

# TS-x53DU

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

使用手冊

文件版本: 3 23/11/2022

# 目錄

1.	. 前言	
		3
	適用對象	3
	慣用符號	3
2	. 產品概觀	
	- /エロイル (A)	4
	硬體規格	
	包裝內容	
	元件	
	前面板	
	後面板	
	系統板	
	硬碟編號	
	安全資訊	
	安裝需求	
	設定 NAS	
3.	. 安裝與設定	
	- <del> </del>	15
	取下機殼蓋	
	装上機殼蓋	
	硬碟安裝	
	安裝擴充卡	
	更換記憶體模組	
	安裝擴充設備	
	把手安裝	37
	機架滑軌	39
	QTS 安裝	39
	使用 Qfinder Pro 安裝 QTS	39
	使用 Cloud Key 安裝 QTS	40
	使用 HDMI 連線安裝 QTS	42
1	. 基本操作	
┱.	· 坐中沫下 電源按鈕	12
	重設按鈕	
	EED 燈號	
	警示音	
_		
5.	. 疑難排解	
	強制 Qfinder Pro 或 myQNAPcloud 定位 NAS	
	熱抽換故障硬碟	47
	復原意外移除的正常硬碟	
	支援和其他資源	48
6.	. 詞彙	
	Cloud Key	49
	myQNAPcloud Link	
	myONAPcloud	

myQNAPcloud ID Qfinder Pro	49
<b>\</b>	49
QTS	
·	
7. 聲明	
有限保固	50
免責聲明	50
著作權與商標 著作權與商標	
GNU Public License	50
CE 聲明	
UKCA 聲明	58
FCC 聲明	58
VCCI 聲明	50
經濟部標準檢驗局聲明	50
SI/T 11364-2006	

# 1. 前言

# 關於本手冊

本手冊涵蓋裝置的相關資訊以及安裝硬體的步驟指示。此外,本手冊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。本手冊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。
A	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 $^{ ext{®}}$  Celeron $^{ ext{®}}$  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,增加擴充性與靈活度。

# 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	<b>虚理器</b>							
CPU	Intel <sup>®</sup> Celeron <sup>®</sup> J4125							
頻率	4 核心/4 執行緒 2.00 GHz 基频	頁/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  ① 重要  • 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	8 GB RAM: 2 x 4 GB							
快閃記憶體	4 GB(雙啟動作業系統防護)							
諸存空間								

元件		TS-453DU TS-453DU-RP	TS-853DU-RP	TS-1253DU-RP	
硬碟插槽	4 x 3.5	4 x 3.5 吋 SATA 6 Gbps 8 x 3.5 吋 SATA 6 Gbps 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:			
	• 3.	• 3.5 吋 SATA 硬碟			
	• 2.	• 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	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	5 GbE RJ45			
	<b>注意</b> 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				
	<b>提示</b> 請前往 https://www.qnap.com/compatibility 查看相容的擴充 卡清單。				
USB 連接埠	• 2 x USB 2.0 Type-A				
	• 2 x USB 3.2 Gen 1 Type-A				
HDMI 連接埠	_		5達 3840 x 2160 @ 30Hz 解析度)		
介面				·	
按鈕	• 電	<b>湿源</b>			
	• 重	設			
尺寸					
外型	1U 機	架式	2U 機架式		
尺寸(高 x 寬 x 深)	43	5-453DU 3.3 x 482.6 x 483.9 mm .70 x 19.00 x 19.05 in)	88.7 x 482.2 x 423.8 mm (3.49 x 18.98 x 16.69 in)		
	43	5-453DU-RP 3.3 x 482.6 x 508.7 mm .70 x 19.00 x 20.03 in)			
淨重		5-453DU:6.66 kg 4.55 lbs)	8.89 kg (19.60 lbs)	9.43 kg (20.79 lbs)	
		5-453DU-RP:8.12 kg 7.90 lbs)			

元件		TS-453DU TS-453DU-RP	TS-853DU-RP	TS-1253DU-RP	
其他					
滑軌相容性	RAIL-B02				
電源供應器			2 x 300W, 100-240V AC, 50-60Hz		
	25	5-453DU-RP: 2 x 50W, 100-240V AC, 0-60Hz			
系統電池	CR203	2 鋰電池(3V,225 mA	h)		
	Δ	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。			
	1	<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 TS-453DU: 38 dB(A) 23.6 dB(A) 24.0 TS-453DU-RP:37.5 dB(A)		24.6 dB(A)			
<b>注意</b> 從旁觀者位置(距 NAS 一公尺內)測試噪音(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,12	2V DC	
	<b>A</b>	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	• 不凝結相對溼度:5% 至 95%				
	・ 濕球溫度:27℃ (80.6℉)				

