

# TS-x32PXU

TS-432PXU-RP
TS-832PXU-RP
TS-832PXU-RP
TS-1232PXU-RP

使用者指南

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# 7. 聲明

有限保固	52
免責聲明	
GNU Public License	
FCC 聲明	
CE 聲明	
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S.I/T 11364-2006	61

# 1. 前言

# 關於本指南

本指南涵蓋 QNAP TS-x32PXU 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。
1	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 裝置的基本資訊。

#### 關於 TS-x32PXU

TS-x32PXU 是專為 SMB IT 環境所設計的機架式 NAS·搭載四核心 1.7 GHz 處理器。它具有兩個 10 Gigabit 乙太網路 SFP+ 埠和兩個 2.5 Gigabit 乙太網路埠,提供高網路頻寬,使檔案存取、備份、媒體傳輸和團隊協作更加流暢。這款 NAS 支援 PCIe 擴充,可加裝 M.2 SSD 快取和 2.5 Gigabit 乙太網路及 5 Gigabit 乙太網路頻寬。TS-x32PXU RP 機型搭載備援電源供應器,確保最長的服務運轉時間。

#### 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。



#### 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。

訂購料號	硬碟插槽	記憶體	電源供應器
TS-432PXU-2G	4	2 GB	單獨
TS-432PXU-RP-2G			備援
TS-832PXU-4G	8	4 GB	單獨
TS-832PXU-RP-4G			備援
TS-1232PXU-RP-4G	12	4 GB	備援

元件	TS-432PXU TS-432PXU-RP	TS-832PXU TS-832PXU-RP	TS-1232PXU-RP	
處理器				
CPU	Annapurna Labs AL324	Annapurna Labs AL324		
頻率	4 核心 1.7 GHz			
架構	ARM 64 位元			
加密引擎	支援			
記憶體				
預載記憶體	2 GB RAM : 1 x 2 GB UDIMM DDR4	4 GB RAM : 1 x 4 GB UDIN	/M DDR4	

元件	TS-432PXU TS-432PXU-RP	TS-832PXU TS-832PXU-RP	TS-1232PXU-RP			
記憶體插槽	1 x Long-DIMM DDR4  注意  • 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	16 GB RAM : 1 x 16 GB					
儲存空間						
硬碟插槽	4 x 3.5 吋 SATA 6 Gbps 注意 硬碟插槽與 SATA 3	8 x 3.5 吋 SATA 6 Gbps Gbps 回溯相容。	12 x 3.5 吋 SATA 6 Gbps			
硬碟相容性	<ul><li>3.5 吋插槽:</li><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>	<ul><li>3.5 吋 SATA 硬碟</li><li>2.5 吋 SATA 硬碟</li></ul>				
SSD 快取加速技術 支援	支援					
熱抽換	支援					
網路	網路					
10 Gigabit 乙太網 路埠	乙太網 2 x 10 GbE SFP+					
2.5 Gigabit 乙太網 路埠	igabit 乙太網 2 x 2.5 GbE RJ45					
網路喚醒	有 (2.5 GbE RJ45)					
外接 I/O 埠和擴充插	外接 I/O 埠和擴充插槽					
PCIe 插槽	1 x PCle 2.0 x2					
USB 連接埠	4 x USB 3.2 Gen 1 Type-A					
介面						
按鈕	• 電源					
	<ul><li>重設</li></ul>					
尺寸		I				
外型	1U 機架式	2U 機架式				

元件	TS-432PXU TS-432PXU-RP	TS-832PXU TS-832PXU-RP	TS-1232PXU-RP			
尺寸(高x寬x深)	44 x 439 x 499 mm (1.73 x 17.28 x 19.64 时)	89 x 482 x 534 mm (3.50 x 18.97 x 21.02 时)				
淨重	• TS-432PXU : 6.53 kg (14.39 lbs)	• TS-832PXU : 9.45 kg (20.83 lbs)	11.34 kg (25.00 lbs)			
	• TS-432PXU-RP : 8.12 kg (17.90 lbs)	• TS-832PXU-RP : 10.94 kg (24.11 lbs)				
其他						
電源供應器	• TS-432PXU : 250W · 100-240V AC · 50/60 Hz	• TS-832PXU : 250W · 100-240V AC · 50/60 Hz	2 x 250W · 100-240V AC · 50/60 Hz			
	• TS-432PXU-RP : 2 x 250W · 100-240V AC · 50/60 Hz	• TS-832PXU-RP : 2 x 250W · 100-240V AC · 50/60 Hz				
系統電池	CR2032 鋰電池 (3V)					
噪音值	• TS-432PXU : 38 dB(A)	• TS-832PXU : 24.9 dB(A)	32.2 dB(A)			
	• TS-432PXU-RP : 39 dB(A)	• TS-832PXU-RP : 30.6 dB(A)				
風扇	系統:2 x 40 mm · 12V DC 風扇	系統:2 x 70 mm · 12V DC 風扇				
操作溫度	0°C 到 40°C ( 32°F 到 104°F )					
相對濕度	<ul> <li>不凝結相對溼度:5% 至 95%</li> <li>濕球溫度:27°C (80.6°F)</li> </ul>					



請前往 https://www.qnap.com/compatibility·查看相容硬碟型號及擴充卡清單。

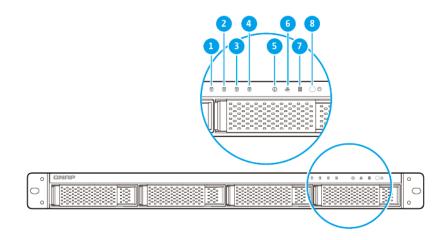
# 包裝內容

項目	數量
TS-x32PXU	1
電源線	• 1
	• TS-432PXU-RP \ TS-832PXU-RP \ TS-1232PXU-RP : 2
乙太網路線	1 x Cat5e
3.5 吋硬碟用螺絲	• TS-432PXU · TS-432PXU-RP : 16
	• TS-832PXU \ TS-832PXU-RP : 32
	• TS-1232PXU-RP : 48

項目	數量
2.5 吋硬碟用螺絲	• TS-432PXU · TS-432PXU-RP : 12
	• TS-832PXU · TS-832PXU-RP : 24
	• TS-1232PXU-RP : 36
把手套組	TS-432PXU · TS-432PXU-RP
	• 2 x 把手
	• 2 x 角形托座
	• 8 x 螺絲
快速安裝手冊 (QIG)	1

