

QNAP

QTS-Linux Combo NAS

TS-x53A Series

4K2K UHD

Q vPC
Technology



Use your NAS as a PC



QTS & Linux dual-system NAS
offering unlimited applications



Access QTS & Linux with a web browser

1



HD Station & Linux Station

2



Enjoy QNAP services with mobile devices

3



- Powered by quad-core Intel® Celeron® N3150 processor
- QTS & Linux Station, the perfect combination for IoT applications
- Two microphone inputs and one Line Out audio output
- Dual HDMI outputs for an extended display or mirrored mode
- AES-NI hardware acceleration engine for full NAS encryption



TS-253A



TS-453A



TS-653A

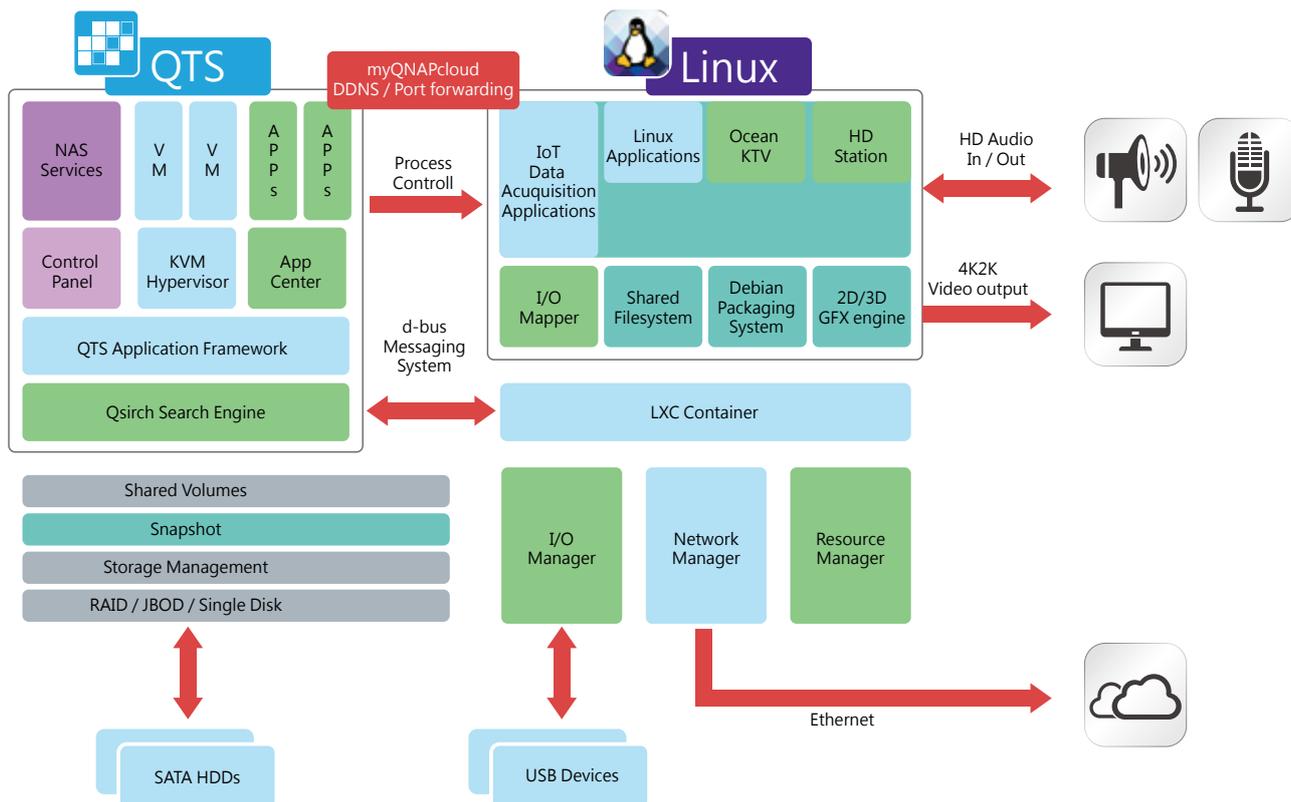


TS-853A



QTS with Integrated Linux The perfect IoT platform

QNAP has employed advanced virtualization technologies to seamlessly integrate Linux with QTS, enabling you to use QTS while simultaneously using the Linux system on an HDMI display. Expand the functionalities of your NAS with the QTS App Center, and exploit the incredibly popular open source Linux Operating System to leverage your NAS as a complete development platform.



