QNAP

QNAP

•

QNAP

P

169 254 100 1

TVS-h674T TVS-h874T

intel.

CORE

intel

CORE

i5

intel.

CORE

17

Thunderbolt[™] 4 NAS series with an Intel Core processor and PCIe Gen 4 expansion ports, supporting high-speed transfer and expandable to 25GbE network

A faster and bigger storage need for the 4K / 8K era

	Date Rate	File Size
HD 1080P (ProRes 422)	220 Mb/s	90 GB/hr
4K (ProRes 422)	630 Mb/s	300 GB/hr
BlackMagic4K	1.4 Gb/s	630 GB/hr
Canon 4K	2.3 Gb/s	1 TB/hr
Phantom Flex 4K	2.3 Gb/s	1 TB/hr
Red 8K	2.4 Gb/s	1.1 TB/hr
ARRI Alexa 6.5K RAW	7.3 Gb/s	3.3 TB/hr



High efficiency video editing storage for NAS with Thunderbolt and 25GbE

Video editing requires large file sizes and fast processing speeds to ensure smooth editing.

- Thunderbolt : Allows for fast transfer speeds and low latency, ensuring that editing is seamless and without interruption.
- **25GbE** : Allows for faster data transfer rates and is ideal for working with high-resolution videos.

Thunderbolt NAS for Video editing

	How Thunderbolt NAS can help
Collaboration	 Support two Mac[®] or Windows[®] notebook/workstation edit photos/videos simultaneously Connects to a network via Ethernet, making it easier to collaborate on projects and share resources
Expandability	 Provide a variety of expansions including 10G/25GbE network card, M.2 and other expansion cards Capacity expansion is very convenient through JBOD solution
User friendly	 Provide fast, smoother, easy-to-used operating system The companion mobile app allows you to remotely access your NAS files
Data Security	 Centralize backups and ensure consistent backups with snapshot You can set permissions or passwords to prevent files from being snooped indiscriminately

Supporting dual Thunderbolt 4, up to Intel[®] Core[™] i9 processor, tailor-made for video editing



Intel[®] Core[™] i processor

Intel[®] Core[™] i9 16-core (8P+8E)/24-thread Intel[®] Core[™] i7 12-core (8P+4E)/20-thread Intel[®] Core[™] i5 6-core / 12-thread



Dual Thunderbolt 4 ports

Featuring two Thunderbolt 4 slots, supporting highspeed transfers to allow you to focus more on creative work



Dual M.2 PCIe SSD slots

PCIe Gen 4 x4 M.2 2280 slots for optimal configuration of NVMe SSD and 3.5" SATA HDD



Dual PCIe Gen 4 slots

Providing two PCIe Gen 4 expansion slots for optional QNAP expansion cards, and preinstalled with a dual-port Thunderbolt[™] 4 expansion card in slot #2



Maximum 64 GB memory

Pre-installed with 32/64 GB, expandable as needed with 2 x DDR4 SODIMM slots



Dual 2.5 GbE LAN ports

Dual 2.5 GbE network ports, provide smooth data transmission experience

Switch NAS operating systems between QuTS hero and QTS for higher everyday performance

TVS-h674T / TVS-h874T are shipped with the enterprise-level QuTS hero operating system, and also supports QTS - QNAP's standard NAS operating system – that provides efficient memory utilization, and the advantage of Qtier auto-tiering.

Note : QTS and QuTS hero use different file systems. You must remove all the drives & backup data from the TVS-h674T / TVSh874T before switching from QuTS hero to QTS.



Choose between ZFS-based QuTS hero and QTS

ZFS-based QuTS hero ensures performance and data integrity

Faced with the explosive growth of data, VDI popularity, increasing SSD adoption, 8K media, and other disruptive IT trends, modern businesses need dependable storage systems to meet future demands. QNAP's new "QuTS hero" operating system combines the app-based QTS with a 128-bit ZFS file system to provide flexible storage management, comprehensive data protection and optimized performance to meet the needs of business-critical applications. Learn More: Why QNAP business NAS uses ZFS

