

# QM2 PCIe Cards

Flexible and versatile, boosts performance and functionality

**10GbE 10GBASE-T network port\***

Comes with an RJ45 copper-wire 10GBASE-T module. Backwards compatible with 5GbE/2.5GbE/1GbE/100MbE connections.

**M.2 SSD status indicator**

Monitor M.2 SSD status and activities.

**Custom aluminum-alloy cooling module**

Prevents overheating and thermal throttling to ensure consistent high performance.

**Smart and quiet fan**

Automatically adjusts based on SSD and system temperatures.

**Adjustable screws for varied SSD thickness**

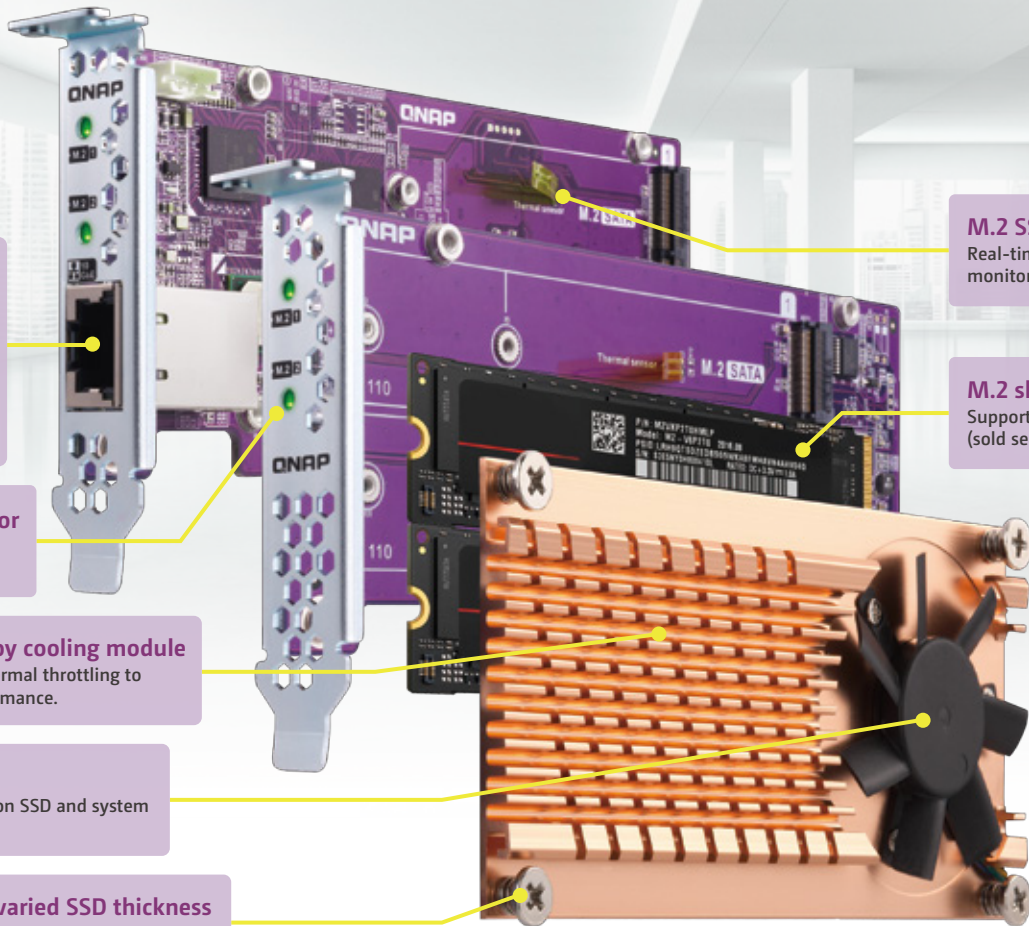
Can fit both single-sided and dual-sided SSDs.

**M.2 SSD thermal sensor**

Real-time temperature monitoring.

**M.2 slots**

Supports two/four M.2 SSDs (sold separately).



