

TS-832PX



Brand: QNAP

Product Code: TS-832PX

Availability: 10

Weight: 7.05kg

Dimensions: 180.20mm x 329.30mm x
280.80mm

Call for Price:

Short Description

High-capacity NAS with 10GbE SFP+ and 2.5GbE, Supports PCIe Expansion for M.2 SSDs to Accelerate Applications

Description

The quad-core 1.7GHz TS-832PX features eight 3.5-inch SATA 6GB/s drive bays, providing huge storage potential for a wide range of applications and everyday usage.

With two 10GbE SFP+ and two 2.5GbE LAN ports, the TS-832PX supports next-generation networks for empowering bandwidth-demanding applications and providing smoother file access and sharing. Various PCIe cards are also supported, including QM2 cards that provide M.2 SATA/NVMe SSD caching and Qtier™ auto-tiering storage to boost NAS performance.

- **1**

Two 10GbE SFP+ and two 2.5GbE RJ45 network ports empower bandwidth-demanding tasks and accelerate file sharing.

- **2**

PCIe expansion allows for installing a QM2 card to add M.2 SSDs for caching, a 10/5GbE network card, or a wireless network expansion card.

- **3**

Snapshots record your system status, allowing you to protect files and data from accidental deletion and malware attacks.

- **4**

Cloud storage gateways realize hybrid cloud applications by working with the cache space reserved on NAS to ensure low-latency data access to the cloud.

- **5**

Qtier™ auto-tiering technology and SSD caching enable constant storage optimization.

- **6**

Increase the storage capacity of the TS-832PX with QNAP TR RAID expansion enclosures or TL JBOD.

Energy-efficient Quad-core Processor

Powered by 64-bit quad-core 1.7GHz ARM Cortex-A57 processor and 4 GB DDR4 RAM (expandable to 16 GB), the TS-832PX features is highly energy efficient without

impacting system or application performance.

Virtualization Certifications Supported by TS-832PX



Supports AES-128-GMAC for SMB signing acceleration

SMB signing (also known as security signatures) is a security mechanism in the SMB protocol. For business applications that demand high-level security, SMB signing helps enhance file sharing security by protecting against interception attacks. However, SMB signing can also negatively impact data transmission performance. QTS 5.1.0 supports AES-128-GMAC signing acceleration (only in Windows Server 2022 and Windows 11 clients) that not only greatly increases data signing efficiency over SMB 3.1.1 but also enhances the CPU utilization of the NAS system - providing the best balance of security and performance.

x86 64-bit NAS

2X Faster

AES-CMAC: 619 MB/s Read

AES-128-GMAC: 1238 MB/s Read

ARM 64-bit NAS

10X Faster

AES-CMAC: 68 MB/s Read
AES-128-GMAC: 738 MB/s Read

Test environment:

Crystal Disk Mark 1MB throughput

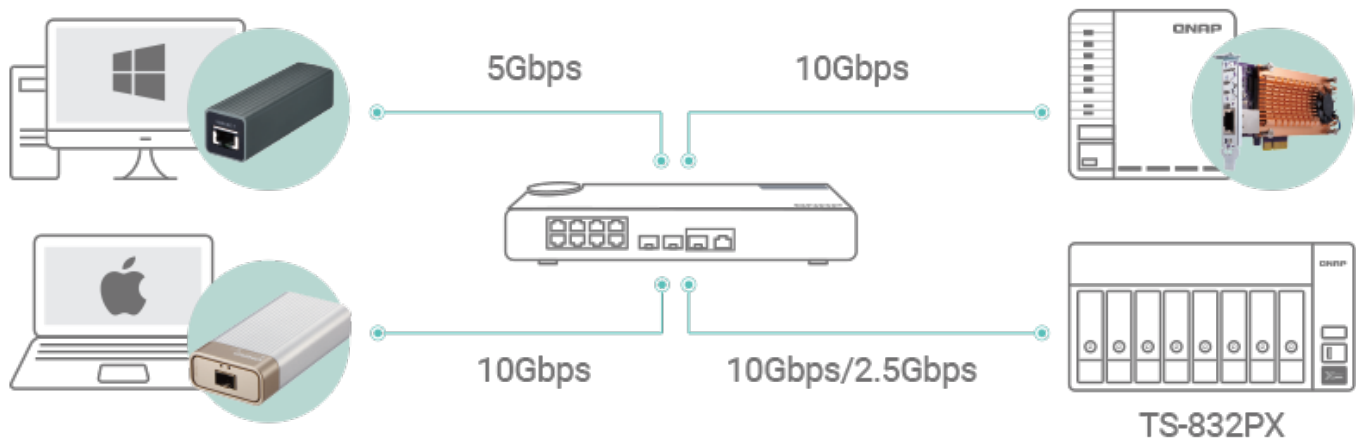
Client: Windows Server 2022 (AMD EPYC 7232P 3.0GHz, DDR4 128GB) with 10GbE NICs

x86 NAS: TS-h1887XU-RP-E2336-32G, QTS 5.1.0 (GMAC), QTS 5.0.1 (CMAC), Samsung 870 EVO 1TB, RAID 50, onboard Aquantia X550 10GbE NIC

