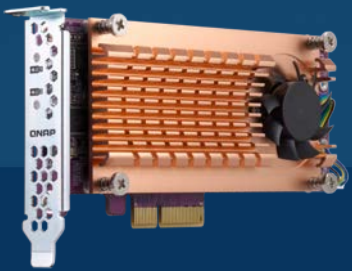
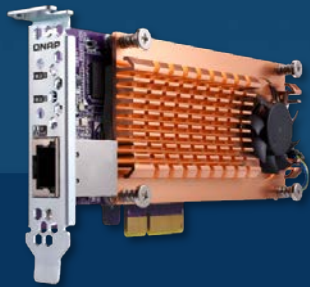


QNAP

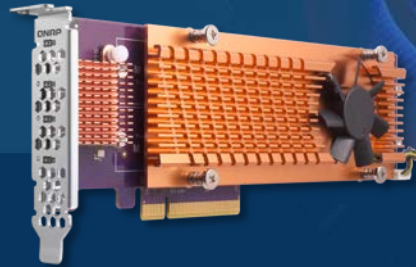
QM2 M.2 SSD/10GbE PCIe 擴充卡再進化



QM2-2S, QM2-2P
QM2-2S-220A, QM2-2P-244A
QM2-2P-344, QM2-2P-384



QM2-2S10G1T
QM2-2P10G1T



QM2-4S-240, QM2-4P-284
QM2-4P-342, QM2-4P-384

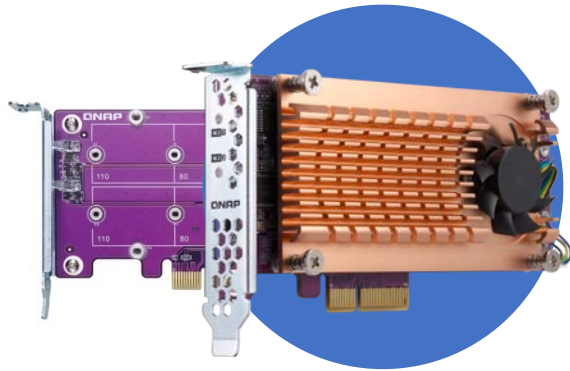
好評不斷的 QM2 M.2 SSD/10GbE 擴充卡

- **QM2-2S**

2 x M.2 22110 / 2280 **SATA** SSD 埠

- **QM2-2P**

2 x M.2 22110 / 2280 **PCIe** NVMe SSD 埠



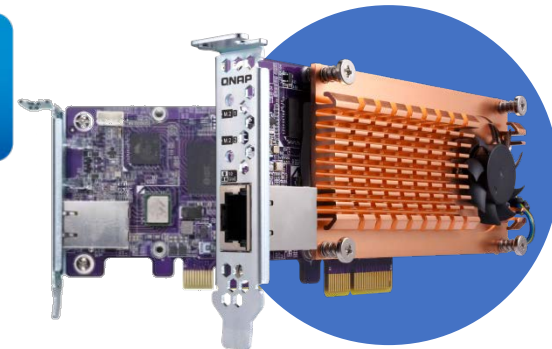
- **QM2-2S10G1T**

2 x M.2 2280 **SATA** SSD 埠
1 x **10GBASE-T** 10GbE 埠

- **QM2-2P10G1T**

2 x M.2 2280 **PCIe** NVMe SSD 埠
1 x **10GBASE-T** 10GbE 埠

10GbE
進階版



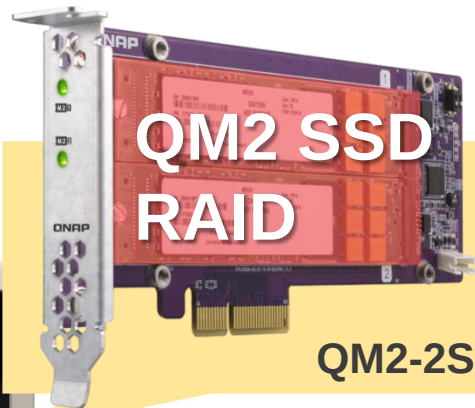
利用 QM2 卡擴展無 SSD 專用槽的 NAS

無需破壞 原有儲存架構與配置

QTS 4.3.4 支援將 4.2 後建立的儲存池
無痛升級為 Qtier 自動分層儲存池

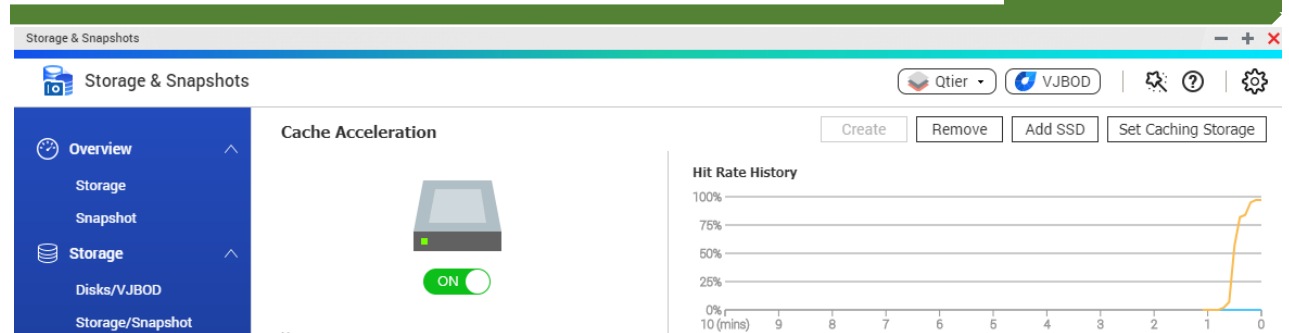


TVS-463



隨機存取效能大幅提升

SSD 快取



SSD tier

效能與總儲存空間擴充雙重效益



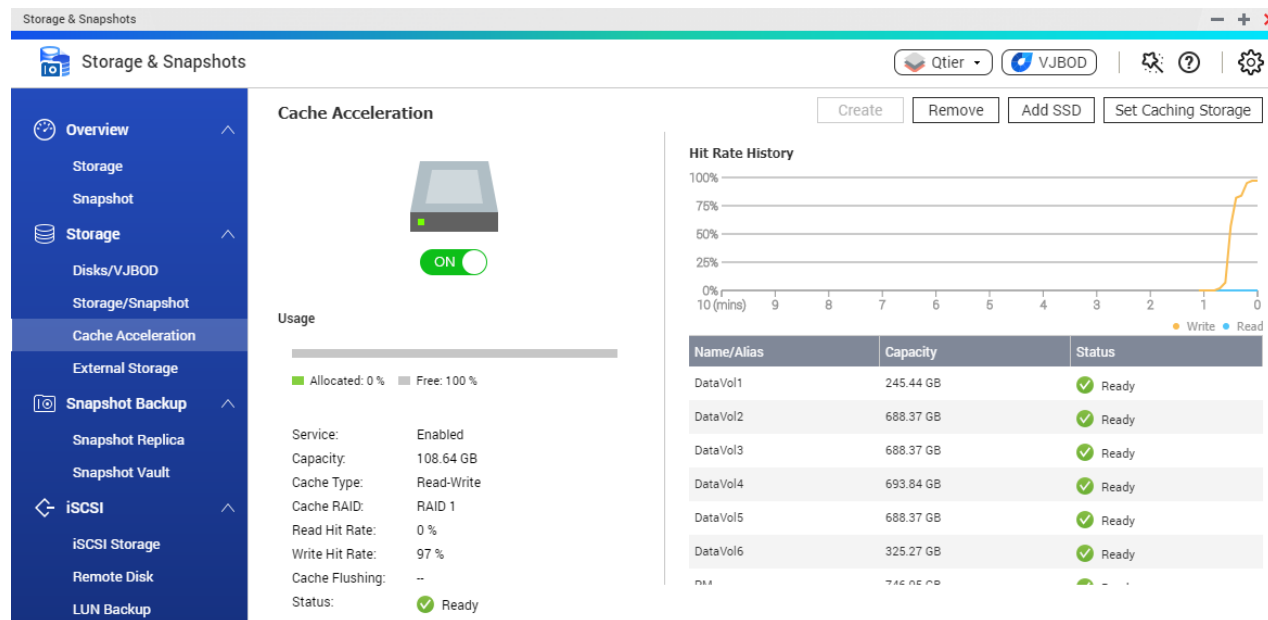
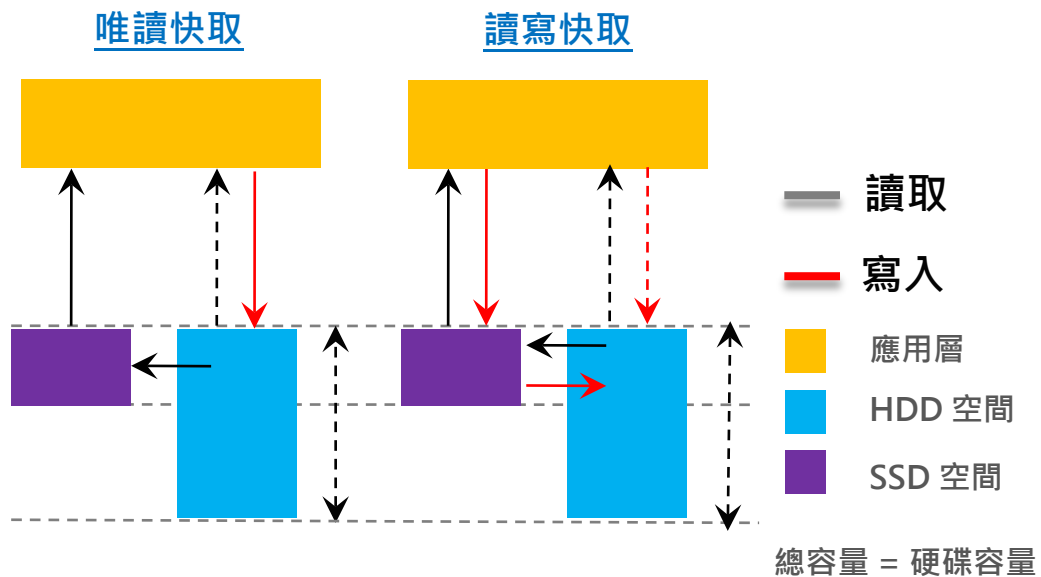
QTS 支援 M.2 SSD 快取儲存應用