M.2 SSD slots



10GbE 10GBASE-T\*  
\*Specific models only



Qtier



SSD cache



Cooling Module

**M.2 SATA SSD**

QM2-2S  
QM2-2S-220A

QM2-2S10G1T

QM2-4S-240

**M.2 NVMe SSD (PCI Express 2.0)**

QM2-2P  
QM2-2P-244A

QM2-2P10G1T

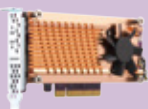
QM2-4P-284

**M.2 NVMe SSD (PCI Express 3.0)**

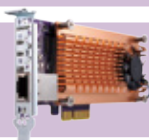
QM2-2P-344  
QM2-2P-384

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

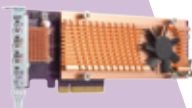
2 x M.2 SSD



2 x M.2 SSD & 10GbE (10GBASE-T)



4 x M.2 SSD

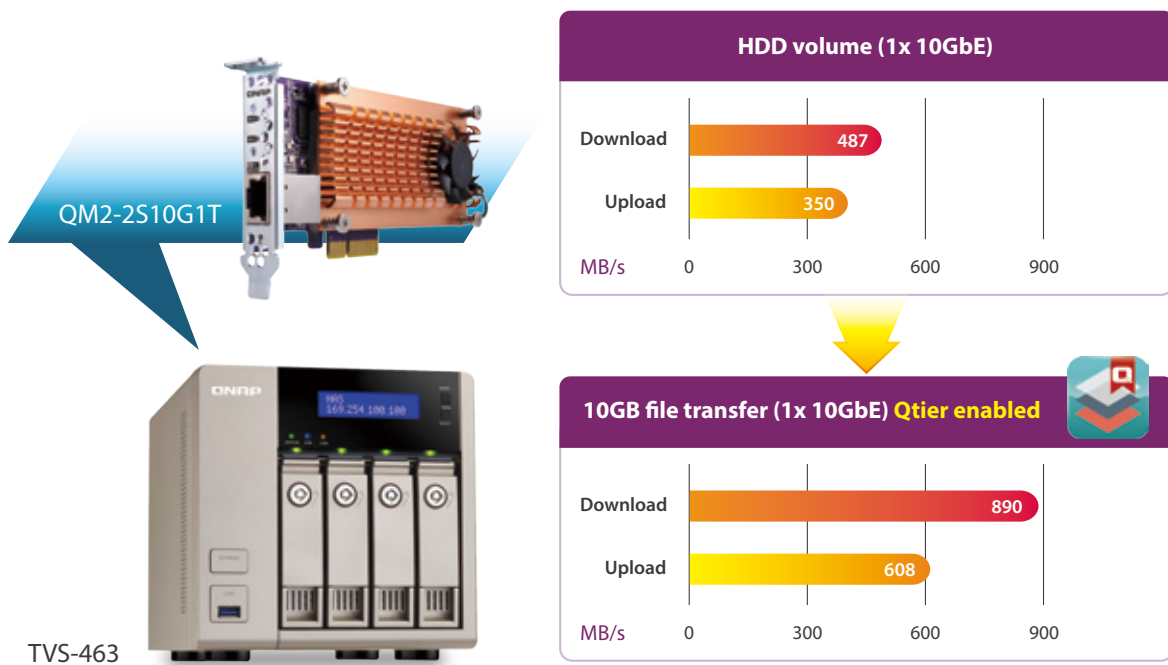


# QM2 PCIe Cards

## QM2: Add M.2 SSDs and 10GbE RJ45 Connectivity to Your NAS

- ✓ Add M.2 SSD without needing to use a drive bay
- ✓ Boost system performance and optimize storage utilization with SSD caching and Qtier Technology
- ✓ Provides 10GBASE-T connectivity and backwards compatibility with 5GbE/2.5GbE/1GbE/100MbE (Specific models only)

