



QNAP



Supports QTS or QuTS hero operating system

# TS-873AeU / TS-873AeU-RP

2U 8-bay short depth rackmount NAS

———— 30cm / 12-inch chassis depth ————

AMD Ryzen 4C/8T 2.2GHz CPU, dual 2.5GbE, M.2 NVMe SSD, PCIe Gen3 x8 expandability

# Massive storage data needs of small business and enterprise

IT setup data storage with a limited budget

Company internal data sharing

Small businesses, educational institutions, studios without server space or rack room



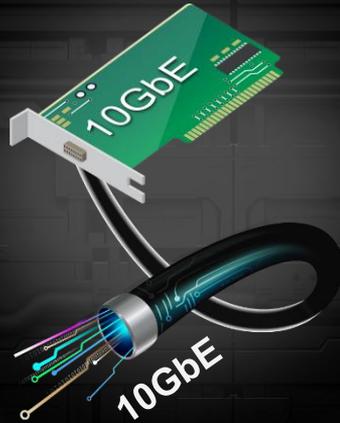
# Enterprise storage needs to consider future expansion needs

Purchasing NAS should consider future expandability

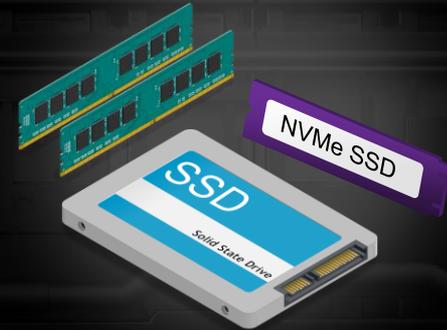
Storage expansion



Network expansion



System performance upgrade



# TS-873AeU, TS-873AeU-RP features



## 30-cm / 12-inch depth

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



## 2 x M.2 2280 PCIe Slots

Built-in 2-port M.2 PCIe Gen 3 x1 slots for NVMe SSD cache to accelerate the speed of random access



## 1 x PCIe Gen 3 x8

1 x PCIe Gen 3 x8 slot for various applications of high-speed expansion cards

**QTS**  
QuTS hero

## QTS and QuTS hero

Choose the NAS O.S. during initial system configuration

# TS-873AeU, TS-873AeU-RP 30cm / 12-inch short-depth chassis benefits

In general, the 2U rackmount servers are heavy and over 18-inch depth in the market. TS-873AeU series with both single power supply and dual power supplies have reduced the weight by **30%** and shortened the length to just **30-cm / 12-inch** for easy placement and movement.



Significant weight reduction of 30%.  
Single power supply or redundant power supply options



30-cm / 12-inch short-depth chassis design, easy to be placed in more cabinets and locations



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



The chassis is 30% shorter.  
Easy to setup and transport

Compared with 2U rackmount  
NAS on the market



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

Reduce by  
**30%+**



# TS-873AeU series short-depth chassis

## NAS usage scenarios



30-cm / 12-inch short-depth design of the TS-873AeU series can be installed in the server room or in a standard cabinet with a depth of 12 inches. It is suitable for installation in offices, studios, educational institutions, and more:

- Compatible with various ANSI/EIA-RS-310-D standard 19-inch cabinets
- Optional slide rails or 2U cantilever fixed shelf for cabinets with a depth over 18 inches.
- Optional 2U cantilever fixed shelf for cabinets with a depth between 12 to 18 inches.
- When the depth of the cabinet is less than 12 inches, you can choose a 2U cantilever fixed shelf that can support at least 20 kg. Make sure that there's enough space for cable wiring and heat dissipation.
- When choosing a 2U cantilever fixed shelf, the shelf must support minimum 20 kg weight and 30-cm/12-inch depth chassis.
- An optional QNAP RAIL-B02 rail kit can be installed in a cabinet with a depth of more than 18 inches, front and rear square holes

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# Economical dual 2.5GbE high-speed network ports for businesses



## Dual 2.5GbE (2.5G/1G) high-speed ports

The previous generation's 1GbE network speed no longer meets the basic enterprise storage needs. Therefore, the TS-873AeU series NAS is equipped with a dual 2.5GbE network as standard, providing up to 5Gbps data transmission through Port Trunking network aggregation.



2 x 2.5GbE

# 4 x USB 3.2 Gen 2 high-speed 10Gbps ports with Type-C and Type-A



## 4-port USB high-speed 10Gbps ports

In addition to connecting to USB JBOD for capacity expansion or backup, it provides a smoother file transfer experience than another NAS on the market. If the NAS is installed with a PCIe graphics card, the USB interface can be connected to a keyboard and mouse for direct operation and monitoring, or it can be used as a PC. There are enough USB ports to meet the requirements of various situations.



USB 3.2 Gen 2 port  
2 x Type-C, 2 x Type-A

# Supports ECC memory (Error Correcting Code)

Reliable memory  
and avoiding data  
corruption



TS-873AeU, TS-873AeU-RP series supports ECC memory, automatically detecting and timely correcting single-bit errors

**System supports up to 64GB memory**

- The NAS is pre-installed with a 4GB non-ECC memory by default.
- ECC memory and non-ECC memory modules cannot be installed together.



