

Smart Workflow **x** High Productivity
Network Storage and Computing System

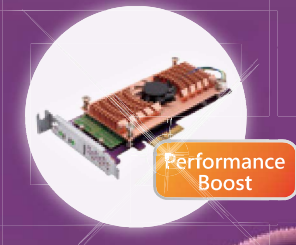
TS-x53B Series

2 / 4 / 6-bay NAS

Equipped with One PCIe Expansion Slot Unlimited Possibilities

QM2 M.2 SSD / 10GbE Network Expansion Card

- Supports SSD caching and Qtier, a high-efficiency auto-tiering storage system



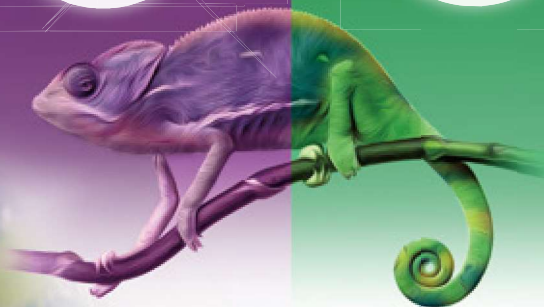
Dual-port USB 3.1 Gen2 10Gbps Type-A Expansion Card

- Enables lightning-fast transmission. Compatible with USB 3.0 and 2.0 devices.



Dual-band 2.4 GHz/5 GHz PCI Express Network Expansion Card

- Turns your NAS into a wireless base station, allowing devices to quickly access NAS resources using Wi-Fi



TS-653B

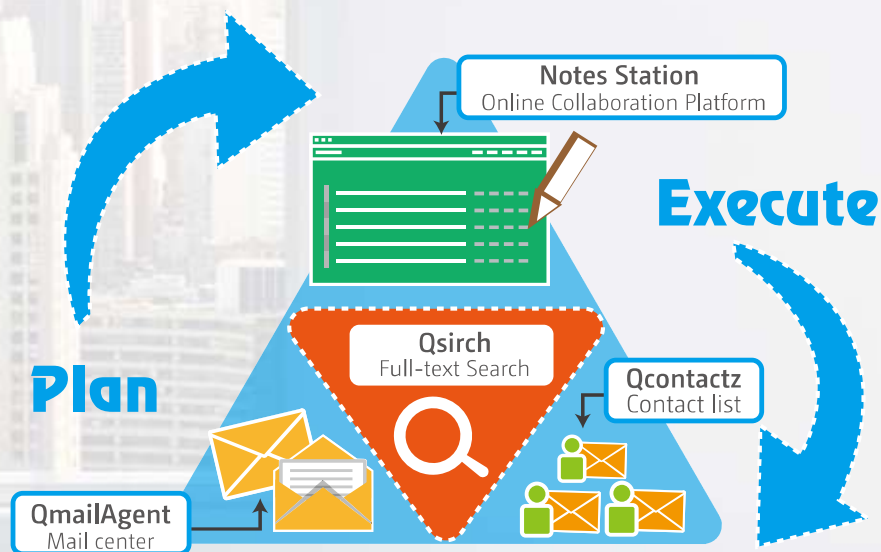
- ◆ USB Type-C QuickAccess port for accessing files without needing a network connection.
- ◆ Equipped with quad-core Intel® Celeron® J3455 processor, burst up to 2.41 GHz.
- ◆ Supports AES-NI encryption and accelerated video decoding and transcoding.
- ◆ A hybrid approach to virtualization: Virtualization Station, Linux Station, and Container Station, with remote access support.
- ◆ QTS 4.3 provides File Station for managing files and data, QmailAgent as a centralized email manager, and Qcontact for storing contact information.
- ◆ Features an OLED screen, touch-sensitive buttons, speaker with verbal system warnings, and easy-to-access internals with tool-less hard drive installation.



QNAP's first smart workflow process based computing and storage system

TS-x53B NAS series is equipped with QTS 4.3 operating system to create the first smart workflow-oriented file storage system (Workflow Based NAS OS). Using file management application File Station as the core, it provides convenient remote mount function, so that you can manage local NAS, external devices, remote NAS and cloud files within a single interface. Various tools such as Notes Station, QmailAgent and Qcontactz make collaborative notes, e-mail and contact management super convenient, so you can focus on work without missing any important information. With Qsirch full-text search, you can search for the exact file you want by just entering the keywords. Other features such as the Qsirch full-text search engine and Qfiling's automatic archiving feature greatly assist in daily NAS management tasks.

In addition, TS-x53B also provides other rich business applications such as cross-platform data storage and disaster recovery, Volume / LUN snapshot backup and virtualization storage, and it's also equipped with PCIe expansion slots, so it can be used as 10GbE network, M.2 SSD cache and USB 3.1 10Gbps expansion. It also has built-in high availability USB Type-C QuickAccess port and standard SD memory card slot, so that large file transmission and sharing is made more convenient. TS-x53B also supports 4K (H.264) video instant playback and transfer, so it can act as a high-quality platform for media workers to work together.