改善 I/O 延遲

加速磁碟存取的 IOPS 效能

允許全域快取

應用到全機或根據需求指定給需要的磁碟區 / LUN



建立 Qtier 中的高速 M.2 SSD 層

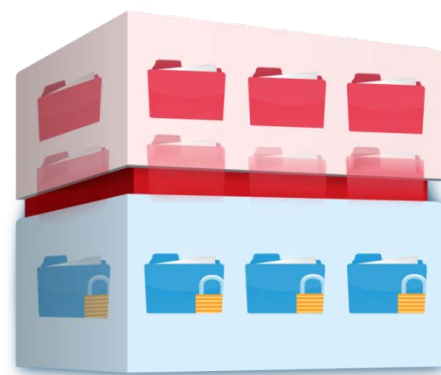
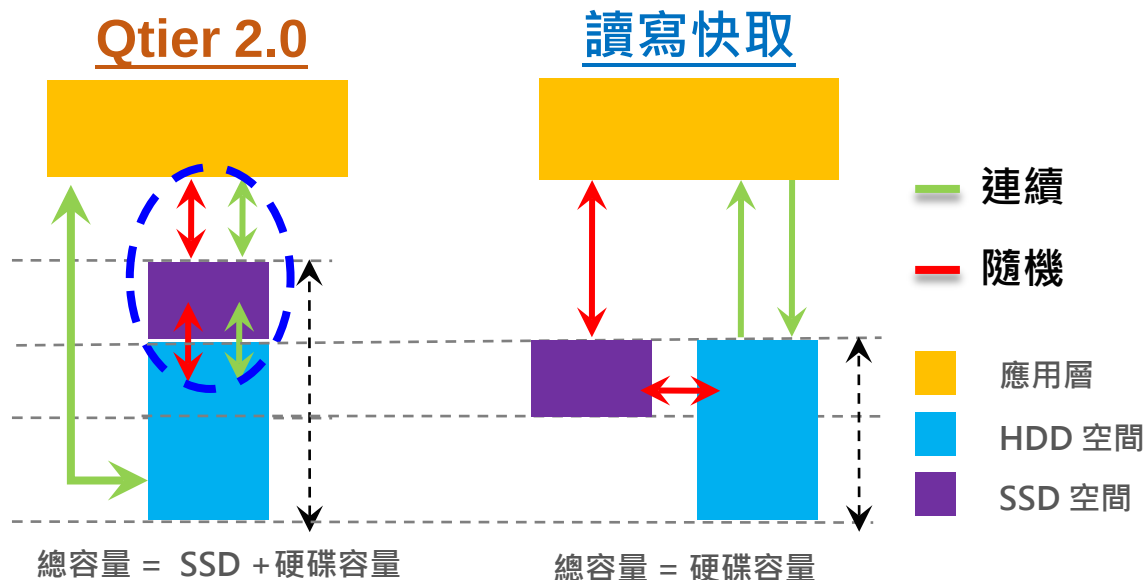
儲存空間 與 SSD 快取 效益兼具

自由決定以 M.2 SSD 加速關鍵資料，
全面提升儲存性價比

I/O 智慧判別



資料夾分層



熱資料 &
即時 I/O 需求

冷資料 &
停用 Qtier

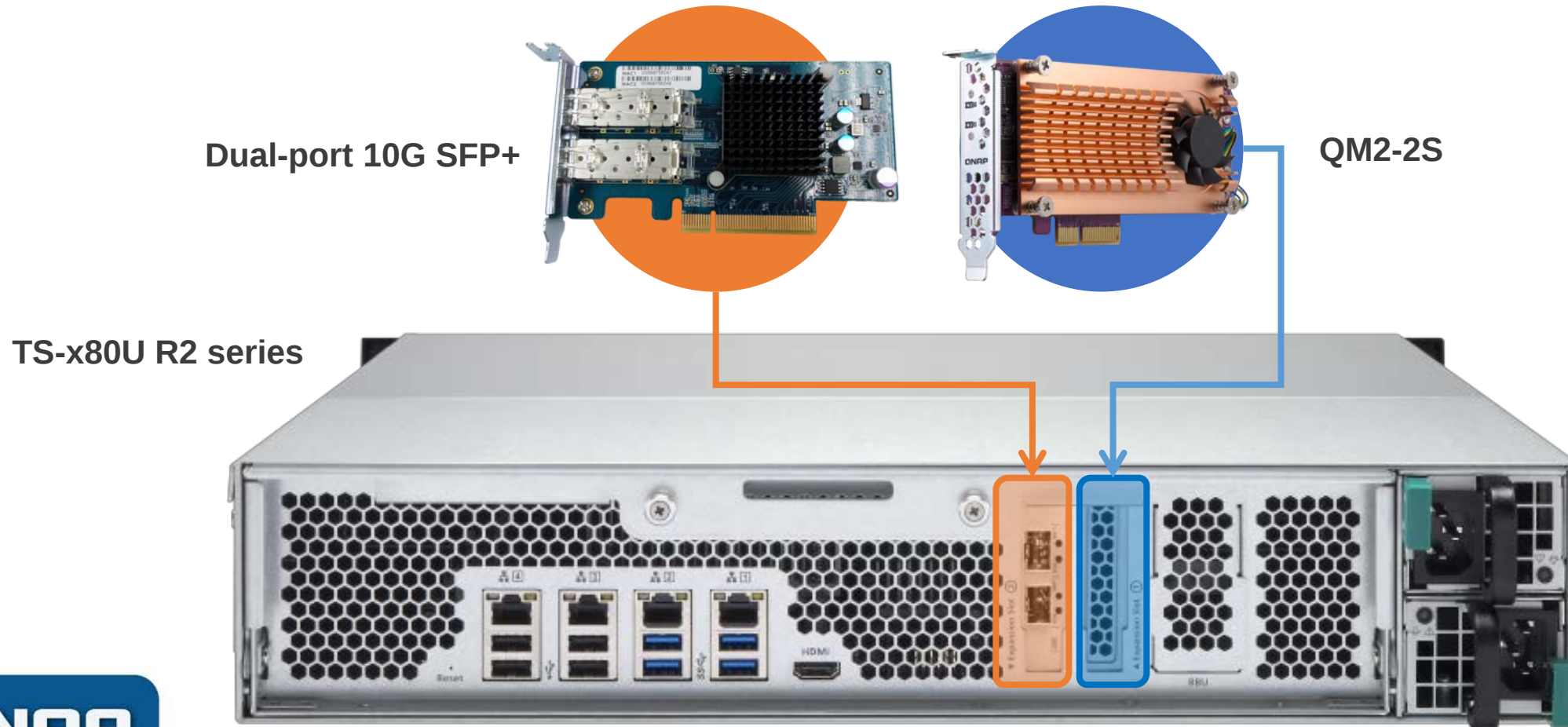
(Tier on Demand)

*Qtier 功能目前支援下列 NAS 機種 (QTS 4.3.4)：

x89U, x85/x85U (QTS), x82(U), x80(U), x79(U), x77, x73(U), x71(U), x70(U), x63(U), x53A, x53B(U), x53pro

利用 QM2 卡建立 RAID 0/1 M.2 SSD 高速層

當 NAS 不具 SSD 專用埠且僅有兩個 PCIe 插槽，
安裝 10G 網卡與 QM2 卡後，僅能建立 **RAID 0/RAID 1** M.2 SSD 高速層