The all-new open source Linux Station – Keeps you ahead of IoT

The TS-x53A introduces the all-new Linux Station, enabling you to display the Linux desktop on an HDMI external monitor. Simply connect a keyboard and mouse to the TS-x53A and use your NAS as a PC. Use Linux Station to switch the output resolution freely or enable remote desktop connection to send the display to a web browser.



💡 Please upgrade to version 4.2.1 to enjoy Linux Station.

💡 Install Linux Station from the QTS App Center. Remote Desktop does not currently support audio output.

Seamlessly switch between HD Station and Linux

Select to output HD Station using either the simple or the advanced mode. Go to [Control Panel] > [Apps] > [HybridDesk Station] to set the current display mode and switch the output on your HDMI display.

HD Station simple mode

Enjoy the multitude of supported apps, such as Kodi®, HD Player, YouTube®, JRiver®, and many more via a simple and intuitive interface. Use your NAS as a multimedia player and use your smart phone, an infrared remote control, or connect a keyboard or mouse for completely convenient playback and control. HD Station V3 supports HDMI for a local display such as a TV. The local display ensures output of media files without the need for a network connection for a better and more stable viewing experience.

Linux Station advanced mode

Install various applications on the Linux Station, an open-source platform. Customize a 3D desktop with thousands of desktop themes to choose from. It operates just like a PC.

HD Station V3 - Use your QNAP NAS as a home theatre system

Simply plug in an HDMI monitor to your NAS, and you can start playing media files from the NAS. This avoids complicated settings of network media players and instability of network conditions, allowing you to have a better viewing experience with large-screen TVs.



Multilingual input and improved multitasking

HD Station V3 supports multi-lingual input, enabling you to search from a web browser in your native language. Additionally, HD Station V3 now supports multitasking with a desktop PC-like taskbar enabling you to switch between different applications.

Qremote - Easy to get started

Qremote is QNAP's exclusive remote control enabling you to control your HD Station from your mobile devices. Qremote offers four modes: application shortcuts, simple remote control, touch screen, or keyboard mode to enter text. Use your smart phone or other mobile device to download the Qremote App from the App Store or Google Play® Store.

A wealth of apps

In addition QNAP's native applications, the NAS supports a number of common multimedia players (Kodi, HD Player, Plex Home Theater®, DeaDBeeF, Clementine®, JRiver®), browser (Chrome, Firefox), and other multimedia streaming platforms (YouTube®, Spotify®, Tuneln Radio®) to provide you with home cinema entertainment.



JRiver® Media Center - Powerful media management and lossless audio playback in HD Station V3

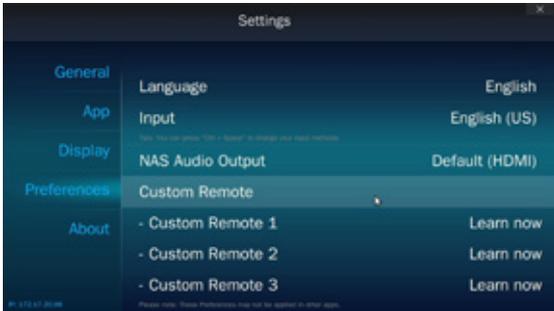
JRiver Media Center is a jukebox style multimedia player capable of managing several large media libraries within the same domain. JRiver® Media Center supports a variety of multimedia streaming formats and multi-room streaming, and is capable of indexing album covers for a variety of metadata to provide efficient multimedia management. Additionally, JRiver® Media Center also supports a number of professional music processing features such as an equalizer, rhythm, pitch, and sampling rate to further meet the needs of video enthusiasts and significantly enhance your QNAP NAS multimedia streaming experience. For more information, please refer <http://www.jriver.com/>



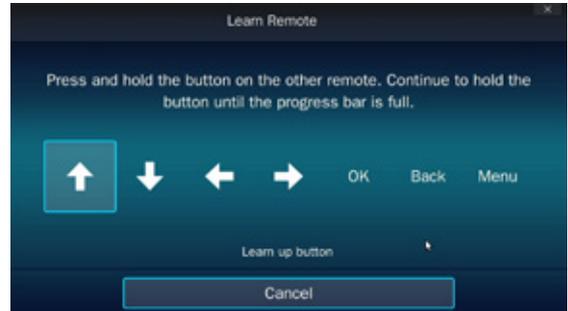
Custom Remote – Use your existing IR remote controls with HD Station

HD Station supports remote control learning enabling you to use your existing IR remote controls with HD Station. Matching your existing remote control with HD Station only requires two steps, and helps reduce clutter in your living room.

