

**QNAP**

# TS-855eU/ TS-855eU-RP

2U 8-bay short depth rackmount NAS,  
powered by Intel Atom® 8C/8T 2.8 GHz  
CPU, dual 2.5GbE, M.2 NVMe SSD,  
PCIe Gen 3 support 25GbE expandability



# Short depth rackmount with an Intel 8-core CPU to provide 25GbE performance and expandability

8

Core

## Intel® 8-core 2.8 GHz CPU

Intel Atom® C5125 2.8 GHz 8-core processor, provide powerful NAS performance



## Dual 2.5 GbE ports

Sufficient 2.5 GbE network bandwidth provides smooth data transmission experience



M.2 SSD

## Dual M.2 PCIe 2280 slots

Two PCIe Gen3 x4 M.2 2280 slots for optimal configuration of SSDs or AI accelerators



## Dual PCIe Gen3 x4 slots

Provide a variety of expansions including 5/10/25GbE network card, M.2, HBA and other expansion cards

64 GB



## Maximum 64 GB Memory

Pre-installed 8 GB Non-ECC memory, 2 x DDR4 SODIMM slots for up to 64 GB, optionally support ECC memory modules



## Redundant power supply options

When one of the two power supplies fails, it can still supply the power to prevent service interruptions

# Support Intel QAT and SR-IOV to increase efficiency

SR-IOV

## SR-IOV Network I/O Virtualization

Install a PCIe network card that supports SR-IOV technology, and directly allocate the bandwidth resources of the physical network card to the virtual machine.

QAT

## Intel® QAT hardware acceleration

Supports the Intel® QuickAssist hardware acceleration engine (Intel® QAT), which accelerates data compression/decompression, and can greatly improve the performance of encryption and decryption transmission operations



# Choose between QTS and ZFS based QuTS hero

TS-855eU(-RP) is shipped with the QTS operating system, which has powerful data transmission performance and more efficient memory usage, and enjoys the Qtier automatic tiered storage function. You can also change to the QuTS hero operating system according to your needs

	QuTS hero	QTS
Filesystem	ZFS	Ext4
SSD cache	Read Cache	Read/Write Cache Read Cache Write Cache
Inline Compression	Yes (LZ4 compression, ideal for RAW files and document files)	No
Inline Deduplication	Yes (At least 16 GB RAM required)	No
HBS with QuDedup for Remote Backup	Yes	Yes
Power Failure Protection (Software)	ZIL Copy-on-Write	No
Permission Management	Rich ACL (14 types)	POSIX ACLs (3 types) + certain special permissions
Capacity Expansion	Upgrade RAID capacity Change higher capacity disk drives Attach expansion enclosures/JBODs	Add a disk drive to a RAID group Upgrade RAID capacity Change higher capacity disk drives Attach expansion enclosures/JBODs
Data Security	Better (Self-Healing & Copy-on-Write)	Standard
Recommendation SSD Configuration for Video Editing Applications	Use SSD Pools Note: Set the block size 128K when creating Folders/LUNs	Editing (from original/RAW files): Use SSD Pools Post production: Enable Read/Write cache Note: Set the block size to 32K or 64K when creating Volumes, and choose "All I/O" for cache mode.

