

# Turbo vNAS

# TVS-x73 Series



# QNAP



Use your NAS as a PC

▼ A great leap in performance with the 64-bit QTS 4.3.0



- a. Inbuilt with USB 3.1 (10 Gbps) dual Type-A expansion card
- b. Supports optional dual-port 10 Gb network expansion card, with transmission performance up to 1,673 MB/s



TVS-673



Comes with dedicated remote control with Qbutton express control feature

## AMD R Series RX-421BD quad-core 2.1 GHz APU, Turbo Core up to 3.4 GHz, embedded with Radeon™ R7 graphics core, supports up to 64GB DDR4 memory

### USB QuickAccess

Connects directly to a Windows or Mac computer through a USB cable for installation operations and data access. Does not require network connection or complex settings.

### QButton Control

Controller comes with shortcut buttons in four different colors for customizing actions and events shortcuts. Compatible with various hardware and software to facilitate easy control and operations.

### Build your private cloud

Integrated with QmailAgent (e-mail agent), Qsirch (full-text search tool for NAS) and Qcontactz (contacts manager with powerful backup and sharing features)

### 2 x M.2 SATA 6Gb/s SSD ports

2280/2260 SATA 6Gb/s SSD coupled with Qtier (auto storage tiering) and SSD Cache for around-the-clock storage acceleration



TVS-473



TVS-673



TVS-873



AES-NI encryption engine



DDR4 8/16/64GB



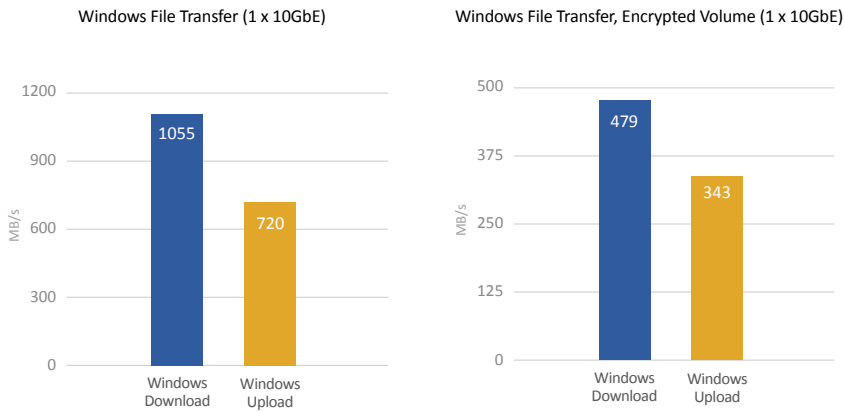
Speaker



3.5mm MIC In Line Out

## AMD R-Series quad-core APU, up to 64GB RAM, and hardware-accelerated encryption with AES-NI

The TVS-x73 is equipped with a next-gen AMD R-Series RX-421BD quad-core 2.1 GHz APU (burst up to 3.4 GHz), dual channel 8GB/16GB/64GB DDR4 RAM (upgradable to 64GB), and four Gigabit LAN ports for lightning-fast multi-tasking with low power consumption and is capable of delivering up to 1,055 MB/s throughout with a 10GbE configuration. The TVS-x73's hardware-accelerated encryption engine with AES-NI provides unmatched encryption performance in its class (up to 479 MB/s with AES 256-bit full NAS volume encryption) to boost system performance, security, and ensuring the safety of sensitive business data stored in the NAS.



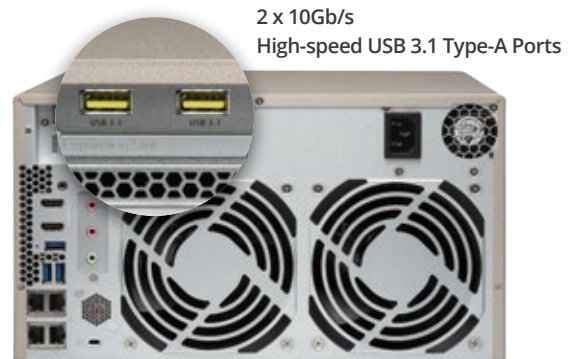
Tested in QNAP Labs. Figures may vary by environment.