	QuTS hero	QTS		
Filesystem	ZFS	Ext4		
SSD Cache	Read Cache	Read/Write Cache Read Cache Write Cache		
Inline Compression	Yes (LZ4 compression, ideal for RAW files and document files)	No		
Inline Deduplication	Yes (At least16 GB RAM required)	No No (Risk of files ystem -level corruption on power-loss and system downtime required for "Check File System") POSIX ACLs (3 types) + certain special permissions Add a disk drive to a RAID group Upgrade RAID capacity Change higher capacity disk drives Attach expansion enclosures/JBODs Standard		
Power Failure Protection (Software)	ZIL Copy-On-Write (Service continues after power recovery)			
Permission Management	Rich ACL (14 types)			
Capacity Expansion	Upgrade RAID capacity Change higher capacitydisk drives Attach expansion enclosures/JBODs			
Data Security	Better (Self-Healing & Copy-on-Write)			
Recommendation SSD Configuration for Video Editing Applications	Use SSD Pools Note: Set the block size 128K when creating Folders/LUNs	Editing (from original/RAW files): Use SSD Pools Post production: Enable Read/Write cache Note: Set the block size to 32K or 64K when creating Volumes, and choose "All I/O" for cache mode.		

New Intel[®] Core[™] Thunderbolt 4 NAS



TVS-h874T-i9-64G

- Intel Core i9 16-core (8P+8E) / 24-thread
- DDR4 64GB RAM (2 x 32GB)
- 2 x 2.5GbE ports
- 2 x Thunderbolt 4 ports

TVS-h874T-i7-32G

- Intel Core i7 12-core (8P+4E) / 20-thread
- DDR4 32GB RAM (2 x 16GB)
- 2 x 2.5GbE ports
- 2 x Thunderbolt 4 ports



TVS-h674-i5-32G

- Intel Core i5 6-core / 12-thread
- DDR4 32GB RAM (2 x 16GB)
- 2 x 2.5GbE port
- 2 x Thunderbolt 4 ports

Performance-cores (P-cores) and Efficient-cores (Ecores). Both types of core have a different role.

• Performance-cores : Physically larger, highperformance cores designed for raw speed while maintaining efficiency.

• Efficient-cores : Physically smaller, with multiple E-cores fitting into the physical space of one Pcore.

TVS-h674T / TVS-h874T front view



TVS-h674T / TVS-h874T rear view



TVS-h874T

Powerful next-gen processor options with up to 16 cores and 24 threads

Powerful performance with Intel[®] Core[™] i5 / i7 / i9 series processors

- Intel Core i9 16-core (8P+8E) / 24-thread
- Intel Core i7 12-core (8P+4E) / 20-thread
- Intel Core i5 6-core / 12-thread

The new Intel powerful processors deliver robust performance, featuring up to 30MB of cache, Turbo Boost Max technology with a maximum frequency of up to 5.0 GHz, and integrated Intel UHD Graphics for supporting 4K video transcoding and accelerating various AI applications

Boost up to

Transcoding performance compared to previous TVS-x72XT

Max 16C / 24T



3.54 CPU mark compared to

PU mark compared to previous TVS-x72XT



The specifications on this page use Intel Core i9-12900E as an example. Detailed specifications vary depending on the CPU selected for each SKU https://www.cpubenchmark.net/compare/5053vs3260/Intel-i9-12900E-vs-Intel-i5-8400T

Large preinstalled 32/64 GB DDR4 RAM, upgradeable to max 64GB DDR4 memory

NAS ordering P/N

Ordering P/N	Memory
TVS-h674T-i5-32G	32GB (2 x 16GB SODIMM)
TVS-h874T-i7-32G	32GB (2 x 16GB SODIMM)
TVS-h874T-i9-64G	64GB (2 x 32GB SODIMM)

- 2 x DDR4 SO-DIMM slots, max. 64 GB (2 x 32 GB), DDR4 dual channel memory
- QNAP optional RAM modules for easy upgrade and better multi-app or multi-user usage



2 x M.2 PCIe SSD slots as default shared folder to improve overall performance in QuTS hero

Use 2 x M.2 slots as System Drive & Default Shared Folders to improve performance in QuTS hero

The first Storage Pool you create is where the system drive, default shared folders, and apps are stored. In this step, it is recommended to create an SSD RAID with at least two SSDs to attain optimal system performance and efficient app metadata management. (With an all-HDD configuration, the first Storage Pool is also where the system drive and default shared folders are stored.)

- Improve random data access speeds with an SSD cache
- Maximize the value of SSDs with Qtier Technology







Built-in 2 x 2.5 GbE LAN ports, aggregated for maximum 5Gbps bandwidth



2.5GbE-supported motherboards, Wi-Fi 6 AP, switches, and LAN cards are now becoming popular

2.5GbE benefits

2.5X the speed 2.5GbE 1GbE to 2.5GbE Huge leap in performance



Use the same Cat.5e/ Cat.6/ Cat. 6A LAN cables



The second PCIe slot is preinstalled with a dual-port Thunderbolt 4 expansion card, supporting high transfer speeds so you can focus more on your creative work.

