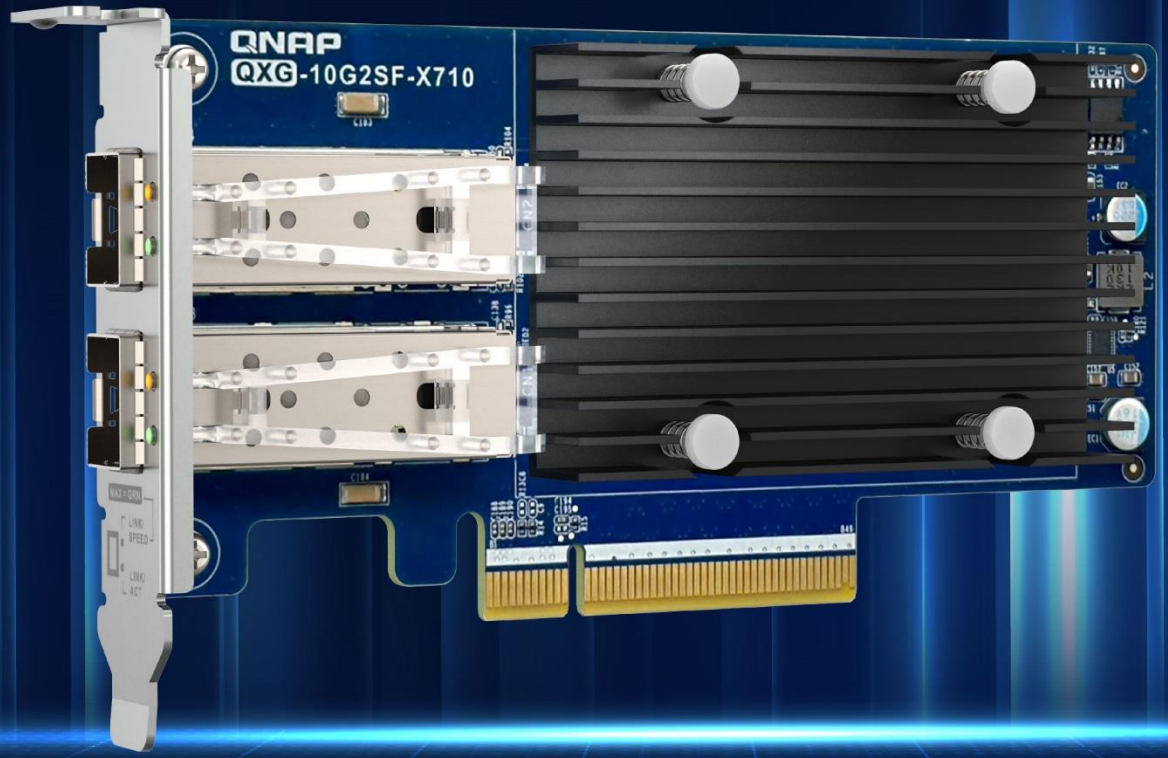
QNAP



QXG-10G2SF-X710

Dual-port, 10GbE SFP+ Intel X710 network expansion card for concurrent data access and video collaboration

Compatible with QNAP NAS, Windows®, and Linux® devices

intel

10GbE SFP+

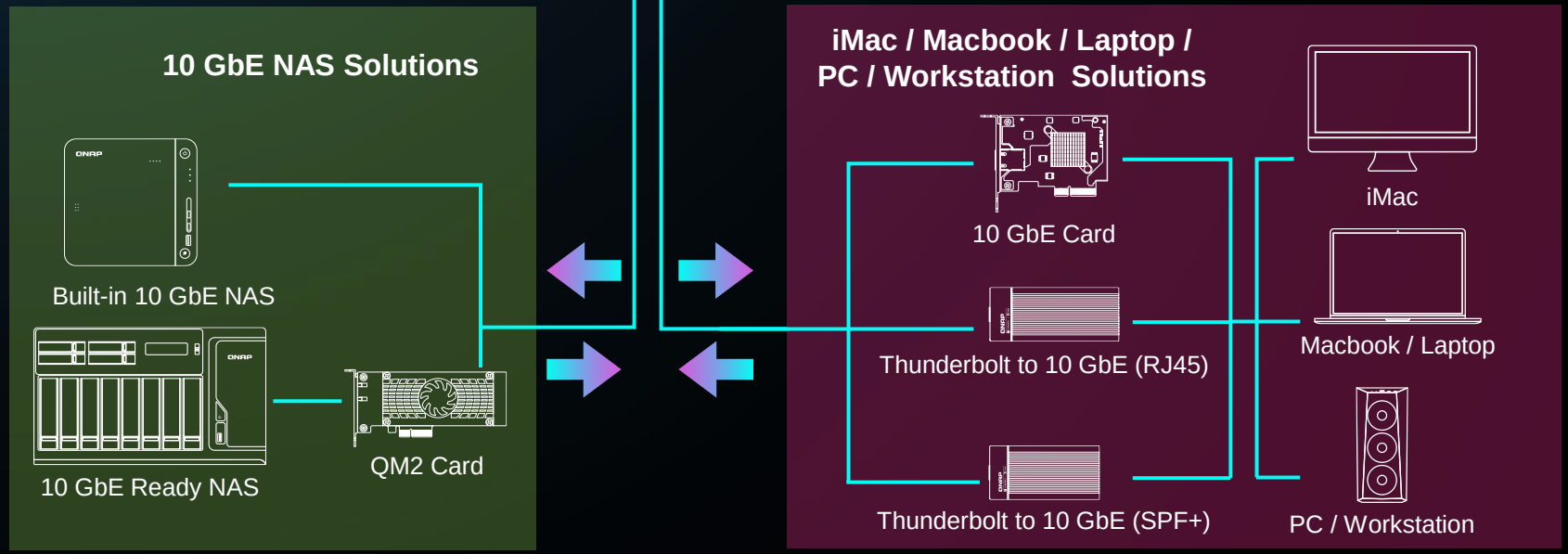
10/1G 2-speed

Brackets for NAS & PC/Server

10GbE Network, the Standard for High Productivity

10GbE Connectivity: The Future is Now!

QNAP has a complete 10GbE product architecture to help you easily upgrade to a high-speed environment!!!



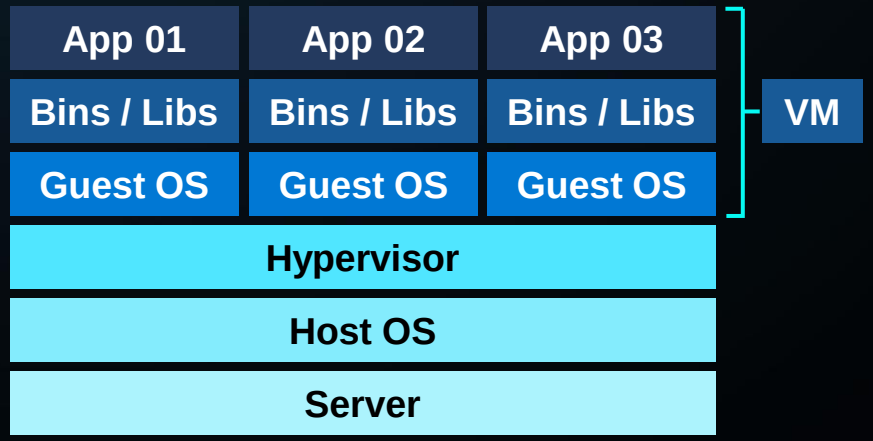
The high specification 10GbE network is no longer just for enterprises. It's also a must have for professional audiovisual content creators. With 10GbE bandwidth, SOHO studios can maintain smooth operations and break through the efficiency barrier. Whether it's for mult-user collaboration, multimedia transfer and streaming, 4K/8K video editing and rendering, or online video editing and post-production.

Transferring an hour of 4K video with a file size of approximately 300GB takes about 50 minutes on a previous 1GbE network, but upgrading to a 10GbE network takes about 5 minutes to complete the same task – 10 times faster! This dramatically reduces waiting time and increases efficiency in a work environment where every second counts. A 10GbE network can be said to be the standard for high productivity!!!

