



QNAP

TS-x53DU

TS-453DU
TS-453DU-RP
TS-853DU-RP
TS-1253DU-RP

使用者指南

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1. 前言





關於本指南

本指南涵蓋裝置的相關資訊以及安裝硬體的步驟指示。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 TS-x53DU NAS 的基本資訊。

關於 TS-x53DU

TS-x53DU 搭載 Intel® Celeron® J4125 四核心 2.0 GHz 處理器，支援各種硬碟儲存設定，更加滿足虛擬化和資料儲存需求。它支援高達 8 GB DDR4 記憶體和 SATA 6 Gbps 硬碟介面。

TS-x53DU 亦配備兩個 2.5 Gigabit 乙太網路連接埠、兩個 USB 3.2 Gen 1 連接埠、兩個 USB 2.0 連接埠和一個 PCIe 2.0 x2 插槽，增加擴充性與靈活性。

硬體規格











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-453DU-4G	4	4 GB	單獨
TS-453DU-RP-4G	4	4 GB	備援
TS-853DU-RP-4G	8	4 GB	備援
TS-1253DU-RP-4G	12	4 GB	備援

元件	TS-453DU TS-453DU-RP	TS-853DU-RP	TS-1253DU-RP
處理器			
CPU	Intel® Celeron® J4125		
頻率	4 核心/4 執行緒 2.00 GHz 基頻/2.70 GHz 超頻		
架構	x86 64 位元		
加密引擎	AES-NI		
記憶體			
預載記憶體	4 GB : 1 x 4 GB SODIMM DDR4		
記憶體插槽	2 x SODIMM DDR4		
	<div style="display: flex; align-items: center;"> <div style="text-align: center; margin-right: 10px;"> </div> <div> <p>重要</p> <ul style="list-style-type: none"> • 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。 </div> </div>		
最大記憶體	8 GB RAM : 2 x 4 GB		
快閃記憶體	4 GB (雙啟動作業系統防護)		
儲存空間			

元件	TS-453DU TS-453DU-RP	TS-853DU-RP	TS-1253DU-RP
硬碟插槽	4 x 3.5 吋 SATA 6 Gbps	8 x 3.5 吋 SATA 6 Gbps	12 x 3.5 吋 SATA 6 Gbps
	 注意 SATA 6 Gbps 硬碟插槽與 SATA 3 Gbps 硬碟回溯相容。		
硬碟相容性	3.5 吋插槽： <ul style="list-style-type: none"> • 3.5 吋 SATA 硬碟 • 2.5 吋 SATA 硬碟 • 2.5 吋 SATA 固態硬碟 		
SSD 快取加速技術支援	此裝置支援所有硬碟的 SSD 快取加速。		
熱抽換	支援		
網路			
2.5 Gigabit 乙太網路埠	2 x 2.5 GbE RJ45  注意 2.5 Gigabit 乙太網路埠提供四種網路連線速度：2.5G、1G、100M 和 10M。		
網路喚醒	有 (2.5 GbE RJ45)		
外接 I/O 埠和擴充插槽			
PCIe 插槽	1 x PCIe 2.0 x2  提示 請前往 https://www.qnap.com/compatibility 查看相容的擴充卡清單。		
USB 連接埠	<ul style="list-style-type: none"> • 2 x USB 2.0 Type-A • 2 x USB 3.2 Gen 1 Type-A 		
HDMI 連接埠	1 x HDMI v1.4b (最高達 3840 x 2160 @ 30Hz 解析度)		
介面			
按鈕	<ul style="list-style-type: none"> • 電源 • 重設 		
尺寸			
外型	1U 機架式	2U 機架式	
尺寸 (高 x 寬 x 深)	<ul style="list-style-type: none"> • TS-453DU 43.3 x 482.6 x 483.9 mm (1.70 x 19.00 x 19.05 in) • TS-453DU-RP 43.3 x 482.6 x 508.7 mm (1.70 x 19.00 x 20.03 in) 	88.7 x 482.2 x 423.8 mm (3.49 x 18.98 x 16.69 in)	
淨重	<ul style="list-style-type: none"> • TS-453DU : 6.66 kg (14.55 lbs) • TS-453DU-RP : 8.12 kg (17.90 lbs) 	8.89 kg (19.60 lbs)	9.43 kg (20.79 lbs)
其他			

元件	TS-453DU TS-453DU-RP	TS-853DU-RP	TS-1253DU-RP
滑軌相容性	RAIL-B02		
電源供應器	<ul style="list-style-type: none"> TS-453DU : 1 x 250W, 100-240V AC, 50-60Hz TS-453DU-RP : 2 x 250W, 100-240V AC, 50-60Hz 	2 x 300W, 100-240V AC, 50-60Hz	2 x 300W, 100-240V AC, 50-60Hz
系統電池	CR2032 鋰電池 (3V · 225 mAh)  警告 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。  重要 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	TS-453DU : 38 dB(A) TS-453DU-RP : 37.5 dB(A)	23.6 dB(A)	24.6 dB(A)
	 注意 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 : 2 x 40 mm · 12V DC	系統 : 2 x 80 mm · 12V DC	
	 警告  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"> 不凝結相對溼度 : 5% 至 95% 濕球溫度 : 27°C (80.6°F) 		

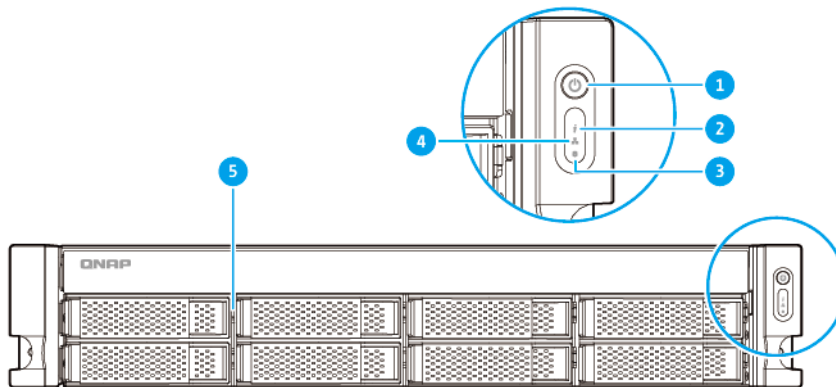
包裝內容

項目	數量
TS-x53DU	1
電源線	<ul style="list-style-type: none"> TS-x53DU 型號 : 1 TS-x53DU-RP 型號 : 2
乙太網路線	1 x Cat5e 連接線
3.5 吋硬碟用螺絲	<ul style="list-style-type: none"> TS-453DU、TS-453DU-RP : 16 TS-853DU-RP : 32 TS-1253DU-RP : 48

項目	數量
2.5 吋硬碟用螺絲	<ul style="list-style-type: none"> • TS-453DU、TS-453DU-RP : 12 • TS-853DU-RP : 24 • TS-1253DU-RP : 36
把手套組	TS-453DU、TS-453DU-RP : <ul style="list-style-type: none"> • 2 x 把手 • 2 x 角撐架 • 8 x 螺絲
快速安裝手冊 (QIG)	1

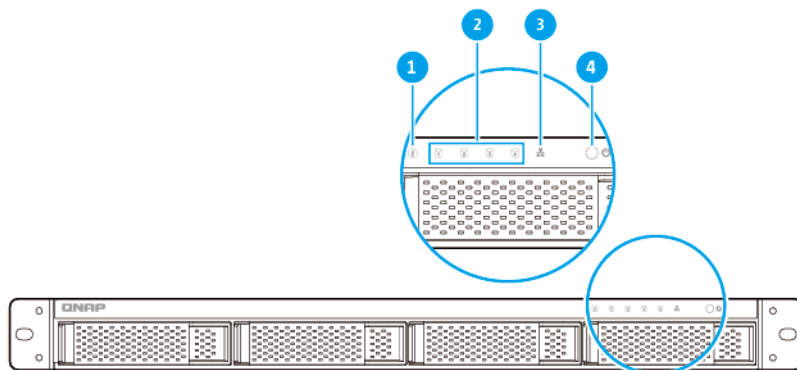
元件

前方面板



TS-853DU-RP、TS-1253DU-RP

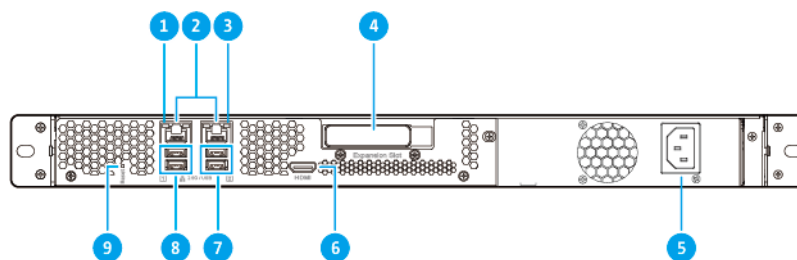
編號	元件	編號	元件
1	電源按鈕	4	LAN LED 燈
2	狀態 LED 燈	5	硬碟 LED 燈
3	擴充設備 LED 燈	-	-



TS-453DU、TS-453DU-RP


編號	元件	編號	元件
1	狀態 LED 燈	3	LAN LED 燈
2	硬碟 LED 燈	4	電源按鈕

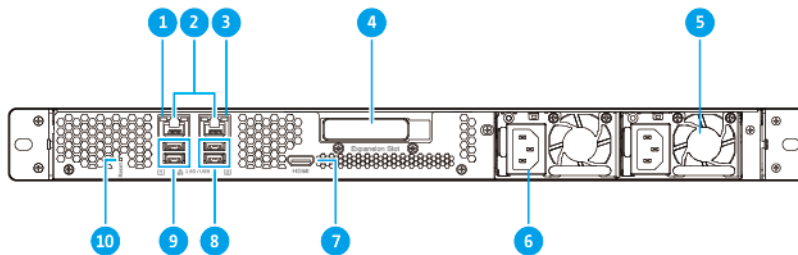
背部面板



TS-453DU

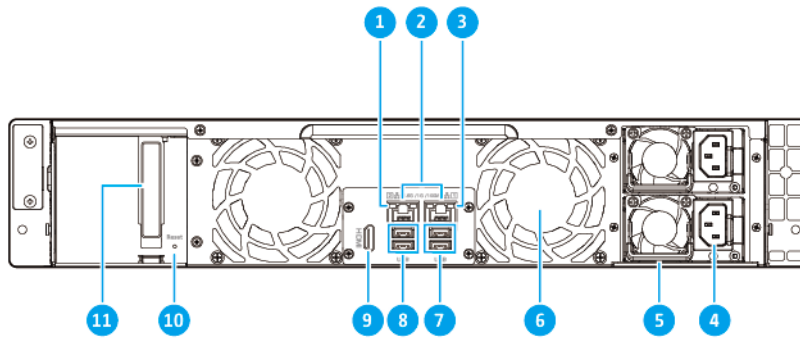
編號	元件	編號	元件
1	2.5 Gigabit 乙太網路活動 LED 燈	6	HDMI v1.4b 連接埠

