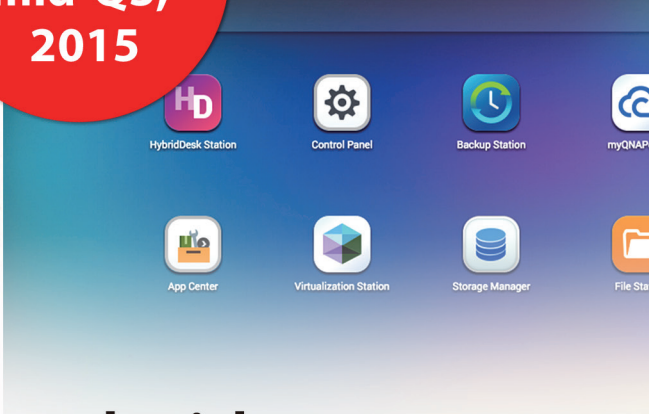


2015

**QTS 4.2
Firmware**



**Launching
mid-Q3,
2015**



**QTS 4.2 Re-Engineered with
Hybrid Virtualization and Containerization**

Introducing the re-architected QTS 4.2

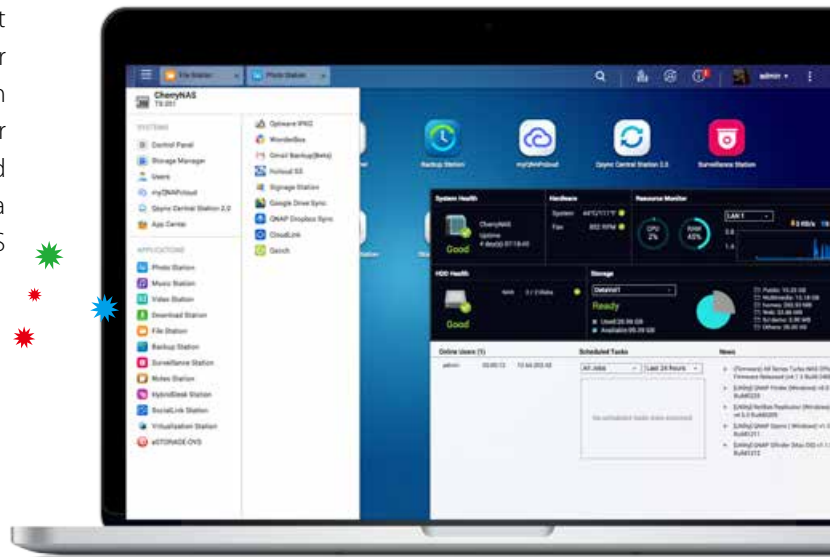
QNAP's Turbo NAS OS "QTS" has been re-engineered and redesigned to empower users with the flexibility, and control they need. Following intense scrutiny from UX designers and positive feedback from over 10,000 users, we have overhauled the entire OS to make it more intuitive, more convenient, more polished, and simply more beautiful. With the myQNAPcloud Service, connecting to your QNAP NAS is easier than ever helping you to upload, download, share, or back up your files to and from any PC, tablet, or smartphone from anywhere, at any time.



Elegant, powerful, beautiful
– QTS 4.2

The QTS intelligent desktop is specifically architected to support and enable your workflow. QTS is designed and built with your work in mind, to help you increase your productivity from anywhere at any time. QTS is simply designed to meet all your needs for storage, management, backup, multimedia, and surveillance. To improve your experience, we have assembled a team of world-class UX designers to design and refine every QTS user interface.

Now, let's take a sneak preview at the all-new QTS 4.2.



• Beautifully engineered design

Under the exacting demands and careful considerations of our team of world-class UX designers, all unnecessary distractions have been removed from our user interfaces to ensure a convenient, coherent, and rewarding user experience. The redesigned QTS is elegant, powerful, beautiful, and a true asset to your productivity.

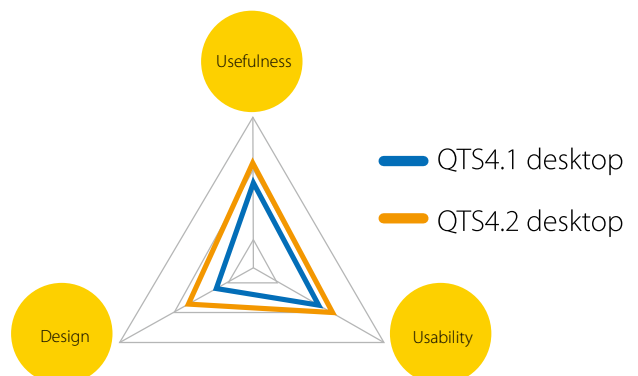
• Improved utilization

Intelligent, concurrent multi-tasking with enhanced modal windowing introduced in QTS 4.2 enables users to amplify their productivity. Remote monitoring, background tasks, and centralized management features ensure the highest utilization rate and optimal operation of the Turbo NAS.

• Finesse of form and function

In a branch and root redesign, all of the QTS UX elements including buttons, links and icons, were carefully refined, ensuring users are able to intuitively use the system without prior learning. The minimalist philosophy adopted in the QTS UX redesign and optimized applications subtly make the QTS experience feel cleaner and more refined throughout.

Usefulness, Usability and Design of QTS



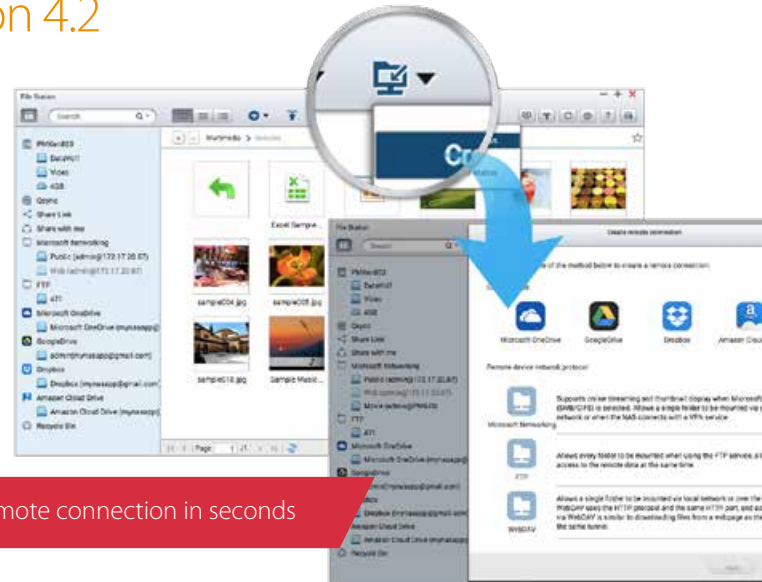
Centralized file storage and management

QTS 4.2 provides a centralized platform to manage all your data wherever it is, including on a remote NAS, or on cloud storage services. With our newest App Qsirch it is even easier to find the data you want!



Manage local, remote and files in cloud storage from one place – File Station 4.2

The enhancements to File Station 4.2 integrate a number of remote file management features. These features enable users to directly mount shared folders from a remote NAS on a local NAS using FTP, WebDAV or CIFS/SMB. Additionally, connect to cloud storage services (such as Google Drive, Dropbox, Microsoft OneDrive, Box, Amazon Cloud Drive and Yandex Disk) and mount each of them as a network drive on your local NAS. Breaking geographic and service limitations enables you to enjoy convenient access across both public and private cloud services for truly flexible file management.



