

QNAP

# QSW-M2106PR-2S2T

L2 網管型 10GbE/2.5GbE PoE++ 交換器

支援 90 瓦 PoE++ 與高速頻寬，滿足新世代 Wi-Fi 網路部署需求



PoE++



2.5GbE



10GbE

1



2 in 1U / 半機櫃式

2

# 越來越龐大的資料傳輸量，越來越快的無線網路

- 不斷演進的影音格式

- Video format evolution (720p→1080p→4K Ultra HD >8K UHD→10K)

	1080p 60 ProRes HQ	4K ProRes HQ 24	4K RAW BMPC 24	8K RedCode Raw 75
File size per hour	223.77GB	318GB	741.6GB	7.29TB

- WiFi: WiFi5→WiFi6→WiFi6E→WiFi7

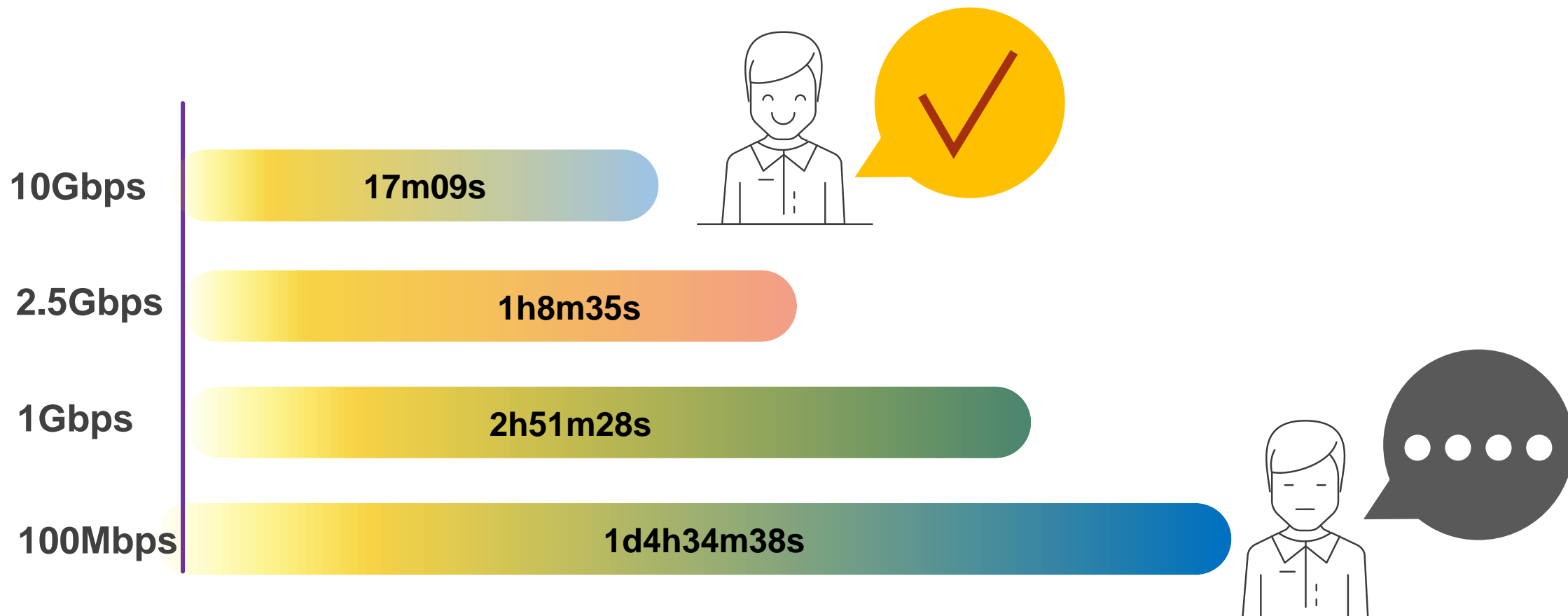
- 隨著無線網路技術的升級，實體線路速度也必須跟著往上，要搭配2.5GbE port甚至10GbE port



# 想花多少時間等待？

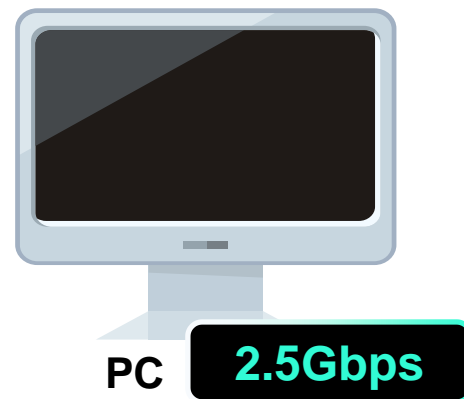
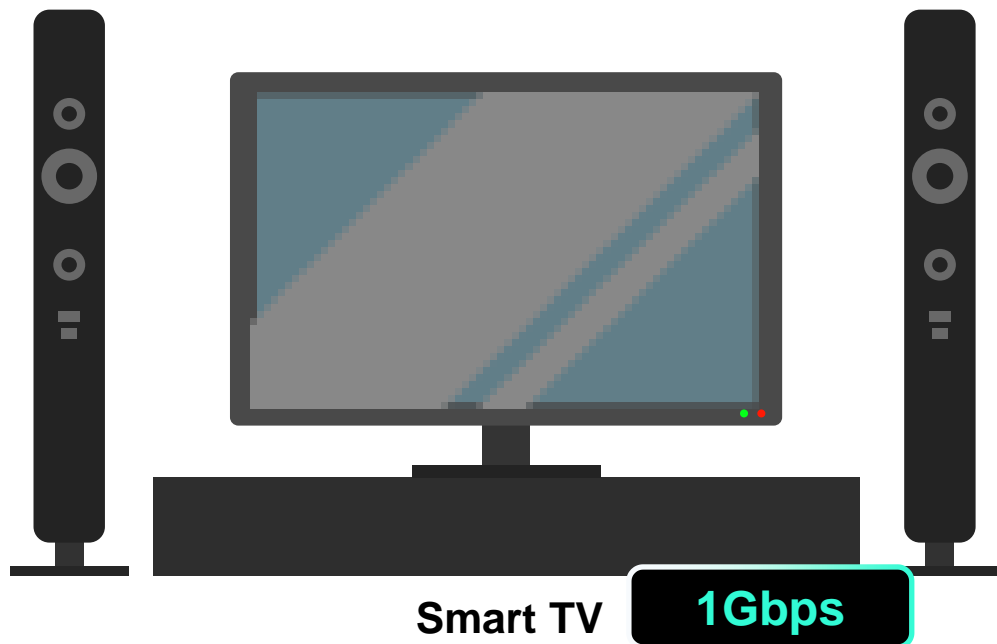
## 備份1 TB所需預估時間