編號	元件	編號	元件
2	2.5 Gigabit 乙太網路埠 (RJ45)  注意 這些連接埠支援網路喚醒設定。	7	USB 3.2 Gen 1 Type-A 連接埠
3	2.5 Gigabit 乙太網路速度 LED 燈	8	USB 2.0 Type-A 連接埠
4	PCIe 短蓋	9	重設按鈕
5	電源輸入	-	-



TS-453DU-RP

編號	元件	編號	元件
1	2.5 Gigabit 乙太網路活動 LED 燈	6	電源輸入
2	2.5 Gigabit 乙太網路埠 (RJ45)  注意 這些連接埠支援網路喚醒設定。	7	HDMI 1.4b 連接埠
3	2.5 Gigabit 乙太網路速度 LED 燈	8	USB 3.2 Gen 1 Type-A 連接埠
4	PCIe 短蓋	9	USB 2.0 Type-A 連接埠
5	電源供應器	10	重設按鈕



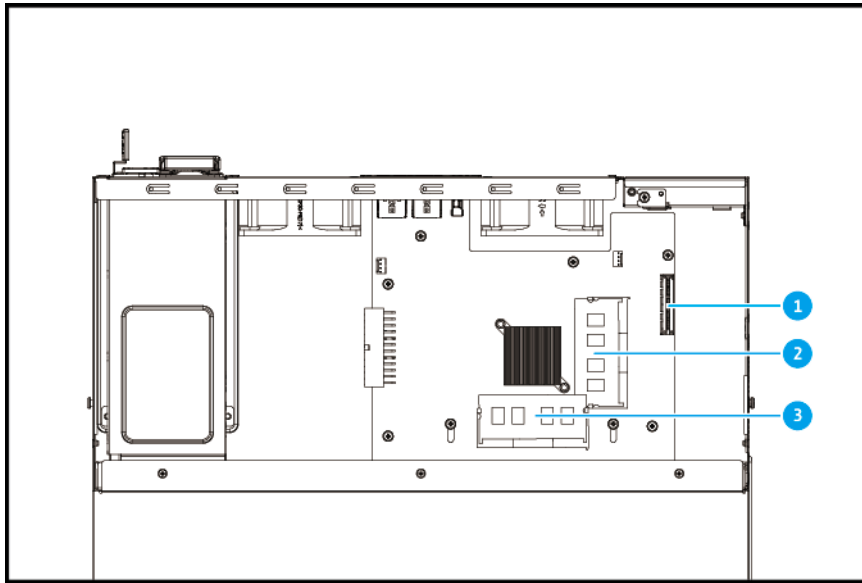
TS-853DU-RP、TS-1253DU-RP

編號	元件	編號	元件
1	2.5 Gigabit 乙太網路活動 LED 燈	7	USB 3.2 Gen 1 Type-A 連接埠
2	2.5 Gigabit 乙太網路埠	8	USB 2.0 Type-A 連接埠
3	2.5 Gigabit 乙太網路速度 LED 燈	9	HDMI 1.4b 連接埠
4	電源輸入	10	重設按鈕
5	電源供應器	11	PCIe 短蓋
6	系統風扇	-	-



注意
這些連接埠支援網路喚醒設定。

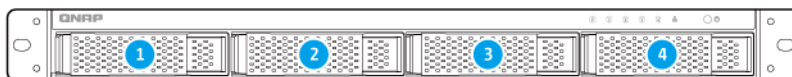
系統板



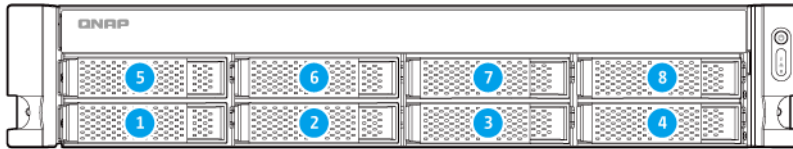
注意
圖片不包含機殼蓋。

編號	元件	編號	元件
1	PCIe 2.0 x2 插槽	3	記憶體插槽 2
2	記憶體插槽 1	-	-

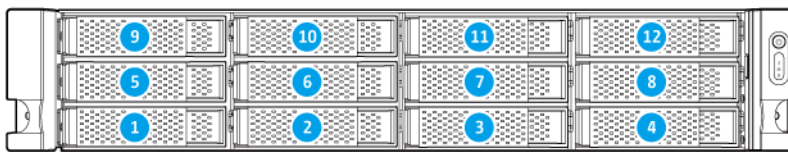
硬碟編號



TS-453DU、TS-453DU-RP



TS-853DU-RP



TS-1253DU-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"> 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) 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
硬體和週邊設備	<ul style="list-style-type: none"> 儲存硬碟 請前往 https://www.qnap.com/compatibility 以查看相容的硬碟機型清單。 網路線
工具	<ul style="list-style-type: none"> 1 號或 2 號十字螺絲起子 防靜電腕帶

設定 NAS

- 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](#)。
- 將 NAS 安裝到機架上。
如需詳細資訊，請參見：[機架滑軌](#)和[把手安裝](#)。
- 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](#)

請前往 <https://www.qnap.com/compatibility> 以查看相容的硬碟機型清單。
- 選擇性：安裝擴充卡。
如需詳細資訊，請參見：[安裝擴充卡](#)。
- 將 NAS 連接至網路。
- 選擇性：連接擴充設備。
如需詳細資訊，請參見：[連接 USB 擴充設備](#)和[連接 SATA JBOD 擴充設備](#)。

7. 連接電源線與所有適用的網路線。
8. 打開 NAS 電源。
9. 安裝 QTS。
如需詳細資訊，請參見：[QTS 安裝](#)。
10. 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。

取下機殼蓋



警告

-



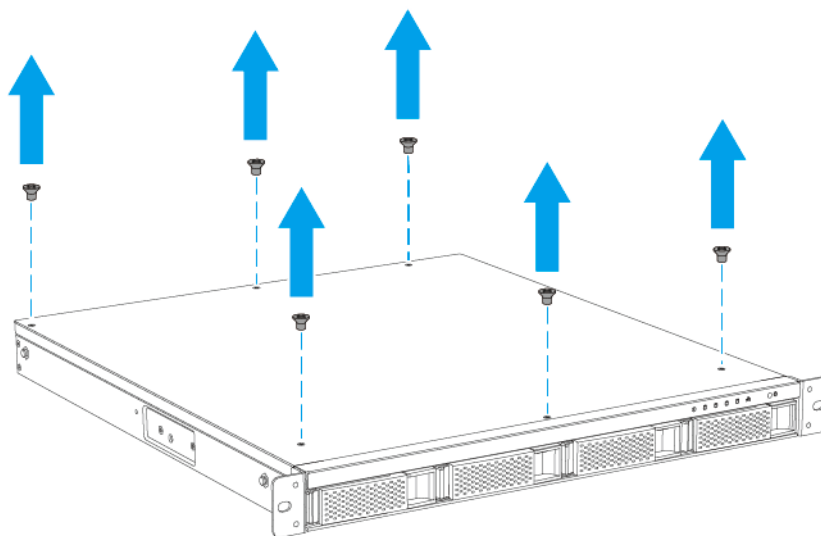
轉動的風扇葉片：使雙手及身體其他部位遠離正在轉動的風扇葉片。

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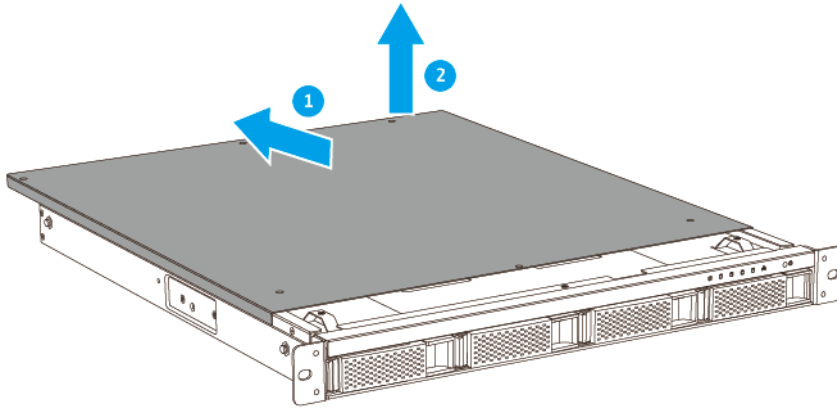


其他移動的元件：使雙手及身體其他部位遠離正在移動的其他元件。

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. 取下機殼蓋。
 - TS-453DU、TS-453DU-RP
 1. 移除用於連接機殼蓋和機殼的螺絲。