Create a remote connection in seconds



Introducing QNAP Qsirch v1.0 – Domain-wide search for your Turbo NAS

Convenience is critical to saving you both time and money and QTS 4.2 now comes with Qsirch, a built-in domain-wide search engine designed to help you quickly locate your files. This new application features a Near Real-Time engine and when used with the ultra-fast QNAP NAS as a file server, you will be able to instantly locate the files you need.

• Massive range of supported file types

Qsirch indexes more than six thousand different file types ranging from Microsoft Office documents, to a huge array of multimedia formats all the way through to compressed archive files.

• Result previewing

Qsirch highlights keywords found within documents and displays both suggestion hints and thumbnail previews ensuring you quickly find exactly what you are looking for.

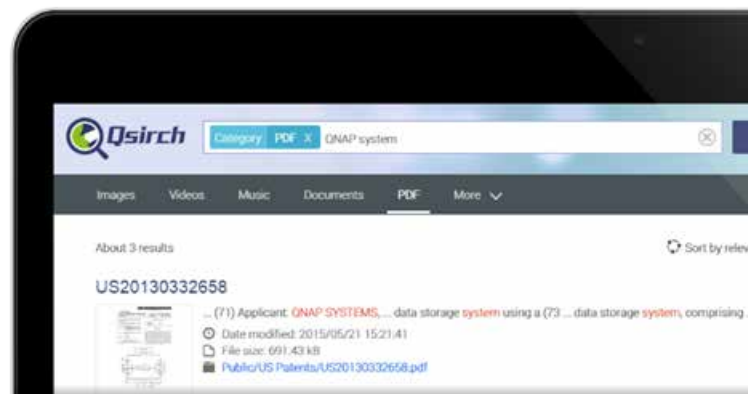
• Unique sequencing technology and recommendation system

QNAP's unique TF-IDF sequencing algorithm and predictive recommendation system enable you to sort through files faster and with a higher degree of accuracy.

*To use Qsirch, please install the Qsirch App in QTS App Center.

• Quick, insightful, predictive analysis

With just a single letter, the Qsirch Near Real-Time full-text smart search engine can provide instant results and will automatically make recommendations as you enter the keywords to make finding results even quicker.



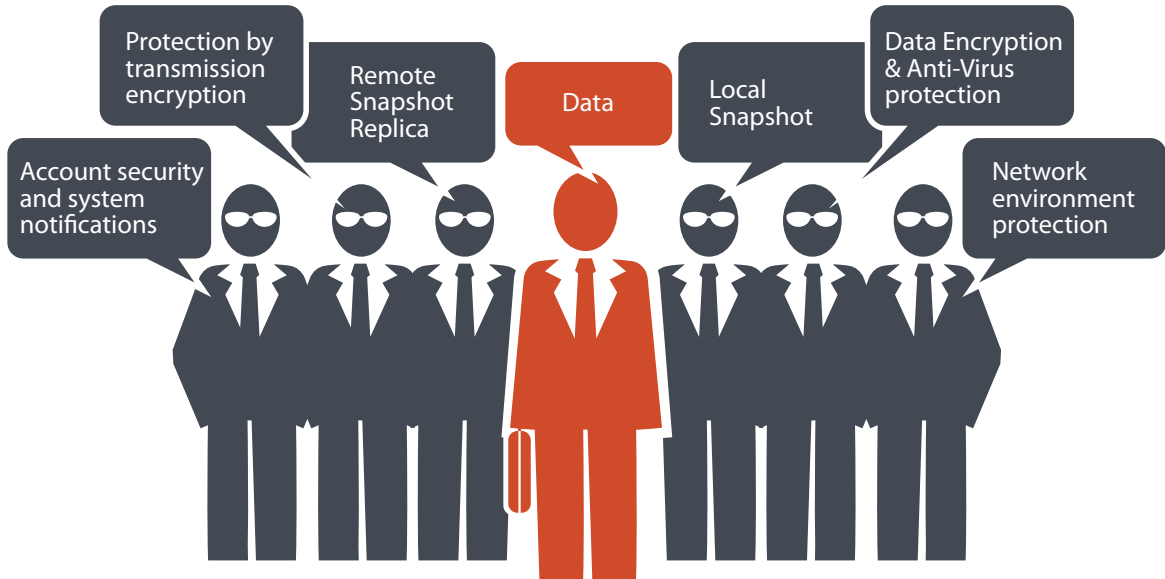
* Supported Models: Every **x86-based QNAP Turbo NAS** with at least **2GB RAM (4GB recommended.)**

Performance will be affected by hardware and available system resources.

Firmware: QTS 4.1 or newer version

Secure Your Data with Six Protection Mechanisms - Data Security

The growing tide of data breaches, leaks, and malicious actors mean your security is under the spotlight. Our solutions are built on a "security-first" foundation and enable you to focus on using your data rather than losing it.



1. Network environment protection

• IP Connection Filtering

Black/White list IP filtering enables you to allow or deny specific IP addresses or even entire subnets. This technique surgically removes malicious actors and networks at the very root ensuring connections to your NAS are safe.



• Service binding

Service binding enables you to bind network interfaces to specific services to enhance system security. An example would be binding access to critical company data to specific personnel with a specific protocol from specific IP addresses.

2. Account security and system notifications

• Two-Step Verification

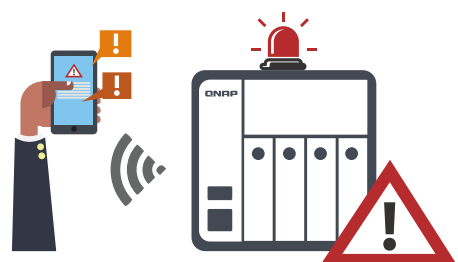
Two-Step Verification* adds an extra layer of security by requiring users to log in to the NAS with a password and a six-digit one-time password (OTP) generated by an authenticator app.

* This requires the installation of one of the following authenticator apps on your mobile device: Google Authenticator (Android, iOS, BlackBerry) or Authenticator (Windows Phone).

• Push Notifications

In addition to email and SMS, you can get event notification messages sent to your mobile devices*. This keeps you fully updated with the latest system status enabling you to take immediate action to reduce the risk of data loss.

* Requires installing QNAP Mobile App Qmanager on your mobile device.



3. Protection by transmission encryption

• Traffic encryption

Wrap your transmitted Data with industrial-grade, independently verified encryption when using services such as FTP, WebDAV or HTTP.

• VPN Server

A Virtual Private Network (VPN) ensures secure connections to access network resources and services across a public network. Whether you are an individual user or an IT administrator, you can use the built-in VPN server (L2TP/IPsec, PPTP or OpenVPN) or VPN client (PPTP or OpenVPN) to guarantee your security and anonymity.