條件：Effective Data Rate 95%, Payload Data Rate (w/ Overhead) 90%



# 真的需要全10GbE交換器嗎？

雖然10GbE很快，但還是有其他機器不是10GbE.....





# 1GbE目前夠用，以後呢？

- 越來越多設備配備2.5GbE
- 購買交換器，與其之後受限，不如一次到位2.5GbE



TP-Link EAP670



Netgear AXE7800



TP-Link Archer AX6000



TP-Link Archer GX90



Gigabyte Z490 AORUS MASTER



Apple MacBook



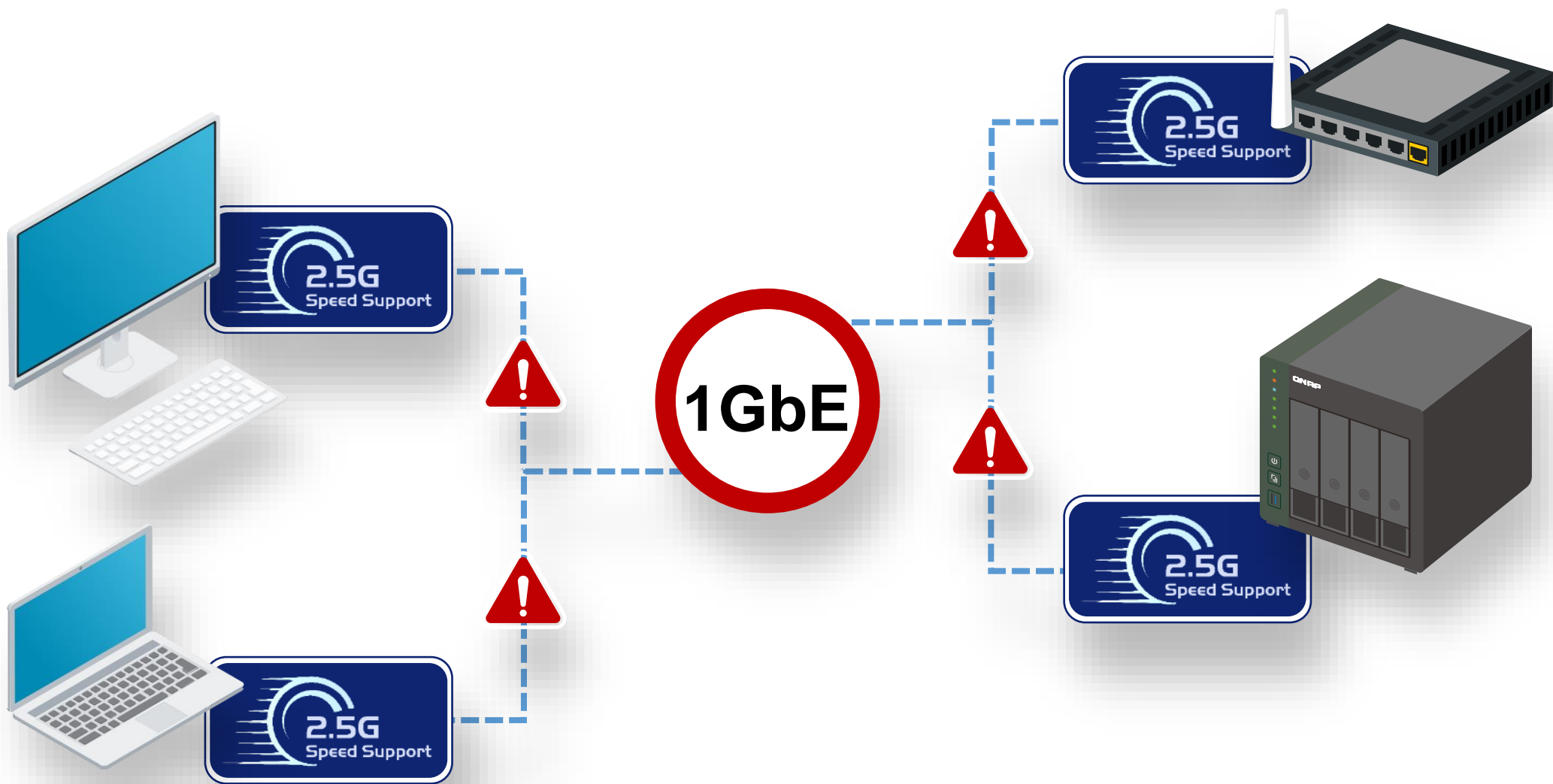
Asrock Z490 Taichi



QNAP TS-431P3

QNAP TS-231P3

# 別讓交換器成為網路瓶頸



# 2.5GbE可以直接使用原本Cat5e的網路線

- 省去重新拉線佈線的麻煩

	CAT 5e	CAT 6	CAT 6A
100M	✓	✓	✓
1G	✓	✓	✓
2.5G	✓	✓	✓
5G	✓	✓	✓
10G	X	✓(55m)	✓



# 自由搭配現有網速的設備

如果現有網路設備只有1GbE或甚至100MbE，  
一樣可以無痛直連



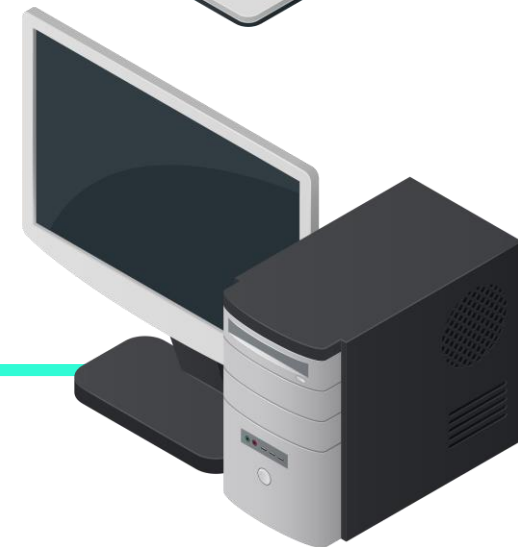
100MbE



2.5GbE



1GbE

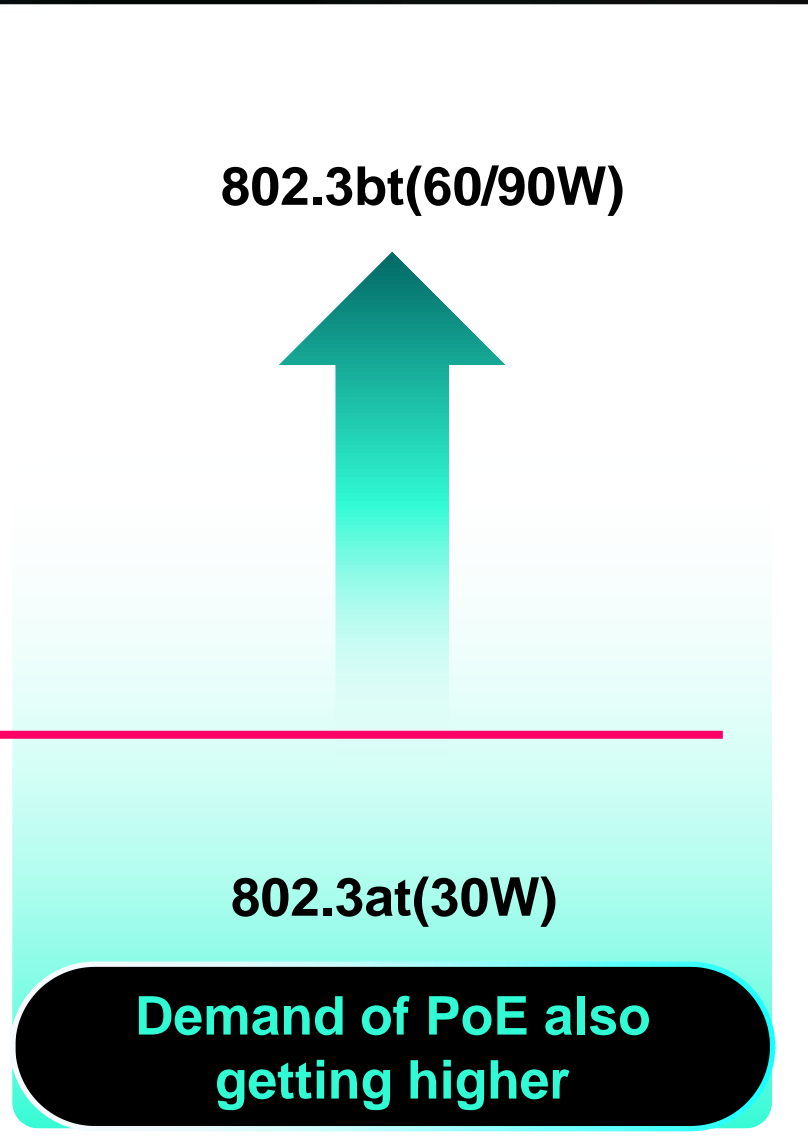




# 只是802.3at足夠嗎？



WiFi spec	Band & Model	PoE Power Consumption
AX8400	Abuba, 650 Series	46.5W
AX6000	Abuba, 550 Series	38.2W