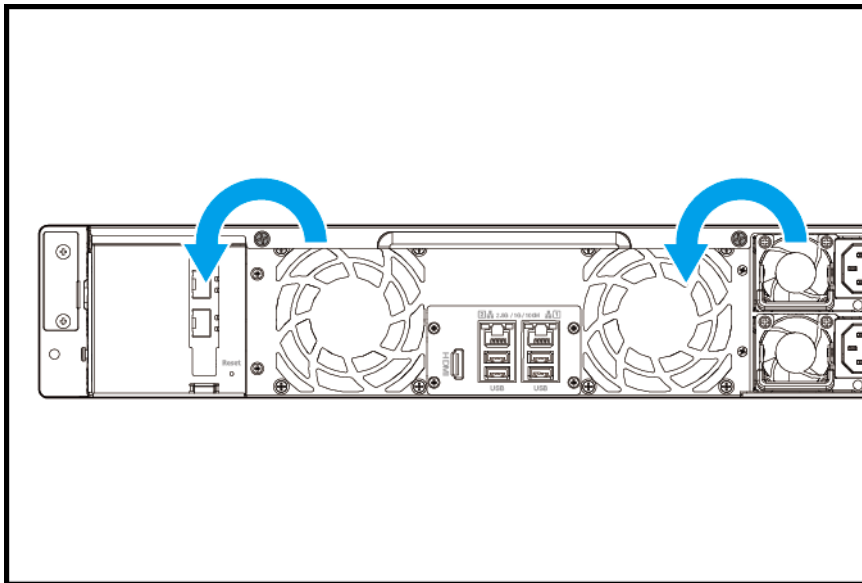


2. 將殼蓋往後推。
3. 提起殼蓋，使其脫離 NAS。

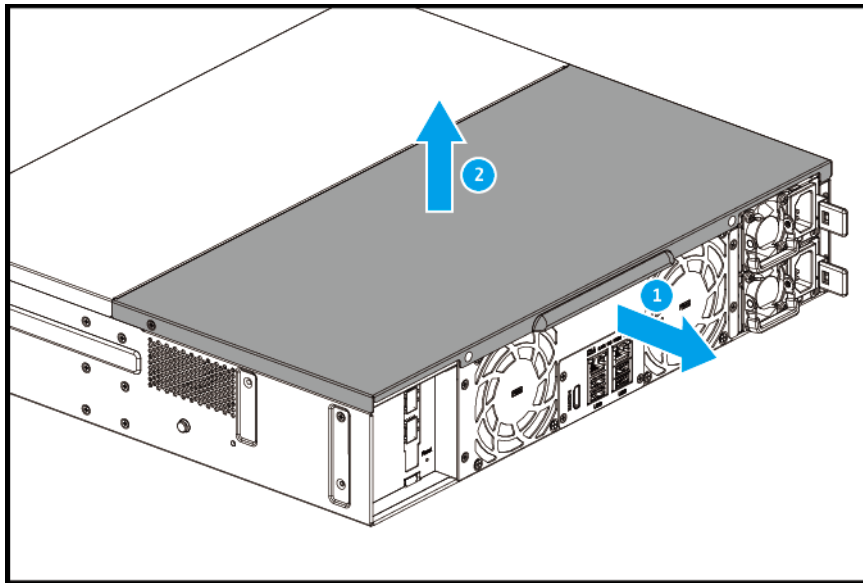


- TS-853DU-RP、TS-1253DU-RP

1. 鬆開螺絲。



2. 將殼蓋往後推。
3. 提起殼蓋，使其脫離 NAS。



裝上機殼蓋



警告

•



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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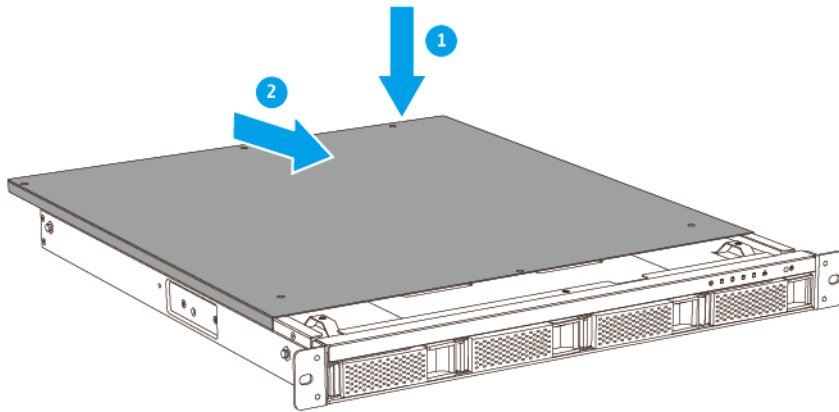