TS-873AeU

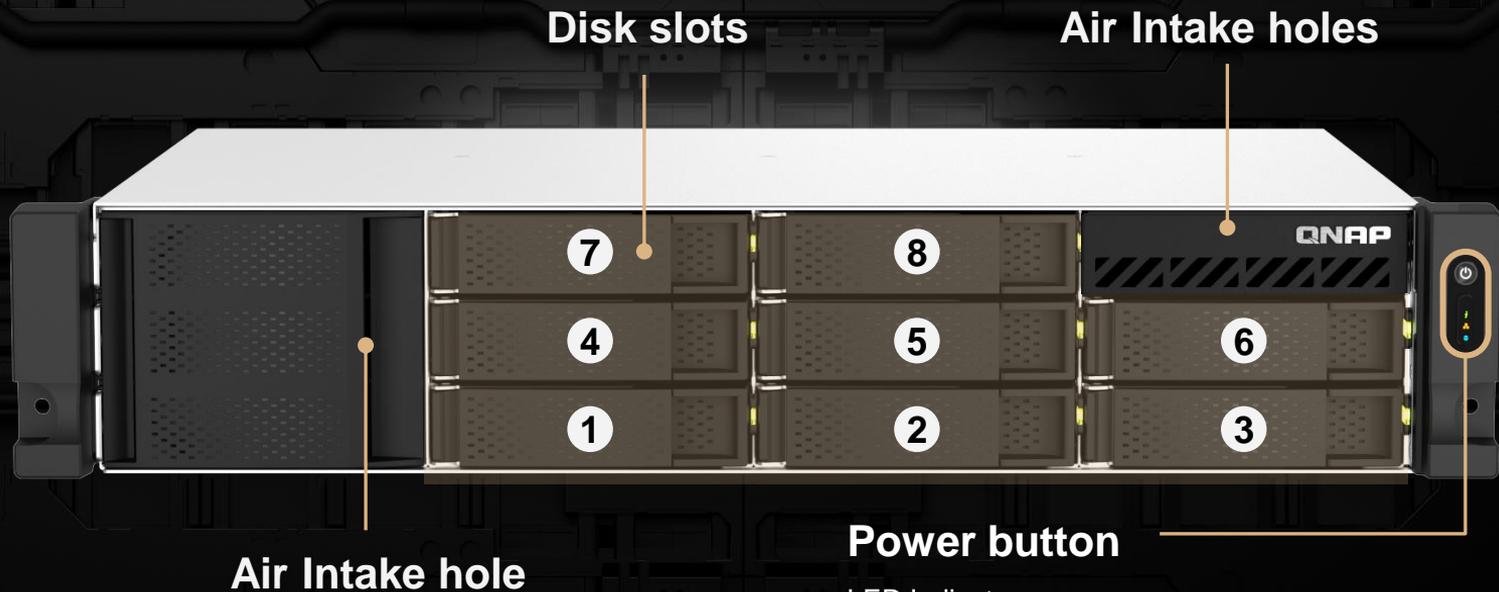
8-bay Short-depth  
rackmount NAS series

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Hardware



# Front view



# Rear view

2 x 2.5 GbE ports

4 x USB 3.2 Gen 2  
(2 x type-A, 2 x type-C)

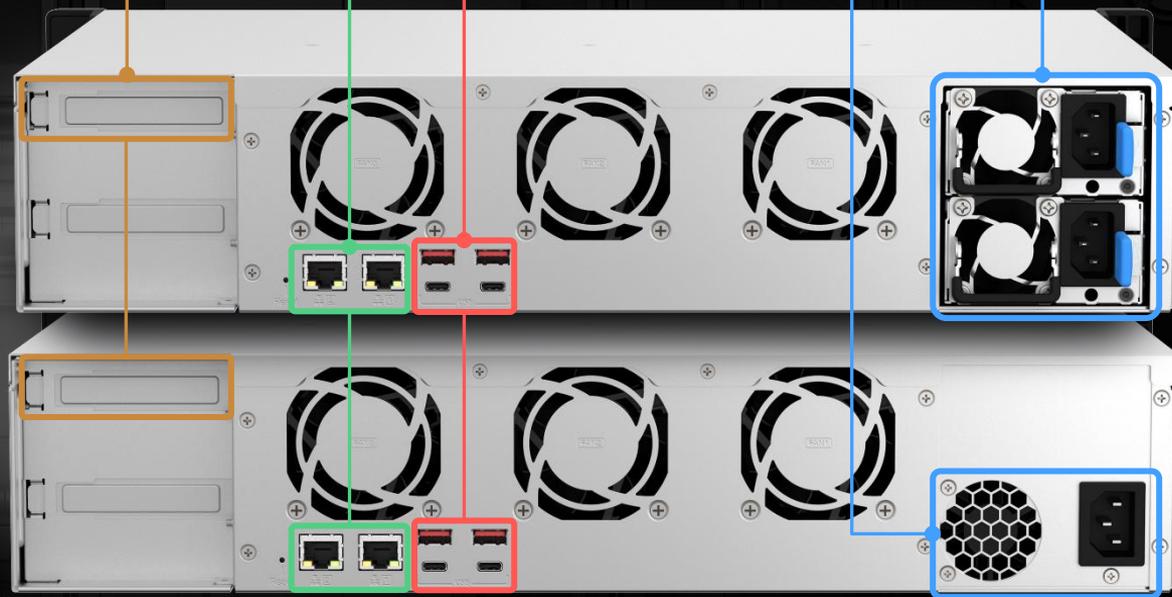
1 x PCIe Gen 3 x 8

250W

2 x 300W

TS-873AeU-RP-4G

TS-873AeU-4G



# 2U NAS comparison

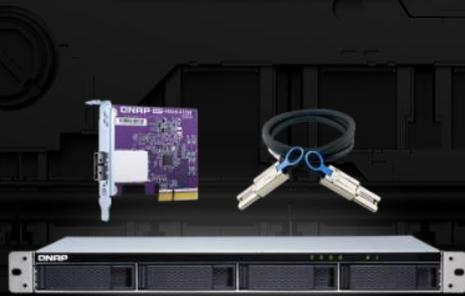
## TS-873AU-4G(-RP)



