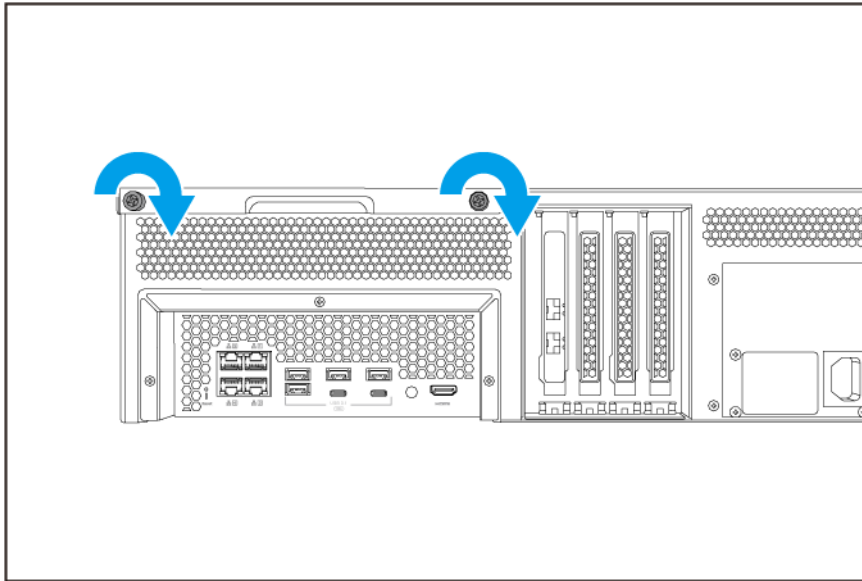




**b.** 將上蓋往前推。



**c.** 鎖緊螺絲。



8. 連上所有連接線和外接裝置。
9. 將電源線插入電源插座。
10. 打開 NAS 電源。

## 安裝擴充卡

NAS 支援特定的擴充卡，其中部分需要使用 QNAP PCIe 固定片。在公司網站購買的 QNAP 品牌擴充卡會隨附所有 QNAP NAS 型號適用的必要固定片。



### 注意

- TVS-1672XU-RP：PCIe 3.0 插槽 4 已預先安裝一個雙埠 10 GbE SFP+ 網路擴充卡。
- TVS-2472XU-RP：PCIe 3.0 插槽 5 已預先安裝一個雙埠 10 GbE SFP+ 網路擴充卡。



### 警告

- 僅限合格人員可執行下列步驟。未遵照指示操作可能導致嚴重傷害或死亡。
- 請遵守靜電放電 (ESD) 程序以防止元件損壞。



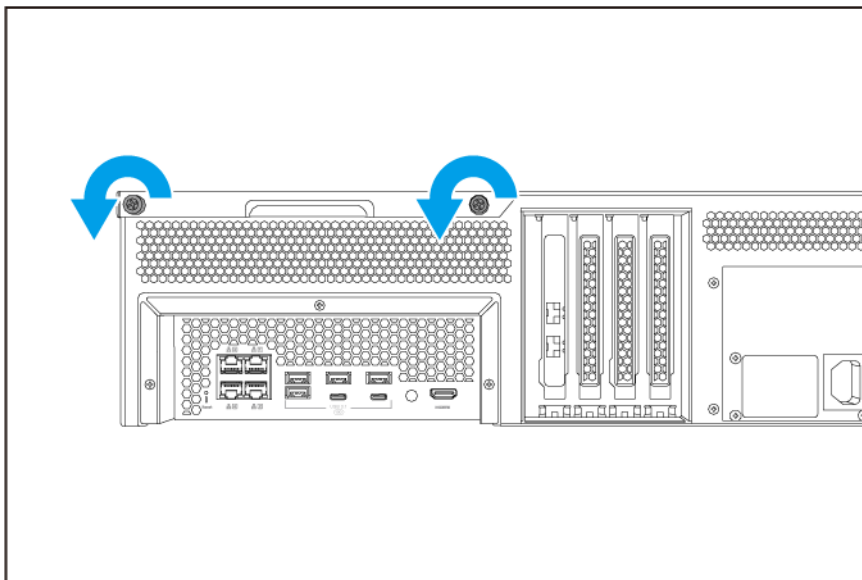
**轉動的風扇葉片：**使雙手及身體其他部位遠離正在轉動的風扇葉片。



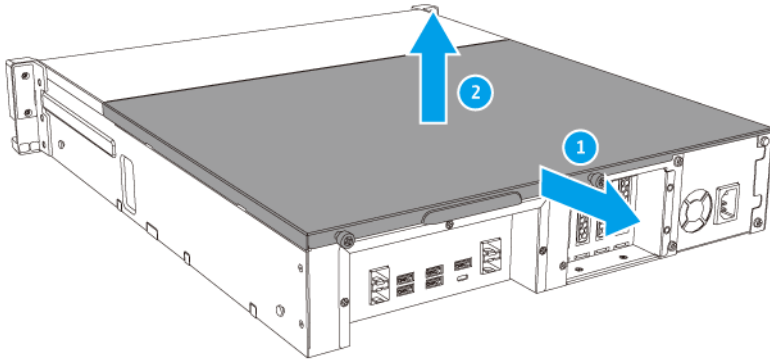
**其他移動的元件：**使雙手及身體其他部位遠離正在移動的其他元件。

1. 在 QNAP 網站查看您型號適用的擴充卡和固定片。
  - a. 前往 [www.qnap.com/compatibility](http://www.qnap.com/compatibility)。