其他移動的元件：使雙手及身體其他部位遠離正在移動的其他元件。

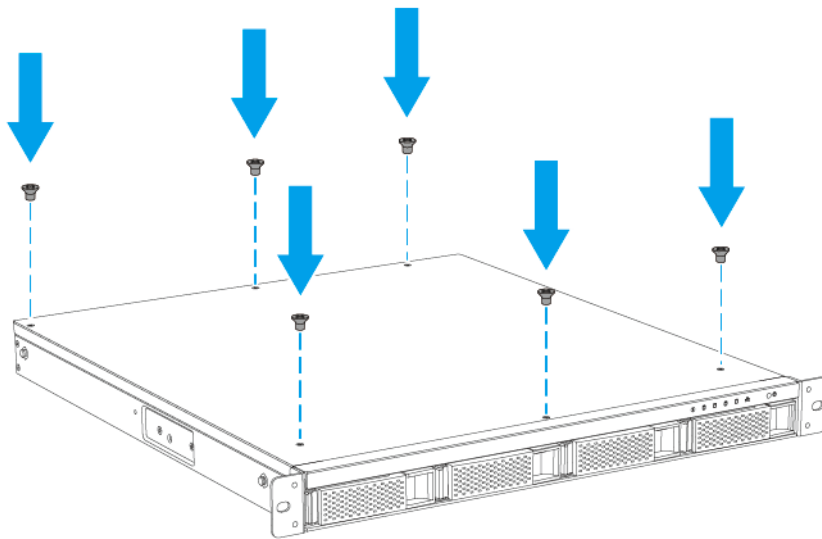
1. 裝上機殼蓋。

- TS-453DU、TS-453DU-RP

1. 將殼蓋放在 NAS 上。
2. 將殼蓋往前推。

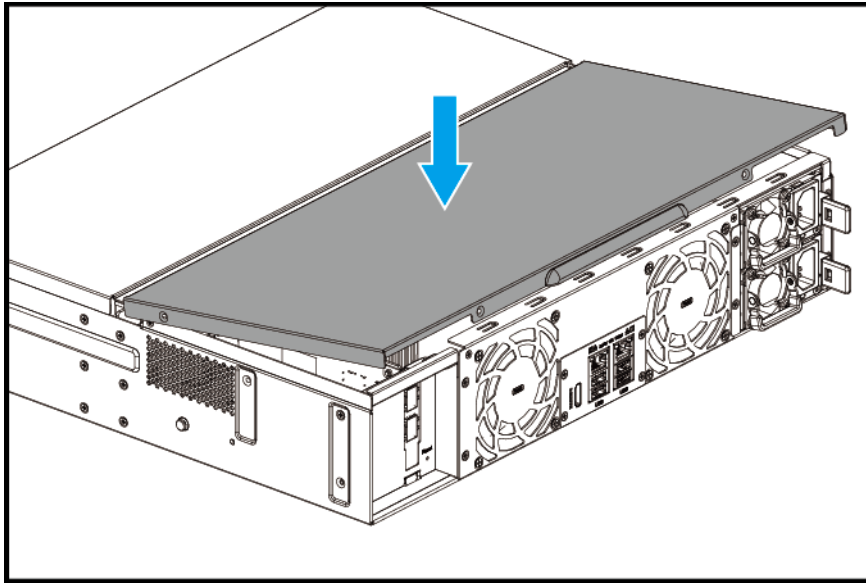


3. 鎖上用於連接機殼蓋和機殼的螺絲。

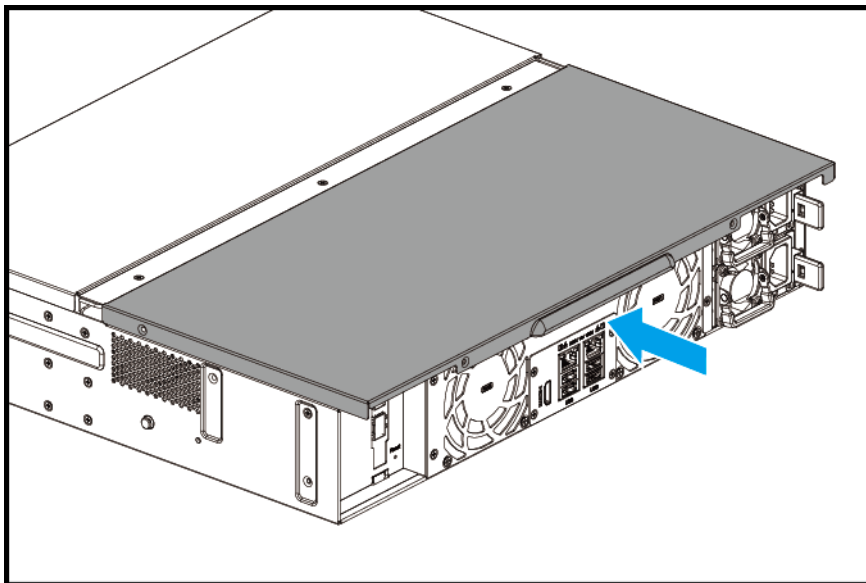


• TS-853DU-RP、TS-1253DU-RP

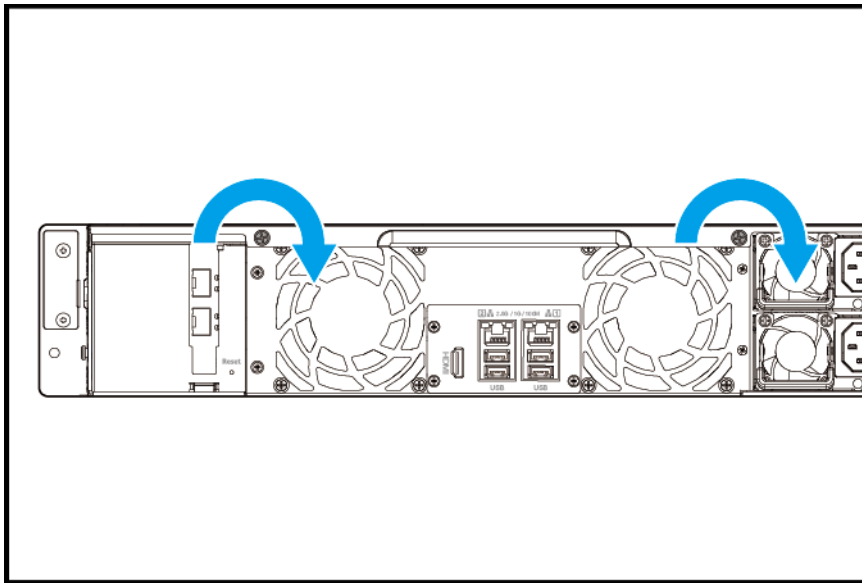
1. 將殼蓋放在 NAS 上。



2. 將殼蓋往前推。



3. 鎖緊螺絲。



2. 連上所有連接線和外接裝置。
3. 將電源線插入電源插座。
4. 開啟 NAS 電源。

硬碟安裝

TS-x53DU 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



提示

請前往 <https://www.qnap.com/compatibility> 以查看相容的硬碟機型清單。



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。



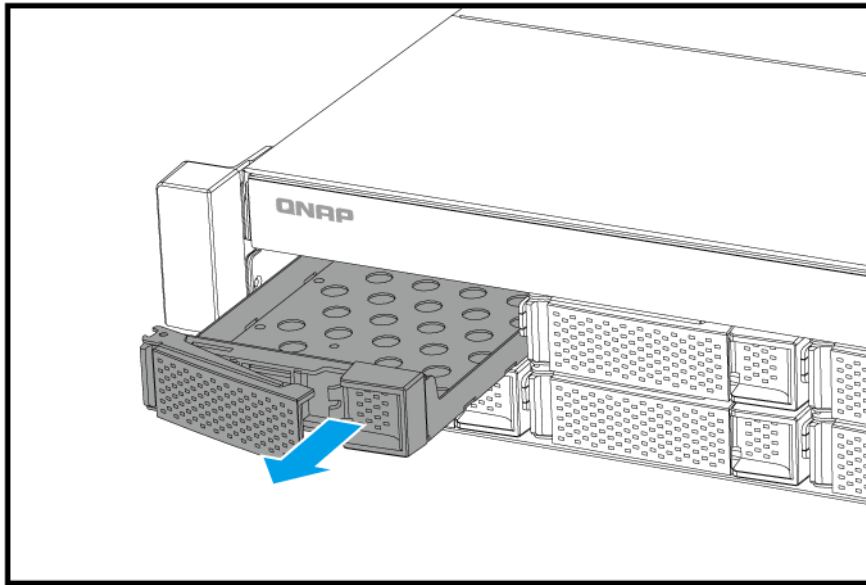
轉動的風扇葉片：使雙手及身體其他部位遠離正在轉動的風扇葉片。



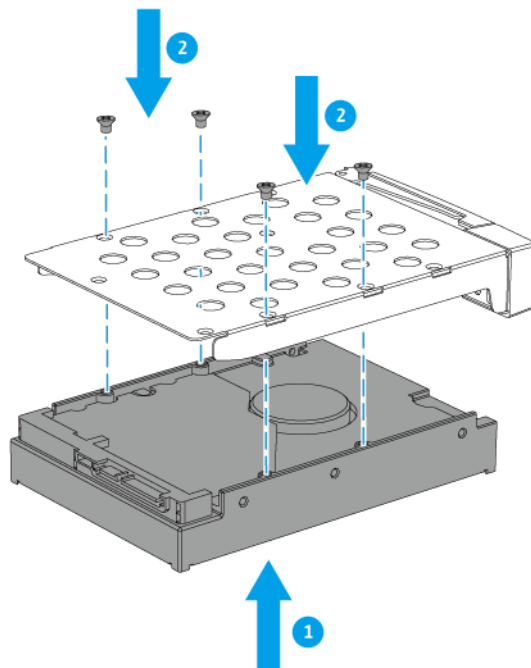
其他移動的元件：使雙手及身體其他部位遠離正在移動的其他元件。

1. 關閉 NAS 電源。
2. 取出硬碟托盤。

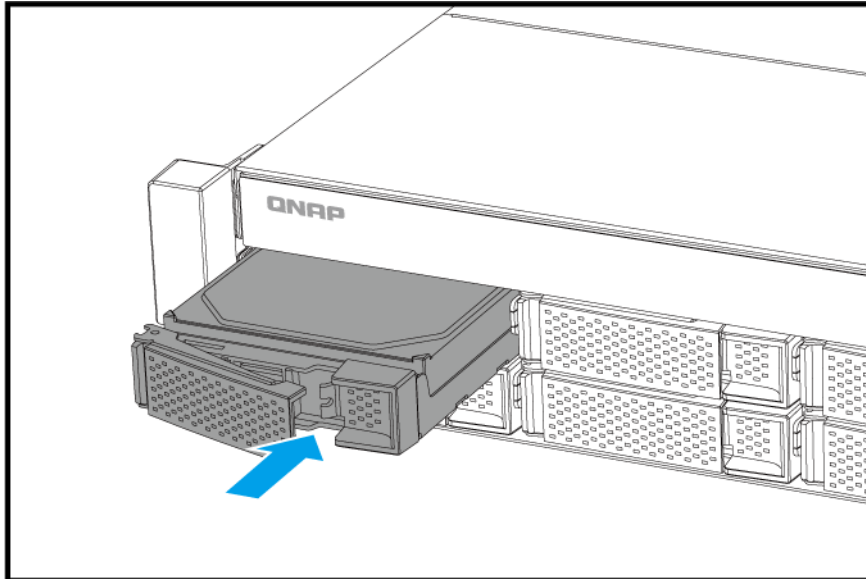
- a. 將托盤把手往外拉。
- b. 將托盤拉出。



3. 在托盤上安裝硬碟。
- a. 將托盤放在硬碟上，讓托盤的孔洞與硬碟的孔洞對齊。
- b. 鎖上螺絲。



4. 將托盤裝入插槽。
 - a. 將托盤插入插槽。
 - b. 將托盤推入插槽。
 - c. 推入把手。
 - d. 將托盤上鎖。



5. 開啟 NAS。

在 3.5 吋托盤上安裝 2.5 吋硬碟或固態硬碟



提示

請前往 <https://www.qnap.com/compatibility> 以查看相容的硬碟機型清單。



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。



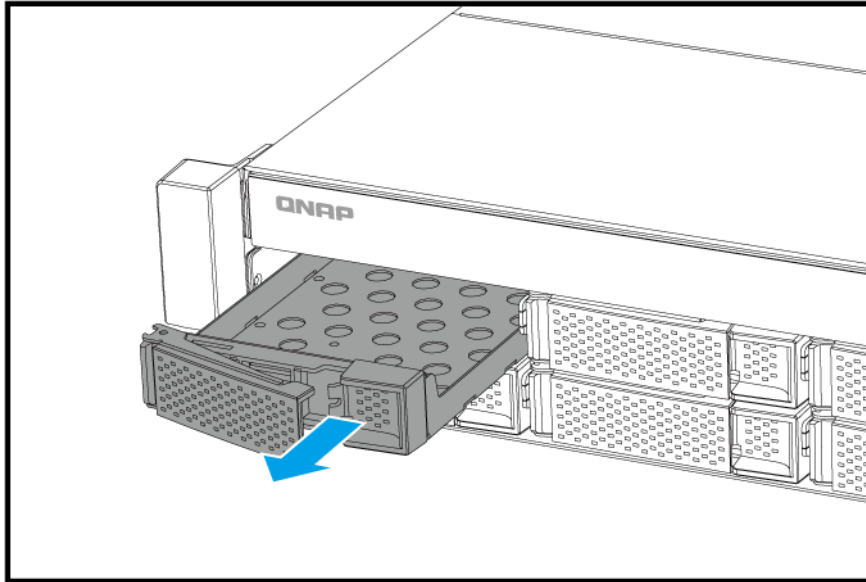
轉動的風扇葉片：使雙手及身體其他部位遠離正在轉動的風扇葉片。



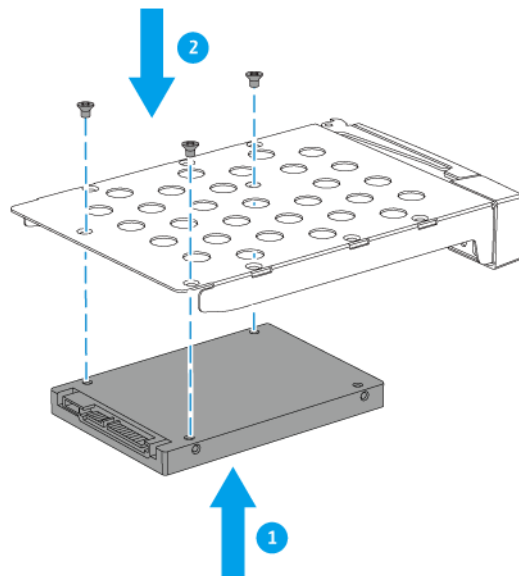
其他移動的元件：使雙手及身體其他部位遠離正在移動的其他元件。

1. 關閉 NAS 電源。

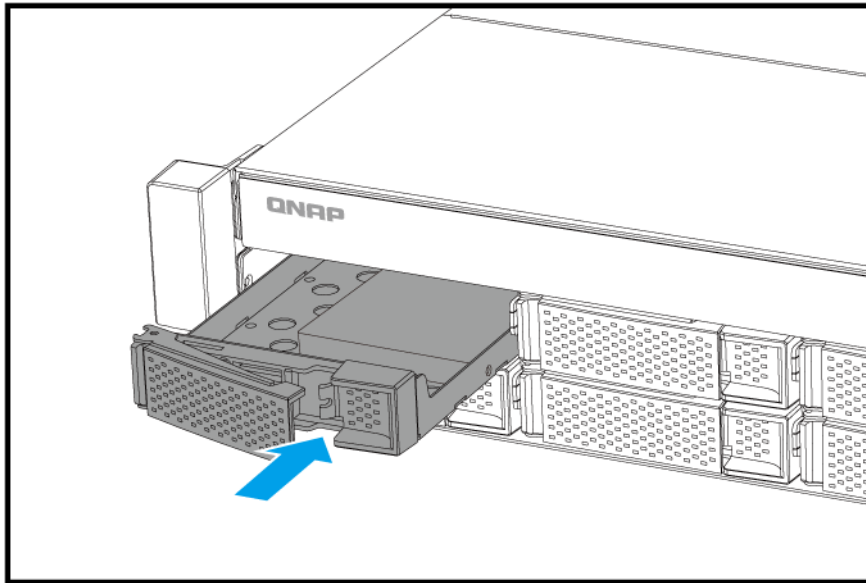
2. 取出硬碟托盤。
 - a. 將托盤把手往外拉。
 - b. 將托盤拉出。



3. 在托盤上安裝硬碟。
 - a. 將托盤放在硬碟上，讓托盤的孔洞與硬碟的孔洞對齊。
 - b. 鎖上螺絲。



4. 將托盤裝入插槽。
 - a. 將托盤插入插槽。
 - b. 將托盤推入插槽。
 - c. 推入把手。
 - d. 將托盤上鎖。



5. 開啟 NAS。

安裝擴充卡

TS-x53DU 支援特定的擴充卡，其中部分需要使用 QNAP PCIe 固定片。在公司網站所購買的 QNAP 品牌擴充卡會隨附 TS-x53DU 適用的必要固定片。