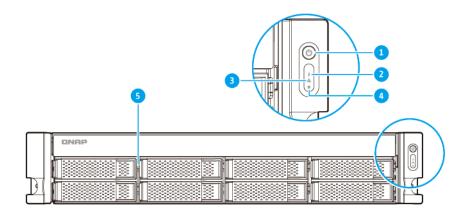
# 元件

# 前面板

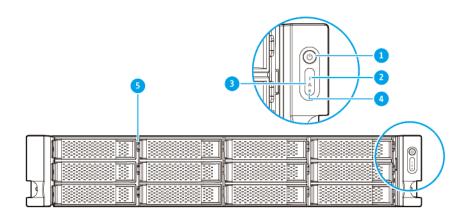


TS-432PXU · TS-432PXU-RP

編號	元件	編號	元件
1	硬碟 1 LED 燈	5	狀態 LED 燈
2	硬碟 2 LED 燈	6	LAN LED 燈
3	硬碟 3 LED 燈	7	擴充設備 LED 燈
4	硬碟 4 LED 燈	8	電源按鈕



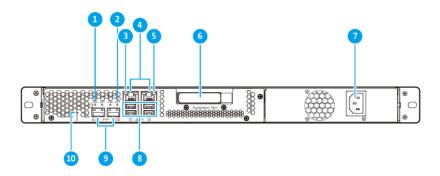
TS-832PXU · TS-832PXU-RP



TS-1232PXU-RP

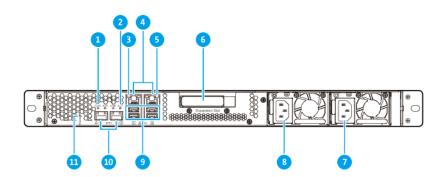
編號	元件	編號	元件
1	電源按鈕	4	擴充設備 LED 燈
2	狀態 LED 燈	5	硬碟 LED 燈
3	LAN LED 燈	-	-

# 背面板



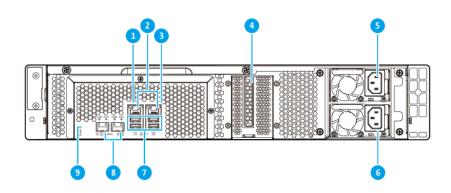
#### TS-432PXU

編號	元件	編號	元件
1	10 Gigabit 乙太網路 SFP+ 連線 LED 燈	6	PCIe 插槽
2	10 Gigabit 乙太網路 SFP+ 活動 LED 燈	7	電源供應器
3	2.5 Gigabit 乙太網路速度 LED 燈	8	USB 3.2 Gen 1 Type-A 連接埠
4	2.5 Gigabit 乙太網路埠	9	10 GbE SFP+ 乙太網路埠
5	2.5 Gigabit 乙太網路活動 LED 燈	10	重設按鈕



TS-432PXU-RP

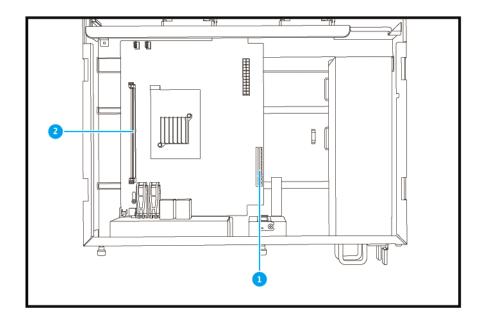
編號	元件	編號	元件
1	10 Gigabit 乙太網路 SFP+ 連線 LED 燈	7	電源供應器 1
2	10 Gigabit 乙太網路 SFP+ 活動 LED 燈	8	電源供應器 2
3	2.5 Gigabit 乙太網路速度 LED 燈	9	USB 3.2 Gen 1 Type-A 連接埠
4	2.5 Gigabit 乙太網路埠	10	10 GbE SFP+ 乙太網路埠
5	2.5 Gigabit 乙太網路活動 LED 燈	11	重設按鈕
6	PCIe 插槽	-	-



TS-832PXU · TS-832PXU-RP · TS-1232PXU-RP

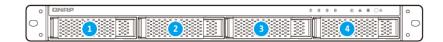
編號	元件	編號	元件
1	2.5 Gigabit 乙太網路速度 LED 燈	6	電源供應器 2
2	2.5 Gigabit 乙太網路埠	7	USB 3.2 Gen 1 Type-A 連接埠
3	2.5 Gigabit 乙太網路活動 LED 燈	8	10 GbE SFP+ 乙太網路埠
4	PCIe 短蓋	9	重設按鈕
5	電源供應器 1	-	-

# 系統板

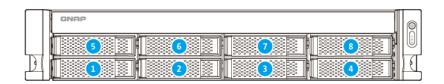


編號	元件	編號	元件
1	PCIe 2.0 x2	2	記憶體插槽

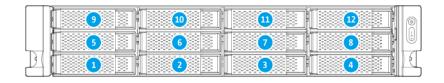
# 硬碟編號



TS-432PXU · TS-432PXU-RP



#### TS-832PXU · TS-832PXU-RP



#### TS-1232PXU-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適當的接地電源插座。



具有備援電源供應器的裝置可能配備一條或以上電源供應器 (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。

#### 移動零件



轉動之風扇葉片:裝置連接至電源時,請使身體部位遠離轉動中之風扇葉片。



移動元件:使身體部位遠離其他移動元件。

#### 安裝需求

類別	項目
環境	• 室溫:0°C 到 40°C(32°F 到 104°F)
	• 不凝結相對溼度: 5% 至 95%
	• 濕球溫度:27°C (80.6°F)
	<ul><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>
	沒有物體會阻礙 NAS 通風或者對 NAS 或電源線 產生壓力
硬體和週邊設備	• 儲存硬碟
	<b>注意</b> 請前往 https://www.qnap.com/ compatibility 以查看相容的硬碟機型清 單。
	<ul><li>網路線</li></ul>
工具	• 1 號或 2 號十字螺絲起子
	• 防靜電腕帶

#### 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。

- 1. 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。
- 2. 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 吋硬碟以及固態硬碟

請前往 https://www.qnap.com/en/compatibility/,查看相容硬碟及擴充卡清單。

- 3. 將 NAS 連接至網路。
- 4. 選擇性: 安裝擴充卡。

如需詳細資訊,請參見:安裝擴充卡。

- 5. 選擇性: 安裝記憶體模組。 如需詳細資訊,請參見: 更換記憶體模組
- **6.** 選擇性: 連接擴充設備。 如需詳細資訊, 請參見下列主題:
  - 連接 USB 擴充設備
  - 連線 SATA JBOD 擴充設備
- 7. 連接電源線與所有適用的網路線。
- 8. 開啟 NAS。
- **9**. 安裝 QTS。