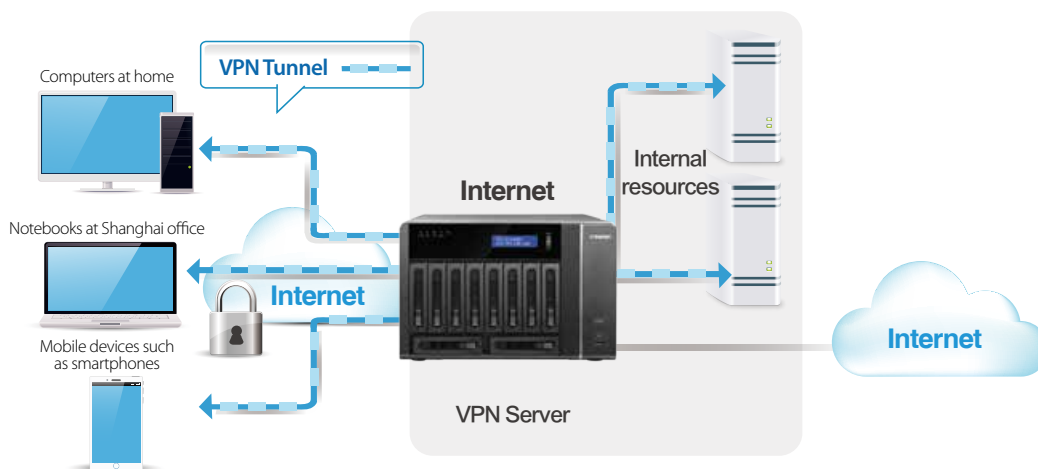
• VPN Client

VPN can better protect your data during download. This type of configuration also enables you to set up remote site backup using secure data transmission.

• Squid: hugely popular web proxy server

A web proxy provides cache and connection controls for internet services like HTTP, FTP. For companies that need a boost to web response time and security, Squid can be leveraged to make your QNAP NAS a web proxy server also providing protection for other devices in your local network.

* To use Squid, please install the Squid App in QTS App Center.



4. Data Encryption & Anti-Virus Protection

• Internal hard drive encryption across the entire system

QTS whole volume encryption absolutely protects the data stored on your NAS. The system will prompt for the encryption key when mounting an encrypted volume, and the data is simply inaccessible without it. This root level protection guarantees your data security data even in the event the entire NAS or individual drives are stolen.



• Anti-Virus Protection

QTS integrates the ClamAV antivirus toolkit to defend against the latest viruses, malware, worms, and Trojan horses with continuous free virus database updates, ensuring continuous business operation.

*QTS also supports McAfee virus scanner which is available in the QTS App Center with a free 30-day trial.



• Fine grained folder encryption

In addition to whole volume encryption, QTS also offers fine grained folder level encryption—to encrypt data with an encryption key in a specific folder to protect it from being accessed by unauthorized users. This approach is useful when you do not want to encrypt the whole volume and can also improve performance.



5. Local Snapshot

QNAP's whole volume/LUN snapshot technology employs Copy-on-Write technique to ensure a consistent system state. In the event of an unexpected system failure, you can immediately revert the system to a specific state earlier in time with full application consistency, including open files.

6. Remote Snapshot Replica

By using the Snapshot Replica function in Backup Station, you can also backup snapshots to a remote site.

*Please note that Snapshot function is only available on certain models and requires a minimum of 4GB system RAM.

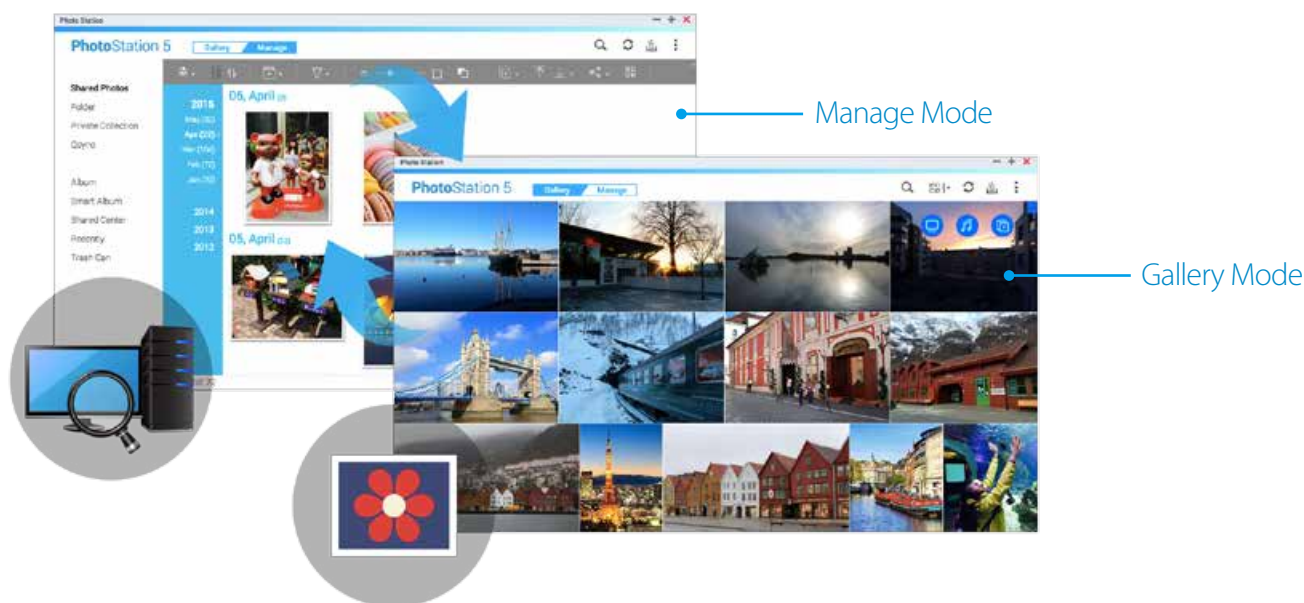
Streamlined, cloud ready, multimedia entertainment and collection center

QTS provides a number of features and applications that enable you to collect, back up, and share your favorite multimedia files using a web browser. In addition, QTS makes it easier than ever to stream your media to HDMI, DLNA, AirPlay, and Chromecast devices.



Your Perfect Personal Photo Diary

– Photo Station 5



- **Gallery and Manage viewing modes**

The all-new interface is optimized for to enhance both your photo browsing and archive management experience.

- **Create engaging galleries to keep and share your memories**

Select photos and create albums on the fly, or set conditions and have Photo Station 5 create smart albums for you; for example, simply set a date range to create a smart album of your latest trip.

- **Convert existing folders into albums or smart albums**

Use File Station to quickly and easily convert existing folders into albums or smart albums for photos you have organized already.

- **Plug-in: Face Detection App**

Quickly tag everyone in your photos with Face Detection, or convert photos to PDF files for convenient browsing on all devices.

*To use Face Detection, please install the Face Detection App in QTS App Center.

- **Create and share personalized photo collections**

Create personalized and themed albums to share your best photos with your friends and family using the all-new Sharing Cart, or upload photos to social platforms (such as Flickr, Picasa, Weibo, or YouTube).





