TS-473A



Brand: QNAP

Product Code: TS-473A

Availability: 10 **Weight:** 5.54kg

Dimensions: 180.20mm x 199.30mm x

279.60mm

Price: 53,000.00EGP

Short Description

AMD RyzenTM quad-core 2.2 GHz 2.5GbE NAS supports M.2 NVMe SSD and PCIe expansion for adding 10GbE high-speed connectivity and M.2 SSD; QTS and QuTS hero dual operating system for greater flexibility

Description

Featuring an AMD RyzenTM V1000 series V1500B quad-core processor that delivers great system performance with up to quad-core / 8 threads and Turbo Core up to 2.2 GHz. The TS-473A features two 2.5GbE RJ45 ports and two PCIe Gen 3 slots for you to flexibly deploy 5GbE/10GbE networks. Two M.2 NVMe SSD slots for Qtier Technology and SSD Caching enable constant storage optimization. The TS-473A supports QTS and QuTS hero, allowing users to flexibly switch operating system based on their requirements.



• 2.5GbE connectivity

Both 2.5GbE ports are backwards compatible with 1GbE/ 100MbE speeds. Up to 5 Gbps transfer speeds can be achieved by using port trunking.

• Flexible PCIe expansion

Add extra functionality with PCIe cards, including 10GbE ports, SSD caching, extra USB 3.2 Gen 2 ports, wireless networking, or Fibre Channel.

• **GPU** applications

Supports entry-level NVIDIA® graphics cards for video processing or GPU-passthrough to VMs.

• SSD cache acceleration

Features two M.2 PCIe NVMe SSD slots for Qtier Technology and SSD Caching enable constant storage optimization.

• Virtualization applications

Host containerized applications and virtual machines with various operating systems.

Supports QTS/QuTS hero OS

Features QTS operating system and supports switching to ZFS-based QuTS hero for greater reliability.

High performance AMD RyzenTM processor

The TS-473A is powered by an AMD RyzenTM V1000 series V1500 quad-core 2.2 GHz processor with up to 64GB RAM (ECC memory is supported*) and features USB 3.2 Gen 2 ports for speeds up to 10 Gb/s. The TS-473A also provides one USB Type-C port for supporting more devices to transfer large media files across devices, providing you with a more efficient workflow.

Virtualization Certifications Supported by TS-473A



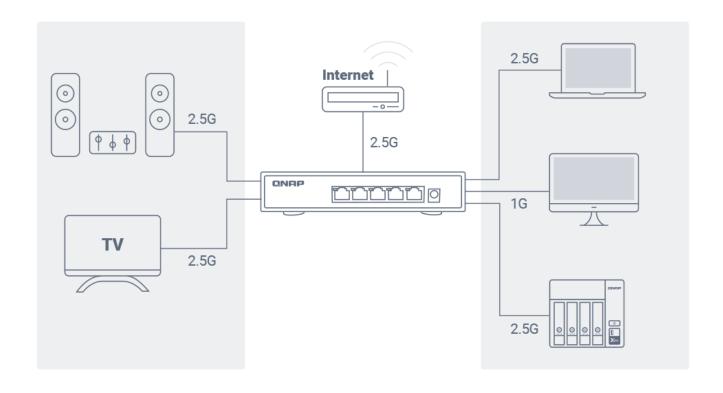






Transform your network with a wallet-friendly 2.5GbE switch

Upgrading your network shouldn't break the bank, and 2.5GbE connectivity provides immediately noticeable improvements compared to standard 1GbE. QNAP offers 2.5GbE switches that supports Multi-Gigabit NBASE-TTM and allows you to use existing CAT5e cables to connect multiple computers and NAS, assisting organizations in implementing high-speed, secure and scalable network environments without going over budget.



Switch to QuTS hero operating system for optimal data integrity and reliability

The TS-473A also supports QuTS hero - QNAP's ZFS-based NAS operating system. Providing end-to-end data integrity, data reduction (inline data deduplication, compression, and compaction), and much more, QuTS hero uses additional system resources to ensure an optimal environment for protecting business data.

QTS

Suited for 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



Obtain performance benefits from M.2 SSD caching

The TS-473A features 2 M.2 NVMe SSD slots for you to enjoy SSD caching or Qtier auto tiering Technology

Improve random data access speeds with an SSD cache

SSD caches accelerate IOPS performance and reduce latency for storage volumes. They are perfect for IOPS-demanding applications (including databases and virtualization) and can significantly improve overall workflows.