## TS-873AeU-4G(-RP)

Operating System	QTS (pre-installed) Supports QuTS hero	QTS (pre-installed) Supports QuTS hero
CPU	AMD Ryzen™ Embedded V1500B 4-core/8-thread 2.2 GHz processor	AMD Ryzen™ Embedded V1500B 4-core/8-thread 2.2 GHz processor
System Memory	4GB UDIMM DDR4 (1 x 4GB), Maximum support 64GB and support ECC	4GB SODIMM DDR4 (1 x 4GB), Maximum support 64GB and support ECC
Memory Slot	2 x UDIMM DDR4	2 x SODIMM DDR4
Drive Bay(Hot-swappable)	8 x 3.5-inch SATA 6Gb/s, 3Gb/s	8 x 3.5-inch SATA 6Gb/s, 3Gb/s
2.5 Gigabit Ethernet Port (RJ45)	2	2
PCIe Slot	2 x Gen 3 x 4	1 x Gen 3 x 8
M.2 2280 (PCIe Gen3 x1)	-	2
USB 3.2 Gen 1 port	1	-
USB 3.2 Gen 2 port	2 x type-C, 1 x Type-A	2 x type-C, 2 x Type-A
Dimensions (HxWxD)	89 × 482 × 425 mm	89 × 482 × 297 mm
Operating temperature	0 - 40 °C (32°F - 104°F)	0 - 40 °C (32°F - 104°F)
Power Supply Unit	Single power 250W, 100-240V or Redundant power 300W, 100-240V	Single power 250W, 100-240V or Redundant power 300W, 100-240V
Fan	System fan: 2 x 80mm, 12VDC	System fan: 3 x 60mm, 12VDC

# Optional support for storage expansion units and rails



## TL-R400S

4-bay short-depth  
rackmount SATA JBOD



## TL-R1200S-RP

12-bay rackmount SATA JBOD  
with redundant power supply



## TL-R1200C-RP

12-bay rackmount USB 3.2 Gen 2 JBOD  
with redundant power supply

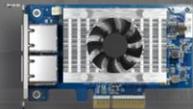


## RAIL-B02

Standard rail kit compatible with  
ANSI/EIA-RS-310-D

# Supports various QNAP network expansion cards

## 10GbE expansion card



LAN-10G2T-X710

2 x RJ45



QXG-10G2TB

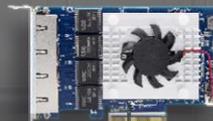
2 x RJ45



QXG-10G1T

1 x RJ45

## 5GbE expansion card



QXG-5G1T-111C

QXG-5G2T-111C

QXG-5G4T-111C

1/2/4 x RJ45

## 25GbE expansion card



QXG-25G2SF-CX6  
(support 25GbE  
SFP28, 10GbE SFP+,  
1GbE SFP)

2 x SFP28 25Gb/s

## 2.5GbE expansion card



QXG-2G1T-I225

QXG-2G2T-I225

QXG-2G4T-I225

1/2/4 x RJ45

more...

Please refer to the compatibility list  
<https://www.qnap.com/go/compatibility/>

# Build an affordable Fibre Channel SAN environment

## 16Gb FC expansion card



QXG-16G2FC

2 x SFP+ and transceiver

Common Fibre Channel Storage Area Networks (SAN) devices are often costly. By installing a QNAP 16Gb Fibre Channel card (QXP-16G2FC 16Gb) in the TS-873AeU series, you can set a Fibre Channel Target using the iSCSI & Fibre Channel app. Moreover, the LUN Masking and Port Binding features provide an additional layer of data security.

The screenshot shows the 'iSCSI & Fibre Channel' management interface. The left sidebar contains navigation options: iSCSI, iSCSI Storage, Remote Disk, Fibre Channel, FC Ports, FC Storage, FC WWPN Aliases, Unmapped LUN, and LUN Import/Export. The main content area is divided into two sections: 'FC Port Groups' and 'FC Ports'.

### FC Port Groups

FC Port Groups	WWPN	Port	Action
Default	All FC ports		
16gport1	21:00:00:24:5e:be:00:06 (jauss882c16p1)	FC Adapter 2 Port 1	[Edit] [Delete]
My16gSAN	21:00:00:24:5e:be:00:06 (jauss882c16p1)	FC Adapter 2 Port 1	[Edit] [Delete]
	21:00:00:24:5e:be:00:07 (jauss882c16p2)	FC Adapter 2 Port 2	[Edit] [Delete]
My32gSAN	21:00:24:5e:be:00:00:06 (jauss882c32p1)	FC Adapter 1 Port 1	[Edit] [Delete]
	21:00:24:5e:be:00:00:07 (jauss882c32p2)	FC Adapter 1 Port 2	[Edit] [Delete]

### FC Ports

Adapter	Manufa...	Status	Speed	WWPN	Alias	Initiators
FC Adapter 1 Port 1	QNAP	Disconnect...	0 Gbps	21:00:24:5e:be:00:00...	jauss882c...	0
FC Adapter 1 Port 2	QNAP	Disconnect...	0 Gbps	21:00:24:5e:be:00:00...	jauss882c...	0
FC Adapter 2 Port 1	QNAP	Connected	16 Gbps	21:00:00:24:5e:be:00...	jauss882c...	1