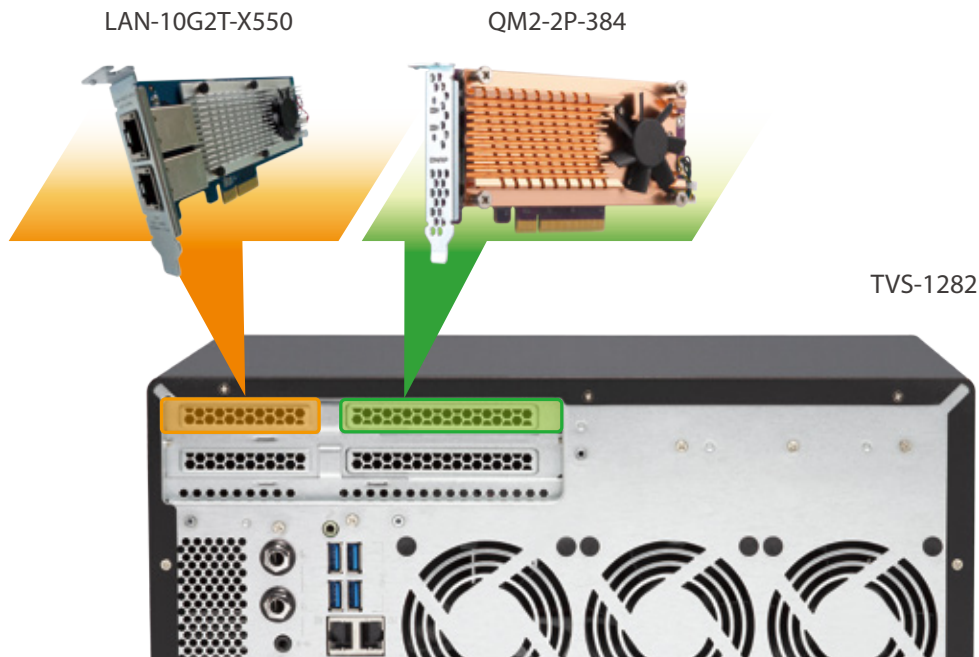
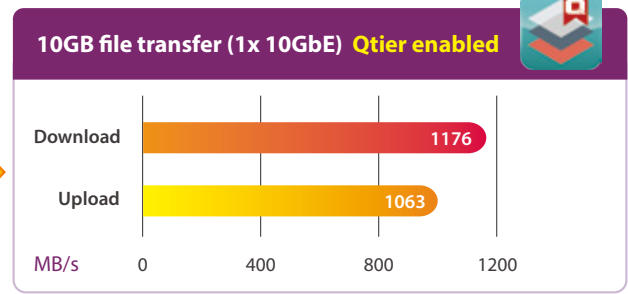
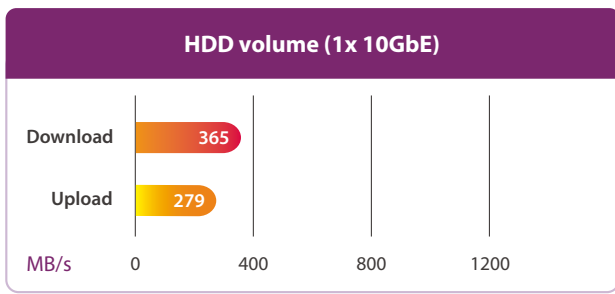
The QM2 is a PCIe card that adds support for M.2 SSDs (and 10GbE/5GbE/2.5GbE/ 100MbE RJ45 connectivity on specified models) to a QNAP NAS, effectively enhancing NAS storage performance and data transmission capabilities. QM2 cards are available with two or four M.2 22110/2280 SSD slots, allowing the flexible setup of SSD caching to boost performance, or the creation of a storage volume in a tiered storage pool to optimize storage efficiency with Qtier Technology. With SSDs and 10GbE connectivity combined into one PCIe card, QM2 cards can help construct a fully-optimized 10GbE environment for bandwidth-demanding applications.



## Boost the IOPS performance and storage capacity of your PC/workstation

- ✓ Easily upgrade your PC/workstation
- ✓ An flexible and economic solution to boost system performance
- ✓ Increase working efficiency for data-intensive tasks and team collaboration

The PCIe QM2 expansion card allows you to easily add M.2 SSDs and 10GbE RJ45 connectivity (specific models only) to your PC/workstation. Compared with the SATA interface, the QM2's PCIe interface provides higher bandwidth to deliver faster speed and data access.



