

## The common issues of file sharing and backup in an office environment



- Huge quantity of photos, videos, and data
- Not able to easily locate the data from multiple USB drives
- Data loss caused by HDD failure or viruses
- Complicated setup of a video surveillance system
- Limited space or no server room

# QNAP NAS for efficient business digital transformation and data security





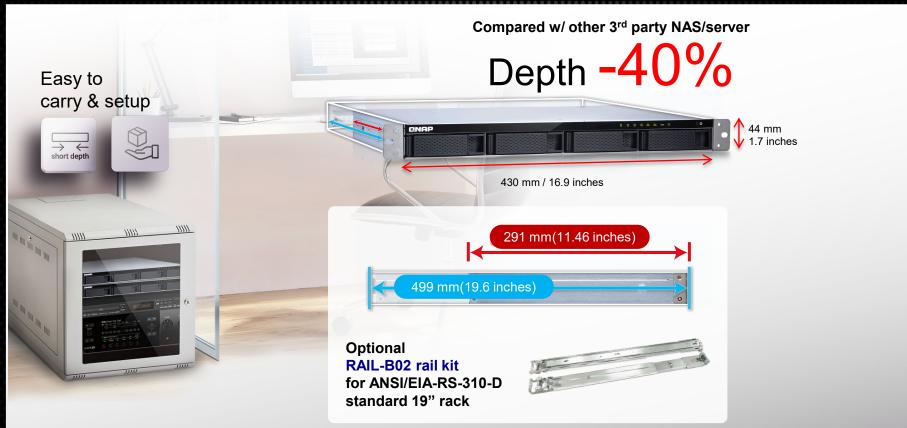
## 1U 4-bay 30cm /12-inch short depth NAS with quad core 2.2 GHz and 10GbE SFP+

The compact and feature-rich TS-435XeU provides a professional-grade quad-core NAS solution in short depth rackmount form factor. The native 10GbE SFP+ and 2.5GbE connectivity alongside M.2 NVMe SSD slots that enable cache acceleration allows businesses to efficiently tackle everyday tasks like file backup/restore and to boost team collaboration with higher productivity.

- 64-bit ARM v8 Cortex-A72 quad-core 2.2 GHz
- 4GB DDR4 RAM, expandable to 32GB memory
- 2 x M.2 2280 NVMe PCle SSD slots
- 2 x 10GbE SFP+ & 2 x 2.5GbE RJ45



# Smaller footprint (30 CM / 12-inch depth) for bigger opportunities

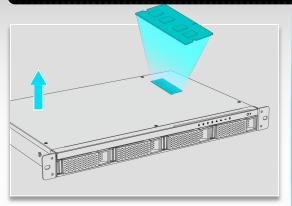


### Advanced ARM Cortex-A72 64-bit quadcore 2.2 GHz SoC CPU designed for SMB





# 4GB DDR4 RAM for multi-tasking, easily upgrade to max 32GB memory



Just need to remove a few screws



1 x DDR4 SO-DIMM slot

max 32 GB

- NAS ordering SKU: TS-435XeU-4G
- Optional RAM parts:

32GB: RAM-32GDR4T0-SO-2666

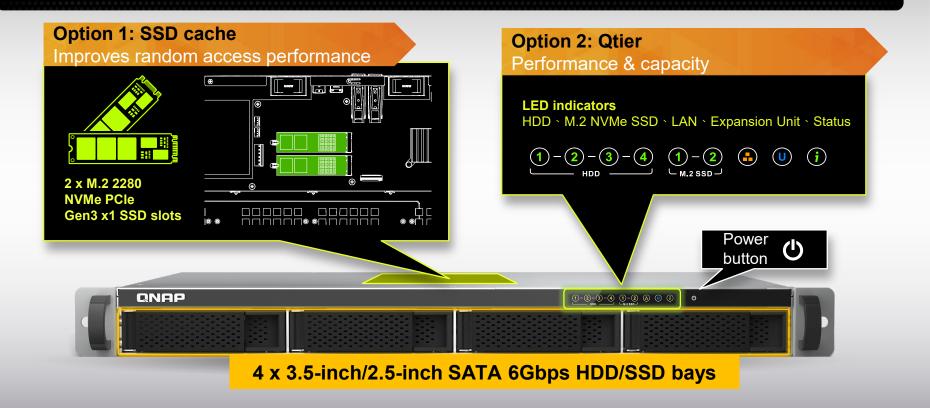
16GB: RAM-16GDR4T0-SO-2666

8GB: RAM-8GDR4T0-SO-2666

4GB: RAM-4GDR4T1-SO-2666



### Accelerate performance with SSD cache or Qtier via the dual M.2 NVMe SSD slots



## M.2 NVMe SSD cache for improved performance at a lower cost

Especially useful for RAID 5/6 and applications dealing with small files or concurrent user access.