如需詳細資訊,請參見:QTS 安裝。

# 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。

#### 安裝硬碟

TS-x32PXU 與 3.5 吋硬碟、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。

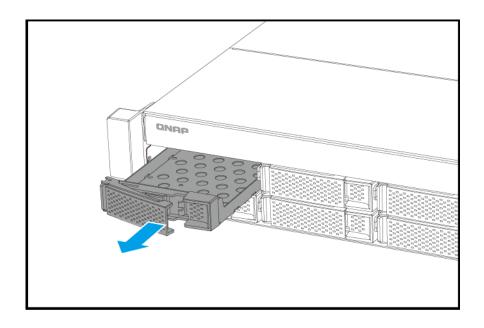
**A** 

轉動之風扇葉片:使雙手及其他身體部位遠離轉動中之風扇葉片。

6

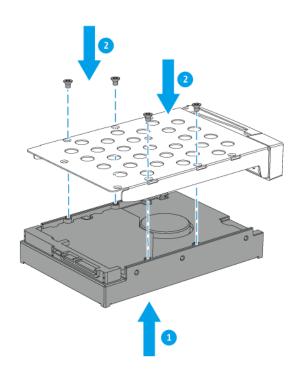
其他移動元件:使雙手及其他身體部位遠離其他移動元件。

- 1. 關閉 NAS 電源。
- 2. 抽出硬碟托盤。
  - a. 將托盤把手往外拉。
  - b. 將托盤拉出。



#### 3. 在托盤上安裝硬碟。

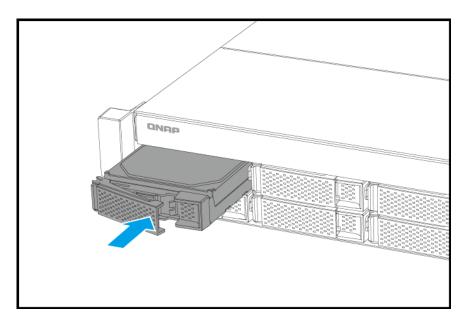
- a. 將硬碟放在托盤上,讓硬碟底部的孔洞與托盤底部的孔洞對齊。
- **b.** 裝上螺絲,將硬碟鎖定在托盤上。



#### 4. 將托盤裝入插槽。

a. 將托盤插入插槽。

#### **b.** 推入把手。



**5.** 開啟 NAS。

#### 在 3.5 吋托盤上安裝 2.5 吋硬碟以及固態硬碟



#### 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。

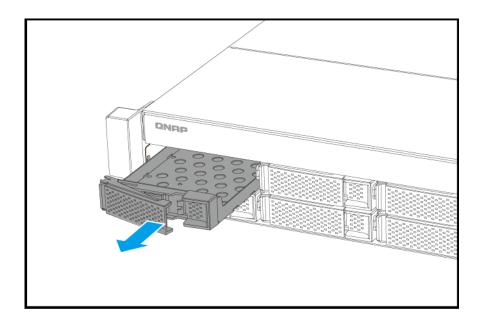


轉動之風扇葉片:使雙手及其他身體部位遠離轉動中之風扇葉片。



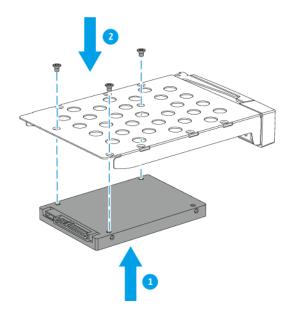
**其他移動元件**:使雙手及其他身體部位遠離其他移動元件。

- 1. 關閉 NAS 電源。
- 2. 抽出硬碟托盤。
  - a. 將托盤把手往外拉。
  - **b.** 將托盤拉出。



#### 3. 在托盤上安裝硬碟。

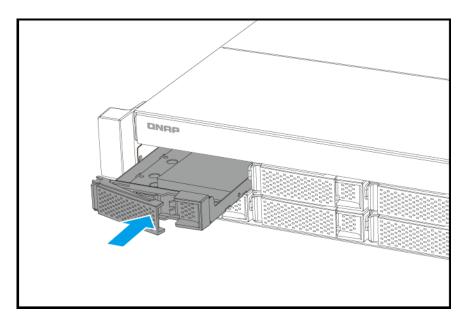
- a. 將硬碟放在托盤上,讓硬碟底部的孔洞與托盤底部的孔洞對齊。
- **b.** 鎖上螺絲。



#### 4. 將托盤裝入插槽。

a. 將托盤插入插槽。

#### **b.** 推入把手。



5. 開啟 NAS。

#### 安裝擴充卡

#### 在 TS-432PXU 或 TS-432PXU-RP 安裝擴充卡



#### 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。



轉動之風扇葉片:使雙手及其他身體部位遠離轉動中之風扇葉片。



其他移動元件:使雙手及其他身體部位遠離其他移動元件。

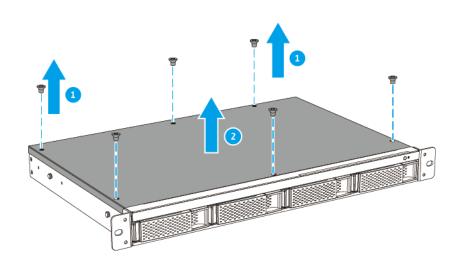


#### 注意

本程序僅適用於 TS-432PXU 和 TS-432PXU-RP。 若需 TS-832PXU、TS-832PXU-RP 和 TS-1232PXU-RP 的詳細資訊,請參見:在 TS-832PXU、TS-832PXU-RP 或 TS-1232PXU-RP 安裝擴充卡。

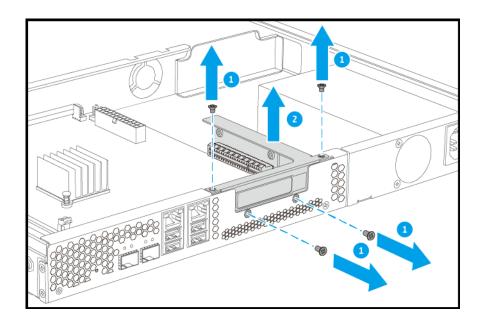
- 1. 在 QNAP 網站查看您型號適用的擴充卡和固定片。
  - a. 前往 www.qnap.com/compatibility。
  - b. 按一下 [ 依 NAS 搜尋 ] 。

- 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. 取下機殼蓋。
  - a. 取下螺絲。
  - **b.** 提起殼蓋,使其脫離裝置。