單卡立即新增 4 個 M.2 SSD 埠

QM2-4S-240

4 x M.2 2280 **SATA** SSD 插槽

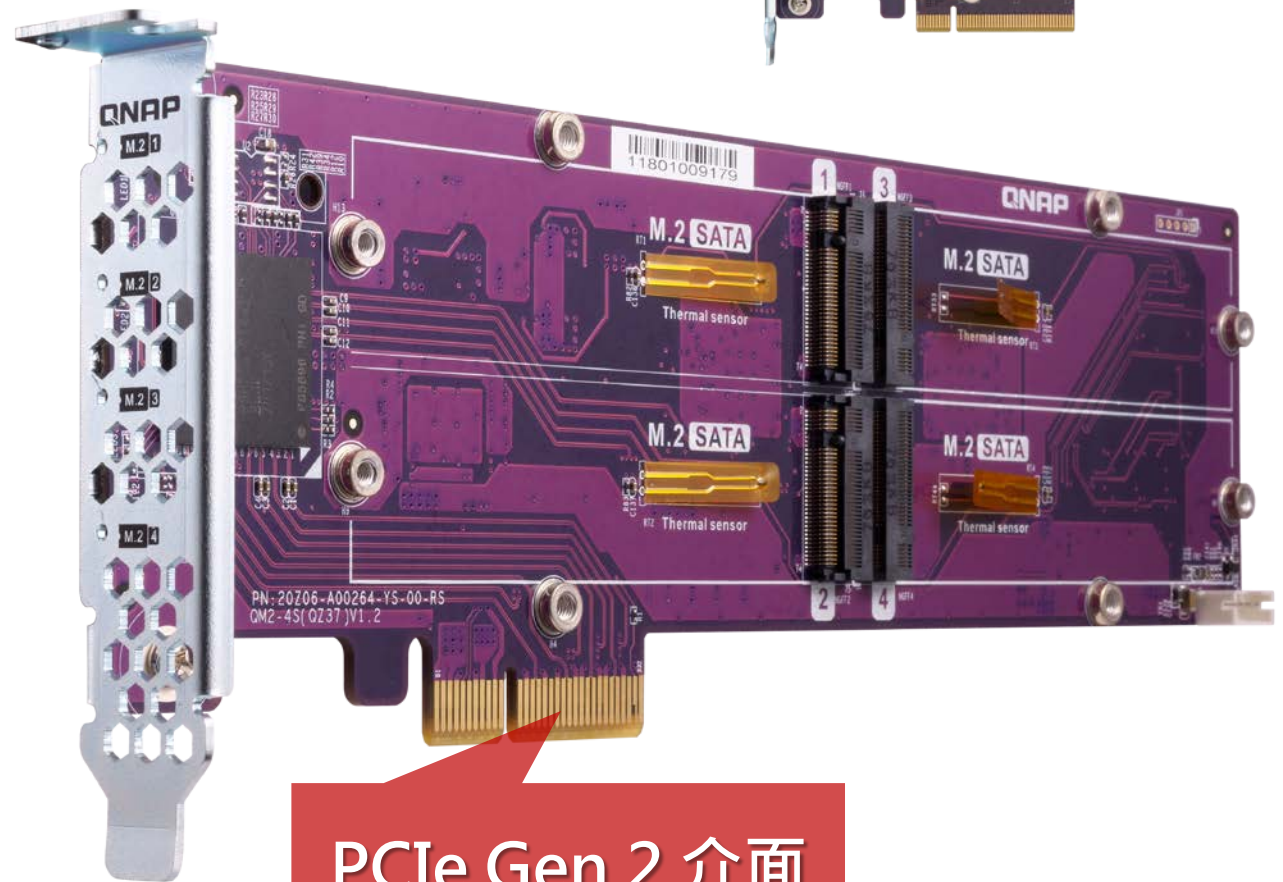
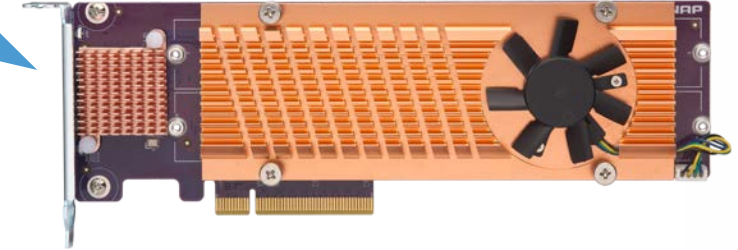
QM2-4P-284

4 x M.2 2280 **PCIe** NVMe SSD 插槽

建立具有 RAID 保護的
RAID 5/RAID 6/RAID 10

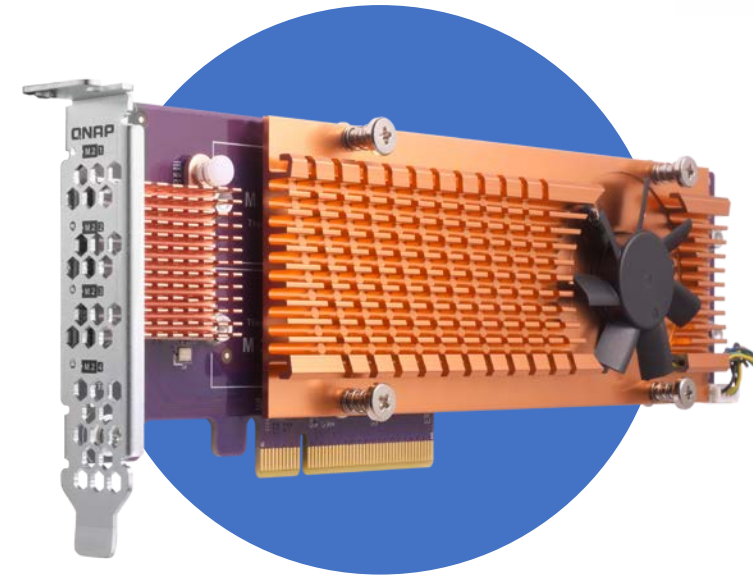
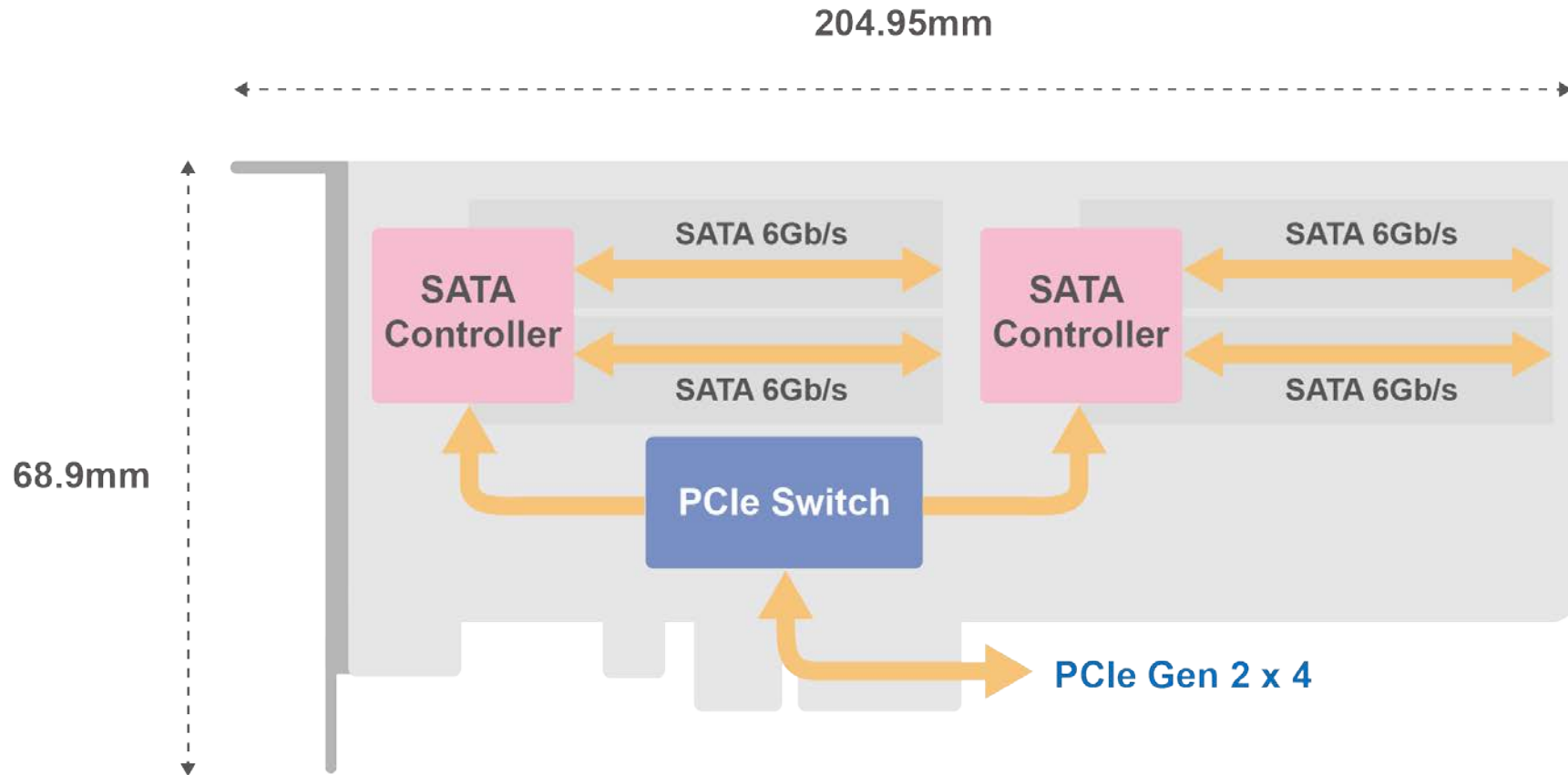
僅佔用單一個 PCIe 插槽，
一次**新增 4 個 M.2 SSD**

