



Introducing the TS-x77XU :

Powered by an AMD Ryzen™ processor with up to 8 cores/16 threads, featuring two built-in 10GbE SFP+ ports



LIVE

Live Broadcast Date:

JUN 4, 2018

Live Broadcast Date:

5:30 p.m. (UTC+8)



QNAP

TS-x77XU

Ryzen Enterprise NAS



TS-977XU / TS-977XU-RP



TS-877XU / TS-877XU-RP
TS-1277XU / TS-1277XU-RP



TS-1677XU / TS-1677XU-RP
TS-2477XU-RP

New to the Ryzen NAS Family

New

TS-x77XU rackmount NAS

2 x SFP+ 10G SmartNIC



TS-2477XU-RP



TS-1677XU
TS-1677XU-RP



TS-1277XU
TS-1277XU-RP



TS-877XU
TS-877XU-RP



TS-977XU
TS-977XU-RP

TS-x77 desktop NAS

2 x 10GBASE-T



TS-1677X



TS-1277

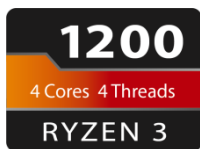


TS-877



TS-677

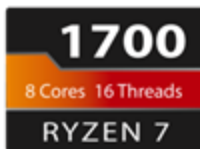
Superb performance with 65W TDP



4-core, 4-thread | 3.1 GHz / 3.4 GHz



6-core, 12-thread | 3.2 GHz / 3.6 GHz



8-core, 16-thread | 3.0 GHz / 3.7 GHz

Complete product portfolio – 1U 9-bay

Single PSU

250W

TS-977XU-1200-4G

Ryzen 3 **1200**, **4GB** RAM (1x 4GB)



Redundant PSU

2 x 300W

TS-977XU-RP-1200-4G

Ryzen 3 **1200**, **4GB** RAM (1x 4GB)



TS-977XU-RP-1600-8G

Ryzen 5 **1600**, **8GB** RAM (2x 4GB)



[5 x SSD (inside)
4 x HDD



9-bay

Complete product portfolio - 2U 8-bay

350W

Single PSU



TS-877XU-1200-4G

Ryzen 3 **1200**, **4GB** RAM (1x 4GB)

2 x 250W

Redundant PSU



TS-877XU-RP-1200-4G

Ryzen 3 **1200**, **4GB** RAM (1x 4GB)



TS-877XU-RP-1600-8G

Ryzen 5 **1600**, **8GB** RAM (2x 4GB)



8-bay

Complete product portfolio – 2U 12-bay

350W

Single PSU



TS-1277XU-1200-4G

Ryzen 3 **1200**, **4GB** RAM (1x 4GB)

2 x 300W

Redundant PSU



TS-1277XU-RP-1200-4G

Ryzen 3 **1200**, **4GB** RAM (1x 4GB)



TS-1277XU-RP-1600-8G

Ryzen 5 **1600**, **8GB** RAM (2x 4GB)



TS-1277XU-RP-1700-16G

Ryzen 7 **1700**, **16GB** RAM (2x 8GB)



12-bay

Complete product portfolio – 3U 16-bay

500W

Single PSU



TS-1677XU-1200-4G

Ryzen 3 **1200**, **4GB** RAM (1x 4GB)

2 x 500W

Redundant PSU



TS-1677XU-RP-1200-4G

Ryzen 3 **1200**, **4GB** RAM (1x 4GB)



TS-1677XU-RP-1600-8G

Ryzen 5 **1600**, **8GB** RAM (2x 4GB)



TS-1677XU-RP-1700-16G

Ryzen 7 **1700**, **16GB** RAM (2x 8GB)



16-bay

Complete product portfolio – 4U 24-bay

Redundant PSU

2 x 800W



TS-2477XU-RP-1700-16G

Ryzen 7 **1700**, **16GB** RAM (2x 8GB)



TS-2477XU-RP-1600-8G

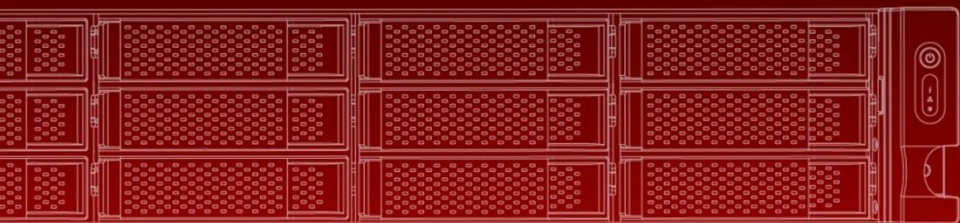
Ryzen 5 **1600**, **8GB** RAM (2x 4GB)