AX8400	RUCKUS, R760	36.08W
AX6000	RUCKUS, R850	31W
AX6000	Netgear, WAX630	30.1W
AX4200	Abuba, 630 Series	29.4W
AX7800	Netgear, WAX630E	27.6W
AX6000	Abuba, 530 Series	26.4W
AX3600	Netgear, WAX620	25.5W
AX3600	RUCKUS, R750	22.34W
AX3000	RUCKUS, R650	21.59W
AX5400	Aruba, 510 Series	20.8W
AX1800	Netgear, WAX610	15.3W



# QSW-M2106PR-2S2T 規格



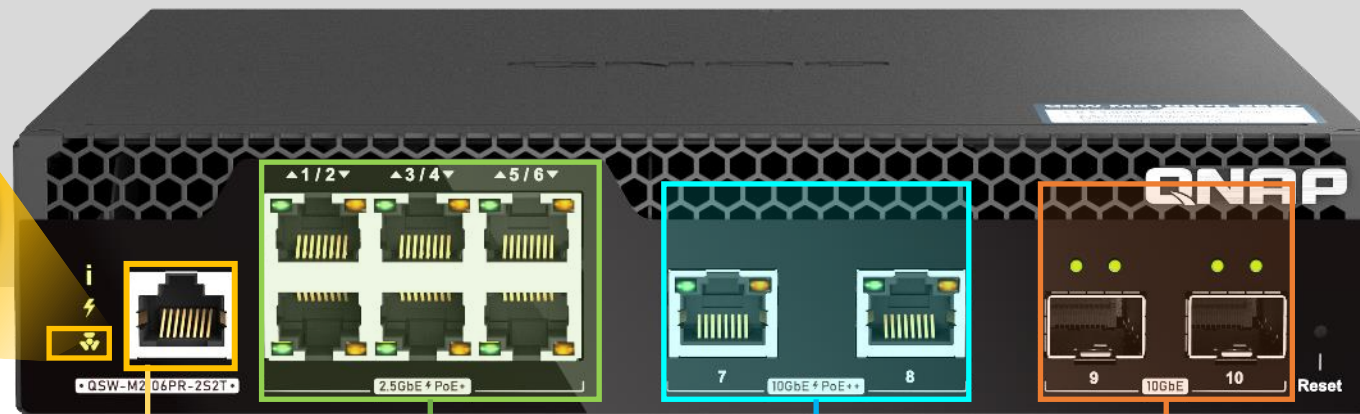
	QSW-M2106PR-2S2T
<b>Management</b>	Layer2 Web Managed switch
<b>Number of Port</b>	10
<b>2.5 GbE RJ45</b> (Support 2.5GbE/1GbE/100M)	6, support 802.3bt (90W)
<b>10 GbE RJ45</b> (Support 10GbE/5GbE/2.5GbE/1GbE/100M)	2, support 802.3bt (90W)
<b>10 GbE SFP+</b> (Support 10GbE/1GbE)	2
<b>Power budget</b>	310W
<b>Switch bandwidth</b>	110Gbps
<b>Packet buffer size</b>	12Mbit
<b>Jumbo Frame</b>	9Kbytes
<b>MAC table</b>	16K
<b>Fan design</b>	With fan
<b>Form factor</b>	Half-rackmount