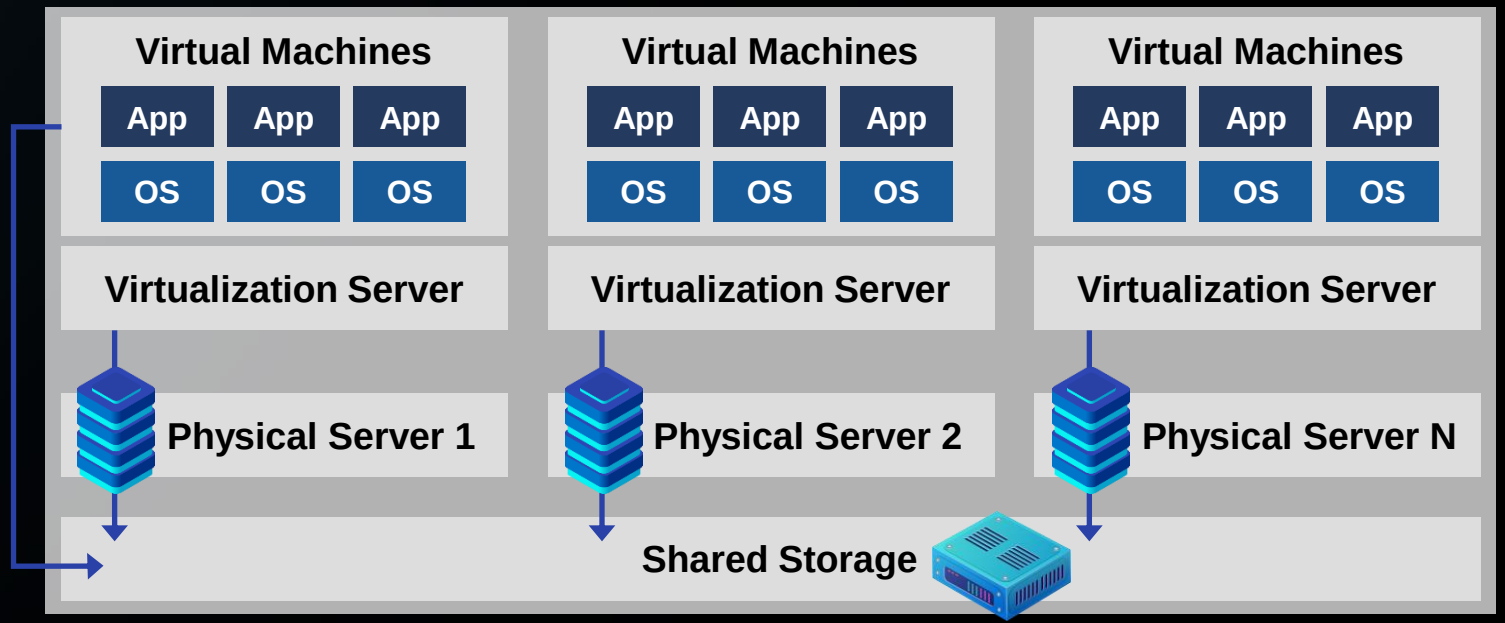
Virtual Machine (VM) Offers Multiple Advantages for Developers & Users

A must-have upgrade for program developers and technology enthusiasts!

VM provides a wide range of technical support for development. Application developers can use VM to create and manage development and test environments. These environments allow developers to run and test applications on different OS, ensuring cross-platform compatibility. For technology enthusiasts, VM can be used to create virtual desktop environments to run different OS, or to isolate different applications in separate virtual environments for increased security and stability. QXG-10G2SF-X710 provides a variety of VM-related features, including iSCSI, SR-IOV, etc., to increase your efficiency when using VM. If you are using VM, don't miss this opportunity to upgrade; if you are planning to use VM, QXG-10G2SF-X710 is the best way to get started with VM applications.



