

# Turbo NAS TS-453mini

Powerful & Quiet 4-bay Turbo NAS for Offices

- ▶ Low-noise design with easy system setup and smart LED indicators
- ▶ NAS and iSCSI-SAN unified storage solution and scale up with a QNAP expansion unit
- ▶ Supports VMware, Citrix, and Microsoft Hyper-V and advanced virtualization features
- ▶ Enhanced data security with high-performance AES 256-bit encryption and anti-virus
- ▶ On-the-fly and offline hardware accelerated video transcoding

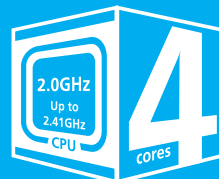
QNAP



Use your Turbo NAS as a PC



Remote Control Included!



dlna | HDMI

## Set up easily

Magnetic top cover with tool-less hot-swap HDD installation



## Fits anywhere

Near silent, small foot-print design for limited desktop space

29%  
desktop space  
reduction

TS-453 Pro



## Upgrade anytime

Easy access to memory slots for RAM upgrade

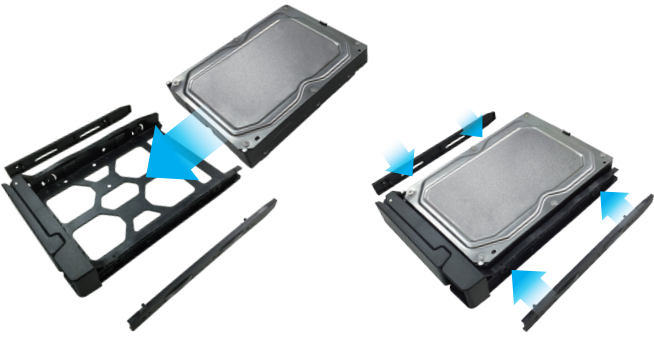


# Exclusive and Exquisite

## Easy Hard Drive Installation and Quiet Operation

The glossy TS-453mini features a stylish vertical design that takes up less desktop space, making it suitable for offices or even study rooms at home. Compared with the traditional NAS cooling fan, the TS-453mini houses a quiet internal compact exhaust that helps dissipate heat and reduce dust. With the tool-less design, you can easily remove the TS-453mini's magnetic top cover to add or replace hot-swappable 3.5" hard drives\*. Upgrading the RAM of a TS-453mini has also never been easier with a conveniently accessible cover at the bottom.

\* The tool-less installation is only for 3.5" hard drives.



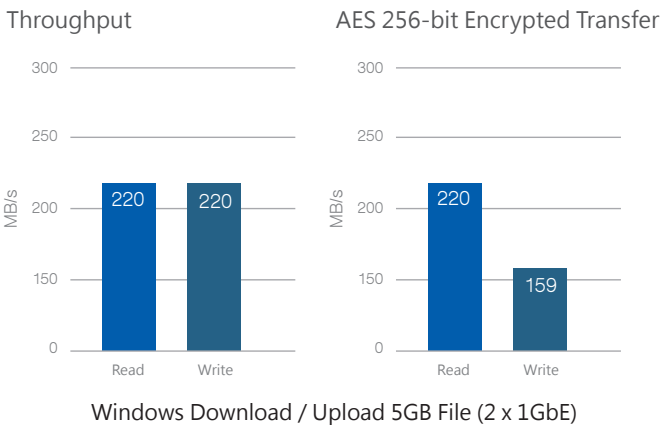
## Smart LEDs

The aesthetically-designed skyline LED indicator will flash a blue light to remind you the system is in S3 sleep mode. Based on the surrounding environment, you can adjust the brightness of all system indicators (from a scale from 0 to 100, in 20-step increments) and also schedule the system to automatically dim the LEDs at certain times when needed.