#### 6. 取下 PCIe 檔板。

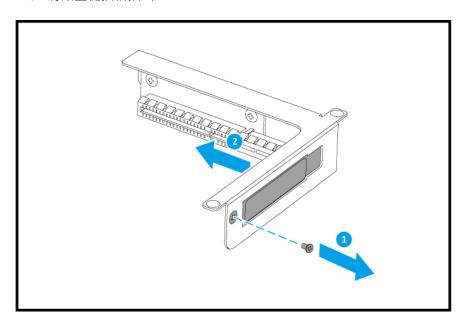
a. 取下用於固定檔板和機殼的螺絲。



**b.** 將檔板從機殼取下。

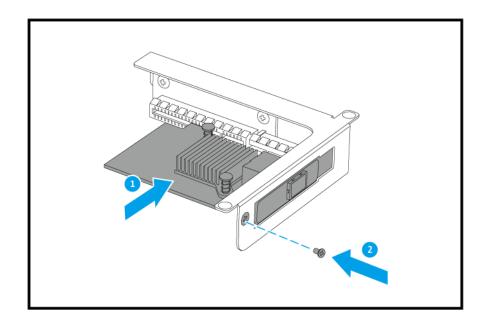
# **7.** 取下 PCIe 蓋。

- a. 取下用於固定殼蓋和固定片的螺絲。
- **b.** 將殼蓋從插槽抽出。



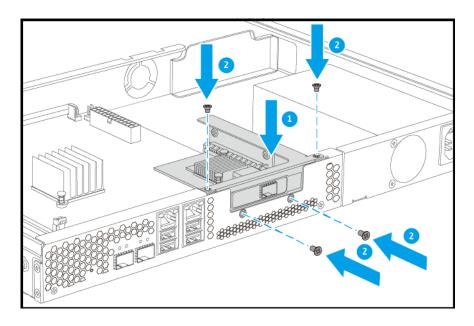
#### 8. 安裝擴充卡。

- a. 握住擴充卡的邊緣。
- **b.** 將擴充卡插入插槽。
- c. 鎖上螺絲。



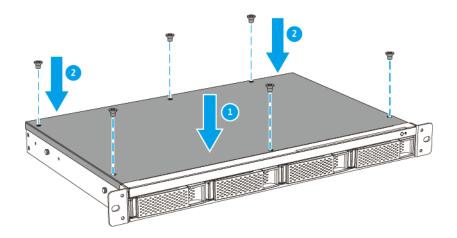
#### 9. 插入 PCIe 檔板。

- a. 將檔板上 PCIe 接頭插入系統板的 PCIe 插槽。
- **b.** 鎖上用於固定檔板和機殼的螺絲。



#### 10. 安裝上蓋。

- a. 將殼蓋放在 NAS 上。
- **b.** 鎖上用於固定上蓋和機殼的螺絲。



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

#### 在 TS-832PXU、TS-832PXU-RP 或 TS-1232PXU-RP 安装擴充卡



#### 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。

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轉動之風扇葉片:使雙手及其他身體部位遠離轉動中之風扇葉片。

•



其他移動元件:使雙手及其他身體部位遠離其他移動元件。

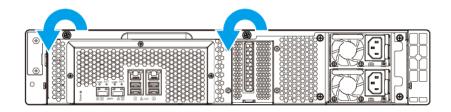


#### 注意

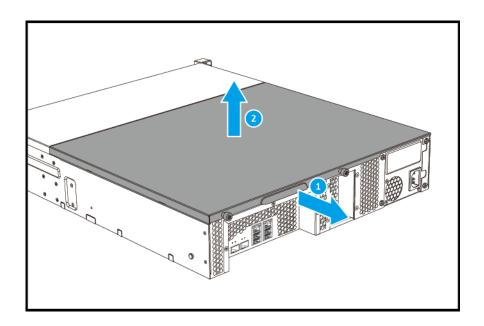
本程序僅適用於 TS-832PXU、TS-832PXU-RP 和 TS-1232PXU-RP。 若需 TS-432PXU 和 TS-432PXU-RP 的詳細資訊,請參見:在 TS-432PXU 或 TS-432PXU-RP 安裝擴充卡。

- 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。
  - 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. 取下機殼蓋。
  - a. 鬆開螺絲。

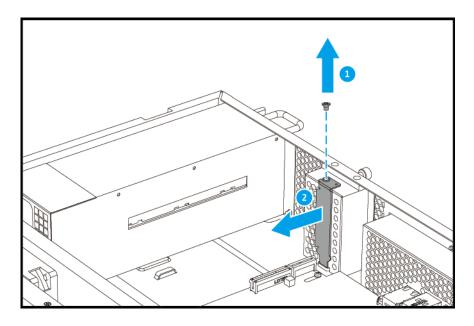


- b. 將殼蓋往後推。
- c. 提起殼蓋,使其脫離裝置。



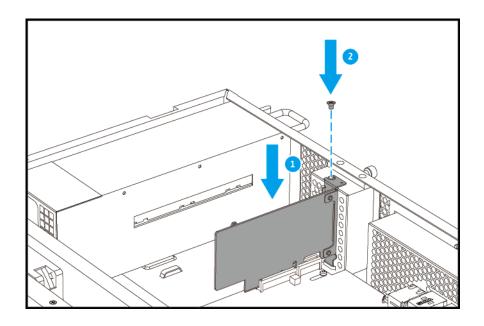
#### 6. 取下 PCIe 蓋。

- a. 取下用於固定殼蓋和固定片的螺絲。
- **b.** 將殼蓋從插槽抽出。



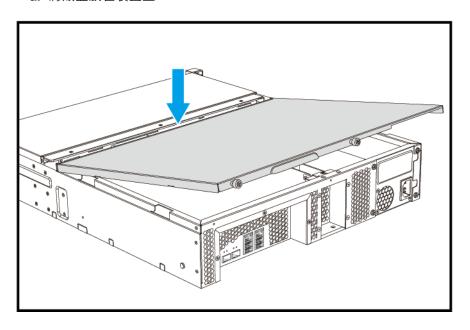
# 7. 安裝擴充卡。

- a. 握住擴充卡的邊緣。
- **b.** 將擴充卡插入插槽。
- c. 鎖上螺絲。

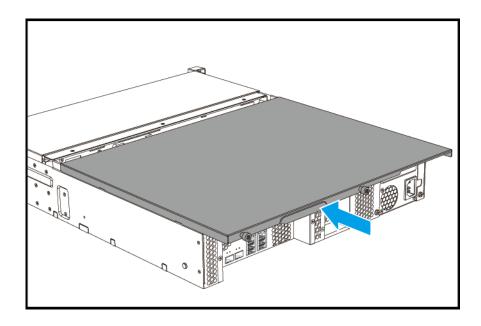


# 8. 裝上機殼蓋。

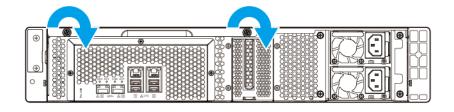
a. 將殼蓋放在裝置上。



**b.** 將殼蓋往前推。



c. 鎖緊螺絲。



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

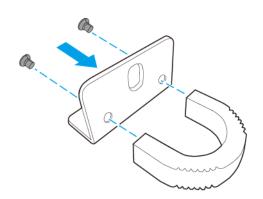
# 把手安裝

安裝把手後,即可輕鬆且穩固地拿取 NAS。



注意 TS-432PXU 和 TS-432PXU-RP 上的把手需要手動安裝。

- 1. 關閉 NAS 電源。
- 2. 將把手安裝到角形托座上。
  - a. 將把手開口對齊至角形托座上的兩個圓頭螺絲洞。
  - **b.** 鎖上螺絲,將把手鎖定在角形托座上。