Enjoy your videos with improved subtitle support – Video Station 4.2

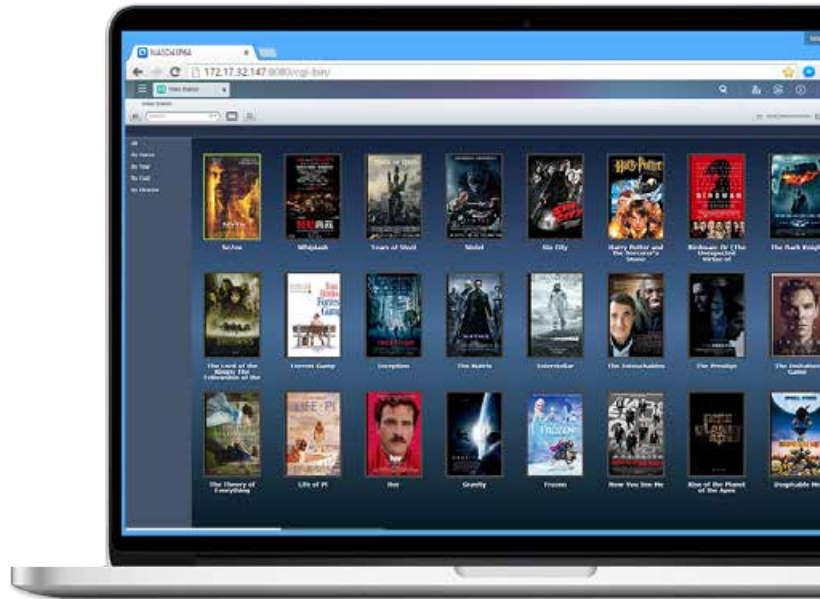
Video Station is your personal entertainment library that can organize and play your videos providing greater convenience in searching for covers and subtitles online; and streaming via DLNA, Airplay, and Chromecast.


• Online subtitle search

Subtitles can now be uploaded from a computer or searched for and downloaded from an Internet database, allowing viewers to enjoy videos in their native language or a language they are studying.

• Manually import subtitle

Through the computer-imported subtitles, it saves you from changing the subtitles file name and storage location to easily upload the subtitles. Supporting .ssa and .ass subtitles files, and also supporting more languages, it frees you from worrying about format incompatibility and display issues



 Improved subtitle support

• Adjust subtitle styles

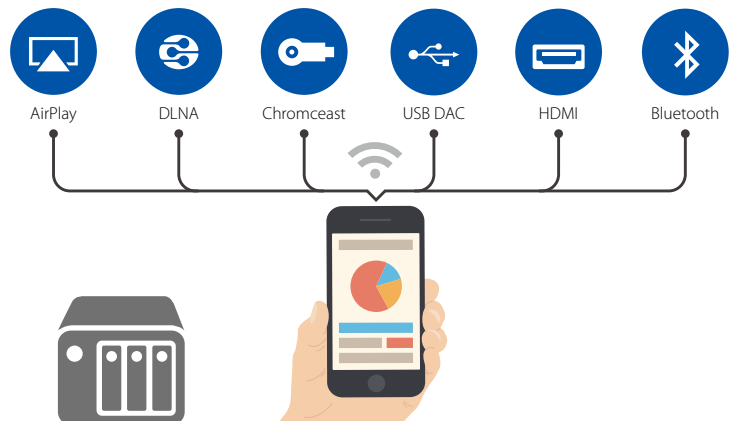
The display of subtitles can be adjusted to change the font, size, color and display time, enabling you to customize them to your liking.



Simultaneous Zonal Streaming to Multiple Devices

QTS 4.2 now integrates support for simultaneous streaming to multiple devices. Our beautifully designed interface makes it easy for you to control and direct your multimedia. Stream your media to be played on different devices in different locations at the same time using AirPlay, DLNA, Chromecast, USB DAC, HDMI, and Bluetooth devices.

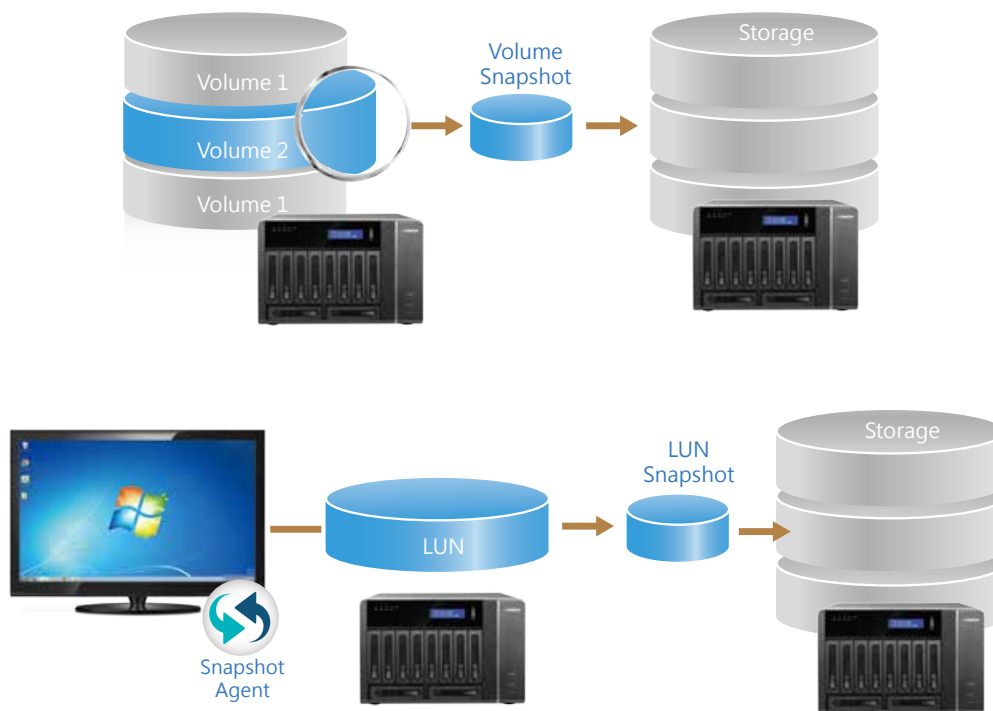
*Before using this feature, please install Multimedia Extension Pack from the QTS App Center.



Whole NAS Snapshot Technology Complete and Total Data Protection for Enterprises

The QNAP Volume and LUN Snapshot technology uses the Copy on Write technique to record the current system state. This block-based snapshot technology enables you to rapidly restore files to their normal state after an error occurs and very effectively reduces snapshot sizes. Using Remote Snapshot Replica in Backup Station, you can also back-up snapshots to a remote Turbo NAS. This not only provides better data resilience, but also dramatically cuts IT operating costs.

*Snapshot is only available on certain NAS models and at least 4GB system RAM is required.



• Advantages of QNAP Snapshot technologies

As a block-based snapshot technology, QNAP snapshot technologies can intelligently backup only changed files dramatically reducing snapshot sizes. With support for up to 256 snapshots per volume and LUN (or 1024 snapshots for the entire system), snapshots can be scheduled to occur automatically by the minute, hour, daily, weekly or on a monthly basis. This technology can improve the Recovery Point to Object and Recovery Time to Object for enterprises and allows you to take application consistent snapshots using Snapshot Agent for files that are being used by the system or other applications.

