# QNAP TVS-H474 NAS Tower Intel® Core™ i3 i3-12100 8 GB DDR4 0 TB QuTS hero Black

Model: TVS-H474-PT-8G

Manufacturer: QNAP

EAN: 4711103082355

Product Code: 20032

## R35,940

Highly-reliable ZFS-based storage with PCIe Gen 4 expandability for 10/25GbE connectivity, M.2 NVMe SSD caching and multi-threads processors for virtualization applications

With an Intel® Pentium® Gold dual-core Processor to support the ZFS-based QuTS hero operating system, the TVS-h474 SMB NAS ensures data integrity and supports block-level inline data deduplication and compression, near-limitless snapshots, real-time SnapSync, and SSD optimization. Whether for mission-critical file servers, virtualization servers, collaborative video editing, or efficient data backup and recovery applications, the TVS-h474 delivers an ideal NAS solution. The high-performance TVS-h474 provides PCIe Gen 4 (up to twice the transmission speed of Gen 3) expandability, M.2 NVMe SSD caching, and 2.5GbE connectivity for high-speed virtualization network

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environments.

## M.2 PCIe Gen 3

Enable NVMe SSD caching or Edge TPU empowered AI image recognition.

## 2.5GbE connectivity

2.5GbE ports provide higher transmission speeds with existing Cat 5e cables.

## Flexible PCIe Gen4 expansion

PCIe slots allow for installing 2.5/5/10/25GbE adapters, QM2 cards, or entry-level graphics cards to increase application performance.

## Virtual machines and containers

Host multiple virtual machines and containers with optimized resource utilization.

## Full HD HDMI

Directly view creative works on an HDMI display. Enjoy smooth full HD media playback and real-time transcoding.

## Faster image recognition with AI acceleration

The built-in Intel® OpenVINO™ and Intel® UHD Graphics help boost AI image recognition and offload CPU workloads.

## High-performance Intel® Pentium® 3.7 GHz processor

The TVS-h474 adopts an Intel® Pentium® Gold dual-core Processor and Intel® UHD Graphics 710 to increase multi-tasking capabilities, offering SMBs a secure, reliable, and high-performance NAS solution.

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## Boost NAS performance with M.2 SSDs or TPU

The TVS-h474 has two M.2 PCIe slots, enabling SSD caching or SSD storage pools for improved performance, or other applications.

## Install M.2 NVMe SSDs for cache acceleration

The TVS-h474 supports SSD caching and features two M.2 slots that support M.2 PCIe NVMe SSDs1 with 2280 form factors (sold separately) for boosting overall NAS performance.

## Accelerate AI–powered image recognition with TPU

By leveraging a Google Edge TPU to QNAP AI Core (AI-powered engine for image recognition), the TVS-h474 can perform high-speed face and object recognition. Google Edge TPU enables QuMagie to quickly process thousands of photos with high-speed AI Image recognition and classification, and QVR Face to analyze real-time video for instant facial recognition.

## Build a High-Speed 2.5GbE Network Environment

QNAP offers comprehensive, budget-friendly storage and networking solutions that provide an array of connectivity possibilities. Easily and flexibly upgrade your workplace or home network now to handle bandwidth-hungry applications.

## A fast 2.5GbE NAS

A QNAP NAS featuring one or more 2.5GbE ports, and Port Trunking allows you to combine multiple ports for greater bandwidth potential.

## Upgrade computers and servers

Servers and desktops can install PCIe-based QNAP network cards that support 2.5G/1G/100M Multi-Gig.

## Add a 5GbE port to laptops

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Laptops and upgrade-limited computers can use QNAP’s portable USB 3.2 Gen 1 to 5GbE adapter that allows you to connect to 5G/2.5G/1G/100M networks via USB.

## A switch that supports 2.5GbE+

QNAP’s 10GbE/NBASE-T switches support 10G/5G/2.5G/1G/100M and allow connecting multiple workstations and devices for high-speed collaboration in device-dense environments.

## Abundant I/O capabilities with PCIe expansion

The TVS-h474 has two PCIe slots that allow for installing various expansion cards for expanding application potential.

**Ultimate visual experience with Full HD HDMI output and real-time video transcoding**

## HDMI output

The TVS-h474 features HDMI output that supports Full HD, providing great benefits for applications like video production/editing or industrial design that demands high resolution and intensive media storage, transfer, and display.