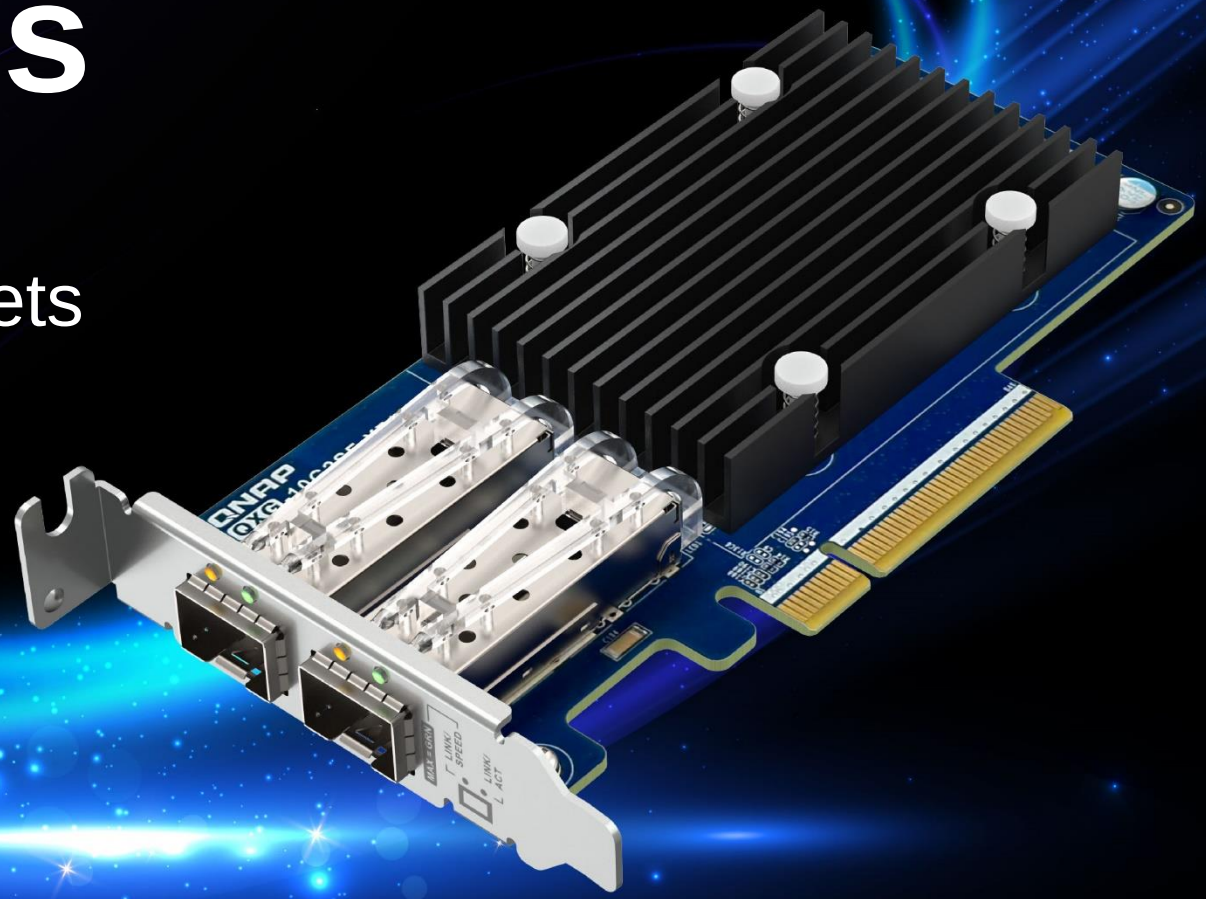
Source: Microsoft Azure



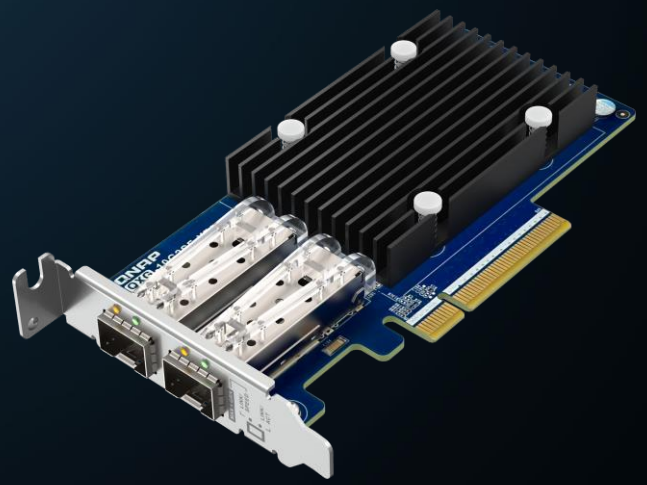
QNAP

Specifications

2-port Intel 10GbE SFP+ NIC,
Easily build high-speed intranets



QNAP 2-port 10GbE SFP+ Network Card
QXG-10G2SF-X710



Dual-Port 10GbE SFP+
Half-Height Network Card

- 2 x SFP+ 10GbE Ports
- 10G/1G Dual-Speed

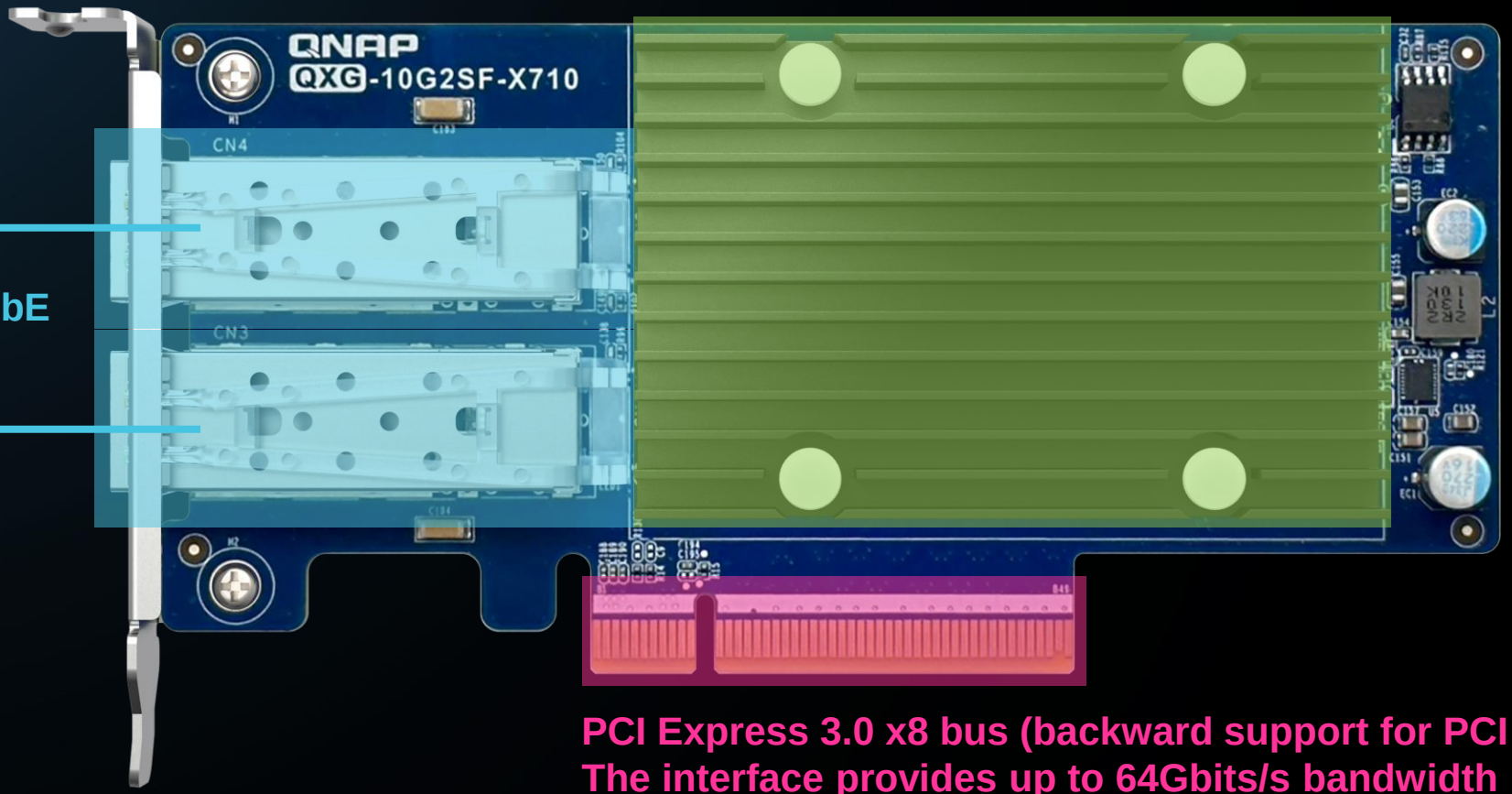
QXG-10G2SF-X710

- Support iSCSI
- Support SR-IOV

Intel® Ethernet Controller X710-BM2

QXG-10G2SF-X710 External Configuration

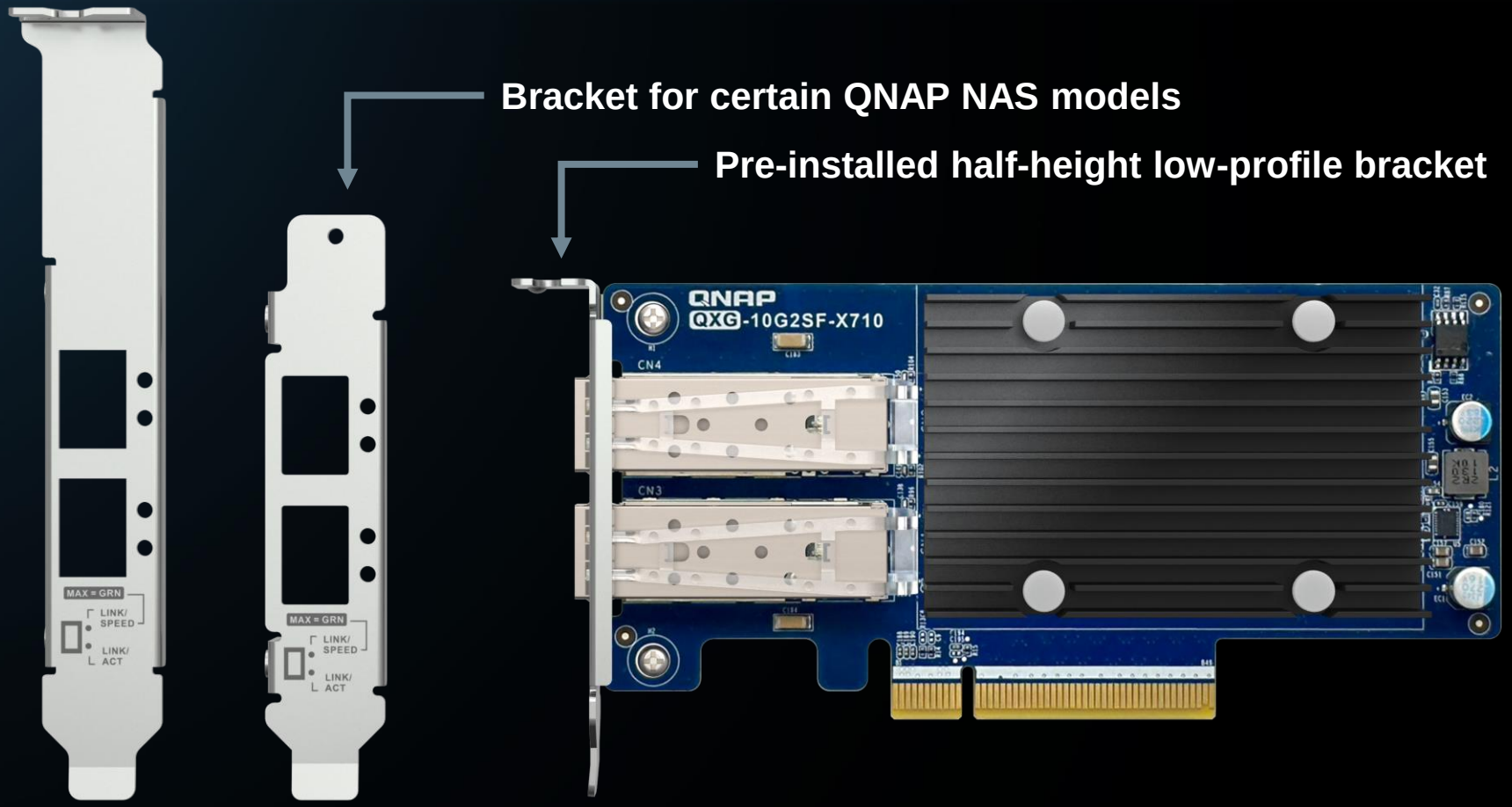
Chip Cooling Module: Maximum contact area with high quality heat sink, achieve the best heat dissipation effect



2 x SFP+ 10GbE Ports

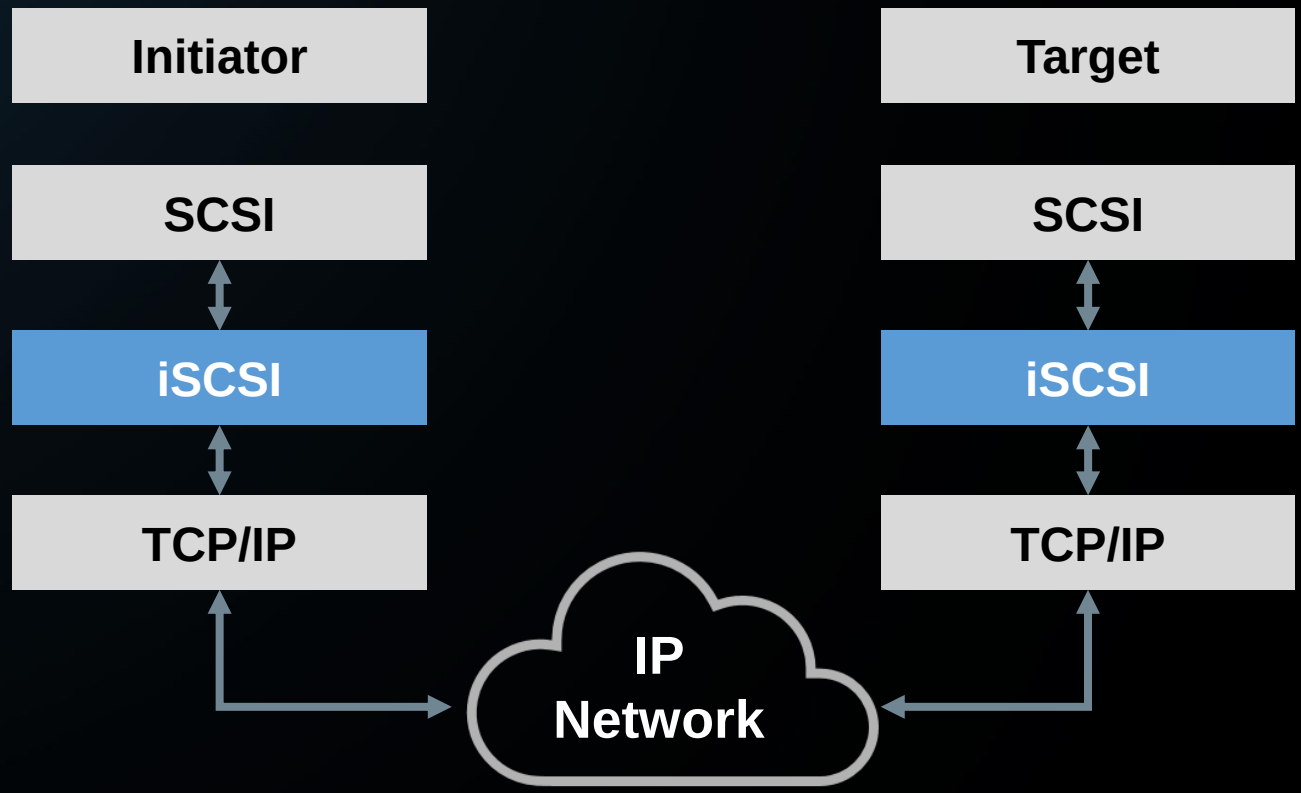
PCI Express 3.0 x8 bus (backward support for PCI Express 2.0)
The interface provides up to 64Gbits/s bandwidth

QXG-10G2SF-X710 with Various Brackets for Installation in any Kind of NAS and PC/Server Chasis



Support iSCSI for Flexible Operation

QXG-10G2SF-X710 supports iSCSI function, which allows you to use QNAP NAS as a virtual disk directly when it is connected to client device such as PC, server and VM. Clients can also partition and format virtual hard disks as if they were local hard disks. Virtual hard disks can also be used as storage expansion devices or backup destinations, giving you more virtualization flexibility.