- 1 Enter “Settings”>“Preferences” in HD Station. Find “Custom Remote” and select a slot for the new remote control.



- 2 Follow the on-screen instructions and press and the button you want to match. Hold the button until the progress bar is complete.



System requirements

- HD Station 3.1.1 or later
- Supports up to 3 simultaneous custom remote controls
- Some IR remote controllers are not supported

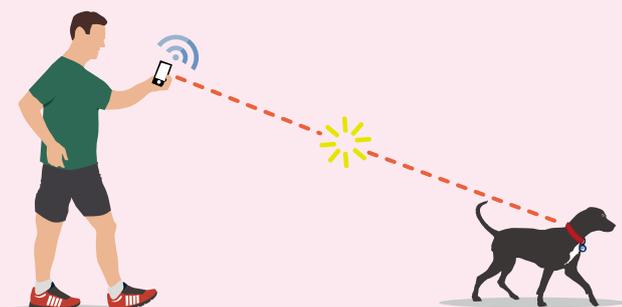
Limitless IoT possibilities - instantly start your open source projects

The explosive popularity of IoT related application means our lives and devices are increasingly linked across the Internet, creating potential privacy pitfalls. QNAP NAS provides the best private cloud solutions with an all-new AES encryption engine capable of encrypting a specific folder or an entire storage volume. QTS also supports AES encryption of external USB/ eSATA drives to protect against unauthorized access.



Intelligent dog tag DOTT

Recognizing that there are more than 10 million pets lost each year, a development team from Los Angeles designed a smart dog tag. DOTT enables pet owners to better monitor and keep track of their pets. DOTT can provide valuable information via instant push notifications in the event a dog ventures too far away from home or gets lost in an unfamiliar environment.



Fitbit® fitness bracelet

Fitbit's fitness products help you to stay motivated and improve your health by tracking your activity, exercise, food, weight, and sleep with activity trackers or wireless-enabled wearable devices. View progress and analyze your trends with easy-to-read charts and graphs to empower and inspire you to live a healthier, more active life. Embrace the Fitbit community with your friends to share stats, and compete on the leaderboard.





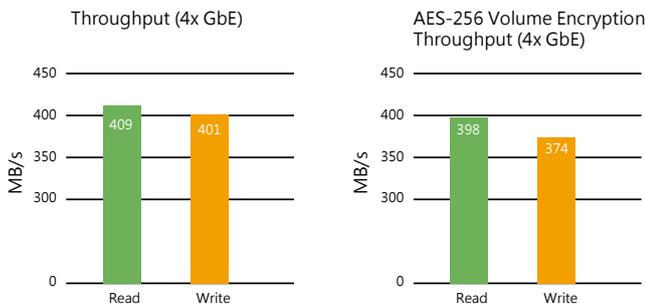
Intel® Celeron® N3150 Quad-Core Processor

High performance processor for demanding workloads

The TS-x53A is equipped with the 14-nm Intel® Celeron® N3150 1.6GHz processor with 4GB or 8GB RAM. With Intel® Burst Technology built in, the processor dynamically bursts to 2.08GHz, making it possible to handle spiky, demanding, high-performance workloads. Equipped with a SATA 6Gb/s interface and Gigabit LAN ports, the TS-x53A delivers up to 409 MB/s performance while still being incredibly energy efficient.

An all-new, built-in, AES encryption acceleration

The TS-x53A is equipped with an all-new AES encryption engine capable of encrypting a folder or an entire volume at up to 398 MB/s, providing data protection on the NAS while maintaining high performance for the entire system.