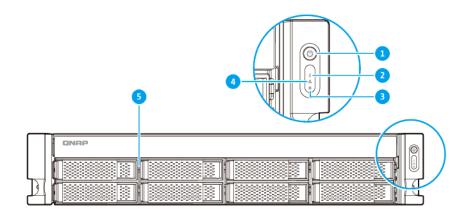
# 包裝內容

項目	數量
TS-x53DU	1
電源線	• 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	• 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	• TS-453DU • TS-453DU-RP : 12
	• TS-853DU-RP: 24
	• TS-1253DU-RP: 36
把手套組	TS-453DU、TS-453DU-RP:
	• 2 x 把手
	• 2 x 角撐架
	• 8 x 螺絲
快速安裝手冊 (QIG)	1

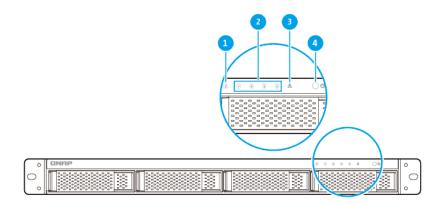
# 元件

# 前面板



# TS-853DU-RP \ TS-1253DU-RP

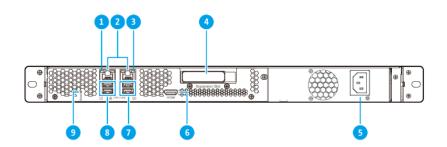
編號	元件	編號	元件
1	電源按鈕	4	LAN LED 燈
2	狀態 LED 燈	5	硬碟 LED 燈
3	擴充設備 LED 燈	-	-



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

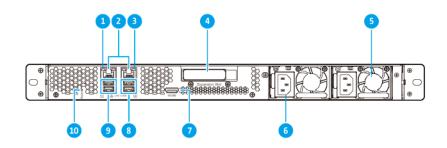
# 後面板



TS-453DU

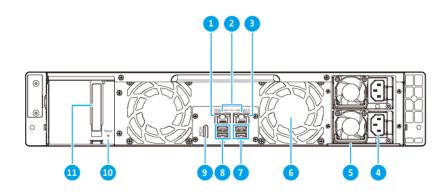
編號	元件	編號	元件
1	2.5 Gigabit 乙太網路活動 LED 燈	6	HDMI v1.4b 連接埠

編號	元件	編號	元件
2	2.5 Gigabit 乙太網路埠 (RJ45)	7	USB 3.2 Gen 1 Type-A 連 接埠
	注意 這些連接埠支援網 路喚醒設定。		
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

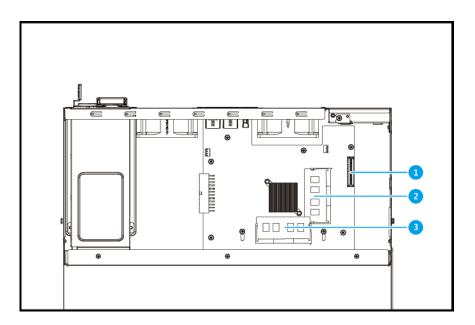
編號	元件	編號	元件
1	2.5 Gigabit 乙太網路活動 LED 燈	6	電源輸入
2	2.5 Gigabit 乙太網路埠 (RJ45) <b>注意</b> 這些連接埠支援網路喚醒設定。	7	HDMI 1.4b 連接埠
3	2.5 Gigabit 乙太網路速度 LED 燈	8	USB 3.2 Gen 1 Type-A 連 接埠
4	PCIe 短蓋	9	USB 2.0 Type-A 連接埠
5	電源供應器	10	重設按鈕



# 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 <b>注意</b> 這些連接埠支援網路喚醒設定。	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	-	-