LIVE  
DEMO



# 2.5GbE-capable network switch optional

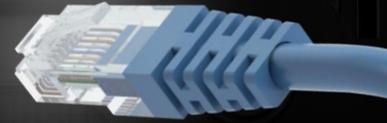
**QSW-1108-8T (Unmanaged Switch)**



8 x 2.5G  
RJ45 Multi-Gig

Fanless and  
metal shell

Upgraded 2.5GbE  
without replacing  
existing cable



CAT 5e

CAT 6

CAT 6A



**QSW-1208-8C (Unmanaged)**

8 x 10G/5G/2.5G  
RJ45 Multi-Gig



**QSW-308-1C (Unmanaged)**

1 x 10G/5G/2.5G  
RJ45 Multi-Gig



**QSW-M408-4C (Managed)**

4 x 10G/5G/2.5G  
RJ45 Multi-Gig



**QSW-M2108R-2C  
(Managed Half-Width Rackmount)**

2 x 10G/5G/2.5G  
RJ45 Multi-Gig

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

# 2 x 2.5GbE for 10GB file transfer performance

2 x 2.5GbE Windows file transfer (10GB)

2 x 2.5GbE Windows file transfer (10GB)  
NAS encrypted volume

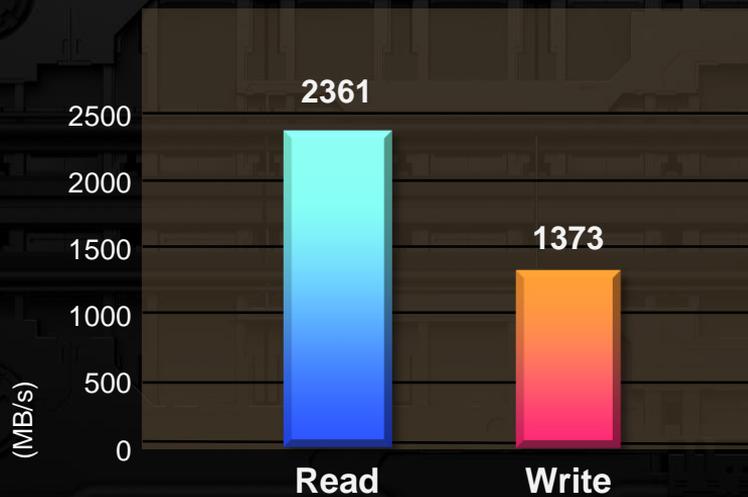


Environment:  
NAS | TS-873AeU, QTS 5.0, 8 x Samsung 850 Pro 512GB, RAID 5, thick volume  
PC | Windows 10 Pro, Intel Core i7-6700 3.4 GHz, 32GB RAM

Tested in QNAP Labs. Figures may vary by environment.

# Install the optional network expansion card (2 x 10GbE) to get higher performance

2 x 10GbE SMB sequential throughput (512KB)



2 x 10GbE SMB sequential throughput (512KB)  
NAS encrypted volume



Environment:  
NAS | TS-873AeU, QTS 5.0, 8 x Samsung 850 Pro 512GB, RAID 5, thick volume  
PC | Windows 10 Pro, Intel Core i7-6700 3.4 GHz, 32GB RAM  
Ethernet install QXG-10G2T-X710 expansion card  
IOmeter | RAM 128MB, 30-sec ramp up time, 3-min seq. run time, 16 workers, 4-outstanding, 1MB

Tested in QNAP Labs. Figures may vary by environment.

# TS-873AeU

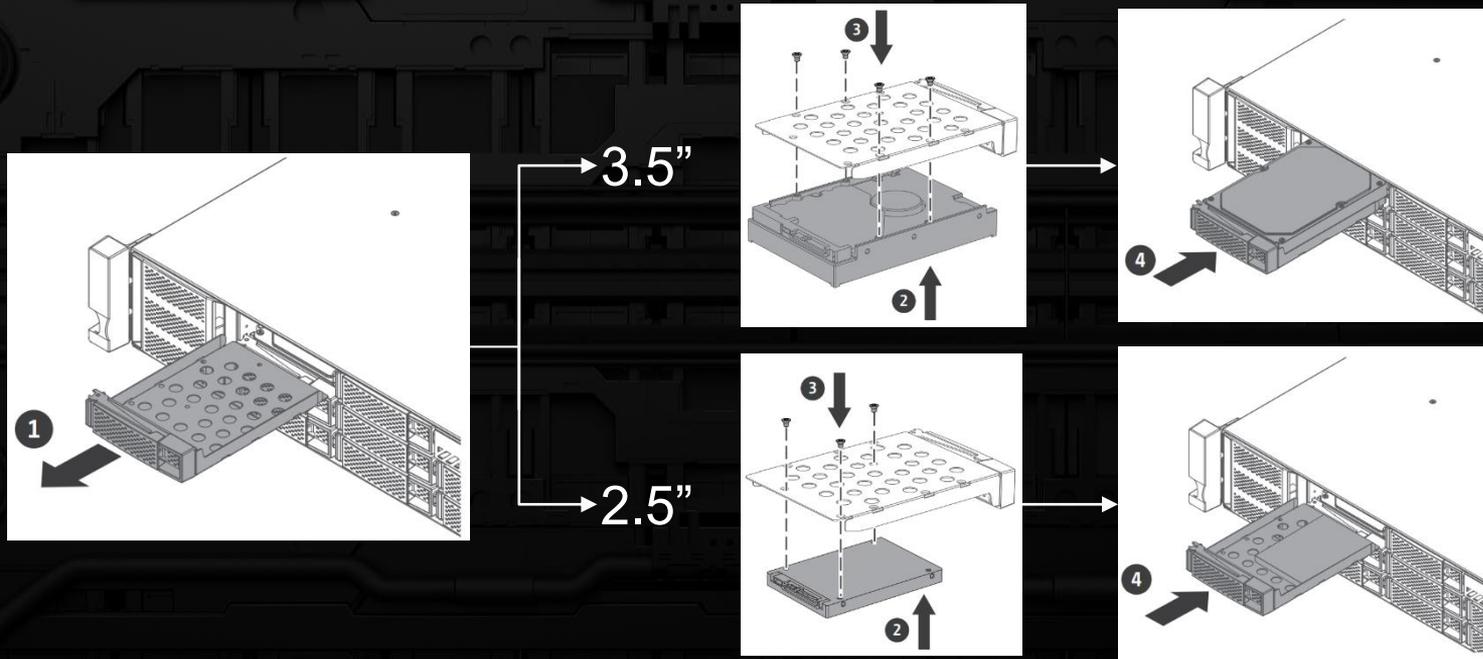
8-bay Short-depth  
rackmount NAS series