# QSW-M2106PR-2S2T 面板配置

## 獨立風扇狀態燈

- 考量QSW-M2106PR-2S2T會有PoE供電需求，散熱系統尤其重要
- 獨立燈號設計一目瞭然

PoE總供電量最高  
310W



Console port

6 x 2.5GbE RJ45  
with 802.3bt(90W)

2 x 10GbE RJ45  
with 802.3bt(90W)

2 x 10GbE SFP+

# 半機櫃設計-更彈性地空間利用



單台 QSW-M2106PR-2S2T 裝  
在 1U 機櫃

混搭 QSW-M2106PR-2S2T 與 QSW-M2106R-2S2T 在 1U 機櫃



Note1: QSW-M2106PR-2S2T only

Note2: Requires separate 2-in-1U rackmount kit. Please visit <https://shop.qnap.com>.



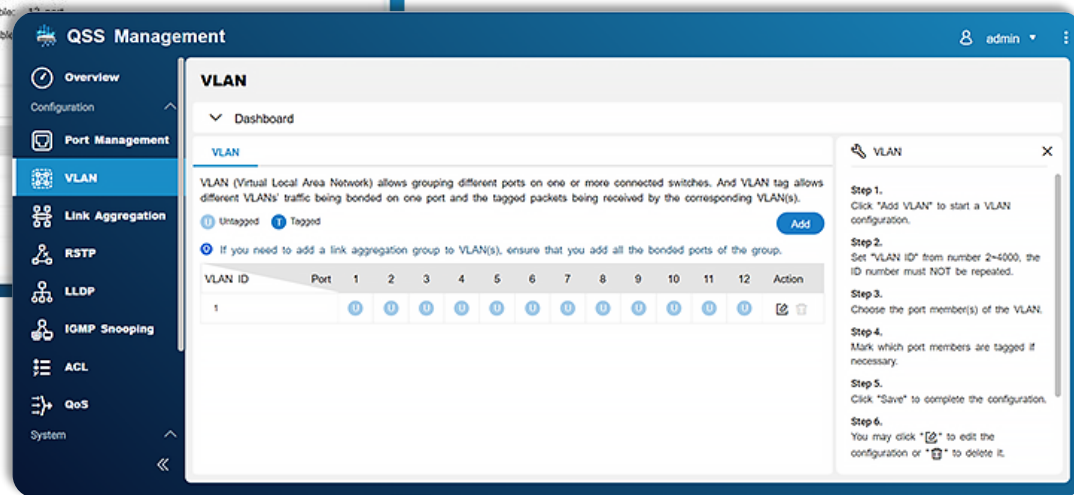
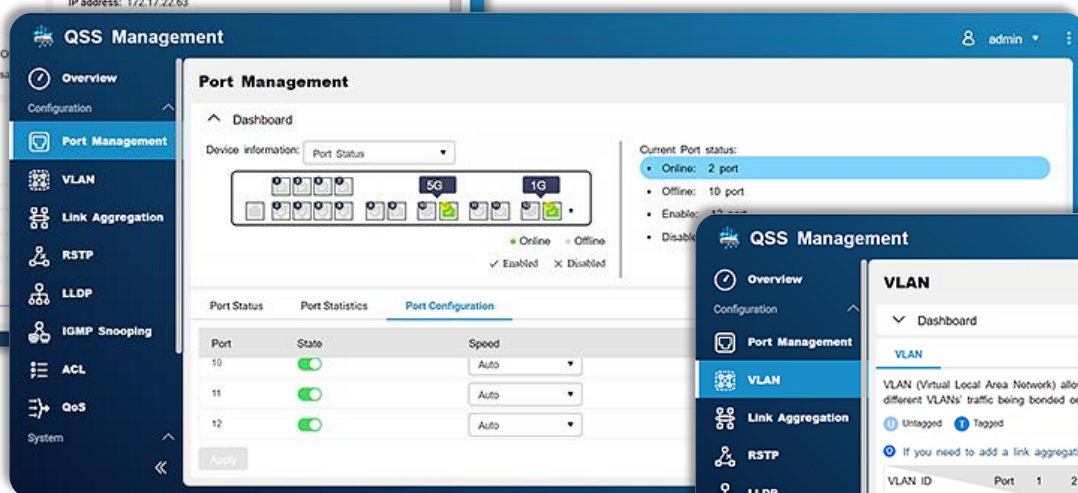
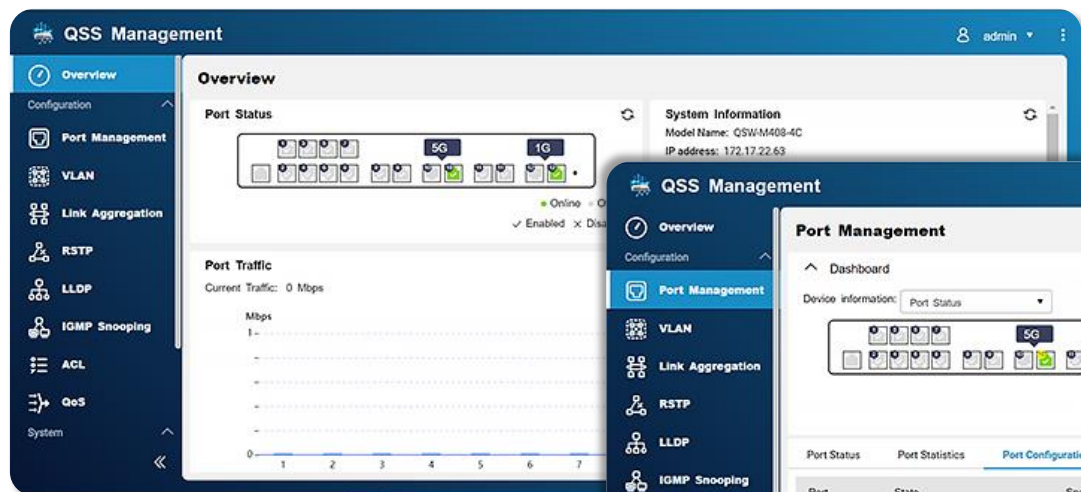
# QSW-M2106PR-2S2T