- b. 按一下 [ 依 NAS 搜尋 ] 。
  - c. 指定插槽數目以及您 NAS 的特定型號。
  - d. 在 [ 裝置類型 ] 底下，選擇元件或裝置類型。
  - e. 在清單中找出特定元件或裝置型號。
  - f. 選擇性: 按一下對應的 [ 備註 ] 圖示可查看詳細資訊。
2. 關閉 NAS 電源。
  3. 從電源插座拔下電源線。
  4. 中斷所有連接線和外接裝置的連線。
  5. 卸除上蓋。
    - a. 鬆開上蓋背面的兩顆螺絲。

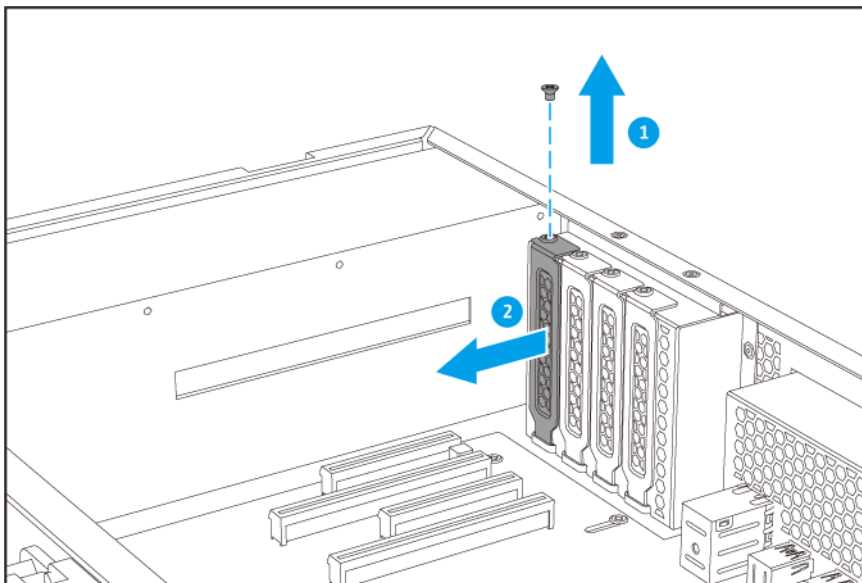


- b. 用把手將上蓋往外拉。
- c. 拿起上蓋。



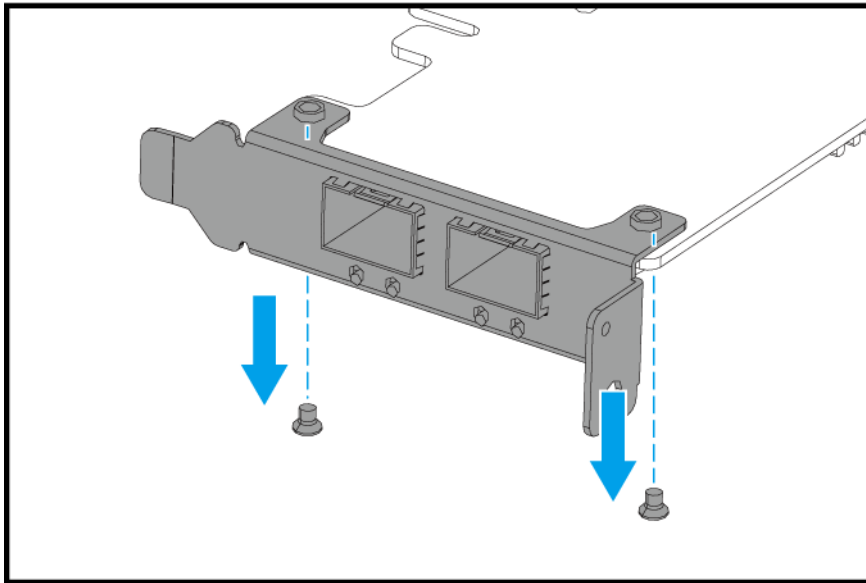
**6. 取下 PCIe 蓋。**

- a. 取下用於固定殼蓋和檔板的螺絲。
- b. 將殼蓋從插槽抽出。

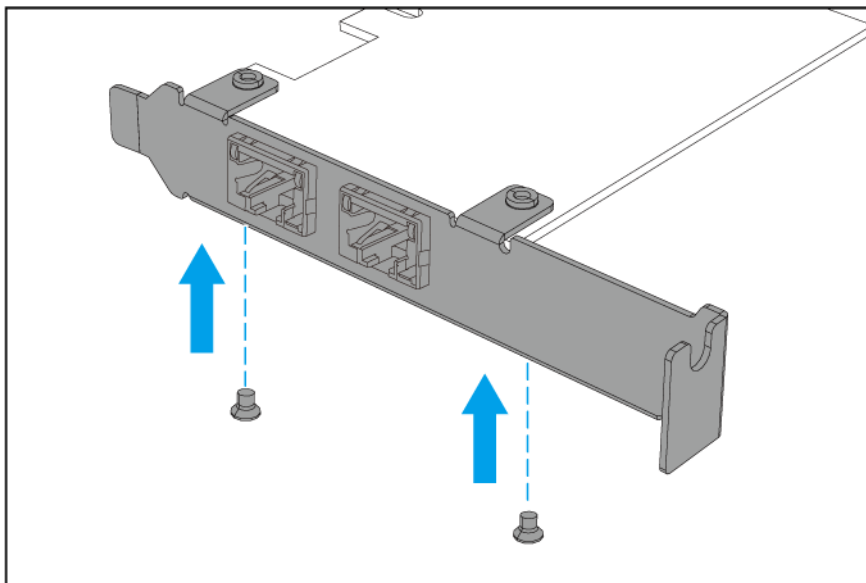


**7. 選擇性: 將 QNAP 固定片裝至擴充卡。**

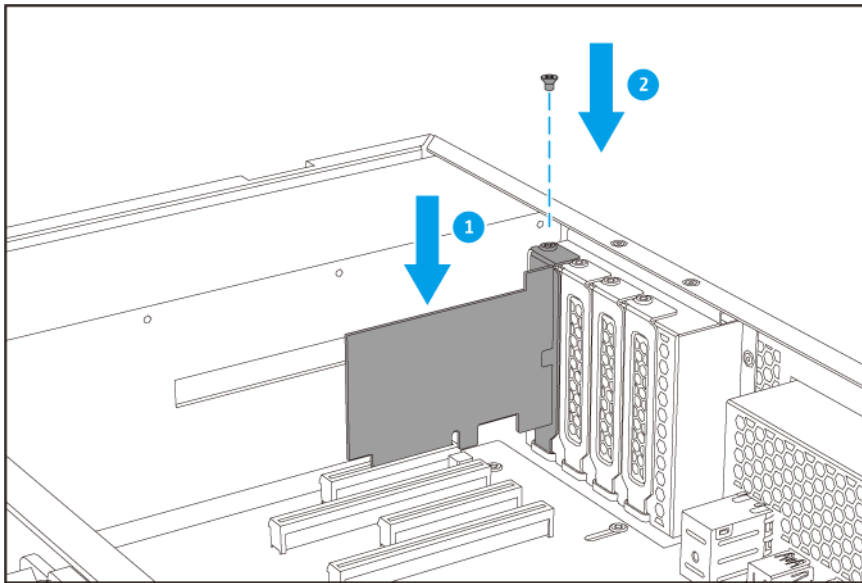
- a. 取下現有固定片的所有螺絲。



- b. 小心地將固定片與擴充卡分開。
- c. 利用相同的螺絲將 QNAP 固定片裝至擴充卡。

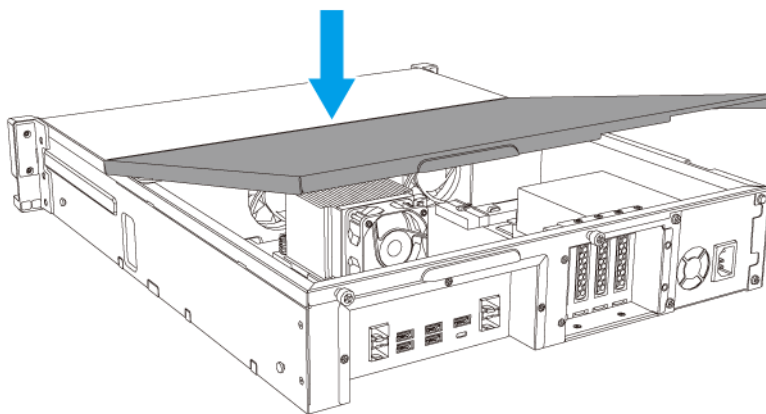