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## NAS Installation

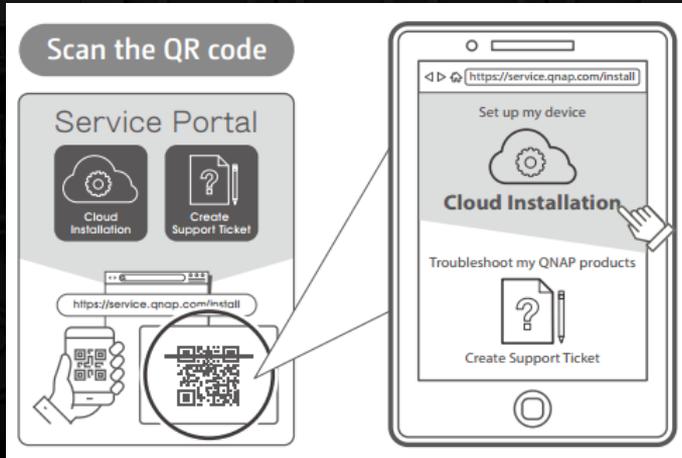


# HDD / SSD disk installation



# NAS initialization

- 1 scan the QR code with your mobile phone for installation



- 2 download the Qfinder Pro program on your computer for installation



# Pre-installed with the new QTS 5.0 NAS operating system



## Supports WireGuard VPN

Safe and convenient connection



## Upgraded Linux Kernel 5

Strengthen data security to protect your assets



## Improve the performance of AMD processors

better overall performance



## Brand new UI

Simple and smooth user experience



## Accelerates NVMe SSD cache performance

Enhance cache performance



# Dual system for your choice, QTS / QuTS hero

Pre-installed QTS operating system in shipping. Enterprise can switch to QuTS hero by user environment. QuTS hero uses the ZFS file system, which will get higher reliability.

## Notice :

1. QTS and QuTS hero use different file systems, and NAS cannot be pre-installed disks during system switching. Therefore, after the switching is complete, you can migrate the system.
2. When using QuTS hero operating system, it is recommended to use SSD as system for better performance.
  - a. It is recommended to install the 2.5" SATA SSD in two 3.5" slots for hot swapping
  - b. The motherboard M.2 NVMe SSD slot does not support hot swapping

Welcome to the QuTS hero Smart Installation system!

Thank you for choosing QNAP. Smart Installation will guide you through the installation process.  
This process may take a few minutes depending on the installed hard drives.

Start Smart Installation

Switch OS

QTS

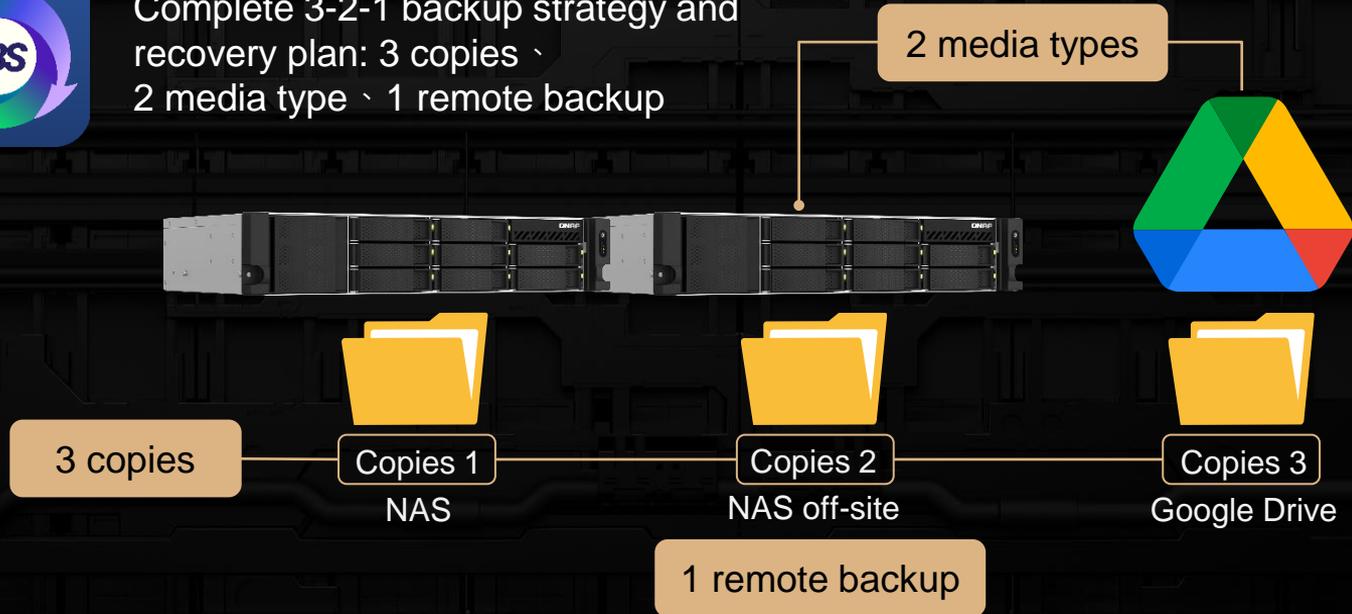
# QuTS hero 5 requires higher data security and protection mechanisms