## Quad-core CPU with Intel® HD Graphics

Powered by a quad-core Intel® Celeron® 2.0GHz processor with 2/8GB DDR3L RAM (upgradeable to max 8GB), 2 Gigabit LAN ports and HDMI output, the TS-453mini is a powerful NAS that delivers up to 222 MB/s read & write speeds.



### Test Environment:

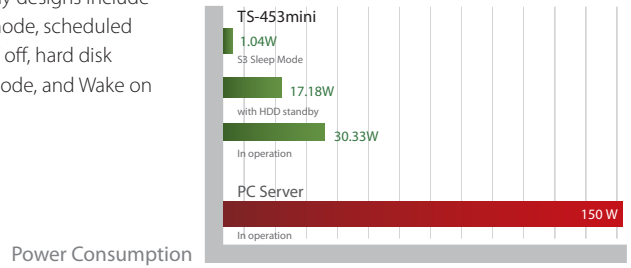
**NAS:**  
 - OS: QTS 4.1.2  
 - Volume type: RAID 5 (Seagate) ST1000NM0033 x4

### Client PCs:

- Intel® Core™ i7-4770 3.40GHz, DDR3 1600Hz 16GB, ST31000524AS Microsoft Windows 7 Professional 64bit

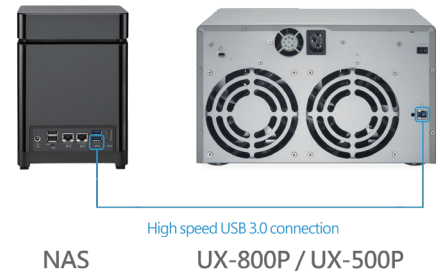
## Energy-saving

The TS-453mini features a 22nm CPU and DDR3L RAM which feature low power consumption whilst maintaining high performance in system operations. Other eco-friendly designs include S3 sleep mode, scheduled power on/ off, hard disk standby mode, and Wake on LAN.



## Economical Storage Expansion

The TS-453mini offers a high performance yet affordable storage solution to fulfill the needs of business in archiving rapidly growing data & large files. The TS-453mini supports capacity expansion by connecting a QNAP expansion enclosure. Simply connect a UX-800P / UX-500P to the TS-453mini and power it on. The Turbo NAS capacity can then be expanded with an additional volume seamlessly by using the powerful QTS Storage Manager.



## Turn the Turbo NAS into an Office PC with QvPC Technology

QNAP's exclusive QvPC Technology consolidates VM integration, multimedia transcoding, HDMI output, cloud integration and NAS connection technologies, allowing users to operate the TS-453mini as a PC when they plug in a keyboard, mouse and monitor. The TS-453mini can be transformed into a cost-effective PC substitute for users to directly access stored data, run multiple applications using Windows/Linux/UNIX/Android-based VMs, surf the web, enjoy media playback, monitor surveillance feeds in real time with local display, and much more.



## Enjoy the Best Audiovisual Experience with HD Station

QNAP's HD Station integrates the powerful Kodi media player with splendid UI and crystal-clear 7.1-surround sound passthrough support. It is convenient & easy to control the HD Station with the included IR remote control or with your mobile devices by installing the Qremote app.



## Real-time & Offline Hardware-accelerated Video Transcoding

The TS-453mini delivers superior real-time & offline Full HD (1080p) video transcoding to convert videos to universal formats that can be smoothly played on PCs, mobile devices and Smart TVs. The Turbo NAS also allows you to set a dedicated folder for automatic video transcoding.



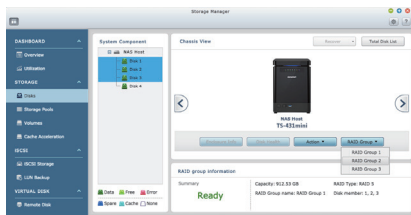
## QTS 4 and File Sharing

Based on Linux, QTS 4 is designed to deliver high-performance file sharing, backup, storage management, surveillance and more. The NAS supports file sharing across Windows, Mac, and Linux/UNIX networks. Data, logs and ISO images of CDs and DVDs can be centrally stored on the Turbo NAS and protected by an integrated antivirus solution. The Windows® AD and LDAP services enable system administrators to configure user permissions by using existing Windows® AD server, LDAP server or NAS build-in LDAP services. The TS-453mini supports SAMBA v4 and can act as a Windows® domain controller to manage privilege settings.