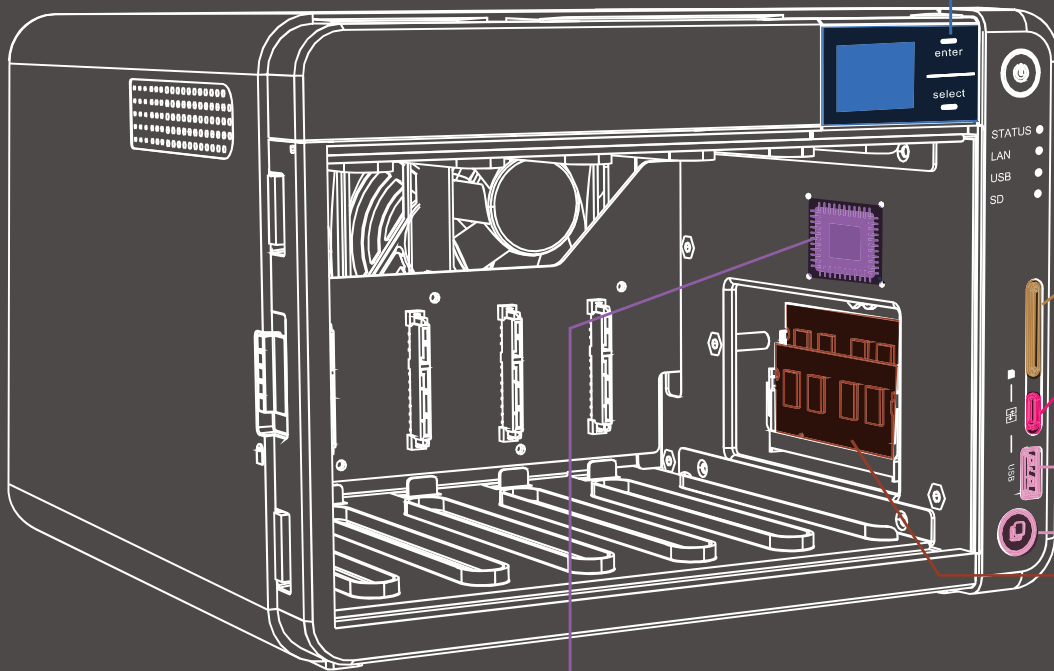
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TS-x53B

Network Storage and Computing Device

Small in size
Big in features



01 High definition screen and sensitive buttons
- System status at a glance

02 SD card slot
- Easily back up your photos

03 USB-C Quick Access
plug and play
- Connect to Windows PC via the USB-C Quick Access
NAS front panel without
through complicated network
Find your NAS in Qfinder
install and access the

04 USB 3.0 ports
One Touch
- Press the "Copy" button
your data

05 Up to 8GB
DDR3L memory
- 2 x SODIMM memory

06 Front cover with magnets and lock
- Quick disassembly and dust prevention

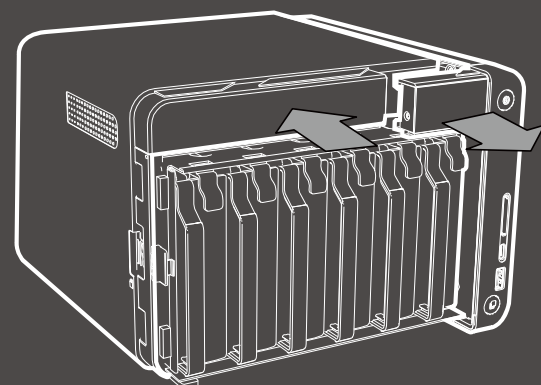
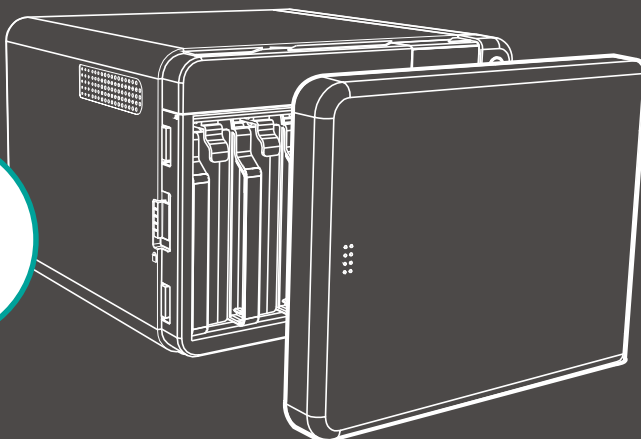
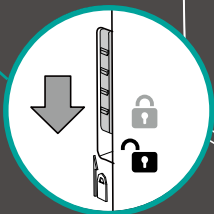
07 Quad-core Intel® Celeron® J3455
1.5 GHz processor, burst up to 2.3 GHz

- 9th-generation HD Graphics processor and 4K hardware-accelerated video transcoding engine
- AES-NI encryption engine