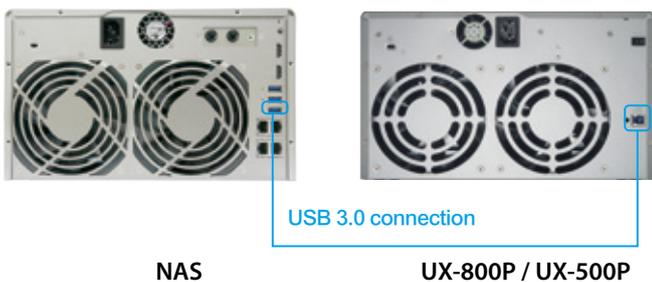


Results may vary depending on the environment.

NAS:
 OS: QTS 4.2.0
 RAID group: RAID 5; 4 x Seagate 1TB ST1000NM0033 HDDs; Directly connect PCs to the NAS
 Data encryption: Volume encryption
 Client PC:
 Intel® Core™ i7-4770 340GHz CPU; DDR3L 1600Hz 16GB; WD 1TB WD10EZE;
 Intel Gigabit CT (MTU 1500); Windows® 7 Professional 64bit SP1 & Windows 81 Pro 64-bit
 iDmeter settings: Connect multiple PCs to the NAS via a switch to transfer a 32GB file for 3 mins. Block size: 64KB, SMB20

Capacity expansion with a 8-bay / 5-bay expansion unit

The TS-x53A series is a powerful and scalable NAS solution fully capable of meeting rapidly growing data storage requirements. The TS-x53A offers hassle-free, cost-effective scalability with QNAP UX-800P/UX-500P expansion units. Connect via USB 3.0 and the TS-x53A will expand its capacity on the fly with minimal setup required. This is especially useful for large data applications, such as video surveillance, data archiving, and TV broadcast.



4K Ultra High-Definition video playback & transcoding

The TS-x53A is built around the latest 8th generation Intel® processor with HD Graphics cores that double the performance of the previous generation processors. The TS-x53A fully supports 4K UHD H.264 hardware transcoding and playback and surround 7.1 audio, for the ultimate in home theatre entertainment.



QJBOD Express to backup 50TB data to a remote site

The QJBOD Express enables quick backup or migration of large amounts of data to local or remote sites without using any network bandwidth. Connect expansion enclosures (UX-800P/UX-500P) to the QNAP NAS and create an independent RAID group for data backup in Storage Manager. Then safely remove the expansion unit when backup is done and transfer the archived data to other NAS devices by connecting the JBOD unit to them and scanning the drives.

San Francisco to Los Angeles: Initial transfer costs for 50TB data

Method	Time	Bandwidth cost
100Mbps network	About 45 days	50TB
QJBOD Express	In one day	0



Dual-HDMI output for an extended display or mirrored mode

The TS-x53A has two HDMI outputs enabling you to increase your productivity by multi-tasking across multiple monitors or to mirror content to a second screen. The TS-x53A also supports multi-room streaming to stream content to different devices in your home, enabling everyone to watch what they want.

Automatic background transcoding

Set a NAS folder as an auto-transcoding folder and your NAS will automatically convert your videos to universal formats that can be enjoyed on PCs, mobile devices, and smart TVs. Having multiple formats and resolutions available enables you to stream, share, and watch your videos using File Station, Video Station, or a mobile app on any device.

Resolution	240p	360p	480p	720p	1080p	4K2K
Network						
Ethernet						
Wi-Fi (802.11 ac)						
Wi-Fi (802.11 a/b/n)						
4G (LTE)						
3G						

Real time, adaptive, on-the-fly transcoding

The TS-x53A is fully capable of transcoding 4K high-resolution videos on-the-fly. The TS-x53A will adapt the on-the-fly transcoding to meet your media player's requirements and bandwidth limits in real time for enabling playback for multiple simultaneous connections.