### Improves I/O latency For IOPS-demanding apps Read-write Read-only cache cache Read Write Application HDD space SSD space **Total capacity = HDD capacity**

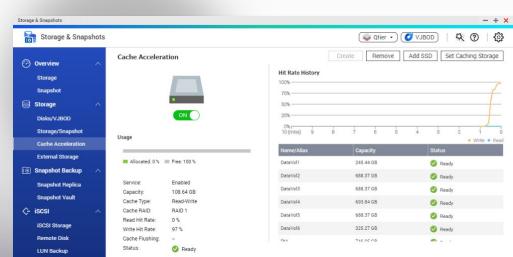
### Global SSD cache

Global SSD cache acceleration can share a single SSD volume/RAID with all volumes/iSCSI LUNs for a read-only or read-write cache.

SSD cache volume depends on the RAM size. Cache space: RAM

1 TB: 4GB <= RAM < 8 GB 2 TB: 8GB <= RAM < 16 GB

4 TB: >= 16 GB



## **Qtier™ Drives Auto-Tiering** constantly optimize data across storage tiers

- Qtier™ is an automated-tiering storage solution that automatically moves hot data to high-performance drives and cold data to lower-cost, higher-capacity drives.
- Unlike SSD cache, the SSD capacity in Qtier can be used to store data.







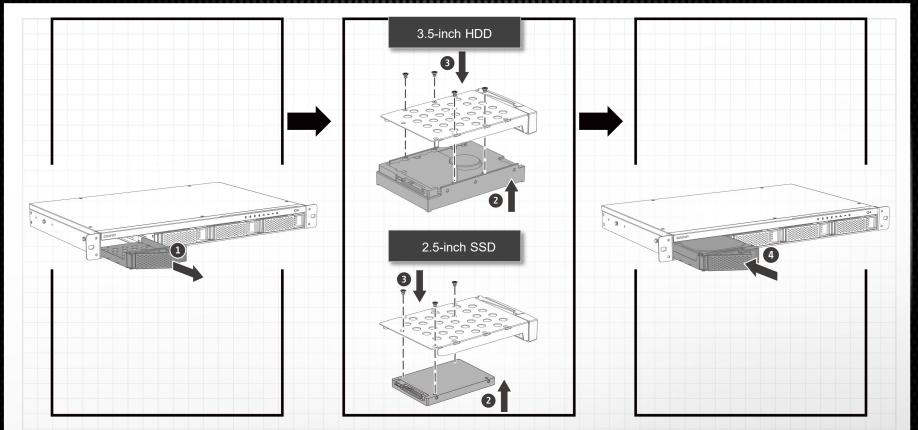




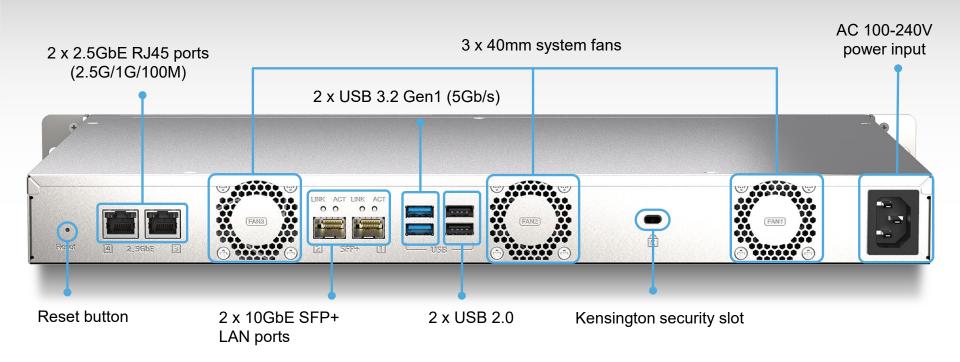




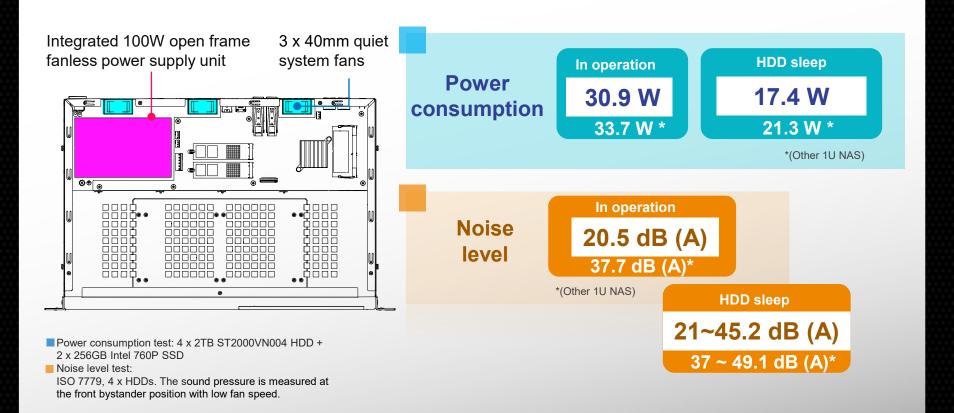
## Quickly install 3.5-inch and 2.5-inch HDDs / SSDs with hot-swappable tray design