ARM NAS: TS-1232PXU-RP-4G, QTS 5.1.0 (GMAC), QTS 5.0.1 (CMAC), Samsung 860PRO 512GB, RAID 5, onboard Annapurna SFP+ 10GbE NIC

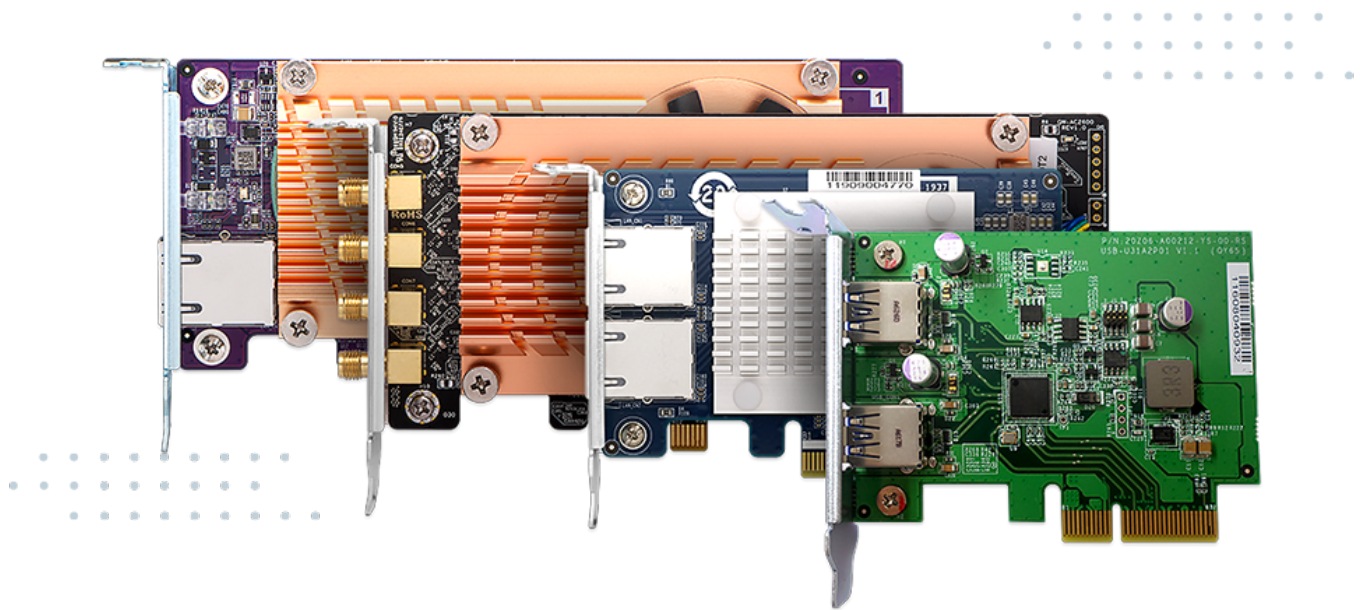
High-speed 10GbE and 2.5GbE connectivity

The TS-832PX includes two 10GbE SFP+ and two 2.5GbE LAN RJ45 ports, providing out-of-the-box support for high-speed networking and supporting Port Trunking and Failover to reinforce your network infrastructure. QNAP also provide many other high-speed networking solutions, including 10GbE/2.5GbE managed/unmanaged switches and network adapters, allowing you to build a budget-friendly high-speed network environment.



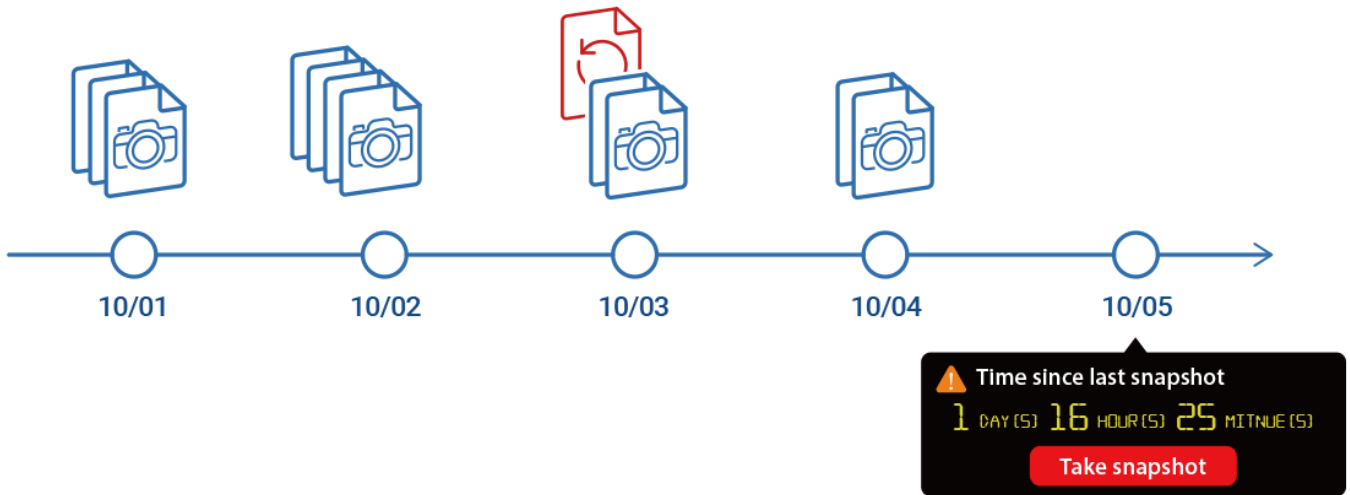
Extend NAS Functionality with a PCIe Card