Test environment:  
 NAS:  
 OS: QTS 4.3  
 Volume type: RAID 5; 8 x Intel SSD DC S3500 240G  
 Client PC:  
 Intel Core i7-4770 CPU @ 3.40 GHz CPU; WD 1TB WD10EZEX; LAN-10G2T-X550 10GbE NIC; Microsoft Windows 10 64bit; 10GB file transfer

## USB 3.1 (10Gbps) connectivity

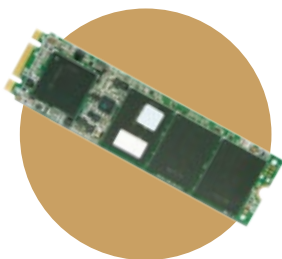
USB 3.1 provides faster maximum speeds of 10Gb/s-double that of USB 3.0 – to greatly boost data transfer performance. The TVS-x73 comes with a USB 3.1 Type-A dual-port card for connecting up to two USB devices, allowing compatibility with newer, faster USB devices for transferring large-sized media files.

✍ USB 3.1 performance may vary depending on hardware/software limitations and usage environment.



## M.2 SSD & 2.5" SSD cache with Qtier optimization

The TVS-x73 supports 2.5" SSD for caching to increase IOPS performance, and provides higher transfer speeds and reliability with additional two M.2 SATA 6Gb/s SSDs. Using an SSD cache boosts overall system performance, and is perfect for improving the overall workflow of random IOPS demanding applications such as virtualization. The TVS-x73 combines M.2 SSD, SATA SSD and high-capacity HDD in one box to effectively realize tiered storage for exceptional application performance and lower TCO of storage at the same time.



M.2



SSD



SATA Drives

✍ M.2 SSD operations generate high heat output. You are recommended to install heatsink for M.2 SSD module from QNAP or third-party providers.

## Easy installation and direct access to files with USB QuickAccess

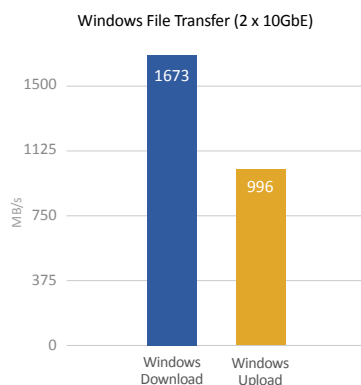
With its innovative USB QuickAccess port, the TVS-x73 eliminates the complications of first-time NAS installation and provides easy direct access to files stored on the TVS-x73- all without needing network connectivity. Simply use a USB 3.0 A – Micro B cable or a USB 2.0 A – Micro B cable\*\* to connect the TVS-x73 to a PC or Mac device, and use Qfinder Pro\* to configure it. It is just that easy. You can also assign access rights to users for different folders to prevent unauthorized access to important files.



\* Qfinder Pro and USB QuickAccess support Windows 8.0 (and newer) and Mac OS X 10.7 (and newer). Other versions may require driver installation.  
\*\* A USB cable is not included.

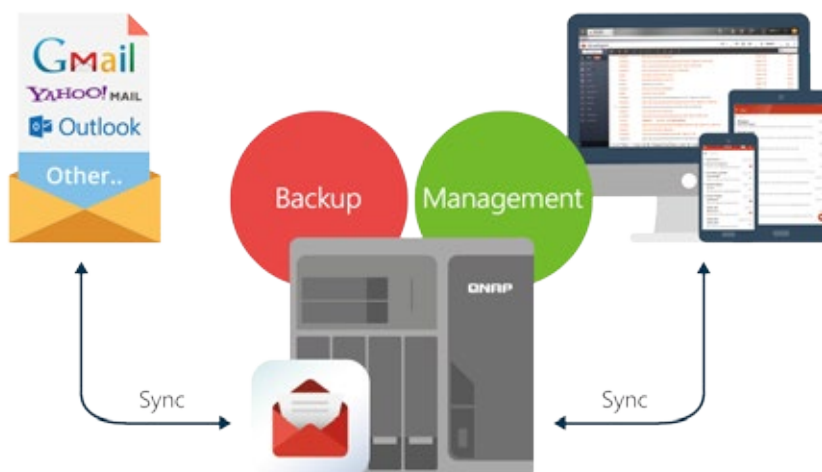
## Flexible 10GbE network expandability

The TVS-x73 features two PCIe (Gen.3 x 4) slots, one preinstalled with a USB 3.1 Type-A dual-port card, and the other allows for installing an optional dual-port 10GbE (10GBASE-T or SFP+) network card. This allows for greater flexibility in setting up 10GbE environments for high-performance virtualization and backup tasks.