# 系統板





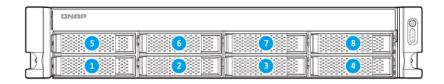
**注意** 圖片不包含機殼蓋。

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	-	-

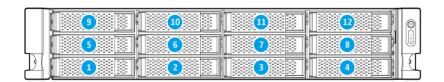
# 硬碟編號



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,經訓練的維修技術人員必須先從裝置上拔除所有電源供應器的電源線。

# 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	・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℃ (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	• 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	• 1 號或 2 號十字螺絲起子
	• 防靜電腕帶

## 設定 NAS

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. 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。

3. 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。

4. 選擇性: 安裝擴充卡。 如需詳細資訊,請參見:安裝擴充卡。

- 5. 將 NAS 連接至網路。
- 6. 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

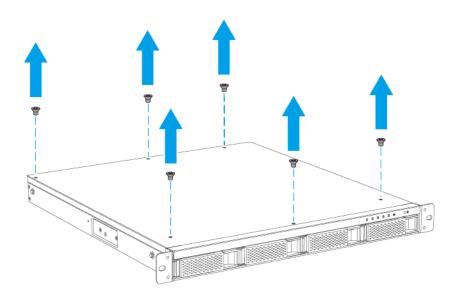


轉動的風扇葉片:使雙手及身體其他部位遠離正在轉動的風扇葉片。

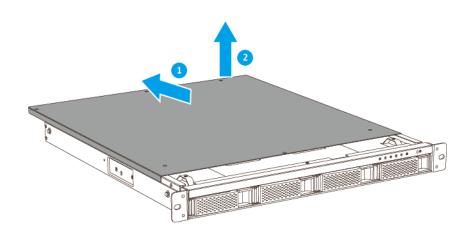


**其他移動的元件:**使雙手及身體其他部位遠離正在移動的其他元件。

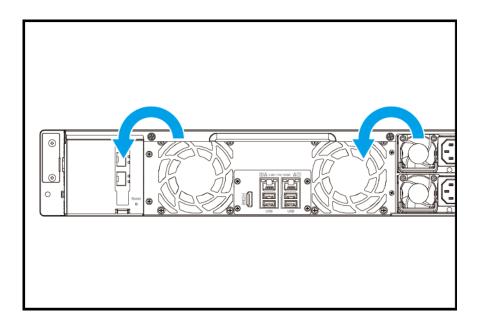
- 1. 關閉 NAS 電源。
- 2. 從電源插座拔下電源線。
- 3. 中斷所有連接線和外接裝置的連線。
- 4. 取下機殼蓋。
  - TS-453DU \ TS-453DU-RP
    - 1. 移除用於連接機殼蓋和機殼的螺絲。



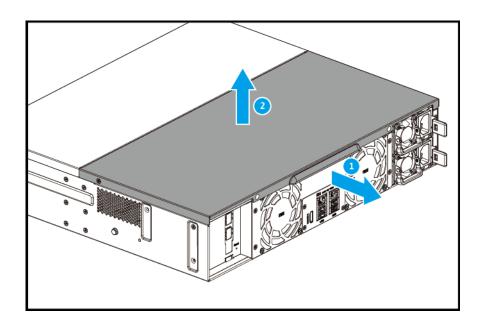
- 2. 將殼蓋往後推。
- 3. 提起殼蓋,使其脫離 NAS。



- 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

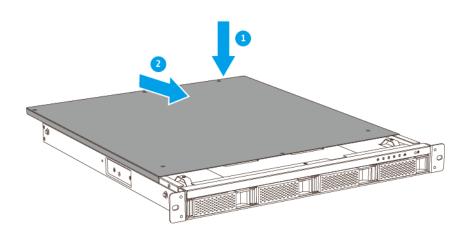


轉動的風扇葉片:使雙手及身體其他部位遠離正在轉動的風扇葉片。

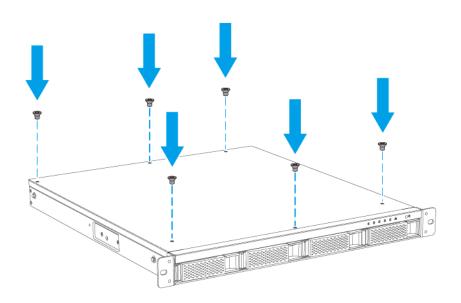


其他移動的元件:使雙手及身體其他部位遠離正在移動的其他元件。

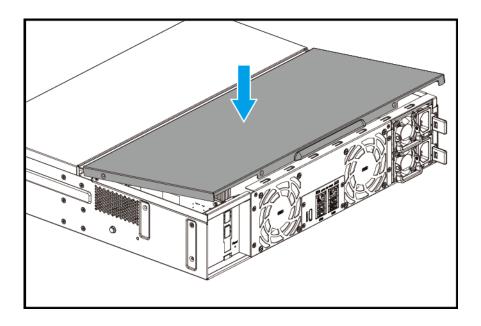
- 1. 裝上機殼蓋。
  - TS-453DU \ TS-453DU-RP
    - 1. 將殼蓋放在 NAS 上。
    - 2. 將殼蓋往前推。