Expansion card installation

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2



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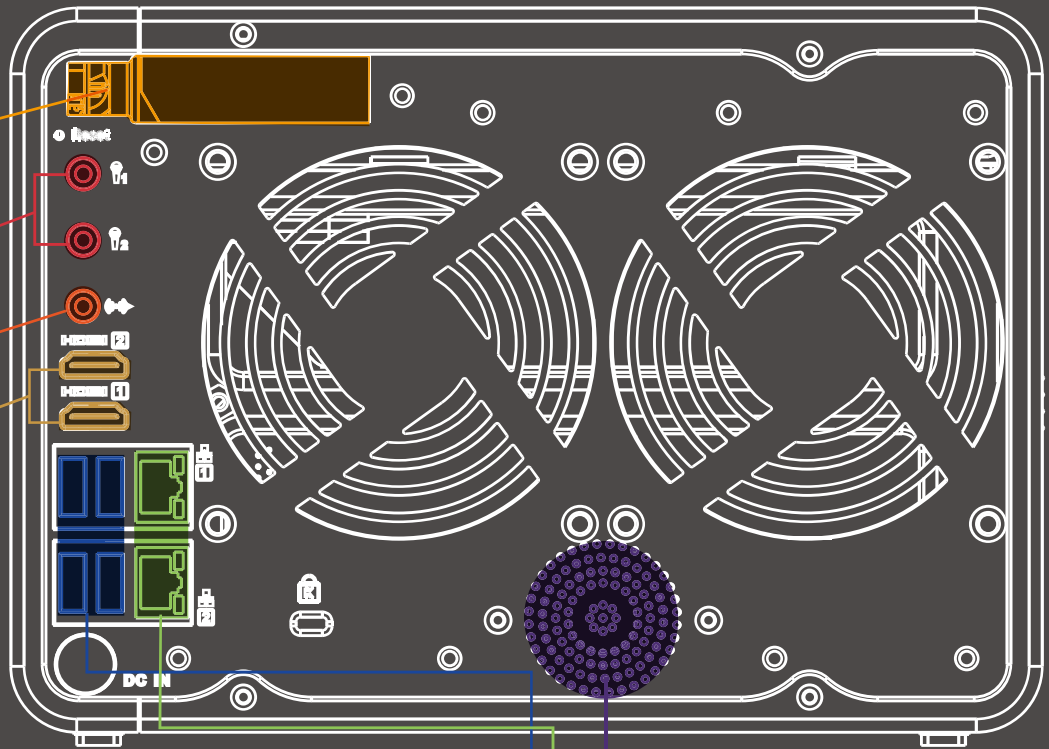
PCs and Macs directly
Access Port on the
ut having to go
network configurations.
der Pro, and easily
NAS shared folder.

rt and USB
Copy button

on to quickly back up

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slots



08 1 x PCIe expansion slot

- PCIe 2.0 x2. Can install QM2 M.2 SSD/10GbE expansion card, 10GbE network expansion card, USB 3.1 expansion card, and wireless expansion card

09 2 x 3.5 mm microphones jacks

- Supports dynamic microphones

10 3.5 mm line-out jack

- Can directly play music files on the NAS by connecting to external speakers

11 2 x 4K HDMI ports

- HDMI v1.4b support up to 3840 x 2160
- Supports mirroring or extended desktop output