Two editors edit photos/videos via Thunderbolt simultaneously





Take images/ footages and uploads raw files from external to Thunderbolt NAS



Preinstalled Thunderbolt 4

PCle slot 2

expansion card

Thunderbolt 4 exceptional performance, ready to use

- Built-in Thunderbolt 4 ports via Thunderbolt Networking
- Write : **1,758** MB/s, Read : **1,738** MB/s via AJA System Test



NAS : TVS-h874T-i9-64G FW : QuTS hero h5.1.1 SSD : Samsung 860 EVO 1TB x 8, RAID 5 Client : Mac Studio 2022 CPU : Apple M1 Max (10 cores)

QNAP Thunderbolt accessories: Thunderbolt 3 & Thunderbolt 4 cables

QNAP also provides a variety of Thunderbolt cables to choose from. In addition to Thunderbolt 4 cables, there are also more affordable Thunderbolt 3 cables for Thunderbolt 3 computers, allowing you to meet high-speed transmission at a lower cost.



Slot # 1 support network, M.2 SSD, JBOD expansion, FC, and wireless expansion cards



Integrated dual 2.5 GbE ports, and expandable to 25GbE high-speed network with an optional NIC

SMB Sequential Throughput (1MB) 591 MB/s 590 MB/s 600 400 s/8M 200 0 Write Read Test environment : NAS: TVS-h874T-i7-32G OS : QuTS hero h5.0.1 Volume type: RAID 5; 8 x Samsung 860 EVO 1TB Client PC: Windows Server 2019, AMD EPYC 7232P 3.0GHz, 64GB RAM, IOmeter : RAM*4, 30-sec ramp up time, 3-min seq. run time, 1 w orker, 32-outstanding

2 x 2.5GbE

2 x 25GbE SMB Sequential Throughput (1MB)



Time is money! Upgrade to faster 25GbE and share or backup data quickly!

- When transferring a 4TB (1 hour of 8K) video, 1GbE takes 11 hours.
- When using 25GbE network, it only takes 20 minutes to transfer the same file.





A comprehensive solution to unleash your creativity through various connectivity options



Upload files from Mac/Windows PC over the network

myQNAPcloud One: Whole New Cloud Service offered by QNAP

myQNAPcloud One is a subscription service that provides expanded storage and other benefits to users. With a myQNAPcloud One subscription, users can access more storage space on Cloud Drive, as well as extra features and benefits on other QNAP products.

myQNAPcloud Storage

- NAS backup
- HBS integration
- NAS gateway (HybridMount)
- Config backup



myQNAPcloud Surveillance

- Recording backup
- Playback
- Event / Sub-stream recording



myQNAPcloud Object

- Standard Object service
- S3 Compatible (Partial / Quota / ACL)
- Support Object Lock & Lifecycle
- Data Migration
- Cross-Site

Replication



QNAP is an official Adobe Partner for video and audio solutions



RNEP × / Adobe

QNAP NAS is the best centralized storage for Adobe users, allowing streamlined collaborative workflows on projects of all types (including photos, graphics, videos, and music). Higher file transfer performance can be achieved using a QNAP NAS with 2.5GbE, 10GbE, or ThunderboltTM connectivity, and storage capacity can be scaled up for larger storage spaces to support your amazing creative work!

Built in HDMI port for video output or Surveillance station

Intel UHD Graphics 730/770

HDMI 4K output

1 x HDMI 1.4b 1920 x 1080, 60Hz



Up to 32 EUs

-

Dedicated EU for graphic

The only Thunderbolt NAS company in the storage industry offering full selections