## Intelligent Storage Manager

The QTS Storage Manager provides a secure and flexible way to manage volumes. It offers storage pooling with multiple RAID group protection, thin provisioned volumes with Space Reclaim, block-level iSCSI LUN and online capacity expansion. The QTS Storage Manager simplifies the process of NAS capacity expansion and QNAP storage expansion enclosure management.



## Well-rounded Backup and Disaster Recovery Solutions

The QNAP NetBak Replicator supports data backup on Windows® including Outlook email archiving. Apple Time Machine backup is also supported. The front USB 3.0 port features a one-touch-copy function for you to instantly back up or copy data. Third-party backup software such as Acronis® True Image and Symantec® Backup Exec are also supported. RTRR (Real-Time Remote Replication) supports real time or scheduled data backup to a remote Turbo NAS or FTP server. Data can also be backed up to and restored from a range of cloud storage services, including Amazon® S3 & Glacier, Microsoft® Azure & OneDrive, ElephantDrive®, Symform®, Dropbox® and Google® Drive.



## Storage for Comprehensive Virtualization Applications

The TS-453mini supports VMware® and Citrix®, and is compatible with Microsoft® Hyper-V™ and Windows Server 2012, benefiting flexible deployment and management in the virtualization environments. The TS-453mini supports VMware VAAI and Microsoft ODX to increase performance by offloading server loading for ESXi server and Hyper-V respectively, and supports QNAP vSphere Client plug-in and QNAP SMI-S provider with enhanced efficiency of operations and management in virtualization applications.



## File Synchronization Across Multiple Devices

The Qsync utility turns your Turbo NAS into a safe data center for file synchronization with a large storage capacity. Any file uploaded to the NAS will be made available for all linked devices, such as computers, laptops or mobile devices.



## Comprehensive 24/7 Surveillance Solution

The TS-453mini's Surveillance Station supports over 2,800 compatible IP camera models and up to 40 expandable IP camera channel licenses. It supports real-time monitoring, video & audio recording and playback with a wide range of customizable settings. You can also install the Vmobile app on your iOS® or Android™ mobile devices to manage the monitoring channels anytime and anywhere, or install the Vcam app to turn your mobile device into a network camera to instantly record any moment around you to your Turbo NAS.



## Install-on-Demand Apps to Extend NAS Functionality

The Turbo NAS has a built-in App Center that provides over 100 install-on-demand apps developed by QNAP and third-party developers. In addition, QNAP's development platform embraces the open-source spirit to enable developers to create their own apps, adding potentially limitless potential for the Turbo NAS.