## 軟體介紹



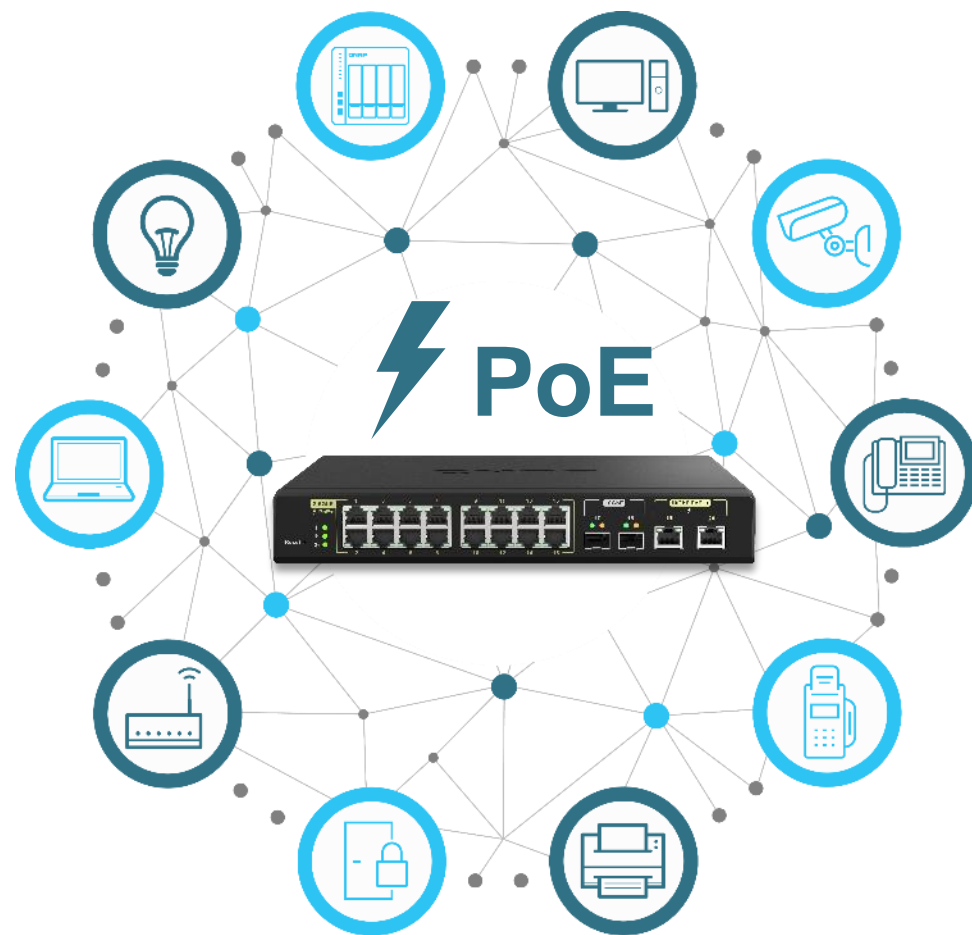
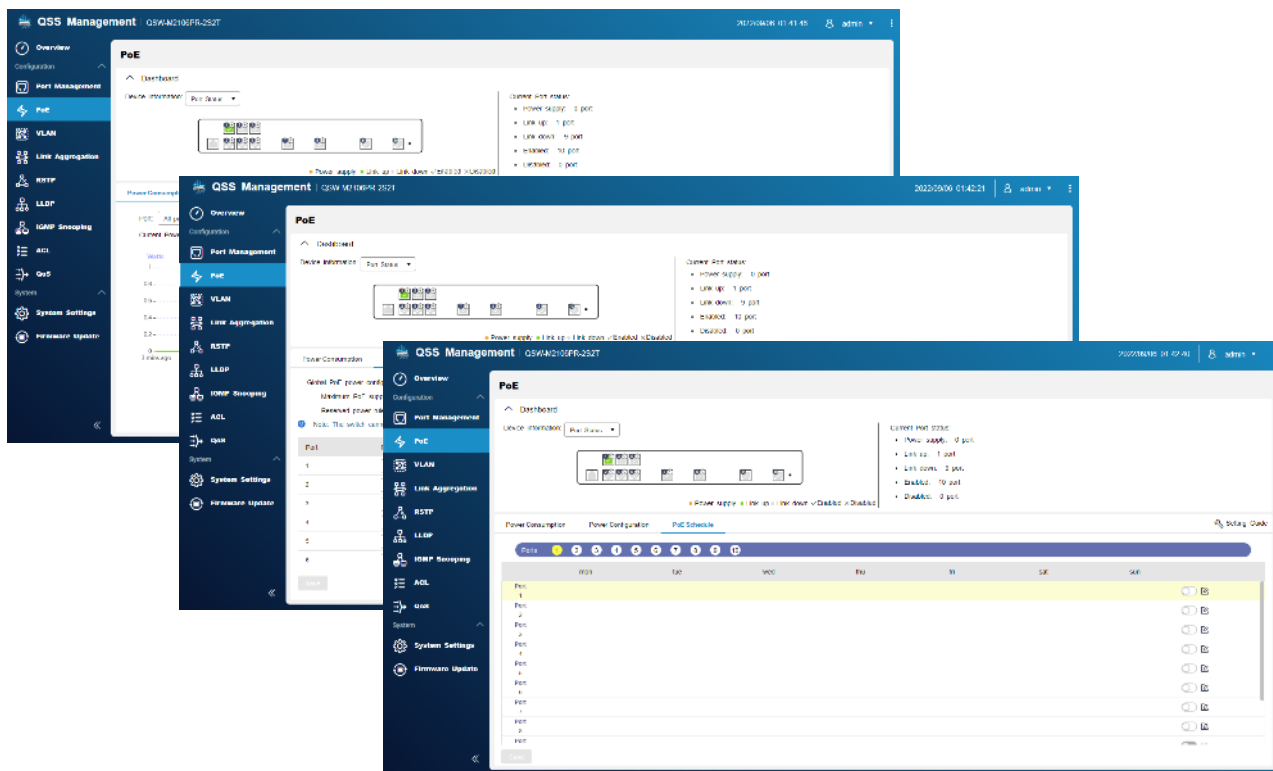
# 簡單明瞭的介面設計