附贈專屬散熱模組與
適用於各式 NAS 的擋板

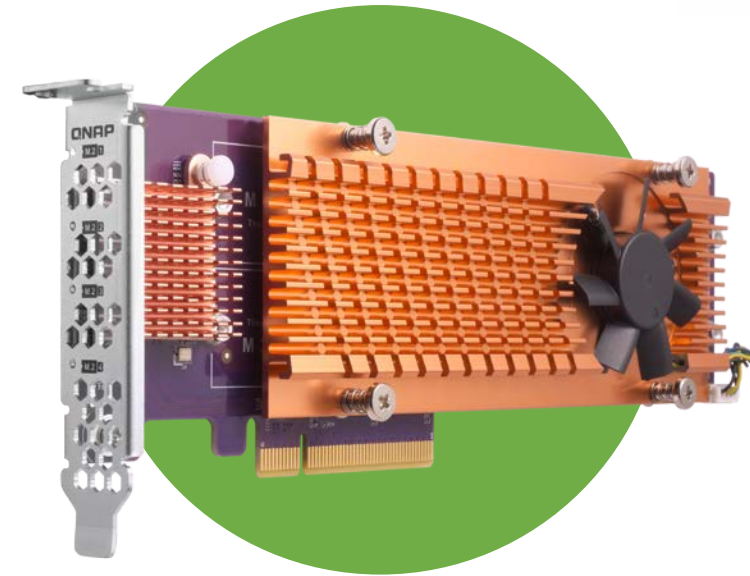
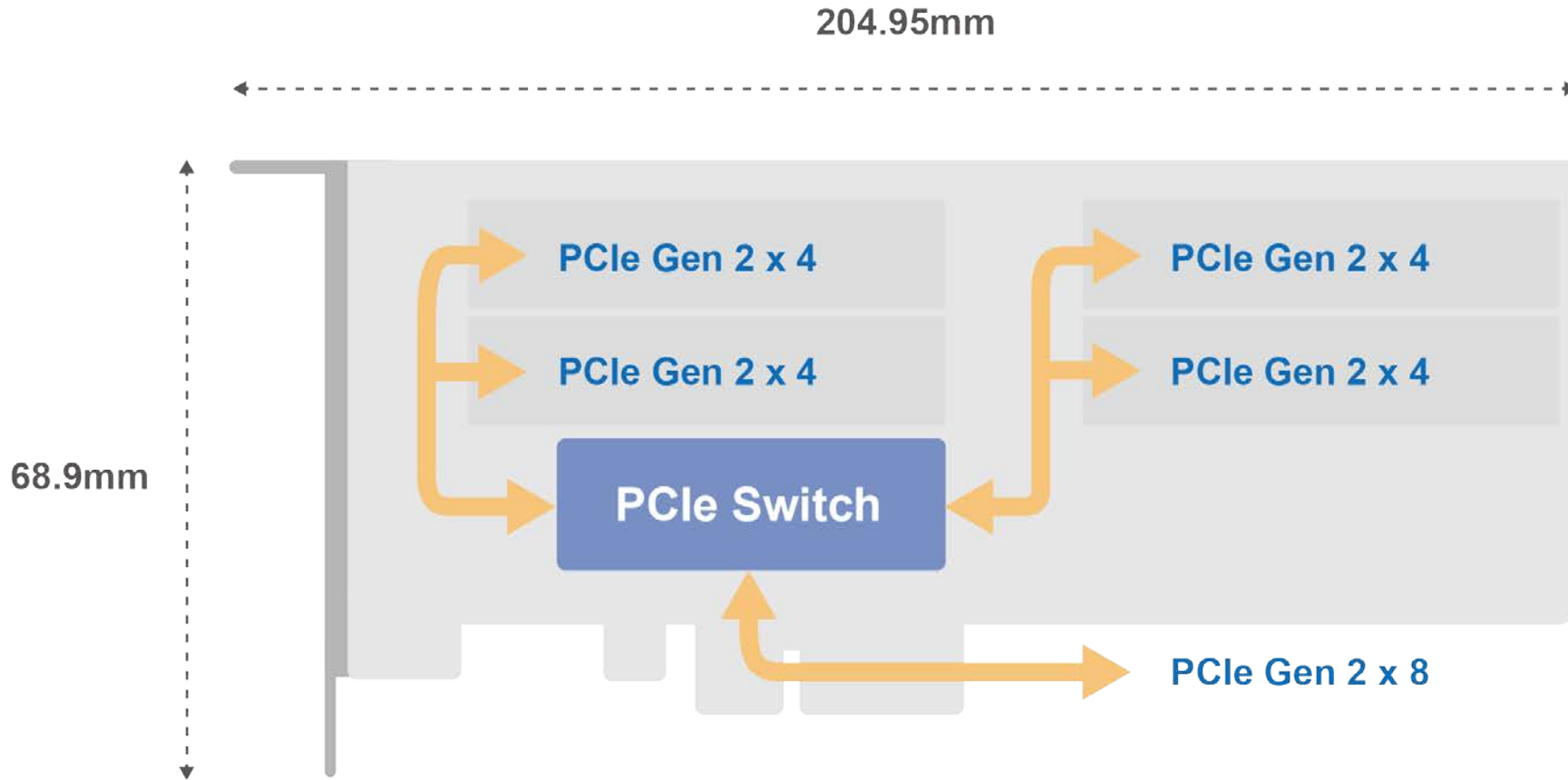


PCIe Gen 2 介面

QM2-4S-240 : 支援 4 個 M.2 SATA SSD



QM2-4P-284: 支援 4 個 M.2 NVMe SSD



QM2-4P-284 (Gen 2 x8 卡)

4 x M.2 2280 **PCIe** Gen 2 x4 NVMe SSD 插槽

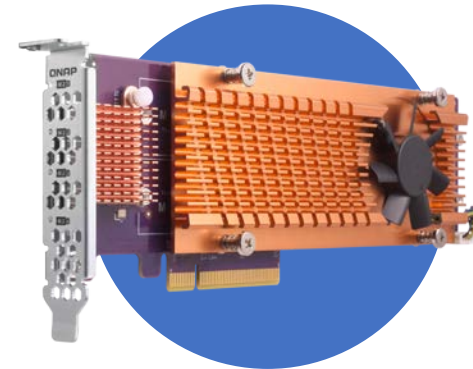
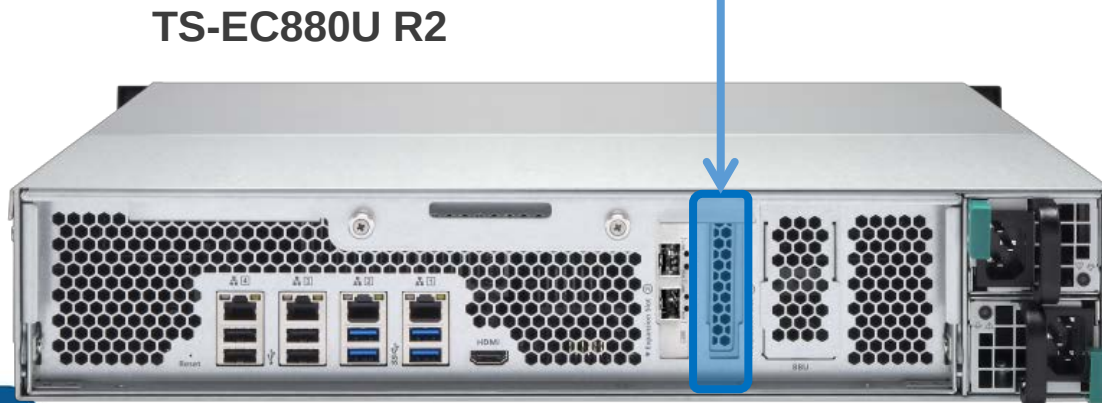
現場安裝 QM2-4S-240 擴充卡

QM2 安裝

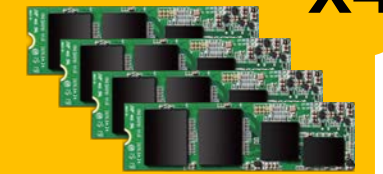
1. 移除散熱模組
2. 移除卡上的保護海綿
3. 安裝 M.2 SSD
4. 裝回散熱模組
5. 安裝 QM2 卡至 TS-x80U R2 NAS 中

QTS 設定

1. 開啟控制台 > 系統狀態或 Dashboard 檢視 QM2 卡資訊
2. 至儲存與快照總管確認 M.2 SSD 狀態
3. 至儲存空間擴展 SSD tier