Maximize the value of SSDs with Qtier Technology

QtierTM Technology empowers the TS-473A with auto tiering that helps continuously optimize storage efficiency by automatically moving data between M.2 SSDs, 2.5-inch SSDs, and high-capacity HDDs based on the data's access frequency. QtierTM 2.0 features IO-awareness that empowers SSD-tiered storage with a cache-like reserved space to handle burst I/O in real time, greatly maximizing the advantages of SSDs.

Upgrade to 10GbE and abundant capability with PCIe expansion

The TS-473A features two PCIe Gen 3 x4 slots that allows for various expansion cards for expanding application potential.

SAS/ SATA expansion card

Designed for connecting the TS-473A to TL SATA, TL SAS and REXP expansion units

to increase storage capacity.

5GbE/10GbE network card

Enable lightning-fast throughput for bandwidth-demanding tasks, such as virtualization, massive data transmission, and fast backup/restoration.

Wi-Fi 6 wireless adapter

Install a PCIe 802.11AX network adapter (based on the Intel® AX200) in your NAS to create a seamless Wi-Fi 6 network environment or add a QWA-AC2600 wireless adapter with WirelessAP Station to build a wireless access point.

QM2 M.2 SSD/10GBE CARD

Adds M.2 NVMe SSD/ SATA SSD caching or 10GbE (10GBASE-T) connectivity to the NAS for optimized performance and bandwidth.

USB 3.2 GEN 2 (10GBPS) expansion card

Enjoy higher network speeds or boost the USB connectivity for faster file transfer.

Easy and Secure File Management

File Station allows direct management of files stored on the TS-473A and in the cloud. Users can easily upload files from their PC, drag/drop files between folders, rename/delete files, and configure file/folder permissions to prevent unauthorized access. Microsoft Office Online can also be used to directly view/edit Microsoft Office documents stored on the TS-473A. Confidential/sensitive data can be encrypted to add extra security.

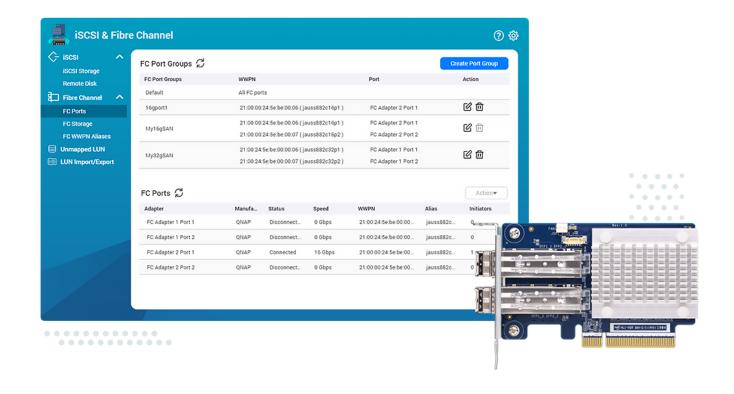
Install a graphics card for GPU-accelerated computing

Graphics cards are optimized for graphical calculations and transformations, but require significantly more power than other hardware. The TS-473A features PCIe slots to support low-profile graphics cards that do not need power cables, including NVIDIA® GeForce® GTX1650 graphics cards to boost performance of applications such as video editing, 4K UHD transcoding, imaging processing in QTS and performance of virtual machines via GPU passthrough.



Build an affordable Fibre Channel SAN environment

Common Fibre Channel Storage Area Networks (SAN) devices are often costly. By installing a QNAP 16Gb Fibre Channel card (QXP-16G2FC 16Gb) in the TS-473A, you can set a Fibre Channel Target using the iSCSI & Fibre Channel app. Moreover, the LUN Masking and Port Binding features provide an additional layer of data security.



High-speed 2.5GbE VM Backup Solution

With Hyper Data Protector, the TS-473A becomes an agentless backup tool for unlimited VMware® vSphere and Microsoft® Hyper-V VM backup. Hyper Data Protector features incremental backup, global deduplication, backup scheduling and recovery compression. With 2.5GbE connectivity, backup and restoration times are greatly reduced, providing a cost-effective solution for disaster recovery.