12 Built-in speaker

- Music playback
- Verbal system warnings

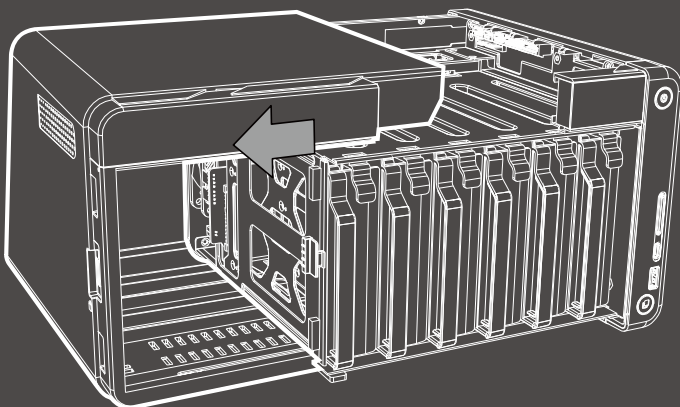
13 4 x USB 3.0 ports

- Supports external hard drives, printers, and UPS

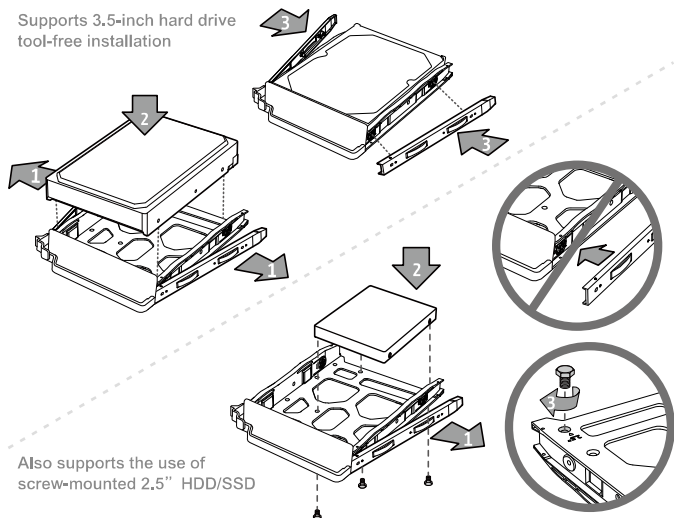
14 2 x Gigabit network ports

- Provide load balancing and other port-trunking network mode

3



Supports 3.5-inch hard drive tool-free installation



Also supports the use of screw-mounted 2.5" HDD/SSD

Next-generation computing and storage system

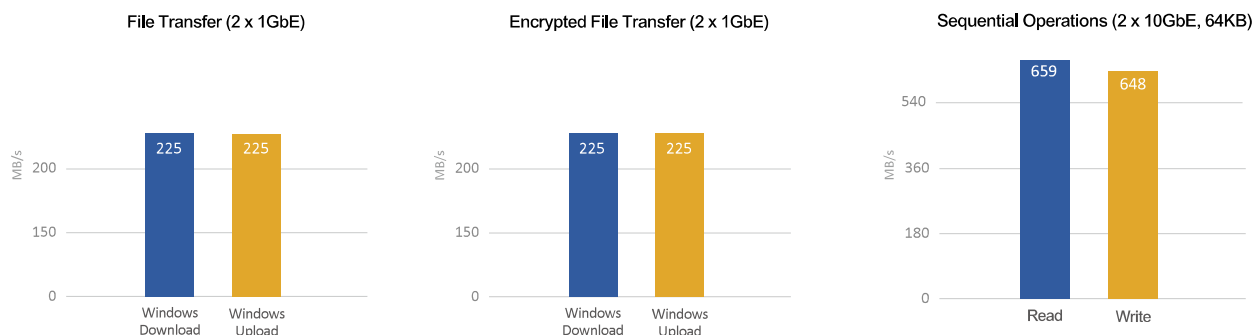
TS-x53B Series Hardware Overview

Redefine your private cloud

QTS-Linux dual-system NAS

Intel® Celeron® J3455 quad-core 1.5 GHz processor with AES-NI encryption acceleration

The TS-x53B is equipped with the latest 14-nm Intel® Celeron® J3455 quad-core 1.5 GHz (burst up to 2.3 GHz) processor and 4GB/8GB DDR3L dual channel RAM (expandable to 8GB) with 2 build-in 1GbE network ports. It supports SATA 6Gb/s and provides up to 225 MB/s continuous read/write performance for running tasks quickly and smoothly. The TS-x53B has a built-in Intel® AES-NI next-generation encryption engine (using AES 256-bit encryption) for whole-NAS or folder encryption and can maintain up to 225 MB/s data read/write speeds, so it can protect sensitive information on the NAS while maintaining high performance.



Tested in QNAP laboratories. Data may vary due to differences in physical environments.

Test environment:

NAS: TS-453B

OS: QTS 4.3.3

Disk group: RAID 5; 4 x Intel S3500 240GB SSDs (SSDSC2BB240G4); Equipped with QNAP LAN-10G2SF-MLX 2 ports 10GbE SFP + NIC

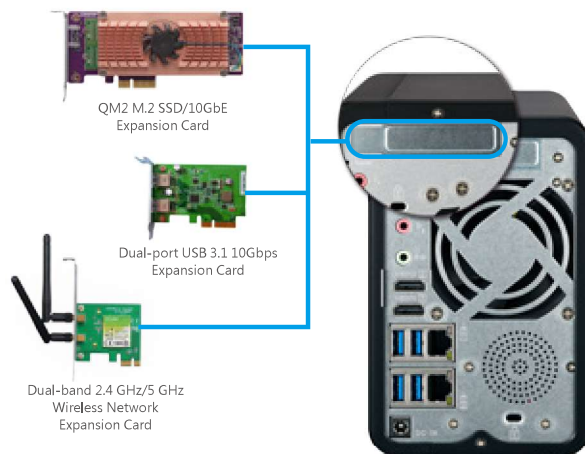
Client Computer:

Intel® Core™ i7-4770 3.40GHz CPU; DDR3L 1600Hz 16GB; WD 1TB WD10EZX;

Intel Gigabit CT (MTU 1500) ; Windows® 10 64-bit

PCIe expansion for multiple storage applications

The TS-x53B has a PCIe expansion slot, allowing you to flexibly configure multiple applications as needed. You can install a QNAP QM2 M.2 SSD / 10GbE PCIe dual-port card for adding an M.2 SSD cache or 10GbE connectivity, or a compatible wireless network card to add wireless base station functionality to the TS-x53B, or a USB 3.1 10Gbps card to expand connectivity options.