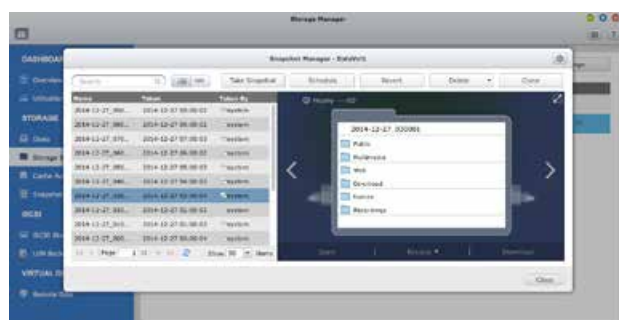
• Local Snapshot for uninterrupted data protection

Traditional backup techniques typically save all backup data into one giant file. This not only takes up a lot of storage space, but also makes it difficult to find and recover individual files. QNAP snapshot technology provides file-based data recovery enabling you to choose to recover a single folder or file, greatly enhancing flexibility for data recovery.

• Remote Snapshot Replica to strengthen protection against disasters

Remote Snapshot Replica allows you to create a snapshot both on your local Turbo NAS and to an off-site, remote Turbo NAS to ensure the most complete data protection.

*Storage pools created before QTS 4.2 do not currently support the snapshot feature, if you need to use snapshots for backup or system migration, please create a new storage pool before using this feature. For details on system migration and backup, please refer to the QNAP website.





A private cloud solution combining centralized management and shared folder synchronization – Qsync Central Station 2.0

- **Synchronization as a better file management and collaboration approach**

Qsync Central Station 2.0 supports file synchronization between multiple devices, and you can utilize a smart phone, tablet, computer or webpage to browse through synchronized files. When your computer is offline, you can edit the files offline or view the files on the local Qsync folder, and as soon as the network resumes, online, it will continue to synchronize the data.



- **Enhance management efficiency by monitoring equipment settings**

The administrator can create default settings on Qsync Central Station 2.0 and also apply them to Qsync clients, which helps to not only save time and effort setting up individual clients, but also allows administrators to monitor user settings, thereby strengthening enterprise-wide IT management and file filtering control and avoiding the risk of deleting files on a QNAP NAS by mistake due to synchronization.

- **Supports shared folder synchronization and seamless file sharing for each other**

Besides the Qsync folder, now you can synchronize shared folders on a QNAP NAS to the Qsync client on your computer, enabling synchronization among multiple shared folders on the NAS and elevating the level of file sync and sharing efficiency to a higher level.



Visual management platform for multi-NAS management – Q'center central management system

Q'center is a powerful QNAP Turbo NAS management tool. You can view the status and system information of multiple Turbo NAS units at the same time from the Q'center Server.

- **Central Management Platform**

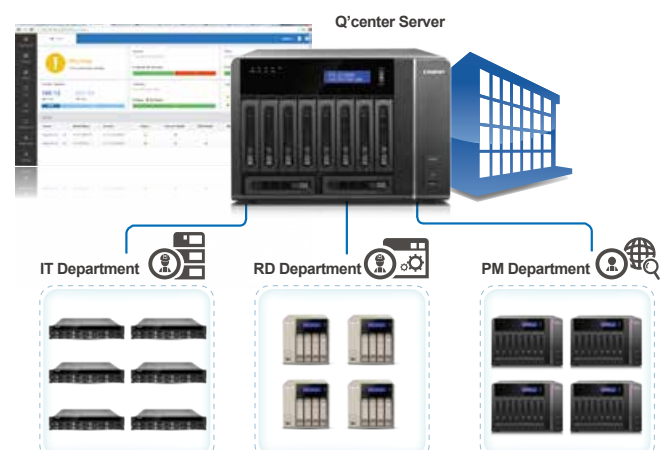
The "Dashboard" screen provides you with tools to conveniently inspect and monitor system status for all connected NAS units and allows you to efficiently review system logs of selected NAS units. You can customize dashboards to get a quick overview of specific system information or statuses and alerts.

- **Manage Turbo NAS behind firewall**

The exclusive firewall penetration technology from QNAP enables Q'center to connect different QNAP NAS units in different geographic locations and subnets. Using Q'center Agent, you can quickly establish connections between NAS clients and the Q'center server, saving you the trouble of complicated router and VPN settings.

- **Q'center for VM**

QNAP also offers the Q'center version to run on VMware and Windows Hyper-V. You can install it in VM without a QNAP NAS, adding flexibility to your setup choices.



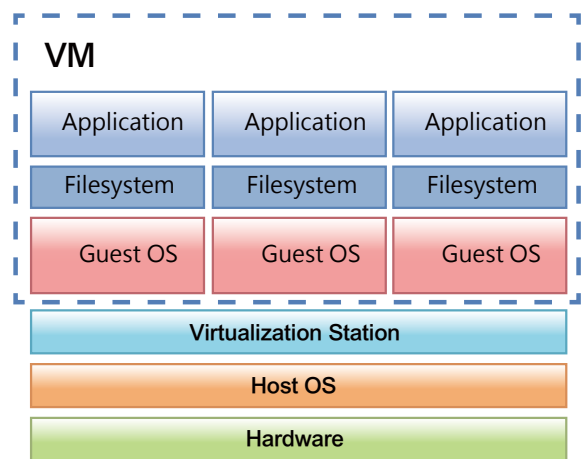
Comprehensive Virtualization Solutions VMs or Containers? You can have both!

2014 saw QNAP launch Virtualization Station, the first truly vendor neutral, built-in NAS hypervisor incorporating cloud computing and storage technologies. Following this successful launch, QNAP has continued to innovate and will be incorporating Software Defined Networking (SDN) technology. Adopting SDN will enable the fundamental redesign of network architecture and improves network performance.

Virtualization Station 2.0, scheduled for release this year sees QNAP pioneering again with the introduction of Container Station supporting both LXC (Linux® Container), and Docker® containers. No matter what your virtualization needs are, you can count on QNAP for a complete range of virtualization support.

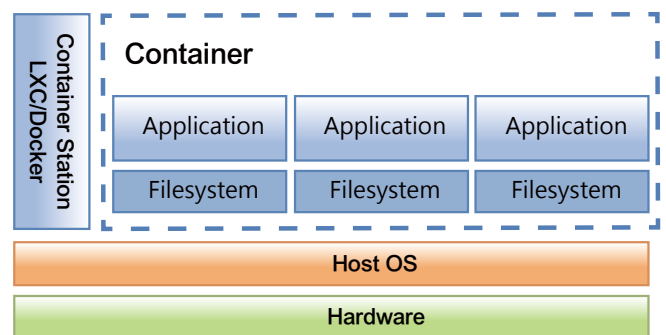
• Virtualization Station 2.0

- Complete OS virtualization solution
- Secure, isolated computing environment
- Supports Windows®, Linux®, UNIX®, and Android®



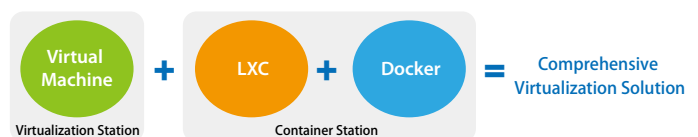
• Container Station 1.0

- Lightweight Linux®-based OS and app virtualization solution
- Supports LXC® and Docker® containers
- Easy deployment, lightweight, portable, and efficient



VM, LXC and Docker®, You May Need Them All

In many use cases, a virtual machine is an ideal deployment solution for systems with fixed resources. However, more recently LXC has grown to be the choice of administrators deploying extremely lightweight operating systems. In contrast, Docker® is increasingly the preferred choice for rapidly deploying application services across several platforms including the cloud, servers, and PC's. With an increasing level of sophistication and choice, tailoring your virtualization strategy to fit exactly your needs just got a lot easier.