警告

-



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。

-



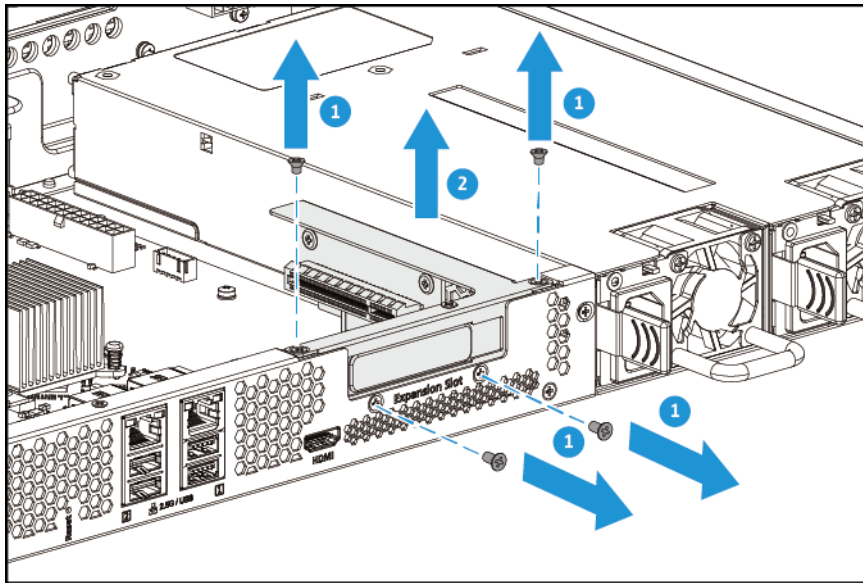
其他移動的元件：使雙手及身體其他部位遠離正在移動的其他元件。



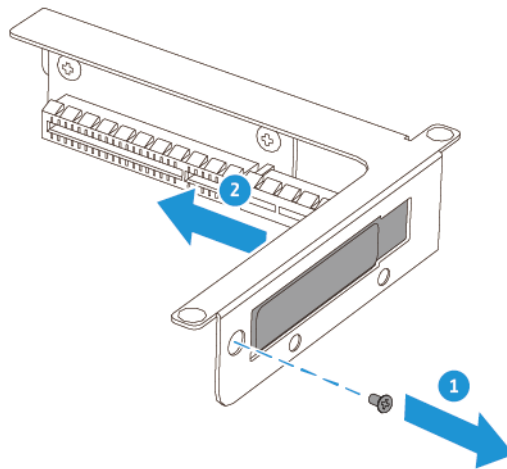
注意

安裝前，請檢查擴充卡電源需求及相容性清單。如需詳細資訊，請參見：www.qnap.com/compatibility。

1. 取下機殼蓋。
如需詳細資訊，請參見：[取下機殼蓋](#)。
2. 取下 PCIe 蓋。
 - TS-453DU、TS-453DU-RP
 1. 取下用於固定殼蓋和檔板的螺絲。
 2. 將固定片從插槽抽出。