24-bay



TS-x77XU

Hardware Introduction

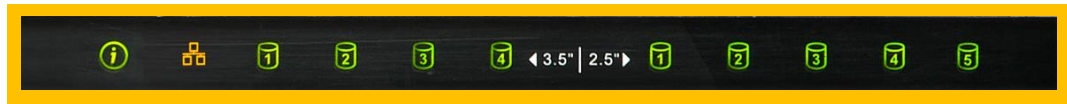




Enjoy Qtier and SSD cache in a 1U NAS

5 x 2.5"
SATA 6Gb/s SSD ports

LED indicators:
System status, network, disks



4 x 3.5" SATA 6Gb/s HDD/SSD ports

TS-977XU/TS-977XU-RP rear view

Single PSU

Low profile PCIe 3.0 x16 slot

250W
2 x 250W

Redundant PSU

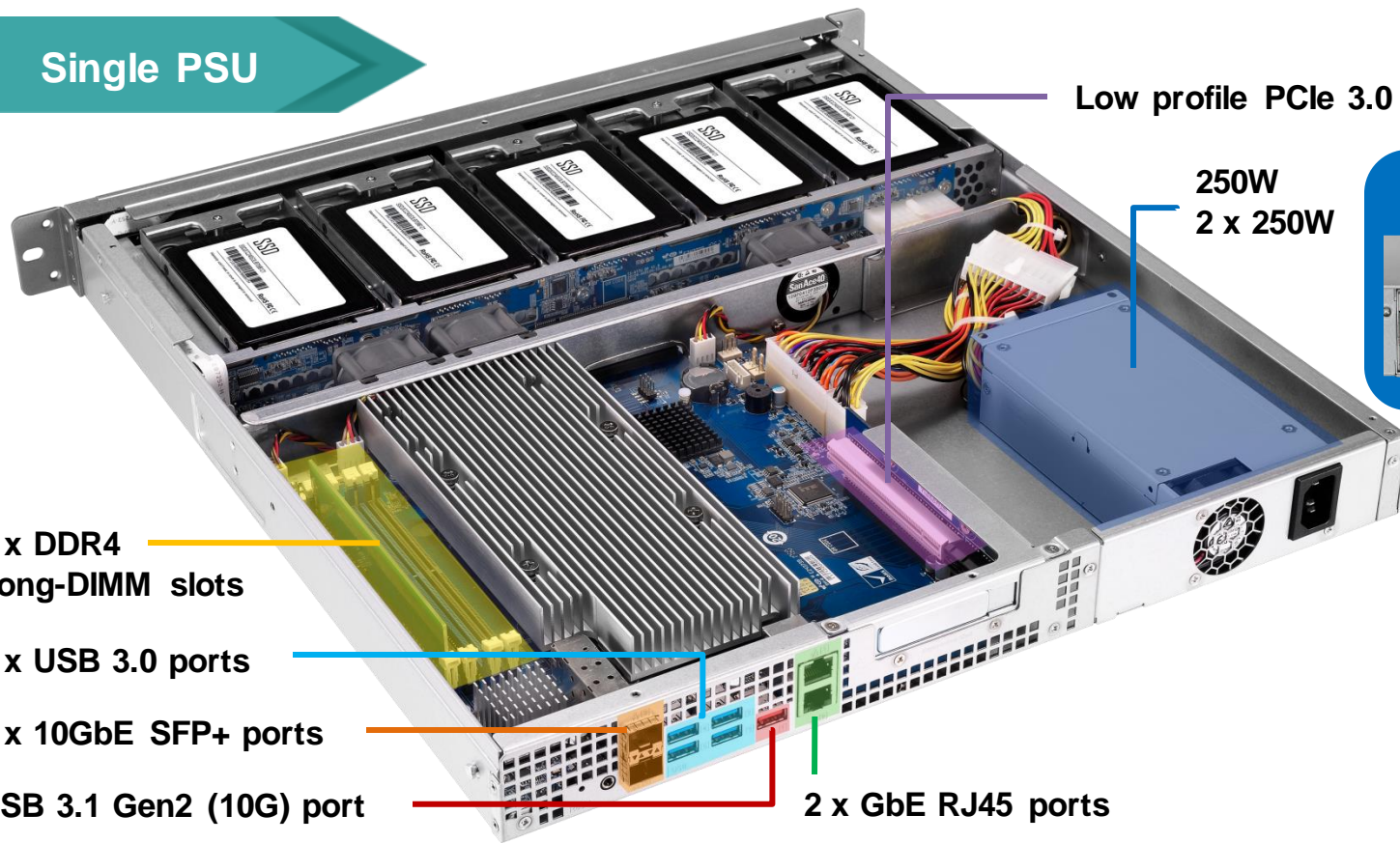
4 x DDR4
Long-DIMM slots

4 x USB 3.0 ports

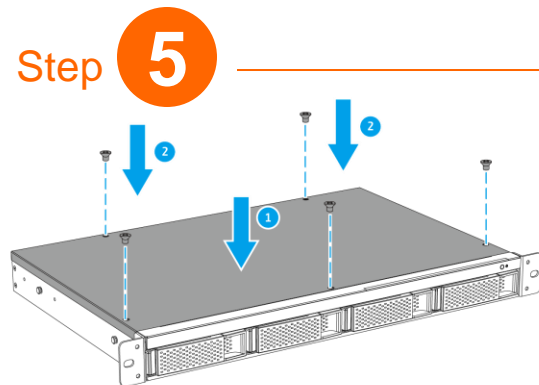
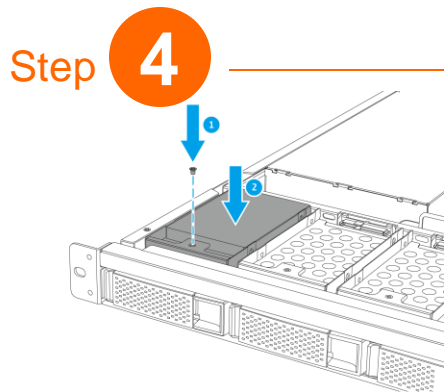
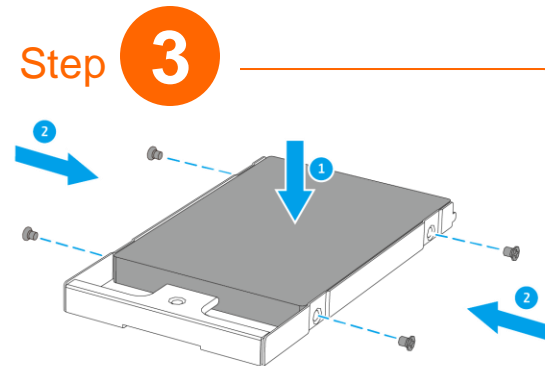
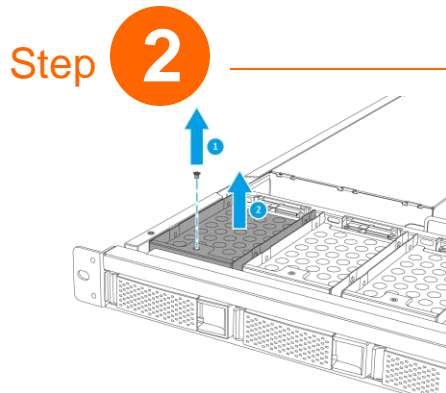
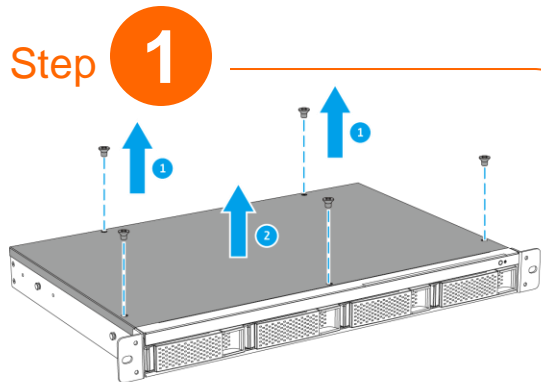
2 x 10GbE SFP+ ports

USB 3.1 Gen2 (10G) port

2 x GbE RJ45 ports



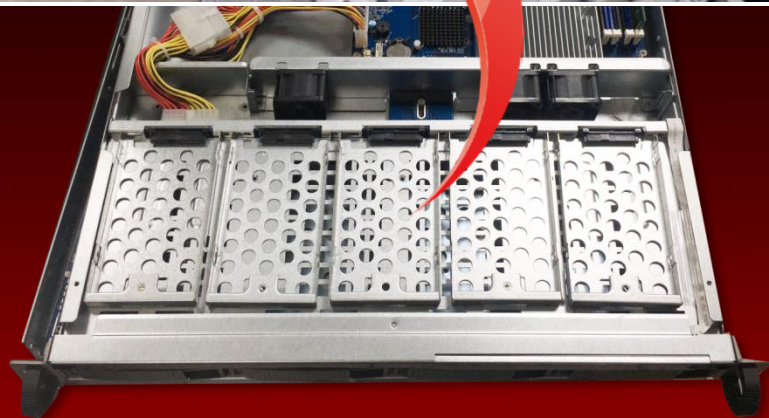
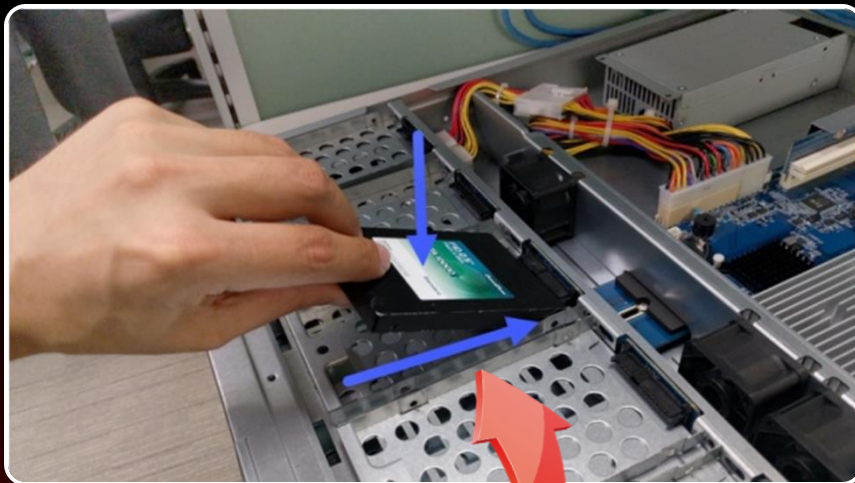
TS-977XU SSD Installation



QNAP

Demo

SSD Installation



2U/3U TS-x77XU Front View

24/ 16/ 12/ 8 x 3.5" SATA 6Gb/s HDD/SSD Ports

TS-1277XU / TS-1277XU-RP



TS-877XU / TS-877XU-RP



TS-1677XU / TS-1677XU-RP



TS-2477XU-RP



2U/3U TS-x77XU Front View

2U



Power switch
LED indicators: system status, network,
external expansion enclosures, disks