## View NAS media or virtual machines on an TV

By connecting the TVS-h474 to an HDMI display, you can directly watch multimedia content saved on the NAS, operate virtual machines from Virtualization Station, or enjoy multimedia using HD Player or third-party players like Plex® Home Theater.
Learn more: HybridDesk Station

## Real-time transcoding and display

The TVS-h474 features Intel® UHD Graphics that supports hardware decoding and real-time transcoding* for converting videos to universal file formats that can be smoothly played on multiple devices.

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*The TVS-h474 provides hardware decoding, encoding and transcoding capabilities. However, playback quality may vary due to factors (including playback software, file formats, system usage, and available bandwidth).

**Faster image identification with integrated Intel® OpenVINO™ AI engine.**
With integrated Intel® OpenVINO™ AI computing resources, the TVS-h474 accelerates AI image recognition performance without impacting other applications or services. QNAP AI Core primarily works with the QuMagie application.

## QuMagie photo management

Easy-to-use photo management solution that integrates AI image recognition and intelligent classification for your collection.

## ZFS-based QuTS hero operating system enhances NAS performance and data integrity

QuTS hero combines the app-based QTS with the 128-bit ZFS file system to provide flexible storage management, comprehensive data protection, and optimized performance to tackle the complexity and performance demands of modern IT. From storage management, virtualization, to collaborative media workflows, QuTS hero streamlines your business-critical tasks.

## Data integrity is key

QuTS hero’s self-healing ensures data integrity and reliability. Write Once, Read Many (WORM) is also supported.

## Data reduction improves storage efficiency and performance

Inline data deduplication, compression, and compaction reduce file sizes to conserve storage capacity and optimize performance.

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## Multi-level cache technology

Main memory read cache (L1 ARC), SSD second-level read cache (L2 ARC), and ZFS Intent Log (ZIL) for synchronous transactions with power failure protection are supported to boost performance and security.

## RAID Z enables robust data protection

Multiple RAID levels allow flexible capacity utilization. RAID Triple Parity and Triple Mirror deliver higher levels of data protection.

## QSAL (QNAP SSD Antiwear Leveling) enhances data protection

RAID-level SSD lifespan is automatically and regularly detected to prevent simultaneous SSD failure, improving your data protection and system reliability.

## App Center ecosystem extends NAS functionality

Apps for backup/sync, virtual machines/containers, content management, productivity, and more features can be used to expand the application potential of the NAS.

## Inline data deduplication, compression, and compaction improve SSD endurance

QuTS hero supports advanced block-based data reduction technologies (including inline data deduplication, compression, and compaction) to reduce file sizes, conserve storage capacity, and optimize performance. For example, if 20 virtual machines on a NAS are replicated using the same template, then storage space requirements for all 20 virtual machines can be reduced by up to 95%. Whether acting as primary or backup storage, the TVS-h474 optimizes storage utilization to provide a reliable storage cornerstone in the Big Data era. All-flash solutions thus achieve higher cost efficiency while improving both random write performance and SSD lifespan.

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## Comprehensive backup and disaster recovery solution

The TVS-h474 supports various apps that cover all your backup needs. Practice safe IT habits by regularly backing up files and device content, allowing them to be easily restored when needed.

## PC/Laptop backup

For Windows®, install NetBak Replicator to back up your PC to QNAP NAS. In macOS®, just set up the built-in Time Machine® to secure your data.

## Remote backup for NAS

Hybrid Backup Sync makes it easy to back up data from a TVS-h474 to another QNAP NAS or remote server to fulfill your 3-2-1 backup strategy.

## VM backup

Enjoy license-free VMware® and Hyper-V VM backup with source-side incremental backup, global deduplication, and recovery compression.

## SaaS backup

Safeguard enterprise cloud data by backing up/syncing files, emails, calendars, and contacts from Google™ Workspace and Microsoft® Office 365® to the NAS.

## Cloud backup for NAS

Hybrid Backup Sync supports mainstream cloud storage for NAS data backup. For backup to object cloud storage, VJBOD Cloud is especially useful to reduce bandwidth usage and backup time.

## QuDedup technology

Hybrid Backup Sync eliminates redundant data at the source and then backs up the deduplicated data, helping to save time and storage costs while providing efficient multi-version backups.

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## Real-time SnapSync

Real-time SnapSync immediately synchronizes data changes with the destination storage, ensuring the primary and secondary NAS always have the same data. RPO is minimal to achieve real-time disaster recovery.