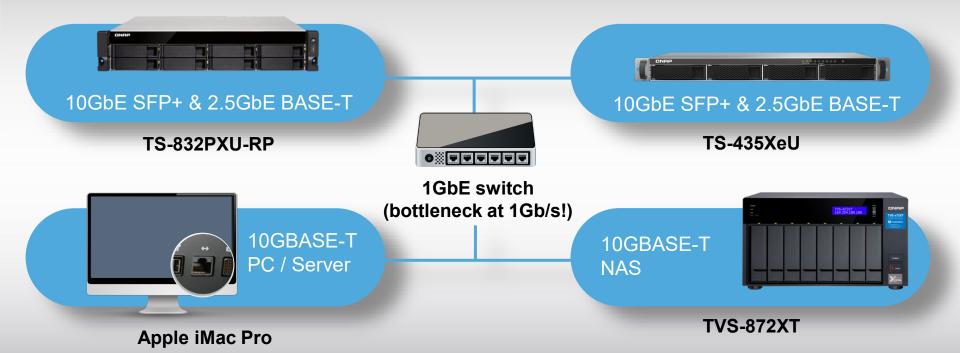
# TS-435XeU flexible I / O ports can help your business ready for future growth



### Fanless power supply unit and quiet system fans suitable for the office environment



# Don't let the 1GbE switch limit the maximum throughput of your devices



## The 1<sup>st</sup> step to go beyond 1 GbE: QNAP 2.5GbE & 10GbE switches

**QSW-1108-8T** (unmanaged) 8 x 2.5GbE

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RJ45 Multi-Gig

**QSW-1105-5T (**unmanaged) <sub>5 x 2.5GbE</sub>



5 x 2.5GbE RJ45 Multi-Gig Fanless & Metal chassis

Upgrade to 2.5GbE with the existing wiring infrastructure



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QSW-2104-2S (unmanaged)

4 x 2.5GbE + 2 x 10GbE SFP+



QSW-M2116P-2T2S (PoE managed)

16 x 2.5GbE PoE+ (30W)

+ 2 x 10GBASE-T PoE+ (90W)

+ 2 x 10GbE SFP+



QSW-M2108-2S (managed)

8 x 2.5GbE + 2 x 10GbE SFP+



QSW-M2108R-2C (managed)

8 x 2.5GbE + 2 x 10GbE SFP+

	CAT 5e	CAT 6	CAT 6A
100M	✓	✓	✓
1G	✓	✓	✓
2.5G	✓	✓	✓
5G	✓	✓	✓
10G	X	<b>√</b> (55m)	✓

## The 2<sup>nd</sup> step to go beyond 1 GbE: PC / Server with a QNAP 2.5GbE+ NIC

### 10G/5G/2.5G/1G/100M Multi-Gig



#### **QXG-10G1T**

- Marvell AQC107
- 1 x 10GBASE-T (10G/5G/2.5G/1G)
- PCle Gen3 x8
- Low Profile



#### QXG-10G2TB

- Marvell AQC113C
- 2 x 10GBASE-T (10G/5G/2.5G/1G)
- PCIe Gen3 x8
- Low Profile

### 5G/2.5G/1G/100M Multi-Gig





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

- Marvell AQC111C
   Int
- 1/2/4 x 5GbE NBase-T
- PCle Gen2, Gen3
- Low Profile

QXG-2G1T-I225 QXG-2G2T-I225 QXG-2G4T-I225

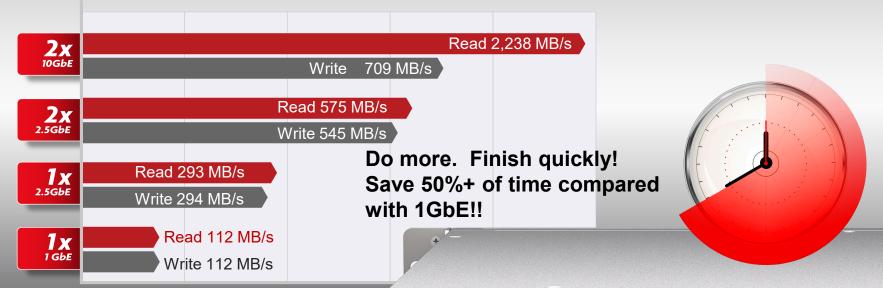
- Intel I225-LM
- 1/2/4 x 2.5GbE NBase-T
- PCIe Gen2
- Low Profile