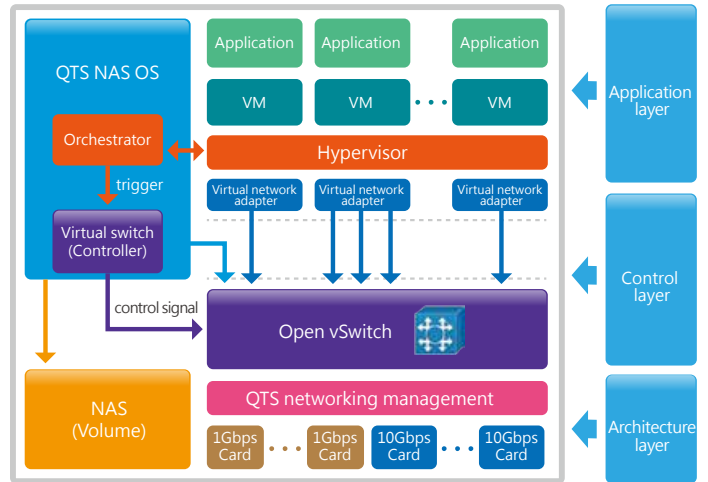
Virtualization platform / Requirement	Windows OS	Windows application	Linux OS	Linux application	Setup time	Resource Requirements
Virtual Machine	✓	✓	✓	✓	Medium	Medium
LXC	-	-	✓	✓	Fast	Low
Docker	-	-	-	✓	Fast	Low



Complete OS virtualization solution – Virtualization Station 2.0

Based on the SDN architecture, Virtualization Station 2.0 enables your virtual machines and your Turbo NAS to share network ports and communicate with one another. This internally seamless transfer data and vastly improve network performance. The advantage of adopting the SDN architecture for network and data traffic designs is that the transmission performance of data exchanged between VMs, or between VMs and Turbo NAS via a high-speed virtual switch is not limited by the performance bottleneck of physical NICs and can be drastically increased.

Removes the need to dedicate a network interface to virtual machines

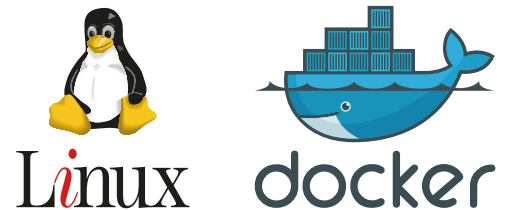


Lightweight Linux®-based OS and app virtualization solution – Container Station 1.0

While almost all mobile apps connect to cloud platforms, virtualization is the cornerstone for enterprises to enter the cloud ecosystem. In 2015, QNAP has pioneered again with the introduction of the Container Station 1.0. Developed following the Just enough OS, or JeOS, philosophy, this lightweight virtualization technology can instantly and truly create a ready-to-use environment on PC's, Turbo NAS and the Cloud for RD developers and IT administrators.

• Why LXC?

LXC supports OS virtualization for Linux® based operating systems, while Docker® is ideal for application virtualization purposes. As shown in the figure below, most NAS products in the market can only support single-core Docker® containers, and as such are not suitable for deployment of Linux®-based services. Therefore, QNAP Turbo NAS, the only dual-core Turbo NAS on the market supporting both LXC and Docker®, is your clear choice for your virtualization solutions.





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**Just Docker is
not good enough!!!**




	LXC	Docker®
Architecture	Supports a fully virtualized Linux® OS including boot-up procedures such as init and daemon	Single image, sharing with the host kernel and running as an application
Purpose	<ol style="list-style-type: none"> 1. Run multiple applications in a single Linux® OS 2. Requires a full Linux® OS, e.g. init, daemon 3. Requires a Linux® upgrade 	<ol style="list-style-type: none"> 1. Single container, single application 2. Rapid deployment and migration across platforms 3. Independent containers within the respective Linux® OS versions

Network Attached Storage (NAS)

SS-ECx79U-SAS-RP Series				TS-ECx79U-SAS-RP Series	
NAS Model	SS-EC2479U-SAS-RP	SS-EC1879U-SAS-RP	SS-EC1279U-SAS-RP	TS-EC1679U-SAS-RP	TS-EC1279U-SAS-RP
					
CPU	Intel® Xeon® E3-1245 v2 Quad-Core 3.4GHz			Intel® Xeon® E3-1245 v2 Quad-Core 3.4GHz	
Memory	8GB DDR3 ECC (max 32GB)			8GB DDR3 ECC (max 32GB)	
Drive *	24 x 2.5"	18 x 2.5"	12 x 2.5"	16 x 3.5" / 2.5"	12 x 3.5" / 2.5"
Drive Type	SAS/SATA 6Gb/s & 3Gb/s, hot swappable			SAS/SATA 6Gb/s & 3Gb/s, hot swappable	
LAN Port	4 x GbE (max 8 x GbE or 4 x 10GbE + 4 x GbE)			4 x GbE (max 8 x GbE or 4 x 10GbE + 4 x GbE)	
PCI-E Slot	2			2	
HDMI / USB 3.0 / USB 2.0 / eSATA	1 / 2 / 4 / 0			1 / 2 / 4 / 0	
Users / Groups / Shared Folders	4096 / 512 / 512			4096 / 512 / 512	
Max Concurrent Connections (CIFS)	1200			1200	
Max IP Cameras	Default 4 / Max 72 (optional)			Default 4 / Max 72 (optional)	
QNAP Expansion Enclosure	Max 8 REXP-1600U-RP / REXP-1200U-RP			Max 8 REXP-1600U-RP / REXP-1200U-RP	
SSD Cache	✓			✓	
Hardware Transcoding	✓			✓	
Virtualization Station	✓			✓	

TVS-x71U Series		
NAS Model	TVS-1271U-RP	TVS-871U-RP
		
CPU	Intel® Core™ i7-4790S Quad-Core 3.2GHz / Core™ i5-4590S Quad-Core 3.0GHz / Core™ i3-4150 Dual-Core 3.5GHz / Pentium® G3250 Dual-Core 3.1GHz	Intel® Core™ i5-4590S Quad-Core 3.0 GHz / Core™ i3-4150 Dual-Core 3.5GHz / Pentium® G3250 Dual-Core 3.1GHz
Memory	i7 model : 32GB DDR3 / i5 model : 16GB DDR3 / i3 model : 8GB DDR3 / Pentium® model : 4GB DDR3 (max 32GB)	i5 model : 8GB DDR3 / i3 & Pentium® models : 4GB DDR3 (max 32GB)
Drive *	12 x 3.5" / 2.5"	8 x 3.5" / 2.5"
Drive Type	SATA 6Gb/s & 3Gb/s, hot swappable	SATA 6Gb/s & 3Gb/s, hot swappable
LAN Port	4 x GbE (max 8 x GbE or 4 x 10 GbE + 4 x GbE)	4 x GbE (max 8 x GbE or 4 x 10GbE + 4 x GbE)
PCI-E Slot	2	2
HDMI / USB 3.0 / USB 2.0 / eSATA	1 / 4 / 4 / 0	1 / 4 / 4 / 0
Users / Groups / Shared Folders	4096 / 512 / 512	4096 / 512 / 512
Max Concurrent Connections (CIFS)	1500	1500
Max IP Cameras	Default 4 / Max 72 (optional)	Default 4 / Max 72 (optional)
QNAP Expansion Enclosure	Max 8 REXP-1200U-RP / REXP-1600U-RP	Max 8 REXP-1200U-RP / REXP-1600U-RP
SSD Cache	✓	✓
Hardware Transcoding	✓	✓
Virtualization Station	✓	✓