# Hardware & Software Specifications



	TS-453mini-2G	TS-453mini-8G
<b>Processor</b>	Quad-core Intel® Celeron® 2.0GHz (burst up to 2.41GHz)	
<b>Graphics</b>	Intel® HD Graphics	
<b>Hardware transcoding engine</b>	Yes	
<b>Memory (SO-DIMM RAM)</b>	2 GB DDR3L (1 x 2GB)	8 GB DDR3L (2 x 4GB)
<b>Memory slots</b>	2 (max 8GB)	
<b>Flash</b>	512MB	
<b>Drive</b>	4 x 3.5" / 2.5" HDDs & SSDs (not included)	
<b>SATA interface</b>	HDD slot 1 & 2: 6Gb/s; HDD slot 3 & 4: 3Gb/s	
<b>Expansion enclosure support</b>	1 (UX-800P, UX-500P)	
<b>Network interface</b>	2 x integrated Gigabit RJ45 Ethernet LAN ports	
<b>Ports</b>	3 USB 3.0, 2 USB 2.0, 1 HDMI v1.4a	
<b>IR sensor</b>	Yes, compatible with QNAP RM-IR002 remote control	
<b>LED indicators</b>	Power, status, LAN, USB, HDD1-4	
<b>Buttons</b>	Power, Reset, USB one-touch copy	
<b>Fan</b>	Internal compact system fan	
<b>Power supply</b>	90W AC power adapter, 100 - 240V	
<b>Power consumption (W)</b>	S3 Sleep: 1.04, HDD sleep 17.18; , typical operation: 30.33	
<b>Dimensions (HxWxD)</b>	210 x 151 x 200 mm; 8.27 x 5.95 x 7.87 inch	
<b>Weight</b>	Net / Gross: 2 kg / 3.4 kg (4.41 lb / 7.50 lb)	
<b>Temperature and humidity</b>	0 - 35°C, 5 - 95% R. H.	

<b>Volume Types</b>	Single disk, RAID 0, 1, 5, 6, 10, 5 + spare
<b>Storage Management</b>	Flexible volume / LUN; Online RAID capacity expansion and online RAID level migration; SSD cache; AES 256-bit full NAS encryption
<b>Supported Client OS</b>	Windows XP, Vista, Windows 7, Windows 8, Windows Server 2003 / 2008 R2 / 2012 R2, Apple Mac OS X, Linux & UNIX
<b>Internal File System</b>	EXT4
<b>External File System</b>	EXT4, EXT3, NTFS, HFS+, FAT32
<b>Supported Protocols</b>	CIFS / SMB, AFP (v3.3), NFS(v3), FTP, FTPS, SFTP, TFTP, HTTP(S), Telnet, SSH, iSCSI, SNMP, SMTP, and SMSC
<b>File Sharing</b>	Max user accounts: 4096; Max groups: 512; Max shared folder: 512; Max concurrent connections: 700
<b>Surveillance Station</b>	Includes 2 free camera licenses, up to 40 camera channels via additional license purchase ( <a href="http://license.qnap.com">http://license.qnap.com</a> )
<b>Features</b>	File Station, Photo Station, Music Station, Video Station, Download Station, Qsync, Notes Station, HD Station, Kodi, FTP Server, Print Server, VPN Server, VPN Client, Antivirus Protection
<b>Streaming Server</b>	DLNA Server, Airplay, Chromecast, iTunes Server
<b>Video Transcoding</b>	Hardware accelerated on-the-fly and offline transcoding
<b>Remote Access</b>	myQNAPcloud with CloudLink

Some data encryption functions may not be available in accordance with the legislative restrictions of some countries such as Russia.

Designs and specifications are subject to change without notice.

## TS-x53 Series



# QNAP Systems, Inc.

TEL : +886-2-2641-2000 FAX : +886-2-2641-0555 Email: [qnapsales@qnap.com](mailto:qnapsales@qnap.com)  
 Address : 3F, No.22, Zhongxing Rd., Xizhi Dist., New Taipei City, 221, Taiwan

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### Netherlands (Warehouse Services)

Email: [nlsales@qnap.com](mailto:nlsales@qnap.com)  
 TEL: +31(0)107600830

### Germany

Email: [desales@qnap.com](mailto:desales@qnap.com)  
 TEL: +49-89-381562991

### China

Email: [cnsales@qnap.com.cn](mailto:cnsales@qnap.com.cn)  
 TEL: +86-400-628-0079

### India

Email: [indiasales@qnap.com](mailto:indiasales@qnap.com)

### US

Email: [usasales@qnap.com](mailto:usasales@qnap.com)  
 TEL: +1-909-595-2782

### Thailand

Email: [thsales@qnap.com](mailto:thsales@qnap.com)  
 TEL: +66-2-5415988