	The highest number of transcoding tasks supported		
Source video files	1080p	720p	360p
4K	2	4	4
1080p	-	8	16

Note: The performance varies depends
 Test parameters:
 4K (format: mpeg4, bitrate: 50 Mbps, video codec: H.264,
 High@L5.1, width: 3840, height: 2160, framerate: 30, bit depth: 8)
 1080p (format: mpeg4, bitrate: 9.7 Mbps, video codec: H264,
 Main@L4.1, width: 1920, height: 1080, framerate: 24, bit depth: 8)

Dual microphone input, and high-quality audio output

The TS-x53A has two 6.3mm high-quality, dynamic microphone input/line-out audio jacks for enhanced sound staging, and true signal clarity. The TS-x53A adopts a stereo analog-to-digital converter (ADC) for recordings that are extremely realistic from the listener's perspective. In addition, the TS-x53A adopts a 24-bit digital-to-analog converter (DAC) providing a truly lifelike listening experience.





Computer Utilities

Boost your productivity

QNAP offers many computer utilities for you to connect to your NAS effortlessly. With all these utilities, you'll be able to install set up a QNAP NAS quickly, set up backup jobs, upload files to the NAS or synchronize files across all of your devices.



Qfinder Pro

Qfinder Pro helps you find and access a QNAP NAS in the LAN and can be used to generate thumbnails for media files in advance of file upload, accelerating media file processing and improving user experience.

 Available for Windows®, OS X®, Linux® and the Chrome™ Browser.

Search and set up your QNAP NAS

Qfinder Pro assists in finding, setting up and accessing a QNAP NAS on local network. Install Qfinder on your computer, open it, and double click your QNAP NAS name, and the login page is ready for you.

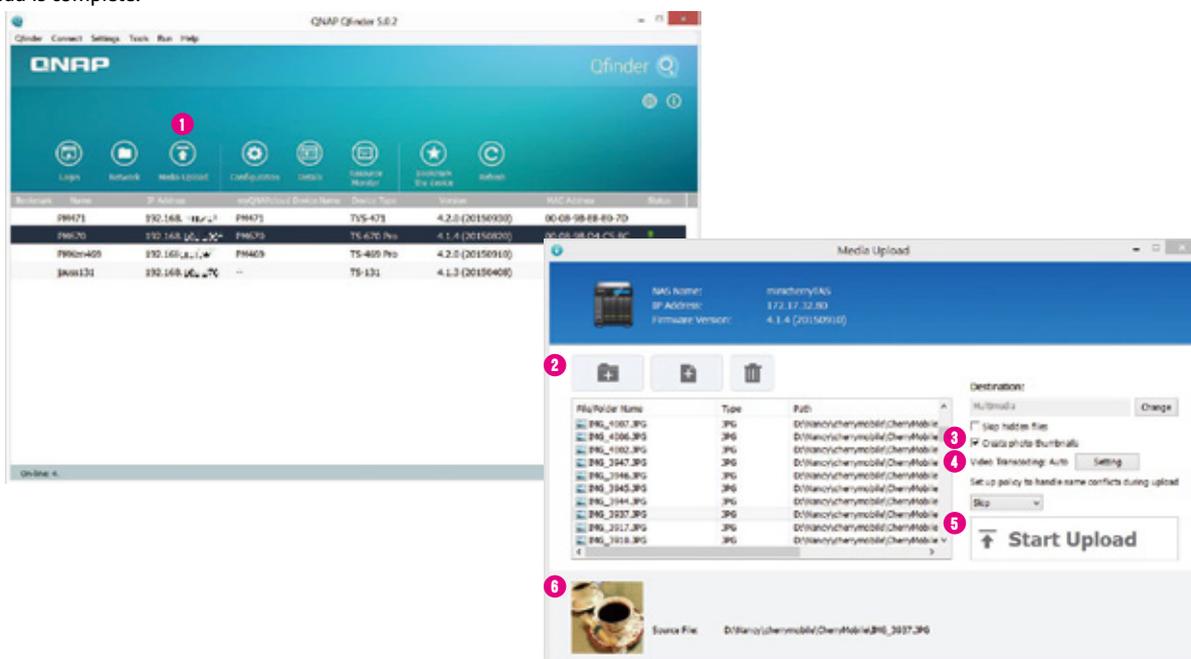
 Qfinder for Chrome is for Chromebooks & Chrome only.

Easily access the NAS by Storage Plug & Connect

The Windows version of Qfinder Pro provides a convenient way to connect to QNAP NAS and map a network drive or a virtual disk. By creating a shared folder on the QNAP NAS and mapping it as a network drive, you can use it as an additional drive and store files on it as it is a local drive of the computer.