With a PCIe Gen 2.0 slot, the TS-832PX provides flexibility in extending NAS functionality and potential applications. To optimize system performance, install a QNAP QM2 card for M.2 SATA/NVMe SSD caching/10GbE connectivity and use with Qtier for optimal system performance. You can also use a QNAP [Wi-Fi 6](#) (802.11AX) network card to create a wireless environment. Additional options include QXG 5GbE/2.5GbE network adapter cards and USB 3.2 Gen 2 (10Gbps) cards. All these options ensure that the TS-832PX can be upgraded to fit future requirements.



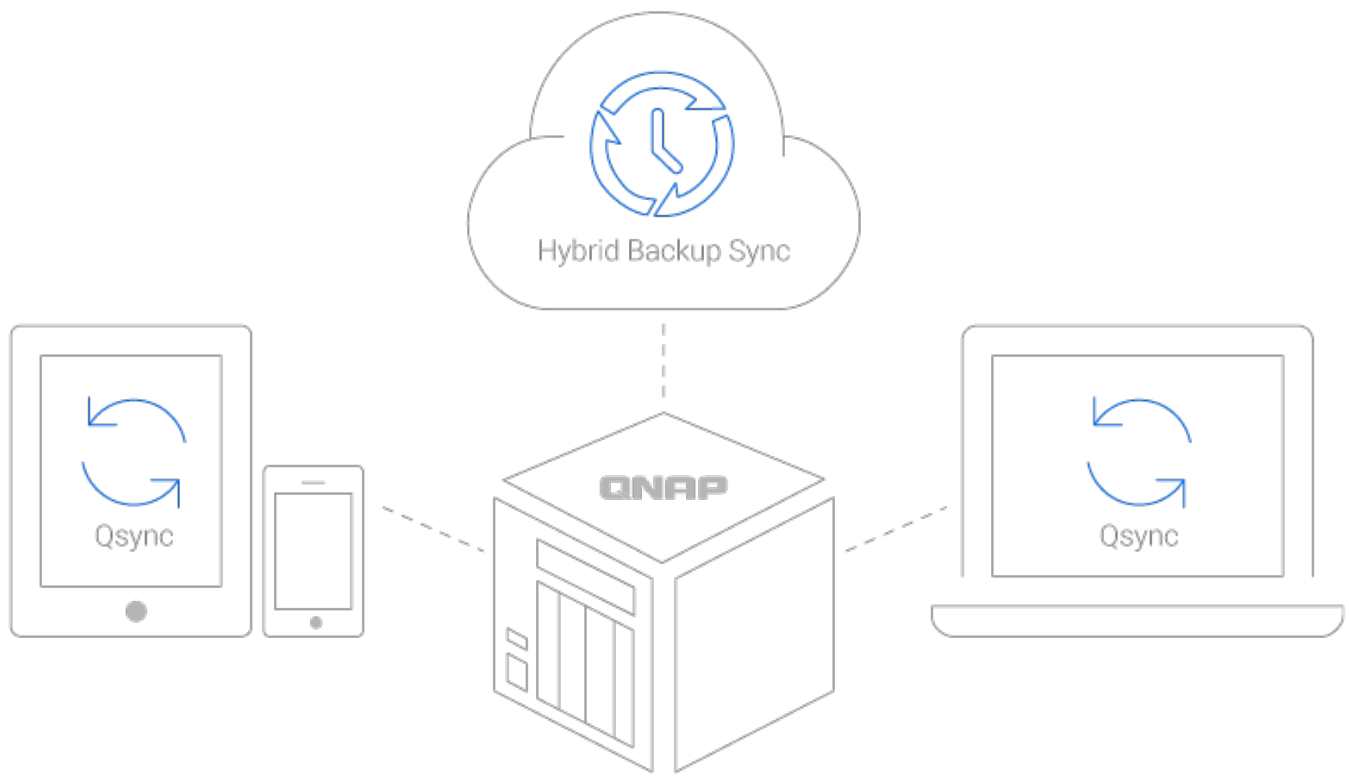
Protect Important Data with Snapshots

Snapshots fully record the NAS system state and metadata and can be used to quickly restore files to previously-recorded states if they are accidentally deleted/modified or if the system is compromised by ransomware. QNAP snapshots are block-based and only record modified data. Not only does this save storage space, but also reduces the time required to back up and restore data. The TS-832PX supports up to 256 snapshots per NAS and up to 64 snapshots per volume or LUN.