	QuTS hero	QTS
File System	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 (Hardware)	supports UPS	supports UPS
Power Failure Protection (Software)	ZIL Copy-On-Write (Service continues after power recovery)	No (Risk of filesystem-level corruption on power-loss and system downtime required for "Check File System")
Permission Management	Rich ACLs (14 types)	POSIX ACLs (3 types) + certain special permissions
Data Security	Better (Self-Healing & Copy-on-Write)	Standard
Overall Performance	Requires higher-performance CPU and more memory	<b>Better</b>

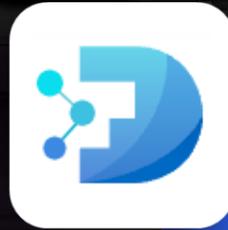
# HBS 3 (Hybrid Backup Sync 3) for efficient backup 1-2-3 strategy



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.

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

DA Drive Analyzer

Overview

- Drive Prediction
- Email Alerts
- Additional Information
- Prediction History

Overview

DA Drive Analyzer

Drive enclosures: 2, Drives: 21 (HDD: 19; SSD: 0; NVMe drives: 2)

**Faulty** 5  
Defective drive detected.  
Replace the drive.

**Critical** 4  
90% risk of failure  
Replace the drive as soon as possible.

**Warning** 9  
70% risk of failure  
Start planning for a drive replacement.

**Normal** 1  
Drive(s) are functioning normally.

**Data Analysis in Progress** 0  
There are no new drives in the cloud A stage.

**Important: Review Drive Status**

Drives: 18 (Faulty: 5, Critical: 4, Warning: 9)

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	🗑️

**License**

License plan: BETA

Valid until: 2022-02-18

# Data security



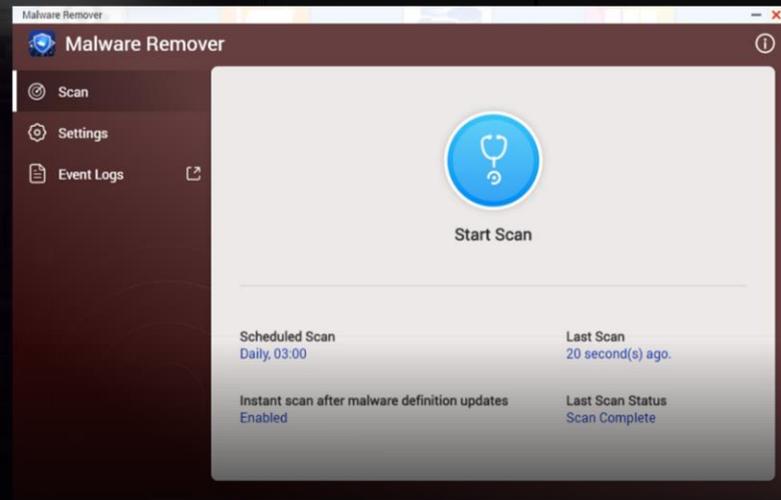
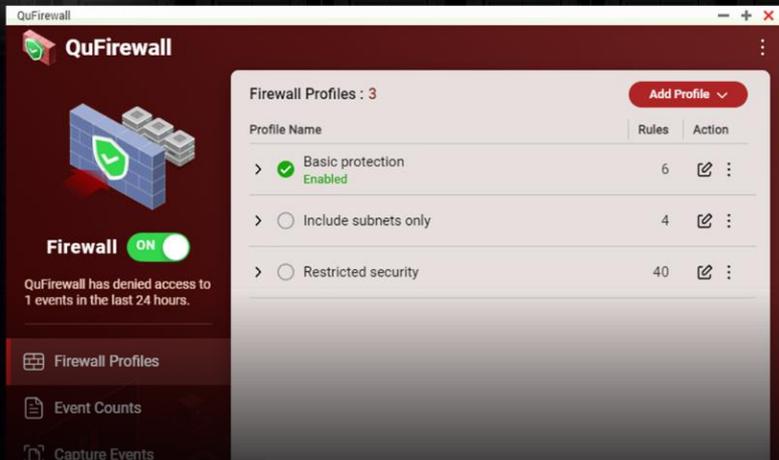
## QuFirewall

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



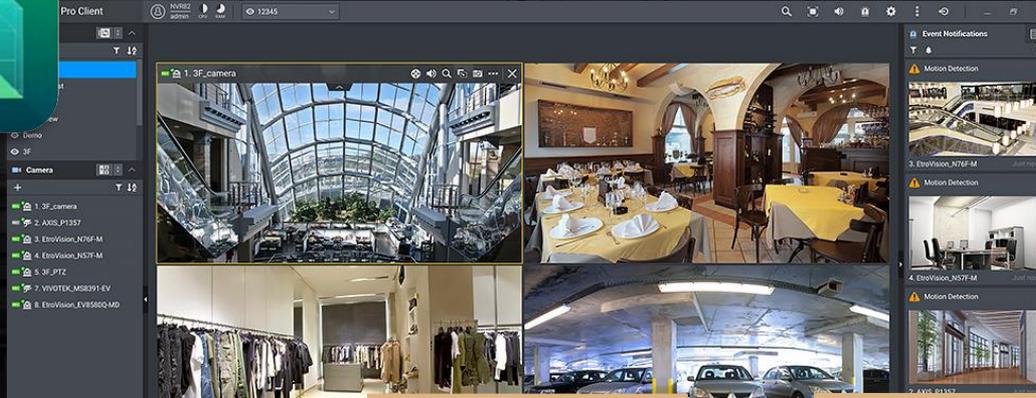
# QVR Elite Surveillance System

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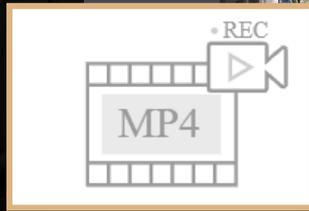
flexible subscription  
plan for recording channels