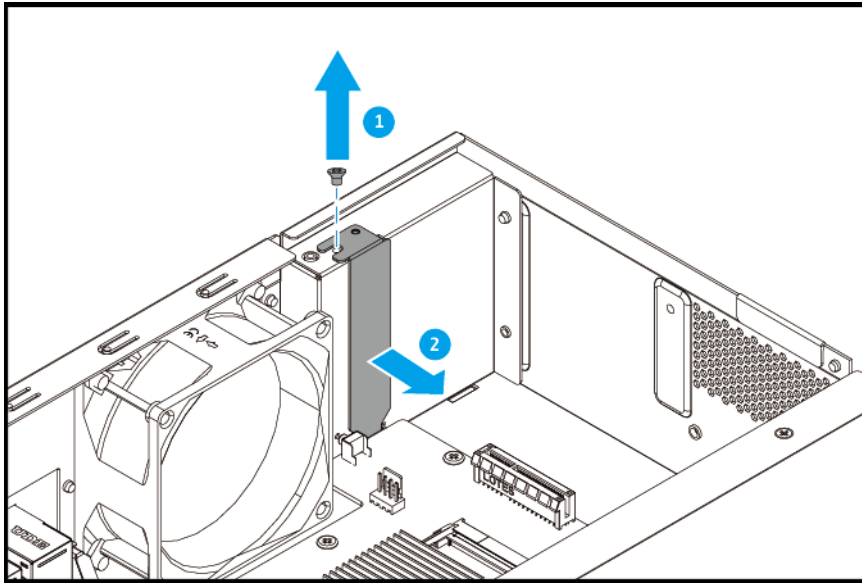


3. 取下用於固定殼蓋和檔板的螺絲。
4. 將殼蓋從插槽抽出。



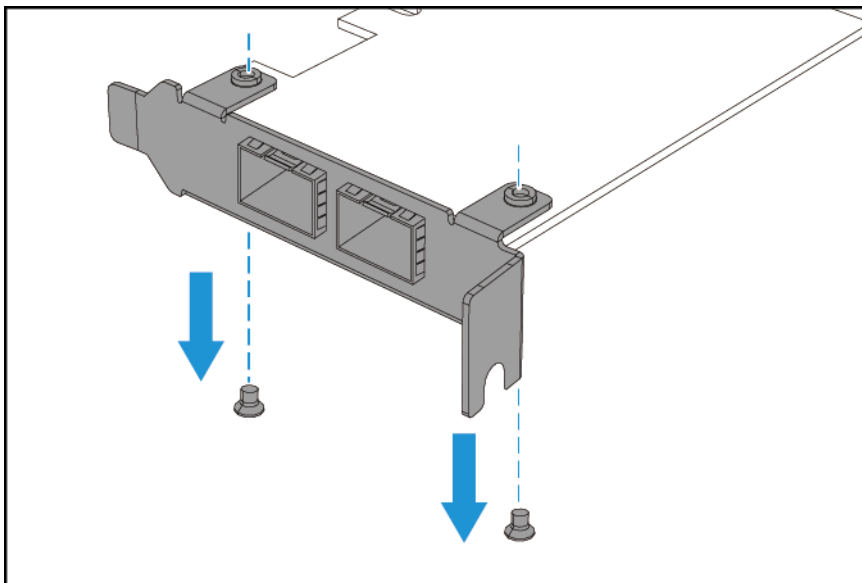
- TS-853DU-RP、TS-1253DU-RP

1. 取下用於固定殼蓋和檔板的螺絲。
2. 將固定片從插槽抽出。

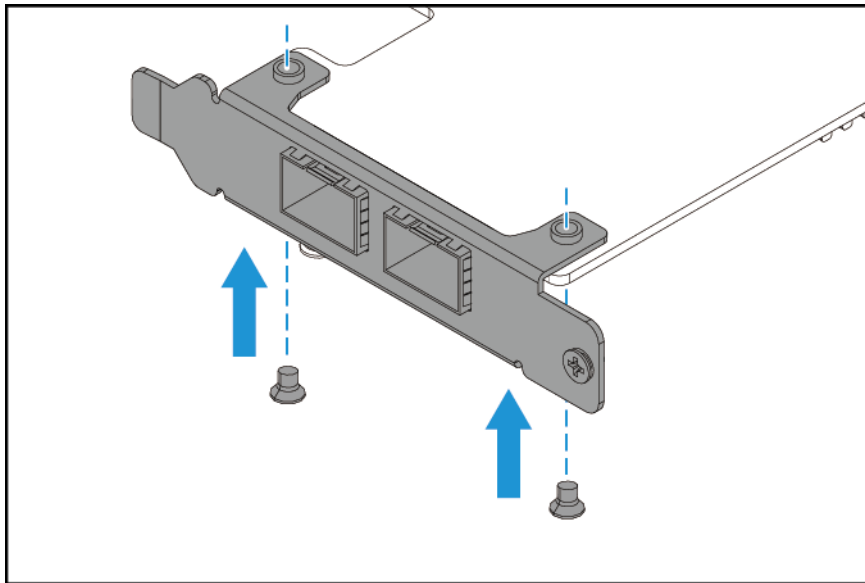


3. 選擇性: 將 QNAP 固定片裝至擴充卡。

- 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。

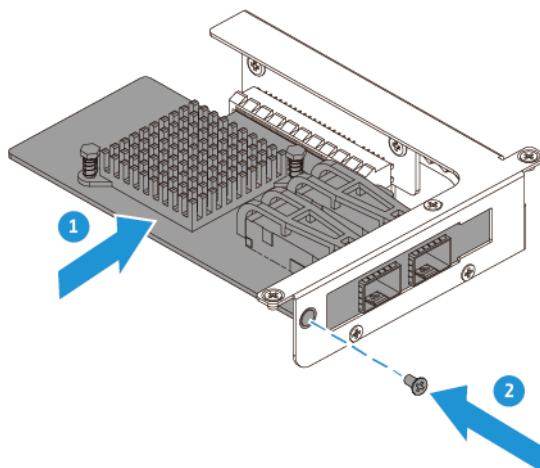


d. 確認固定片是否牢固不動。

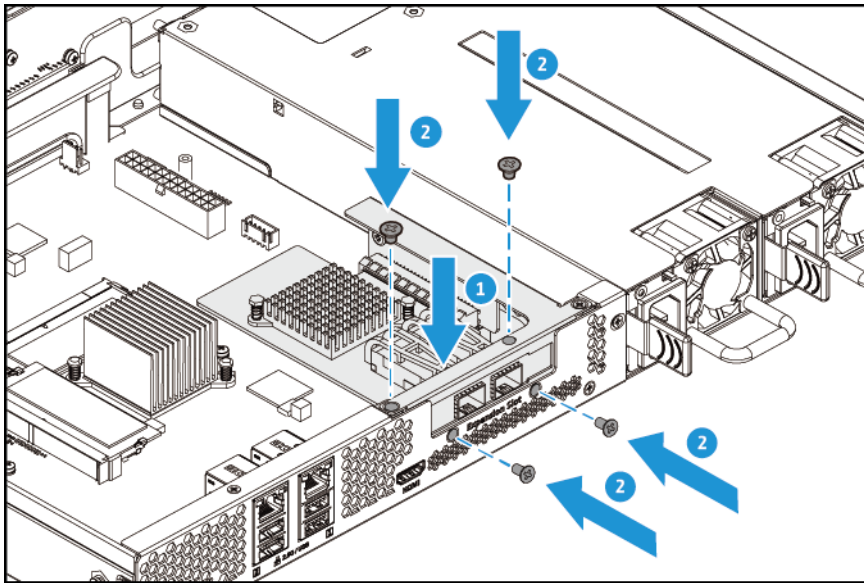
4. 安裝擴充卡。

• TS-453DU、TS-453DU-RP

1. 握住擴充卡的邊緣。
2. 將擴充卡插入 Riser 卡插槽。
3. 鎖上螺絲。

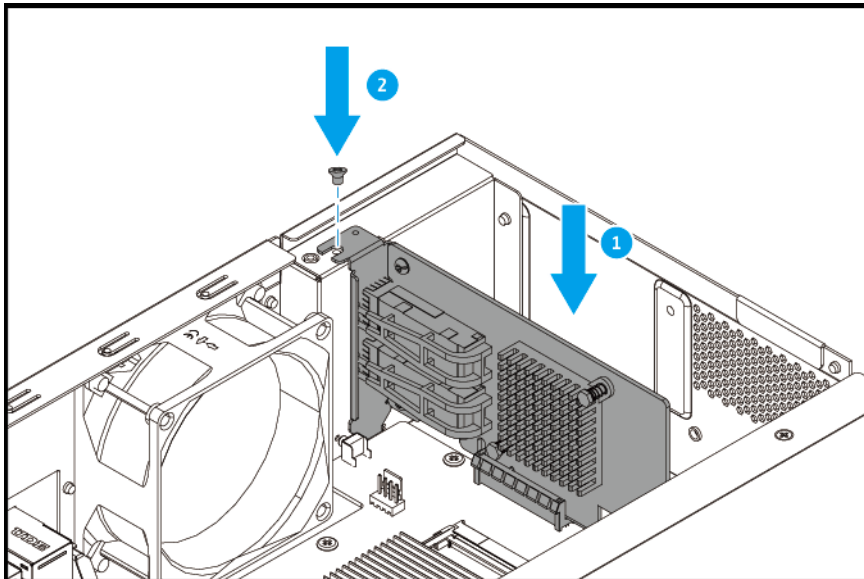


4. 將 Riser 卡插入插槽。
5. 鎖上螺絲。



- TS-853DU-RP、TS-1253DU-RP

1. 握住擴充卡的邊緣。
2. 將擴充卡插入插槽。
3. 鎖上螺絲。



5. 裝上機殼蓋。
如需詳細資訊，請參見：[裝上機殼蓋](#)。

更換記憶體模組

TS-x53DU 具有兩個記憶體插槽。您可以透過升級記憶體模組來增加 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**

確認兩個記憶體模組皆相同。

**警告**

- 請遵守靜電放電 (ESD) 程序以防止元件損壞。

-



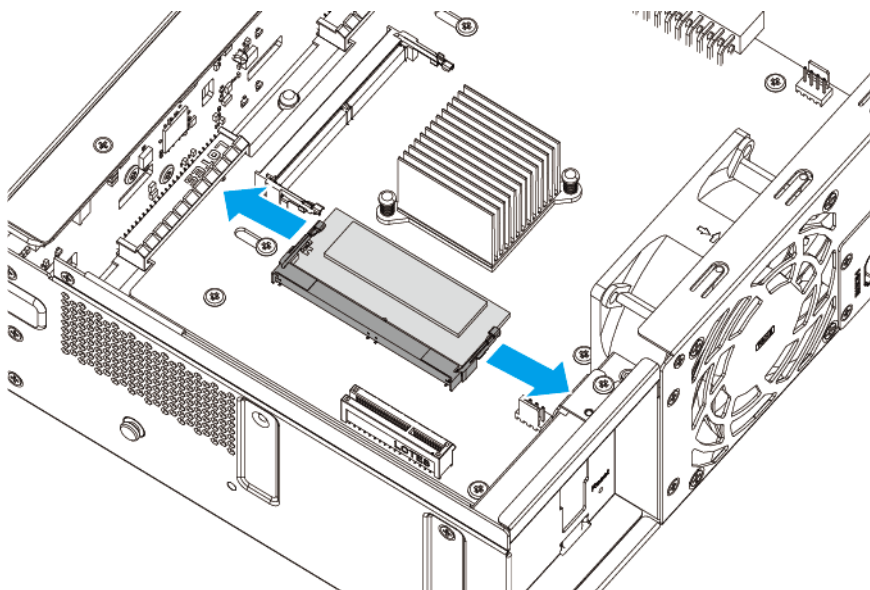
轉動的風扇葉片：使雙手及身體其他部位遠離正在轉動的風扇葉片。

-



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。

- 關閉 NAS 電源。
- 從電源插座拔下電源線。
- 中斷所有連接線和外接裝置的連線。
- 取下機殼蓋。
如需詳細資訊，請參見：[取下機殼蓋](#)。
- 取下現有的記憶體模組。
 - 將固定夾同時往外推以鬆開記憶體模組。

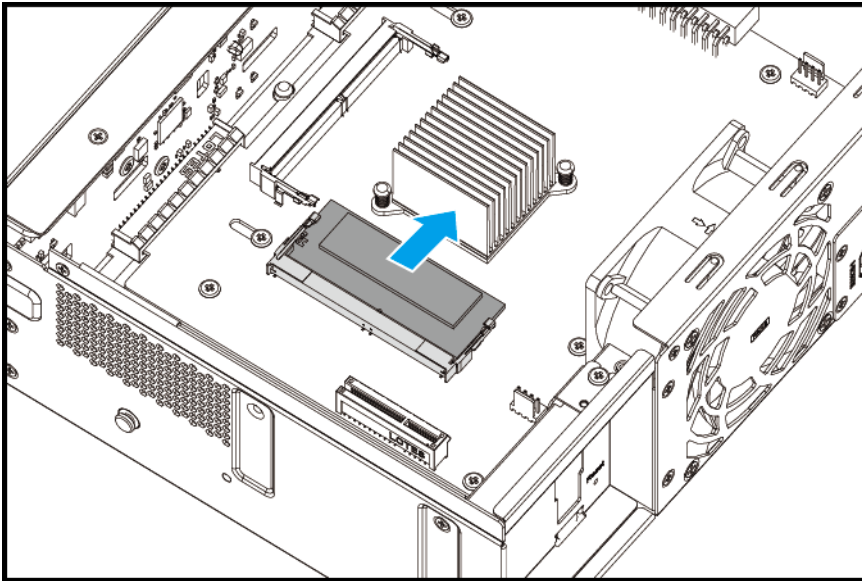


- 確認記憶體模組已向上傾斜且完全從插槽鬆脫。

**警告**

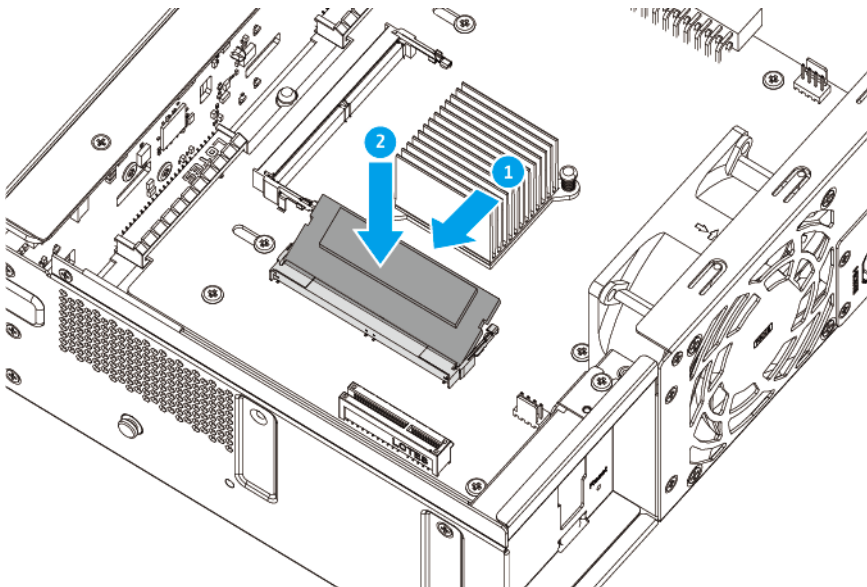
若嘗試取下未完全鬆脫的記憶體模組，可能會損壞記憶體模組與主機板。

- c. 握住模組的邊緣。



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。
如需詳細資訊，請參見：[裝上機殼蓋](#)。

8. 連上所有連接線和外接裝置。
9. 連上所有連接線和外接裝置。
10. 開啟 NAS 電源。
11. 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。

熱抽換備援電源供應器



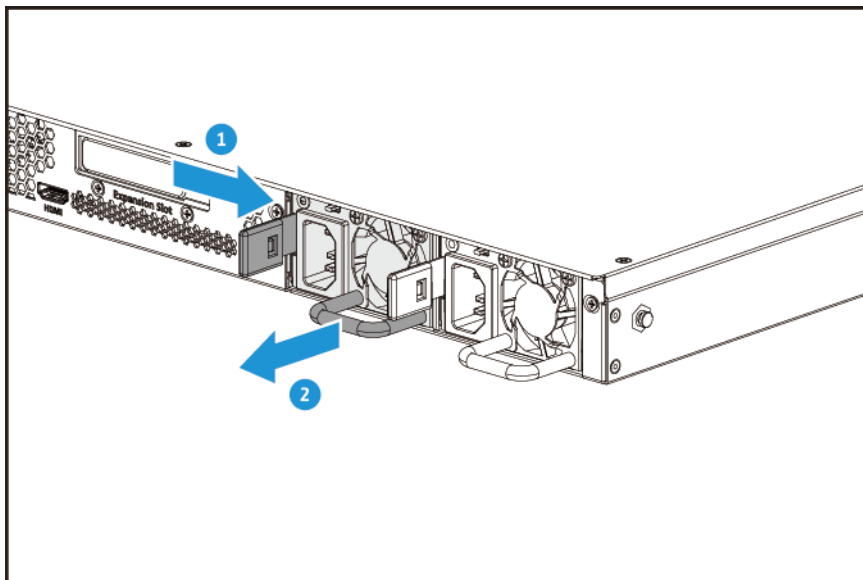
警告



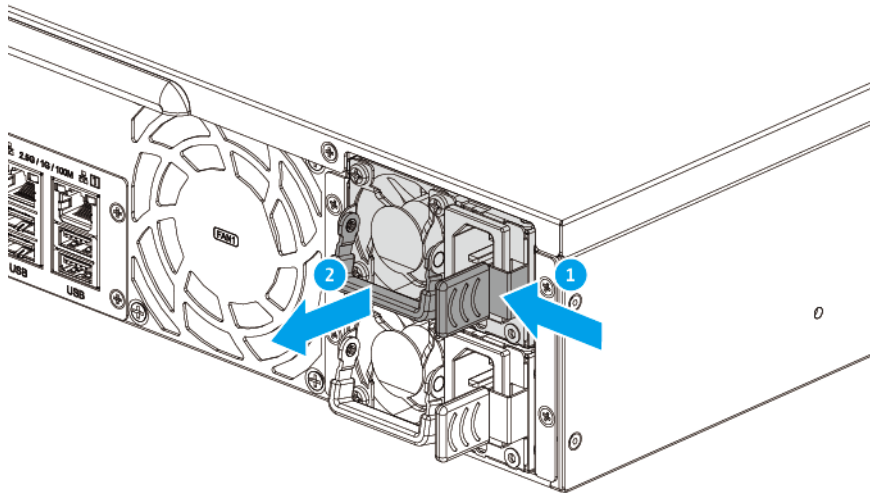
NAS 至少配備一條電源供應器 (PSU) 的電源線。為防止嚴重傷害事故發生，在安裝或替換系統元件前，應由受過訓練的技術人員拔下所有 PSU 電源線。