AOGOE

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2.5

## The 3<sup>rd</sup> step to go beyond 1 GbE: TS-435XeU 10GbE/2.5GbE NAS



Tested in QNAP Labs. Figures may vary by environment. Test Environment:

NAS: TS-435XeU, QTS 5.0 Volume type: RAID 5, 4 x Samsung SSD 860 EVO 1TB SSD

Client PC: Windows Server 2016, Intel® Xeon E-2124 3.30GHz, 64GB RAM lometer config.: 30s ramp up time, 3m run time, 16 workers, 4 outstanding I/O, 4GB data





- Memory & M.2 NVMe SSD upgrade
- Performance



## Shipped with QTS 5.0 for reinforced data security to protect your digital assets



#### WireGuard VPN

Fast and secure



#### **New Linux Kernel 5.10**

The 1<sup>st</sup> QNAP ARM NAS with new kernel



### Al data management

Smooth workflow



#### New UI and wizard

Fast, smooth, and easy-to-use



### **NVMe SSD performance**

Increased cache performance

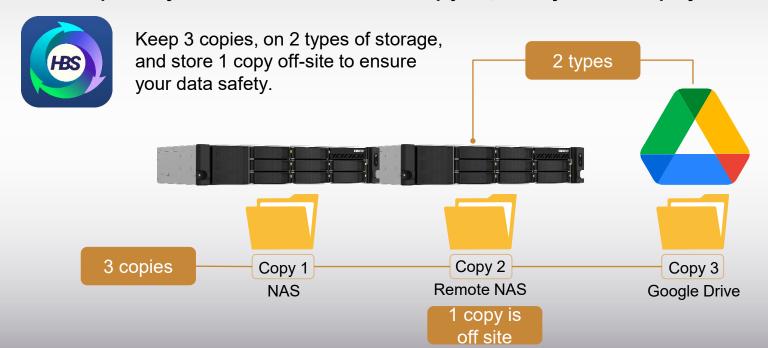


#### App center

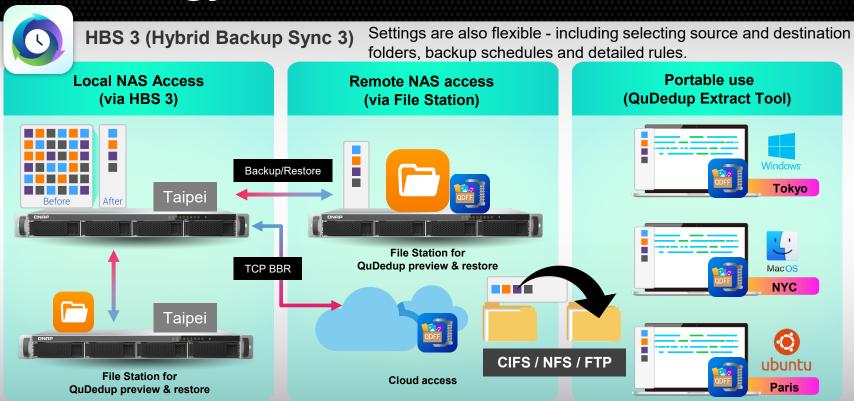
Many value-added applications

## Complete a 3-2-1 backup plan with license-free HBS 3 (Hybrid Backup Sync 3)

3-2-1 backup plan is the primary method for ensuring data safety, and HBS (Hybrid Backup Sync) makes it simple. All you need is to schedule backup jobs, and Hybrid Backup Sync does the rest.



## Easy data backup and data deduplication technology to save bandwidth and time



# Mac Time Machine backup center centralized backup for multiple Macs

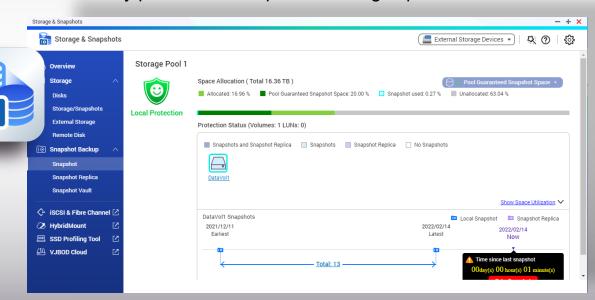
NAS can support the backup of Time Machine backup from multiple Mac computers. Furthermore, you can use HBS 3 to backup the data from the NAS to a QNAP external enclosure such as the TR-004U USB RAID enclosure.



# Enterprise-grade snapshots: protect and recover your data just in seconds

TS-435XeU's block-based snapshots provide a fast and easy data backup and recovery solution to protect from data loss and potential malware attacks. Restoring all data in a volume using snapshots is up to 10 times faster than restoring the data by copying it from a backup source.