3U

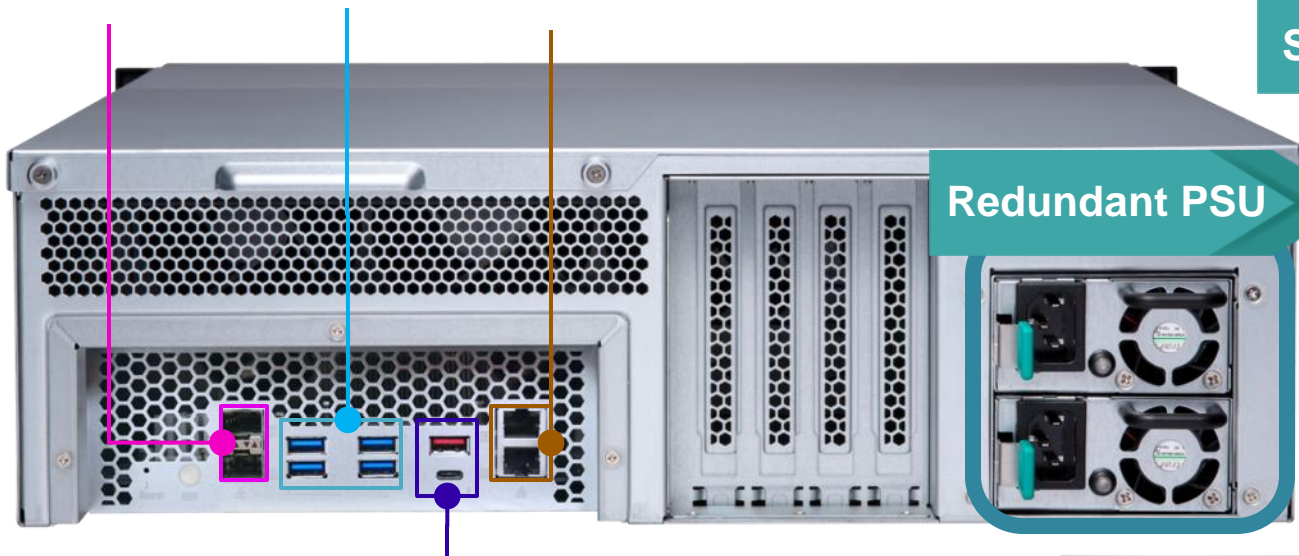


4U



2U/3U/4U TS-x77XU Rear View

2 x 10Gb SFP+ SmartNIC ports 4 x USB 3.0 Type-A ports 2 x 1Gb network



USB 3.1 Gen2 (10G) Type-A & Type-C ports

8-bay
12-bay
Single
PSU



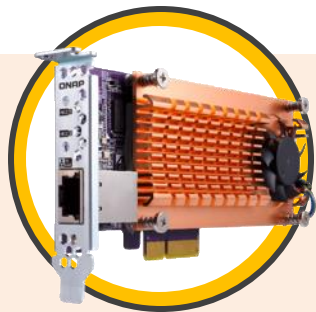
Redundant PSU

24-bay
Redundant
PSU

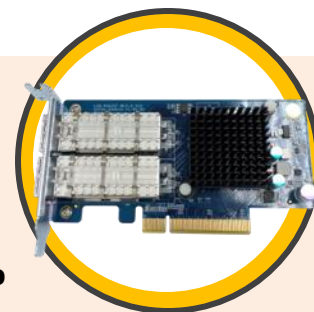


Industry-leading PCIe expansion options

QM2 provides 10GBASE-T port and/or M.2 SSD slots for SSD cache or Qtier tiered storage for optimized storage performance.



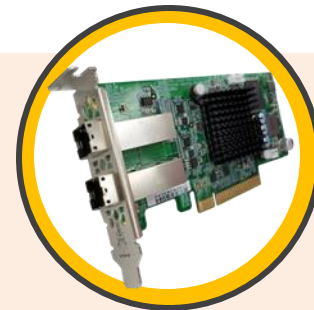
40GbE/10GbE and wireless network expansion cards provide high bandwidth, low latency, or wireless AP functionality.



USB 3.1 Gen 2 expansion cards provide 10Gb/s for external USB devices · Type-A port is also backward compatible with USB 3.0/2.0 devices.

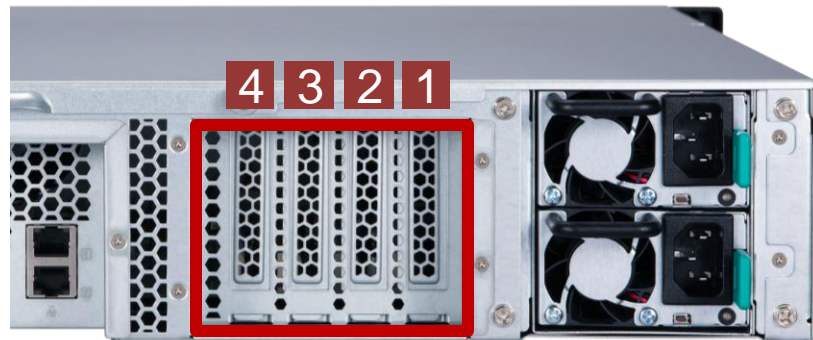


SAS expansion card is for adding support of REXP expansion units for up to 40 additional SAS/SATA drives.

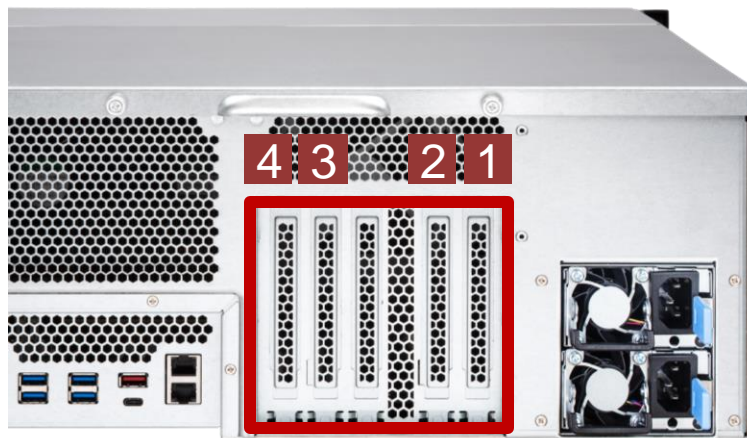
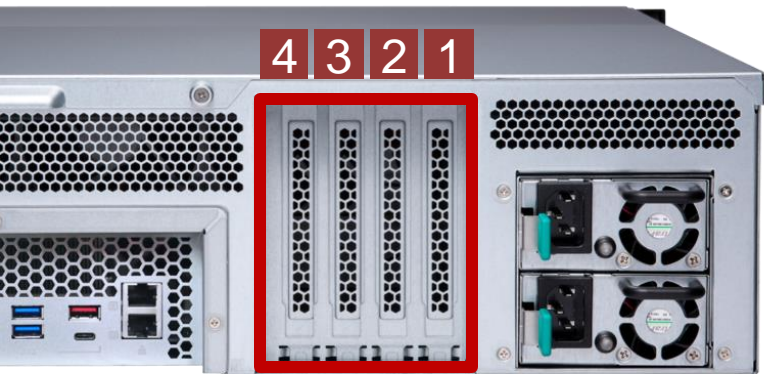