QNAP Backup & Data Protection Solutions: Complete Apps & Utilities at Your Fingertips

QNAP provides comprehensive solutions for virtually all data protection requirements. Discover an array of apps/utilities to help you back up various sources, including:

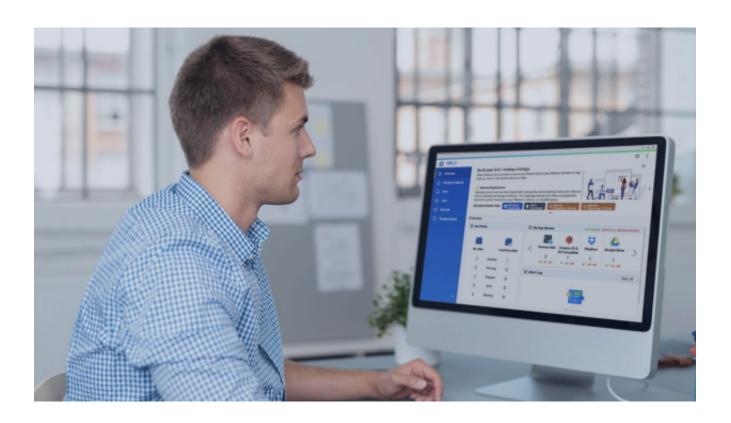
Boxafe – Google Workspace (G Suite) /Microsoft 365 SaaS backup

Hyper Data Protector – VMware vSphere/Microsoft Hyper-V VM backup

Hybrid Backup Sync – QNAP NAS/file server/macOS backup

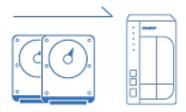
NetBak Replicator – Windows backup

Snapshot – QNAP NAS protection/backup



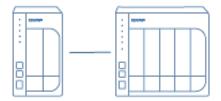
Flexible and economical storage expansion

QNAP provides easy storage capacity expansion solutions. Here are several ways to expand your TS-473A storage as needed to accommodate data and business growth.



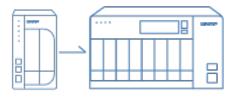
Upgrade RAID Capacity

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



Attach Expansion Enclosures

Connect two TR-004 RAID expansion enclosures, or one 8-bay TL-D800S SATA 6 Gb/s JBOD, and use the QTS Storage & Snapshots Manager to easily handle NAS capacity expansion.



Migrate to a New NAS

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

More productivity applications



Qsirch

QNAP's powerful, Google-like search tool for quickly finding specific images, music, videos, documents, and emails by keywords, color, and more search conditions.



Boxafe

Backup/sync files, emails, calendars and contacts from GoogleTM Workspace and Microsoft® Office 365® into the TS-473A to safeguard enterprise cloud data.



QuMagie

An AI-powered photo management app, supporting automated photo categorization with AI Albums, iOS® Live Photo display, and powerful search tool for ultimate photo management and sharing solution.

Software Specs

Operating System
Supported Client Operating Systems

Supported Browsers

Supported Languages

QTS 5.2.3

- 1. Apple Mac OS 10.10 or later
- 2. Ubuntu 14.04, CentOS 7, RHEL 6.6, SUSE 12 or later Linux
- 3. IBM AIX 7, Solaris 10 or later UNIX
- 4. Microsoft Windows 7, 8, 10 and 11
- 5. Microsoft Windows Server 2008 R2, 2012, 2012 R2, 2016, 2019 and 2022
- 1. Apple Safari (latest version)
- 2. Google Chrome (latest version)
- 3. Microsoft Edge (latest version)
- 4. Mozilla Firefox (latest version)

Chinese (Traditional & Simplified), Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese (Brazil), Romanian, Russian, Spanish, Swedish, Thai, and Turkish

Storage Pool

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SED Storage Pool Maximum Pool size Maximum number of storage pool Volume Type Maximum volume size	?? 308 TB 128 Thick, Thin, Static 250 TB
Maximum number of volume Maximum shared folder size Maximum number of shared folder JBOD Expansion VJBOD / VJBOD Cloud iSCSI Service Fibre Channel Service LUN Type File-based iSCSI LUN Block-based iSCSI LUN Maximum LUN size	Note: At least 4 GB RAM is required. 128 250 TB 512 ?? ?? ?? ?? Thick, Thin ?? ?? 250 TB
Maximum number of targets LUN LUN feature	 Note: At least 4 GB RAM is required. 128 1. LUN Mapping (LUN can be moved between iSCSI and FC) 2. LUN Masking 3. WWPN Aliases Import/Export 4. FC Port Group 5. FC Port Binding 6. Multipath IO (MPIO) 7. Online LUN capacity expansion 8. LUN snapshot 9. LUN snapshot replication and clone
Auto Tiering	• •
RAID Type	Requires minimum 2GB memory. 1. 8-bay (and more): JBOD, Single, RAID 0, 1, 5, 6, 10, 50, 60 2. 6-bay: JBOD, Single, RAID 0, 1, 5, 6, 10, 50 3. 4-bay: JBOD, Single, RAID 0, 1, 5, 6, 10 4. 2-bay: JBOD, Single, RAID 0, 1