- d. 確認固定片是否牢固不動。
8. 安裝擴充卡。
- a. 握住擴充卡的邊緣。
  - b. 將擴充卡插入插槽。
  - c. 鎖上螺絲。

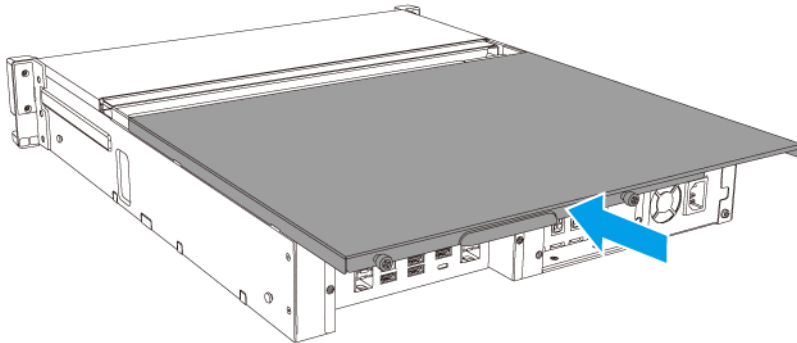


**9. 安裝上蓋。**

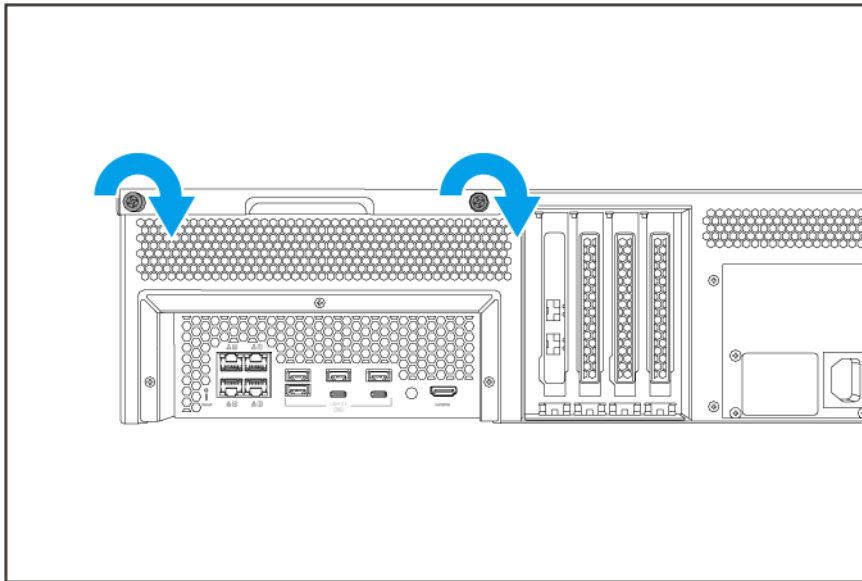
- a. 將上蓋放在 NAS 上。



- b. 將上蓋往前推。



**c. 鎖緊螺絲。**



10. 連上所有連接線和外接裝置。
11. 將電源線插入電源插座。
12. 打開 NAS 電源。

### 機架滑軌

NAS 不含機架滑軌，必須另外購買。如需詳細資訊，請聯絡授權經銷商或前往 <http://shop.qnap.com>。

TVS-x72XU 與下列機架滑軌型號相容：

型號	相容機架滑軌
TVS-1672XU-RP	RAIL-A03-57
TVS-2472XU-RP	RAIL-A02-90

您可以在機架滑軌的包裝中找到安裝資訊。

## 更換記憶體模組

NAS 具有四個記憶體插槽。您可以升級記憶體模組以增加 NAS 的記憶體容量。

僅使用相同類型與容量的 QNAP 記憶體模組，以維持系統效能和穩定性。您可向授權經銷商購買 QNAP 記憶體模組。



### 重要

更換記憶體模組時，請確認下列事項：

- 只安裝一個記憶體模組時，請裝在插槽 1。