QM2-4S-240

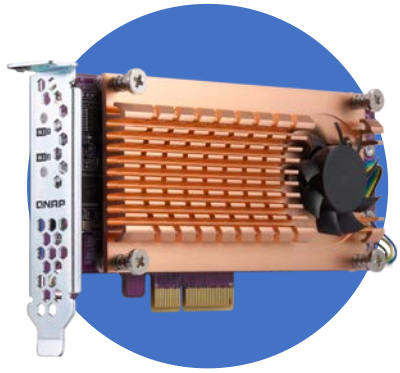


x4

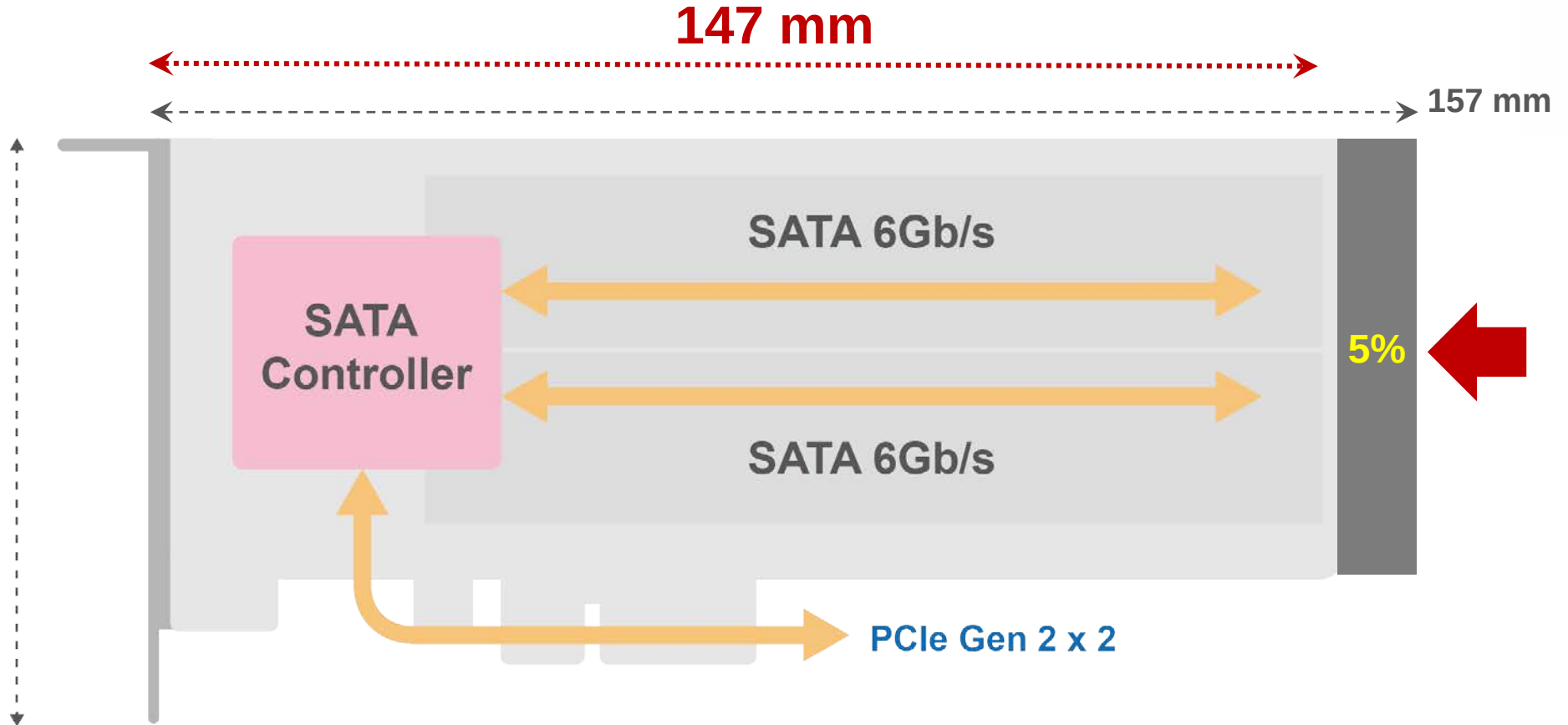
工藝再進化！精巧型 QM2-2S 卡現身

QM2-2S-220A

相較於 **QM2-2S** 長度縮減 5 %



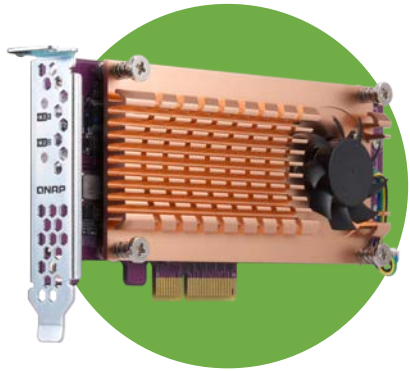
68.9mm



工藝再進化！精巧型 QM2-2P 卡現身

QM2-2P-244A

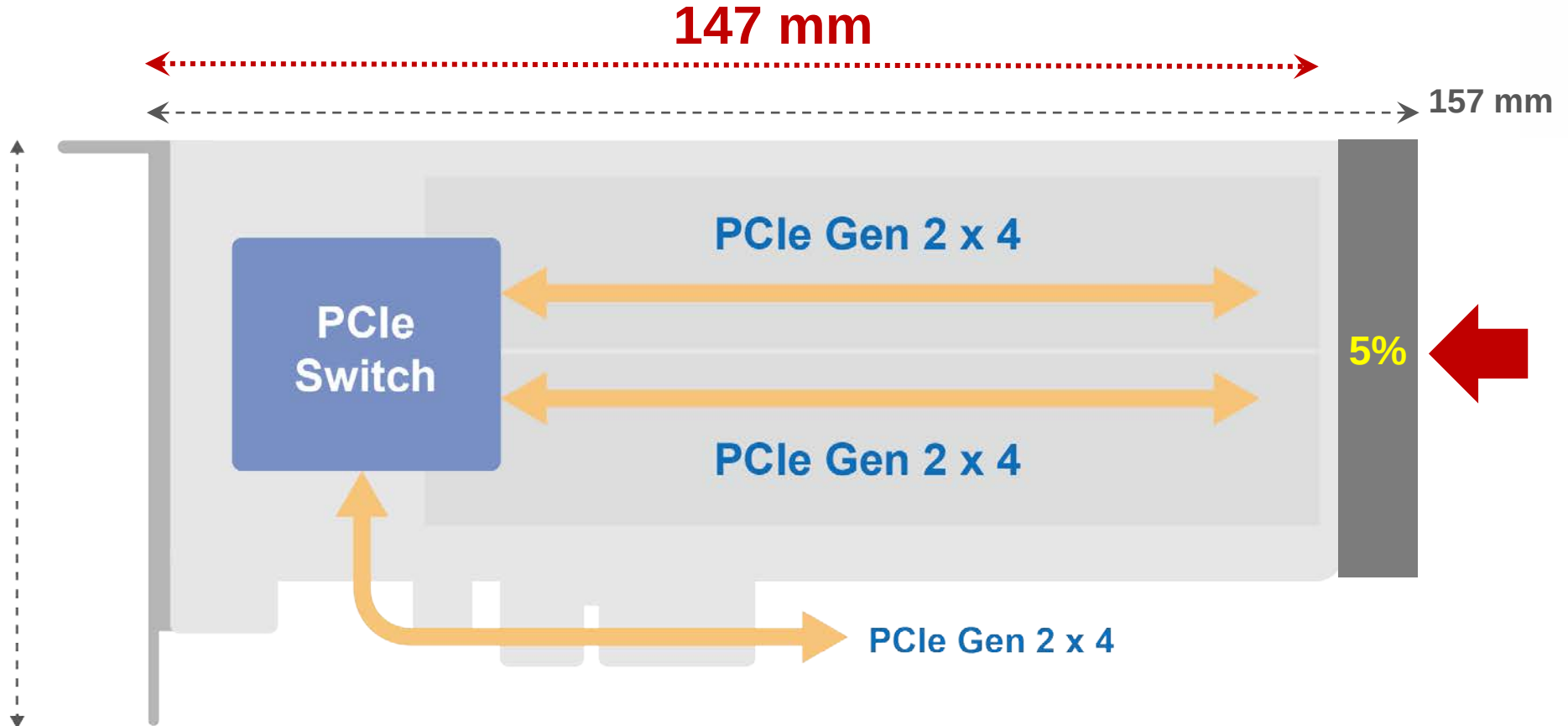
相較於 QM2-2P 長度縮減 5 %



68.9mm

147 mm

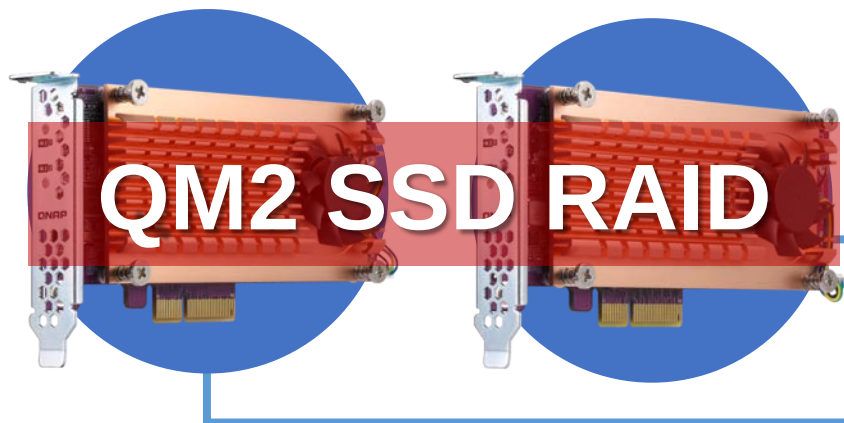
157 mm



5%

全 PCIe 插槽皆適用，不受空間限制

2 x QM2-2S-220A / QM2-2P-244A



PCIe slot 2

PCIe slot 3

Slot 1



保留最大頻寬給圖形顯示卡

PCIe slot 1



TS-1677X

如何榨乾 PCIe Gen3 插槽的高速頻寬？

★ Gen 3 x4 插槽

- TS-x71U ⁽¹⁾
- TS-x73, TS-x73U
- TS-x77 ⁽²⁾
- TS-x80U ⁽¹⁾

★ Gen 3 x8 插槽

- TS-x71 ⁽²⁾, TS-x71U ⁽²⁾
- TS-x77 ⁽¹⁾
- TS-1282 ⁽¹⁾
- TS-x80, TS-x80U ⁽²⁾
- TS-x89U ^(3,4,5)
- TS-1685 ⁽¹⁾

★ Gen 3 x16 插槽

- TS-682 ⁽¹⁾, TS-882 ⁽¹⁾
- TDS-16489U ⁽²⁾



首挑具先天優勢的 M.2 PCIe NVMe SSD

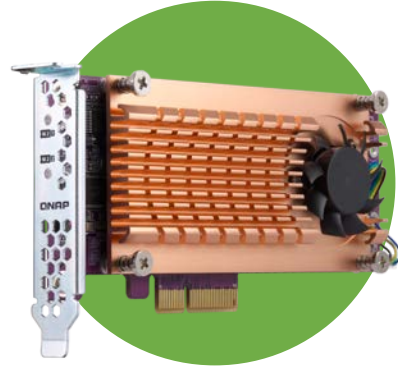
兩倍以上**效能提升**的 M.2 PCIe NVMe SSD

傳輸介面規格	傳輸速度 (理論值)		
M.2 SATA III	6Gb/s		240GB NT \$2,600
M.2 PCIe Gen 3 x2	★ 新選擇	16G/s	240GB NT \$2,600
M.2 PCIe Gen 2 x4	20Gb/s		240GB NT \$4,800
M.2 PCIe Gen 3 x4	★ 高速主流	32Gb/s	240GB NT \$4,800

量身訂做超高速 PCIe Gen 3 版本 QM2卡

2 x

M.2 **PCIe** NVMe SSD 埠



QM2-2P-344

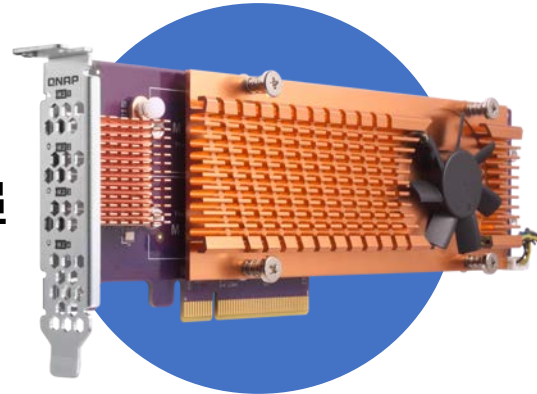
(Gen 3 x4 卡)

QM2-2P-384

(Gen 3 x8 卡)