TS-ECx80U-RP Series				TVS-ECx80 Series		
TS-EC2480U-RP	TS-EC1680U-RP	TS-EC1280U-RP	TS-EC880U-RP	TVS-EC1080+	TVS-EC1080	TVS-EC880
						
Intel® Xeon® E3 Quad-Core 3.4GHz				Intel® Xeon® E3 Quad-Core 3.4GHz	Intel® Xeon® E3-1245 v3 Quad-Core 3.4GHz / Core™ i3-4150 Dual-Core 3.5GHz	Intel® Xeon® E3-1245 v3 Quad-Core 3.4GHz
4GB DDR3 ECC (max 32GB)				32GB DDR3	E3 models : 8GB / 16GB DDR3 i3 models : 8GB DDR3(max 32GB)	E3 models : 16GB / 8GB DDR3 (max 32GB)
24 x 3.5" / 2.5"	16 x 3.5" / 2.5"	12 x 3.5" / 2.5"	8 x 3.5" / 2.5"	10 x 3.5" / 2.5"	10 x 3.5" / 2.5"	8 x 3.5" / 2.5"
SATA 6Gb/s & 3Gb/s, hot swappable				SATA 6Gb/s & 3Gb/s, hot swappable		
4 x GbE (max 8 x GbE or 4 x 10GbE + 4 x GbE)				4 x GbE + 2 x 10GbE	4 x GbE (max 6 x GbE or 2 x 10GbE + 4 x GbE)	
2				1	1	1
1 / 4 / 4 / 0				1 / 3 / 6 / 2	1 / 3 / 6 / 2	1 / 3 / 6 / 2
4096 / 512 / 512				4096 / 512 / 512	4096 / 512 / 512	4096 / 512 / 512
1500				1500	1500	1500
Default 8 / Max 80 (optional)				Default 2 / Max 80 (optional)		
Max 8 REXP-1600U-RP / REXP-1200U-RP				Max 4 REXP-1000 Pro		
✓				✓		
✓				✓		
✓				✓		








TVS-x71 Series		
TVS-871	TVS-671	TVS-471
		
Intel® Core™ i7-4790S Quad-Core 3.2GHz / Core™ i5-4590S Quad-Core 3.0GHz / Core™ i3-4150 Dual-Core 3.5GHz / Pentium® G3250 Dual-Core 3.1GHz	Intel® Core™ i5-4590S Quad-Core 3.0GHz / Core™ i3-4150 Dual-Core 3.5GHz / Pentium® G3250 Dual-Core 3.1GHz	Intel® Core™ i3-4150 Dual-Core 3.5GHz / Pentium® G3250 Dual-Core 3.1GHz
i7 model : 16GB DDR3 / i5 model : 8GB DDR3 i3 & Pentium® models : 4GB DDR3 (max 16GB)	i5 model : 8GB DDR3 i3 & Pentium® models : 4GB DDR3 (max 16GB)	4GB DDR3 (max 16GB)
8 x 3.5" / 2.5"	6 x 3.5" / 2.5"	4 x 3.5" / 2.5"
SATA 6Gb/s & 3Gb/s, hot swappable	SATA 6Gb/s & 3Gb/s, hot swappable	SATA 6Gb/s & 3Gb/s, hot swappable
4 x GbE (max 8 x GbE or 4 x 10GbE + 4 x GbE)		
2	2	2
1 / 3 / 2 / 0	1 / 3 / 2 / 0	1 / 3 / 2 / 0
4096 / 512 / 512	4096 / 512 / 512	4096 / 512 / 512
1500	1500	1500
Default 4 / Max 72 (optional)	Default : 4 / Max : 72 (optional)	Default 4 / Max 72 (optional)
Max 4 REXP-1000 Pro or max 2 UX-800P / 500P	Max 4 REXP-1000 Pro or max 2 UX-800P / 500P	Max 4 REXP-1000 Pro or max 2 UX-800P / 500P
✓	✓	✓
✓	✓	✓
✓	✓	✓









All specifications are subject to change without notice










* The standard system is shipped without hard drives. Check www.qnap.com for HDD compatibility list.

Network Attached Storage (NAS)

	TVS-x63 Series				TS-563	TS-x53U Series	
NAS Model	TVS-863+	TVS-863	TVS-663	TVS-463	TS-563	TS-1253U TS-1253U-RP	TS-853U TS-853U-RP
							
CPU	AMD G-Series Quad-Core 2.4GHz				AMD G-Series Quad-Core 2.0GHz	Intel® Celeron® Quad-Core 2.0GHz (up to 2.41GHz)	
Memory	16GB / 8GB (max 16GB)	8GB / 4GB (max 16GB)			8GB / 2GB (max 16GB)	4GB DDR3L (max 8GB)	4GB DDR3L (max 8GB)
Drive*	8 x 3.5" / 2.5"	8 x 3.5" / 2.5"	6 x 3.5" / 2.5"	4 x 3.5" / 2.5"	5 x 3.5" / 2.5"	12 x 3.5" / 2.5"	8 x 3.5" / 2.5"
Drive Type	SATA 6Gb/s & 3Gb/s, hot swappable					SATA 6Gb/s & 3Gb/s, hot swappable	
LAN Port	2 x GbE + 1 x 10GbE (max 4 x GbE or 2 x 10GbE + 2 x GbE)	2 x GbE (max 4 x GbE or 2 x 10GbE + 2 x GbE)				4 x GbE	4
PCI-E Slot	1 (pre-installed 10GbE NIC)	1			1	—	—
HDMI / USB 3.0 / USB 2.0 / eSATA	2 / 5 / 0 / 0				0 / 5 / 0 / 0	1 / 4 / 0 / 0	1 / 4 / 0 / 0
Users / Groups / Shared Folders	4096 / 512 / 512				4096 / 512 / 512	4096 / 512 / 512	4096 / 512 / 512
Max Concurrent Connections (CIFS)	1050				800	800	800
Max IP Cameras	Default 4 / Max 40 (optional)					Default 2 / Max 40 (optional)	
QNAP Expansion Enclosure	Max 2 UX-800P / UX-500P					Max 1 UX-800U-RP / UX-1200U-RP	
SSD Cache			✓				✓
Hardware Transcoding			✓		—		✓
Virtualization Station			✓				✓

	TS-453mini	TS-x51 Series					
NAS Model	TS-453mini	TS-851	TS-651	TS-451	TS-251	TS-251C	TS-451S
							