TS-x77XU PCIe slots

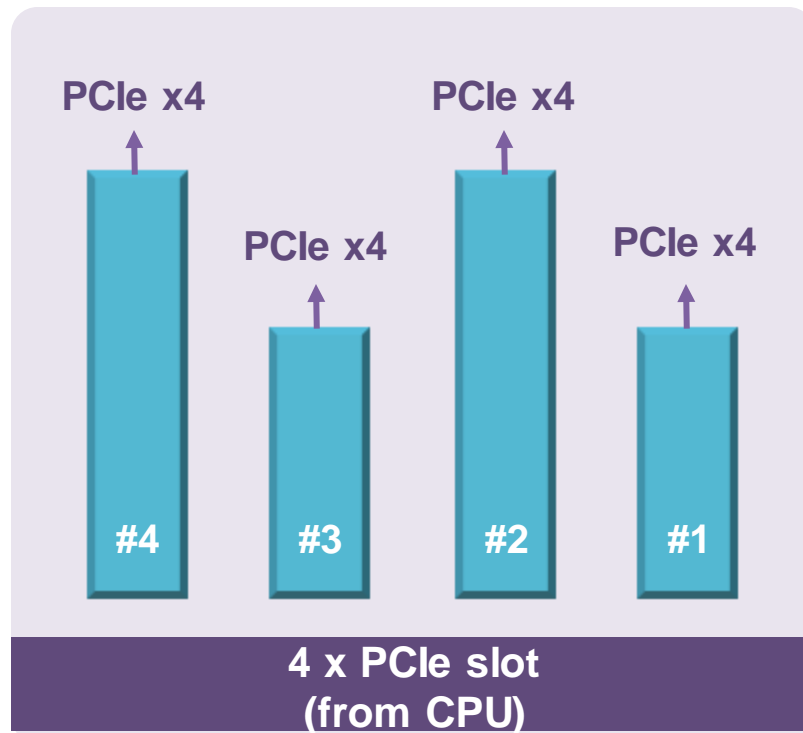
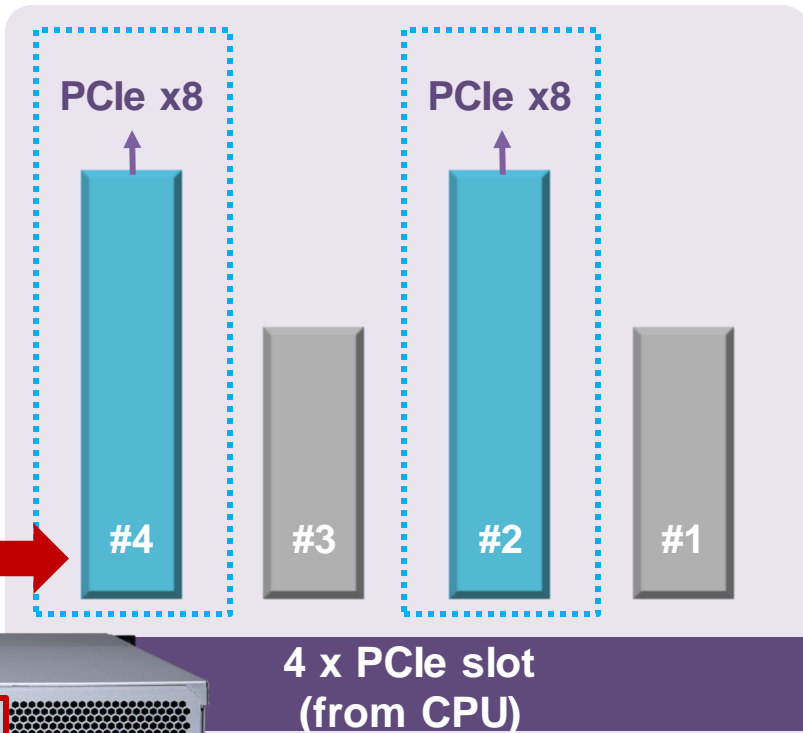
1U/2U: low profile



3U/4U: full height



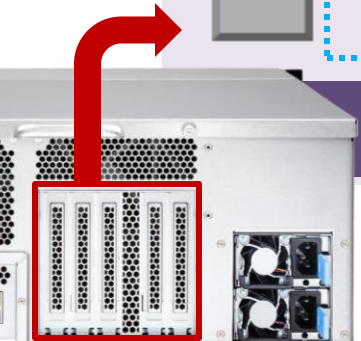
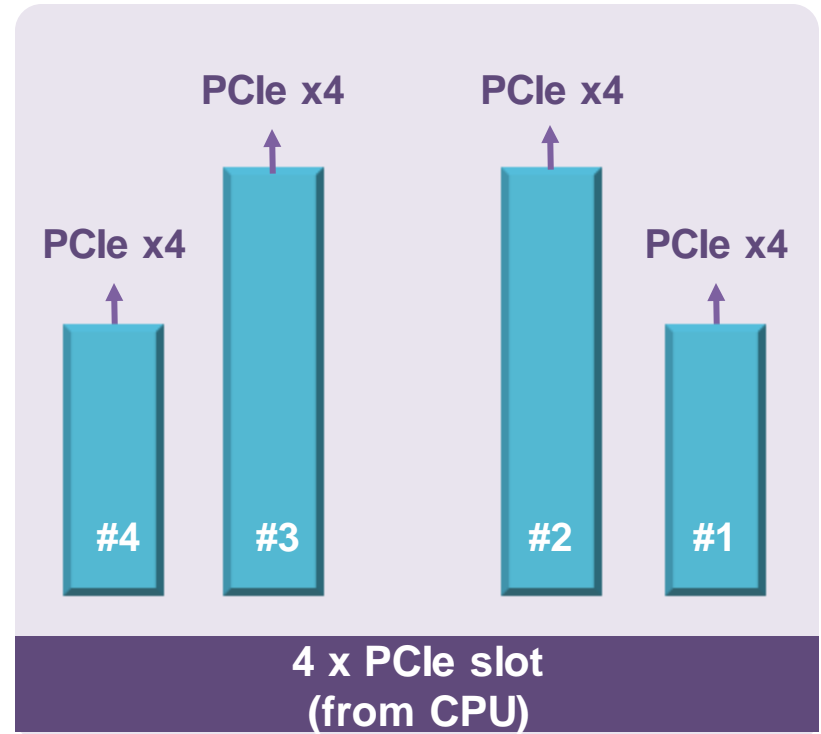
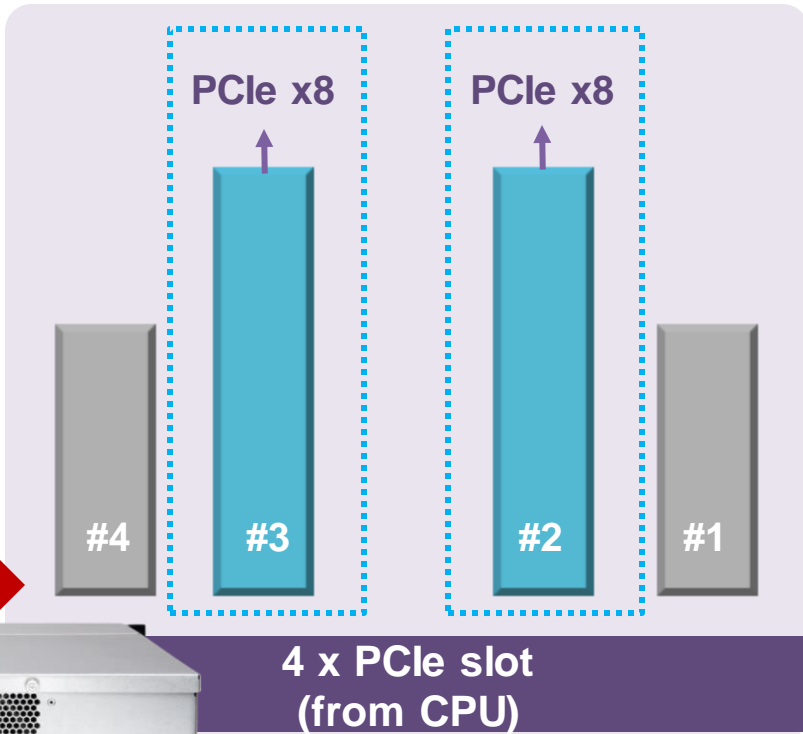
Flexible PCIe Allocation (2U/3U)