Advantage and Benefits of SR-IOV

Advantage

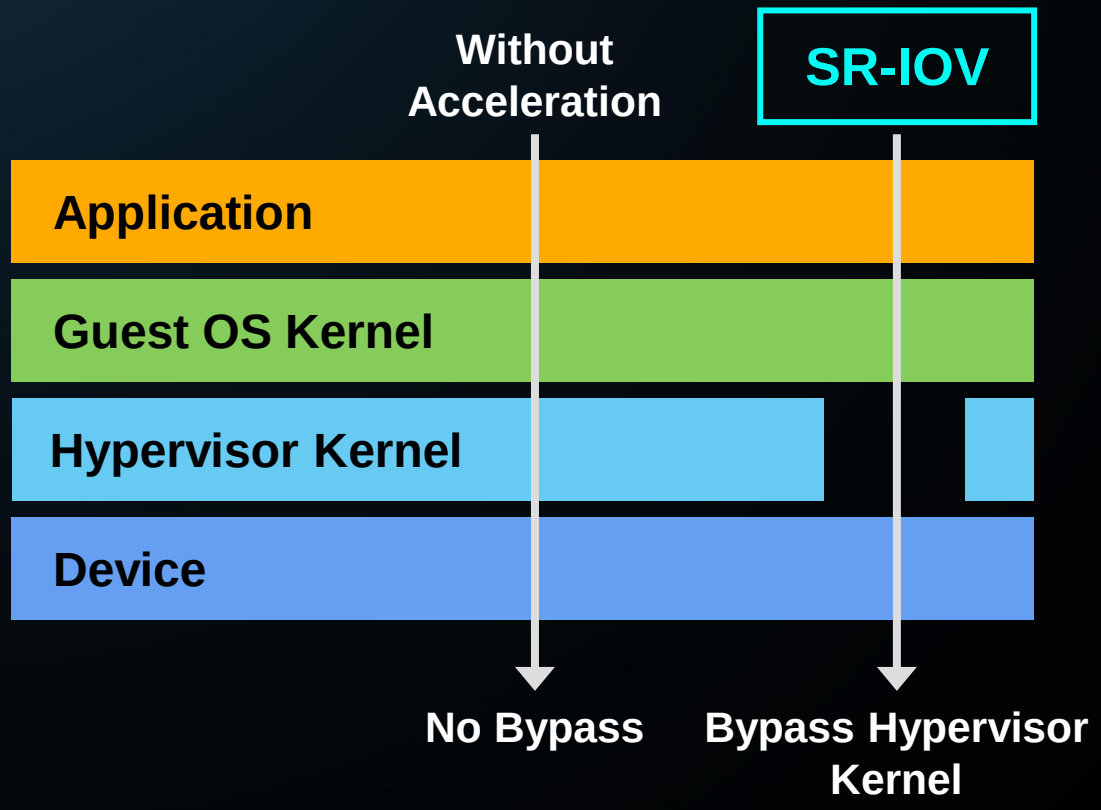
- Allow you to enjoy physical network service even on a virtual machine.

Benefit

- If you need real-time service, such as ticket booking, internet cash flow, audio and video services, etc. You can directly enjoy the speed of the physical NIC to reduce network latency.
- Reduce host CPU consumption
- Reduce network bandwidth consumption and improve network efficiency by at least 20%.

SR-IOV Support for Improved VM Networking Performance

QXG-10G2SF-X710 supports the SR-IOV function that can be installed on the NAS to allocate the bandwidth resource from the physical NIC directly to the VM, reducing network bandwidth consumption and improving network efficiency, as well as being more stable and reducing hypervisor CPU Utilization.



Hardware Acceleration

Advanced Virtual Machine Performance

Specific QNAP NAS models and appliances support pass-through assignment of hardware resources to VM that can dramatically increase VM performance and enhance VM application poptential.

Notes for the Use of SR-IOV

- SR-IOV requires a supported host model, BIOS version, and supported network card.
- SR-IOV requires minimum software versions: QTS 4.5.2, QuTS hero h4.5.2 or QVS 3.5.3.
- Currently, only Linux and FreeBSD driver are available for download from the Intel® website.
  - www.intel.com/content/www/us/en/developer/topic-technology/open/overview.html
- VM Live Migration is not available when using SR-IOV (Device Passthrough).
  - Because the physical device used for the original virtual machine has been dynamically migrated, the original physical device ID will not be recognized when you migrate the virtual machine to the new NAS.

QNAP Product List with SR-IOV support

Minimum BIOS Version

- Q05SAR01: TS-h686, TS-h886
- Q047AR03: TS-1886XU-RP, TS-h1886XU-RP
- QX31AR19: TDS-16489U, TDS-16489U R2
- Q09ARR07: TS-h1290FX
- Q03XAR15: TS-h2490FU
- Q053AR20: TDS-h2489FU

NAS Supported

- QuCPE-7010-D2123IT-8G
- QuCPE-7010-D2146NT-32G
- QuCPE-7010-D2166NT-64G

QuCPE Supported

Minimum BIOS Version

- Q03OAR05: QGD-1602P
- Q03OAR16: QGD-1602

QGD Supported

More Information of SR-IOV

QNAP

QXG-10G2SF-X710

Comes with a free **3-year** product warranty

More Information: QNAP Warranty Service

QNAP-Warranty Service Official Website
https://www.qnap.com/service/product-warranty/go/