# 30-cm / 12-inch short-depth chassis



The chassis is 47% shorter.  
Easy to setup and transport



30-cm / 12-inch short chassis  
supports most of the cabinet on  
the market

Compared with 2U rackmount NAS  
in the market

Reduced by **47%+**

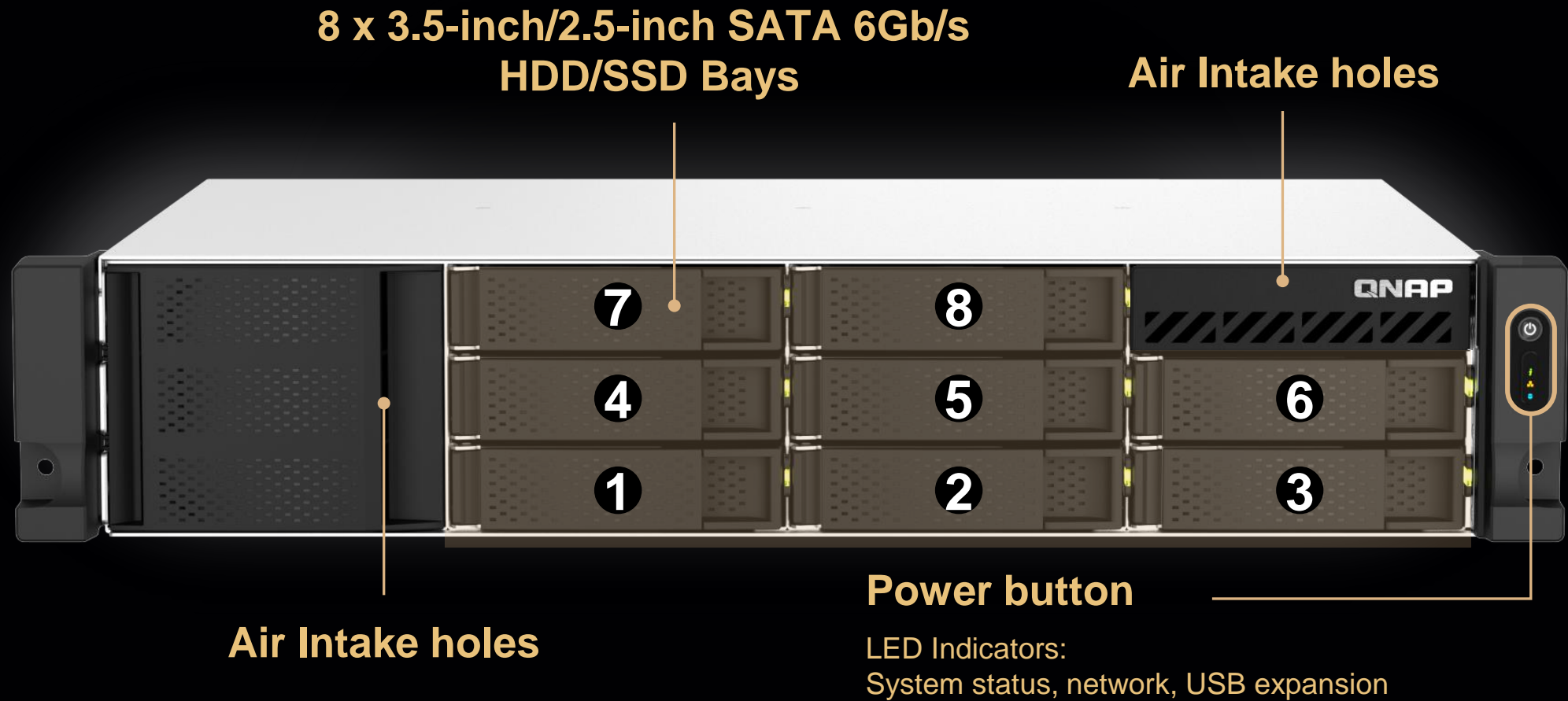


# Hardware

TS-855eU & TS-855eU-RP | 8-bay short depth rackmount NAS



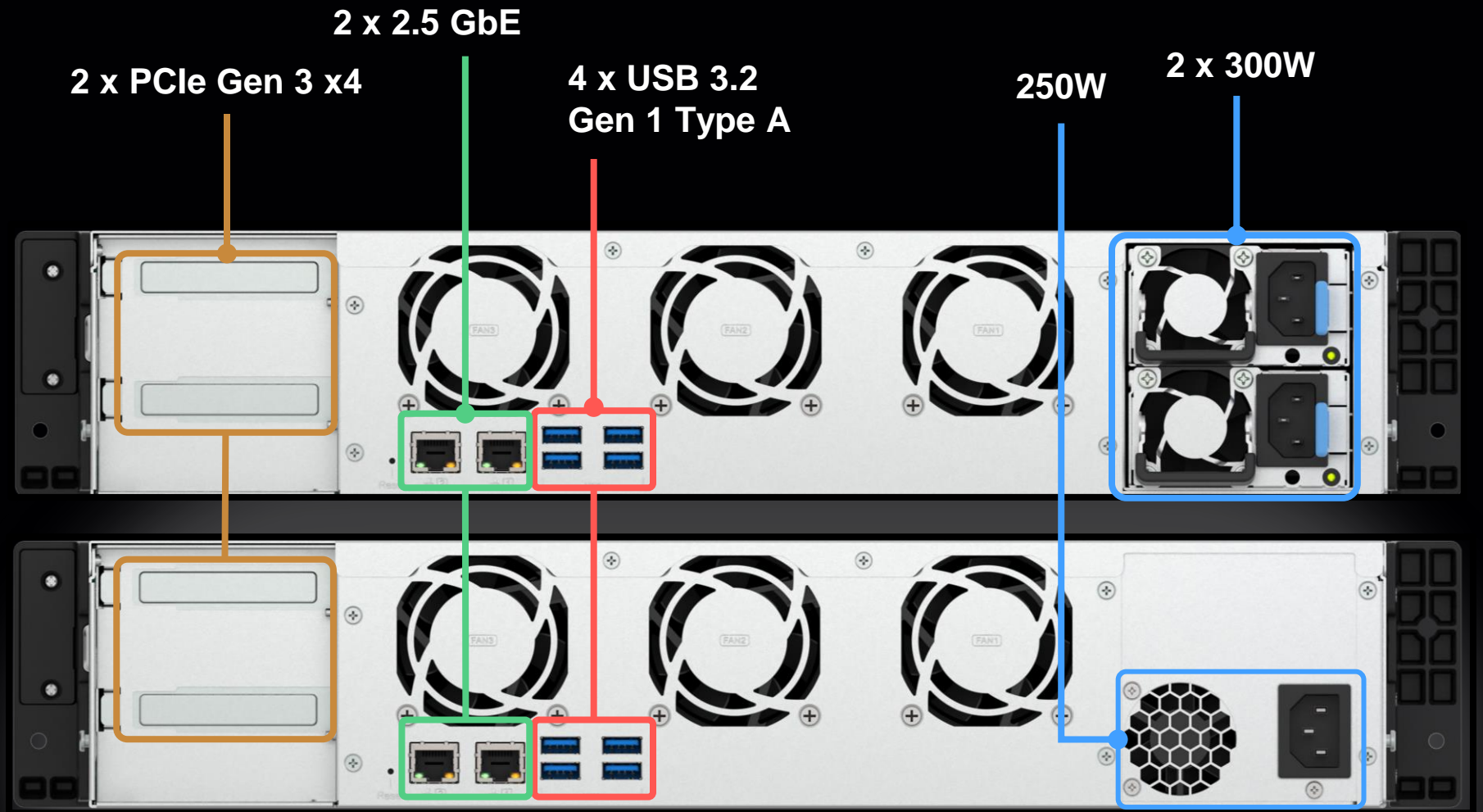
# Front view



# Rear view

**TS-855eU-RP-8G  
( 2 x 300W )**

**TS-855eU-8G  
( 250W )**





# Supports ECC memory (Error Correcting Code)

Reliable memory and  
avoiding data corruption

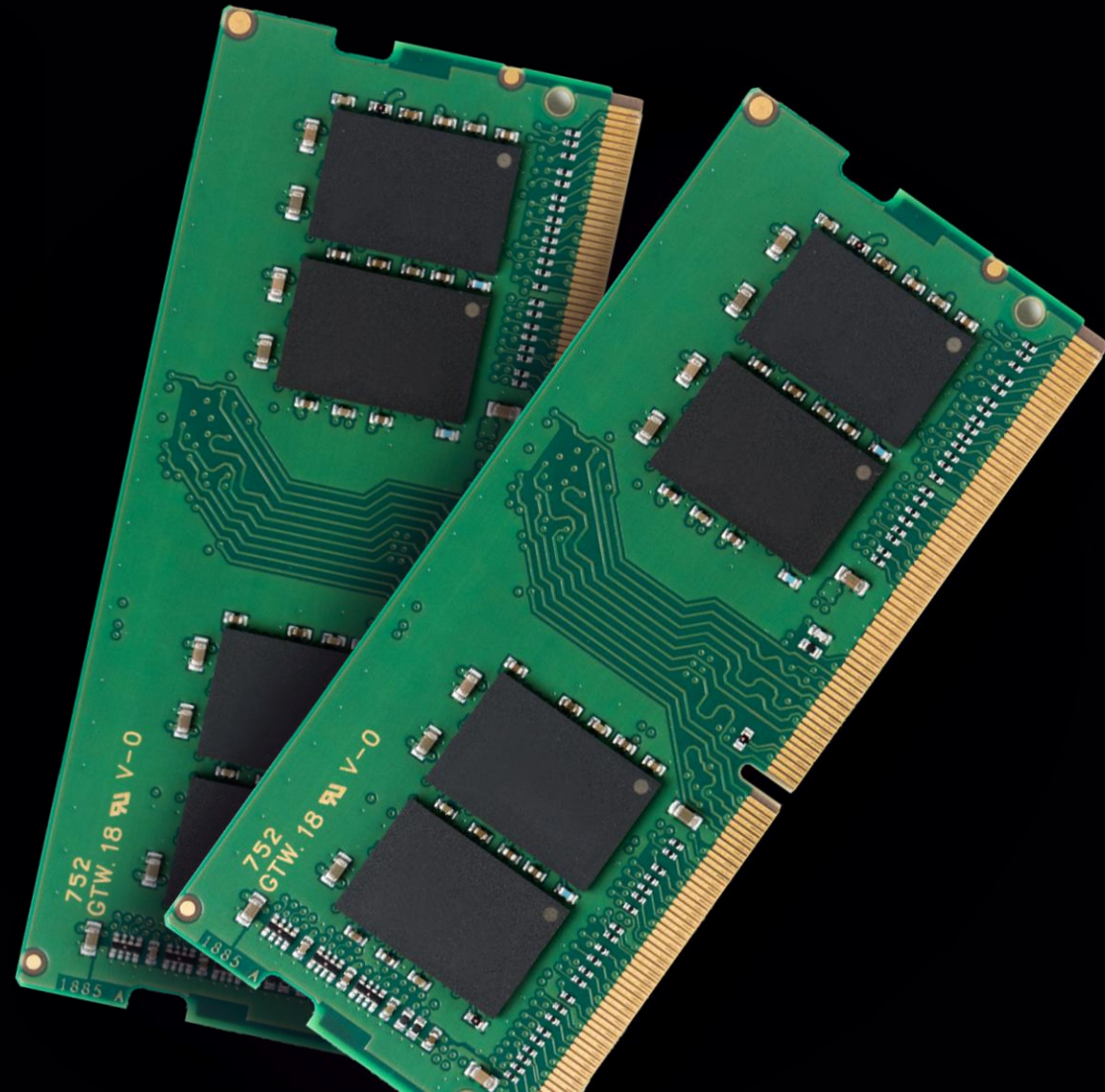
**ECC**



TS-855eU / TS-855eU-RP series supports ECC memory,  