Occupied Empty

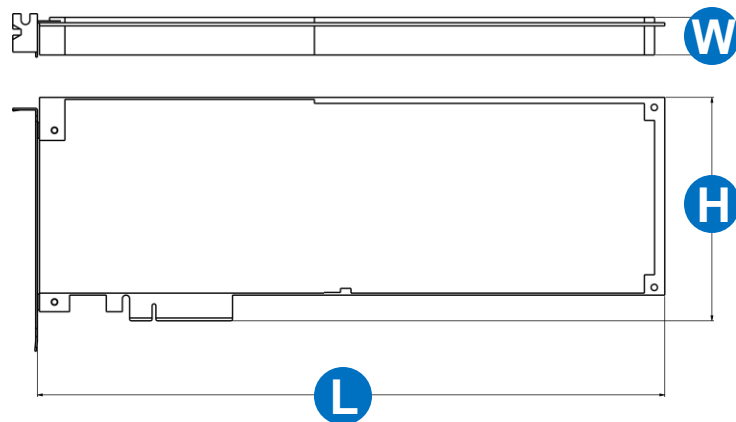


Flexible PCIe Allocation (4U)

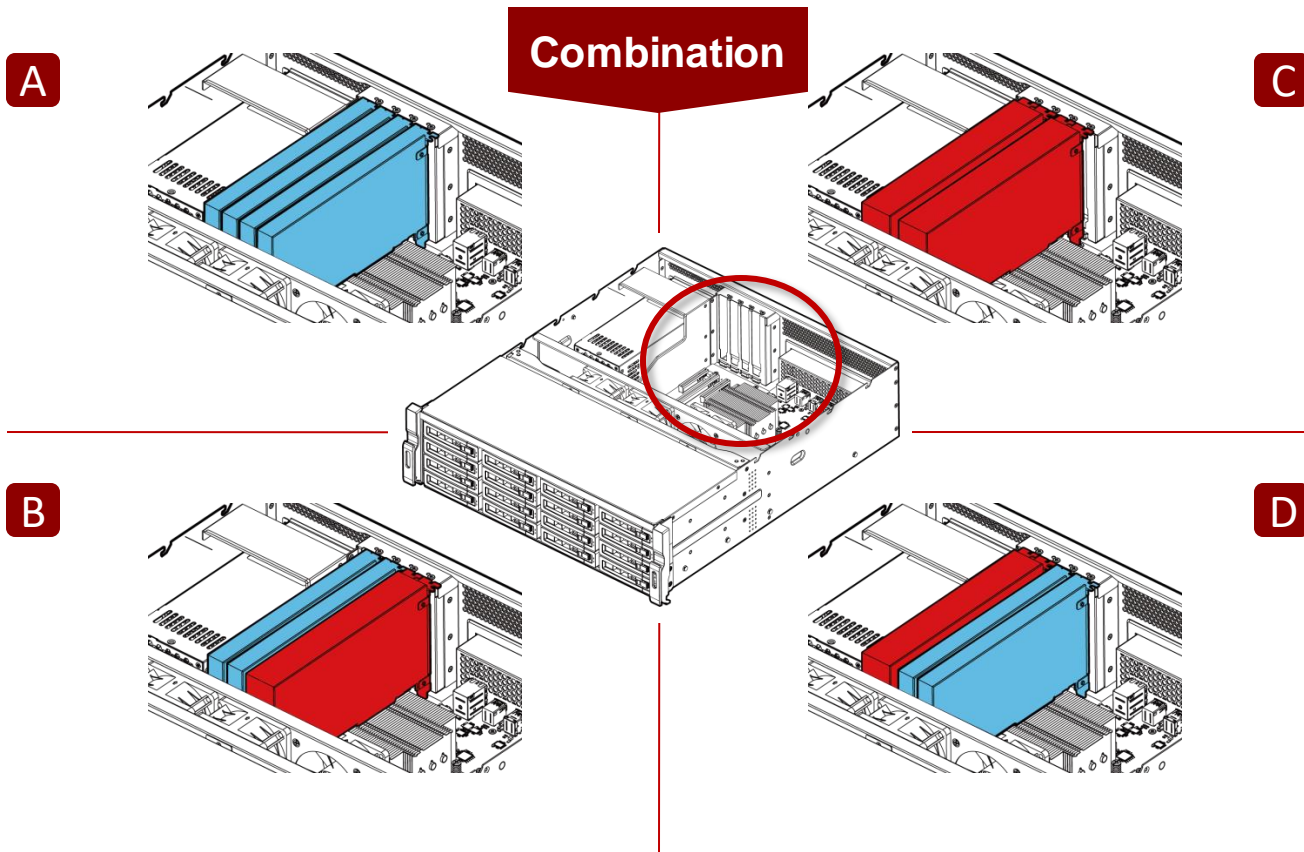


 Occupied  Empty

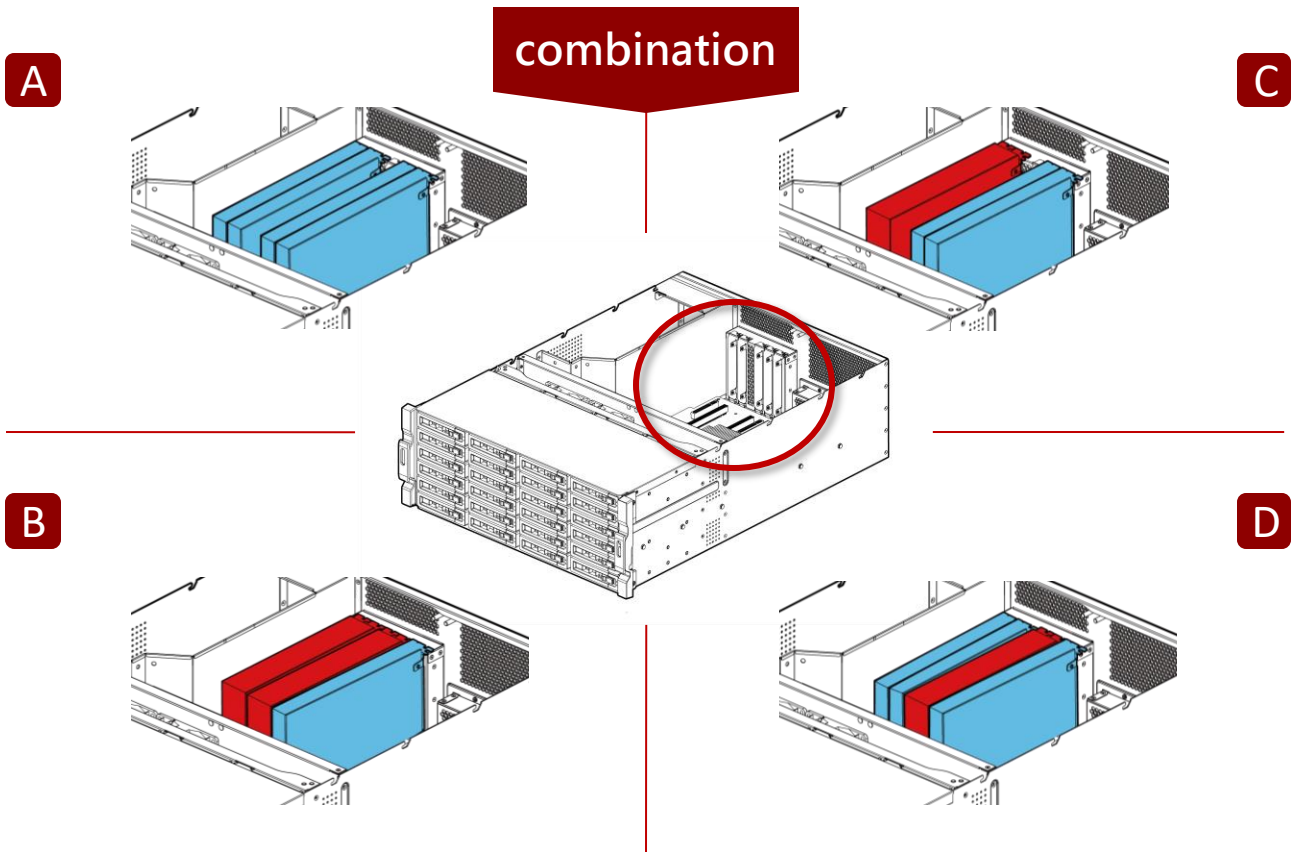
| | Slot | Dimension W x H x L (mm) |
|---------------------------|--------|--------------------------|
| TS-877XU TS-877XU-RP | Slot 2 | 37 x 68.9 x 214 |
| | Slot 4 | 37 x 68.9 x 214 |
| TS-1277XU TS-1277XU-RP | Slot 2 | 37 x 68.9 x 214 |
| | Slot 4 | 37 x 68.9 x 214 |
| TS-1677XU TS-1677XU-RP | Slot 2 | 38.5 x 111 x 214 |
| | Slot 4 | 38.5 x 111 x 214 |
| TS-2477XU-RP | Slot 2 | 55 x 138 x 312 |
| | Slot 3 | 55 x 138 x 312 |