Flexible Development of 10GbE in Your Device

Windows

Windows 11
Windows Server 2022

ubuntu

Ubuntu
20.04/22.04 LTS

QTS 5.0.1 or a later updated version

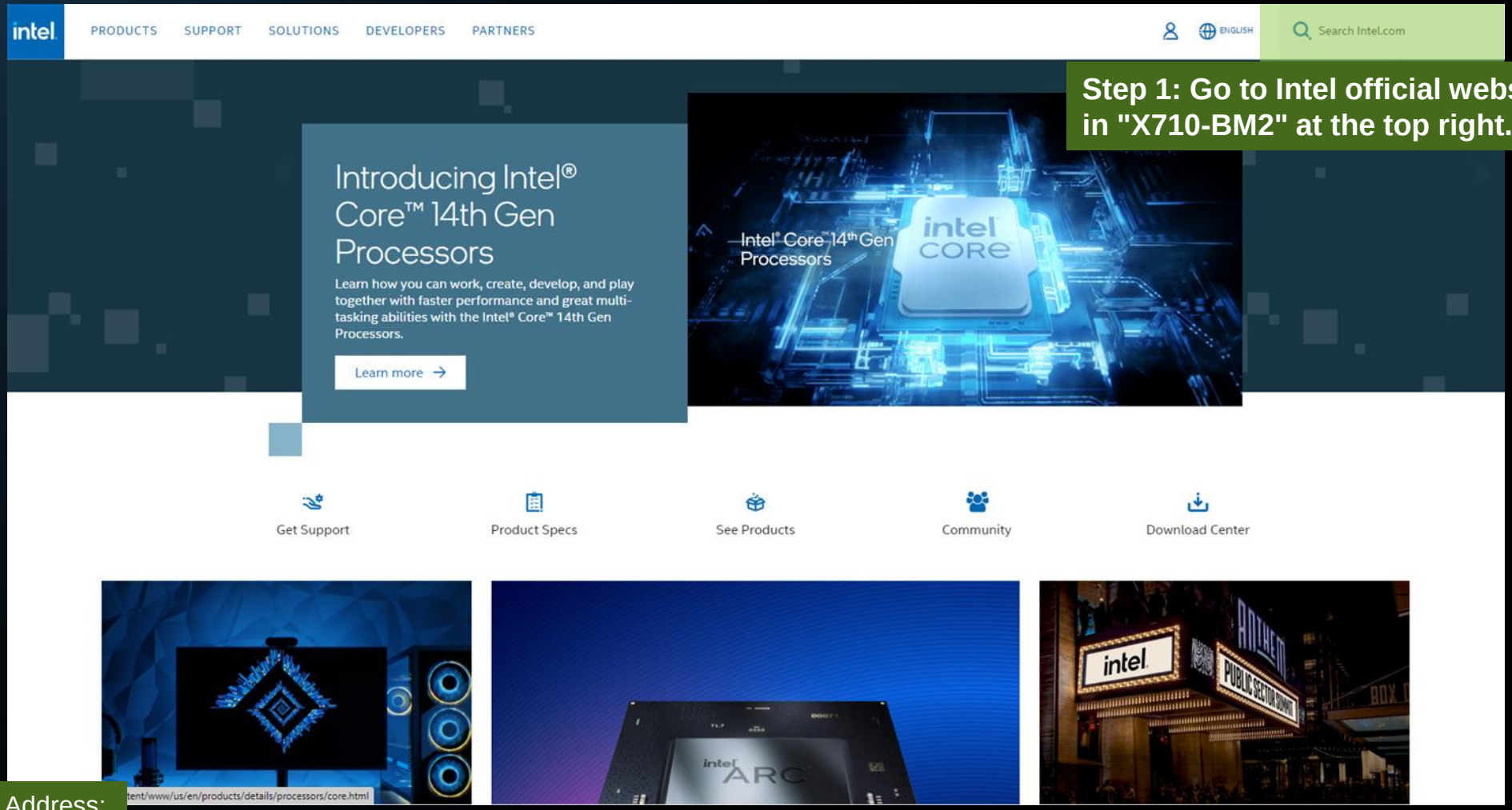
QTS

QuTS hero 5.0.1 or a later updated version

QuTS hero

Intel Official Website NIC Driver Download

QXG-10G2SF-X710 Driver Download

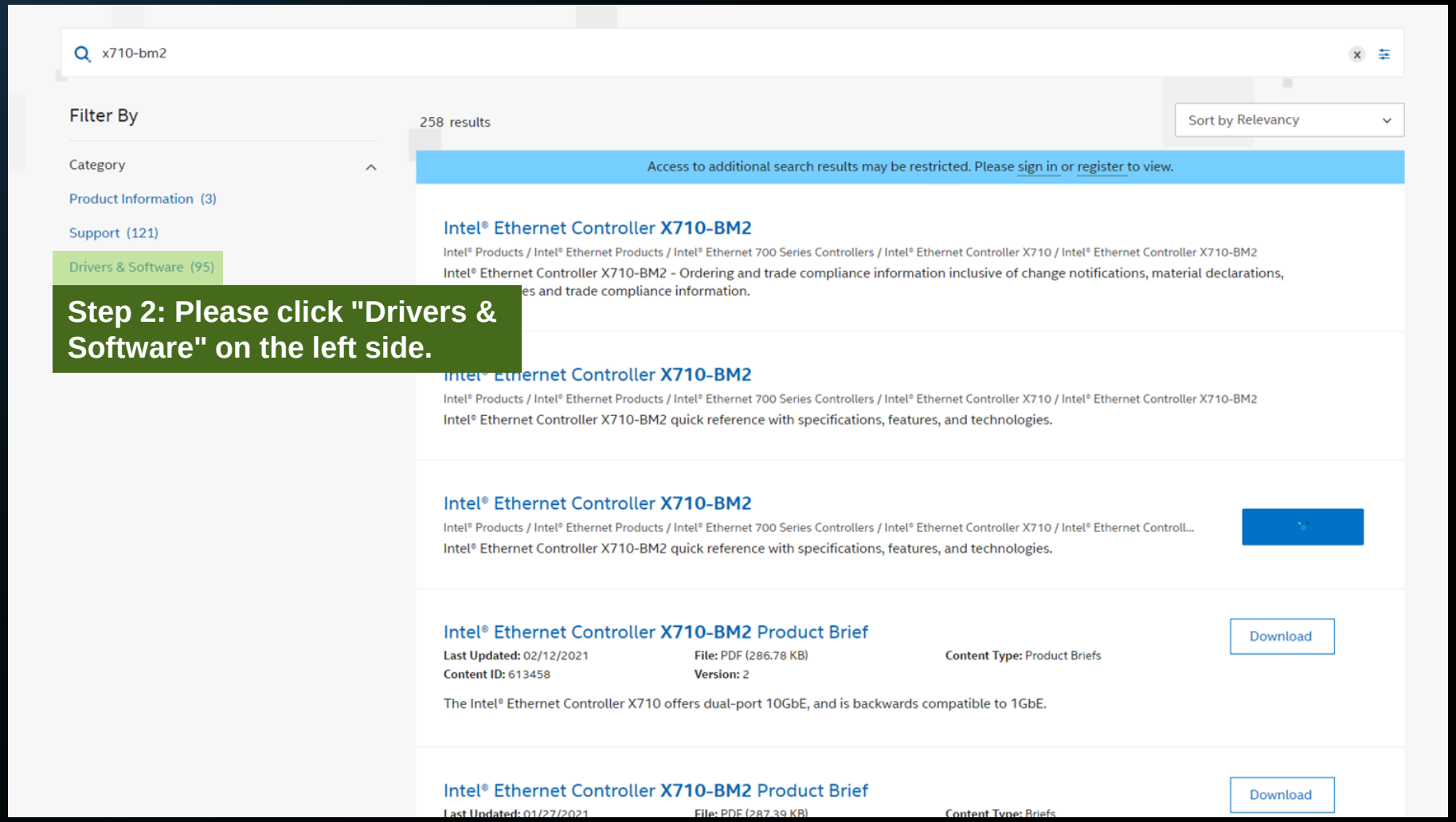


Step 1: Go to Intel official website and type in "X710-BM2" at the top right.

Intel Official Website Address:
“https://www.intel.com.tw”

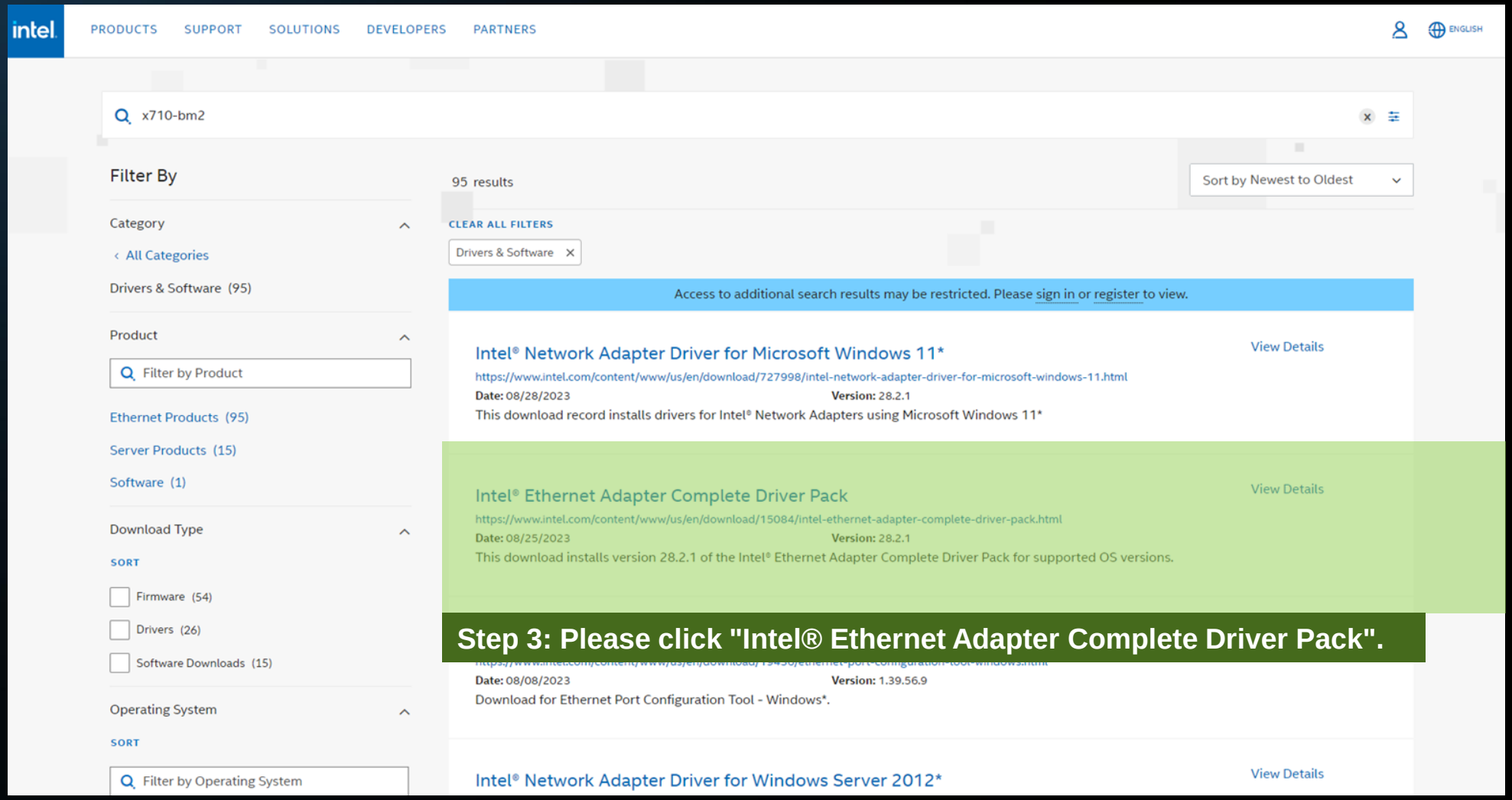
Intel Official Website NIC Driver Download