automatically detecting and timely correcting single-bit errors

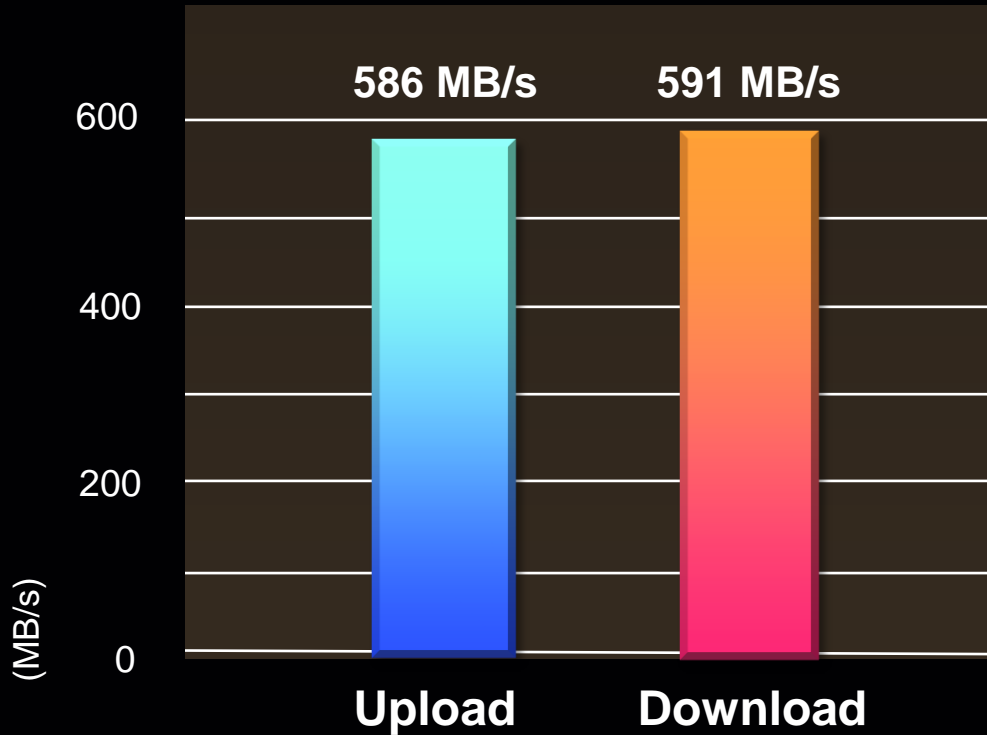
System supports up to **64GB ( 2 x 32GB)**  
memory

- The NAS is pre-installed with a 8GB DDR4 SO-DIMM non-ECC memory by default.
- ECC memory and non-ECC memory modules cannot be installed together



# Integrated 2 x 2.5 GbE, expand to 2 x 25GbE via a QNAP PCIe network interface card

2 x 2.5 GbE Windows File Transfer



2 x 25 GbE SMB Sequential Throughput (1MB)



Environment:  
NAS | TS-855eU-RP, QTS 5.0.1, 8 x Samsung 860 EVO 1TB, RAID 5, thick volume  
PC | Windows Server 2016, Intel Core i7-6700 3.4 GHz, 64GB RAM  
Tested in QNAP Labs. Figures may vary by environment.