3U PCIe Card Combination



4U PCIe Card Combination



Tool-less rail kit

RAIL-B02



Supported NAS :
TS-877XU/1277XU

Max. Load : **20** kg

RAIL-A03-57



Supportd NAS :
TS-1677XU

Max. Load : **37** kg

RAIL-A02-90

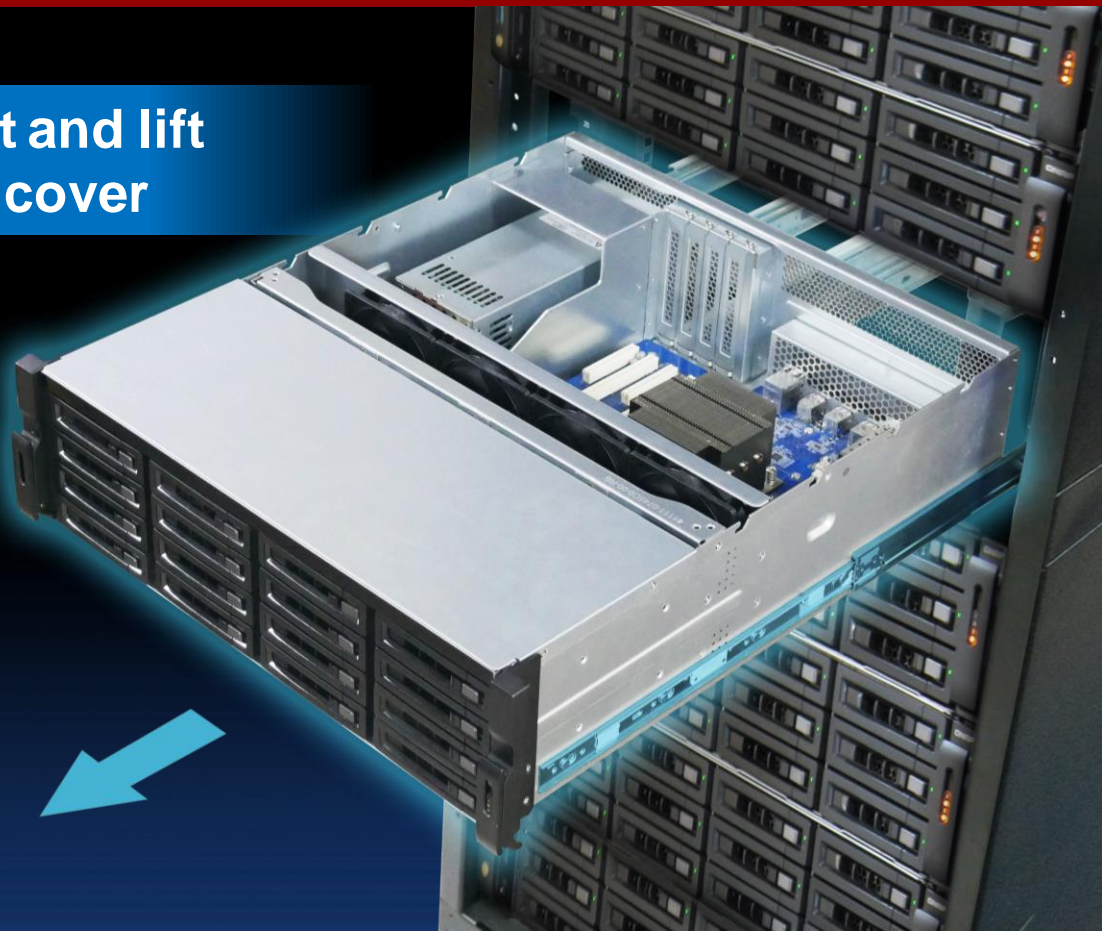


Supported NAS :
TS-2477XU

Max. Load : **90** kg

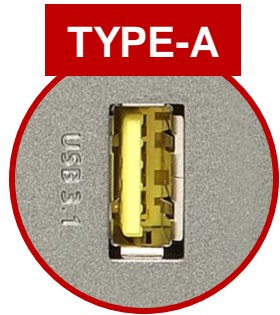
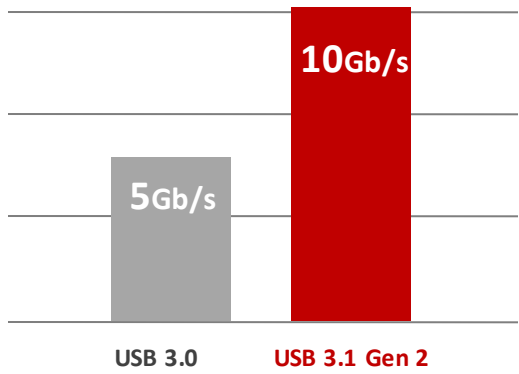
Hardware upgrade made easy

Pull it out and lift up the cover



QNAP More Efficient Backup with USB 3.1 Gen 2

2X USB 3.1
SPEED UP



The image shows a variety of storage hardware: a Samsung SSD, a SanDisk SSD, and a Toshiba SSD. Below them is a laptop displaying the 'Hybrid Backup Sync' software interface. The interface includes sections for 'Overview', 'Create Job', 'Job Status', and 'Storage Space'. The 'Storage Space' section shows details for 'Local Storage 1' (Free Size: 37.37 GB, Total Size: 75.75 GB) and 'Remote Storage 2' (Free Size: 443.44 GB, Total Size: 444.44 GB). The 'Job Status' section lists several backup jobs with their respective statuses.