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; 2 x M.2 SATA SSD 256GB or 2 x M.2 PCIe SSD 256GB  
 Client PC:  
 Intel® Core™ i7-4770 3.40GHz CPU; 16GB RAM; Intel 10GbE NIC ; Windows® 10 64-bit; 10GB file transfer by Robocopy

### **Enhanced performance for demanding applications**

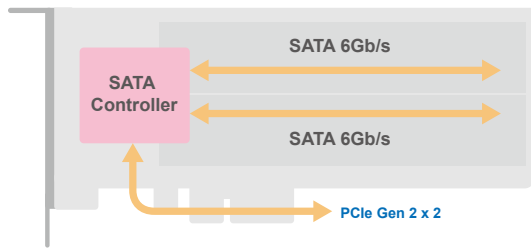
The QM2 expansion card allows for adding M.2 SSDs to your PC/workstation, providing an ideal solution for increasing storage capacity and IOPS performance. It is ideal for performance-demanding applications, such as inline video-editing, gaming and more.

### **Add 10GbE connectivity (specific models only)**

Some QM2 PCIe cards also feature a 10GBASE-T Multi-Gigabit (10G/5G/2.5G/1G/100M) network port to expand the network connectivity of your PC/workstation (10GbE connectivity requires downloading a driver).

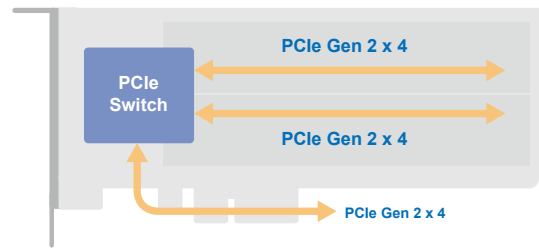
# QM2 PCIe Cards

## Hardware Specifications



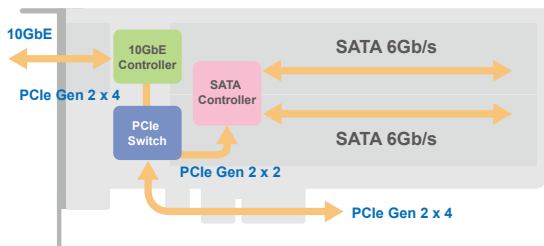
Ordering SKU	QM2-2S
Interface	Ordering SKU PCI Express 2.0 x2
Supported M.2 SSD Types	2 x M.2 2280/22110 SATA SSD
Connector	B+M Key
10GbE Support	N/A
Dimensions (Length x Width x Height)	157(L) x 68.9(W) x 20.6(H) mm; 6.18(L) x 2.71(W) x 0.81(H) inch

Ordering SKU	QM2-2S-220A
Interface	PCI Express 2.0 x2
Supported M.2 SSD Types	2 x M.2 2280/22110 SATA SSD
Connector	B+M Key
10GbE Support	N/A
Dimensions (Length x Width x Height)	147.15(L) x 68.9(W) x 20.6(H) mm; 5.79(L) x 2.71(W) x 0.81(H) inch

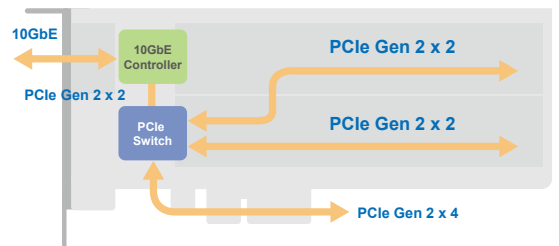


Ordering SKU	QM2-2P
Interface	PCI Express 2.0 x4
Supported M.2 SSD Types	2 x M.2 2280/22110 PCIe SSD
Connector	M Key
10GbE Support	N/A
Dimensions (Length x Width x Height)	157(L) x 68.9(W) x 20.6(H) mm; 6.18(L) x 2.71(W) x 0.81(H) inch