- 安裝兩個記憶體模組時，請裝在插槽 1 和插槽 3。確認記憶體模組皆相同。
- 安裝四個記憶體模組時，請將第一對模組裝在插槽 1 和插槽 3，第二對模組裝在插槽 2 和插槽 4。確認每對皆使用相同的記憶體模組。

如需插槽編號的詳細資訊，請參見：[系統板](#)。



### 警告

- 僅限合格人員可執行下列步驟。未遵照指示操作可能導致嚴重傷害或死亡。
- 請遵守靜電放電 (ESD) 程序以防止元件損壞。

•



**轉動的風扇葉片：**使雙手及身體其他部位遠離正在轉動的風扇葉片。

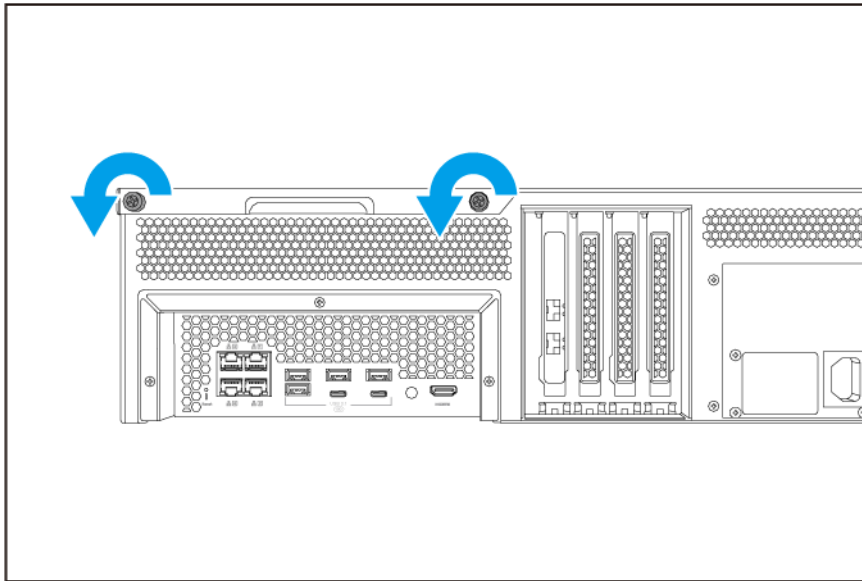
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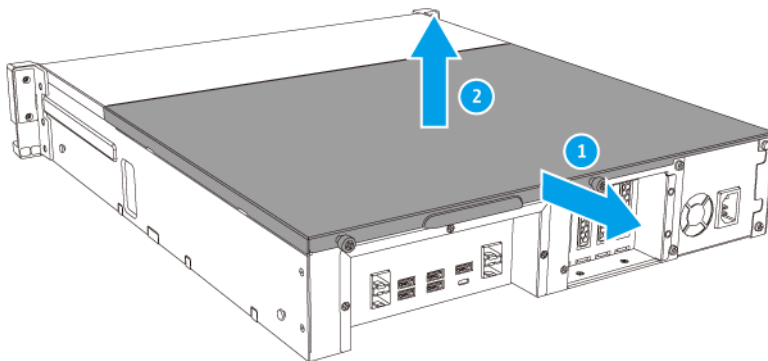
**其他移動的元件：**使雙手及身體其他部位遠離正在移動的其他元件。

1. 關閉 NAS 電源。
2. 從電源插座拔下電源線。
3. 中斷所有連接線和外接裝置的連線。
4. 卸除上蓋。
  - a. 鬆開上蓋背面的兩顆螺絲。





- b. 用把手將上蓋往外拉。
- c. 拿起上蓋。



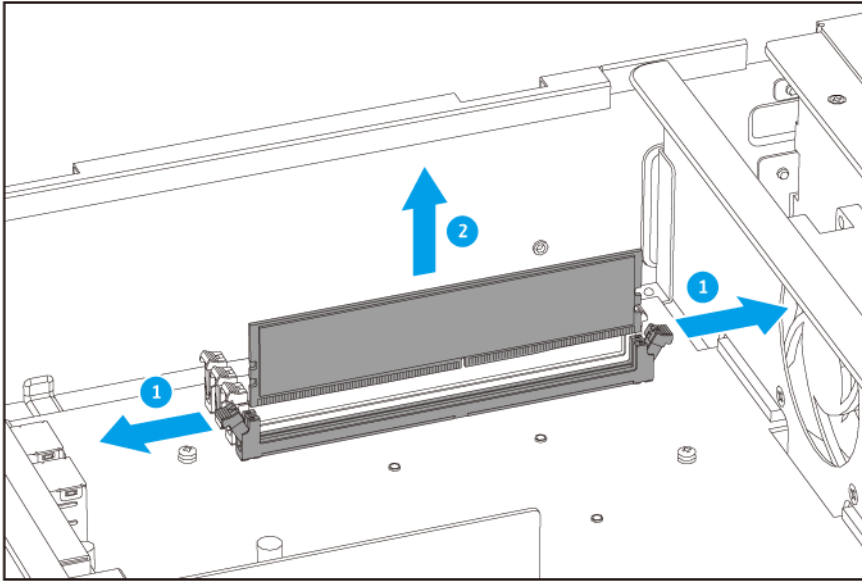
5. 取下現有的記憶體模組。
  - a. 將固定夾同時往外推以鬆開記憶體模組。