Super high capacity surveillance



Surveillance Station 5.1

Default: **8 free channels**
Max: 80 CH (optional license)



QVR Pro

Default: **8 free channels**
Max: 128 CH (optional license)



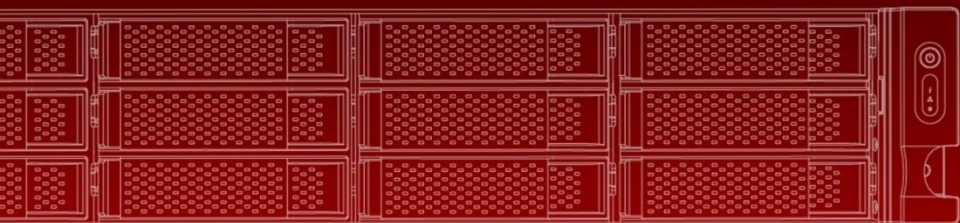
QUSBCam2

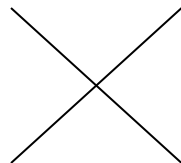
Up to 1080p USB Webcam recording



Demo

- Memory upgrade
- GPU card installation
- GPU card configuration in QTS



The QNAP logo is displayed in a bold, blue, sans-serif font. A red swoosh is positioned under the letter 'Q'. A registered trademark symbol (®) is located to the upper right of the 'P'.

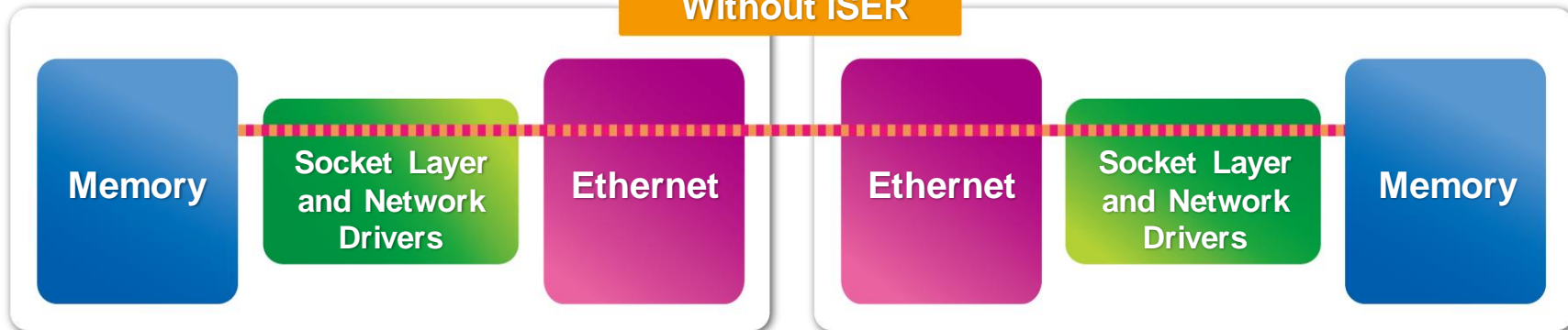
- **Buit-in Mellanox ConnectX 4Lx 10GbE SmartNIC**
- **Supports iSER**



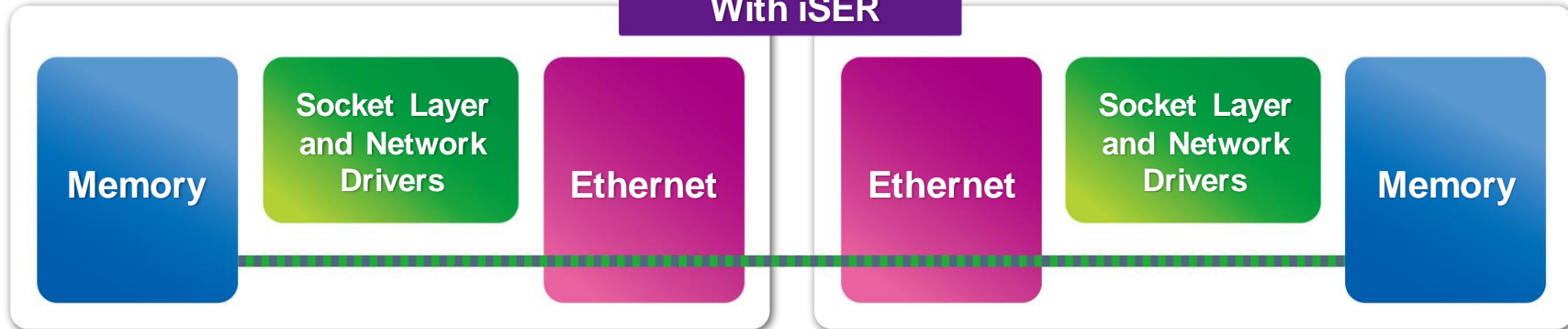
Offload tasks from CPU with iSER

iSER (iSCSI Extension for RDMA)

Without iSER



With iSER



Comes with two 10GbE Ports



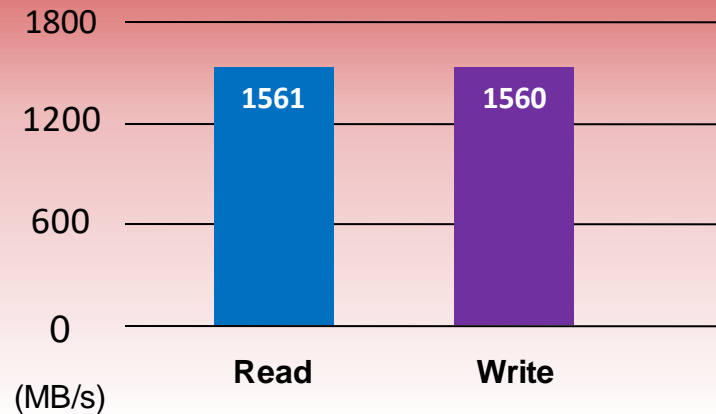
Tested in QNAP Labs. Figures may vary by environments.

Test environment:

NAS: TS-1677XU-1700-16G with QTS 4.3.4

Volume type: RAID 5; 16 x Intel S3500 240GB SSDs (SSDSC2BB240G4)

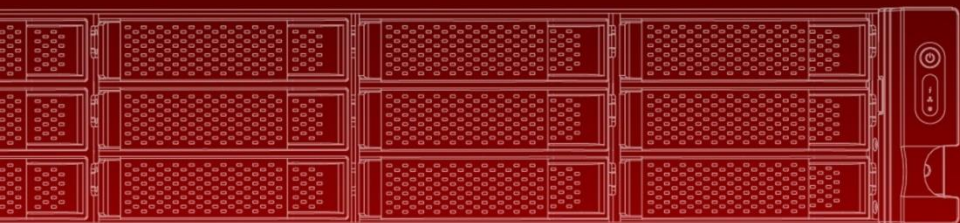
10GbE x 2 (Sequential)



QNAP

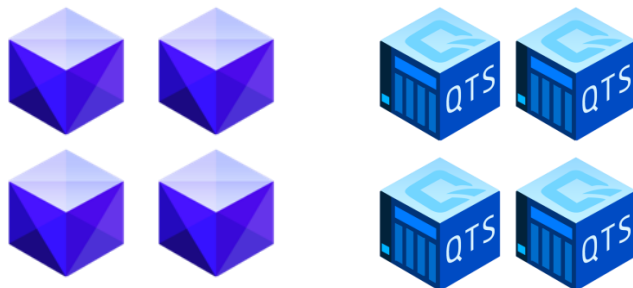
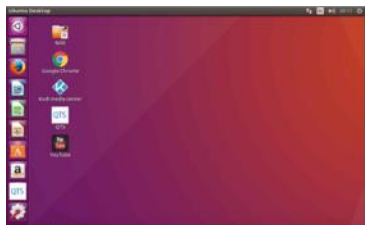
Demo