Ordering SKU	QM2-2P-244A
Interface	PCI Express 2.0 x4
Supported M.2 SSD Types	2 x M.2 2280/22110 PCIe (Gen2 x2) SSD
Connector	M Key
10GbE Support	N/A
Dimensions (Length x Width x Height)	147.15(L) x 68.9(W) x 20.6(H) mm; 5.79(L) x 2.71(W) x 0.81(H) inch

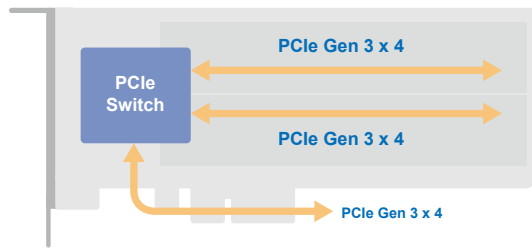


Ordering SKU	QM2-2S10G1T
Interface	PCI Express 2.0 x4
Supported M.2 SSD Types	2 x M.2 2280 SATA SSD
Connector	B+M Key
10GbE Support	1 x 10GBASE-T 10GbE LAN support (backwards compatible with 5GbE/2.5GbE/1GbE/100MbE)
Dimensions (Length x Width x Height)	157(L) x 68.9(W) x 20.6(H) mm; 6.18(L) x 2.71(W) x 0.81(H) inch

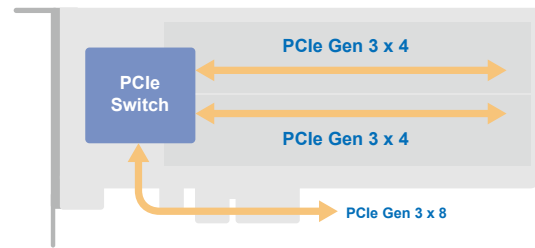


Ordering SKU	QM2-2P10G1T
Interface	PCI Express 2.0 x4
Supported M.2 SSD Types	2 x M.2 2280 PCIe (Gen 2 x4) SSD
Connector	M Key
10GbE Support	1 x 10GBASE-T 10GbE LAN support (backwards compatible with 5GbE/2.5GbE/1GbE/100MbE)
Dimensions (Length x Width x Height)	157(L) x 68.9(W) x 20.6(H) mm; 6.18(L) x 2.71(W) x 0.81(H) inch

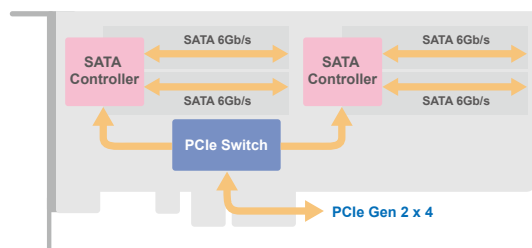
• QTS 4.3.4 is required. For compatible NAS models, visit [www.qnap.com/compatibility](http://www.qnap.com/compatibility)  
 • Model specifications are subject to change without notice. Please refer to [www.qnap.com](http://www.qnap.com) for the latest information.



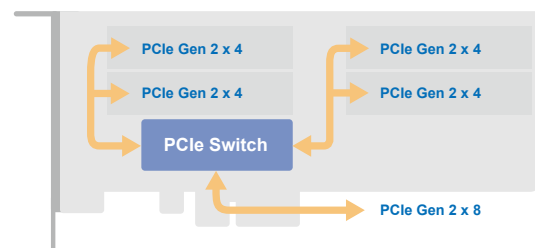
<b>Ordering SKU</b>	<b>QM2-2P-344</b>
<b>Interface</b>	PCI Express 3.0 x4
<b>Supported M.2 SSD Types</b>	2 x M.2 2280 PCIe (Gen 3 x4) SSD
<b>Connector</b>	M Key
<b>10GbE Support</b>	N/A
<b>Dimensions (Length x Width x Height)</b>	147.15(L) x 68.9(W) x 20.6(H) mm; 5.79(L) x 2.71(W) x 0.81(H) inch