QXG-10G2SF-X710 Driver Download



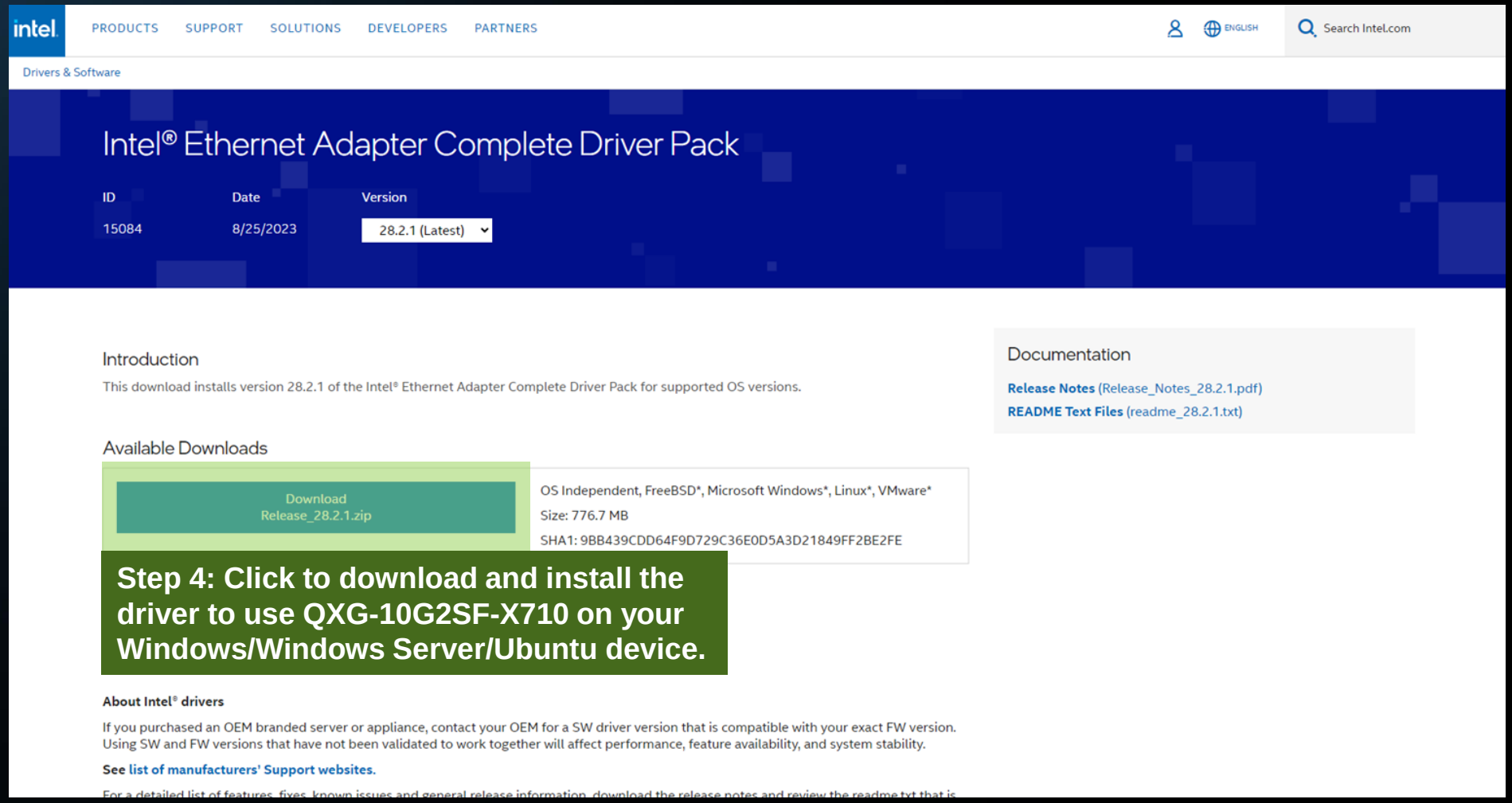
Intel Official Website NIC Driver Download

QXG-10G2SF-X710 Driver Download



Intel Official Website NIC Driver Download

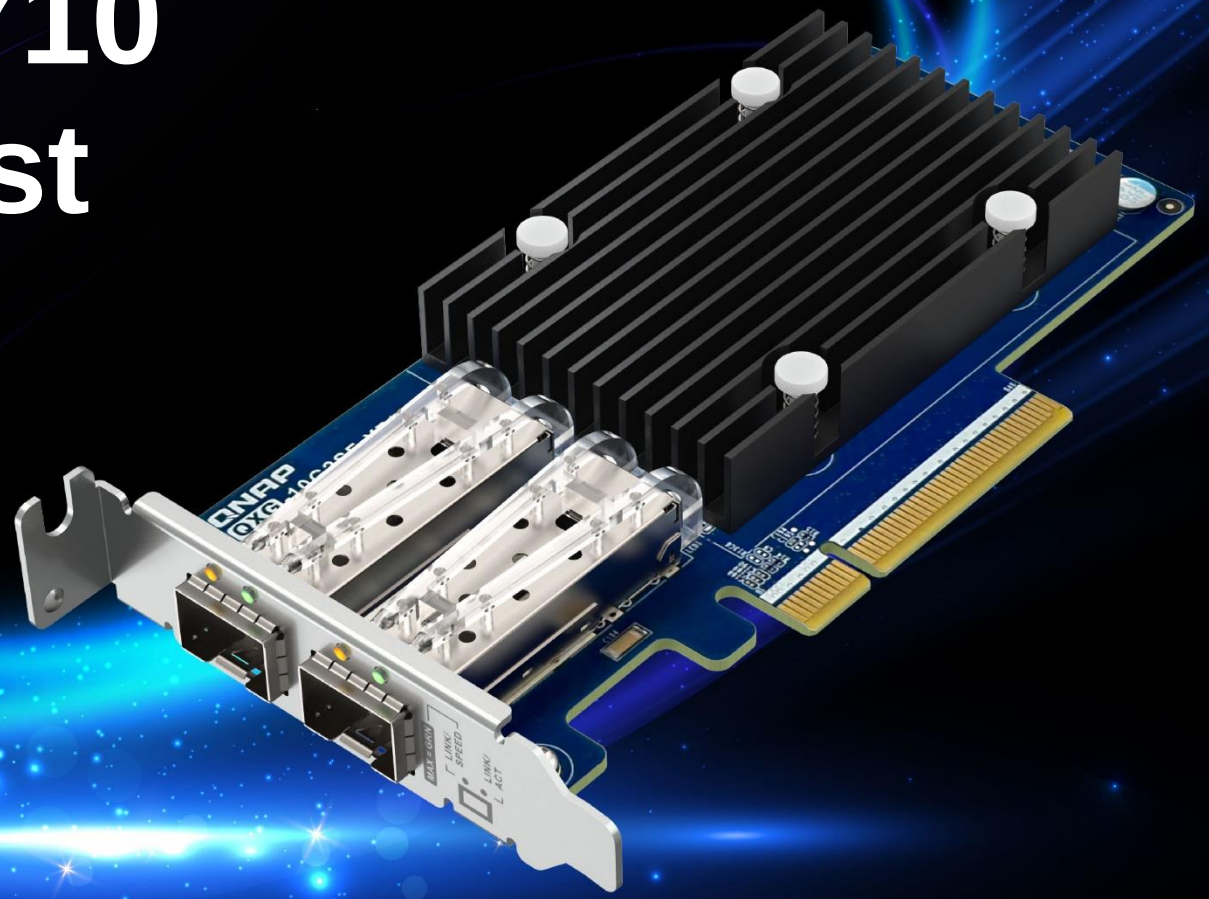
QXG-10G2SF-X710 Driver Download



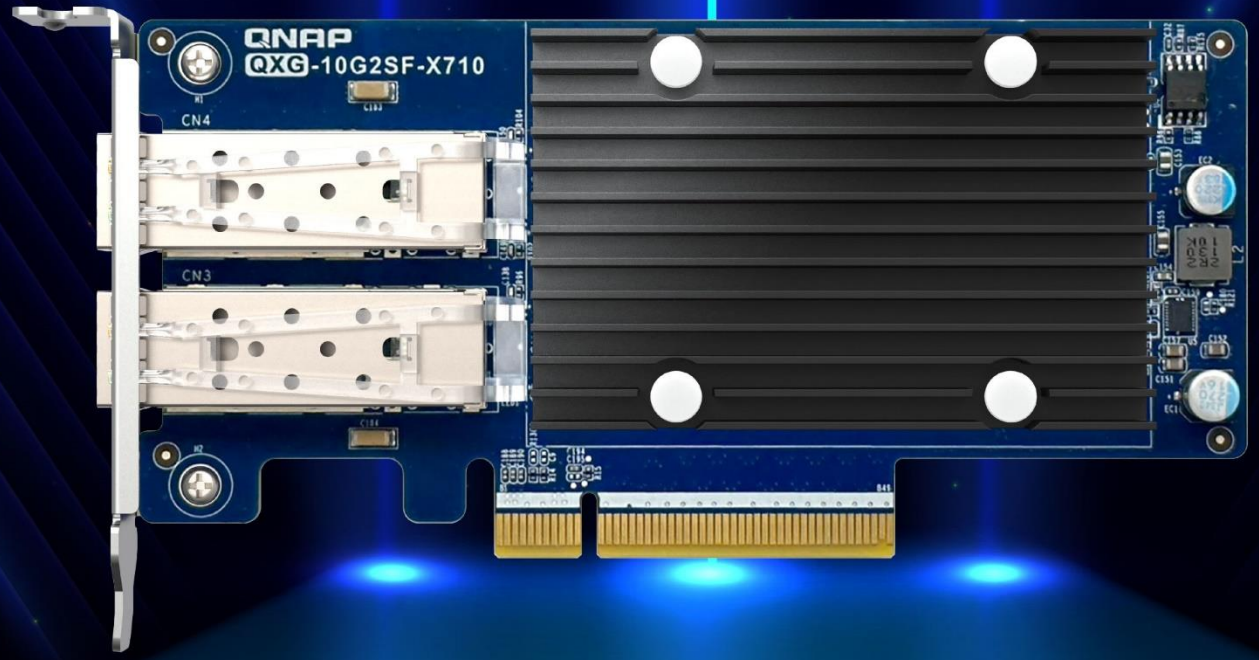
QXG-10G2SF-X710 10GbE NIC Specifications

QXG-10G2SF-X710	
Network Controller	Intel® Ethernet Controller X710-BM2
Transmission Speed	10 GbE / 1 GbE Dual-Speed
Type of Port	SFP+
Number of Ports	2
Support for QNAP OS	QTS 5.0.1 or Later Versions QuTS 5.0.1 or Later Versions
Support for other OS	Windows® (Driver Installation Required) Ubuntu® (Driver Installation Required)
PCIe Interface	PCI Express 3.0 x 8
Package Content	1 x QXG-10G2T 1 x QIG (Quick Installation Guide) 3 x Bracket (Pre-Installed Half-Height Low Profile Bracket)
Year of Warranty	3 Years