## Qcontactz-Easily manage huge amounts of contacts on the NAS

Qcontactz with the high-capacity TVS-x73 helps you centrally store and manage contact information for colleagues, business partners, families, and friends. Other features include: importing/exporting CSV or vCARD 3.0 files, automatic identification of frequently-used contacts, encryption for sensitive/confidential contact information, smart search function, and more. Qcontactz offers snapshot backups that enable you to revert to a previous version of your contacts list according to your needs. A companion app for Android phones and iPhone is also available for easy access to contacts. Qcontactz can also be used with QmailAgent to create the perfect email workflow environment.



## 4K HDMI output with a free remote control for an excellent audiovisual experience

The TVS-x73 offers dual HDMI outputs that support "duplicated" or "extended" desktop configurations. You can connect the TVS-x73 to a TV or A/V receiver and use the media player in HybridDesk Station (HD Station) with the bundled QNAP remote control to enjoy rich media content and 4K videos with the best audiovisual experience. With the help of the smart remote control learning function, you can pair up to three TV or stereo IR remote controls and program your frequently-used buttons and functions. You can also turn your mobile devices into remote controls by installing the Qremote app.



## QButton - Start a smart IoT life with a single click

QButton works with the QNAP NAS remote control (RM-IR004), letting you choose what each button does. You can select events or conditions in the App Center (including QIoT applications, Surveillance Station for viewing specific monitored channels, Music Station for playing favorite music, or powering on/off the NAS itself) then simply press the button to trigger the action



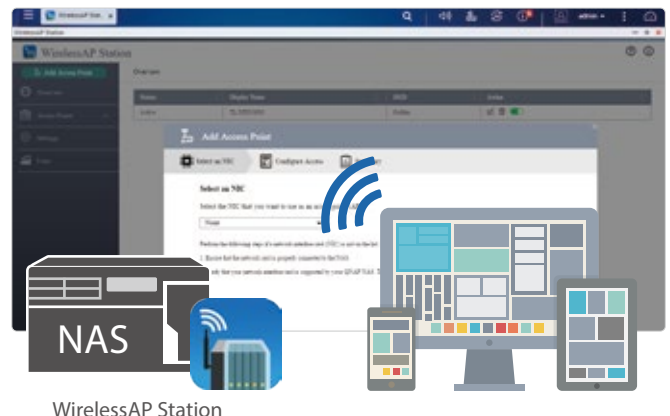
## User-friendly vocal alerts and music playback

The TVS-x73 features a built-in speaker that supports Chinese and English vocal alerts for important system messages. You can also use Music Station or File Station (coupled with Qfile and Qmusic mobile apps) to directly play music on the NAS.



## NAS as a Wireless AP

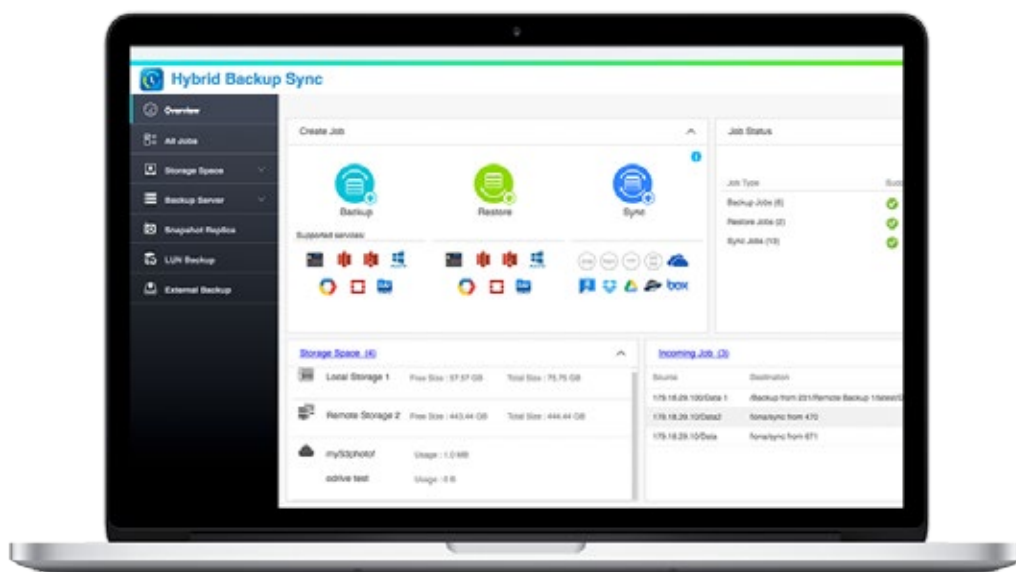
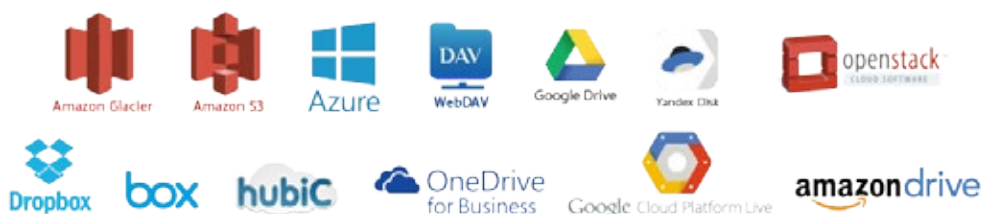
WirelessAP Station coupled with a compatible PCI Express wireless adapter\* turns the TVS-x73 into a dedicated Wireless AP, making it the ideal solution if you have multiple devices that need internet connectivity but have no available access points. As those devices directly communicate with the TVS-x73 through the WirelessAP Station, it not only allows for the network resources of the NAS to be shared with greater efficiency, but it also prevents possible slowdown that may occur when the broadband router is busy