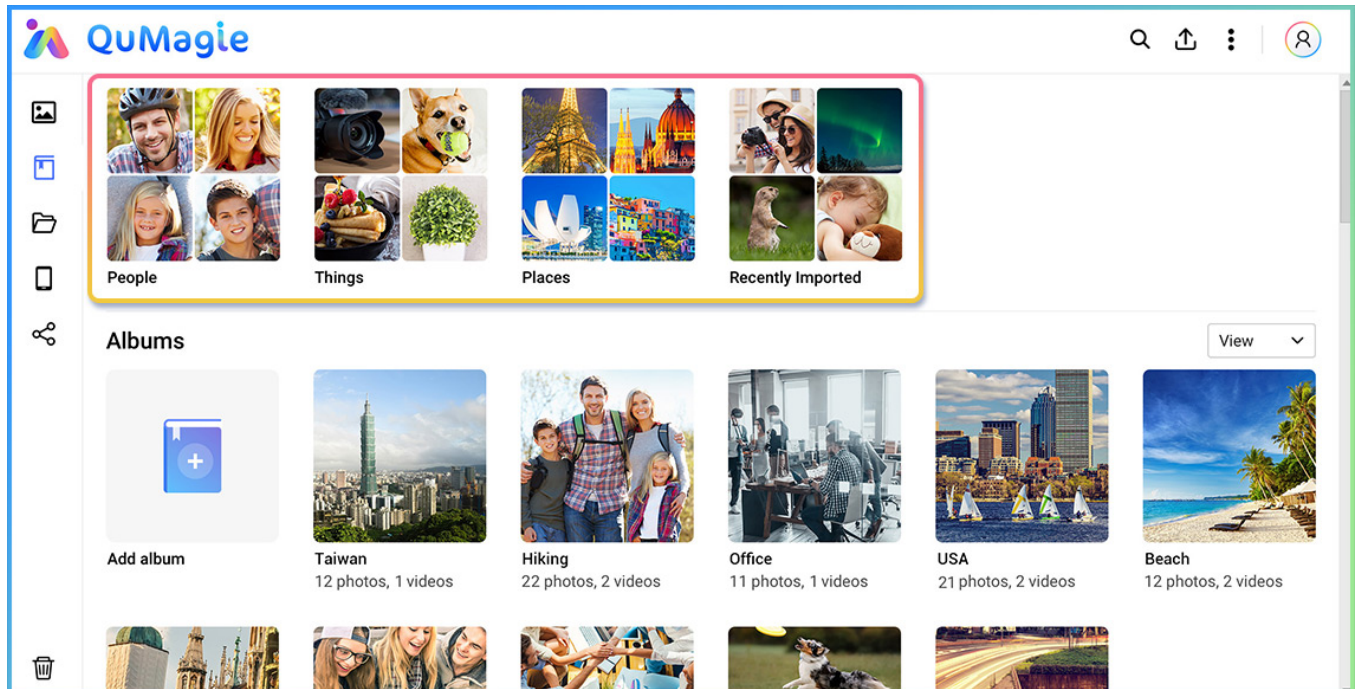
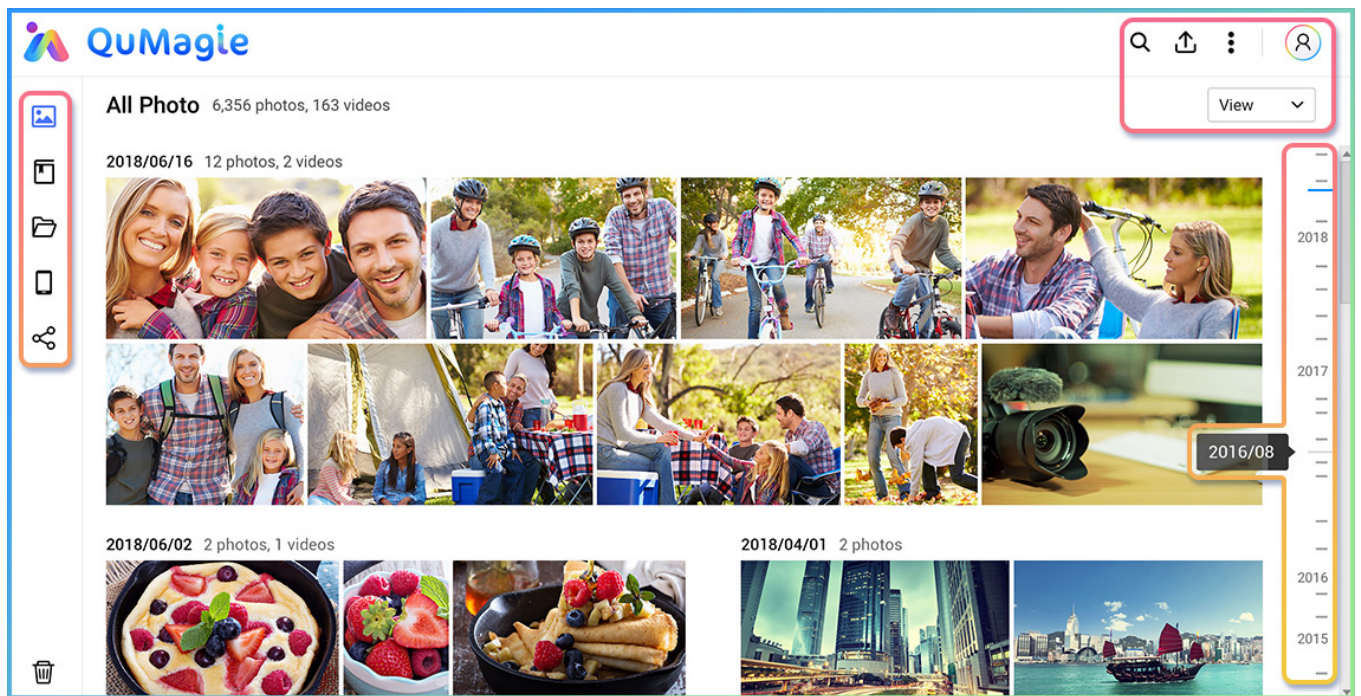
Multi-Point File Backup, Access, and Sync