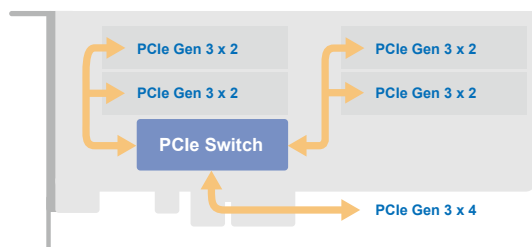
<b>Ordering SKU</b>	<b>QM2-2P-384</b>
<b>Interface</b>	PCI Express 3.0 x8
<b>Supported M.2 SSD Types</b>	2 x M.2 2280 PCIe (Gen 3 x4) SSD
<b>Connector</b>	M Key
<b>10GbE Support</b>	N/A
<b>Dimensions (Length x Width x Height)</b>	147.15(L) x 68.9(W) x 20.6(H) mm; 5.79(L) x 2.71(W) x 0.81(H) inch



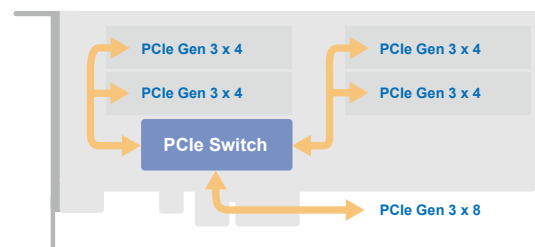
<b>Ordering SKU</b>	<b>QM2-4S-240</b>
<b>Interface</b>	PCI Express 2.0 x4
<b>Supported M.2 SSD Types</b>	4 x M.2 2280 SATA SSD
<b>Connector</b>	B+M Key
<b>10GbE Support</b>	N/A
<b>Dimensions (Length x Width x Height)</b>	204.95(L) x 68.9(W) x 20.6(H) mm; 8.07(L) x 2.71(W) x 0.81(H) inch



<b>Ordering SKU</b>	<b>QM2-4P-284</b>
<b>Interface</b>	PCI Express 2.0 x8
<b>Supported M.2 SSD Types</b>	4 x M.2 2280 PCIe (Gen 2 x4) SSD
<b>Connector</b>	M Key
<b>10GbE Support</b>	N/A
<b>Dimensions (Length x Width x Height)</b>	204.95(L) x 68.9(W) x 20.6(H) mm; 8.07(L) x 2.71(W) x 0.81(H) inch








<b>Ordering SKU</b>	<b>QM2-4P-342</b>
<b>Interface</b>	PCI Express 3.0 x4
<b>Supported M.2 SSD Types</b>	4 x M.2 2280 PCIe (Gen 3 x2) SSD
<b>Connector</b>	M Key
<b>10GbE Support</b>	N/A
<b>Dimensions (Length x Width x Height)</b>	204.95(L) x 68.9(W) x 20.6(H) mm; 8.07(L) x 2.71(W) x 0.81(H) inch















<b>Ordering SKU</b>	<b>QM2-4P-384</b>
<b>Interface</b>	PCI Express 3.0 x8
<b>Supported M.2 SSD Types</b>	4 x M.2 2280 PCIe (Gen 3 x4) SSD
<b>Connector</b>	M Key
<b>10GbE Support</b>	N/A
<b>Dimensions (Length x Width x Height)</b>	204.95(L) x 68.9(W) x 20.6(H) mm; 8.07(L) x 2.71(W) x 0.81(H) inch

# QM2 PCIe Cards

## Support Models

NAS model SSD slot type	TS-531P TS-531X TS-831X	TS-x31XU	TS-1635	TS-832X	TS-x32XU	TS-1635AX	TS-x53B
							
<b>SATA III</b>							
QM2-2S	v	v	v	v	v	v	v
QM2-2S10G1T	v	v	v	v	v	v	v
QM2-2S-220A	v	v	v	v	v	v	v
QM2-4S-240A	-	-	-	-	-	v	-
<b>PCIe Gen.2</b>							
QM2-2P	v	v	v	v	v	v	v
QM2-2P10G1T	v	v	v	v	v	v	v
QM2-2P-244A	v	v	v	v	v	v	v
QM2-4P-284	-	-	-	-	-	v	-
<b>PCIe Gen.3</b>							
QM2-2P-344	v	v	v	v	v	v	v
QM2-2P-384	v	v	v	v	v	v	v
QM2-4P-342	-	-	-	-	-	v	-
QM2-4P-384	-	-	-	-	-	v	-