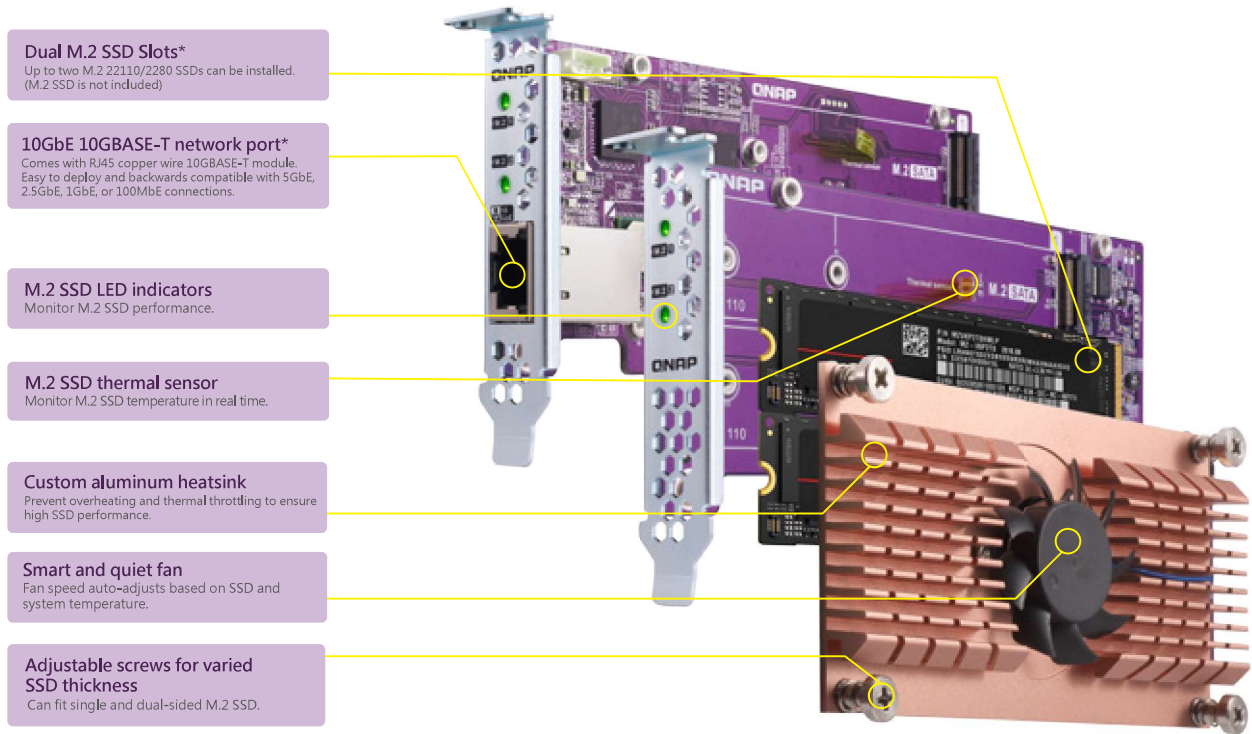


QM2 M.2 SSD / 10GbE PCIe expansion card: NAS performance and application upgrade

The QM2 PCIe expansion card series adds M.2 SSD and 10GbE connectivity* to the TS-x53B, enabling greater NAS performance and compatibility with 10GbE networks. Two M.2 22110 or M.2 2280 SSDs (in RAID 1 or RAID 0) can be added to the QM2 expansion card for caching or tiering. QM2 not only significantly enhances overall performance of NAS, but allows affordable connectivity to 10GbE networks.

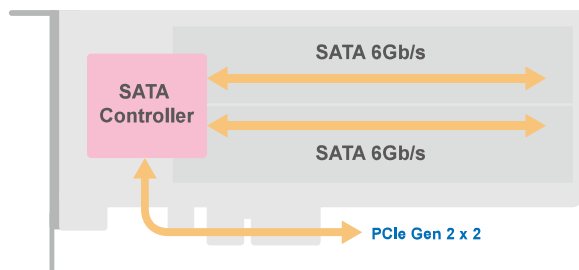
* * QM2-2S, QM2-2P: Compatible with QTS 4.3.3 (or later). QM2-2S10G1T, QM2-2P10G1T: Compatible with QTS 4.3.4 (or later).
 * 10GbE connectivity is only provided by the QM2-2S10G1T and QM2-2P10G1T.

Hardware Design Analysis



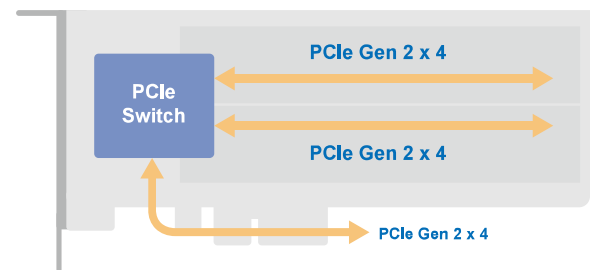
QM2-2S

Supports two M.2 2280/22110 SATA SSDs



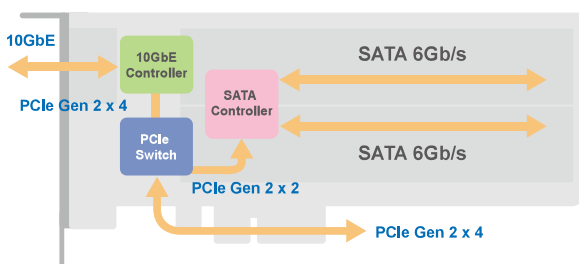
QM2-2P

Supports two M.2 2280 / 22110 PCIe SSDs



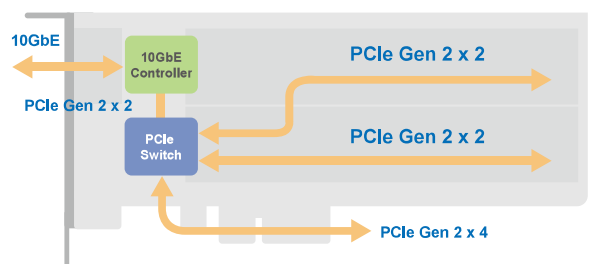
QM2-2S10G1T

Supports two M.2 2280 SATA SSDs and provides a single port 10GBASE-T 10 GbE network port



QM2-2P10G1T

Supports two M.2 2280 PCIe SSDs and provides a single port 10GBASE-T 10 GbE network port



USB QuickAccess for Plug-and-Play use

USB QuickAccess allows you to directly connect a Windows PC or Mac to the TS-x53B via the front-panel USB Type-C* Quick Access Port for easy access to files. USB QuickAccess is especially useful for users with limited networking experience or for those just wanting direct access to files. After finding the TS-x53B in Qfinder Pro**, NAS shared folders can be easily accessed without complex network settings. Access permissions can also be set up to ensure data security.

*The USB Type-C cable is not included.

** Qfinder Pro and USB QuickAccess only support Windows 8.0 (or later) and Mac OS X 10.7 (or later). Some operating systems may require additional drivers.



Real-time and offline 4K transcoding

The TS-x53B uses 9th-generation Intel® HD Graphics to support 4K video, and also to allow the TS-x53B to transcode videos (in real-time or offline) to 4K, 1080p and other resolutions for playing on a wide range of devices across different network connections.

Video quality may vary according to system usage and network conditions.