The TS-832PX supports common file sharing protocols (including SMB/CIFS, AFP and NFS) for Windows®, Mac®, and Linux®/UNIX® devices. Coupled with Qsync (a utility that transforms a QNAP NAS into a secure, high-capacity data center for file synchronization) any file uploaded to the TS-832PX becomes available for all linked devices (such as computers, laptops, and mobile devices). Hybrid Backup Sync helps you easily backup or synchronize data on the TS-832PX to another QNAP NAS, remote server, or cloud storage (including Microsoft One Drive®, Google Drive™, and Dropbox®) for disaster recovery.



Smart AI Photo Management

QuMagie integrates QuMagie Core AI image recognition technology for facial recognition, subject identification, and geotagging photos. Similar photos are categorized into People, Places, and Things albums. QuMagie also features a built-in timeline scroll, customizable folder covers, iOS® Live Photo display and a powerful search tool, to provide you with the ultimate photo management and image sharing solution.



Low-latency Access to Cloud Data with Cloud Storage Gateways

By deploying cloud storage gateways and enabling local caching on the TS-832PX, you can seamlessly use the cloud for storage, backup, and data recovery with low-latency access, providing an innovative hybrid cloud experience.



HybridMount

File-Based Cloud Gateway

Flexibly expand your storage capacity by connecting to cloud storage. You can leverage QTS apps to manage and edit your cloud files or monitor multimedia files. HybridMount is ideal for file server online collaboration and file-level data analysis.



VJBOD Cloud

Block-Based Cloud Gateway

VJBOD Cloud supports backing up NAS data to block-based cloud storage. Block-based data transmission uploads random data and large files to the cloud in blocks, and only block-based volume or LUN changes are transmitted. This is ideal for backing up LUN, databases, and confidential files.

Easily find and automatically organize files

The TS-832PX provides greater convenience for managing files. You can quickly find files using Qsirch and auto-archive them with Qfiling.



File search

Qsirch quickly finds images, music, videos, documents, emails, and other files by using keywords, colors and different filters.



Auto archiving

Qfiling automates file organization or recycling based on self-configured rules, greatly improving work efficiency.

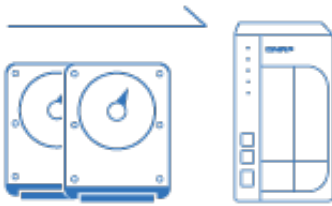
Secure remote access to your QNAP NAS

Use myQNAPcloud Link to access, share, download, and manage files stored on an HQ-based NAS via the Internet. QNAP NAS also supports VPN services for remote workers to access the NAS and resources on a private network from the Internet. You can also use QVPN Device Client powered by QNAP's proprietary QBelt protocol to easily connect to your TS-832PX and use measurement tools to know the speed of your VPN connections and connection history.



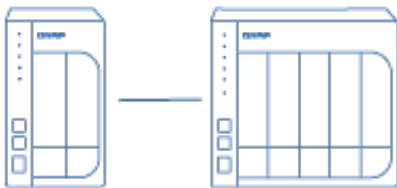
Flexible and economical storage expansion

QNAP provides several ways to expand the storage capacity of the TS-832PX to accommodate data growth:



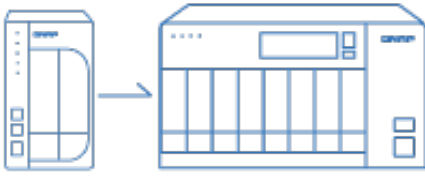
Upgrade RAID Capacity

Hot-swap lower-capacity drives with larger-capacity drives to expand the TS-832PX.