## Multi-version snapshots mitigate ransomware threats

The TVS-h474 supports block-based snapshots that record the state of the system at any time. It helps protect data, which can be restored back to a specific point of time, greatly helping in mitigating the threat of ransomware.

## Up to 65,536 snapshots

QuTS hero supports enough snapshots for you to create 1 snapshot every hour for 7 years without needing to delete any! Copy-on-write technology makes snapshot creation almost instantaneous without affecting ongoing data writing.

## Back up snapshots

Multiply data protection by backing up snapshot files! Replicate volume/LUN snapshots in the TVS-h474 to a remote NAS (Snapshot Replica) by copying only the changes made. This helps save time & bandwidth, and can be run manually or on a scheduled basis.

## All-in-one solution for hosting virtual machines and containers

By running multiple virtual machines and containers on the TVS-h474, you can deploy multi-tenant environments and applications to increase management efficiency and save hardware costs. Coupled with the Network & Virtual Switch app that boosts interoperability between virtual machines, containers, QNAP NAS, and other physical devices on the network, you can flexibly allocate physical and virtual network resources to simplify network deployment.

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## Virtualization Station

Run multiple Windows®, Linux®, UNIX®, Android™, and QuTScloud virtual machines and access them via a web browser or Virtual Network Computing (VNC). Businesses can run virtualized server applications on a single NAS without needing additional physical servers.

## Conainer Station

Experience Docker®, LXD, and Kata Containers lightweight virtualization technologies, download apps from the built-in Docker Hub Registry®, import/export containers, and create abundant microservices.

## Linux Station

Run Linux® applications (including apps from the Software Center) directly on the NAS and remotely access the Linux® desktop from a web browser. The open-source Linux® platform is also ideal for Internet of Things development.

## Comprehensive security and privilege settings

The TVS-h474 is loaded with flexible privilege settings and security measures. Besides IP blocking, 2-step verification, HTTPS connection, there are more apps that help ensure optimal NAS protection against threats like malware and hackers.

## myQNAPcloud secures remote access

myQNAPcloud allows convenient connection to the TVS-h474 through the Internet without any complex DDNS settings. To ensure your remote access service is secure, myQNAPcloud strengthens keys on SSL Certificates to 2048-bits.

## Simplified privilege settings

The TVS-h474 supports comprehensive access right settings for shared folders, Azure Active Directory Domain Services (Azure AD DS), LDAP, and Windows ACL to help IT staff efficiently manage

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user accounts and access rights for multiple NAS systems.

## QuFirewall protection

Supports IPv6, firewall access lists, and GeoIP filtering to restrict access based on geographical locations for higher NAS network security.

## Superior security with QVPN

A virtual private network (VPN) allows secure access to network resources and services across public networks. QVPN supports creating a VPN client, using the TVS-h474 as a VPN server, and WireGuard® VPN service with an easy-to-use interface for setting up a secure connection.

## QuWAN SD-WAN

To facilitate digital transformation, multi-site expansion and remote working, QuWAN SD-WAN helps automatically mesh multi-site VPN. It features IPsec encryption and cloud-centric management, allowing secure multi-site network including QNAP NAS and VMware ESXi platforms.

## Security Counselor

A security portal for the TVS-h474 to check for weaknesses and offer recommendations for enhancing NAS security. It also integrates anti-virus and anti-malware scanning software.

## Malware Remover

Regularly scan your TVS-h474 using the latest malware definitions. If infected files are detected, they will be immediately removed to ensure NAS data security.

## TeamViewer remote access

TeamViewer app enables remote management and connectivity to multiple NAS devices from Windows® PCs with an unparalleled level of safety, while increasing IT efficiency and end user productivity.

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## The best file storage and collaboration center

The TVS-h474 integrates rich apps for storing, managing, synchronizing, searching, and archiving files. It supports SMB/CIFS, AFP, and NFS protocols for streamlined file sharing across Windows®, Mac®, and Linux®/UNIX®, and provides the smartest NAS solution for professionally managing your files.

## File Station

Manage, access, and share all the files in the TVS-h474 and view snapshots files – all from your web browser. You can also easily mount remote NAS folders and cloud storage.

## Qsync

Make any file uploaded to a TVS-h474 available to linked devices, such as computers, laptops and mobile devices. You can sync shared folders and team folders for group file sharing to enhance the flexibility of team projects and collaboration.