# QVR Elite - Surveillance System



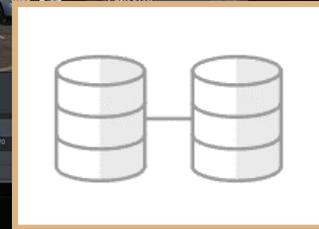
base embedded  
channels  
(Flexible  
expansion)



MP4 Recording Format



Flexible Subscription



Expandable Capacity

# Compatible with Huge Amount of Camera Models

over **180 Brands**

 GeoVision

 VIVOTEK  
BUILT WITH RELIABILITY

 Panasonic

 AXIS  
COMMUNICATIONS

 MOBOTIX

 Canon

 HIKVISION

 aHua  
TECHNOLOGY

 Honeywell

 Brickcom

over **6700 Models**



**ONVIF Profile Supported**

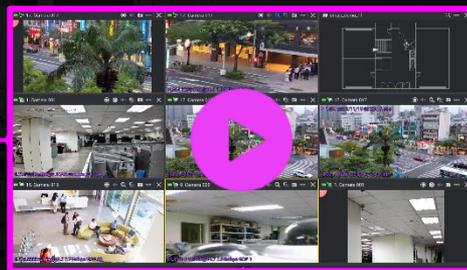
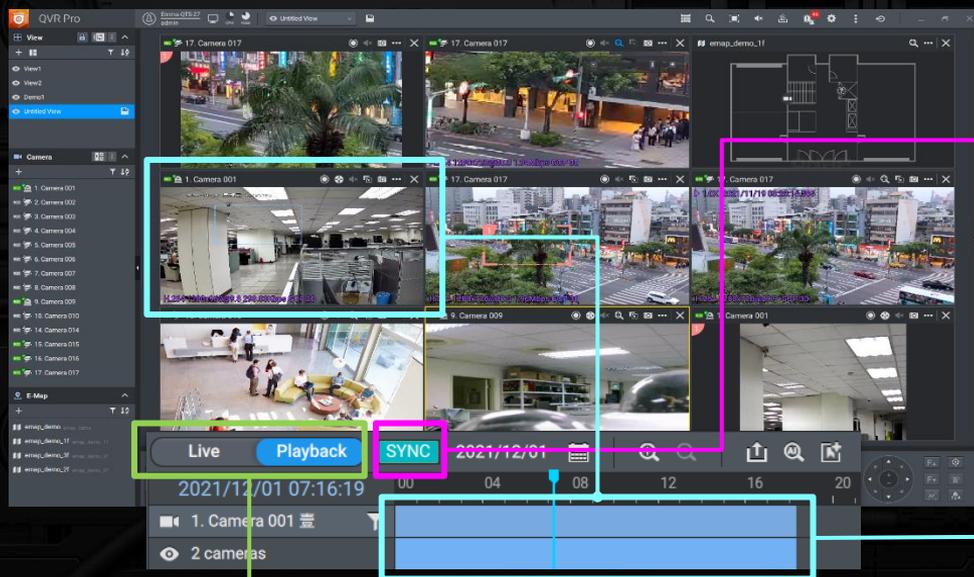
 ONVIF® | S

**RTSP Stream  
Input / Output**

**RTMP Stream  
Input**

# Unified Interface for Live & Playback

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



1-click to sync playback all video views

1 click to jump to the previous playback time

1 click to switch between Live & Playback

# Surveillance Client for mobile and home environment



QVR Pro Client  
mobile monitoring playback



QVR Viewer  
Surveillance for Apple TV



# Qsirch full text search tool



## NAS Edition

Search massive data in the NAS.



## PC Edition

The most powerful search engine that integrate with NAS and PC local search.

Qsirch is QNAP dedicated full-text search tool for finding files by filename(metadata) that sets your search conditions.



+



+



=

**Find everything!**

Full-text  
search

AI search

Multiple filters

# Qfiling auto archive and filing

Qfiling automates your file organization. All you need to do is categorize your files, set a schedule, and Qfiling will do the rest. It's easy, smart, and efficient!



## Flexible

Customize the filing and batch editing rules.



## Efficient

Scheduling for auto filing.



## Total Control

With system logs, filing status is easily accessible.



The screenshot displays the Qfiling Premium interface. On the left is a navigation menu with options: Overview, Task List, Recipe Library, and System Logs. The main content area is titled 'Task Status' and features three circular progress indicators for different task types:

- One-time task:** Total 4. Sub-categories: Completed (2), Running (1), Queued (1).
- Scheduled task:** Total 3. Sub-categories: Completed (1), Running (1), Queued (1).
- Real-time task:** Total 1. Sub-category: Monitoring the ... 1.

Below the task status is a section for 'File Editing Modules' with the subtitle: 'During the filing process, you can also edit or convert files using the below file editing modules.' This section contains ten icons representing various editing capabilities:

- Video Transcoding (For videos)
- Subtitle Pairing (For videos)
- Encryption & Decryption (For all files)
- Compression (For all files)
- Watermark (For images and videos)
- Resize (For images)
- Convert (For images)
- Face Blur (For images)
- Image2PDF (For images)

# Qtier Drives Auto-Tiering

## (Auto-Tiering) Balance capacity and performance

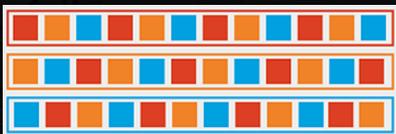
Qtier can schedule and identify hot and cold data, achieve efficient automatic transfer, and improve access efficiency. Hot data will be moved to higher-performance disks.