4 x

M.2 **PCIe** NVMe SSD 埠



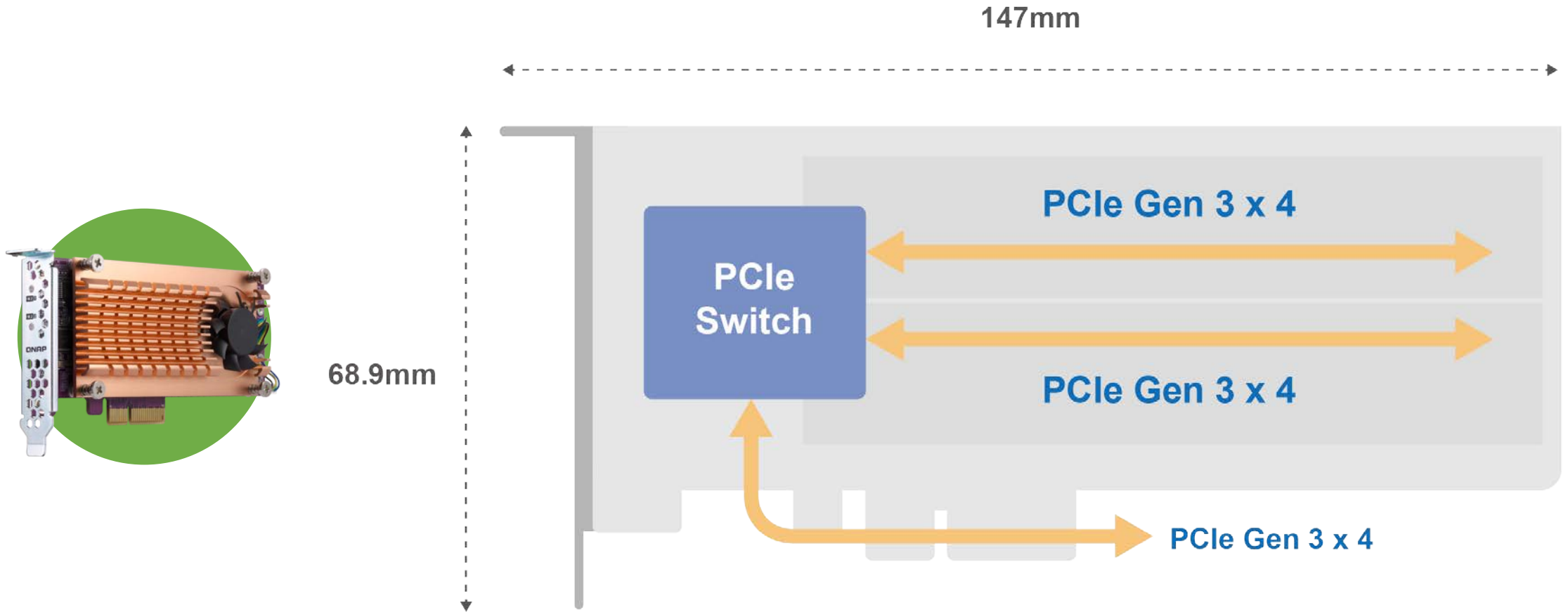
QM2-4P-342

(Gen 3 x4 卡)

QM2-4P-384

(Gen 3 x8 卡)

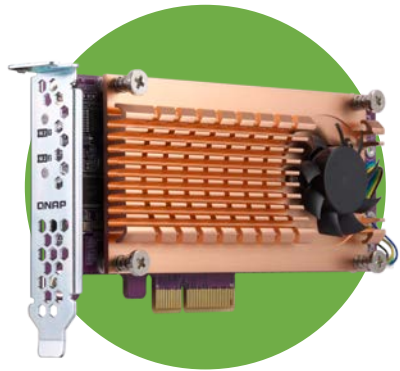
QM2-2P-344 PCIe 3.0 x4 卡 : 2 x NVMe SSD



QM2-2P-344 (Gen 3 x4 卡)

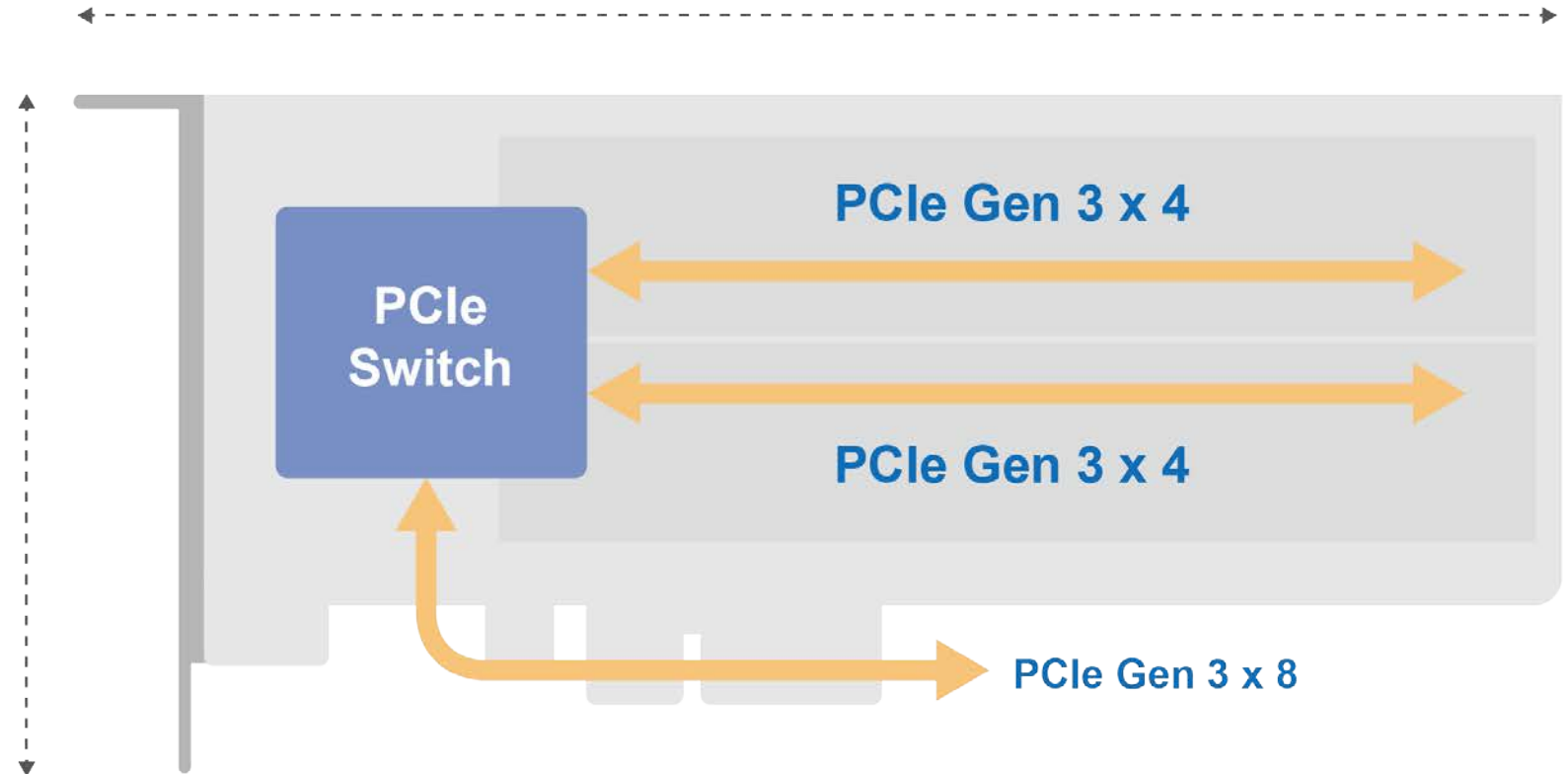
2 x M.2 22110/2280 **PCIe** Gen 3 x4 NVMe SSD 埠

QM2-2P-384 PCIe 3.0 x8 卡 : 2 x NVMe SSD



68.9mm

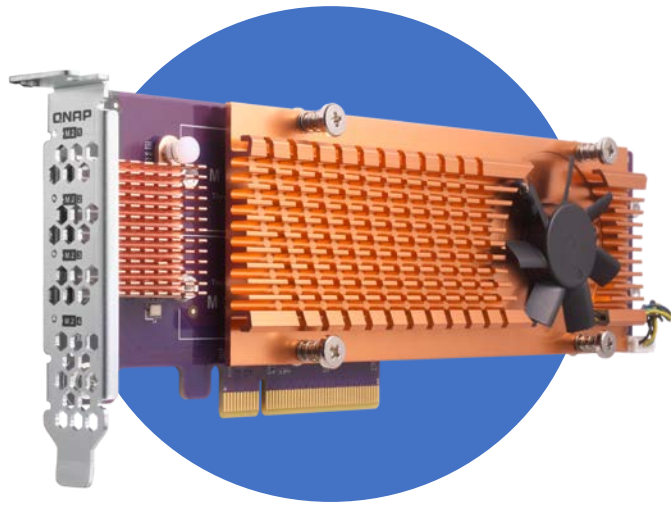
147mm



QM2-2P-384 (Gen 3 x8 卡)