## Qsirch

QNAP’s powerful, Google-like search tool helps you quickly find images, music, videos, documents, and emails by keywords, color, and more search conditions. It also supports Qfiling to perform one-time or automatic archival tasks based on your search criteria.

## Qfiling

Automate your file organization − all you need to do is categorize files, set a schedule, and Qfiling will do the rest. Qfiling also enables smart recycling that instantly moves filtered files to the Recycle Bin.

## mart surveillance solution for 24/7 security

QVR Elite is QNAP’s subscription-based smart surveillance solution, allowing you to easily build a surveillance system with lower TCO and higher scalability. Recordings are saved as MP4 files,

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allowing playback on nearly every device. QVR Elite also integrates QNAP AI-based solutions to build smart facial recognition for retail and door access systems with QNAP NAS. You can arrange a dedicated, independent storage space for surveillance data on the TVS-h474 and enjoy simplified camera management, storage space allocation, camera live viewing and playback.

## Flexible and economical storage expansion

QNAP provides easy ways to expand your storage capacity. Here are several ways to expand your TVS-h474 storage as needed to accommodate data and business growth.

## Attach QNAP expansion enclosures

Connect expansion enclosures to the TVS-h474, and manage NAS storage expansion with the user-friendly Storage & Snapshots Manager app.

## Mount cloud storage or remote file servers

Mount cloud storage or remote file servers to expand the capacity of the TVS-h474 while also centrally managing files on the NAS, cloud storage, and remote devices.

## Migrate to a new NAS

Install your NAS hard drives into a larger QNAP NAS and retain all your existing data and configurations.

## Upgrade RAID capacity

Hot-swap lower-capacity drives with larger-capacity drives to expand your NAS capacity so it can grow with your business.

## More productivity-boosting applications

The TVS-h474 provides an App Center that includes feature-rich apps to expand your NAS potential!

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## QuObjects

Run a high-performance S3 compatible development environment on your TVS-h474 to simplify service development workflows from testing to production. You can also move cold data from the cloud to an on-premises QuObjects to save cloud storage costs.

## Notification Center

Consolidates all system events, alerts, and notifications for smooth and easy NAS management, keeping you always informed of your NAS status.

## Proxy Server

By using a high-capacity TVS-h474 as a proxy server, online resources can be efficiently accessed with greater cost-savings and productivity, while network security is also enhanced at the same time.

## QmailAgent

The best email backup solution that allows you to easily backup/recover and manage multiple email accounts in their native format with strong security and data integrity.

## Qcontactz

Centrally manage all your contacts, import contacts from Google™, import/export contact information using CSV or vCard files, and enjoy an always-online database of contact information.

## QuFTP

The TVS-h474 can perform as an FTP server featuring SSL/TLS encryption, QoS bandwidth controls, and permission settings for efficiently and securely transferring large amounts of data. FTP Client is also supported.

## A health check for your hard drives

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Hard drives are at the heart of your NAS, and ensuring their long-term health and reliability is absolutely crucial. QNAP provides various methods and tools to help you monitor hard drive health, ensuring that you can take proactive decisions to safeguard your data and files.

## S.M.A.R.T. and back block scanning

If any of the S.M.A.R.T. values are reported as abnormal, or bad blocks are detected, you can take early action and replace drives before potential data loss occurs.

## DA Drive Analyzer

The DA Drive Analyzer leverages ULINK cloud-based AI to predict the expected lifespan of drives, assisting you in planning future drive replacements to protect against NAS downtime and data loss.

## Seagate® IronWolf™ Health Management

When using supported IronWolf™ or IronWolf Pro™ hard drives, overall system reliability is improved by providing you with actionable prevention, intervention, and recovery options.

## Flexibly switch to QTS operating system

The TVS-h474 also supports QTS - QNAP’s standard NAS operating system – that provides greater everyday performance, efficient memory utilization, and the advantage of Qtier auto-tiering. You can also migrate drives from your current QTS-based NAS to the TVS-h474.

## QTS

Suited for performance-demanding tasks, cross-teams file sync, and HDD-SSD hybrid storage applications

## QuTS hero

Featuring highly reliable data protection and data reduction, and optimized for SSD-based applications

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# Extend hardware warranty up to 5 years

The TVS-h474 is backed by a 3-year warranty at no additional cost. You can also purchase a warranty extension that extends your warranty coverage up to 5 years.

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