	TVS-h874T	TVS-h674T	TVS-472XT	TVS-672XT	TVS-872XT	
ѕки	 TVS-h874T-i9-64G TVS-h874T-i7-32G 	TVS-h674T-i5-32G	TVS-472XT-i3-4G	TVS-672XT-i3-8G	-TVS-872XT-i3-8G -TVS-872XT-i5-16G	
CPU	 Intel[®] Core[™] i9 16-core 24-thread Processor Intel[®] Core[™] i7 12-core 20-thread Processor 	Intel [®] Core [™] i5-124006- core 12-thread Processor, up to 4.4GHz	Intel® Core™ i3 processor		Intel® Core™ i3 processor Intel® Core™ i5 processor	
O.S.	QuTS	hero		QTS		
Memory	64 GB / 32 GB S Maximum 64 G		4 GB SODIMM DDR4 Maximum 64 GB (2 x 32 GB)	8 GB / 16 GB SODIMM DDR4 Maximum 64 GB (2 x 32 GB)		
LAN	2 x 2.5 GbE (2.5	5G/1G/100M)	2 x 1GbE 1 x 10GBASE-T			
Thunderbolt	2 x Thunc	lerbolt 4		2 x Thunderbolt 3		
PCIe	network en	2 x PCIe Gen 4, Upgradeable to a 25GbE network environment Slot 2 preinstalled a Thunderbolt 4 AIC2 x PCIe Gen 3, Upgradeable to a 25GbE network environment Slot 1 preinstalled a Thunderbolt 3 AIC				
M.2	2 x M.2 2280 F	PCIe Gen 4 x4	2 x M.2 2280 PCIe Gen3 x2			
HDMI	1 x HDMI, supp	oort 4K output	1 x HDMI, support 4K output			
USB	1 x Type-C US 2 x Type-A US		1 x Type-A USB 3.2 Gen 1 2 x Type-C USB 3.2 Gen 2 2 x Type-A USB 3.2 Gen 2			



2 x 25GbE SMB Sequential Throughput

Thunderbolt 4 performance



Enterprise-level OS ZFS-based QuTS hero



NAS & QuTS hero O.S. support powerful data reduction technologies to extend SSD endurance

Only available when during inline data Reduces the amount of storage space needed by eliminating duplicate Storage Settings: copies of repeated data. Please note that the system required at least 16 process before writing GB of RAM to enable data deduplication and this function will obviously Compression Deduplication Capacity educe storage performance Performance SSD Cache Fast Clone Synchronous I/O ZFS file system with inline Usage Summary: deduplications and Original Used **Total Files** Public Share Management After Compressio compression feature 124 80.00 GB 50.00 GB Data Reducation Statistics It's the best choice to pair Clear Logs Pastwork Artical Line with the all-flash and SSD Actual Used Past-day Past-week Past-week After Compression After Deduplication 76.61 storage because it reduces the data size and pattern that need to be written to Write the SSD directly. ABCD B 55D 55D **55**D ABCD B B **Deduplication Deduplicated Data** SSD Pool **Original Data Compressed Data** Minimum: 16GBRAM Write to SSDs as sequential **Deduplication** Compression

as much as possible.

Prevent silent data corruption & self-healing



SMB Multichannel for doubled speed

A SMB 3 client automatically establishes multiple connections to the SMB server for a single SMB session. The connection also provides bandwidth aggregation and network fault tolerance. Requirement: Both NAS and Client device support SMB 3.0 protocol. NAS: QTS 5.1.0 (or later), QuTS hero h5.1.0 (or later). Clients: Windows Server 2012 (or later), macOS Big Sur 11.3.1 (or later)



File Station : Easy to use, easy to find

All the files and folders stored on your NAS and connected storage spaces are accessible through a familiar interface, and rich search/sort functions are available to help find files.



Easily make NAS your team collaboration portal with File Station

~	w∃X∃P≌		
	Edit with Office Online	View in Google Docs	Open with Google Chrome Extension
Requirement	CloudLink needs to be enabled	CloudLink needs to be enabled	Use Chrome with extension "Office Editing for Docs, Sheets & Slides" to open
Supported formats	.docx, .pptx, .xlsx	.doc, .ppt, .xls .docx, .pptx, .xlsx	.doc, .ppt, .xls .docx, .pptx, .xlsx
Capabilities	 File collaboration Auto save to NAS in real time 	 Document preview Convert to Google docs for editing & saving in your Google Drive 	 Document preview Convert to Google docs for editing & saving in your Google Drive

- Saving...

Save to NAS in real time



Multi-user online editing

Smart and automatic file management

Qsirch 5

A powerful, GoogleTM-like search tool

- Search image, music, video, document, and email by keyword and filters.
- 5 advanced image search: search by face, text in image, things, color and map.
- Supports Qfiling to perform archival tasks based on your search criteria.

Automatically filing and archiving

Qfiling 3



- <u>2 type of task</u>: filing task, recycling task
- <u>3 type of scheduling rule</u>: one-time, scheduling, real-time
- <u>9 editing module</u>: AI face blur, encryption and decryption, video transcoding and so on

Qsync 5.0 – Cross-device file sync for individuals and teams

Qsync enables efficient file synchronization between a QNAP NAS and linked devices such as computers, laptops, and mobile devices. With Qsync, you can easily access data across all your devices and share it among your team members.