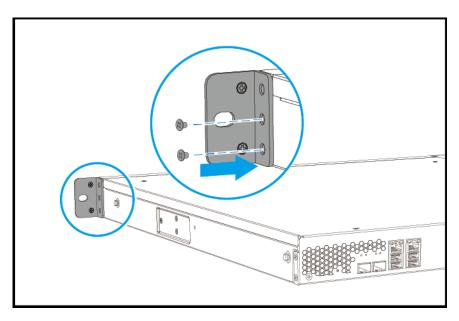
- 3. 在裝置上安裝角形托座。
  - a. 將角形托座上的孔洞對齊機殼上的孔洞。



#### 注意

請確定把手與前面板面對相同的方向。

**b.** 鎖上螺絲。



- 4. 在機殼的另一側安裝第二個把手。
- 5. 開啟 NAS。

#### 更換記憶體模組

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。



#### 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。

6

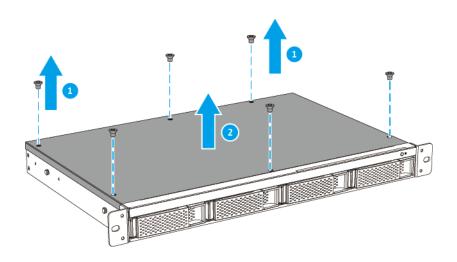


轉動之風扇葉片:使雙手及其他身體部位遠離轉動中之風扇葉片。

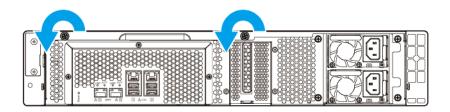
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其他移動元件:使雙手及其他身體部位遠離其他移動元件。

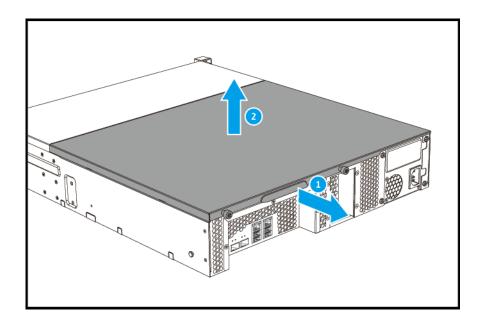
- 1. 關閉 NAS 電源。
- 2. 從電源插座拔下電源線。
- 3. 中斷所有連接線和外接裝置的連線。
- 4. 取下機殼蓋。
  - TS-432PXU · TS-432PXU-RP
    - 1. 取下螺絲。
    - 2. 提起殼蓋,使其脫離 NAS。



- TS-832PXU \ TS-832PXU-RP \ TS-1232PXU-RP
  - **1.** 鬆開螺絲。



- 2. 使用把手將殼蓋從 NAS 拉開。
- 3. 提起殼蓋,使其脫離 NAS。



#### 5. 取下現有的記憶體模組。

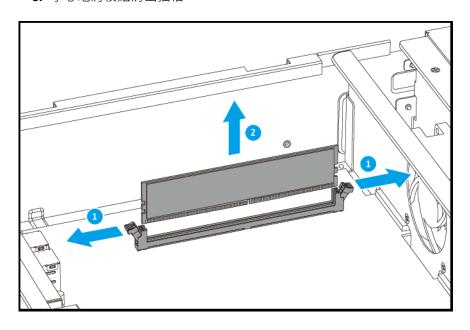
a. 將固定夾同時往外推以鬆開記憶體模組。



#### 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。

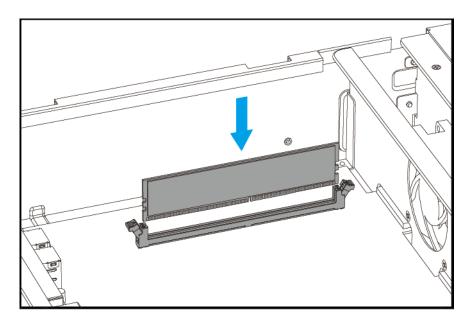
- **b.** 握住模組的邊緣。
- c. 小心地將模組滑出插槽。



#### 6. 安裝新的記憶體模組。

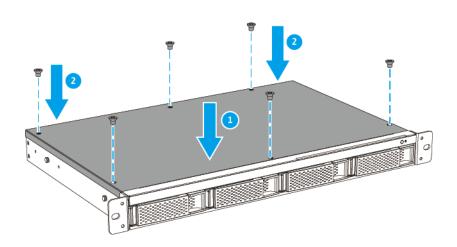
- a. 將接口與插槽的凸出部分對齊。
- **b.** 將記憶體模組插入插槽。

- 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。

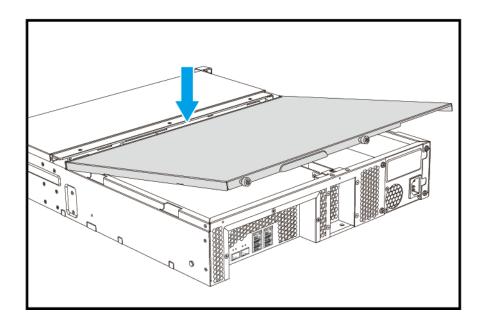


#### 7. 裝上機殼蓋。

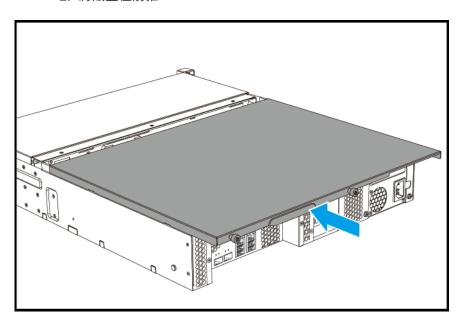
- TS-432PXU · TS-432PXU-RP
  - 1. 將殼蓋放在 NAS 上。
  - 2. 鎖上用於固定機殼蓋和機殼的螺絲。



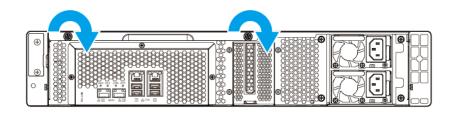
- TS-832PXU · TS-832PXU-RP · TS-1232PXU-RP
  - 1. 將殼蓋放在 NAS 上。



2. 將殼蓋往前推。



**3.** 鎖緊螺絲。



- 8. 連上所有連接線和外接裝置。
- 9. 開啟 NAS。
- 10. 確認 NAS 可辨識記憶體模組。
  - a. 請以管理員身分登入 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。