**警告**

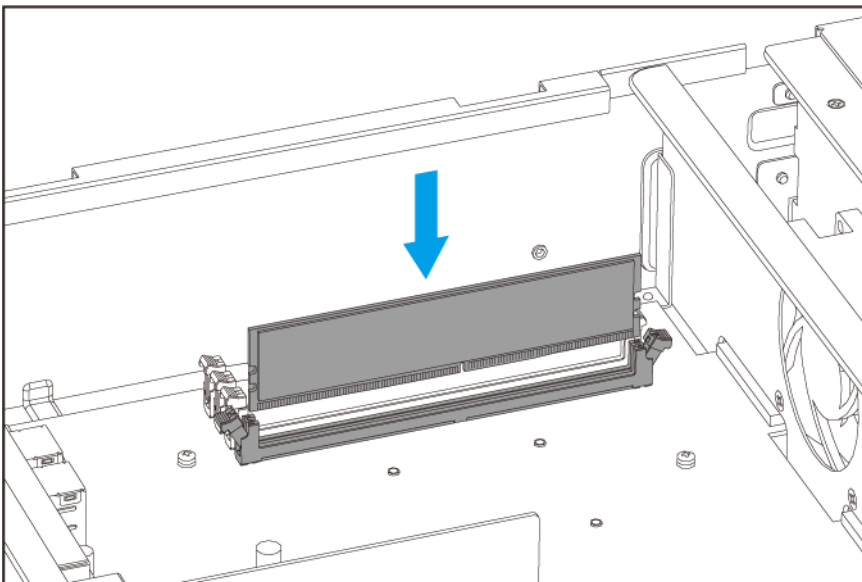
若嘗試取下未完全鬆脫的記憶體模組，可能會損壞記憶體模組與主機板。

- b. 握住記憶體模組的邊緣，然後小心地將它從插槽取出。



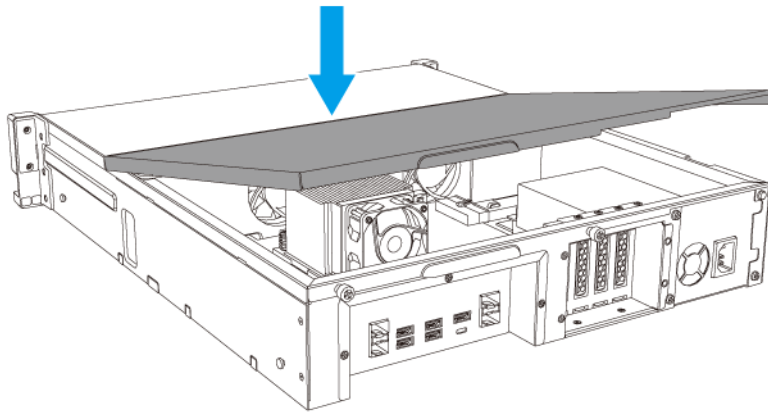
**6. 安裝新的記憶體模組。**

- a. 將接口與插槽的凸出部分對齊。
- b. 將記憶體模組插入插槽。
- c. 確認金屬接頭已完全插入插槽。
- d. 小心按下記憶體模組，直到固定夾正確扣住記憶體模組。