QXG-25G2SF-CX6  
2 x 25GbE SFP28 NIC



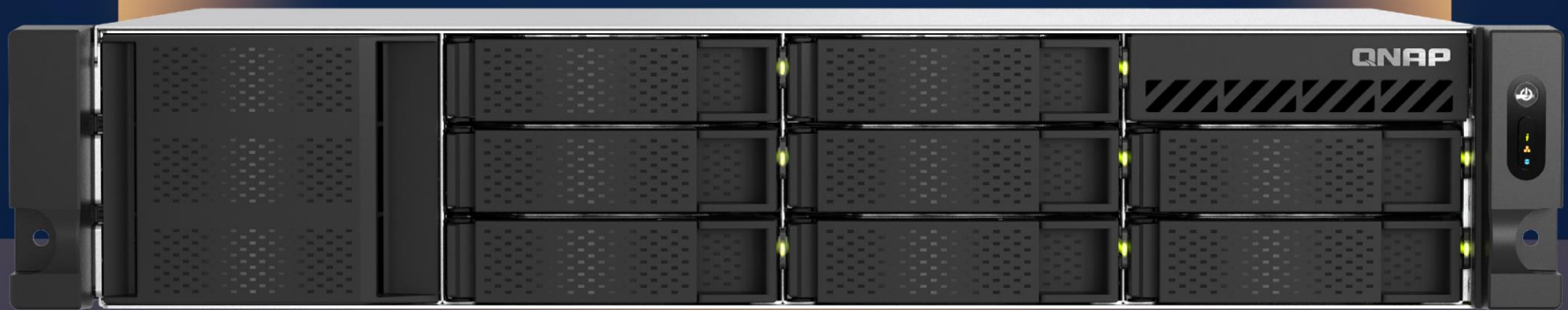
# TS-855eU (-RP) vs. TS-873AeU (-RP)

## TS-855eU (-RP)

## TS-873AeU (-RP)

	TS-855eU (-RP)	TS-873AeU (-RP)
CPU	Intel® Atom® C5125 8-core processor, 2.8GHz	AMD Ryzen V1500B 4-core processor, 2.2GHz
Memory	8 GB SODIMM DDR4 (1 x 8 GB), Max 64GB, optional ECC supported	4 GB DDR4 SODIMM (1 x 4GB), Max 64GB, optional ECC supported
Memory slots	2 x SODIMM DDR4	
Drive bays	8 x 3.5" or 2.5" SATA 6Gb/s	
LAN ports	2 x 2.5GbE	
PCIe slots	2 x PCIe Gen 3 x 4 (support 10GbE/25GbE SmartNIC)	1 x PCIe Gen3 x8 (support 10/25GbE SmartNIC)
M.2 slots	2 x M.2 PCIe Gen 3 x4	2 x M.2 PCIe Gen 3 x1
USB ports	4 x USB 3.2 Gen 1 Type A	4 x USB 3.2 Gen 2 (2 x Type A 、 2 x Type C)
Dimension (HxWxD)	88.6 × 432 × 297.4 mm (3.48 x 17 x 11.70 inch)	
Power supply	TS-855eU 250W, 100-240V TS-855eU-RP 300W, 100-240V	TS-873AeU, 250W, 100-240V TS-873AeU-RP, 300W, 100-240V
Fan	3 x 60mm	

**LIVE  
DEMO**



# High-performance and large-capacity file backup & surveillance server

TS-855eU & TS-855eU-RP | 8-bay short depth rackmount NAS





**QNAP**

# QTS 5.1.0

Boosted performance,  
flexible management, and  
higher security

# SMB Multichannel

Multiplies the Speed!

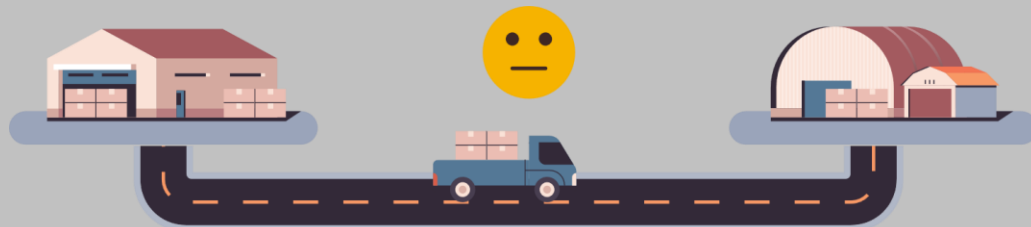


# SMB Multichannel for doubled speed

A SMB 3 client automatically establishes multiple connections to the SMB server for a single SMB session. The connection also provides bandwidth aggregation and network fault tolerance.

Requirement: Both NAS and Client device support SMB 3.0 protocol. NAS: QTS 5.1.0 (or later), QuTS hero h5.1.0 (or later). Clients: Windows Server 2012 (or later), macOS Big Sur 11.3.1 (or later)

## Without Multichannel



## With Multichannel





# Made for business: high-performance storage server, virtualization, and surveillance platform

	Intel Atom C5125	AMD Ryzen Embedded V1500B Quad-core @ 2.20GHz
CPU Mark	<b>8631</b>	<b>5417</b>
(% diff. to max in group)	(0.0%)	(-37.2%)

Powered by Atom® C5125 8-core CPU, with higher CPU benchmark than others

<https://www.cpubenchmark.net/compare/5091vs4624/Intel-Atom-C5125-vs-AMD-Ryzen-Embedded-V1500B-Quad-core>

## Intel 8-Core 2.8GHz CPU

High performance processor suitable for virtual machines and multitasking



Virtualization station



Container station

The short depth rackmount design, with less space and is ideal for businesses

Implement high-performance applications such as data access, data backup and surveillance



QVR Elite



Qsync



HBS3



Certified for virtualization

Microsoft Hyper-V / Citrix ready / VMware ready / Veeam ready

# File Station : Easy to use, easy to find

All the files and folders stored on your NAS and connected storage spaces are accessible through a familiar interface, and rich search/sort functions are available to help find files.

The diagram illustrates the File Station interface and its connectivity. On the left, a smartphone displays the Qfile app interface, showing a list of storage locations: USBDisk1, Web, GoogleDrive (linuslin@qnap.com), Linus431P, home (admin@Linus431P), and Dropbox (linuslin@qnap.com). In the center, three labels with arrows indicate connectivity: 'Loca NAS' (with a double-headed arrow), 'Remote NAS' (with a double-headed arrow), and 'Cloud Storage' (with a double-headed arrow). On the right, the File Station 5 web interface is shown, displaying a file tree for 'Josh963X' and a detailed view of a 'Dropbox (joshchen@qnap.com)' folder. The file tree includes folders like DataVol1, Browser Station, Download, home, homes, Josh, Multimedia, Public, Web, and 快照. The detailed view shows a table of files and folders with columns for '名稱' (Name) and '修改日期' (Modification Date).