Attach Expansion Enclosures

Connect two expansion enclosures (4-bay TR-004, 2-bay TR-002) or one 8-bay TL-D800C, 4-bay TL-D400S, 8-bay TL-D800S JBOD and use the Storage & Snapshots Manager to handle NAS capacity expansion.



Migrate to a New NAS

Install your NAS hard drives into a larger QNAP NAS and retain all your existing data and configurations.

Multiply Your Productivity



QVR Pro

Build a secure surveillance environment without any extra software needed. Provides free embedded channels and you can also purchase QVR Pro licenses to deploy a large-scale surveillance network.



Notification Center

Consolidates all QTS system events, alerts, and notifications for easy NAS management, keeping you always informed of your NAS status.



Security Counselor

A security portal for checking weaknesses and providing recommendations for enhancing NAS security. It also integrates anti-virus and anti-malware scanning software.

Software Specs

Operating System

Supported Client Operating Systems

QTS 5.2.3

1. Apple Mac OS 10.10 or later
2. Ubuntu 14.04, CentOS 7, RHEL 6.6, SUSE 12 or later Linux
3. IBM AIX 7, Solaris 10 or later UNIX
4. Microsoft Windows 7, 8, 10 and 11
5. Microsoft Windows Server 2008 R2, 2012, 2012 R2, 2016, 2019 and 2022

Supported Browsers

1. Apple Safari (latest version)
2. Google Chrome (latest version)
3. Microsoft Edge (latest version)
4. Mozilla Firefox (latest version)

Supported Languages

Chinese (Traditional & Simplified), Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese (Brazil), Romanian, Russian, Spanish, Swedish, Thai, and Turkish

Storage Pool

??

SED Storage Pool

??

Maximum Pool size

308 TB

Maximum number of storage pool

128

Volume Type

Thick, Thin, Static

Maximum volume size

250 TB

Note: At least 4 GB RAM is required.

Maximum number of volume

128

Maximum shared folder size

250 TB

Maximum number of shared folder

512

JBOD Expansion

??

VJBOD / VJBOD Cloud

??

iSCSI Service

??

Fibre Channel Service

??

LUN Type

Thick, Thin

File-based iSCSI LUN

??

Block-based iSCSI LUN

??

Maximum LUN size

250 TB

Note: At least 4 GB RAM is required.

Maximum number of targets LUN	128
LUN feature	<ol style="list-style-type: none"> 1. LUN Mapping (LUN can be moved between iSCSI and FC) 2. LUN Masking 3. WWPN Aliases Import/Export 4. FC Port Group 5. FC Port Binding 6. Multipath IO (MPIO) 7. Online LUN capacity expansion 8. LUN snapshot 9. LUN snapshot replication and clone
Auto Tiering	??
RAID Type	<p>Requires minimum 2GB memory.</p> <ol style="list-style-type: none"> 1. 8-bay (and more): JBOD, Single, RAID 0, 1, 5, 6, 10, 50, 60 2. 6-bay: JBOD, Single, RAID 0, 1, 5, 6, 10, 50 3. 4-bay: JBOD, Single, RAID 0, 1, 5, 6, 10 4. 2-bay: JBOD, Single, RAID 0, 1
RAID Group	??
<p>To ensure data security, system stability, and storage performance, the maximum number of drives for a single RAID group is now 16 (applicable to RAID 5, RAID 6, RAID TP, and subgroups of RAID 50 and RAID 60). Nevertheless, users can combine multiple RAID groups into a large storage pool that contains more than 16 drives, using RAID 50, RAID 60, or RAID 10 as the RAID configuration. This enhancement will only be applied to new RAID groups. All existing RAID groups and storage systems will not be affected.</p>	
RAID Level Migration	??
RAID Expansion (by adding Disk)	??
RAID Expansion (by replacing bigger Disks)	??
Storage Pool Expansion (by adding RAID Group)	??