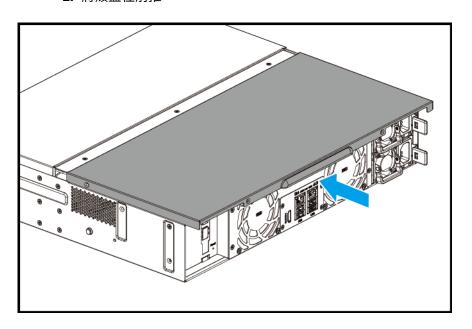
3. 鎖上用於連接機殼蓋和機殼的螺絲。



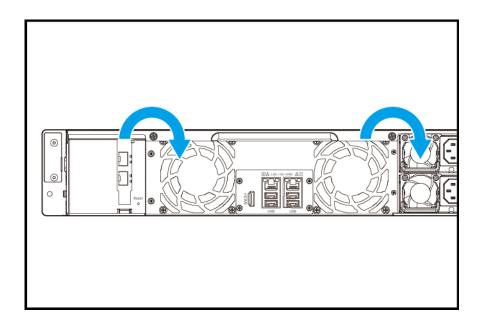
- TS-853DU-RP \ TS-1253DU-RP
  - **1.** 將殼蓋放在 NAS 上。



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



#### 提不

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。

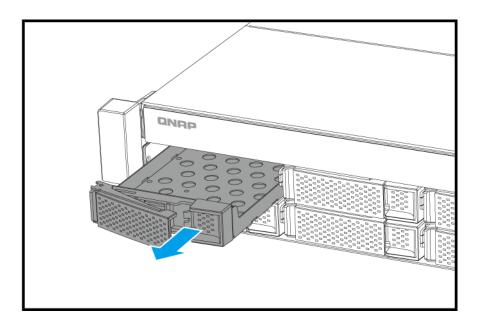
,



**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。

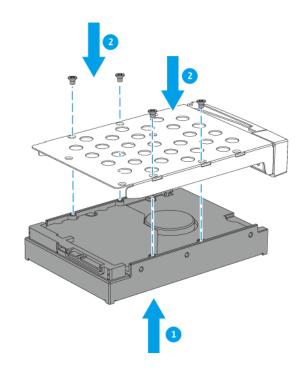
- 1. 關閉 NAS 電源。
- 2. 取出硬碟托盤。

- a. 將托盤把手往外拉。
- b. 將托盤拉出。

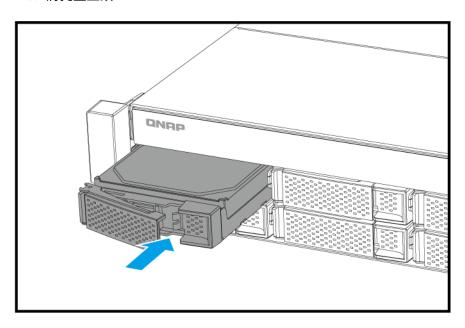


# 3. 在托盤上安裝硬碟。

- 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



#### 提不

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。

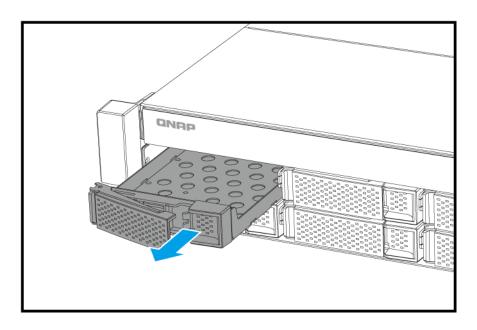