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. 朝把手方向用力按住門門，然後拉出電源供應器。

- TS-453DU-RP

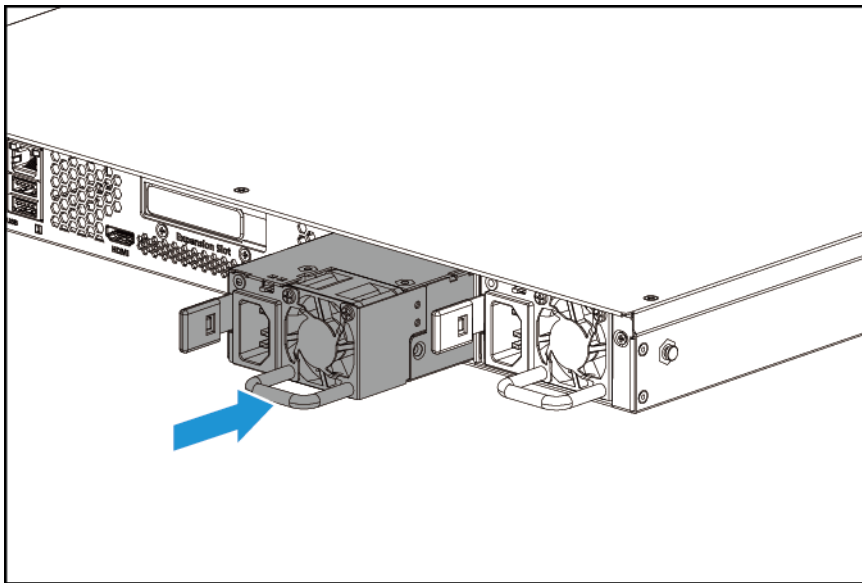


- TS-853DU-RP、TS-1253DU-RP

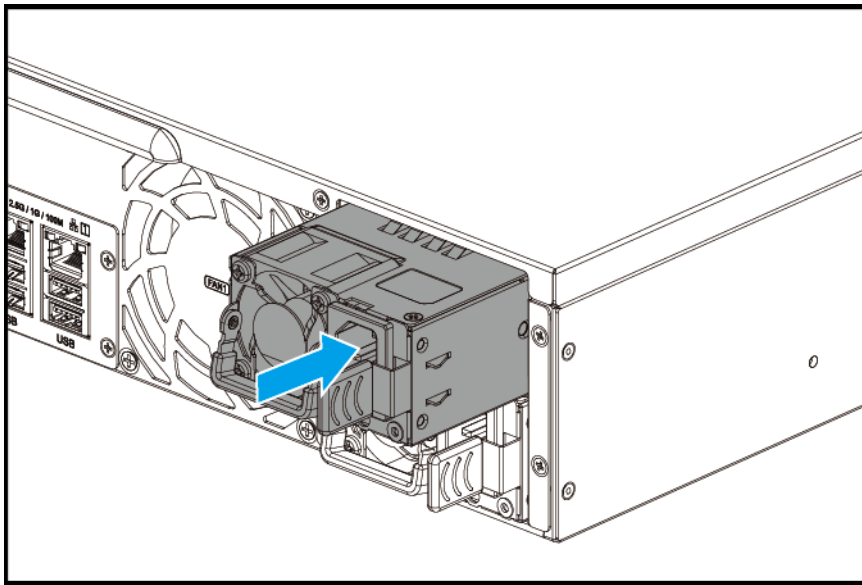


4. 插入新的電源供應器。

- TS-453DU-RP



- TS-853DU-RP、TS-1253DU-RP



5. 將電源線連上電源供應器並插入電源插座。
6. 開啟 NAS 電源。
7. 啟用電源供應器故障警訊。
 - a. 使用管理員帳號登入 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 [套用]。

安裝擴充設備

TS-x53DU 與 SATA 擴充設備和 USB 擴充設備相容。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/>。

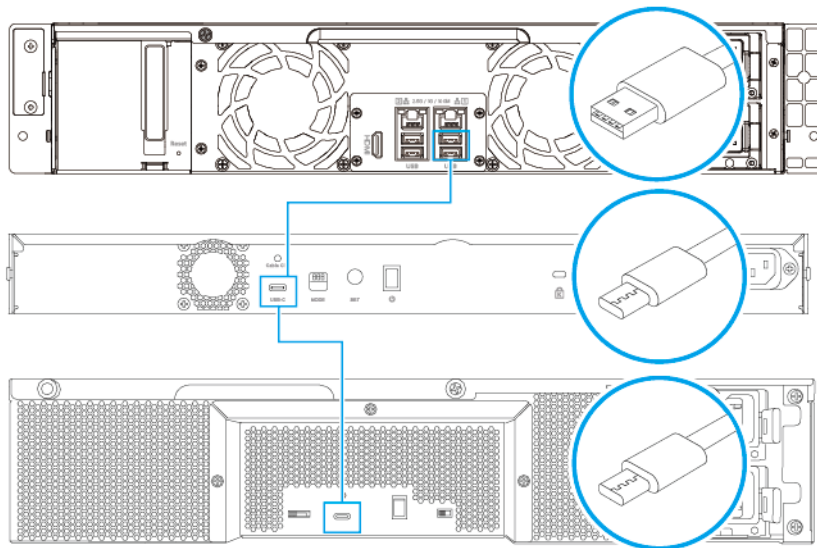
擴充設備型號	說明	必要配件
TR-004U	<ul style="list-style-type: none"> • 使用 USB 3.2 Gen 1 Type-C 介面 • 支援 SATA 硬碟 	<ul style="list-style-type: none"> • USB 3.2 Gen 1 Type-A 轉 Type-C 連接線 • RAIL-B02
TL-R1200C-RP	<ul style="list-style-type: none"> • 使用 USB 3.2 Gen 2 Type-C 介面 • 支援 SATA 硬碟 	<ul style="list-style-type: none"> • USB 3.2 Gen 2 Type-A 轉 Type-C 連接線 • RAIL-B02
TL-D800C	<ul style="list-style-type: none"> • 使用 USB 3.2 Gen 2 Type-C 介面 • 支援 SATA 硬碟 	<ul style="list-style-type: none"> • USB 3.2 Gen 2 Type-A 轉 Type-C 連接線 • USB 3.2 Gen 2 Type-C 轉 Type-C 連接線

擴充設備型號	說明	必要配件
TL-D400S	<ul style="list-style-type: none"> • 使用 SAS 6 Gbps (SFF-8088) 介面 • 支援 SATA/HDD/SSD 	<ul style="list-style-type: none"> • 1 x SFF-8088 接頭線 • QXP-400eS-A1164 主機匯流排介面卡
TL-D800S	<ul style="list-style-type: none"> • 使用 SAS 6 Gbps (SFF-8088) 介面 • 支援 SATA/HDD/SSD 	<ul style="list-style-type: none"> • 2 x SFF-8088 接頭線 • QXP-800eS-A1164 主機匯流排介面卡
TL-D1600S	<ul style="list-style-type: none"> • 使用 SAS 6 Gbps (SFF-8088) 介面 • 支援 SATA/HDD/SSD 	<ul style="list-style-type: none"> • 4 x SFF-8088 轉 SFF-8644 接頭線 • QXP-1600eS 主機匯流排介面卡
TL-R400S	<ul style="list-style-type: none"> • 使用 SAS 6 Gbps (SFF-8088) 介面 • 支援 SATA/HDD/SSD 	<ul style="list-style-type: none"> • 1 x SFF-8088 接頭線 • QXP-400eS-A1164 主機匯流排介面卡 • RAIL-B02
TL-R1200S-RP	<ul style="list-style-type: none"> • 使用 SAS 6 Gbps (SFF-8088) 介面 • 支援 SATA/HDD/SSD 	<ul style="list-style-type: none"> • 3 x SFF-8088 轉 SFF-8644 接頭線 • QXP-1600eS 主機匯流排介面卡 • RAIL-B02

連接 USB 擴充設備

TS-x53DU 最多支援連接兩個 USB 擴充設備。

1. 將擴充設備連接至 NAS。
 - a. 將 USB 連接線接至擴充設備上的 USB Type-C 連接埠。
 - b. 將 USB 連接線接至 NAS 上的 USB 3.2 Gen 1 Type-A 連接埠。



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。

連接 SATA JBOD 擴充設備

TS-x53DU 最多支援一個 SATA JBOD 擴充設備。若要連接 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。



重要

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。

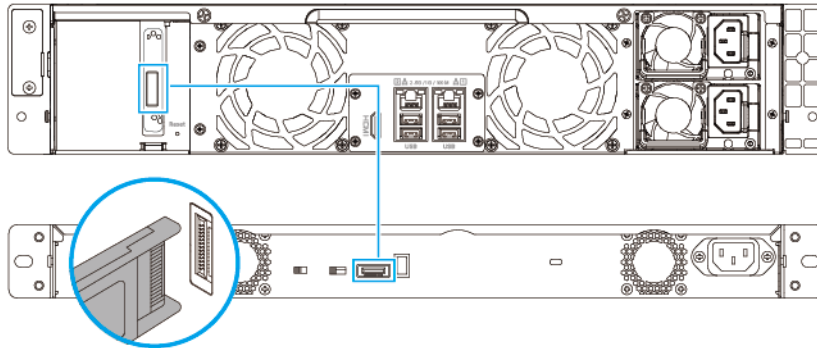
如需詳細資訊，請參見：[安裝擴充卡](#)。

3. 請按照下列拓樸圖，將擴充設備連接到 NAS。



注意

本圖顯示 NAS 連接至 TL-R400S JBOD 擴充設備。

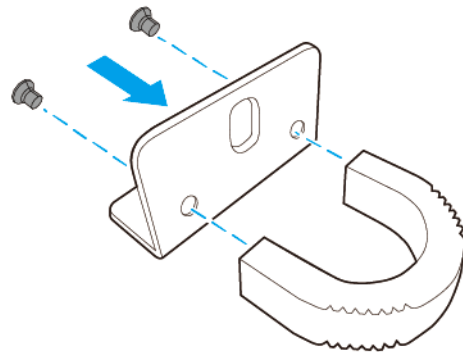


4. 開啟 SATA JBOD 擴充設備的電源。
5. 開啟 NAS。
6. 確認 NAS 可辨識所有擴充設備。
 - a. 使用管理員帳號登入 QTS。
 - b. 前往 [主選單] > [儲存與快照總管] > [總覽] > [儲存空間] > [系統]。
 - c. 確認畫面列出擴充設備。