RAID Group

To ensure data security, system stability, and storage performance, the maximum number of drives for a single RAID group is now 16 (applicable to RAID 5, RAID 6, RAID TP, and subgroups of RAID 50 and RAID 60). Nevertheless, users can combine multiple RAID groups into a large storage pool that contains more than 16 drives, using RAID 50, RAID 60, or RAID 10 as the RAID configuration. This enhancement will only be applied to new RAID groups. All existing RAID groups and storage systems will not be affected.

RAID Level Migration ??

RAID Expansion (by adding Disk) ??

RAID Expansion (by replacing bigger ??

Disks)

Storage Pool Expansion (by adding RAID

Group)

LUN Snapshot

RAID Hot Spare Global, Local

RAID Sync/Rebuild/Scrubbing ??
Internal drive EXT4

External drive EXT3, EXT4, NTFS, FAT32, HFS+, and

??

exFAT (optional for ARM model)

Note: To use exFat in certain models you must purchase an exFAT driver license from License Center.

?? Disk, Enclosure Locate ?? Disk S.M.A.R.T. Scan 22 Disk S.M.A.R.T. Data Migration ?? Ironwolf Health Management 22 Secure Erase SSD Trim 22 ?? **SSD** Life Estimation 22 **Disk Roaming** ?? Disk Standby ?? Volume Snapshot

Maximum Snapshot (Per System) Check maximum number of snapshots of

your NAS

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Maximum Snapshot (Per Volume / LUN) Check maximum number of snapshots of

	your NAS
Minimum Snapshot Interval	5 minutes
Snapshot Retention Policy	??
Self-serve Snapshot Recovery	??
Application Consisted Snapshot	??
Snapshot Full Clone	??
Snapshot Replica / Vault	??
SSD read-only Cache	??
SSD read-write cache	??
	??
SSD write-only cache SSD Cache Maximum Size	
SSD Cache Maximum Size	Check your QNAP NAS cache capacity and RAM requirements
SSD Cache RAID	0, 1, 5, 6, 10
SSD profiling tool	??
External Device Management	??
Mount Smart Phone (MTP)	??
External RAID Device (QNAP so on)	??
Management (External Device Mode)	• •
External RAID Device (QNAP so on)	??
Management (NAS Mode)	• •
File Server	1. File sharing across Windows, Mac,
The Server	and Linux/UNIX
	2. Microsoft networking (CIFS/SMB)
	3. Apple networking (AFP)
	4. NFS version 3/4 services
FTP Server	1. QuFTP
THI Server	2. FTP, SFTP and TFTP protocols
	3. FTP over SSL/TLS (explicit FTPS)
	4. FXP support
Maximum FTP connection	1024
File Station (Web)	??
Object Storage	??
Local user account	4,096
Local group account	512
Domain user/group account	200,000
-	??
Domain Security Domain Controller	??
	??
Shared folder permission	
Advanced folder permission	??, (AFP, CIFS/SMB, FTP, and File
Windows ACI	Station)
Windows ACL	??, (CIFS/SMB)
User quota	??

Group quota	??
Folder quota	??, (Snapshot shared folder)
Home folder	??
Resource Monitor	??
SNMP	V2, V3
Network recycle bin	 Recover files deleted using AFP, CIFS/SMB, and File Station Automatic cleanup and file type filter
System Log & Notification Center	Log recording: 3,000 event per second
Smart Fan	??
Schedule on/off	??
Internet protocol	IPv4, IPv6
Virtual Switch	??
Port trunking	?? , (7 modes)
VLAN	??
DHCP Server	??
DDNS (Dynamic Domain Name Service)	??
Network access protection with auto-	SSH, Telnet, HTTP(S), FTP, CIFS/SMB,
blocking	and AFP
Security Counselor	??
Malware Remover	??
AES 256-bit Volume Encryption validated	??
by FIPS 140-2 CAVP	
2-step verification	??
Allow/Deny List	??
Access Protection	??
Service binding	??
Firewall	??
VMware vSphere Ready	??
Windows Server certificated	??
Citrix Ready	??
vSphere Web Client Plug-in	??
VMware vSphere VAAI for iSCSI	??
VMware vSphere VAAI for NAS	??
Windows ODX	??
Windows/VMware Snapshot Agent	??
HTTP/HTTPS Connections	TLS 1.0/1.1/1.2/1.3
Supports WebDAV Connection	??
Supports Virtual Hosts	32
Qsync	