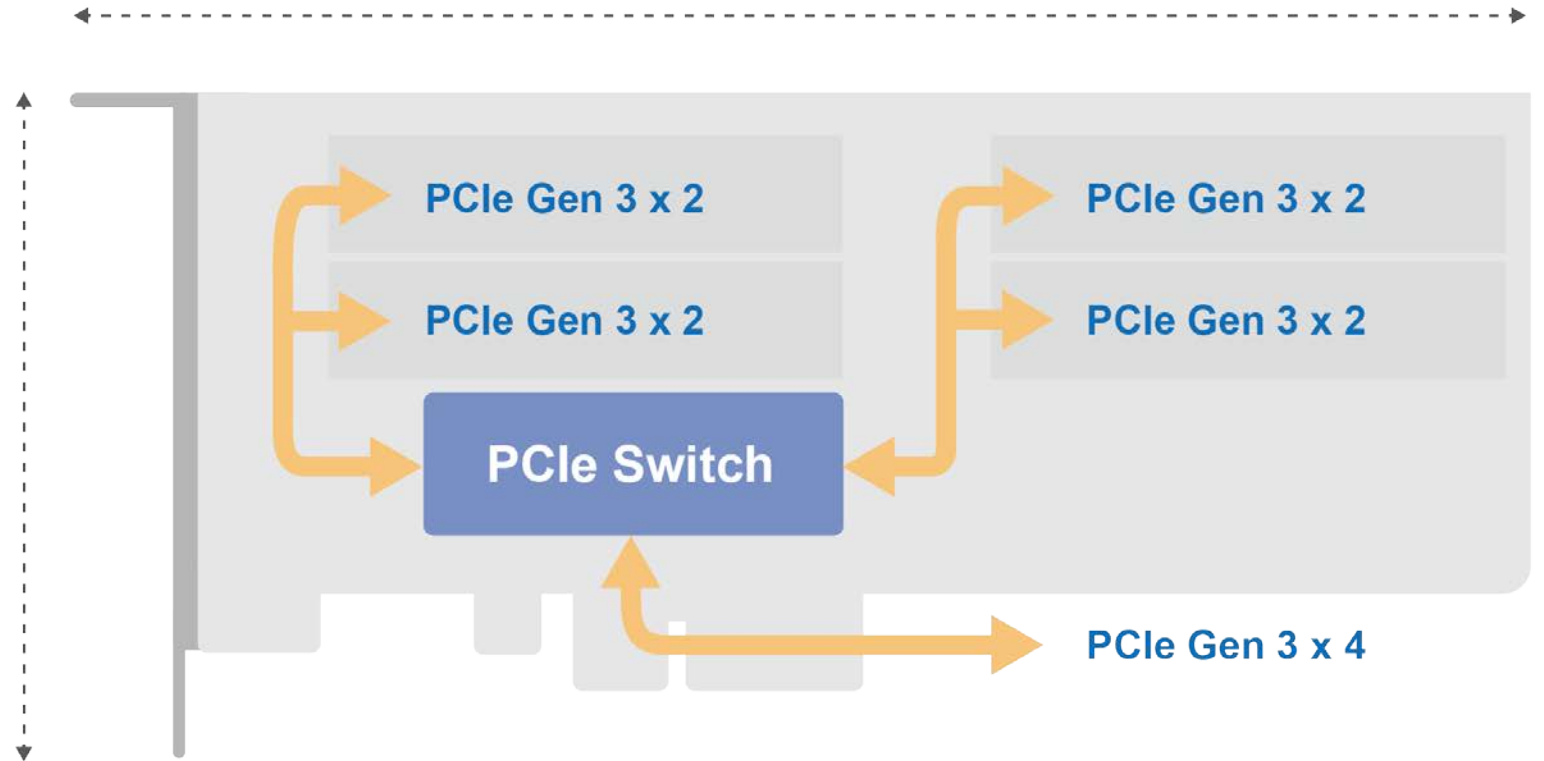
2 x M.2 22110/2280 PCIe Gen 3 x4 NVMe SSD 埠

QM2-4P-342 PCIe 3.0 x4 卡 : 4 x NVMe SSD



68.9mm

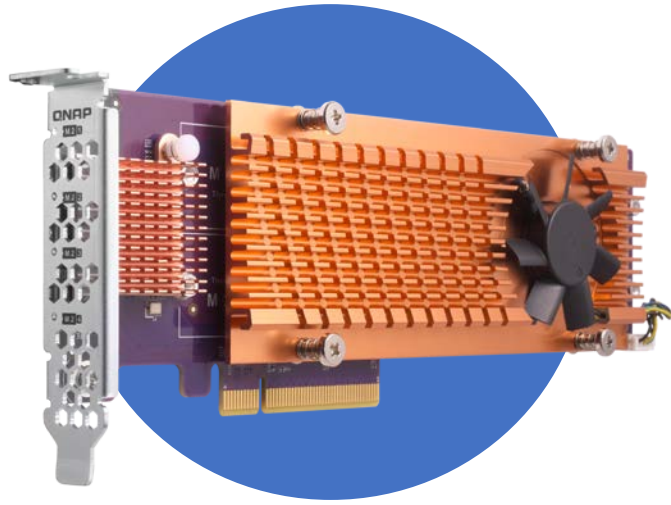
204.95mm



QM2-4**P**-342 (Gen 3 x4 卡)

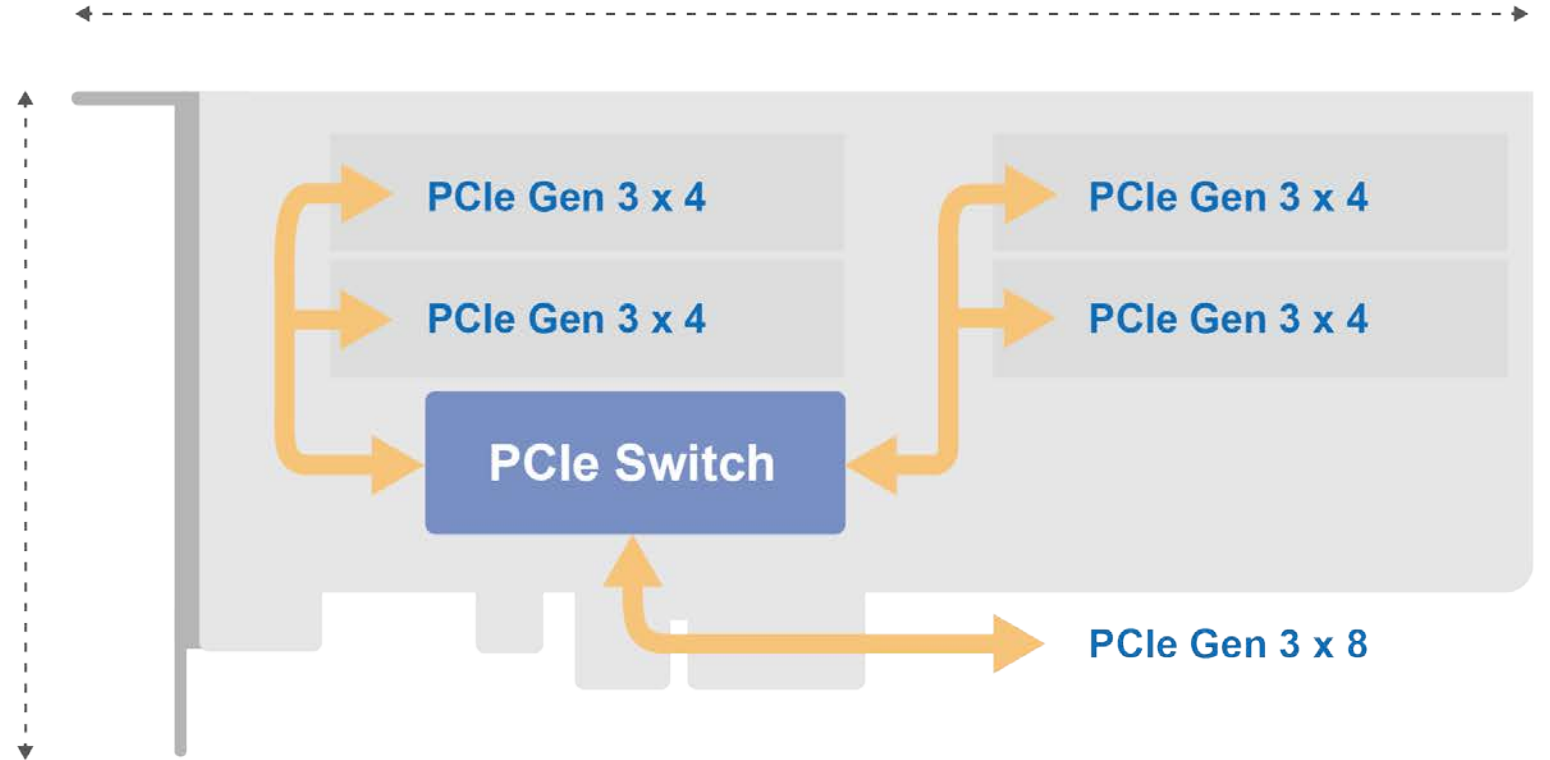
4 x M.2 2280 **PCIe** Gen 3 x2 NVMe SSD 埠

QM2-4P-384 PCIe 3.0 x8 卡 : 4 x NVMe SSD



68.9mm

204.95mm

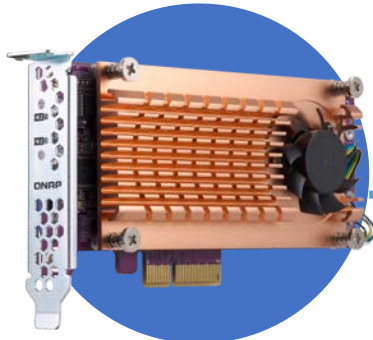


QM2-4**P**-384 (Gen 3 x8 卡)