 Storage & Snapshots Manager introduces visualized snapshot management, and helps back up and restore data to any point of time to prevent losing important data.

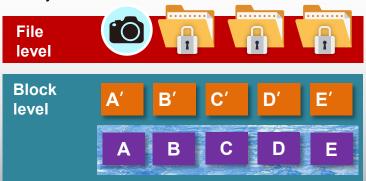


# Take snapshots frequently, up to 64 per volume/LUN and 256 per NAS

- 1. Ext4-based snapshots are faster and more stable in file access performance.
- 2. Saves storage space usage, bandwidth, and time for backing up and restoring.
- 3. Data recovery using snapshots only takes a few minutes.

RAM size	Max # of snapshot per NAS	Max # of snapshots per Volume/LUN	
4GB and more	256	64	

File-level ransomware cannot access or modify even if the volume is affected.





## 2.5GbE or 10GbE can greatly reduce the downtime during disaster recovery

Snapshot Replica efficiently replicates volume/LUN snapshots to a remote NAS by copying only the changes made. This can save time & bandwidth, and can be run manually or on a scheduled basis. TS-435XeU's 10GbE & 2.5GbE can greatly reduce the time needed to backup and recover.

Coupled with a QNAP 10GbE/2.5GbE switches to

Minimize the RTO (Recovery Time Objective)

**Backup** 

TS-1232PXU-RP



TS-435XeU

### Affordable disaster recovery solution

- √ High performance data backup
- ✓ Efficient disaster recovery
- ✓ Securely backup & share data



QNAP 2.5GbE / 10GbE switch Receovery

## Cross-device file sync for individuals and teams with Qsync



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.

- Increase security and efficiency with centralized management
- Up to 64 backup versions for recovery
- A remote erase function is available to ensure that no one gets access to personal/organization al data.

Configure management settings such as conflict Sync data to another NAS or public cloud policies and filter settings. Each device can have its with Hybrid Backup Sync own settings, or you can apply centralized settings to all devices. HBS ONRE NAS with **Qsync Central** App

### Qfile for remotely access, manage, share and upload files directly from mobile device



### File manager

Local, cloud, remote NAS, external device



### **Link sharing**

Share files with download links or download shared file links



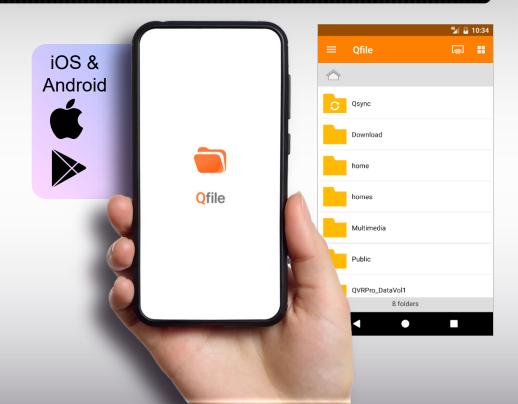
### **Auto backup**

Backup files in the background wherever and whenever you go



#### Secure access

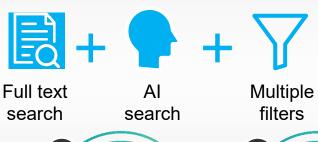
NAS two-step verification and app password protection



### Take control of your file searches and quickly find files with Qsirch, a powerful tool for NAS

Qsirch automatically indexes all NAS-based files, allowing users to quickly find the files they need. Qsirch and QTS share the same privilege settings, so users can only find the files which they are authorized to.





) Qsirch





- · Search while you type
- Preview & share
- Inclusions & exclusions
- · Smart recommendations
- Integration with Qfiling & QmailAgent
- API for 3<sup>rd</sup> party integration



### Qfiling automates file organization. Categorize your files, set a schedule, and it will do the rest.

When faced with a huge number of files spread across multiple folders, it becomes increasingly harder, more time consuming, and frustrating to categorize and archive them. With Qfiling organizing files is now automatic and efficient.





#### Flexible customization

Various filters and editing modules



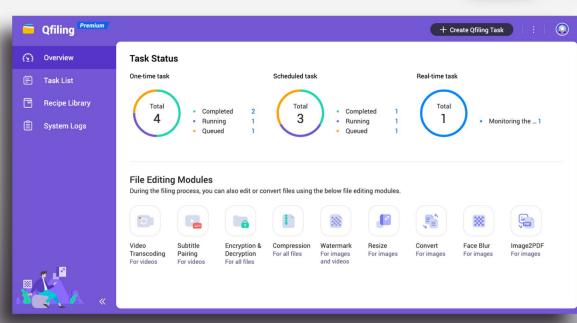
#### More efficient

Schedule or set real-time tasks and system logs



### **Smart recycling**

Automatically move files to the Recycle Bin with filters



## Comprehensive data security to protect your digital asset



#### **QuFirewall**

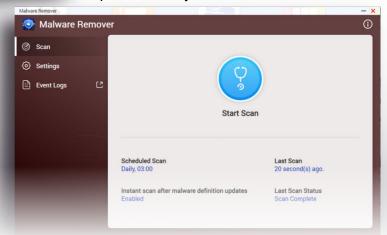
You can allow/deny IP addresses and regions to prevent unauthorized access and brute force attacks for safeguarding data and service security.