HDMI output and free remote control

Linux Station and HD Station provide users with incredible options for home entertainment including Plex. The TS-x53B can be connected to an HDTV or A/V receiver for creating a NAS + home-theater combo. The TS-x53B has two HDMI outputs and supports duplicated and extended display modes. The TS-x53B includes a free QNAP remote control, and the Qremote mobile app can also convert your mobile devices into convenient remote controls.

Video quality may vary according to system usage and network conditions.



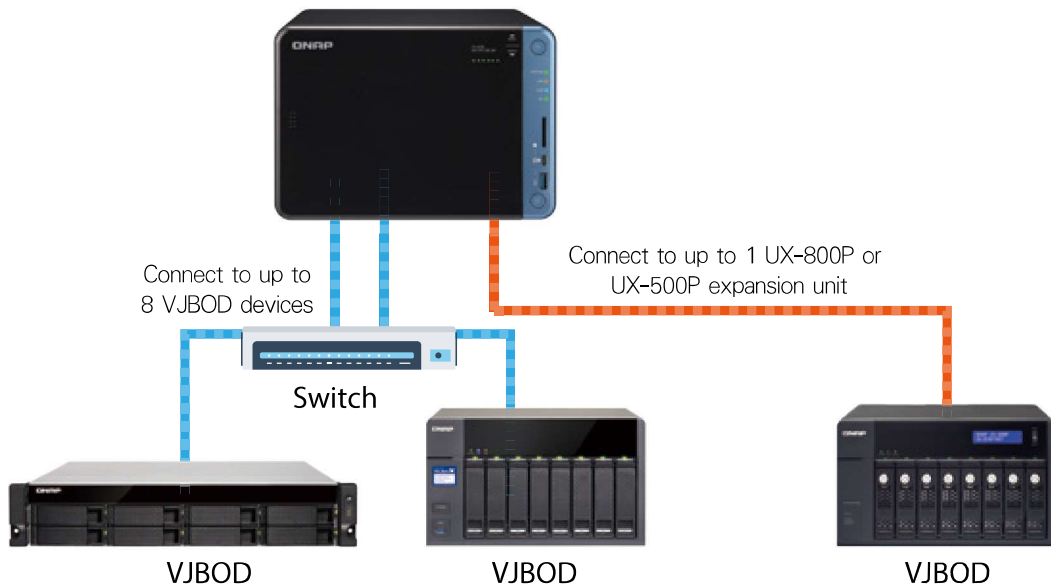
High-quality OLED screen with touch-sensitive buttons

The TS-x53B has a new slider design with both a smooth appearance and a tool-free 3.5-inch hard disk installation. The OLED screen design shows the TS-x53B's status at a glance, so you easily view system status (including CPU operation, system temperature, fan speed, hard disk capacity and temperature, Volume and LUN capacity and other information). The capacitive touch button design is not only dustproof, but also provides a variety of settings to allow you easily wake up the screen, change network IP settings, password, or to restart/shut down the system.



Low-cost, flexible storage expansion

The TS-x53B can be connected to a QNAP expansion enclosure to scale up storage capacity without downtime. It is well-suited for companies and organizations looking to archive data such as surveillance footage or audiovisual materials. With QJBOD Express, you can transfer the contents of an entire TS-x53B to another QNAP NAS by using a large-capacity expansion enclosure (UX-500P or UX-800P) without needing network connectivity. In addition, you can also use VJBOD (Virtual JBOD) to expand the storage capacity of a QNAP NAS by using the unused storage space of another QNAP NAS.



Connect to QNAP storage expansion device to obtain maximum raw capacity

QNAP NAS models	Expansion Enclosure	No. of Expansion Enclosures	Max. Number of Hard Disks (NAS + Expansion Enclosure)
TS-253B	UX-800P or UX-500P	1	10
TS-453B	UX-800P or UX-500P	1	12
TS-653B	UX-800P or UX-500P	1	14

1. A separate static volume or storage pool must be created on the expansion enclosure.
 2. RAID groups for storage pools cannot be spread across multiple expansion units.

Enjoy home entertainment with cloud technology

Multimedia collection center

When a photographer meets TS-x53B

Photographer A: There's never enough storage space! My photos are all stored in RAW file format, so my SD cards quickly reach their capacity. Even when saved to my computer, RAW files take up too much computer storage space...

Photographer B: I want to quickly back up my photos. Photography is for moment catching, and every picture is precious, how can I save my photos in a good manner?

Photographer C: I've accumulated tens of thousands of photos on my computer. Managing photos is really time consuming and cumbersome. I really want a good software to manage my photos more efficiently.

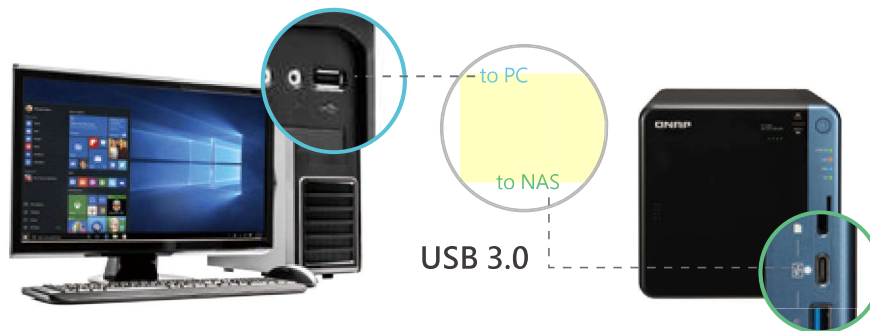
As a photographer, are you often troubled in the same way? QNAP has the solution for you!