**其他移動的元件:**使雙手及身體其他部位遠離正在移動的其他元件。

**1.** 關閉 NAS 電源。

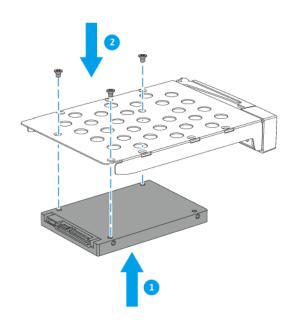
# 2. 取出硬碟托盤。

- a. 將托盤把手往外拉。
- b. 將托盤拉出。



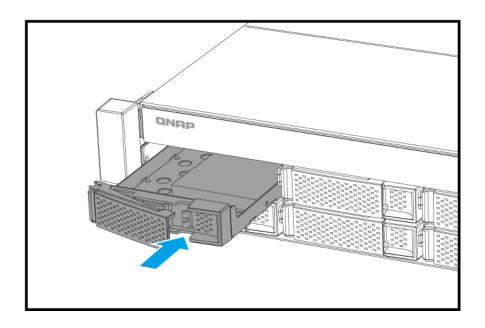
# 3. 在托盤上安裝硬碟。

- 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。



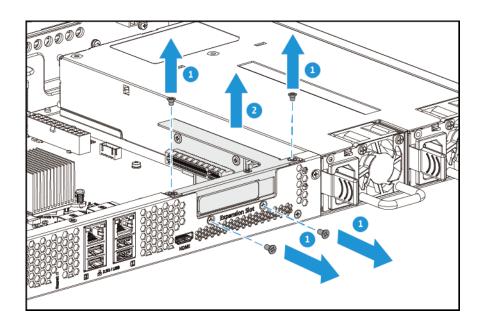
其他移動的元件:使雙手及身體其他部位遠離正在移動的其他元件。



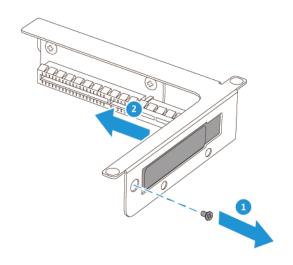
#### 注意

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。

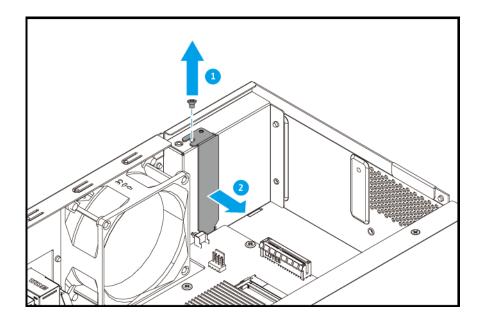
- 1. 取下機殼蓋。 如需詳細資訊,請參見:取下機殼蓋。
- 2. 取下 PCIe 蓋。
  - TS-453DU \ TS-453DU-RP
    - 1. 取下用於固定殼蓋和檔板的螺絲。
    - 2. 將固定片從插槽抽出。



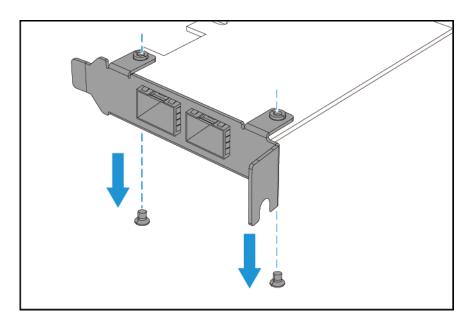
- 3. 取下用於固定殼蓋和檔板的螺絲。
- 4. 將殼蓋從插槽抽出。



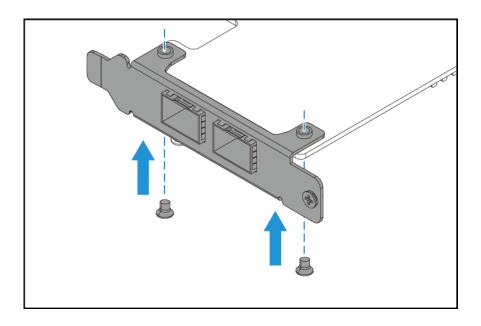
- TS-853DU-RP \ TS-1253DU-RP
  - 1. 取下用於固定殼蓋和檔板的螺絲。
  - 2. 將固定片從插槽抽出。