### Security Counselor & Malware Remover

Security Counselor checks for weaknesses and offers recommendations to secure your data. It also integrates anti-virus and anti-malware software to ensure the complete protection of your QNAP NAS.



## Remotely access your QNAP NAS from anywhere with myQNAPcloud Link

- The myQNAPcloud Link app is integrated with myQNAPcloud and provides a remote access service, linking you to your QNAP NAS from wherever you are.
- You don't need to configure complicated port forwarding settings when connecting to your QNAP NAS. myQNAPcloud Link will automatically select the best connection according to your network environment.





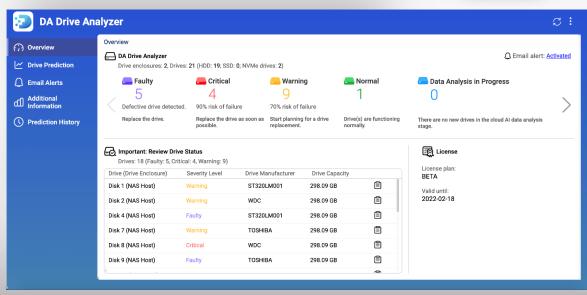
## DA Drive Analyzer predicts drive failure and minimize downtime

### Al-powered diagnostics that predict drive failure

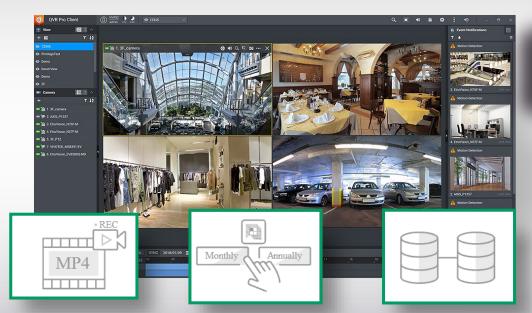
Powered by a cloud AI engine provided by ULINK, the world leader in providing IT storage interface test tools, the ULINK DA Drive Analyzer leverages the historical usage data of millions of drives to intelligently predict if one of your drives is near failure. This allows you to plan for replacements and service continuity before drive failure occurs. You can also view advanced information about your drives on the ULINK DA Portal. With DA Drive Analyzer, surprise drive failures are a thing of the past.

Note: NVMe drives are not currently supported by the DA Drive Analyzer. Some SATA drives may not be supported due to firmware or manufacturer settings - these drives will be listed as "Unsupported" after your drive health information is collected and analyzed by the cloud-based AI.

Each NAS has 1 free disk prediction support. Subscribe service to get more.



### Build a comprehensive surveillance system with a TS-435XeU, QVR Elite, and IP cameras





2 free recording channels (expandable)

QNAP QVR Elite is a subscription-based smart surveillance solution, allowing you to easily build a surveillance system with lower TCO (subscriptions starting from only US \$1.99 per month) and higher scalability. It also integrates multiple QNAP AI-based video analytics solutions to build smart facial recognition for retail and door access systems with QNAP NAS.

MP4 recording format

Flexible subscription

Expandable capacity

## QVR Elite with powerful IP surveillance camera management and support

More than 180 brands









MOBOTIX

Canon

HIKVISION



Honeywell

**Brick**com



**ONVIF Profile** support



Record into QVR Elite by using the RTSP/RTMP link with no integration needed. Multiple video sources are supported - not just IP cameras.

### Universal surveillance monitoring with the QVR Pro Client for Windows/Mac/Mobiles



### **QVR Pro Client**

Multiple platforms

The QVR Pro Client software can be installed on Windows<sup>®</sup>, macOS<sup>®</sup>, and mobile devices, allowing you to monitor from different platforms to take full control over monitored areas.





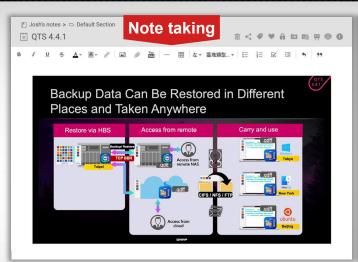
### **QVR Viewer for Apple TV**

Monitor and playback on TV

QVR Viewer is an Apple TV® App that allows you to monitor live feeds and play recordings from QVR Pro, QVR Elite and QVP series NVR. Footage from specific points in time can be viewed by using the timeline bar or calendar.