- 簡潔、圖像化
- 設定引導



# 完整掌控PoE使用狀態

- 監看PoE的使用情況
- 用電優先及遠端重啟
- 設定排程控制供電時間



# 明確分割工作室內各別網路

- 虛擬區域網路 (VLAN) 可以明確獨立出不同的部門網路
- 方便管理, 不同網路間可有條件相連
- 也可分隔員工及來賓網路





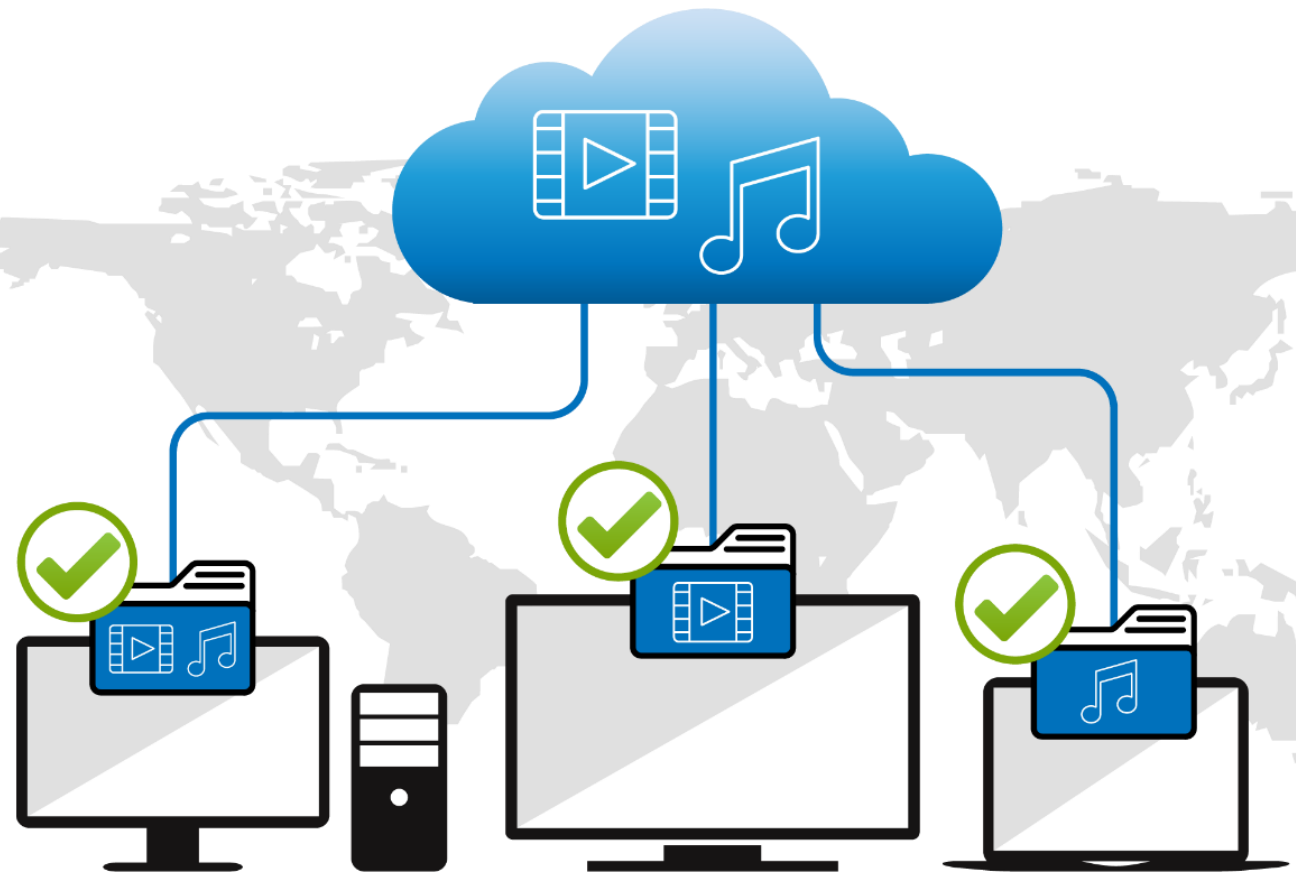
# 多接條網路線也可以提高網速

- 鏈路聚合 (LAG, Link Aggregation) 可以讓多條網路線的網速相加，變成更大的網路頻寬
- 快速又直接的讓網速更上一層樓



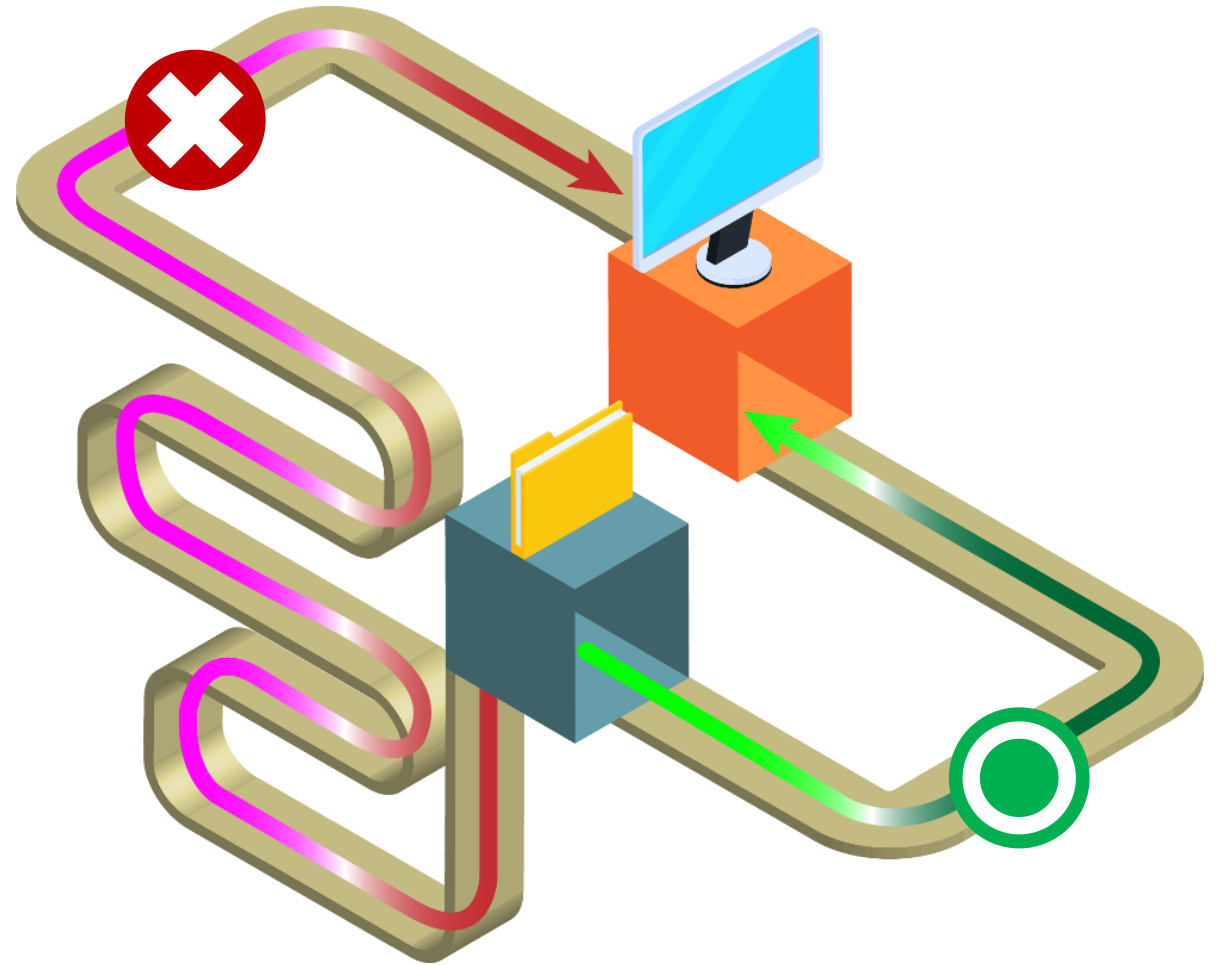
# 準確記錄及配發影音串流給設備

- 群組監聽協定 (IGMP snooping) 可以準確記錄所有影音串流分配方式
- 不會因為誤傳或少傳封包導致影音中斷或品質不佳



# 隨時優化網路傳輸路徑

- 透過生成樹協定 (RSTP, Rapid Spanning Tree Protocol) 隨時監控及優化網路傳輸路徑
- 網路架構再複雜, 檔案永遠用最快的路徑來傳輸



# 軟體版本檢查



- 交換機自動偵測有無新軟體
- 一鍵自動更新
- 手動更新



# 當然 QSW-M2106PR-2S2T 還有很多功能

透過流量控制 (IEEE 802.3x)  
監看網路擁塞情況, 避免掉包



週邊設備偵測 (LLDP), 讓  
管理者一目了然那些設備  
連接到交換機



節能設計 (IEEE 802.3az) 及  
風扇轉速控制, 減少不必要的  
電能消耗



QNAP 提供完整  
10GbE/2.5GbE解決方案，  
讓你網路不卡關



# QNAP 2.5GbE 非網管型交換器

## QSW-1108-8T



- 8x 2.5GbE RJ45
- Auto loop detected
- Desktop design
- Fan less design

## QSW-2104-2T



- 4x 2.5GbE RJ45
- 2x 10GbE RJ45 (2T)
- Auto loop detected
- Desktop design
- Fan less design

## QSW-1105-5T



- 5x 2.5GbE RJ45
- Auto loop detected
- Desktop design
- Fan less design

## QSW-2104-2S



- 4x 2.5GbE RJ45
- 2x 10GbE SFP+ (2S)
- Auto loop detected
- Desktop design
- Fan less design

# QNAP 2.5GbE 網管型交換器

## QSW-M2106-4C

NEW



- 6x 2.5GbE RJ45
- 4x 10GbE SFP+/RJ45 combo
- Layer 2 Management
- Desktop design