Upload multimedia files using Qfinder Pro

- 1 Download the install Qfinder Pro, select the device to upload to, and click "Media Upload" from the main menu.
- 2 Choose a folder or file to be uploaded.
- 3 Check the option "Create photo thumbnails" on the right to create thumbnails in advance.
- 4 Click "Setting" for the Video Transcoding option to convert videos into different resolutions. Transcoding provides video conversion for you to play videos smoothly and instantly on different devices via the Internet.
- 5 Click "Start Upload" to start uploading the files to the NAS.
- 6 The system will display the upload progress at the bottom of the screen. You can enjoy your media collections on the NAS after the upload is complete.





Qsync

With the Qsync utility, you have all the files you want on the computer, server, or mobile devices you use without spending a lot of time copying files manually.

 Available for Windows® and Mac.



Share team folders with different groups of people

Your life is connected with different groups of people. You can create sub-folders within the Qsync folder, and share them with different groups of QNAP NAS users as a file exchange center. Everyone having the privilege of the same sub-folder will have the most recent versions of the files .



Sync selective sub-folders

When synchronizing files, you can choose to only sync specific sub-folders within the Qsync folder, which is useful if your computers have limited storage.



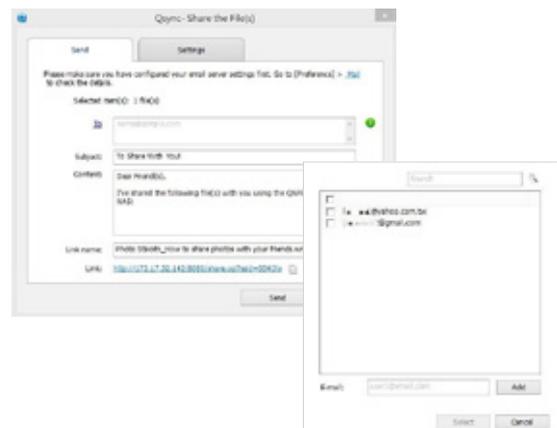
Version control

With Qsync version control, all file revisions (up to 64 versions) are saved as a copy for future retrieval. With file versioning, there's no need to worry about files being overwritten or mistakenly deleted. Even the files that have been deleted from the recycle bin can be retrieved.



Display previous sharing contacts

The new version of Qsync can save contacts from past file sharing to help you find email addresses to be sent to when you share a new file.





myQNAPcloud Connect

myQNAPcloud Connect is a VPN application designed for all Windows users and supports all VPN options to connect to a QNAP NAS (including L2TP/IPsec, PPTP and OpenVPN). By installing and setting up myQNAPcloud Connect, you will be able to connect to the QNAP NAS and easily manage files by drag-and-drop actions.

Available for Windows®.



NetBak Replicator

The QNAP NetBak Replicator is free for anyone with a QNAP NAS and helps you easily back up files from Windows PC - entire disk drives, documents, pictures, music, videos, fonts, emails, and more - to the QNAP NAS. The operation is very simple. You can set up the backup task in just a few clicks using NetBak Replicator by the setting real-time synchronization, scheduled backup and auto-backup from multiple PCs to the QNAP NAS. NetBak Replicator also supports backing up to a remote server via FTP and WebDAV through the Internet.

Available for Windows®.



vSphere Client plug-in

QNAP NAS supports vSphere Client Plug-in that allows managing VMware datastores on the NAS directly from the vSphere client console. In a large-scale server virtualization environment, management is centralized and straightforward.

Available for Windows®.



Qsnap

Qsnap is a handy utility that helps you quickly capture screenshots on your PC, and easily edit, save, and share, enabling quick note-taking or productive communication in your work and life.

Available for Windows®.