QXG-10G2SF-X710 Performance Test



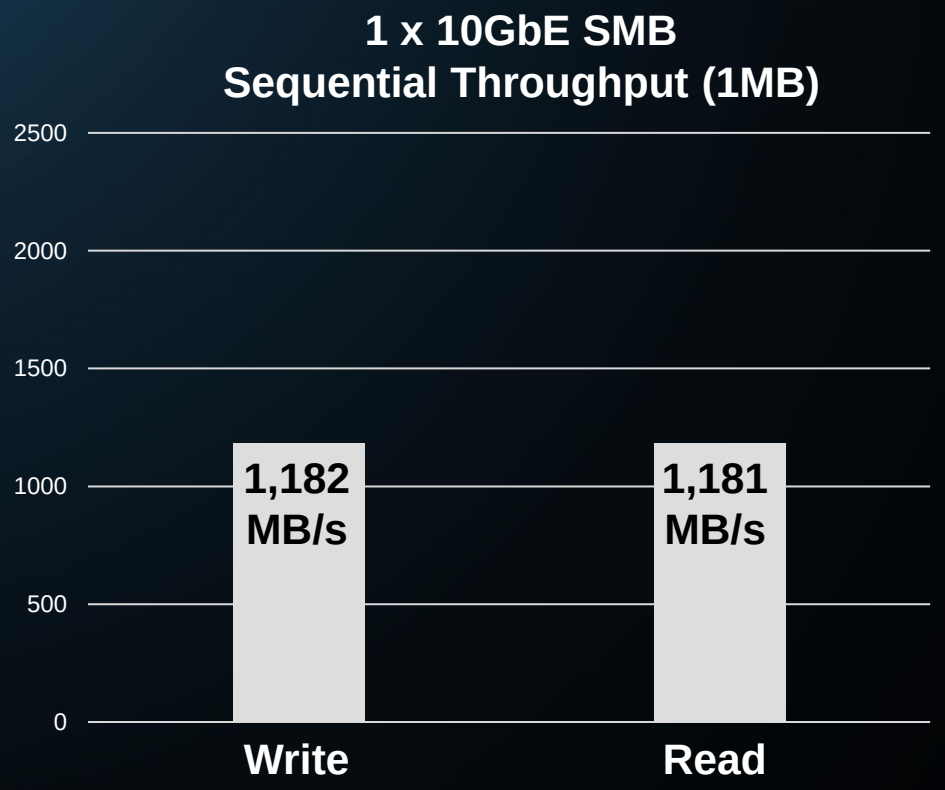
QNAP

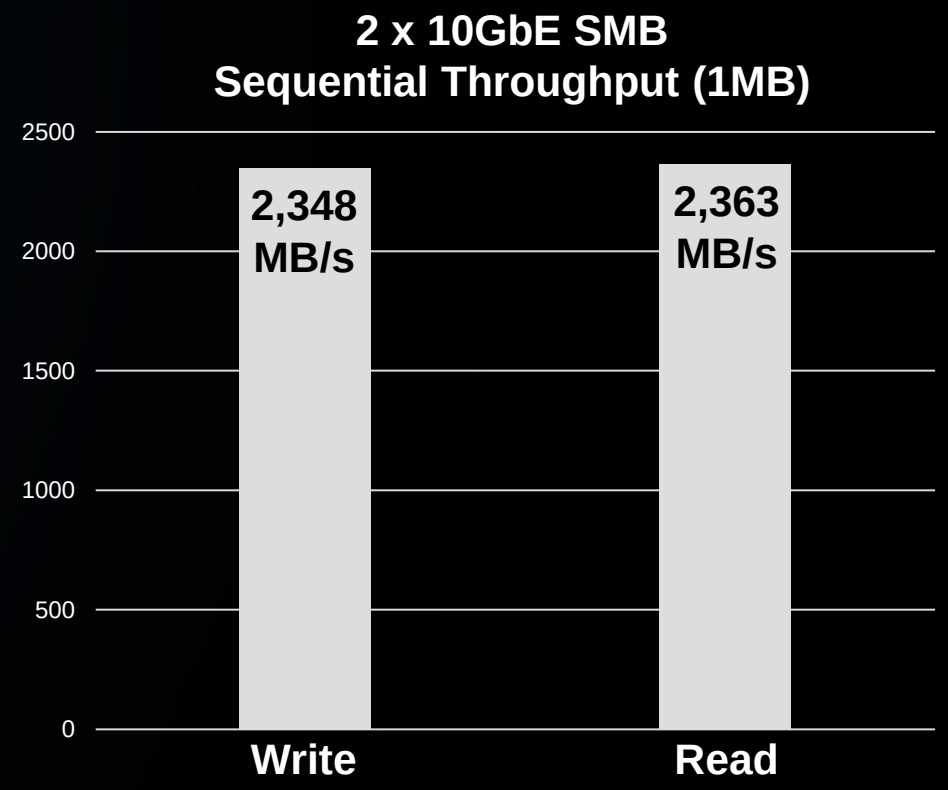


LIVE DEMO

2 x 10GbE SMB Sequential Throughput

1000+MB/s Read/Write Performance, Transferring Large Files/Backups in a Snap





TS-855X

Test Environment:

- NAS: TS-855X
- CPU: Intel Atom® C5125 processor, Max 2800 MHZ (8C, 8T)
- Volume type: Raid 5, Samsung 870 EVO 1TB x8
- Client PC: Windows Server 2022, AMD EPYC 7302P 16-Core Processor 2.9Ghz, 96GB RAM

Paired with QNAP Products

Realized Multiple Application Scenarios

Easily Create a High-Speed 10GbE Network Studio Environments

QNAP's diverse product lineup allows you to use the QXG-10G2SF-X710 with a variety of QNAP's 10GbE switches and NASes to create a high-speed network environment on a lean budget, completely enhancing the productivity and experience of your editing team and other studio partners.

PC + QXG-10G2SF-X710

10GbE

PC + QXG-10G2SF-X710

10GbE

QSW-M3216R-8S8T

10GbE

TS-h1683XU-RP

10GbE

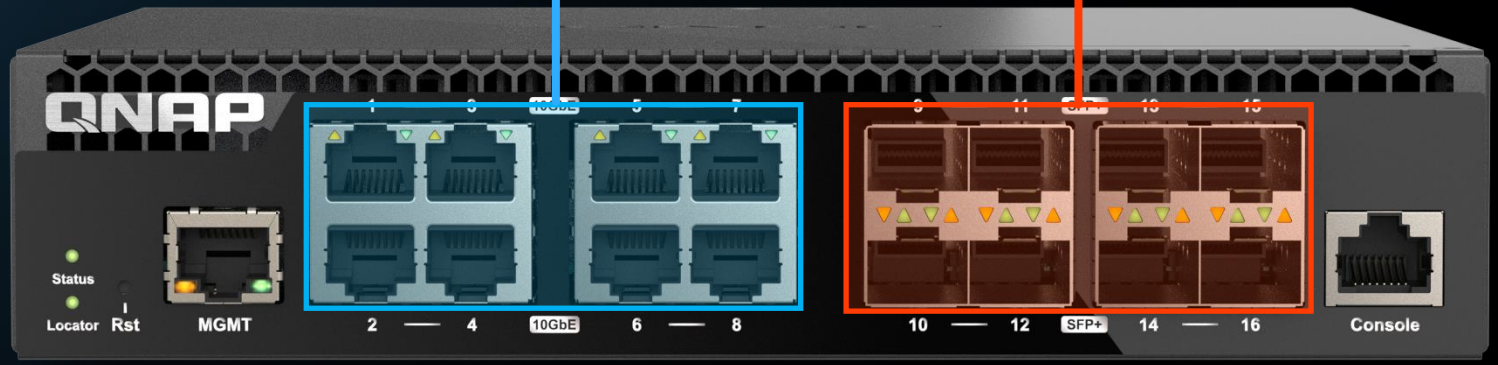
TS-h1886XU-RP R2

You'll also Need a Companion Switch to Unlock the Full Potential of 10GbE Netwoek