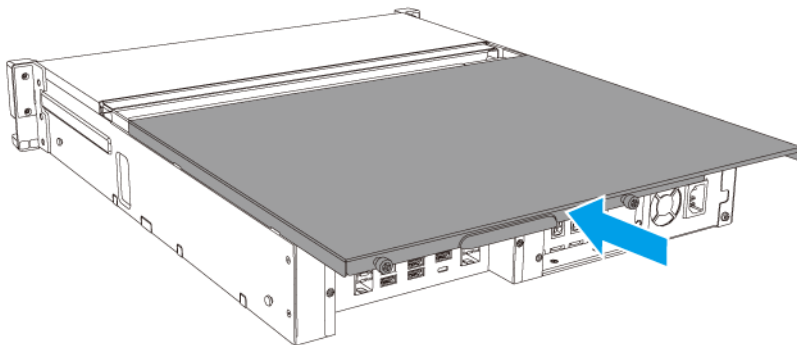


**7. 安裝上蓋。**

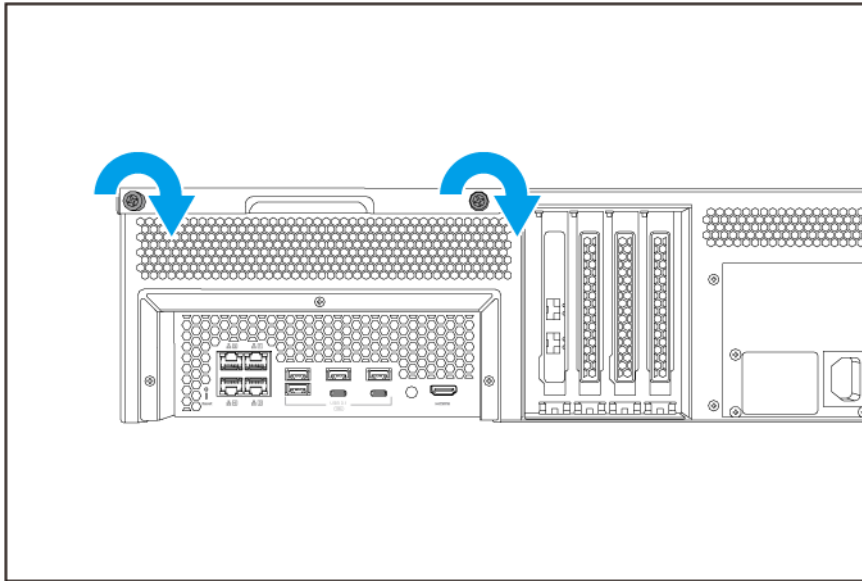
- a. 將上蓋放在 NAS 上。



b. 將上蓋往前推。



c. 鎖緊螺絲。



8. 連上所有連接線和外接裝置。
9. 打開 NAS 電源。
10. 確認 NAS 可辨識記憶體模組。
  - a. 以管理員身份登入 QTS。
  - b. 前往 [ 控制台 ] > [ 系統 ] > [ 系統狀態 ] > [ 硬體資訊 ]。
  - c. 查看 [ 記憶體總容量 ] 的值。

## QTS 安裝

TVS-x72XU 使用 QNAP QTS 作業系統。您可以使用下列其中一種方式安裝 QTS。

方法	說明	需求
Qfinder Pro 安裝 (建議使用)	如果 NAS 已連接您的區域網路，您可以執行下列操作： <ul style="list-style-type: none"> <li>• 使用 Qfinder Pro 定位 NAS。</li> <li>• 完成 [ 智慧安裝導引 ] 精靈中的步驟。</li> </ul> 如需詳細資訊，請參見： <a href="#">使用 Qfinder Pro 安裝 QTS</a> 。	<ul style="list-style-type: none"> <li>• 電腦</li> <li>• 網路線</li> <li>• Qfinder Pro 安裝程式</li> </ul>

方法	說明	需求
雲端安裝	<p>如果 NAS 已連接網際網路，您可以執行下列操作：</p> <ul style="list-style-type: none"> <li>• 掃描 NAS 上的 QR 碼。</li> <li>• 登入 myQNAPcloud 帳號。</li> <li>• 使用 CloudLink 遠端存取您的 NAS。</li> <li>• 完成 [ 智慧安裝導引 ] 精靈中的步驟。</li> </ul> <p>如需詳細資訊，請參見：<a href="#">使用 Cloud Key 安裝 QTS</a>。</p>	<ul style="list-style-type: none"> <li>• 電腦或行動裝置。</li> <li>• 網路線</li> <li>• myQNAPcloud 帳號</li> <li>• CloudKey</li> </ul>

## 使用 Qfinder Pro 安裝 QTS



### 警告

安裝 QTS 會刪除硬碟上的所有資料。繼續操作前請先備份資料。

1. 打開 NAS 電源。
2. 連接 NAS 與區域網路。
3. 在連接相同區域網路的電腦上執行 Qfinder Pro。



### 注意

若要下載 Qfinder Pro，請前往 <https://www.qnap.com/utilities>。

4. 在清單中找到 NAS，然後按兩下它的名稱或 IP 位址。  
[ 智慧安裝導引 ] 隨即在預設的網頁瀏覽器中開啟。
5. 按一下 [ 啟動智慧安裝導引 ]。
6. 指定下列資訊：
  - **NAS 名稱**：指定 1 到 14 個字元的名稱。名稱支援使用英文字母 (A 到 Z、a 到 z)、數字 (0 到 9) 以及連字號 (-)，但不能以連字號做結尾。
  - **密碼**：指定 1 到 64 個字元的管理員密碼。密碼支援使用所有 ASCII 字元。
7. 按一下 [ 下一步 ]。
8. 指定時區、日期和時間。



### 提示

QNAP 建議連接至 NTP 伺服器，以確保 NAS 符合國際標準時間 (UTC) 的標準。

9. 按一下 [ 下一步 ]。
10. 選擇 [ 自動取得 IP 位址 (DHCP) ]。
11. 按一下 [ 下一步 ]。
12. 選擇將用於存取 NAS 共用資料夾的裝置類型。
13. 按一下 [ 下一步 ]。

14. 選擇 [ 稍後設定硬碟 ] 。



**注意**

如需設定硬碟的詳細資訊，請參見《QTS 使用者指南》的 < 儲存空間總管 > 一節。

15. 按一下 [ 下一步 ] 。

16. 選擇 [ 否 ] 。



**注意**

- 若啟用多媒體功能，您就能在 [ 儲存空間總管 ] 中設定硬碟之後，安裝多媒體應用程式。
- 如需在 QTS 啟用多媒體功能的詳細資訊，請參見《QTS 使用者指南》的 < 系統管理 > 一節。

17. 按一下 [ 下一步 ] 。

18. 檢視設定值。

19. 按一下 [ 套用 ] 。
- 確認訊息隨即出現。



**警告**

按 [ 確認 ] 會在安裝 QTS 前，刪除硬碟的所有資料。

20. 按一下 [ 確認 ] 。
- QTS 安裝完成。

## 使用 Cloud Key 安裝 QTS



**警告**

安裝 QTS 會刪除硬碟上的所有資料。繼續操作前請先備份資料。

1. 打開 NAS 電源。
2. 將 NAS 連接至網際網路。
3. 使用下列其中一種方式前往 QNAP 雲端安裝頁面：
  - 使用電腦前往 <http://install.qnap.com/>。
  - 使用行動裝置掃描 NAS 上的 QR 碼。