10GbE Performance Demo



Running vQTS via Virtualization Station

Conventional VM:
Windows, Linux, UNIX



Virtualization Station

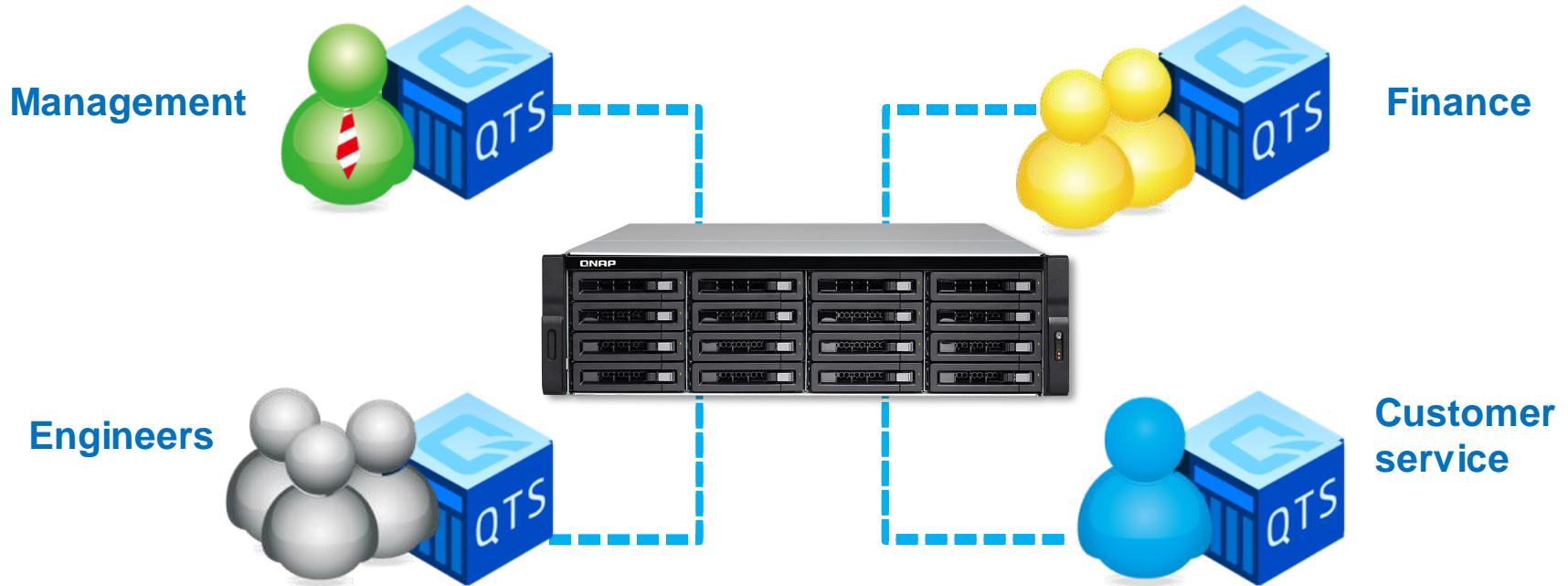


Virtual QTS - vQTS



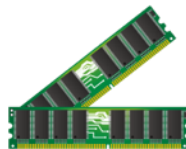
One-for-many

It allows IT admins to flexibly allocate system resources to different departments or groups for different privileges and applications.



Dedicated resource allocation

Allocation of dedicated HW resources (CPU, RAM, storage space, and Internet) ensures performance quality.



Quad-core

4 GB

250 GB

1

Octa-core

8 GB

500 GB

2

The best platform for vQTS

Number of allowed vQTS instances is based on the number of cores of the physical CPU.



AMD Ryzen™ 5 1600 6-core =



2



AMD Ryzen™ 7 1700 8-core =



4



NEW

QTS 4.3.4
Storage & Snapshot Manager,
and multimedia management

Supports Windows/Linux VMs
and containers



Virtualization Station



Container Station

Do more with graphics cards

3U/4U NAS: 500W+ power supply



TS-1677XU-RP

support full-high GPU card which required external power



QuAI

2U NAS: 250W/300W power supply

support half-high GPU card and required no external power , e.g.: NVIDIA GT1030

Add-on GPU Card Applications



AI
Compute
Acceleration



QTS/vQTS
Transcod
Acceleration



**Virtualization
Station**
GPU Passthrough

Ride the AI wave with “QuAI”

QNAP QuAI >> AI Developer Package



Is intended for data scientists and developers to quickly build, train, and optimize their AI Models on QNAP NAS.



AI

+



QNAP NAS

+



GPU accelerated
computing

=



QuAI

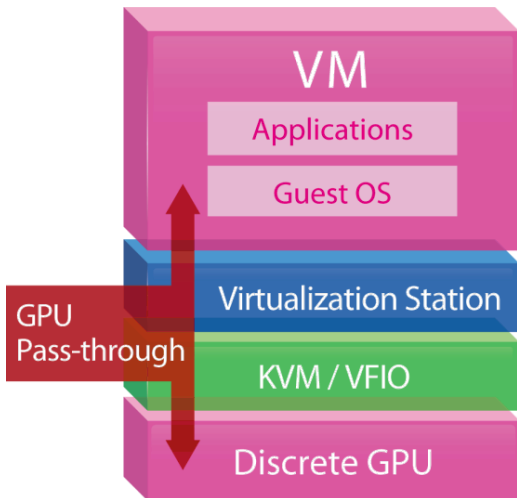
Smooth Video Experience

- **Virtualization Station**
- **HybridDesk Station, Linux Station**
- **QVR Pro Client (HD Station)**
- **Video Station**
- **Plex Media Server**

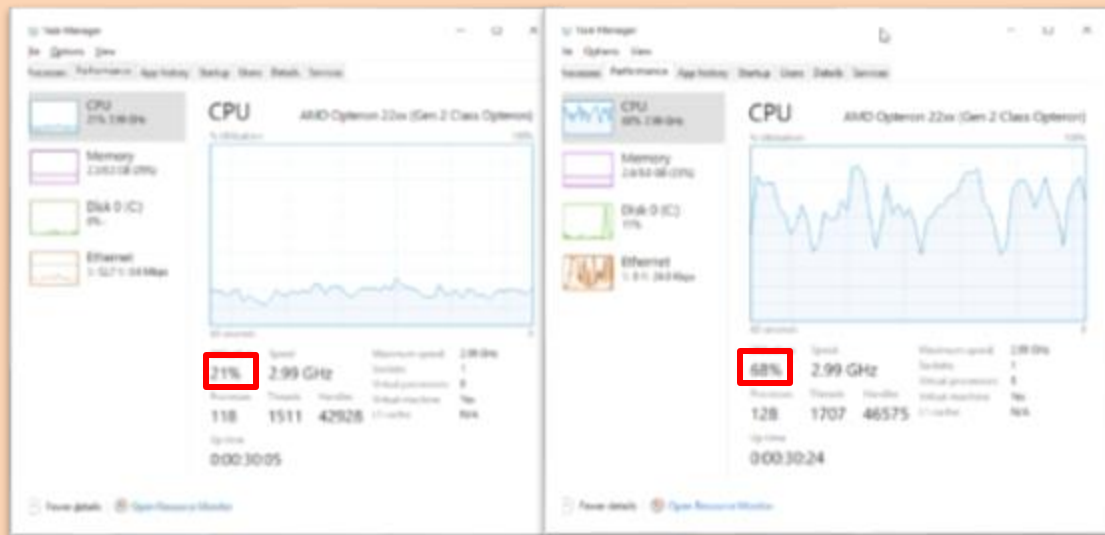


GPU upgrades image/video processing

For OpenGL & DirectX applications



H/W accelerated with GPU to lower CPU usage.



w/ GPU



w/o GPU

Product Launch Schedule

June, 2018



TS-1677XU/TS-1677XU-RP



TS-1277XU/TS-1277XU-RP



TS-877XU/TS-877XU-RP

Q3, 2018



TS-2477XU-RP



TS-977XU/TS-977XU-RP

QNAP

TS-x77XU

Ryzen Enterprise NAS Your Best Choice



TS-977XU / TS-977XU-RP



TS-877XU / TS-877XU-RP
TS-1277XU / TS-1277XU-RP



TS-1677XU / TS-1677XU-RP
TS-2477XU-RP