8 x 10GbE SFP+ Optical Fiber Port

8 x 10GbE RJ45 Ethernet Port

QSW-M3216R-8S8T



8 x 1GbE RJ45 Ethernet Port

8 x 2.5GbE RJ45 Ethernet Port

2 x 10/1GbE SFP+ Dual-Speed Optical Fiber Port

QGD-1602

6 x 2.5GbE RJ45 Ethernet Port

4 x 10GbE SFP+/RJ45 Compound Port

QSW-M2106-4C

More QNAP Switch with 10GbE Network Speed Support

Many QNAP NAS models are Scalable for 10GbE High-Speed Network Transmission

TS-1673AU-RP

TS-1273AU-RP

TS-h886

TVS-h874

TVS-h674

TVS-h474

TS-h686

TS-855eU

TS-855eU-RP

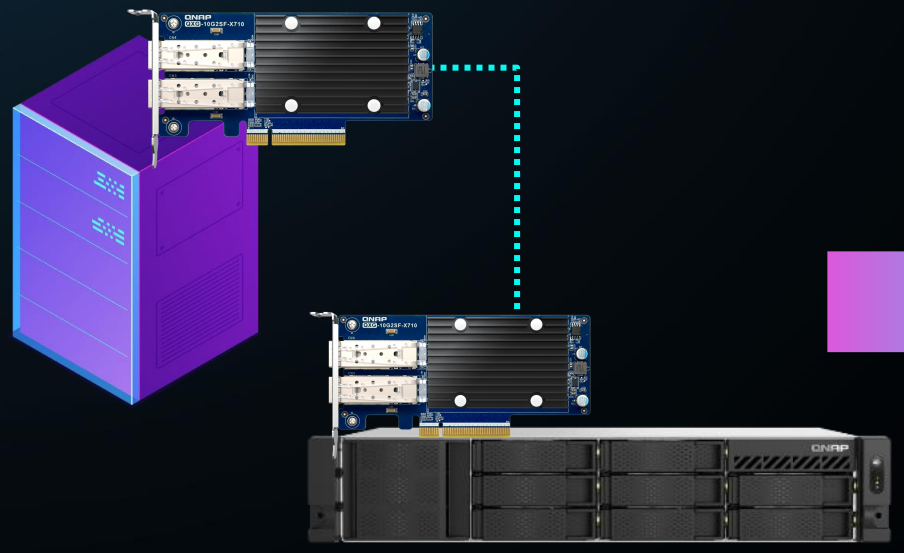
TS-873AeU

More QNAP NAS with QXG-10G2SF-X710 Support

Create a Cost-Effective Virtualized Application Environment with QNAP NAS

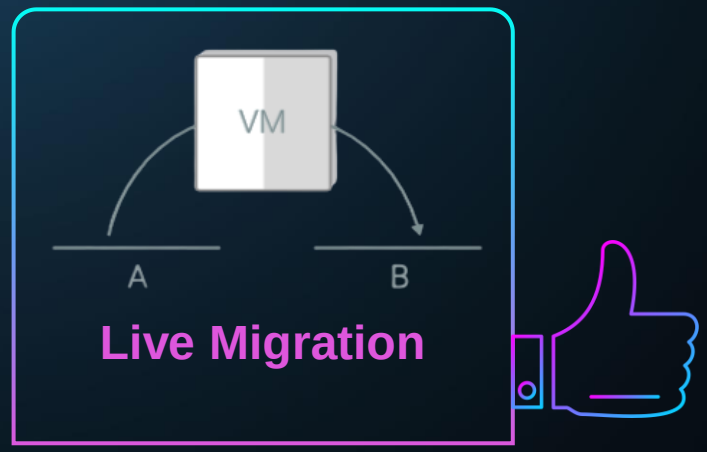
Virtualization Station on QNAP NAS is a powerful Hypervisor software that supports multiple operating systems, including Windows®, Linux®, and QuTScloud, enabling you to create a virtualized environment on your NAS. You can set up and run multiple virtual machines based on available system resources. Virtualization Station also supports a variety of resource management and acceleration features, making it a high-performance and affordable platform for virtualization applications.

PC + QXG-10G2SF-X710

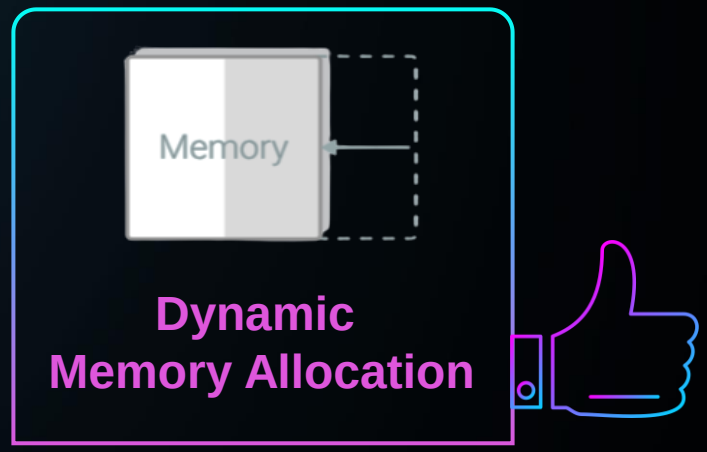


TS-1673AU-RP + QXG-10G2SF-X710

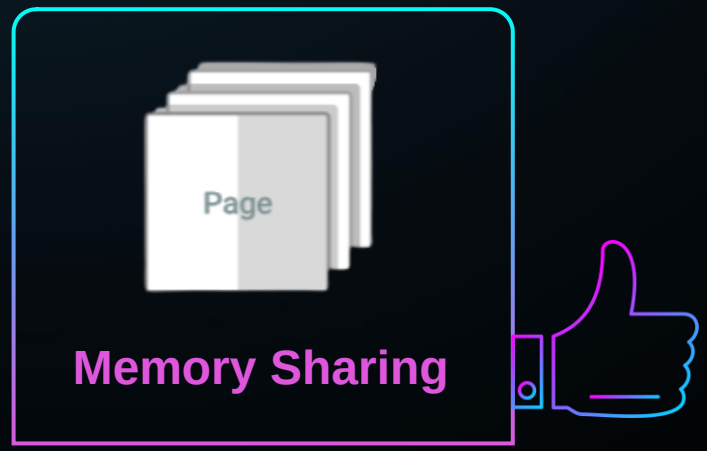
Virtualization Station Support a Wide Range of Powerful Features



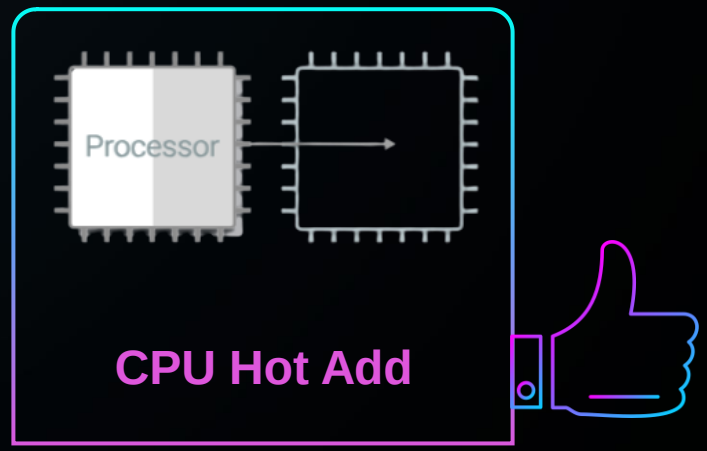
Live Migration



Dynamic Memory Allocation



Memory Sharing



CPU Hot Add

Virtualization Station on QNAP NAS supports a wide range of operating systems. Users can download and use a variety of virtual devices directly from the application's VM Marketplace. Virtualization Station also provides a variety of resource configurations that you can choose according to your needs to maintain the best efficiency and stability of your VM. Virtualization Station offers several disaster recovery tools to protect against data loss. Options include local/remote backups, one-time/scheduled tasks, and more.

More Information of Virtualization Station

QNAP QNA Series Thunderbolt to 10GbE Adapters

Host with **Thunderbolt 3**

- 10G/1G dual speed
- SFP+ port

QNA-T310G1S

Host with **Thunderbolt 3**

- 10G/5G/2.5G/1G/100M five speed
- RJ-45 NBASE-T port

QNA-T310G1T

THUNDERBOLT™

QNA series adapters are also compatible with **Thunderbolt 4**

Complete Line of 10GbE Accessories

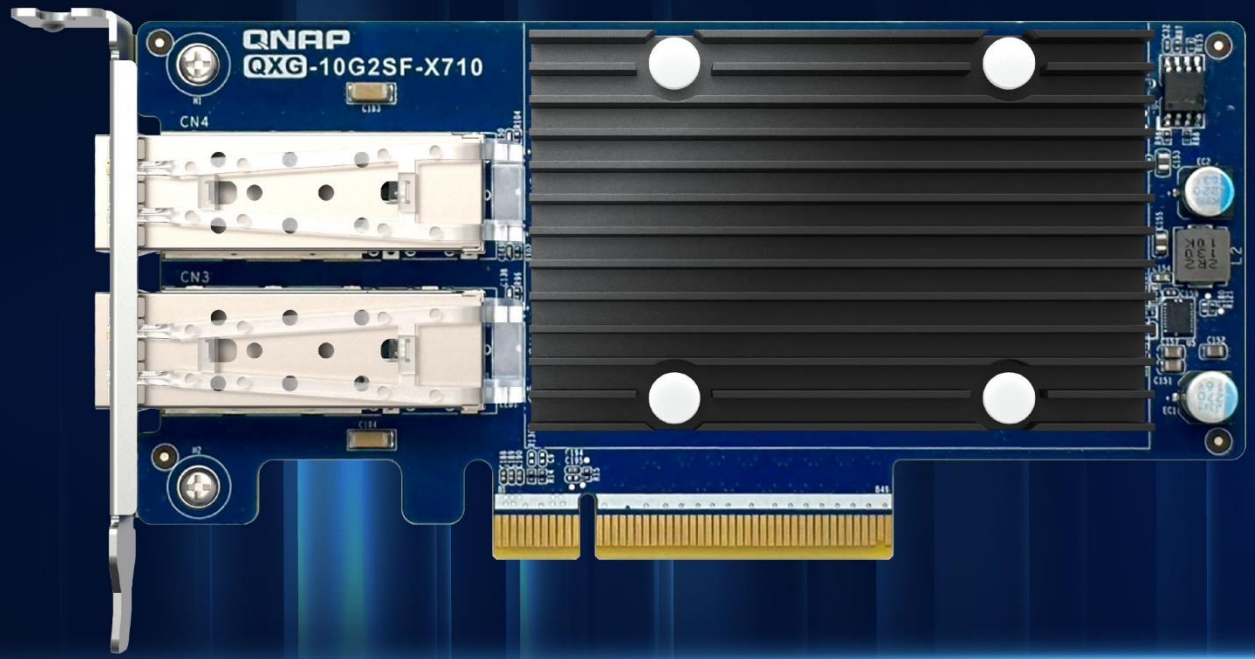
- CAB-DAC15M-SFPP (1.5M)
- CAB-DAC30M-SFPP (3M)
- CAB-DAC50M-SFPP (5M)

10GbE SFP+ DAC

TRX-10GITSFPP-SR

10GbE SR Transceivers

QNAP



intel.

10GbE SFP+

10/1G 2-speed

Brackets for NAS & PC/Server

Compatible with QNAP NAS, Windows®, and Linux® devices

QXG-10G2SF-X710

Dual Port 10GbE Dual Speed PCIe Gen3 Muti-Gig Network Expansion Card
The Best Way to Upgrade Your Network and VM Performance!

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