名稱	修改日期
test	1970/01/01 01
gmail test	1970/01/01 01
test2	1970/01/01 01
test2-複製(1)	1970/01/01 01
test2-複製(2)	1970/01/01 01
@QCloudSync	1970/01/01 01
enctest	1970/01/01 01
Hello_3.txt	2018/07/26 05
Hello_0 copy.txt	2018/07/26 05
Hello_0.txt	2018/07/26 05
Hello_2.txt	2018/07/26 04
ABDCEFG-複製(1).docx	2018/07/26 04
IMG_0033.MOV	2018/07/26 04
ABDCEFG.docx	2018/07/25 03

# Easily make NAS your team collaboration portal with File Station

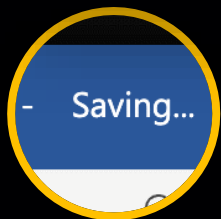


**Edit with Office Online**

**View in Google Docs**

**Open with Google Chrome Extension**

<b>Requirement</b>	CloudLink needs to be enabled	CloudLink needs to be enabled	Use Chrome with extension "Office Editing for Docs, Sheets & Slides" to open
<b>Supported formats</b>	.docx, .pptx, .xlsx	.doc, .ppt, .xls .docx, .pptx, .xlsx	.doc, .ppt, .xls .docx, .pptx, .xlsx
<b>Capabilities</b>	<ul style="list-style-type: none"> <li>•File collaboration</li> <li>•Auto save to NAS in real time</li> </ul>	<ul style="list-style-type: none"> <li>•Document preview</li> <li>•Convert to Google docs for editing &amp; saving in your Google Drive</li> </ul>	<ul style="list-style-type: none"> <li>•Document preview</li> <li>•Convert to Google docs for editing &amp; saving in your Google Drive</li> </ul>



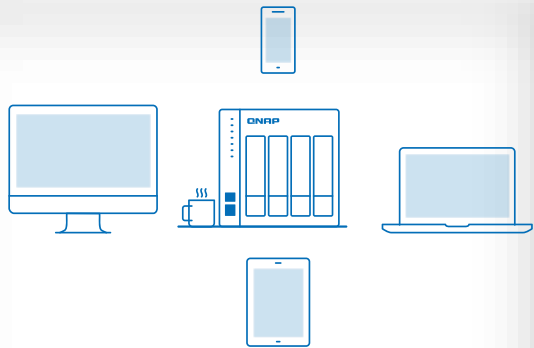
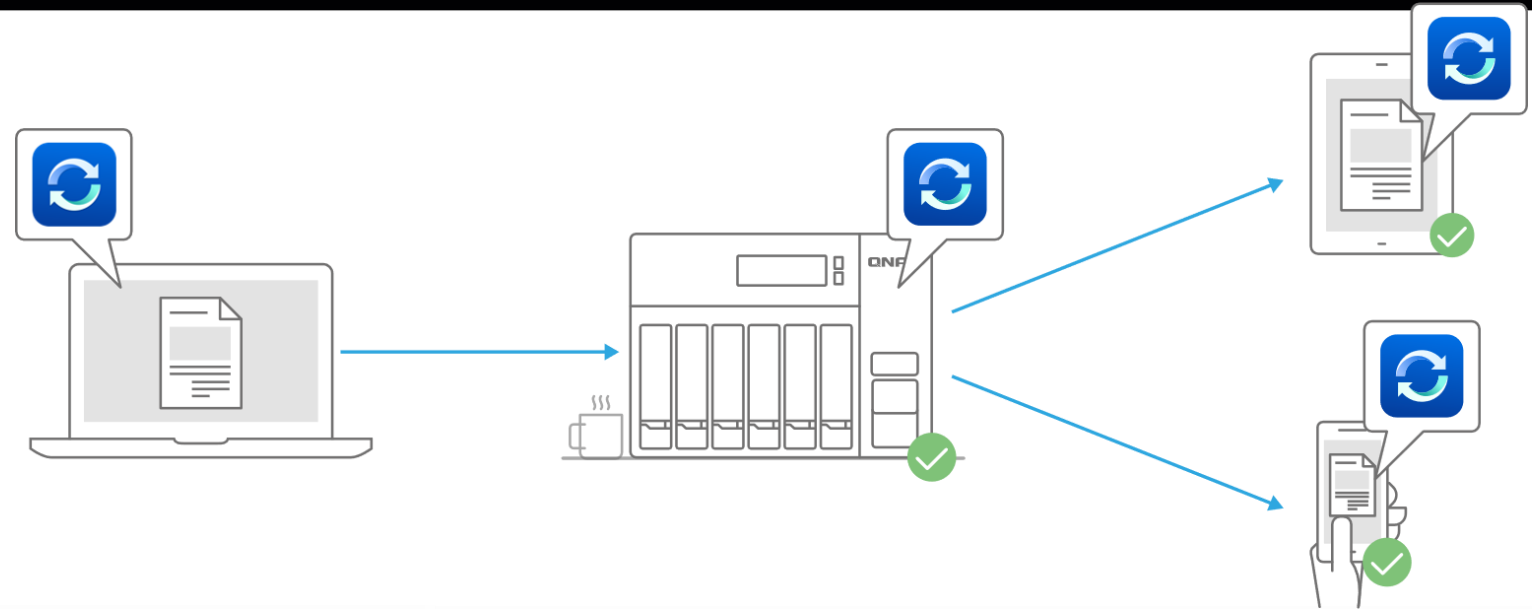
Save to NAS in real time



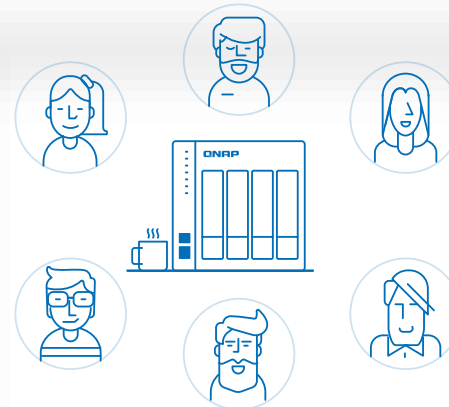
Multi-user online editing

# Qsync 5.0 – Cross-device file sync for individuals and teams

Qsync enables efficient file synchronization between a QNAP NAS and linked devices such as computers, laptops, and mobile devices. With Qsync, you can easily access data across all your devices and share it among your team members.



If you own many devices, any file changed on one device will be automatically synchronized with the others.