Qtier

- Hot data
- Warm data
- Cold data

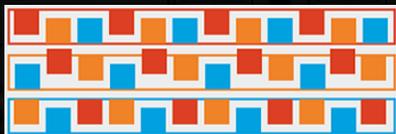
01

Before Tiering  
Data unoptimized



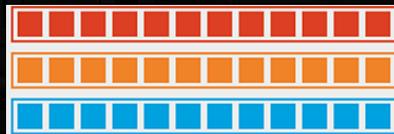
02

Smart Tiering



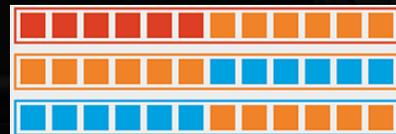
03

After Tiering  
Data optimized



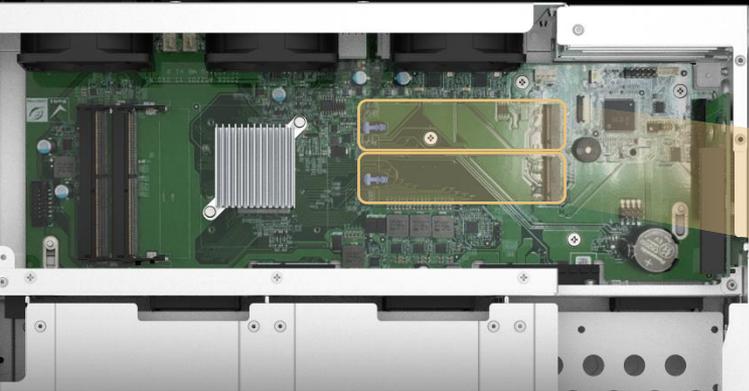
04

Change the  
access behavior



\* QuTS hero does not support Qtier

# Flexible installation of M.2 NVMe SSD or SATA SSD as cache



M.2 NVMe PCIe SSD



Optionally install a higher-speed M.2 NVMe PCIe SSD (PCIe Gen 3 x 1), or a 2.5" SATA SSD for cache expansion

or SATA SSD



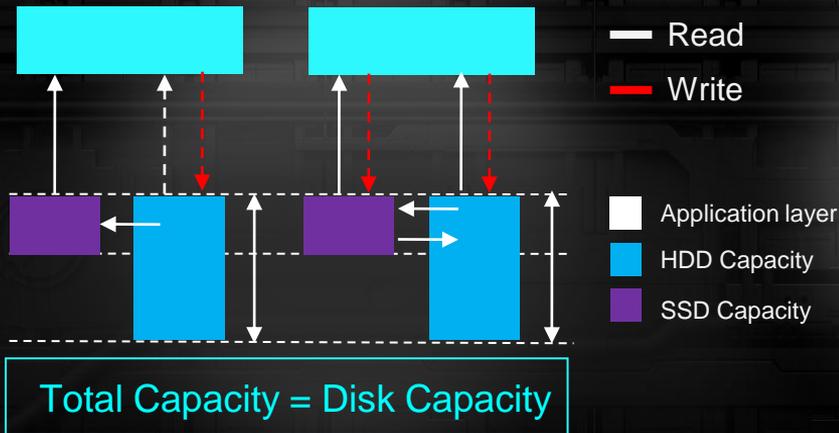
# Benefits of SSD cache

(Especially suitable for RAID/5/6/50/60 configuration, and the use environment has a large number of small files or applications that multiple users connect to access at the same time)

**Improve I/O latency** Accelerated disk access and IOPS

**Allow global caching** Apply to the entire NAS or assign it to a specific volume/LUN

Cache(read only)    Cache(read/write)



Storage & Snapshots

Cache Acceleration

Usage

Allocated: 0%    Free: 100%

Service: Enabled  
Capacity: 108.64 GB  
Cache Type: Read-Write  
Cache RAID: RAID 1  
Read Hit Rate: 0%  
Write Hit Rate: 97%  
Cache Flushing: --  
Status: Ready

Hit Rate History

Name/Alias	Capacity	Status
DataVol1	245.44 GB	Ready
DataVol2	688.37 GB	Ready
DataVol3	688.37 GB	Ready
DataVol4	693.84 GB	Ready
DataVol5	688.37 GB	Ready
DataVol6	325.27 GB	Ready



# Virtualization Station

Virtualization Station is a powerful hypervisor software on your QNAP device that supports multiple operating systems, including Windows®, Linux®, and QuTScloud.



**Red Hat**

fedora<sup>f</sup>



**CentOS**

ubuntu<sup>u</sup>



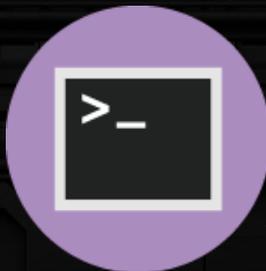
# Container Station

QNAP Container Station (software container workstation) supports LXD and Docker® lightweight virtualization technologies. You can run a full Linux® virtual machine on your QNAP NAS and download thousands of applications from around the world from the Docker® Hub/LXD image server online collection.



## At-a-glance dashboard

The dashboard provides a clear overview including the NAS CPU/memory and individual container resource usage.



## Flexible user interface

You can enjoy flexible management using either a command line interface or a convenient web interface.



## Permission settings

You can set user permissions to access shared folders on the NAS, other containers' data or NAS devices.



# TS-873AeU series

The only choice for a lightweight  
2U short-depth rackmount NAS

**QNAP**

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