NAS model SSD slot type	TS-x73U	TS-x77	TS-x77XU	TS-x79	TS-x79U TS-x79U-SAS	TS-x80	TS-x80U TS-x80U-SAS
							
<b>SATA III</b>							
QM2-2S	v	v	v	v	v	v	v
QM2-2S10G1T	v	v	v	v	v	v	v
QM2-2S-220A	v	v	v	v	v	v	v
QM2-4S-240A	v	v	v	-	-	-	v
<b>PCIe Gen.2</b>							
QM2-2P	v	v	v	v	v	v	v
QM2-2P10G1T	v	v	v	v	v	v	v
QM2-2P-244A	v	v	v	v	v	v	v
QM2-4P-284	v	v	v	-	-	-	v
<b>PCIe Gen.3</b>							
QM2-2P-344	v	v	v	v	v	v	v
QM2-2P-384	v	v	v	v	v	v	v
QM2-4P-342	v	v	v	-	-	-	v
QM2-4P-384	v	v	v	-	-	-	v

TS-x53BU	TVS-x63	TS-x63U TS-x63XU	TVS-x70	TS-870U TS-1270U	TVS-x71	TVS-x71U	TS-x73
							
v	v	v	v	v	v	v	v
v	v	v	v	v	v	v	v
v	v	v	v	v	v	v	v
-	-	-	-	-	-	-	v
v	v	v	v	v	v	v	v
v	v	v	v	v	v	v	v
v	v	v	v	v	v	v	v
-	-	-	-	-	-	-	v
v	v	v	v	v	v	v	v
v	v	v	v	v	v	v	v
-	-	-	-	-	-	-	v
-	-	-	-	-	-	-	v

TVS-x82	TVS-x82T	TVS-1582TU	TS-1685	TES-x85U	TDS-x89U
					
v	v	v	-	-	-
v	v	v	-	-	-
v	v	v	v	v	v
v	-	v	v	v	v
v	v	v	-	-	-
v	v	v	-	-	-
v	v	v	v	v	v
v	-	v	v	v	v
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v	v	v	v	v	v
v	-	v	v	v	v
v	-	v	v	v	v