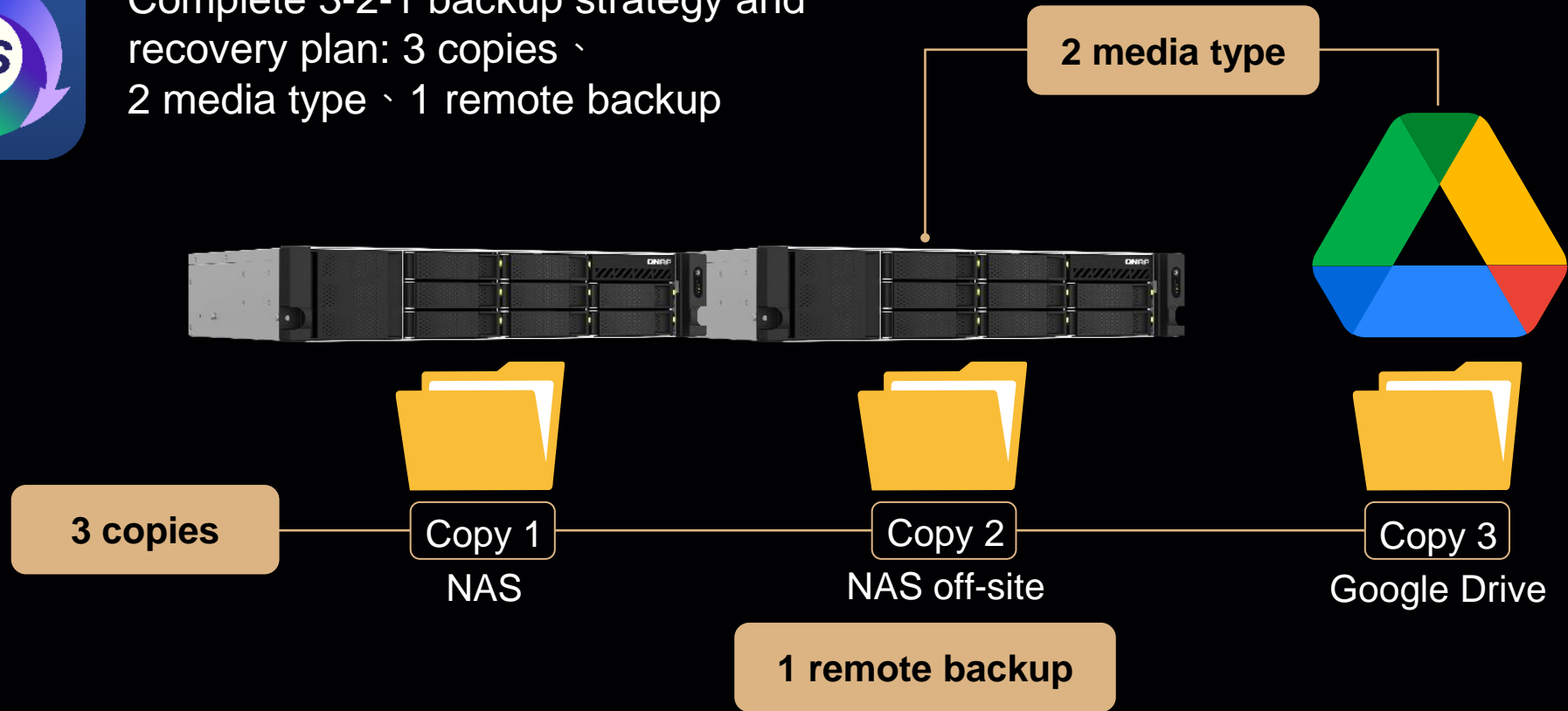


For team works, any file changed will be automatically distributed to your teams' devices, accelerating and streamlining your workflows.

# Easy to use HBS 3.0 app fulfilling backup 3-2-1 practice with deduplication



Complete 3-2-1 backup strategy and recovery plan: 3 copies \ 2 media type \ 1 remote backup



# DA Drive Analyzer disk failure prediction



Each NAS can perform one disk prediction for free, and you can also pay to subscribe to enhance protection for all disks.

The screenshot shows the DA Drive Analyzer interface. On the left is a navigation menu with 'Overview' selected. The main area displays an 'Overview' section with a summary of drive enclosures and drives, and a status bar showing 5 Faulty, 4 Critical, 9 Warning, and 1 Normal drives. Below this is an 'Important: Review Drive Status' section with a table of drive details. A 'License' section on the right shows the plan is BETA and valid until 2022-02-18.

Drive (Drive Enclosure)	Severity Level	Drive Manufacturer	Drive Capacity
Disk 1 (NAS Host)	Warning	ST320LM001	298.09 GB
Disk 2 (NAS Host)	Warning	WDC	298.09 GB
Disk 4 (NAS Host)	Faulty	ST320LM001	298.09 GB
Disk 7 (NAS Host)	Warning	TOSHIBA	298.09 GB
Disk 8 (NAS Host)	Critical	WDC	298.09 GB
Disk 9 (NAS Host)	Faulty	TOSHIBA	298.09 GB

## Disk health analysis and failure prediction

DA Drive Analyzer integrated ULINK AI predict technology can warn you before disk failure, help you protect valuable data

# All-in-one solution for hosting virtual machines and containerized apps



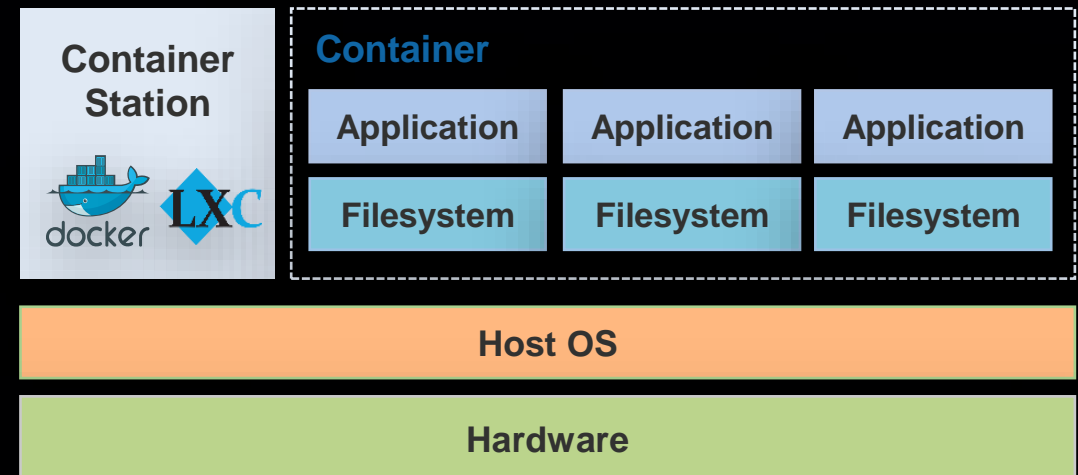
## Virtualization Station

Virtualization Station allows you to create virtual machines (VM) on Turbo NAS, supporting Windows® · Linux® operating systems.