該網頁列出區域網路內所有未初始化的 QNAP NAS 裝置。

4. 在清單中找出自己的 NAS，然後按一下 [ 初始化 ] 。



**注意**

如果未列出您的 NAS，請按照網頁上的指示指定 NAS 的 Cloud Key。

安裝精靈隨即在預設的網頁瀏覽器中開啟。

5. 建立帳號或登入 myQNAPcloud。



**注意**

您建立帳號之後，必須返回此頁面完成安裝步驟。

- 指定 NAS 的 myQNAPcloud 裝置名稱。



#### 注意

遠端存取 NAS 時，需要用到 myQNAPcloud 裝置名稱。

- 選擇性: 選擇 [ **CloudLink** ]。



#### 注意

- 透過 CloudLink，您無須在路由器設定連接埠轉址功能，即可遠端存取 NAS。您可以登入 QTS 或使用行動應用程式來遠端存取 NAS。
- 您也可以安裝 NAS 上安裝 CloudLink 應用程式，藉此啟用 CloudLink。

- 按一下 [ 下一步 ]。  
[ 智慧安裝導引 ] 隨即在預設的網頁瀏覽器中開啟。

- 按一下 [ 啟動智慧安裝導引 ]。

- 指定下列資訊：

- NAS 名稱**：指定 1 到 14 個字元的名稱。名稱支援使用英文字母 (A 到 Z、a 到 z)、數字 (0 到 9) 以及連字號 (-)，但不能以連字號做結尾。
- 密碼**：指定 1 到 64 個字元的管理員密碼。密碼支援使用所有 ASCII 字元。

- 按一下 [ 下一步 ]。

- 指定時區、日期和時間。



#### 提示

QNAP 建議連接至 NTP 伺服器，以確保 NAS 符合國際標準時間 (UTC) 的標準。

- 按一下 [ 下一步 ]。

- 選擇 [ 自動取得 IP 位址 (DHCP) ]。

- 按一下 [ 下一步 ]。

- 選擇將用於存取 NAS 共用資料夾的裝置類型。

- 按一下 [ 下一步 ]。

- 選擇 [ 稍後設定硬碟 ]。



#### 注意

如需設定硬碟的詳細資訊，請參見《QTS 使用者指南》的 < 儲存空間總管 > 一節。

- 按一下 [ 下一步 ]。

- 選擇 [ 否 ]。



#### 注意

- 若啟用多媒體功能，您就能在 [ 儲存空間總管 ] 中設定硬碟之後，安裝多媒體應用程式。
- 如需在 QTS 啟用多媒體功能的詳細資訊，請參見《QTS 使用者指南》的 < 系統管理 > 一節。

21. 按一下 [ 下一步 ] 。
22. 檢視設定值 。
23. 按一下 [ 套用 ] 。
- 確認訊息隨即出現 。

**警告**

按 [ 確認 ] 會在安裝 QTS 前，刪除硬碟的所有資料 。

24. 按一下 [ 確認 ] 。
- QTS 安裝完成 。




## 4. 基本操作

本章介紹 NAS 的基本操作。

### 電源按鈕

操作	使用者動作	結果
開啟電源	按一下按鈕。	NAS 電源開啟。
關閉電源	按住按鈕 1.5 秒。	NAS 電源關閉。
強制關機	按住按鈕 5 秒。	NAS 關機。



**重要**  
僅在 NAS 沒有回應時使用此方法。

### 重設按鈕

操作	使用者動作	結果
系統基本重設	按住按鈕 3 秒。	以下設定將回復至預設值： <ul style="list-style-type: none"> <li>• 系統管理員密碼：admin</li> <li>• TCP/IP 設定：               <ul style="list-style-type: none"> <li>• 透過 DHCP 自動取得 IP 位址設定</li> <li>• 停用 Jumbo Frame</li> <li>• 若已啟用 Port Trunking (僅適用於支援多 LAN 的型號)，系統將重設為「Active Backup (網路容錯)」模式。</li> </ul> </li> <li>• 系統通訊埠：8080 (系統服務埠)</li> <li>• 安全等級：低 (接受所有連線)</li> <li>• LCD 面板密碼：(空白)</li> <li>• VLAN：停用</li> </ul>
系統進階重設	按住按鈕 15 秒。	回復為出廠預設值。 <ul style="list-style-type: none"> <li>• 若要在系統進階重設後取得舊有資料，請在 NAS 上重建先前的資料夾結構。</li> </ul>