[Qsync] Management Mode	Note: At least 1 GB RAM is required. User customization, Central
[Qsync] Qsync client supported platforms	Windows, macOS, Ubuntu, Android, and iOS
[Qsync] Maximum number of version	64
control	
HybridMount	??
	N. A. L. A. CD DAM:
	Note: At least 1 GB RAM is required.
[HybridMount] File Cloud Gateway	Concurrent Connections = 20 Upload & 20
	Download
[HybridMount] Network Drive Mount	??
[HybridMount] Free cloud gateway sessions	
HBS (Hybrid Backup Sync)	??
	Note: At least 1 GB RAM is required.
[HBS (Hybrid Backup Sync)] NAS to NAS	??
backup	• •
•	. 9 9
[HBS (Hybrid Backup Sync)] Cloud Backup	
[HBS (Hybrid Backup Sync)] Cloud Sync	??
[HBS (Hybrid Backup Sync)] 2-way and	??
Active Sync	9.9
[HBS (Hybrid Backup Sync)] Backup Deduplication	??
[HBS (Hybrid Backup Sync)] Apple Time	??
Machine Backup	• •
[HBS (Hybrid Backup Sync)] External drive	. 22
backup	· ·
[HBS (Hybrid Backup Sync)] Maximum	400
number of backup job	
Hyper Data Protector	??
Boxafe	??
	Note: At least 4 GB RAM is required.
[Boxafe] Office 365 Backup	??
[Boxafe] Google Workspace Backup	??
[Boxafe] Full-text search	??
Qsirch	??
	Note: This feature is supported by all QNAP
	NAS devices with at least 2 GB of memory
[Osinch] Duovierre	Photos music videos PDEs Cmail and

Photos, music, videos, PDFs, Gmail, and

[Qsirch] Previews

[Qsirch] Integrate Mac Finder [Qsirch] Advanced picture search [Qsirch] Search filters QuMagie	others ?? ?? ?? ?? ??
[QuMagie] Browse photos [QuMagie] Virtual and smart albums [QuMagie] AI-assisted photo management Antivirus (free) McAfee (License) QVPN Service	Note: At least 1 GB RAM is required. ?? ?? People, things, places, and others ?? ?? ??
[QVPN Service] Remote Access	Note: At least 1 GB RAM is required. PPTP, L2TP/IPSec, OpenVPN, WireGuard, QBelt (QNAP proprietary)
[QVPN Service] Supported utility and	Windows, macOS, iOS, and Android
mobile app	100
[QVPN Service] Supported maximum clients	100
LDAP Server	??
RADIUS	??
SQL server	??
License Center	??
Multimedia Console	??
Photo Station	??
Music Station	??
Video Station	??
Download Station	??
Notes Station	??
Qfiling	??
Media Streaming add-on	??
QmailAgent	??
QuWAN	??
DA Driver Analyzer	??
Q'center	??

Note: The application is available in the App Center and in virtual appliance marketplaces (VMware vSphere ESXi and Microsoft Hyper-V).

Q'center Server Q'center Agent Connect to Q'center	?? ?? ??
Virtualization Station	??
[Virtualization Station] Supports Virtual machine instances	Note: At least 4 GB RAM is required. Windows, Linux, Unix, and Android
[Virtualization Station] VM importing, exporting, cloning, snapshot capturing, backup, and restoration	All function is Fine.
[Virtualization Station] Virtual switches	Can create a virtual switch
[Virtualization Station] GPU pass-through [Virtualization Station] Suggested number of virtual machine instances	Not support GPU 8
	The actual number of virtual machine instances may vary by the memory installed on NAS (e.g. 1 VM= 1 thread for 1 vCPU and 1GB memory). Please expend memory if needed.
Container Station	??
[Container Station] Supported type	Note: At least 1 GB RAM is required. LXC/LXD and Docker
	Note: LXD has been supported after Container Station 2.4
[Container Station] Docker Hub Registry [Container Station] Container importing and	?? 1 ??
exporting [Container Station] Console mode	??
Linux Station	??
	Notification: At least 4 GB RAM is required.
[Linux Station] Supports Ubuntu versions Linux Station Center QVR Pro	18.04, and 20.04

Note: At least 4 GB RAM is required. The maximum number of channels supported varies by NAS model, network

configuration, and camera settings. For more information,

visit https://www.qnap.com/go/qvr-nas-

selector.