If you own many devices, any file changed on one device will be automatically synchronized with the others.



For team works, any file changed will be automatically distributed to your teams' devices, accelerating and streamlining your workflows.

Easy to use HBS 3.0 app fulfilling backup 3-2-1 practice with deduplication



HBS 3 (Hybrid Backup Sync 3)

Complete 3-2-1 backup strategy and recovery plan: 3 copies < 2 media type < 1 remote backup



All-in-one solution for hosting virtual machines and containerized apps



Virtualization Station allows you to create virtual machines (VM) on Turbo NAS, supporting Windows® < Linux® operating systems.





Container Station

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



High-performance multimedia streaming platform



QuMagie AI smart photo albums and auto classification



CAYIN MediaSign Player HEVC (H.265) video transcoding



Use Cinema28 for multi-room streaming



Snapshots - A standard feature in every QNAP NAS

TVS-h674T / TVS-h874T supports Snapshot, like taking a photo - within seconds the complete status of your NAS system and data is recorded.

QTS supports up to 1,024 snapshots, QuTS hero supports up to 65,536 snapshots

Mitigate the growing threat of

ransomware

Step 1

Regularly update, and use Malware Remover

Step 2

Routinely back up to your NAS, and create multi-version snapshots

Step 3

Back up snapshots to another QNAP NAS



Data security for enhanced data protection



QuFirewall

You can allow/deny IP addresses and regions to prevent unauthorized access and brute force attacks for safeguarding data and service security.



Malware Remover

Regularly scan your NAS using the latest malware definitions. When under attack, infected files will be immediately removed to ensure NAS data security.

uFirewall						- + ×	Malwar
🕎 QuFirewall							
	Fir	ewa	II Profiles : 3	Add F	Profile		0
	Pro	ofile N	lame	Rules	Acti	on	0
	>	0	Basic protection Enabled	6	C	:	
	>	0	Include subnets only	4	C	:	
Firewall ON QuFirewall has denied access to 1 events in the last 24 hours.	>	0	Restricted security	40	Ľ	:	
E Firewall Profiles							
Event Counts							
Capture Events							
🜔 Notification Settings [2							

//alwa	re Remover					- ×
0	Malware Rei	mover				()
0	Scan					
0	Settings			(\mathbf{c})		
Ē	Event Logs	[2		(Å		
				Start Scan		
			Scheduled Scan Daily, 03:00		Last Scan 20 second(s) ago.	
			Instant scan after malware de Enabled	finition updates	Last Scan Status Scan Complete	

Supports up to 24 more HDDs with two JBOD units, add nearly 500TB (24 x 22TB) of storage space

					Maximum # of .	JBOD / RAID ex	kpansion units
USB				NDP	TR-002		2
			في في في في في ال		TR-004		2
				M	TR-004U		2
			finnend,		TL-D800C		2
	TR-002	TR-004	TL-D800C		TL-R1200C-RP		2
					TL-D400S		2
			\frown		TL-D800S		2
					TL-D1600S		2
	TR-004U		TL-R1200C-RP		TL-R400S		2
					TL-R1200S-RP		2
SATA							6
R TL-D400S		D800S	TL-D1600S	TL-R4	R 100S	TL-R1200	OR DS-RP

Note: These expansion units can only be used as an individual storage pool or volume on the NAS. Their storage pool or volume cannot be combined into the connected NAS. NAS applications cannot be installed on

3-year standard warranty covering hardware repair and support services

TVS-h674T / TVS-h874T is backed by a 3year warranty at no additional cost. You can also purchase a warranty extension that extends your warranty coverage up to 5 years total

• For TVS-h674T : EXTW-BROWN-2Y (2-year extended warranty), USD\$ 399

• For TVS-h874T : **EXTW-RED-2Y** (2-year extended warranty), USD\$ 599











TVS-h674T TVS-h874T

Thunderbolt[™] 4 NAS series with an Intel Core processor and PCIe Gen 4 expansion slots, supporting highspeed transfer and expandable to 25GbE network

ONA QNAP 8

Copyright© 2023 QNAP Systems, Inc. All rights reserved. QNAP® and other names of QNAP Products are proprietary marks or registered trademarks of QNAP Systems, Inc. Other products and company names mentioned herein are trademarks of their respective holders.