CPU	Intel® Celeron® Quad-Core 2.0GHz (up to 2.41GHz)	Intel® Celeron® Dual-Core 2.41GHz (up to 2.58GHz)				Intel® Celeron® Dual-Core 2.41GHz (up to 2.58GHz)	
Memory	8GB / 2GB DDR3L (max 8GB)	4GB / 1GB DDR3L (max 8GB)				1GB DDR3L (max 8GB)	1GB DDR3L (max 8GB)
Drive*	4 x 3.5" / 2.5"	8 x 3.5" / 2.5"	6 x 3.5" / 2.5"	4 x 3.5" / 2.5"	2 x 3.5" / 2.5"	2 x 3.5"	4 x 2.5"
Drive Type	SATA 6Gb/s & 3Gb/s, hot swappable	SATA 6Gb/s & 3Gb/s, hot swappable				SATA 6Gb/s & 3Gb/s	SATA 6Gb/s & 3Gb/s, hot swappable
LAN Port	2 x GbE	2 x GbE				1 x GbE	2 x GbE
PCI-E Slot	—	—				—	—
HDMI / USB 3.0 / USB 2.0 / eSATA	1 / 3 / 2 / 0	1 / 3 / 2 / 0		1 / 2 / 2 / 0		1 / 1 / 2 / 0	1 / 3 / 0 / 0
Users / Groups / Shared Folders	4096 / 512 / 512	4096 / 512 / 512				4096 / 512 / 512	4096 / 512 / 512
Max Concurrent Connections (CIFS)	800	600				600	600
Max IP Cameras	Default 2 / Max 40 (optional)	Default 2 / Max 24 (optional)				Default 2 / Max 24 (optional)	Default 2 / Max 24 (optional)
QNAP Expansion Enclosure	Max 1 UX-800P / UX-500P	Max 1 UX-800P / UX-500P				Max 1 UX-800P / UX-500P	Max 1 UX-800P / UX-500P
SSD Cache	✓			✓		✓	✓
Hardware Transcoding	✓			✓		✓	✓
Virtualization Station	✓			✓		✓	✓

	TS-451U	TS-x53 Pro Series					
TS-453U TS-453U-RP	TS-451U	TS-853 Pro	TS-653 Pro	TS-453 Pro	TS-253 Pro	TS-853S Pro	TS-453S Pro
							
Intel® Celeron® Quad-Core 2.0GHz (up to 2.41GHz)	Intel® Celeron® Dual-Core 2.41 GHz (up to 2.58GHz)	Intel® Celeron® Quad-Core 2.0GHz (up to 2.41GHz)				Intel® Celeron® Quad-Core 2.0GHz (up to 2.41GHz)	
4GB DDR3L (max 8GB)	1GB DDR3L (max 8GB)	8GB / 2GB DDR3L (max 8GB)				4GB DDR3L (max 8GB)	
4 x 3.5" / 2.5"	4 x 3.5" / 2.5"	8 x 3.5" / 2.5"	6 x 3.5" / 2.5"	4 x 3.5" / 2.5"	2 x 3.5" / 2.5"	8 x 2.5"	4 x 2.5"
SATA 6Gb/s & 3Gb/s, hot swappable		SATA 6Gb/s & 3Gb/s, hot swappable				SATA 6Gb/s & 3Gb/s, hot swappable	
4 x GbE	2 x GbE	4 x GbE			2 x GbE	4 x GbE	2 x GbE
—	—	—				—	
1 / 4 / 1 / 0	1 / 4 / 1 / 0	1 / 3 / 2 / 0			1 / 2 / 2 / 0	1 / 3 / 2 / 0	1 / 3 / 0 / 0
4096 / 512 / 512	4096 / 512 / 512	4096 / 512 / 512				4096 / 512 / 512	4096 / 512 / 512
800	600	800				800	800
Default 2 / Max 40 (optional)	Default 2 / Max 24 (optional)	Default 2 / Max 40 (optional)				Default 2 / Max 40 (optional)	
Max 1 UX-800U-RP / UX-1200U-RP		Max 1 UX-800P / UX-500P				Max 1 UX-800P / UX-500P	
✓	✓	✓				✓	
✓	✓	✓				✓	
✓	✓	✓				✓	

Silent NAS	TS-431U	TS-x31+ Series		TS-x31 Series			TS-x12 Series	
HS-251	TS-431U	TS-431+	TS-231+	TS-431	TS-231	TS-131	TS-212P	TS-112P
								
Intel® Celeron® Dual-Core 2.41GHz	Freescalar ARM® Dual-Core 1.2GHz	Annapurna Labs ARM® Cortex®-A15 Dual-Core 1.4GHz		Freescalar ARM® Dual-Core 1.2GHz			Marvell ARM® 1.6GHz	Marvell ARM® 1.6GHz
2GB	1GB	1GB		512MB			512MB	512MB
2 x 3.5" / 2.5"	4 x 3.5" / 2.5"	4 x 3.5" / 2.5"	2 x 3.5" / 2.5"	4 x 3.5" / 2.5"	2 x 3.5" / 2.5"	1 x 3.5" / 2.5"	2 x 3.5"	1 x 3.5"
SATA 6Gb/s & 3Gb/s, hot swappable		SATA 6Gb/s & 3Gb/s, hot swappable		SATA 6Gb/s & 3Gb/s, hot swappable			SATA 6Gb/s & 3Gb/s	
2 x GbE	2 x GbE	2 x GbE		2 x GbE		1 x GbE	1 x GbE	1 x GbE
—	—	—		—			—	—
1 / 2 / 2 / 0	0 / 4 / 1 / 0	0 / 3 / 0 / 0		0 / 3 / 0 / 1			0 / 2 / 1 / 0	0 / 2 / 1 / 1
4096 / 512 / 512	4096 / 512 / 512	4096 / 512 / 512		4096 / 512 / 512			2048 / 256 / 256	2048 / 256 / 256
600	200	400		200			130	130
Default 2 / Max 24 (optional)	Default 2 / Max 8 (optional)	Default 2 / Max 16 (optional)		Default 2 / Max 8 (optional)			Default 2 / Max 8 (optional)	
Max 1 UX-800P / UX-500P	—	—		—			—	
✓	—	✓		—			—	
✓	—	—		—			—	
✓	—	—		—			—	

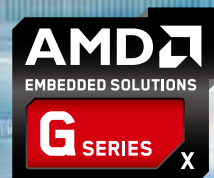
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More efficient, more secure, with excellent ROI

TS-563 5-Bay Turbo NAS

An Affordable, Business-Ready Quad-Core NAS with 10GbE Connectivity



Flexible 10GbE Connectivity



SFP+



10GBASE-T

64bit x86
Quad-core
2.0 GHz



Container Station



Virtualization Station

• Secure, centralized storage, backup & collaboration

A storage solution built on a 'security first' foundation. Data backup, file sharing, and virtualization, all built on an outstanding hardware-accelerated encryption engine for industrial-grade, efficient performance exceeding 300MB/s.

• Run multiple virtual machines & virtual appliances

Virtualization Station makes deploying PaaS, SaaS, and VDI easier than ever. Run multiple Windows/Linux/UNIX/Android-based virtual machines and deploy ready-made virtualized containers for your services to reduce your overheads!

• Scalable for archiving rapidly growing data

Rest-assured that your future needs can be met with ease and convenience. Scale up to 21 drives by adding QNAP UX-800P expansion enclosures for storage-intensive applications including video surveillance, TV broadcast storage, and more.

• Flexible 10GbE connectivity

Cost-efficient, reliable, redundant storage paired with fast 10GbE for high-bandwidth, processor intensive HD video editing, and virtualization.

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