[QVR Pro] Recording Technique Index database based

[QVR Pro] License Type Perpetual

[QVR Pro] User-defined trigger events ?? [QVR Pro] Metadata ??

[QVR Pro] QVR Pro Client (Desktop) Windows, macOS, and QNAP HybridDesk

Station

[QVR Pro] QVR Pro Client (Mobile) Android and iOS

[QVR Pro] Recording camera streams H.264 [QVR Pro] Free built-in camera channels 8 OVR Elite ??

Note: At least 1 GB RAM is required. The maximum number of channels supported varies by NAS model, network

configuration, and camera settings. For more

information,

visit https://www.qnap.com/go/qvr-nas-

selector.

[QVR Elite] Recording Technique Standard MP4 file based

[QVR Elite] License Type Subscription-based

[QVR Elite] User-defined trigger events ??

[QVR Elite] QVR Pro Client (Desktop) Windows, macOS, and QNAP HybridDesk

Station

[QVR Elite] QVR Pro Client (Mobile) Android and iOS

[QVR Elite] Recording camera streams H.264

[QVR Elite] Free built-in camera channels 2 QVR Pro Client ??

[QVR Pro Client] Dynamic View Layout ?? [QVR Pro Client] Windows ??

[QVR Pro Client] Windows ?? [QVR Pro Client] Mac ??

[QVR Pro Client] HybridDesktop ??
[QVR Pro Client] iOS ??

[QVR Pro Client] Android ??

QVR Center ??

Note: At least 4 GB RAM is required.

[QVR Center] Log management ??

[QVR Center] Central monitoring across ??

multiple servers QVR Guard

??

Note:	At least	4 GB	RAM	is	required.
11010.	1 It Icast	$\neg \cup D$	177 7111	10	required.

[QVR Guard] Failover design	??
[QVR Guard] Viewing task details	??
[QVR Guard] Automatic switch between	??
Standby and Takeover modes	
QVR Face	??

The maximum number of channels supported varies by NAS model, network configuration, and camera settings. For more information,

visit https://www.qnap.com/solution/qvr-

face/en-us/

QVR DoorAccess ??

Specification

Specification	
NAS	
CPU Model	AMD Ryzen TM Embedded V1500B 4-core/8-thread
	2.2 GHz processor
CPU Architecture	64-bit x86
Hardware Encryption	?? (AES-NI)
Engine	
Memory	8 GB SODIMM DDR4 (1 x 8 GB)
Drive Bays	4
Compatible Drive Type	3.5-inch SATA hard disk drives 2.5-inch SATA
	solid state drives
Hot Swappable Drive	??
System Fan	System fan: 1 x 120mm CPU fan: 1 x 60mm
Power Supply Unit /	250W, 100-240V AC, 50-60Hz, 3.5A
Adapter	
Total Memory Slots	2 x SODIMM DDR4 Support ECC memory
Maximum Memory	64 GB (2 x 32 GB)
Capacity	
M.2 Drive Slots	2 x M.2 2280 PCIe Gen3 x1 slots
PCIe Expansion	2 Slot 1: PCIe Gen 3 x4 Slot 2: PCIe Gen 3 x4
Form Factor (RU)	Tower
Graphic Processors	Optional via a PCIe adapter
Floating Point Unit	??
Hardware-accelerated	Optional via a PCIe adapter

Transcoding	
Flash Memory	5GB (Dual boot OS protection)
SSD Cache Acceleration	??
Support	
Wake on LAN (WOL)	??
Jumbo Frame	??
USB 3.2 Gen 2 (10Gbps)	3 x Type-A USB 3.2 Gen 2 5V/1A 10Gbps 1 x
Port	Type-C USB 3.2 Gen 1 5V/1A 5Gbps
HDMI TM Output	Optional via a PCIe adapter
LED Indicators	Status/Power, USB, LAN, Drive 1-4, M.2 SSD 1-2
Buttons	Power, Reset, USB Auto Copy
Operating Temperature	0 - 40 °C (32°F - 104°F)
Storage Temperature	-20 - 70°C (-4°F - 158°F)
Relative Humidity	5-95% RH non-condensing, wet bulb: 27?C
	(80.6?F)
Power Consumption: Disk	19.576
Standby Mode	
System Warning	Buzzer
Max. Number of	2000
Concurrent Connections	
(CIFS) - with Max.	
Memory	

Product Gallery