*✍* For compatible PCI Express wireless adapters, please check the Compatibility List.

## Disaster recovery solutions bring peace of mind

Hybrid Backup Sync consolidates backup, restoration and synchronization functions (using RTRR, rsync, FTP, CIFS/SMB) into a single app for easily transferring data to local, remote and cloud storage spaces as a comprehensive data storage and disaster recovery plan. Supported cloud services include Amazon® Glacier, Azure™ Storage, Google Cloud Storage™, Google Drive™, Microsoft® OneDrive® for Business, Dropbox®, Amazon® Drive, Yandex® Disk, Box®, hubic® and Amazon® S3/OpenStack Swift/WebDAV compatible services. Hybrid Backup Sync supports multi-version backup, flexible job scheduling, file compression to save storage space, and more.



## Restore files with Volume & LUN Snapshot

QTS Storage Manager adds an easy-to-use web-based snapshot tool for you to easily backup and restore data on the TVS-x73 back to any point of time in case you lose any important data. You can take snapshots for volumes and LUN (up to 256 snapshots per volume or LUN and maximum 1,024 snapshots per NAS), efficiently replicate volume/LUN snapshots via Snapshot Replica to remote servers by copying only the changes made, and quickly clone a volume /LUN snapshot as a local volume without interrupting the current system operation. You can even set up the system to automatically take a snapshot of the volume before backup via RTRR/rsync, even if files are open.



## Storage for comprehensive virtualization applications

The TVS-x73 is a comprehensive iSCSI/IP-SAN storage solution, and supports VMware®, Citrix®, Microsoft® Hyper-V™ and Windows Server® 2012 R2, benefiting flexible deployment and management in virtualization environments. The TVS-x73 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 operational efficiency and management in virtualization applications.



## Storage for hosting virtual machines and containerized applications

Virtualization Station allows you to host virtual machines (VM) on the TVS-x73 and access them via a web browser or VNC. Virtualization Station supports multiple operating systems, fast VM creation, VM backup & restoration, VM import/export, snapshot, and Device Management for centrally managing VMs. Virtualization Station allows the TVS-x73, VMs and containers to share the same LAN port. No longer constrained by physical network performance, high-speed virtual switches greatly increases data transfer between VMs, containers and NAS through the internal interface. The TVS-x73 also features Container Station, which integrates LXC and Docker® lightweight virtualization technologies. You can operate multiple isolated Linux® systems on the TVS-x73 as well as download apps from the built-in Docker Hub Registry®. Container Station also supports the QIoT Containers platform that helps quickly structure your IoT environment and deployment on your private IoT cloud.



## Comprehensive surveillance solution providing 24/7 security

Surveillance Station is a professional network surveillance Video Management System (VMS) that offers a user-friendly management interface, over 3,000 compatible IP camera models, and 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™ devices to manage the monitored channels anytime and anywhere, or install the Vcam mobile app to turn your device into a network camera to instantly record to your TVS-x73. The TVS-x73 offers 4 free IP camera channels and you can expand up to 72 channels by purchasing additional licenses.