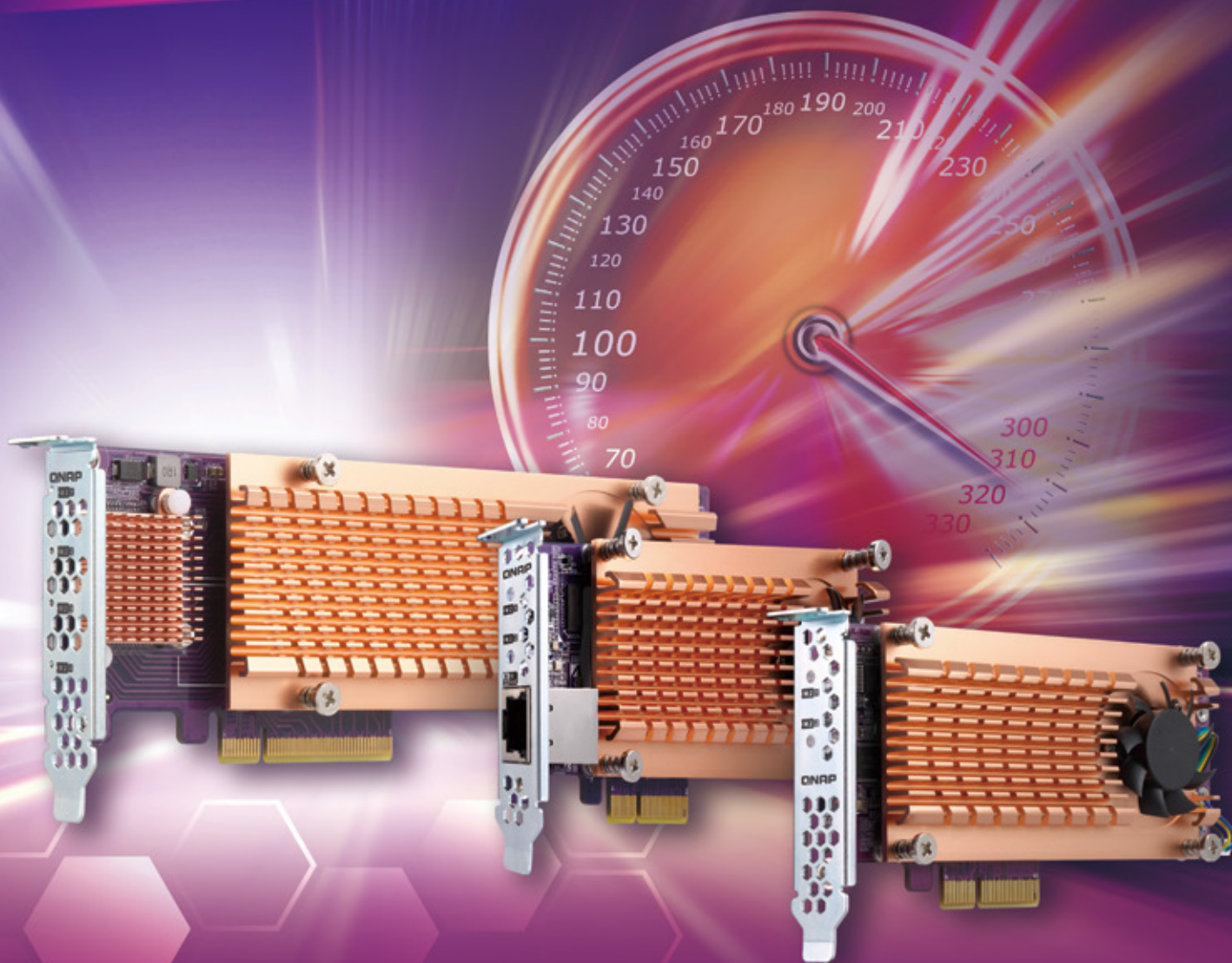
• This table shows the compatible models that have been released as of September, 2018. For more information, scan the below QR code or visit our networking product pages on the QNAP website.



[www.qnap.com](http://www.qnap.com)

# Tiering on Demand and get a performance boost

Accelerates IOPS performance and reduces latency



## QNAP SYSTEMS, INC.

TEL : +886-2-2641-2000 FAX: +886-2-2641-0555 Email: [qnapsales@qnap.com](mailto:qnapsales@qnap.com)

Address : 3F, No.22, Zhongxing Rd., Xizhi Dist., New Taipei City, 221, Taiwan

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[www.elmatech.pl](http://www.elmatech.pl) [www.sklep.elmatech.pl](http://www.sklep.elmatech.pl)

30-702 Kraków, ul.Lipowa 3

tel./fax +48 12 294-28-35



### Netherlands (Warehouse Services)

Email: [nlsales@qnap.com](mailto:nlsales@qnap.com)  
TEL: +31(0)107600830

### China

Email: [cnsales@qnap.com](mailto:cnsales@qnap.com)  
TEL: +86-400-028-0079

### Thailand

Email: [thsales@qnap.com](mailto:thsales@qnap.com)  
TEL: +66-2-5415988

### Japan

Email: [jpsales@qnap.com](mailto:jpsales@qnap.com)  
FAX: 03-6435-9686

### US

Email: [usasales@qnap.com](mailto:usasales@qnap.com)  
TEL: +1-909-595-2782

### India

Email: [indiasales@qnap.com](mailto:indiasales@qnap.com)

### Germany

Email: [desales@qnap.com](mailto:desales@qnap.com)

### France

Email: [frsales@qnap.com](mailto:frsales@qnap.com)



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201809 (EN) A