Using Photo Station and Qphoto together with TS-x53B series and exFAT credentials, you will be able to solve these problems.



NAS storage space plug & play

The TS-x53B series have USB QuickAccess, allowing you to use a transmission cable to directly connect your NAS to a computer without complex network settings. It is plug and play, same as using USB to transfer photos stored in a camera to the computer. It is just that simple. By connecting a computer to NAS, you can store all the camera RAW files or edited JPG files into NAS and save your computer storage space.



Backup precious photos to keep everlasting memories

By saving photos to NAS, you will not only have more local storage to shoot and preserve more beautiful photos, but also use various QTS data backup solutions to manage your photo backup, restore and synchronization, so precious photos are never lost.



Quickly save high quality RAW files

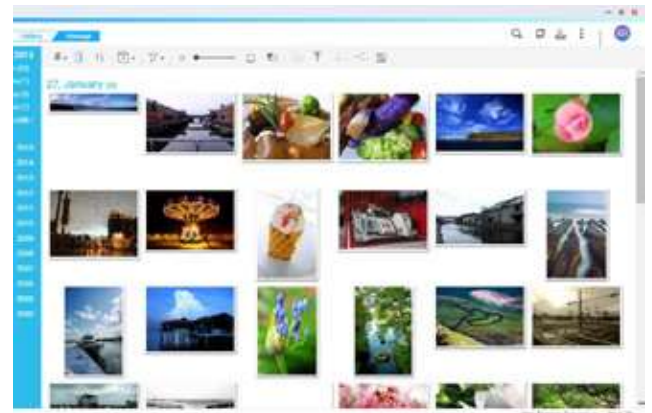
In addition, you can also purchase exFAT credentials to directly access exFAT-based devices on your NAS. With exFAT support, you can insert an exFAT-based SD card directly into NAS or connect the USB port of NAS to a card reader, and immediately save your photos and videos into NAS without having to transfer files via your computer. It is both fast and convenient.



Safeguard and share your precious moments

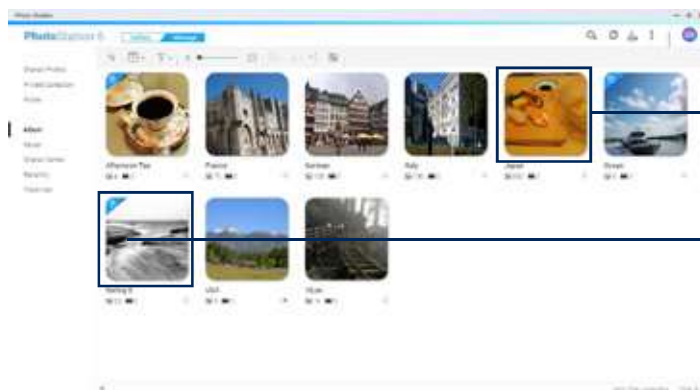
Photo Station 5.3

With more and more high-quality photos and cameras, everyone can become a photographer to record life's precious moments. However, are you still using traditional methods to manage and share photos? Photo Station can manage photos through virtual albums, categorize photos through tagging, quickly search and share your photos and meet your needs for photo management.



Virtual albums, easy management

Virtual Album frees you from file path restrictions, so that you can easily create albums for all sorts of things in your life, without worrying about saving too many file copies. You can also create smart albums according to set conditions, so photos satisfying a condition will be automatically added to the album. Albums free you from restrictions of complex NAS folder permissions settings. You can simply select the account that you want to share in the album settings, or by sharing the link, then you will be able to share photos to users without an account.

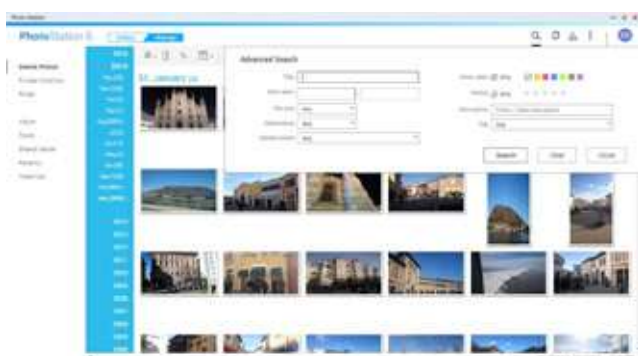


General Album: manually add photos.

Smart Album: set time, label and other conditions, automatically add photos satisfying these conditions to the album.

Advanced Search for specific photos

Provide various search conditions, search according to title, tag, date, camera model and other conditions to quickly find a specific photo.



Advanced folder permissions

Photo Station 5.3 supports advanced folder permissions. You can set up permissions for each sub-folder in the Control Panel, then each user can only view photo/video of allowed folders in Photo Station, making permissions management more accurate and simple.

Easily share photos

Photo Station provides the "Share" feature, allowing you to easily choose desired photos and share them with friends and family; while sharing links, you can also set up password and expiry dates to increase security. You can also directly upload photos or videos to Flickr, Picasa, Twitter, YouTube and other online communities.



Enjoy through slides

Whether in Photo Station or with shared links, you can always enjoy the photos through slide shows. You can also choose playlists in Music Station, and play different music for different albums to create perfect moods for your enjoyment!



Right-click lock to prevent photo saving

Photo Station disables mouse right-clicking. You can also disable the download function in the settings, so that friends receiving the shared link can view the photo but cannot download it.