## Notes Station 3 allows efficient real-time online collaboration







Notes
Station 3



Insert file



Insert Image



Insert table



Rotate/Flip



Pixelated tool



Cut tool



**Chrome extension** 



Link



Insert YouTube



Check list



Text tool



Shape tool



Brush tool



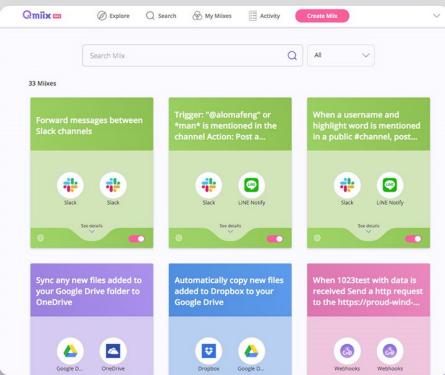
Mobile apps

## Qmiix, the cross-platform automation solution, frees you from repetitive tasks

Qmiix is QNAP's integration platform as a service (iPaaS) solution that automates self-defined workflows between multiple clouds, QNAP NAS, and other software, greatly assisting businesses in reducing the time, effort, and costs involved in digital workflows.

Qmiix automates actions between QNAP NAS, cloud services, social networks, and messaging apps to simplify routine tasks such as backup, posting, and event notifications. This provides SMBs and collaborative teams with flexible multicloud backup and immediate improvements to communication efficiency and productivity.





## Also powerful as a multimedia server for multi-device media streaming

The short depth TS-435XeU can be easily placed in a media cabinet. By installing streaming apps such as Plex® Media Server from the QTS App Center, you can stream media files stored on the TS-435XeU to mobiles and media streaming devices.



Multi-room/device streaming with QNAP Cinema28



Plex server for various Plex clients



Apple TV/Fire TV/Roku/
Android TV via Qmedia playback



**QuMagie Al photo albums for smart classification & sharing** 





### **QVPN Service enables VPN connections between NAS and users for data protection over the Internet**





Set up the NAS with the QVPN Service and connect to a remote VPN server for secure data access without geographic limitations.



#### **QNAP VPN QBelt:**

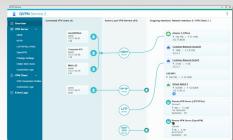
QNAP's proprietary QBelt lowers the chance of the connection being detected as a VPN - further reducing the possibility of network traffic interception.



### Supports many devices:

Windows/Mac, iOS, Android





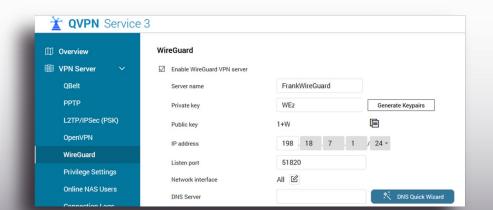




### WireGuard® - easier and faster VPN tunnels for remote workers

WireGuard® is now supported, providing faster and stable VPN connections. With a user-friendly interface, non-IT professional remote workers can easily set up VPN tunnels to access office-based QNAP devices with simplified connection methods.

- WireGuard® provides faster VPN connections
- QVPN service can be WireGuard server/client
- Mobile devices and computers can connect with WireGuard client APPs





## Container Station is a lightweight Linux®-based OS and app virtualization solution



QNAP Container Station exclusively integrates Docker® lightweight virtualization technologies, allowing you to operate multiple isolated Linux® applications on a QNAP NAS as well as download apps from the built-in Docker® Hub.



#### At-a-glance dashboard

Provides a clear overview of NAS and container system resource usage.



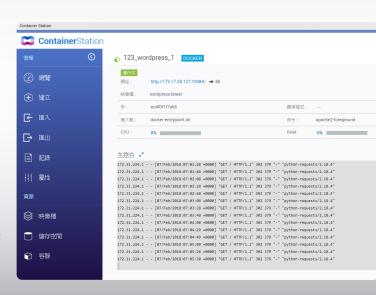
#### Flexible user interface

Use either a command line interface or a convenient web interface.



### Permission settings

Control access to shared folders on the NAS, other containers' data, or NAS devices.