RAID Hot Spare	Global, Local
RAID Sync/Rebuild/Scrubbing	??
Internal drive	EXT4
External drive	EXT3, EXT4, NTFS, FAT32, HFS+, and exFAT (optional for ARM model)
Note: To use exFat in certain models you must purchase an exFAT driver license from License Center.	
Disk, Enclosure Locate	??
Disk S.M.A.R.T. Scan	??
Disk S.M.A.R.T. Data Migration	??
Ironwolf Health Management	??
Secure Erase	??
SSD Trim	??
SSD Life Estimation	??
Disk Roaming	??
Disk Standby	??
Volume Snapshot	??
LUN Snapshot	??
Maximum Snapshot (Per System)	Check maximum number of snapshots of your NAS
Maximum Snapshot (Per Volume / LUN)	Check maximum number of snapshots of your NAS
Minimum Snapshot Interval	5 minutes
Snapshot Retention Policy	??
Self-serve Snapshot Recovery	??
Application Consisted Snapshot	??
Snapshot Full Clone	??
Snapshot Replica / Vault	??
SSD read-only Cache	??
SSD read-write cache	??
SSD write-only cache	??
SSD Cache Maximum Size	Check your QNAP NAS cache capacity and RAM requirements
SSD Cache RAID	0, 1, 5, 6, 10
SSD profiling tool	??
External Device Management	??
Mount Smart Phone (MTP)	??
External RAID Device (QNAP so on)	??
Management (External Device Mode)	??
External RAID Device (QNAP so on)	??

Management (NAS Mode)

File Server

1. File sharing across Windows, Mac, and Linux/UNIX
2. Microsoft networking (CIFS/SMB)
3. Apple networking (AFP)
4. NFS version 3/4 services

FTP Server

1. QuFTP
2. FTP, SFTP and TFTP protocols
3. FTP over SSL/TLS (explicit FTPS)
4. FXP support

Maximum FTP connection

1024

File Station (Web)

??

Object Storage

??

Local user account

4,096

Local group account

512

Domain user/group account

200,000

Domain Security

??

Domain Controller

??

Shared folder permission

??

Advanced folder permission

?? , (AFP, CIFS/SMB, FTP, and File Station)

Windows ACL

?? , (CIFS/SMB)

User quota

??

Group quota

??

Folder quota

?? , (Snapshot shared folder)

Home folder

??

Resource Monitor

??

SNMP

V2, V3

Network recycle bin

1. Recover files deleted using AFP, CIFS/SMB, and File Station
2. Automatic cleanup and file type filter

System Log & Notification Center

Log recording: 3,000 event per second

Smart Fan

??

Schedule on/off

??

Internet protocol

IPv4, IPv6

Virtual Switch

??

Port trunking

?? , (7 modes)

VLAN

??

DHCP Server

??

DDNS (Dynamic Domain Name Service)

??

Network access protection with auto-

SSH, Telnet, HTTP(S), FTP, CIFS/SMB,

blocking	and AFP
Security Counselor	??
Malware Remover	??
AES 256-bit Volume Encryption validated by FIPS 140-2 CAVP	??
2-step verification	??
Allow/Deny List	??
Access Protection	??
Service binding	??
Firewall	??
Windows Server certificated	??
vSphere Web Client Plug-in	??
VMware vSphere VAAI for iSCSI	??
VMware vSphere VAAI for NAS	??
Windows ODX	??
Windows/VMware Snapshot Agent	??
HTTP/HTTPS Connections	TLS 1.0/1.1/1.2/1.3
Supports WebDAV Connection	??
Supports Virtual Hosts	32
Qsync	??
Note: At least 1 GB RAM is required.	
[Qsync] Management Mode	User customization, Central
[Qsync] Qsync client supported platforms	Windows, macOS, Ubuntu, Android, and iOS
[Qsync] Maximum number of version control	64
HybridMount	??
Note: At least 1 GB RAM is required.	
[HybridMount] File Cloud Gateway	Concurrent Connections = 20 Upload & 20 Download
[HybridMount] Network Drive Mount	??
[HybridMount] Free cloud gateway sessions	2
HBS (Hybrid Backup Sync)	??
Note: At least 1 GB RAM is required.	
[HBS (Hybrid Backup Sync)] NAS to NAS backup	??
[HBS (Hybrid Backup Sync)] Cloud Backup	??
[HBS (Hybrid Backup Sync)] Cloud Sync	??
[HBS (Hybrid Backup Sync)] 2-way and	??

Active Sync	
[HBS (Hybrid Backup Sync)] Apple Time	??
Machine Backup	
[HBS (Hybrid Backup Sync)] External drive	??
backup	
[HBS (Hybrid Backup Sync)] Maximum	400
number of backup job	
Boxafe	??
Note: At least 4 GB RAM is required.	
[Boxafe] Office 365 Backup	??
[Boxafe] Google Workspace Backup	??
[Boxafe] Full-text search	??
Qsirch	??
Note: This feature is supported by all QNAP NAS devices with at least 2 GB of memory	
[Qsirch] Previews	Photos, music, videos, PDFs, Gmail, and others
[Qsirch] Integrate Mac Finder	??
[Qsirch] Advanced picture search	??
[Qsirch] Search filters	??
QuMagie	
Note: At least 1 GB RAM is required.	
[QuMagie] Browse photos	??
[QuMagie] Virtual and smart albums	??
[QuMagie] AI-assisted photo management	People, things, places, and others
Antivirus (free)	??
QVPN Service	??
Note: At least 1 GB RAM is required.	
[QVPN Service] Remote Access	PPTP, L2TP/IPSec, OpenVPN, QBelt (QNAP proprietary)
[QVPN Service] Supported utility and mobile app	Windows, macOS, iOS, and Android
[QVPN Service] Supported maximum	100
clients	
LDAP Server	??
RADIUS	??
SQL server	??
License Center	??