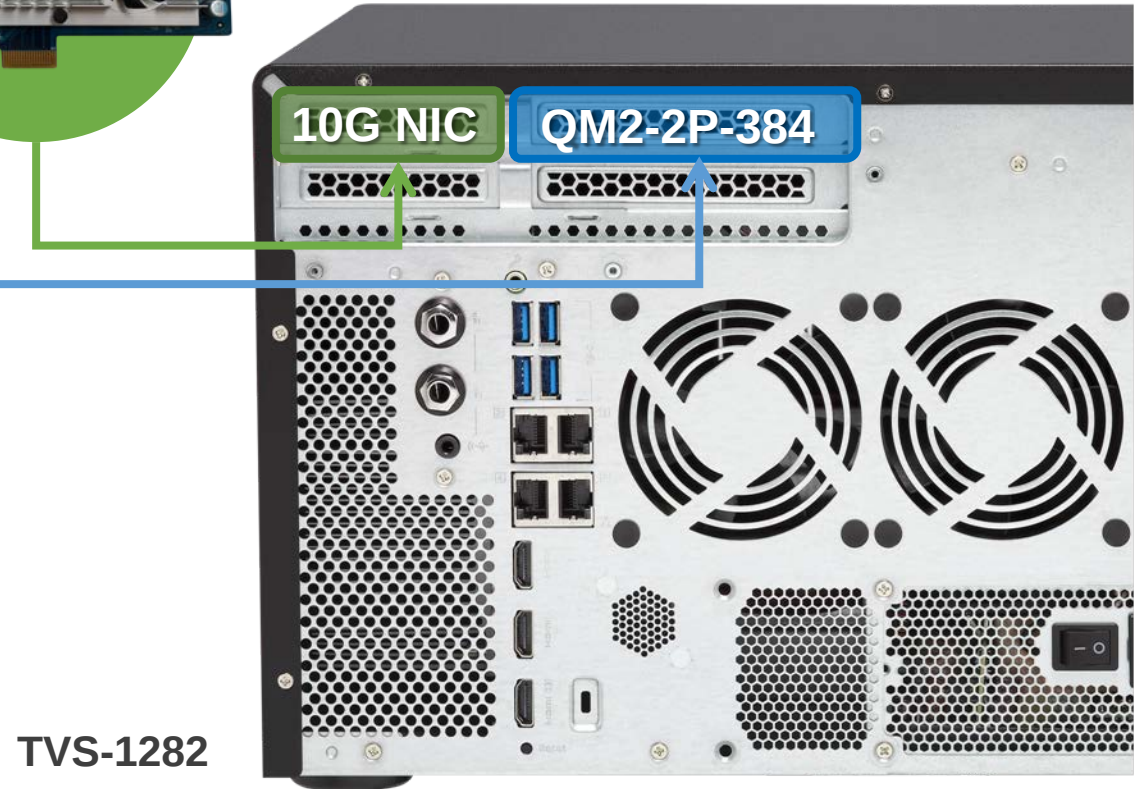
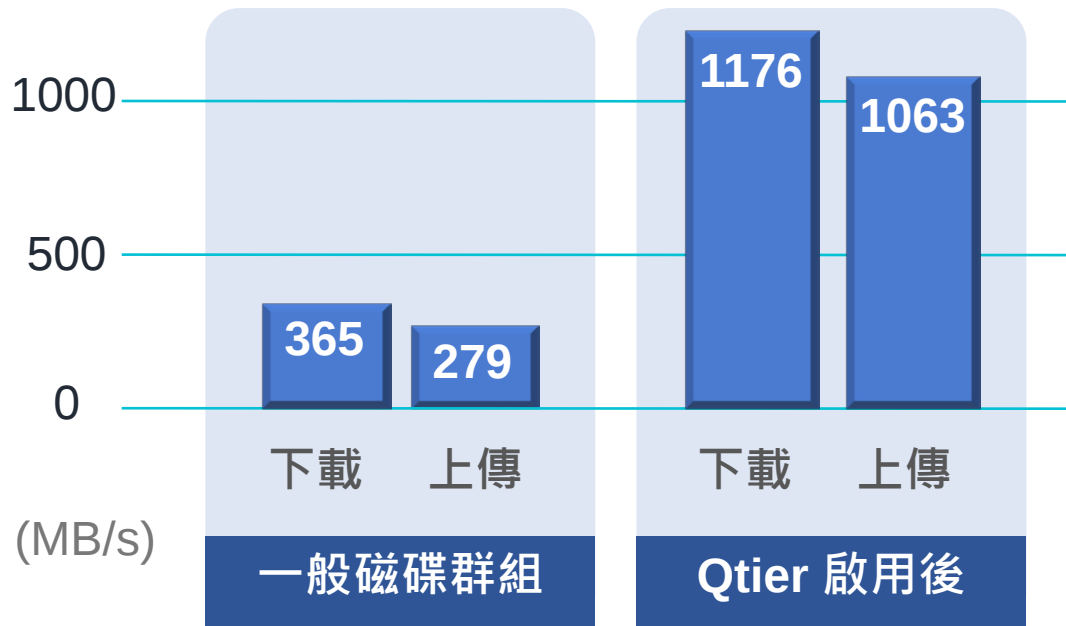
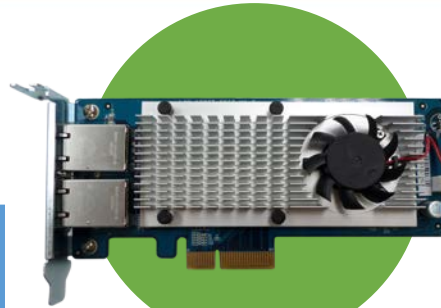
4 x M.2 2280 **PCIe** Gen 3 x4 NVMe SSD 埠

PCIe Gen 3 NAS 安裝 QM2 卡效能實測

安裝 QM2-2P-384
於 PCIe Gen 3 x8 插槽



安裝 LAN-10G2T-X550
於 PCIe Gen 3 x4 插槽



Tested in the QNAP lab. Actual results may vary by environments.

Test environment:

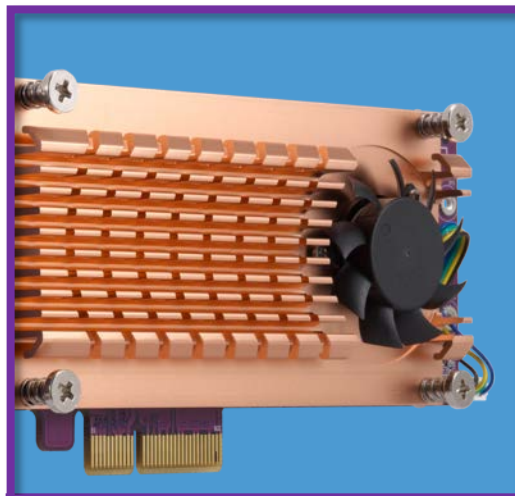
NAS operating system: QTS 4.3

Volume type: RAID 5; 4 x Seagate Enterprise HDD 1TB

Client PC:

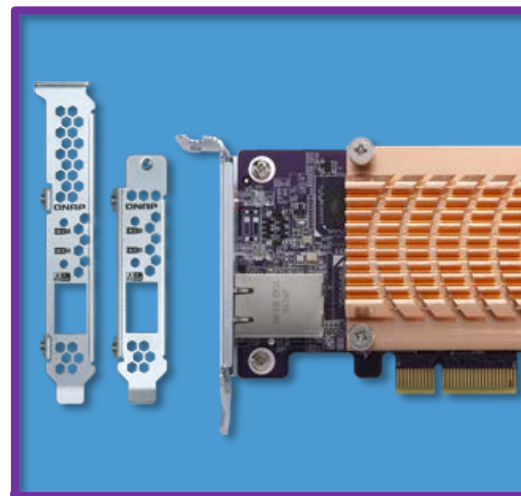
Intel® Core™ i7-4770 3.40GHz CPU; 16GB
RAM; Intel 10GbE NIC ; Windows® 10 64-bit;
10GB file transfer by Robocopy

第三方作業系統亦可使用



搭載**主動式**散熱模組

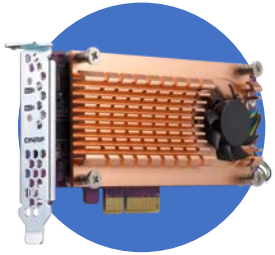
感溫元件自我監控即時溫度，
調整靜音風扇高中低轉速



相容標準 **PCIe** 插槽

半高 PCIe 擴充卡設計，
並附贈全高擋版

如何挑選適合的 QM2 卡



M.2 SATA

QM2-2S
QM2-2S-220A

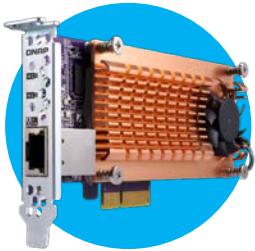
M.2 PCIe Gen 2

QM2-2P
QM2-2P-244A

M.2 PCIe Gen 3

QM2-2P-344
QM2-2P-384

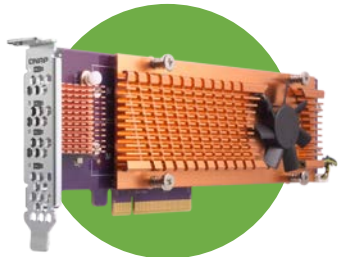
支援 10GBASE-T 埠



QM2-2S10G1T

QM2-2P10G1T

支援擴充 4 個 M.2 埠



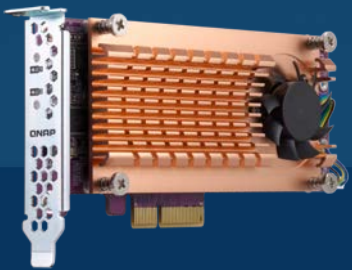
QM2-4S-240

QM2-4P-284

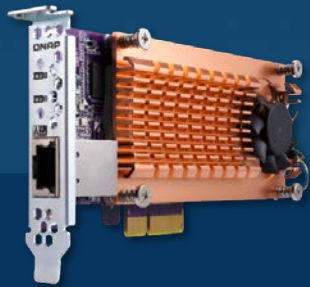
QM2-4P-342
QM2-4P-384



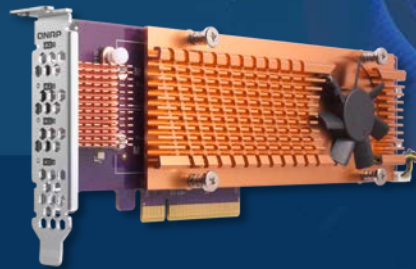
以 QM2 擴充卡 讓 NAS 蛻變



QM2-2S, QM2-2P
QM2-2S-220A, QM2-2P-244A
QM2-2P-344, QM2-2P-384



QM2-2S10G1T
QM2-2P10G1T



QM2-4S-240, QM2-4P-284
QM2-4P-342, QM2-4P-384