- 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。



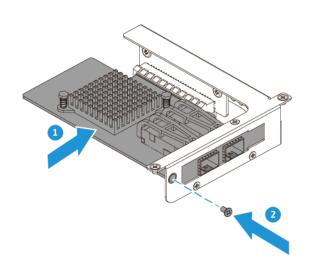
- **b.** 小心地將固定片與擴充卡分開。
- c. 利用相同的螺絲將 QNAP 固定片裝至擴充卡。



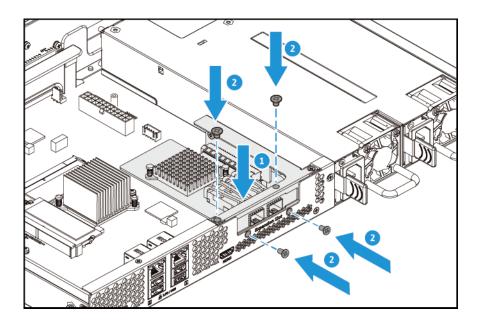
d. 確認固定片是否牢固不動。

# 4. 安裝擴充卡。

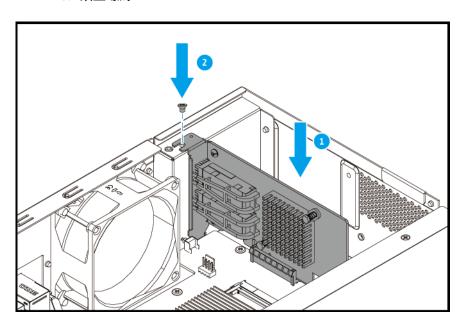
- TS-453DU \ TS-453DU-RP
  - 1. 握住擴充卡的邊緣。
  - 2. 將擴充卡插入 Riser 卡插槽。
  - 3. 鎖上螺絲。



- 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。

•

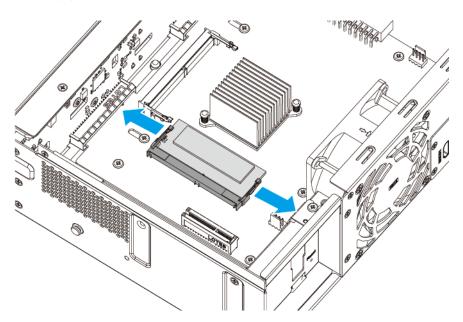


轉動的風扇葉片:使雙手及身體其他部位遠離正在轉動的風扇葉片。



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。

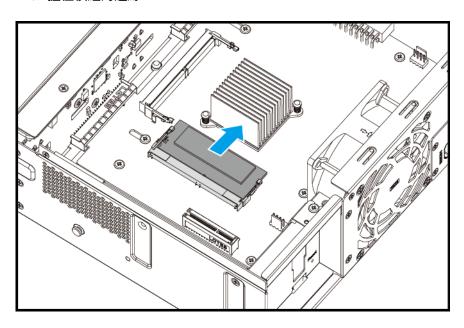
- 1. 關閉 NAS 電源。
- 2. 從電源插座拔下電源線。
- 3. 中斷所有連接線和外接裝置的連線。
- 4. 取下機殼蓋。 如需詳細資訊,請參見:取下機殼蓋。
- 5. 取下現有的記憶體模組。
  - a. 將固定夾同時往外推以鬆開記憶體模組。