#### 安裝擴充設備

TS-x32PXU 支援 SATA JBOD 擴充設備和 USB 擴充設備。如需詳細資訊,請參見下方表格。

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/。

如需相容擴充設備清單以及適用擴充設備的數量上限,請前往:http://www.qnap.com/go/compatibility-expansion。

擴充設備型號	說明	必要配件
TL-D400S	• 採用 SFF-8088 介面。	• 1 x SFF-8088 接頭線
	• 支援 SATA HDD/SSD	• QXP-400eS-A1164 主機匯流 排介面卡
TL-D800S	• 採用 SFF-8088 介面	• 2 x SFF-8088 接頭線
	• 支援 SATA HDD/SSD	• QXP-800eS-A1164 主機匯流 排介面卡

擴充設備型號	說明	必要配件
TL-D1600S	• 使用 SFF-8088 轉 SFF-8644 介面	• 4 x SFF-8088 轉 SFF-8644 接 頭線
	• 支援 SATA HDD/SSD	• QXP-1600eS 主機匯流排介面 卡
TL-R400S	• 採用 SFF-8088 介面	• 1 x SFF-8088 接頭線
	• 支援 SATA HDD/SSD	• QXP-400eS-A1164 主機匯流 排介面卡
		• RAIL-B02
TL-R1200S-RP	• 使用 SFF-8088 轉 SFF-8644 介面	• 3 x SFF-8088 轉 SFF-8644 接 頭線
	• 支援 SATA HDD/SSD	• QXP-1600eS 主機匯流排介面 卡
		• RAIL-B02
TR-002	• 使用 USB 3.2 Gen 2 Type-C 介面	USB 3.2 Gen 2 Type-A 轉 Type-C 連接線
	• 支援 SATA 硬碟	
TR-004	• 使用 USB 3.2 Gen 1 Type-C 介面	USB 3.2 Gen 2 Type-A 轉 Type-C 連接線
	● 支援 SATA 硬碟	
TR-004U	• 使用 USB 3.2 Gen 1 Type-C 介面	• USB 3.2 Gen 1 Type-A 轉 Type-C 連接線
	• 支援 SATA 硬碟	• RAIL-B02
TL-D800C	• 使用 USB 3.2 Gen 2 Type-C 介面	• USB 3.2 Gen 2 Type-A 轉 Type-C 連接線
	• 支援 SATA 硬碟	• 選購:QNAP QXP-10G2U3A USB 3.2 Gen 2 PCIe 卡
TL-R1200C-RP	• 使用 USB 3.2 Gen 2 Type-C 介面	• USB 3.2 Gen 2 Type-A 轉 Type-C 連接線
	• 支援 SATA 硬碟	• RAIL-B02
		• 選購: QNAP QXP-10G2U3A USB 3.2 Gen 2 PCIe 卡

#### 連接 USB 擴充設備

若要將 TS-x32PXU 連接到 USB 擴充設備,需要使用 USB Type-A 轉 USB Type-C 的連接線。

1. 將擴充設備連接至 NAS。

如需必要配件的詳細資訊,請參見:安裝擴充設備。

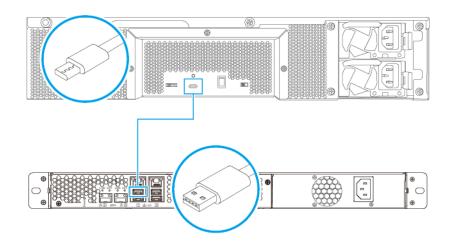
a. 將 USB 連接線接至 NAS 上的 USB 3.2 Gen 1 Type-A 連接埠。



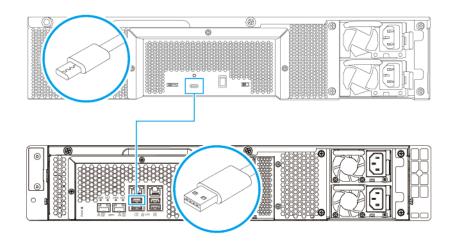
#### 注意

在擴充設備安裝 QNAP QXP-10G2U3A USB 3.2 Gen 2 PCIe 卡來取得 USB 3.2 Gen 2 功能。

▍若需有關擴充設備支援的擴充卡詳細資訊,請參見:安裝擴充設備。



此為 TL-R1200C-RP 和 TS-432PXU 的連接。





**注意** 此為 TL-R1200C-RP 和 TS-1232PXU-RP 的連接。

- 2. 開啟擴充設備的電源。
- 3. 確認 NAS 可辨識所有擴充設備。
  - a. 請以管理員身分登入 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。

### 連線 SATA JBOD 擴充設備

若要連接 TS-x32PXU 至 SATA JBOD 擴充設備,必須先在 NAS 安裝主機匯流排介面卡。

如需必要配件的詳細資訊,請參見:安裝擴充設備。

- 1. 關閉 NAS 電源。
- 2. 在 PCIe 插槽安裝主機匯流排介面卡。

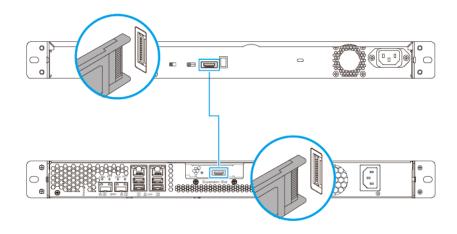


#### 注意

連接 SATA JBOD 擴充裝置至主機裝置需要 QNAP QXP 主機匯流排介面卡。第三方主機匯流排介面卡與 QNAP JBOD 擴充裝置不相容。

如需詳細資訊,請參見:安裝擴充設備。

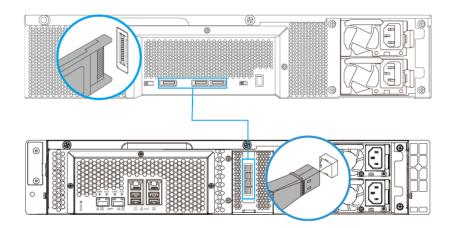
3. 請按照下列拓樸圖,將擴充設備連接到 NAS。





#### 注意

此為 TL-R400S 和 TS-432PXU 的連接。





#### 注意

此為 TL-1200S 和 TS-1232PXU-RP 的連接。

- 4. 開啟 SATA JBOD 擴充設備的電源。
- **5.** 開啟 NAS。
- 6. 確認 NAS 可辨識所有擴充設備。
  - a. 以管理員身分登入 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