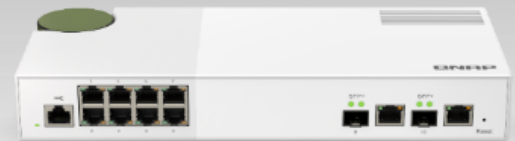
## QSW-M2106-4S

NEW



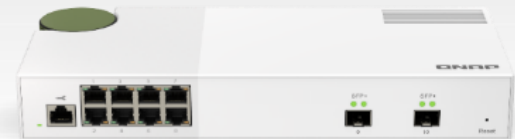
- 6x 2.5GbE RJ45
- 4x 10GbE SFP+
- Layer 2 Management
- Desktop design

## QSW-M2108-2C



- 8x 2.5GbE RJ45
- 2x 10GbE SFP+/RJ45 combo
- Layer 2 Management
- Desktop design

## QSW-M2108-2S



- 8x 2.5GbE RJ45
- 2x 10GbE SFP+
- Layer 2 Management
- Desktop design

## QSW-M2106R-2S2T

NEW



- 6x 2.5GbE RJ45
- 2x 10GbE RJ45
- 2x 10GbE SFP+
- Layer 2 Management
- Rack mount and 2 for 1 design

## QSW-M2106PR-2S2T

NEW



- 6x 2.5GbE RJ45 with 802.3bt (90W)
- 2x 10GbE RJ45 with 802.3bt (90W)
- 2x 10GbE SFP+
- Power budget: 310W
- Layer 2 Management
- Rack mount and 2 for 1 design

## QSW-M2116P-2T2S



- 16x 2.5GbE RJ45 with 802.3at(30W)
- 2x 10GbE RJ45 with 802.3 bt(90W)
- 2x 10GbE SFP+
- Layer 2 Management
- Power budget: 280W
- Rackmount design

## QSW-M2108R-2C



- 8x 2.5GbE RJ45
- 2x 10GbE SFP+/RJ45 combo
- Layer 2 Management
- Rack mount and 2 for 1 design



# 如果預算足夠，您也可以選擇全10GbE交換器

## Managed switches

### QSW-IM1200-8C



- 3 x powers with redundant design
- 4 x10GbE SFP+
- 8 x10GbE SFP+/RJ45 combo
- Layer 2 management
- Rackmount
- Fan less

### QSW-M1204-4C



- 8x 10GbE SFP+
- 4x 10GbE SFP+/RJ45 combo
- Layer 2 Management
- Rack mount design

### QSW-M804-4C



- 4x 10GbE SFP+
- 4x 10GbE SFP+/RJ45 combo
- Layer 2 Management
- Rack mount design

### QSW-M1208-8C



- 4x 10GbE SFP+
- 8x 10GbE SFP+/RJ45 combo
- Layer 2 Management
- Rack mount design

## Unmanaged switches

### QSW-1208-8C



- 4x 10GbE SFP+
- 8x 10GbE SFP+/RJ45 combo
- Rack mount design

# 搭配內建2.5GbE桌上型NAS

SMB



TS-873A

TS-673A

TS-473A

Enterprise



TS-h886

TS-h686

SMB



TVS-675

SMB



TBS-464

TS-453E

TS-253E

Home/SOHO



TS-364

TS-462

TS-262

TS-433

# 搭配內建10GbE桌上型NAS

With 10GbE BASE-T



TVS-h1688X /  
TVS-h1288X



TVS-872XT / TVS-672XT  
/ TVS-472XT



TS-832PX



TS-431X3

10GbE + 2.5GbE

With 10GbE BASE-T



TS-i410X

# 搭配機架型2.5/5/10GbE NAS

With 10GbE BASE-T or SFP+



TS-1886XU-RP R2



TS-hx83XU-RP



TS-hx77XU-RP



TS-hx87XU-RP



TS-435XeU



TS-x32PXU



TS-873AeU/873AeU-RP/1273AU-RP/1673AU-RP



TS-X64U/X64eU series



TS-x32PXU



+ 2 x 10GbE SFP+

With 2.5GbE BASE-T



TS-435XeU



TS-873AeU/873AeU-RP/1273AU-RP/1673AU-RP



TS-X64U/X64eU series



TS-x32PXU

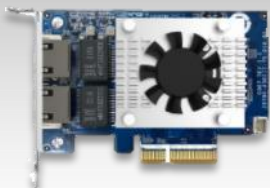
+ 2 x 10GbE SFP+



# 網路擴充: 豐富的各式PCIe網路擴充卡

## 10GbE series

**QXG-10G2TB**



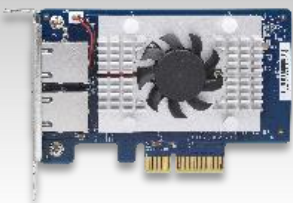
2 x RJ45

**QXG-10G2T-X710**



2 x RJ45

**QXG-10G2T-X107**



2 x RJ45

**QXG-10G1TB**



1 x RJ45

## 5GbE series

**QXG-5G Family**



1 x RJ45



2 x RJ45



4 x RJ45

## 2.5GbE series

**QXG-2.5G Family**



1 x RJ45



2 x RJ45



4 x RJ45



# 網路擴充：豐富的各式攜帶式網路擴充卡

## QNA-UC5G1T



### USB 3.2 Gen 1

- RJ45 NBASE-T
- 4速: 5G/2.5G/1G/100M

透過隨插即用的 USB 為你的筆記型電腦或 PC 升級成 5GbE 的高速網路

<https://www.qnap.com/en/product/qna-uc5g1t>

## QNA-T310G1T



### Thunderbolt 3

- 10GbE NBASE-T port
- 5 速: 10G/5G/2.5G/1G/100M

透過 Thunderbolt 3 快速將你的筆記型電腦或 PC 升級到 10GbE 的高速網路

<https://www.qnap.com/en/product/qna-tb-10gbe>

# QNAP



PoE++



2.5GbE



10GbE



2 in 1U / 半機櫃式

# QSW-M2106PR-2S2T

## 是您最好的選擇！

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