### LED 燈號

LED 燈號指示 NAS 開機時的系統狀態與相關資訊。下列 LED 燈號資訊僅適用於已正確安裝硬碟且 NAS 已連線至網路的狀態下。

如需 LED 燈號的位置資訊，請參見：[元件](#)。

LED	狀態	說明
系統狀態	綠燈與紅燈每 0.5 秒交錯閃爍	<ul style="list-style-type: none"> <li>• 硬碟正在格式化。</li> <li>• NAS 正在初始化。</li> <li>• 作業系統正在更新。</li> <li>• RAID 重建作業正在進行。</li> <li>• 線上 RAID 容量擴充正在進行。</li> <li>• 線上 RAID 組態遷移正在進行。</li> </ul>
	紅燈	<ul style="list-style-type: none"> <li>• 硬碟無效。</li> <li>• 磁碟區容量已滿。</li> <li>• 磁碟區容量將滿。</li> <li>• 系統風扇異常。</li> <li>• 資料存取 ( 讀寫 ) 錯誤。</li> <li>• 硬碟壞軌。</li> <li>• NAS 處於降階唯讀模式 ( RAID 5 或 RAID 6 有兩個硬碟故障，但資料仍可讀取 )。</li> <li>• 硬體自我檢查發生錯誤。</li> </ul>
	紅燈每 0.5 秒閃爍	NAS 處於降階模式 ( RAID 1、RAID 5 或 RAID 6 有一個硬碟故障 )。
	綠燈每 0.5 秒閃爍	<ul style="list-style-type: none"> <li>• NAS 啟動中。</li> <li>• NAS 未設定。</li> <li>• 硬碟未格式化。</li> </ul>
	綠燈	NAS 已就緒。
	關閉	所有硬碟處於待命模式。
區域網路	橙燈	其他裝置存取資料時發生讀寫錯誤。
	橙燈閃爍	使用者正從網路存取 NAS。
硬碟	紅燈閃爍	硬碟存取中並發生讀寫錯誤。
	紅燈	發生硬碟讀寫錯誤。
	綠燈閃爍	資料存取中。
	綠燈	硬碟可供存取。
擴充	橙燈	<ul style="list-style-type: none"> <li>• 已偵測到 SAS JBOD 擴充設備。</li> <li>• 已偵測到 REXP 擴充設備。</li> </ul>
	關閉	未偵測到 JBOD 擴充設備。



**注意**  
擴充設備 LED 燈不適用 9 個硬碟插槽機型。

## 嗶聲警示

時間長度	頻率	說明
短嗶 ( 0.5 秒 )	1 聲	<ul style="list-style-type: none"> <li>• NAS 開啟中。</li> <li>• NAS 關閉中 ( 軟體關機 )。</li> <li>• 使用者按下 [ 重設 ] 按鈕。</li> <li>• 作業系統已更新。</li> </ul>
	3 聲	使用者嘗試將 NAS 資料複製到正面 USB 埠中的外接儲存裝置，但資料無法複製。
長嗶 ( 1.5 秒 )	3 聲 ( 每 5 分鐘 )	系統風扇異常。
	2 聲	<ul style="list-style-type: none"> <li>• 磁碟區容量將滿。</li> <li>• 磁碟區容量已滿。</li> <li>• 硬碟進入降階模式。</li> <li>• 使用者開始硬碟重建程序。</li> <li>• 硬碟插入或拔掉電源。</li> </ul>
	1 聲	<ul style="list-style-type: none"> <li>• NAS 強制關機 ( 硬體關機 )。</li> <li>• NAS 成功開機且可供使用。</li> </ul>

## 5. 疑難排解

本章介紹基本的疑難排解資訊。

### 強制 Qfinder Pro 或 myQNAPcloud 定位 NAS

如果在 QTS 安裝期間，Qfinder Pro 或 myQNAPcloud 找不到 NAS，表示硬碟或資料發生問題。

1. 關閉 NAS 電源。
2. 移除所有硬碟。
3. 打開 NAS 電源。
4. 使用 Qfinder Pro 或 myQNAPcloud 定位 NAS。
5. 將硬碟重新插入。
6. 繼續執行 QTS 安裝作業。

### 熱插拔故障硬碟

NAS 支援熱插拔下列情況的硬碟：

- RAID 1：一個硬碟故障
- RAID 5：一個硬碟故障
- RAID 6：一或兩個硬碟故障

1. 登入 QTS。
2. 前往 [ 主選單 ] > [ 儲存空間總管 ] > [ 儲存空間 ] > [ 硬碟/VJBOD ]。
3. 找出故障的硬碟。
4. 準備一個新的硬碟，其容量不低於故障硬碟的容量。
5. 將 NAS 的故障硬碟拔出。
6. 等待 20 秒或等到 NAS 發出兩次嗶聲。
7. 將故障硬碟從硬碟托盤取下。
8. 將新的硬碟插入硬碟托盤。
9. 安裝新的硬碟。  
NAS 會發出兩次嗶聲。
10. 前往 [ 主選單 ] > [ 儲存空間總管 ] > [ 儲存空間 ]。
11. 找出新硬碟所在的磁碟區，然後確認其狀態為 [ 重建中 ]。

### 支援和其他資源

QNAP 提供下列資源：

資源	URL
文件	<a href="http://docs.qnap.com">http://docs.qnap.com</a>
服務中心	<a href="http://helpdesk.qnap.com">http://helpdesk.qnap.com</a>
下載	<a href="http://download.qnap.com">http://download.qnap.com</a>
社群論壇	<a href="http://forum.qnap.com">http://forum.qnap.com</a>

## 6. 詞彙

### CloudKey

指定至每個 NAS 裝置的唯一 8 位數代碼

### CloudLink

讓您可透過網際網路存取 NAS 而不需配置複雜的連接埠轉址設定

### myQNAPcloud

提供各種遠端存取服務，例如 DDNS 與 CloudLink

### myQNAPcloud ID

用來註冊 myQNAPcloud 帳號的電子郵件地址

### Qfinder Pro

協助您找到並存取區域網路內的 QNAP NAS 裝置

### QTS

QNAP NAS 作業系統

## 7. 聲明

本章介紹擔保、免責聲明、授權以及聯辦法規的相關資訊。

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如要把 NAS ( 網路儲存裝置 ) 等 QNAP 產品的包裝內任何元件退回以要求退款或維修，請確定貨品妥善包裝以利運送。若貨品運送期間因不妥善包裝造成任何損壞，QNAP 一概不予負責。

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### 經濟部標準檢驗局聲明



D33B77  
RoHS

警告使用者：這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

### CE 聲明



此 QNAP NAS 符合 CE 規範等級 A。

## FCC 聲明

### FCC A 級聲明



本產品符合 FCC 規則第 15 部分。產品操作須遵守以下兩個條件：

1. 本產品不得造成有害干擾。
2. 本產品必須承受任何收到的干擾，包含可能造成額外操作的干擾。



#### 注意

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Version 3, 29 June 2007

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