## Achieve the best capacity utilization among multiple QNAP NAS units with Virtual JBOD

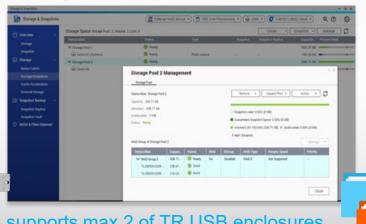
VJBOD (Virtual JBOD) is a capacity expansion technology that allows surplus storage resources of a QNAP NAS to be used to expand the storage space of another QNAP NAS, enabling you not only to create virtual storage pools and volumes on your local NAS, but also to achieve the highest storage utilization of the TS-1232PXU-RP 2.5GbE / 10GbE multiple QNAP NAS in your environment. iSCSI VJBOD connection **QNAP** switch TS-435XeU 2.5GbE / 10GbE **NNBOD** iSCSI VJBOD connection **TVS-672X** 

### TR hardware RAID USB enclosure to add storage capacity or data exchange



### RAID & Storage Pool

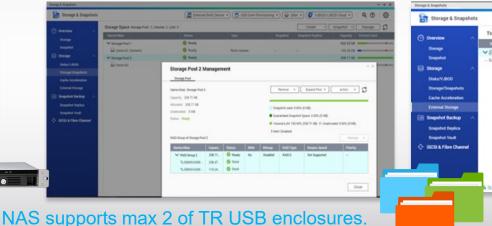
Users can configure RAID and monitor disk health using Storage & Snapshots Manager on a QNAP NAS, or by using the QNAP External RAID Manager utility on their computer.



### Cross-platform file sharing

From your NAS to Windows, Mac, and Linux computers, the TR enclosures are compatible with a wide range of devices by using the TR unit as an external drive mode.

External RAID Device \* | SSD Over Provisioning \* | @ Otier \* | VJB0D/VJB0D Cloud \*



TR-004U

TR-004



The TR units can only be used as an individual storage pool or volume on the NAS. Its storage pool/volume cannot be combined into the connected NAS. NAS applications cannot be installed on the TR-004. TR can only support RAID 0/1/5/10 and JBOD modes due to its hardware RAID capability

## Standard 3-year warranty for peace of mind and up to 5 years of warranty is available

3 years of standard warranty + purchase of 2 years of extended warranty = 5 years of warranty

https://www.qnap.com/service/product-warranty/





Ordering info: EXTW-ORANGE-2Y

- ✓ Login
- ✓ Register
- ✓ Purchase





#### **Standard Warranty**

- Warranty service that comes in effect at the time of purchase.
- Free repair and part replacement for products under normal use during warranty period. (Spare parts and consumables are excluded)

#### **Extended Warranty (optional)**

- Extending your warranty, available within 90 days of the initial unit purchase.
- Offers identical service to standard warranty.

### Affordability, performance, or expandability. QNAP 1U NAS selection has every need covered.

	TS-435XeU	TS-431XeU	TS-464eU	TS-464U	TS-464U-RP	TS-h977XU- RP/TS-977XU-RP	TS-983XU/TS- h983XU-RP
CPU	Marvell OCTEON TX2™ CN9130 / CN9131 ARMv8 Cortex-A72 4C 2.2 GHz	AnnapurnaLabs Alpine AL314 32-bit ARM® Cortex-A15 4C 1.7 GHz	Intel® Celeron® N5105/N5095 4C/4T, up to 2.9 GHz	Intel® Celeron® N5105/N5095 4C/4T, up to 2.9 GHz	Intel® Celeron® N5105/N5095 4C/4T, up to 2.9 GHz	<ul> <li>AMD Ryzen<sup>™</sup> 7 3700X 8C/16T, up to 4.4 GHz</li> <li>AMD Ryzen<sup>™</sup> 5 3600 6C/12T, up to 4.2 GHz</li> </ul>	Intel® Xeon® E-2124 4-core, up to 4.3 GHz
RAM	4 GB, max 32 GB	2 GB, max 8 GB	4 GB, max 16 GB	4 GB, max 16 GB	4 GB, max 16 GB	8 / 32 GB, max 128GB	8 GB, max 128 GB
3.5" SATA	4	4	4	4	4	4	4
2.5" SATA						5	5
M.2 SSD	2 x NVMe		2 x NVMe	Optional via a QM2 PCIe expansion card			
LAN	2 x 2.5GbE, 2 x 10GbE SFP+	2 x 1GbE, 1 x 10GbE SFP+	2 x 2.5GbE	2 x 2.5GbE	2 x 2.5GbE	2 x 1GbE, 2 x 10GbE SFP+, 2 x 10GBASE-T	2 x 1GbE, 2 x 10GbE SFP+
PCIe				1 x Gen3 x2	1 x Gen3 x2	1 x Gen3 x16	1 x Gen3 x16
HDMI			1	1	1		
Depth	30 CM / 12"	30 CM / 12"	30 CM / 12"	48 CM / 19"	48 CM / 19"	48 CM / 19"	48 CM / 19"
Power	100W	100W	250W	250W	2 x 250W	2 x 300W	250W, 2 x 300W

QNAP

Depth:30 cm / 12 inch

TS-435XeU

4-bay short depth rackmount NAS

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