## Container Station

Experience LXD and Docker® lightweight virtualization technologies, download apps from the Docker Hub Registry®, import/export containers, and create abundant microservices.



# Data security



## QuFirewall

You can allow/deny IP addresses and regions to prevent unauthorized access and brute force attacks for safeguarding data and service security.



## Malware Remover

Protect your NAS data against malware attacks

The screenshot shows the QuFirewall application window. On the left, there is a sidebar with a 'QuFirewall' header, a 'Firewall ON' toggle, and a notification: 'QuFirewall has denied access to 1 events in the last 24 hours.' Below this are menu items: 'Firewall Profiles', 'Event Counts', 'Capture Events', and 'Notification Settings'. The main area displays 'Firewall Profiles : 3' with an 'Add Profile' button. A table lists the profiles:

Profile Name	Rules	Action
> <input checked="" type="checkbox"/> Basic protection Enabled	6	✎ ⋮
> <input type="checkbox"/> Include subnets only	4	✎ ⋮
> <input type="checkbox"/> Restricted security	40	✎ ⋮

The screenshot shows the Malware Remover application window. On the left, there is a sidebar with 'Malware Remover' header and menu items: 'Scan', 'Settings', and 'Event Logs'. The main area features a large blue circular button with a stethoscope icon labeled 'Start Scan'. Below this, there are two columns of scan information:

Scheduled Scan Daily, 03:00	Last Scan 20 second(s) ago.
Instant scan after malware definition updates Enabled	Last Scan Status Scan Complete



# Snapshots Help You Fight with Ransomware Threats

TS-855eU(-RP) supports Snapshot , like taking a photo - within seconds the complete status of your NAS system and data is recorded.

QTS supports up to 1,024 snapshots, QuTS hero supports up to 65,536 snapshots

Mitigate the growing threat of ransomware

## Step 1

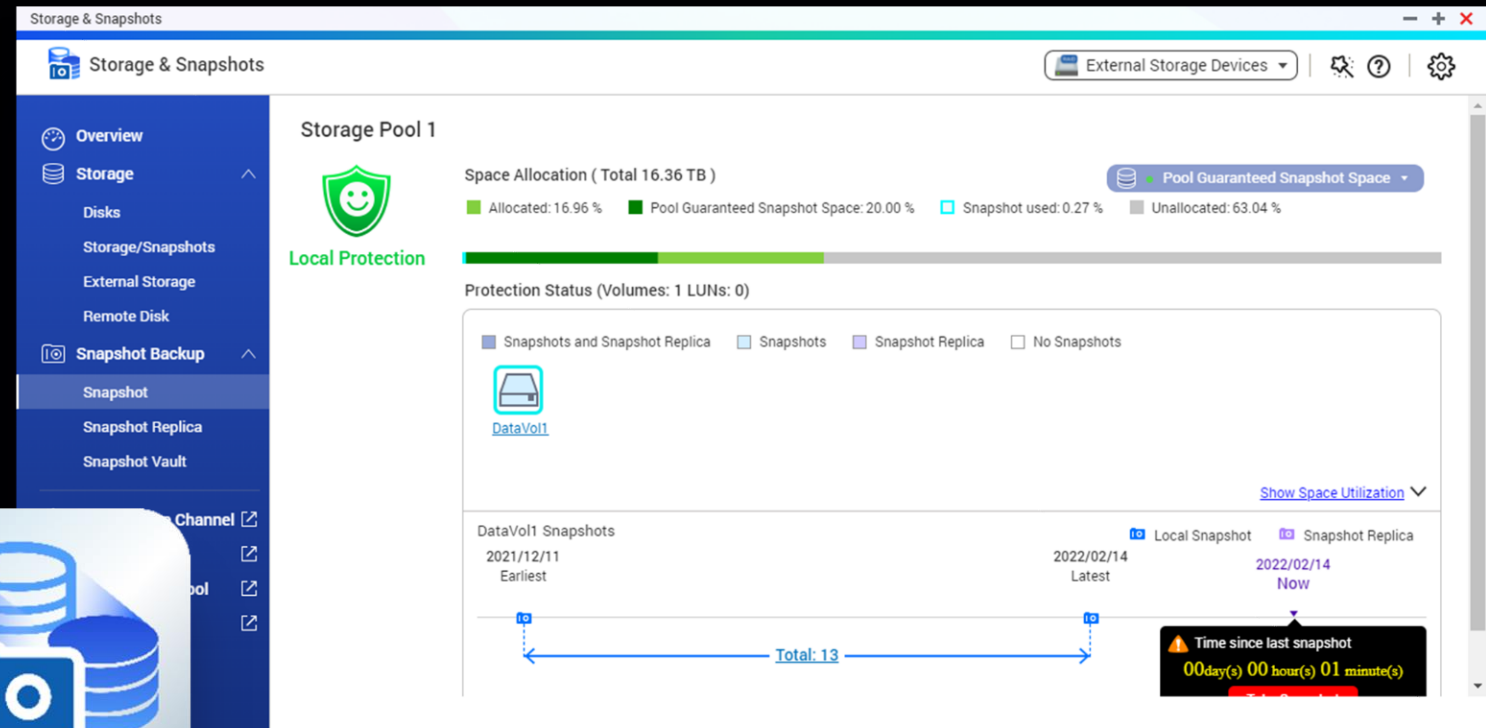
Regularly update, and use Malware Remover

## Step 2

Routinely back up to your NAS, and create multi-version snapshots

## Step 3

Back up snapshots to another QNAP NAS





# QNAP surveillance solution

Your NAS is also a surveillance server



# Your NAS is also a surveillance server



## QVR Pro

- 6,000+ Compatible cameras
- 8 embedded monitoring channels
- \*Expand to 60 channels by purchasing QVR Pro licenses
- View USB camera images through QUSBCam2

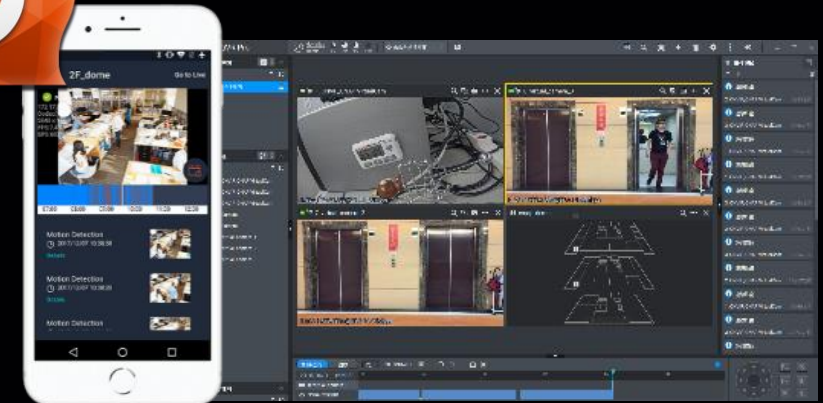


## QVR Elite

- \*The flexible subscription QVR Elite can be expanded to a maximum of 72 channels by purchasing licenses



## QVR Pro Client



- iOS & Android mobile devices
- Support cross-platform : Windows, Mac, Ubuntu
- Use HDMI output and USB keyboard and mouse to control the NAS through installing Graphic card

# Unified interface for live view & playback, anywhere with a PC or mobile device

Monitor the live view of multiple channels and playback on 1 single interface.