把手安裝

安裝把手即可輕鬆且穩固地拿取機架上的 NAS。TS-453DU 和 TS-453DU-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。

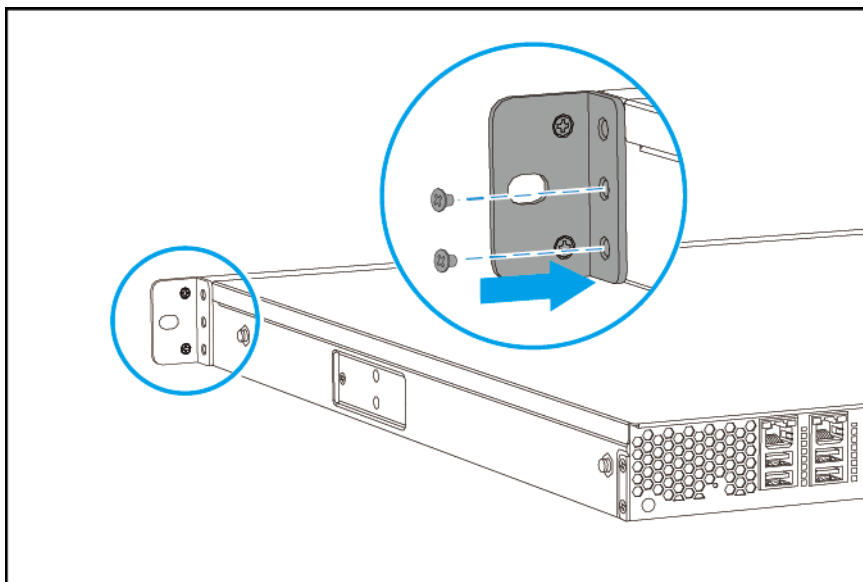


3. 在 NAS 上安裝角形托座。
 - a. 將角形托座上的孔洞對齊機殼上的孔洞。

**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。

機架滑軌

TS-x53DU 與下列型號相容：

- RAIL-B02

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>。

您可以在機架滑軌的包裝中找到安裝資訊。

QTS 安裝

TS-x53DU 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)	<p>如果 NAS 已連接您的區域網路，您可以執行下列操作：</p> <ul style="list-style-type: none"> • 使用 Qfinder Pro 定位 NAS。 • 完成 [智慧安裝導引] 精靈中的步驟。 <p>如需詳細資訊，請參見：使用 Qfinder Pro 安裝 QTS。</p>	<ul style="list-style-type: none"> • 電腦 • 網路線 • Qfinder Pro 安裝程式
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"> • 掃描 NAS 上的 QR 碼。 • 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。 <p>如需詳細資訊，請參見：使用 Cloud Key 安裝 QTS。</p>	<ul style="list-style-type: none"> • 電腦或行動裝置。 • 網路線 • myQNAPcloud 帳號 • Cloud Key
本機安裝	<p>如果 NAS 支援 HDMI 輸出，您可以執行下列操作：</p> <ul style="list-style-type: none"> • 將 NAS 連接至所需的硬碟。 • 完成 [智慧安裝導引] 精靈中的步驟。 <p>如需詳細資訊，請參見：使用 HDMI 連線安裝 QTS。</p>	<ul style="list-style-type: none"> • 監控器 • HDMI 連接線 • USB 鍵盤或遙控器 (並非所有型號皆有提供)

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. 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.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. 檢視設定值。
15. 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。

16. 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。

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]。
[智慧安裝導引] 隨即在預設的網頁瀏覽器中開啟。

8. 按一下 [啟動智慧安裝導引]。

9. 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。

10. 按一下 [下一步]。

11. 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。

12. 按一下 [下一步]。

13. 選擇 [自動取得 IP 位址 (DHCP)]。

14. 按一下 [下一步]。

15. 選擇將用於存取 NAS 共用資料夾的裝置類型。

16. 按一下 [下一步]。

17. 檢視設定值。

18. 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。

19. 按一下 [確認]。
QTS 安裝完成。

使用 HDMI 連線安裝 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. 將 HDMI 顯示器連接至 NAS。
2. 將 USB 鍵盤連接至 NAS，或準備 QNAP 紅外線 (IR) 遙控器 (並非所有型號皆有提供)。
3. 打開 NAS 電源。
智慧安裝導引的 [歡迎] 畫面隨即出現。
4. 選擇 [啟動智慧安裝導引]。
5. 選擇 [否，略過這個程序。]
若啟用多媒體功能，您就能在 [儲存與快照總管] 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。
6. 選擇 [稍後設定]。
如需設定硬碟的詳細資訊，請參見《QTS 使用者指南》的 < 儲存與快照總管 > 一節。
7. 檢視設定值。
8. 按一下 [下一步]。
9. 檢視設定值。
10. 按一下 [下一步]。
[確認] 畫面隨即出現。

**警告**



按一下 [下一步] 後，系統會在安裝 QTS 前刪除硬碟的所有資料。

11. 按一下 [下一步]。
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	使用者操作	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 5 秒。	裝置關機。 <div style="display: flex; align-items: flex-start; margin-top: 10px;"> <div style="margin-right: 10px;"></div> <div> <p>重要 請在裝置沒有回應時才使用此方法。</p> </div> </div> <div style="display: flex; align-items: flex-start; margin-top: 10px;"> <div style="margin-right: 10px;"></div> <div> <p>注意 在關閉電源後，風扇會高速地旋轉大約 3 秒，這是可預期的正常情況。</p> </div> </div>

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。	<p>以下設定將回復至預設值：</p> <ul style="list-style-type: none"> • 系統管理員密碼：無特殊字元的介面卡 1 MAC 位址。 例如，若介面卡 1 的 MAC 位址為 11:22:33:44:55:66，則管理員密碼為 112233445566。 <div style="display: flex; align-items: flex-start; margin-top: 10px;"> <div style="margin-right: 10px;"></div> <div> <p>提示 您可以透過 Qfinder Pro 找到介面卡 1 MAC 位址。黏貼至裝置的標籤亦將位址列為 MAC1。</p> </div> </div> <ul style="list-style-type: none"> • TCP/IP 設定： <ul style="list-style-type: none"> • 使用動態 IP 位址 • 停用 Jumbo Frame • 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。 • 系統通訊埠：8080 (系統服務埠) • 安全等級：低 (接受所有連線) • LCD 面板密碼：(空白) • VLAN：已停用

操作	使用者動作	結果
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">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。

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：[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"> • 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。 • 韌體正在更新。 <p> 重要 請勿在韌體更新期間拔下電源線或 USB 連接線，也不要強制結束應用程式。</p>
	紅燈	<ul style="list-style-type: none"> • 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。 • 系統溫度超過臨限值。
	紅燈每 0.5 秒閃爍	NAS 處於降階模式（RAID 1 的一個硬碟故障）。
	綠燈每 0.5 秒閃爍	<ul style="list-style-type: none"> • 裝置啟動中。 • 裝置未設定。 • 硬碟未格式化。
	綠燈每 2 秒閃爍	所有硬碟處於待命模式。
	綠燈每秒閃爍	裝置未設定。
	綠燈	裝置已就緒。
	關閉	<ul style="list-style-type: none"> • 所有硬碟處於待命模式。 • 裝置已關機。
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	使用者正在從網路存取裝置。
2.5 Gigabit 高速網路（背面）	綠燈	網路執行速度為 2.5 Gbps。
	橙燈	<ul style="list-style-type: none"> • 網路執行速度為 1 Gbps。 • 網路執行速度為 100 Mbps。
	熄滅	網路執行速度為 10 Mbps

LED	狀態	說明
2.5 Gigabit 活動網路 (背面)	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。
	熄滅	無網路連線。
硬碟	紅燈閃爍	資料存取中並發生讀寫錯誤。
	紅燈	<ul style="list-style-type: none"> • 硬碟讀寫錯誤。 • 磁碟溫度超過臨界值。
	綠燈閃爍	<ul style="list-style-type: none"> • 正在存取資料。 • 正在複製資料。
	綠燈	<ul style="list-style-type: none"> • 硬碟可供存取。 • 裝置已開機。
	熄滅	偵測不到硬碟。
擴充設備 <ul style="list-style-type: none"> • TS-853D U-RP • TS-1253 DU-RP 	藍燈	連接至 QNAP USB 或 SATA 外接儲存裝置。
	關閉	未連接 USB 或 SATA 外接儲存裝置。

警示音

期間	頻率	描述
短嗶 (0.5 秒)	1 聲	<ul style="list-style-type: none"> • NAS 啟動中。 • NAS 關閉中 (軟體關機)。 • 使用者按下 [重設] 按鈕。 • 作業系統已更新。
	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"> • 磁碟區容量將滿。 • 磁碟區容量已滿。 • 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。
	1 聲	<ul style="list-style-type: none"> • NAS 強制關機 (硬體關機)。 • NAS 成功開機且可供使用。

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。

熱抽換故障硬碟

NAS 於下列情況支援硬碟熱抽換：

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

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]。

復原意外移除的正常硬碟

NAS 支援獨家 RAID 復原技術，若有硬碟意外斷線或遭到移除，使用者可以復原失效的 RAID 硬碟磁碟區。使用者可以將失效的 RAID 1、RAID 5 或 RAID 6 磁碟區回復至降階模式，或將失效的 RAID 0 和 JBOD 組態回復至正常模式。

硬碟磁碟區	RAID 復原支援	遭移除的硬碟最大數目
單一	否	N/A
JBOD	是	1
RAID 0	是	1
RAID 1	是	1
RAID 5	是	2
RAID 6	是	3
RAID 10	否	N/A

支援和其他資源

QNAP 提供下列資源：

資源	URL
文件	https://docs.qnap.com
服務入口網站	https://service.qnap.com
下載	https://download.qnap.com
社群論壇	https://forum.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送設定

myQNAPcloud

提供各種遠端存取服務，例如 DDNS 與 myQNAPcloud Link

myQNAPcloud ID

用來註冊 myQNAPcloud 帳號的電子郵件地址

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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建議定期備份系統資料，以避免發生任何資料遺失意外。QNAP 不負責任何資料遺失或復原。

如要把 NAS (網路儲存裝置) 等 QNAP 產品包裝內的任何元件退回，並要求退款或維修，請確定貨品已妥善包裝以利運送。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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Version 3, 29 June 2007

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