b. 確認記憶體模組已向上傾斜且完全從插槽鬆脫。

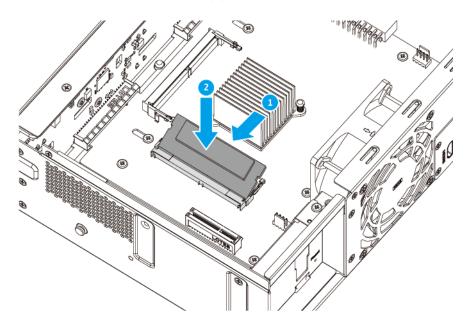
警告 若嘗試取下未完全鬆脫的記憶體模組,可能會損壞記憶體模組與主機板。

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

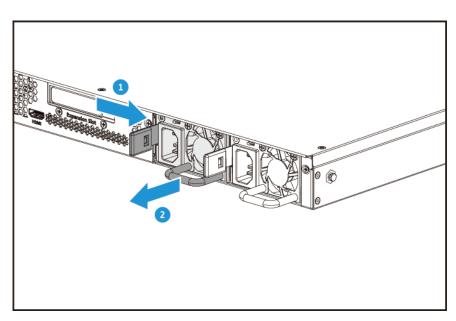


#### 警告

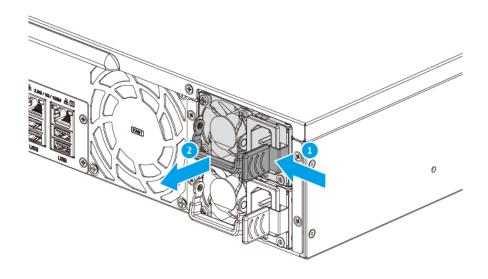


NAS 至少配備一條電源供應器 (PSU) 的電源線。為防止嚴重傷害事故發生,在安裝或更換系統元件前,經訓練的維修技術人員必須先拔除所有電源供應器的電源線。

- 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閂,然後拉出電源供應器。
  - TS-453DU-RP

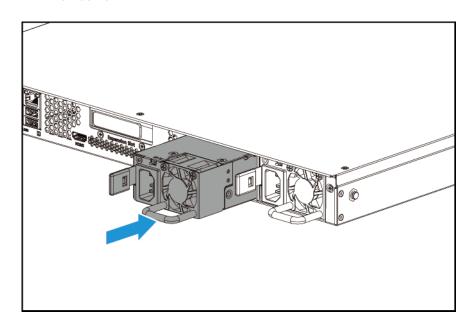


• TS-853DU-RP \ TS-1253DU-RP

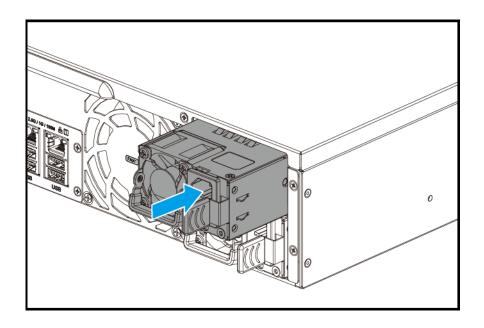


# 4. 插入新的電源供應器。

• 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/。

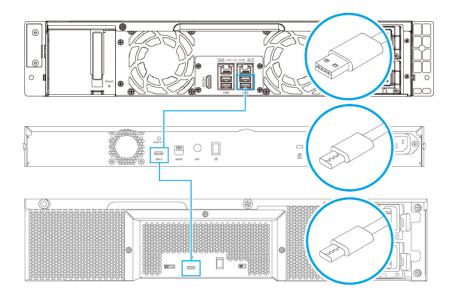
擴充設備型號	說明	必要配件
TR-004U	• 使用 USB 3.2 Gen 1 Type-C 介 面	• USB 3.2 Gen 1 Type-A 轉 Type- C 連接線
	・ 支援 SATA 硬碟	• RAIL-B02
TL-R1200C-RP	・使用 USB 3.2 Gen 2 Type-C 介 面	• USB 3.2 Gen 2 Type-A 轉 Type- C 連接線
	• 支援 SATA 硬碟	• RAIL-B02
TL-D800C	• 使用 USB 3.2 Gen 2 Type-C 介 面	• USB 3.2 Gen 2 Type-A 轉 Type- C 連接線
	・ 支援 SATA 硬碟	• 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	・使用 SAS 6 Gbps (SFF-8088) 介 面 ・支援 SATA/HDD/SSD	<ul><li>1 x SFF-8088 接頭線</li><li>QXP-400eS-A1164 主機匯流排 介面卡</li></ul>
TL-D800S	・使用 SAS 6 Gbps (SFF-8088) 介面 ・支援 SATA/HDD/SSD	<ul><li>2 x SFF-8088 接頭線</li><li>QXP-800eS-A1164 主機匯流排 介面卡</li></ul>
TL-D1600S	・使用 SAS 6 Gbps (SFF-8088) 介面 ・支援 SATA/HDD/SSD	<ul><li>4 x SFF-8088 轉 SFF-8644 接頭線</li><li>QXP-1600eS 主機匯流排介面卡</li></ul>
TL-R400S	・使用 SAS 6 Gbps (SFF-8088) 介面 ・支援 SATA/HDD/SSD	<ul> <li>1 x SFF-8088 接頭線</li> <li>QXP-400eS-A1164 主機匯流排 介面卡</li> <li>RAIL-B02</li> </ul>
TL-R1200S-RP	・使用 SAS 6 Gbps (SFF-8088) 介面 ・支援 SATA/HDD/SSD	<ul><li>3 x SFF-8088 轉 SFF-8644 接頭線</li><li>QXP-1600eS 主機匯流排介面卡</li><li>RAIL-B02</li></ul>