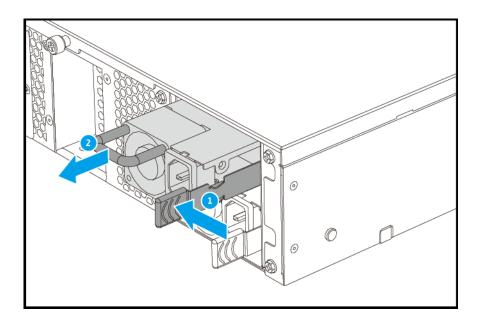


#### 警告

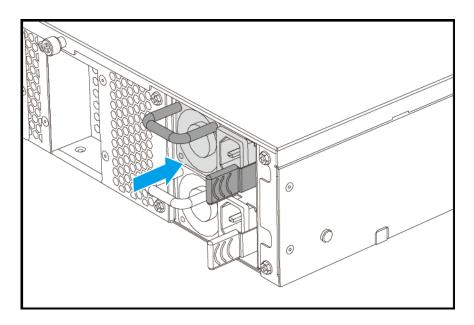


NAS 至少配備一條電源供應器 (PSU) 的電源線。為防止嚴重傷害事故發生,在安裝或替換系統元件前,應由受過訓練的技術人員拔下所有 PSU 電源線。

- 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.** 開啟 NAS。
- 7. 啟用電源供應器故障警訊。
  - a. 請以管理員身分登入 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. 按一下[全部套用]。

# 機架滑軌



## 注意

- 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://
- 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。

型號	相容機架滑軌
• TS-432PXU	RAIL-B02
• TS-432PXU-RP	
• TS-832PXU	
• TS-832PXU-RP	
• TS-1232PXU-RP	

# QTS 安裝

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: • 使用 Qfinder Pro 定位 NAS。 • 完成 [智慧安裝導引]精靈中的步驟。	<ul><li>電腦</li><li>網路線</li><li>Qfinder Pro 安裝程式</li></ul>
雲端安裝	如果 NAS 已連接網際網路·您可以執行下列操作:  • 掃描 NAS 上的 QR 碼。  • 指定 Cloud Key。  • 登入 myQNAPcloud 帳號。  • 使用 myQNAPcloud Link 遠端存取您的 NAS。  • 完成[智慧安裝導引]精靈中的步驟。	<ul><li>電腦或行動裝置</li><li>myQNAPcloud 帳號</li><li>Cloud Key</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. 開啟 NAS。
- 2. 將 NAS 連接至區域網路。
- 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.gnap.com/utilities。

- 4. 在清單中找到 NAS, 然後按兩下它的名稱或 IP 位址。
- 5. 您可以執行下列動作。
  - 若要取得最新提供的版本,請按一下[開始]。
     安裝精靈隨即開始下載最新版本;下載完畢後,NAS 會重新啟動。如果沒有較新的版本,安裝精靈將自動顯示[智慧安裝導引]。
  - 若要安裝「開箱即用」(out-of-the-box)的版本,請按一下[略過]。
- 6. 按一下[啟動智慧安裝導引]。
- 7. 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。
- **8.** 按一下[**下一步**]。
- 9. 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。

- **10.** 按一下[**下一步**]。
- 11. 選擇 [自動取得 IP 位址 (DHCP)]。
- **12.** 按一下「下一步]。
- 13. 選擇將用於存取 NAS 共用資料夾的裝置類型。
- **14.** 按一下「下一步]。
- **15.** 檢視設定值。
- **16.** 按一下**[套用]**。 確認訊息隨即出現。



#### 警告

按一下[確認]後,系統會在安裝 QTS 前刪除硬碟的所有資料。

**17.** 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. 開啟 NAS。
- 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.gnap.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

建立帳號之後,必須返回此頁面完成安裝步驟。

6. 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。
- 基於安全考量·NAS 將於初始化後停用 myQNAPcloud Link 遠端連線服務。日後若要再度啟用,請透過 LAN 連接至 QTS,然後安裝 myQNAPcloud Link。
- **7.** 按一下「**下一步**]。
- 8. 您可以執行下列動作。
  - 若要取得最新提供的版本,請按一下[開始]。
     安裝精靈隨即開始下載最新版本;下載完畢後,NAS 會重新啟動。如果沒有較新的版本,安裝精靈將自動顯示「智慧安裝導引」。
  - 若要安裝「開箱即用」(out-of-the-box)的版本,請按一下[略過]。
- 9. 按一下[啟動智慧安裝導引]。
- 10. 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。
- **11.** 按一下「**下一步**]。
- 12. 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。

- **13.** 按一下「下一步]。
- 14. 選擇 [自動取得 IP 位址 (DHCP)]。
- **15**. 按一下[下一步]。

- **16.** 選擇將用於存取 NAS 共用資料夾的裝置類型。
- **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 按一下[確認]後,系統會在安裝 QTS 前刪除硬碟的所有資料。

20. 按一下[確認]。 QTS 安裝完成。

# 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。	裝置開機。		
關閉電源	按住按鈕 1.5 秒。	裝置關機。		
強制關機	按住按鈕 10 秒。	装置關機。		
		<b>重要</b> 請在裝置沒有回應時才使 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:
		• 系統管理員密碼:預設密碼為 第一個 MAC 位址 (不包含特殊 字元)。例如·若第一個 MAC 位址為 00-08-9B-F6-15-75· 則管理員密碼為 00089BF61575。
		提示 您可以透過 Qfinder Pro 找到第一個 MAC 位址。 黏貼至裝置的標籤亦將位 址列為 MAC1。
		• TCP/IP 設定:
		• 透過 DHCP 自動取得 IP 位址設定
		• 停用 Jumbo Frame
		<ul> <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>
		<ul><li>系統通訊埠:8080(系統服務 埠)</li></ul>
		• 安全等級:低(接受所有連線)
		• LCD 面板密碼:(空白)
		• VLAN:已停用
系統進階重設	按住按鈕 15 秒。	回復為出廠預設值。
		<ul> <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 燈號指示裝置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,且裝置已連線至網路或主機的狀態下。

如需 LED 燈號的位置資訊,請參見:前面板。

LED	狀態	說明
系統狀態	綠燈與紅燈每 0.5 秒交錯閃爍	• 硬碟正在格式化。
		• 裝置正在初始化。
		• 作業系統正在更新。
		• RAID 重建作業正在進行。
		• 線上 RAID 容量擴充正在進行。
		• 線上 RAID 組態遷移正在進 行。
	紅燈	• 硬碟無效。
		• 磁碟區容量已滿。
		• 磁碟區容量將滿。
		• 系統風扇異常。
		• 資料存取(讀寫)錯誤。
		• 硬碟壞軌。
		• 裝置處於降階唯讀模式(RAID 5 或 RAID 6 有兩個硬碟故障 但資料仍可讀取)。
		• 硬體自我檢查發生錯誤。
	紅燈每 0.5 秒閃爍	裝置處於降階模式(RAID 1、 RAID 5 或 RAID 6 有一個硬碟故 障)。
	綠燈每 0.5 秒閃爍	• 裝置未設定。
		• 硬碟未格式化。
	綠燈	裝置已就緒。
	關閉	所有硬碟處於待命模式。
硬碟	紅燈閃爍	資料存取中並發生讀寫錯誤。
	紅燈	硬碟讀寫錯誤。
	綠燈閃爍	正在存取資料。
	緑燈	硬碟已就緒
	關閉	<b>偵測不到硬碟。</b>
區域網路	橙燈	• 網路連線運作中。
		注意 LAN LED 只能偵測裝置內 建的乙太網路連接埠連 接・它無法偵測網路擴充 卡的乙太網路連接埠連接 狀態。
	橙燈閃爍	使用者正在從網路存取裝置。
	關閉	裝置未連接至網路。