The image displays the QVR Pro software interface. On the left, there is a sidebar with a 'View' panel showing 'Unstated View' and a 'Camera' panel listing 17 cameras. The main area is divided into several video windows. At the bottom, there is a control bar with 'Live' and 'Playback' buttons, a 'SYNC' button, a date '2021/12/01', and a timeline. A large play button is overlaid on a grid of video thumbnails in the top right.

**1 click to switch between Live & Playback**

**1 click to sync playback all video views**

**1 click to jump to the previous playback time**

# Compatible with a huge amount of camera models

over **190 brands**

 GeoVision

 VIVOTEK  
BUILT WITH RELIABILITY

 Panasonic

 AXIS  
COMMUNICATIONS

 MOBOTIX

 Canon

 HIKVISION

 aHua  
TECHNOLOGY

 Honeywell

 Brickcom

over **6000 Models**



**ONVIF Profile Supported**

 ONVIF® | S

**RTSP Stream  
Input / Output**

**RTMP Stream  
Input**



# Multiple storage space and expansion solutions

TS-855eU & TS-855eU-RP | 8-bay short depth rackmount NAS



# Supports up to 16 more HDDs with two JBOD units, add nearly 352TB ( 16 x 22TB ) of storage space

## USB



TR-002



TR-004



TL-D800C



TR-004U



TL-R1200C-RP

### Maximum of JBOD / \*RAID expansion enclosures

TR-002	2
TR-004	2
TR-004U	2
TL-D800C	1
TL-R1200C-RP	1
TL-D400S	2
TL-D800S	2
TL-D1600S	1
TL-R400S	1
TL-R1200S-RP	1

## SATA



TL-D400S



TL-D800S



TL-D1600S



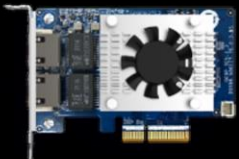
TL-R400S



TL-R1200S-RP

# QNAP 16/32Gb Fibre Channel cards for a reliable, scalable and budget-friendly FC SAN storage solution

## 10GbE NIC



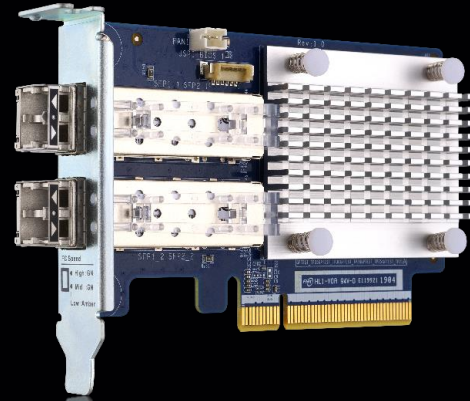
QXG-10G2TB

2 x RJ45



QXG-10G1T

1 x RJ45



**QXP-16G2FC** : Dual ports 16Gbps

**QXP-32G2FC** : Dual ports 32Gbps

(FC HBA with 16/32Gb FC transceivers)

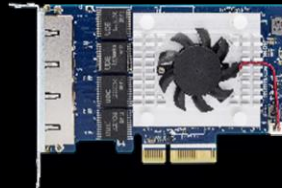
## 25GbE NIC



2 x SFP28 25Gb/s

QXG-25G2SF-CX6  
(Support 25GbE  
SFP28, 10GbE SFP+)

## 5GbE NIC



1/2/4 x RJ45

QXG-5G1T-111C  
QXG-5G2T-111C  
QXG-5G4T-111C

For more, please check :  
<https://www.qnap.com/go/compatibility/>



# 3-year standard warranty covering hardware repair and support services

TS-855eU(-RP) is backed by a 3-year warranty at no additional cost.

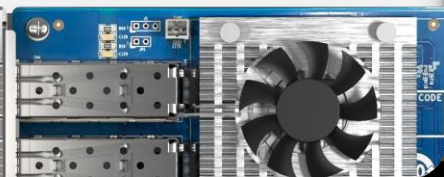
You can also purchase a warranty extension that extends your warranty coverage up to 5 years total (2 additional years **EXTW-BROWN-2Y**).

SKU : **TS-855eU-8G, TS-855eU-RP-8G**

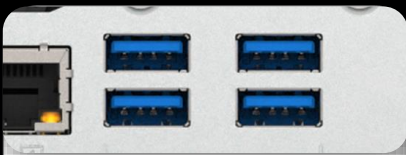
Intel Atom® C5125 8-core CPU 2.8 GHz, , 8 GB DDR4 (1 x 8 GB) , 1 x 250W (Redundant power 2 x 300W)



Support  
5/10/25GbE  
NIC



Support  
multiple  
**JBOD**



**4**

USB 3.2 Gen 1  
Type A



C5125 2.8 GHz  
**8-Core**  
Processor

**352**

TB  
Raw capacity  
w/ JBOD



**2**

PCIe  
Gen3 x4

Supports both

QTS

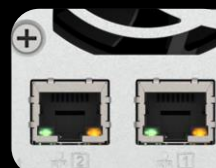
**QuTS** hero  
edition

intel®  
Quick Assist  
Technology



Redundant  
power supply  
options

**TS-855eU/-RP**



**2.5GbE X2**

Will be available up to

**2027**

**64GB** Max.  
Memory

The chassis is  
**47%** shorter



QVR Elite  
Surveillance  
solution



2 x M.2 2280  
PCIe Gen3 x4



Up to 5 years  
Warranty

**SR-IOV**

# TS-855eU / TS-855eU-RP

2U short-depth rackmount NAS  
with 8-core computing power for  
optimized virtualization

**QNAP**

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