Hardware Specifications and Accessories



Model No.	TS-253A-4G	TS-253A-8G	TS-453A-4G	TS-453A-8G	TS-653A-4G	TS-653A-8G	TS-853A-4G	TS-853A-8G
CPU	14nm quad-core Intel® Celeron® N3150 1.6 Hz (burst up to 2.08GHz)							
Floating Point Unit	√							
Hardware Encryption Engine	√ (AES-NI)							
Graphics	8th Generation Intel® HD Graphics							
Pre-installed Memory	4GB (2 x 2GB)	8GB (2 x 4GB)	4GB (2 x 2GB)	8GB (2 x 4GB)	4GB (2 x 2GB)	8GB (2 x 4GB)	4GB (2 x 2GB)	8GB (2 x 4GB)
Memory Expandable up to	8 GB							
Total Memory Slots	2, SODIMM DDR3L-1600 (*To install on both DIMM slots, the same type of memory same size, speed, and manufacturer) should be used for each slot.							
Flash	512MB							
Max. number of HDDs/SSDs	2		4		6		8	
Compatible Drive Type	Hot-swappable 3.5" SATA 6Gbps / SATA 3Gbps HDD or SSD or 2.5" SATA 6Gbps / SATA 3Gbps HDD or SSD							
LAN Ports	2 x Gigabit RJ-45 Ethernet ports		4 x Gigabit RJ-45 Ethernet ports					
USB Ports	4 x USB 3.0 ports (front: 1, back: 3) to support printers, external drives, and UPS, etc							
Video Output	2 x HDMI to support up to 4K 2160P Ultra HD output							
Audio Input	2 x 6.3mm microphone jack (only supports dynamic microphone)							
Audio Output	Line-out jack (to an amplifier)							
LED Indicators	Status, USB, HDD 1-2		Status, USB, HDD 1-4		√ Status, USB, HDD 1-6		Status, USB, HDD 1-8	
Front LCD Status Panel	×		Monochrome, backlit LCD status panel					
Buttons	Power/status, USB One-touch-copy, Reset							
IR Sensor	√, to support QNAP RM-IR002 and RM-IR003 remote control							
Other Connectors	system maintenance port							
Buzzer	System alarm							
Form Factor	Desktop							
Dimensions	150 x 102 x 216 mm 5.91 x 4.02 x 8.5 inch		177 x 180 x 235 mm 6.97 x 7.09 x 9.25 inch		175 x 257 x 235 mm 6.89 x 10.12 x 9.25 inch		185.2 x 298.2 x 235 mm 7.29 x 11.74 x 9.25 inch	
Weight (Net/Gross)	Net: 1.74 kg (3.84 lbs) Gross: 2.92 kg (6.44 lbs)		Net: 3.65 kg (8.04 lbs) Gross: 4.65 kg (10.24 lbs)		Net: 5.2 kg (11.46 lbs) Gross: 6.5 kg (14.33 lbs)		Net: 7.3 kg (16.08 lbs) Gross: 8.6 kg (18.94 lbs)	
Power Consumption (W)	Sleep mode: 1.18W HDD standby: 8.38W In operation: 14.43W		Sleep mode: 1.61W HDD standby: 18.86W In operation: 32.35W		Sleep mode: 1.7W HDD standby: 32.02W In operation: 51.16W		Sleep mode: 1.91W HDD standby: 32.71W In operation: 58.8W	
Operating Temperature	0-40°C							
Relative Humidity	5~95% non-condensing, wet bulb: 27°C.							
Power Supply	65W AC power adapter , 110-240V		96W AC power adapter , 110-240V		ATX 240W power adapter , 110-240V AC, 50-60Hz, 5A			
System Fans	7cm quiet fan (12V DC)		12cm quiet fan (12V DC)		2 x9cm quiet fan (12V DC)		2x 12cm quiet fan (12V DC)	

Accessories

	Category	Model No.	Product description
Expansion enclosure		UX-800P	QNAP 8-bay expansion enclosures Size and weight : 185.2 x 298.2 x 235.4 (mm) (height x width x depth), 7.3 kg
		UX-500P	QNAP 5-bay expansion enclosures Size and weight : 185.2 x 210.6 x 235.4 (mm) (height x width x depth), 5.1 kg
Memory		RAM-2GDR3L-SO-1600	2GB DDR3L RAM, 1600 MHz, SO-DIMM
		RAM-4GDR3L-SO-1600	4GB DDR3L RAM, 1600 MHz, SO-DIMM
		RAM-8GDR3L-SO-1600	8GB DDR3L RAM, 1600 MHz, SO-DIMM
Remote Control		RM-IR002	QNAP IR Remote Control (shipped with the product)

An ideal platform to build and run IoT applications

TS-x53A Series

Powered by the QTS - Linux Dual-system NAS



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