LED	狀態	說明	
10 Gigabit 乙太網路 (SFP+) 連線	綠燈	網路執行速度為 10 Gbps	
	關閉	無網路連線。	
10 Gigabit 乙太網路 (SFP+) 活動	橙燈	網路連線已建立。	
	橙燈閃爍	正在傳送資料。	
	關閉	無網路連線。	
2.5 Gigabit 乙太網路速度	綠燈	網路執行速度為 2.5 Gbps。	
	橙燈	網路執行速度為 1 Gbps。	
	關閉	• 網路執行速度為 100 Mbps。	
		• 無網路連線。	
2.5 Gigabit 乙太網路活動	橙燈	網路連線已建立。	
	橙燈閃爍	使用者正在從網路存取裝置。	
	關閉	無網路連線。	
擴充	橙燈	已偵測到 QNAP JBOD 或 RAID 擴充設備。	
	關閉	未偵測到 JBOD 擴充設備。	

# 警示音

期間	頻率	描述
短嗶 (0.5 秒)	1	• NAS 啟動中。
		• NAS 正在重設設定 (重設按 鈕)。
		• NAS 正在重設設定並重新啟動 (重設按鈕)。
		• 作業系統已更新。
		• 裝置正從睡眠狀態喚醒。
		• USB 裝置已移除 (USB 單鍵備 份按鈕)。
		• 裝置正在啟動 USB 單鍵備份。
	3	• 偵測不到安裝的硬碟。
		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。

期間	頻率	描述
長嗶 (1.5 秒)	3聲(每5分鐘)	• 電源發生錯誤。
		• 系統風扇異常。
		• 風扇模組已移除。
		• 安裝之風扇模組為相容。
		• 系統風扇發生錯誤。
		• NAS 開機。
		• NAS 已完成韌體更新。
	2	• 儲存池容量即將用盡。
		• 儲存池容量已滿。
		• 發生儲存池狀態錯誤。
		• 磁碟區容量將滿。
		• 磁碟區容量已滿。
		• USB 裝置正在移除 (USB 單鍵 備份按鈕)。
		• 磁碟區狀態發生錯誤。
		• 硬碟進入降階模式。
		• 使用者開始硬碟重建程序。
		• 插入或抽出硬碟。
		• iSCSI 容量即將用盡。
	1	• NAS 強制關機(硬體關機)。
		• NAS 成功開機且可供使用。
長嗶聲及短嗶聲	1 次長嗶聲及 2 次短嗶聲	JBOD 擴充設備已移除。

# 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 Qfinder Pro 或 myQNAPcloud 在 QTS 安裝的期間找不到 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. 開啟 NAS。
- 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。

# 復原意外移除的正常硬碟

硬碟磁碟區	RAID 復原支援	硬碟數量	遭移除的硬碟最大數目
單一	否	1	N/A
JBOD	是	≥ 2	
RAID 0	是		
RAID 1	是	2	1
RAID 5	是	≥ 3	
RAID 6	是	≥ 4	3
RAID 10	否	≥4(必須是偶數)	兩個不同鏡像對中有一或 兩個硬碟故障。
RAID 50	是	≥ 6	每個子群組有一個硬碟故 障。
RAID 60	是	≥ 8	每個子群組有兩個硬碟故障。

# 熱抽換故障硬碟

NAS 於下列情況支援硬碟熱抽換:

RAID 類型	硬碟數量 情況	
RAID 1	2	一個硬碟故障
RAID 5	≥ 3	一個硬碟故障
RAID 6	≥ 4	一個或兩個硬碟故障
RAID 10	≥4(必須是偶數)	兩個不同鏡像對中有一或兩個硬碟 故障。
RAID 50	≥ 6	每個子群組有一個硬碟故障。
RAID 60	≥ 8	每個子群組有兩個硬碟故障。

1. 登入 QTS。

- 2. 前往[主選單] > [儲存與快照總管] > [儲存空間] > [磁碟/VJBOD]。
- 3. 找出故障的硬碟。
- 4. 準備一個新的硬碟,且容量至少與故障硬碟相同。
- 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] > [儲存與快照總管] > [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	https://docs.qnap.com
相容性列表	https://www.qnap.com/compatibility/
NAS 遷移相容性	https://www.qnap.com/en/nas-migration
擴充設備相容性	http://www.qnap.com/go/compatibility-expansion
服務入口網站	https://service.qnap.com
產品支援狀態	https://www.qnap.com/product/eol.php
下載	https://download.qnap.com
社群論壇	https://forum.qnap.com
QNAP 配件商店	https://shop.qnap.com/

# 6. 詞彙

# **Cloud Key**

指定至每個 NAS 裝置的唯一 8 位數代碼

# myQNAPcloud Link

讓您透過網際網路存取 NAS·無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 myQNAPcloud Link

# **QNAP ID**

讓您使用 myQNAPcloud 遠端存取及其他 QNAP 服務的使用者帳戶

## **Qfinder Pro**

QNAP 應用工具可讓您定位和存取區域網路內的 QNAP NAS 裝置

# **QTS**

QNAP NAS 作業系統

# 7. 聲明

本章介紹擔保、免責聲明、授權以及聯邦法規的相關資訊。

## 有限保固

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# 免責聲明

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Version 3. 29 June 2007

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## SJ/T 11364-2006



本产品符合中国 RoHS 标准。以下表格标示此产品中某有毒物质的含量符合中国 RoHS 标准规定的限量要求。

本产品上会附有"环境友好使用期限"的标签,此期限是估算这些物质"不会有泄漏或突变"的年限。本产品可能包含有较短的环境友好使用期限的可替换元件,像是电池或灯管,这些元件将会单独标示出来。

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (CR(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
壳体	0	0	0	0	0	0
显示	0	0	0	0	0	0
印刷电路板	0	0	0	0	0	0
金属螺帽	0	0	0	0	0	0
电缆组装	0	0	0	0	0	0
风扇组装	0	0	0	0	0	0
电力供应组装	0	0	0	0	0	0
电池	0	0	0	0	0	0

O: 表示该有毒有害物质在该部件所有物质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。

X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T11363-2006 标准规定的限量要求。