Multimedia Console	??
Photo Station	??
Music Station	??
Video Station	??
Download Station	??
Notes Station	??
Qfiling	??
Media Streaming add-on	??
QmailAgent	??
QuWAN	??
DA Driver Analyzer	??
Q'center	??

Note: The application is available in the App Center and in virtual appliance marketplaces (VMware vSphere ESXi and Microsoft Hyper-V).

Q'center Server	??
Q'center Agent	??
Connect to Q'center	??
Container Station	??

Note: At least 1 GB RAM is required.
LXC/LXD and Docker

[Container Station] Supported type

Note: LXD has been supported after
Container Station 2.4

[Container Station] Docker Hub Registry	??
[Container Station] Container importing and exporting	??
[Container Station] Console mode	??
QVR Pro	??

Note: At least 4 GB RAM is required. The maximum number of channels supported varies by NAS model, network configuration, and camera settings. For more information, visit <https://www.qnap.com/go/qvr-nas-selector>.

[QVR Pro] Recording Technique	Index database based
[QVR Pro] License Type	Perpetual

[QVR Pro] User-defined trigger events	??
[QVR Pro] Metadata	??
[QVR Pro] QVR Pro Client (Desktop)	Windows, macOS, and QNAP HybridDesk Station
[QVR Pro] QVR Pro Client (Mobile)	Android and iOS
[QVR Pro] Recording camera streams	H.264
[QVR Pro] Free built-in camera channels	8
QVR Elite	??

Note: At least 1 GB RAM is required. The maximum number of channels supported varies by NAS model, network configuration, and camera settings. For more information, visit <https://www.qnap.com/go/qvr-nas-selector>.

[QVR Elite] Recording Technique	Standard MP4 file based
[QVR Elite] License Type	Subscription-based
[QVR Elite] User-defined trigger events	??
[QVR Elite] QVR Pro Client (Desktop)	Windows, macOS, and QNAP HybridDesk Station
[QVR Elite] QVR Pro Client (Mobile)	Android and iOS
[QVR Elite] Recording camera streams	H.264
[QVR Elite] Free built-in camera channels	2
QVR Pro Client	??
[QVR Pro Client] Dynamic View Layout	??
[QVR Pro Client] Windows	??
[QVR Pro Client] Mac	??
[QVR Pro Client] HybridDesktop	??
[QVR Pro Client] iOS	??
[QVR Pro Client] Android	

Specification

NAS	
10 Gigabit Ethernet Port	2 x 10GbE SFP+
2.5 Gigabit Ethernet Port (2.5G/1G/100M)	2 (2.5G/1G/100M/10M)
Buttons	Power, Reset, USB Copy
CPU Architecture	64-bit ARM
CPU Model	AnnapurnaLabs Alpine AL324 ARM® Cortex-A57 4-core 1.7GHz processor
Drive Bay	8 x 3.5-inch SATA 6Gb/s, 3Gb/s

Drive Compatibility	3.5-inch bays: 3.5-inch SATA hard disk drives 2.5-inch SATA hard disk drives 2.5-inch SATA solid state drives
Encryption Engine	??
Fan	System fan: 2 x 120mm, 12VDC CPU fan: 1 x 60mm
Flash Memory	512 MB (Dual boot OS protection)
Floating Point Unit	??
Form Factor	Tower
Hot-swappable	?? (Not supported M.2 SSD)
Jumbo Frame	??
Kensington Security Slot	??
LED Indicators	System Status, LAN, USB, HDD1~8
M.2 Slot	Optional via a PCIe adapter
Max. Number of Concurrent Connections (CIFS) - with Max. Memory	700
Maximum Memory	16 GB (1 x 16 GB)
Memory Slot	1 x SODIMM DDR4
Operating Temperature	0 - 40 °C (32°F - 104°F)
PCIe Slot	1 Slot 1: PCIe Gen 2 x2 PCIe bandwidth limitations will restrict the NAS 10GbE performance. Card dimensions for PCIe slot?210 x 68.9x 24.76 mm / 8.27 x 2.71 x 0.97 inches.
Power Consumption: Disk Standby Mode	27.949
Power Consumption: Operating Mode, Typical	50.858 W Tested with drives fully populated.
Power Supply Unit / Adapter	250W, 100-240V AC, 50/60Hz, 3.5A
Relative Humidity	5-95% RH non-condensing, wet bulb: 27°C (80.6°F)
SSD Cache Acceleration Support	??
Storage Temperature	-20 - 70°C (-4°F - 158°F)
System Memory	4 GB SODIMM DDR4(1 x 4 GB)
System Warning	Voice prompts or Buzzer
USB 3.2 Gen 1 port	3
Wake on LAN (WOL)	?? Only the 2.5GbE port

Product Gallery