High-definition enjoyment

QTS automatically creates thumbnails in three sizes for your photos. It supports multiple photo formats, so you can enjoy the best quality and speed in your phone, tablet or computer, allowing you to browse smoothly even on a mobile network.



Map mode

You can enable map mode in any album, then relive your memories through markers on the map.

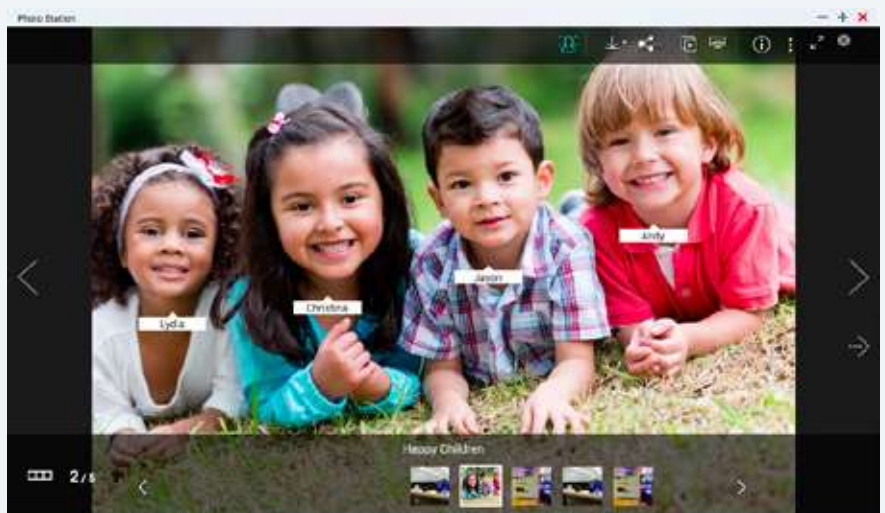


Special
column



Photo Station extension kit

Through the Photo Station extension kit, you can tag faces, convert PDF files into albums, and play an album as a series of photos.





Supports exFAT file system - fast collection of your photographs

QTS 4.3 supports the exFAT file system. Just connect a SD card reader to QNAP NAS USB port, then you can back up your photos and videos directly to the NAS, and view them through Photo Station and other apps. You can also share with other photographers, colleagues, family and friends through network media players or HD Station without using a computer.

✍ To use the exFAT file system, you must first purchase a license. Please contact your local reseller or visit license.qnap.com for more information.

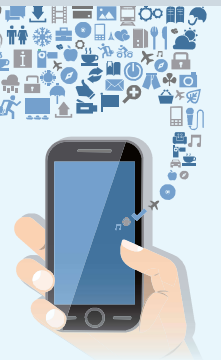


Qphoto - Mobile photo gallery

✍ Supports: iOS®, Android™, and Windows® Phone / Tablet devices

Instant photo and video, instant upload

Often delete photos due to insufficient mobile storage? Take photos and videos directly with Qphoto and automatically upload them to your NAS. Qphoto combines photo taking and uploading so that you can upload as you shoot. You no longer need to worry about insufficient storage, as photos are immediately stored in your NAS. This saves local storage space while ensuring no important photos are ever lost.



Instant photo sharing

Share photos from your QNAP NAS to Facebook, Twitter, Google+, WhatsApp, Line, Instagram, Gmail and other platforms.

Local photos can be viewed as well

Qphoto can browse not only the photos on your NAS, but also the photo library on your mobile device. You don't need to switch apps to see your photos, you can easily browse all your photos, uploading photos and managing them are just as convenient.

Photo browsing

Browse your photo collection using a timeline view, thumbnails, detailed list view, and folders.

Support advanced search

Use keywords or tags to easily find specific photos & videos on your QNAP NAS.





In pursuit of video and audio excellence **Video Station 5.0**

Video Station continues the fine tradition of QNAP in thorough consideration of user requirements and constant quality improvement. Video Station provides a new interface to facilitate sharing. It has comprehensive search modes and multilingual support of movie/TV data. During playback, it provides embedded audio/subtitles, and you can add bookmarks to videos to remember your favorite parts. It also comprehensively restructures TV shows to display TV series according to season/series number, and filters for directors, actors and other information. Additionally, it has added a convenient "follow a series with a keystroke" feature. QNAP has put in significant effort to enhance your audio and video experience.

New interface

Video Station has been greatly improved based on user feedback. It allows you to enjoy your videos without distraction, and to show off your cherished collections through the beautiful Video Station interface.



Easy sharing

Video Station provides QNAP's sharing shopping cart design. After selecting videos that you want to share, you can share the video link to friends and family, and upload the videos to YouTube, Youku and other well-known video sites.



Advanced search

Gone are the days where you could only search based on limited conditions. Now you can set a combination of search criteria, according to title, tag, video length, view progress and more, which allows you quickly find videos.



Sharing Center

For all your shared videos, Video Station will arrange them for you in the Sharing Center. You can manage videos based on shared content, for example: delete shared links, share view history and even share again with other users.

Play bookmarks

You can insert bookmarks into videos and remember your favorite clips, so the next time you can quickly jump to the clip to watch. It is also possible to edit the bookmark along with other users, and share favorite clips.

Embedded audio / subtitles

If a video has embedded audio or subtitles (for example: MKV format), then you can select it in the player, and easily switch between different audio and subtitle languages.

✂ Playing embedded audio and subtitles requires transcoding.