## Whole new QVR Pro surveillance solution

The TVS-x73 also supports QVR Pro (Beta) that integrates QNAP's professional QVR system into the QTS operating system. You can not only arrange a dedicated, independent storage space for surveillance data on the NAS, but also leverage the advantages of scalability and storage manageability from QTS. QVR Pro features a flexible monitoring interface that allows you to adjust the proportion and monitor view of IP cameras, supports an upgraded timeline feature that provides instant video search and quick view identification in live monitoring mode, and allows for monitoring views and playing back images without switching between different windows. Additional functions like batch adding and editing cameras, and searching for cameras across different LANs further save the cost and time in deploying and maintaining a complete surveillance system.



## Install-on-demand apps to extend NAS functionality

The built-in App Center provides various install-on-demand apps developed by QNAP and third-party developers, including tools for backup/sync, business, content management, communications, download, entertainment, and much more. It is also a centralized location for managing & updating installed apps. You can freely install apps as needed to expand your TVS-x73's functionality.



## Enjoy your exclusive karaoke system with OceanKTV

OceanKTV is the first NAS-based karaoke application and allows you to create a quality karaoke experience at home or in the office. The TVS-x73 offers high-capacity storage for potentially accommodating up to thousands of 1080p karaoke songs, and now supports YouTube™ video streaming. The TVS-x73 comes with two 3.5 mm microphone jacks and can transmit audio to your amplifier using HDMI or the 3.5 mm line out port. The experience can be managed using the OceanKTV app in QTS or by using the OceanKTV mobile app on your phone or tablet. More than a NAS, the TVS-x73 is a karaoke machine for singing entertainment.



# Hardware Specifications



Ordering Information	TVS-873-64G/-16G/-8G	TVS-673-64G/-16G/-8G	TVS-473-64G/-16G/-8G
Processor	AMD® R-series RX-421BD quad-core 2.1GHz APU, turbo core up to 3.4GHz		
Hardware Encryption Engine	✓ · AES-NI		
Graphics	Embedded Radeon™ R7 Graphics Processor		
System Memory	64GB DDR4 (4 x 16GB) 16GB DDR4 (2 x 8GB) 8GB DDR4 (2 x 4GB)	64GB DDR4 (4 x 16GB) 16GB DDR4 (2 x 8GB) 8GB DDR4 (2 x 4GB)	64GB DDR4 (4 x 16GB) 16GB DDR4 (2 x 8GB) 8GB DDR4 (2 x 4GB)
Memory Slot	4 x SODIMM DDR4		
Flash memory	512MB DOM		
Hard Disk Drive	8 x 3.5"/2.5" SATA 6Gb/s HDDs/SSDs	6 x 3.5"/2.5" SATA 6Gb/s HDDs/SSDs	4 x 3.5"/2.5" SATA 6Gb/s HDDs/SSDs
M.2 SSD	2 x 2280/2260 SATA 6Gb/s. Note: M.2 SSD operations generate high heat output. You are recommended to install heatsink for M.2 SSD module from QNAP or third-party providers.		
LAN Port	4 x Gigabit RJ-45 Ethernet port		
PCIe Slot	2 x PCIe Gen 3 (x4), one slot is pre-installed with a dual-port USB 3.1 Type-A card		
LED Indicator	Mono-LCD display with backlight, Enter and Select buttons for configuration		
USB	2 x USB 3.1 port, and 4 x USB 3.0 Type-A port		
HDMI	2, up to 3840 x 2160 @ 30Hz resolution		
LED Indicators	Status/Power · USB · LAN · Drive 1-8 · M.2 SSD 1-2	Status/Power · USB · LAN · Drive 1-6 · M.2 SSD 1-2	Status/Power · USB · LAN · Drive 1-4 · M.2 SSD 1-2
Button	Power/Status, USB One-Touch-Backup, reset		
IR Receiver	QNAP RM-IR004 and MCE-compatible remotes		
Secure Design	Kensington security slot for theft prevention		
Form Factor	Tower		
Dimensions	188.2 x 329.3 x 279.6 mm 7.41 x 12.96 x 11.01 inch	188.2 x 264.3 x 279.6 mm 7.41 x 10.4 x 11.01 inch	188.2 x 199.3 x 279.6 mm 7.41 x 7.85 x 11.01 inch
Net Weight	6.52 kg / 14.37 lbs	5.63 kg / 12.41 lbs	4.9 kg / 10.80 lbs
Temperature	0 ~ 40°C		
Humidity	5~95% RH non-condensing, wet bulb: 27°C		
Power Supply	ATX 240W, 110-240V AC, 50-60Hz, 3.5A		
System Fan	2 x 12cm	2 x 9cm	1 x 12cm

Model specifications are subject to change without notice. Please refer to [www.qnap.com](http://www.qnap.com) for the latest information.

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