# 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。



#### 巨亜

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。

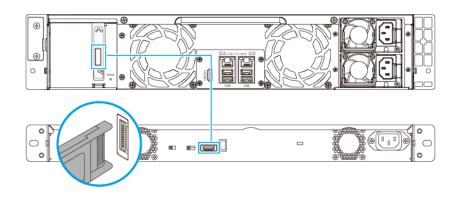
如需詳細資訊,請參見:安裝擴充卡。

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。

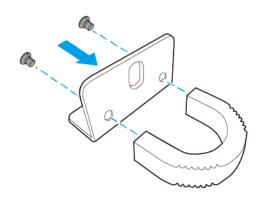


- 4. 開啟 SATA JBOD 擴充設備的電源。
- **5.** 開啟 NAS。
- 6. 確認 NAS 可辨識所有擴充設備。
  - a. 使用管理員帳號登入 QTS。
  - **b.** 前往**[主選單] > [儲存與快照總管] > [總覽] > [儲存空間] > [系統] 。**
  - c. 確認畫面列出擴充設備。

## 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。



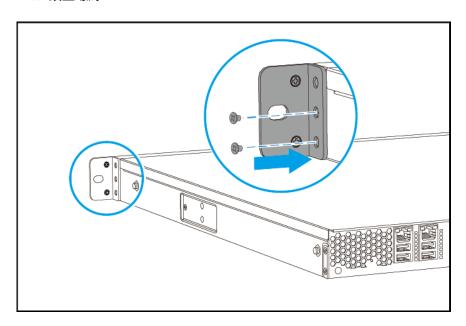
- 3. 在 NAS 上安裝角形托座。
  - a. 將角形托座上的孔洞對齊機殼上的孔洞。



## 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。

		需求
Qfinder Pro 安裝 (建議使用) 雲端安裝	如果 NAS 已連接您的區域網路,您可以執行下列操作:	・電腦 ・網路線 ・Qfinder Pro 安裝程式 ・電腦或行動裝置。 ・網路線 ・myQNAPcloud 帳號 ・Cloud Key
本級で記せ	如需詳細資訊,請參見:使用 Cloud Key 安裝 QTS。	_ B/-+/r QQ
本機安裝	如果 NAS 支援 HDMI 輸出,您可以執行下列操作:	・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。



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。 **[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。



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



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.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

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



### 擎牛

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 使用手冊》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 使用手冊》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。		
		<b>重要</b> 請在裝置沒有回應時才使用此 方法。		
		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。		

# 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> <li>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。</li> </ul>
		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。
		・ TCP/IP 設定:
		• 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
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:元件。

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。
		• 韌體正在更新。
		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。
	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。
		• 系統溫度超過臨界值。
	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	・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。
	緑燈	裝置已就緒。
	關閉	• 所有硬碟處於待命模式。
		• 裝置已關機。

LED	狀態	說明			
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	綠燈	網路執行速度為 2.5 Gbps。			
速網路(背   面)	橙燈	• 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			
2.5 Gigabit 活	橙燈	網路連線已建立。			
動網路(背面)	橙燈閃爍	使用者正在從網路存取裝置。			
Щ/	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	• 硬碟讀寫錯誤。			
		• 磁碟溫度超過臨界值。			
	綠燈閃爍	• 正在存取資料。			
		• 正在複製資料。			
	綠燈	• 硬碟可供存取。			
		• 裝置已開機。			
	熄滅	偵測不到硬碟。			
擴充設備	藍燈	連接至 QNAP USB 或 SATA 外接儲存裝置。			
• TS-853DU -RP	關閉	未連接 USB 或 SATA 外接儲存裝置。			
• TS-1253D U-RP					

# 警示音

期間	頻率	描述
短嗶(0.5 秒)	1聲	• 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。

期間	頻率	描述
長嗶(1.5 秒)	3聲(每5分鐘)	系統風扇異常。
	2 聲	• 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	• 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。

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Version 3, 29 June 2007

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