QNAP TS-AI642-8G NAS/storage server Tower ARM Cortex-A76 8 GB Black

Model: TS-AI642-8G

Manufacturer: QNAP

EAN: 4711103084335

Product Code: 20042

R19,871

TS-AI642

AI NAS with a power-efficient ARM SoC processor and NPU for AI-powered video and image recognition applications

The next-generation TS-AI642 AI NAS is specifically designed for AI-powered video and image recognition applications. Adopting the 64-bit ARM Cortex-A76/-A55 SoC octa-core processor with up to 6 TOPS NPU (Neural network Processing Unit), the TS-AI642 not only tackles image processing and analysis tasks, but also offloads CPU workloads when running AI applications to reduce system operation power consumption. With powerful computing performance, high-capacity storage space and flexible I/O expandability, the TS-AI642 allows enterprises to easily deploy an AI NAS solution for

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video surveillance, image recognition, and face recognition applications.

Expand storage capacity up to 18 hard drives

The TS-AI642 supports a storage capacity of up to 110 TB by installing six 3.5-inch 22 TB hard drives in RAID 5. By connecting a TL-D1600S QNAP storage expansion unit, you can add an additional twelve hard drives to the TS-AI642 to achieve up to 350TB storage space to meet growing storage requirements. Or connect TR Series storage expansion units to add Hardware RAID protection for expanded storage.

NPU accelerates on-device AI performance. 3x Faster face recognition.
Adopting an NPU (Neural network Processing Unit), the TS-AI642 boosts QNAP AI Core (the AI-powered engine for image recognition) performance for high-speed face and object recognition.

QuMagie photo management

NPU greatly accelerates image recognition performance when uploading pictures in QuMagie, realizing intelligent classification.
200% performance boost in image recognition

Qsirch full-text search engine

NPU accelerates AI OCR image recognition technology to make capturing text in images more efficient.
20% performance boost capturing text from images with AI OCR

QVR Face Insight facial recognition

QVR Face instantly recognizes faces and runs analytic tasks within 0.2 seconds. NPU allows more IP cameras to be analyzed at the same time.
10 cameras for real-time attendance management analytics

QVR Human people counting solution

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QVR Human provides real-time counting data and analytics, and NPU allows more IP cameras to be analyzed at the same time.
3 cameras for real-time analytics

Efficient image search with AI photo management

TS-AI642 is the best photo and file storage center. Store and organize thousands of photos and find them anytime you want with powerful AI image recognition.

QuMagie smart photo management

By auto-organizing thousands of photos by People, Things, or Places, QuMagie creates AI albums for smarter filtering and faster searching.

Qsirch fast file search

As powerful as Google™, Qsirch allows you to find files faster and smarter by using keywords, color, and metadata. AI OCR image recognition technology recognizes and captures text inside images.

Smart surveillance

The TS-AI642 provides a professional surveillance NAS solution, compatible with 6,000+ IP cameras of 190+ brands and thousands of ONVIF network cameras. Full HD (1080p) surveillance video recordings of 2 cameras can be stored for 2 years.

Next-generation 2.5G NAS with power-efficient ARM SoC 8-core processor

The TS-AI642 adopts the ARM Cortex 64-bit-A76/A55 SoC octa-core processor with ARM Mali-G610 MC4 GPU, offering excellent computing performance at a low power comsumption. TS-AI642 has one 2.5GbE port and one PCIe slot for upgrading to 10GbE connectivity. SATA 6Gb/s drives are supported to deliver reliable read/write performance for hosting versatile NAS applications in offices.

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Processor

ARM Cortex 64-bit A76/A55 octa-core processor (2.2 GHz/1.8 GHz)

NPU

Up to 6 TOPS NPU high compute performance for boosting high-speed face and object recognition.

Memory

8 GB RAM (non-expandable)

Connections

Two USB 3.2 Gen 1 (5Gbps) ports and two USB 2.0 ports

Abundant I/O capabilities with PCIe expansion

The TS-AI642 has one PCIe Gen 3 x2 slot, allowing you to increase its application potential.

Simple Backup

Superior hardware performance with an all-in-one Backup Solution to speed up backup/recovery tasks.

Multi-version snapshots mitigate ransomware threats

The TS-AI642 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.

Volume and LUN snapshots

Take snapshots in seconds and revert the entire volume/LUN back to a specific point in time to prevent loss of important data.

Instantly restore snapshots

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Snapshot content can be quickly restored to a local NAS, or restored on a folder/file basis to a local/remote NAS or cloud storage. You can also conveniently view and restore snapshots from the client side.

Back up snapshots

Multiply data protection by backing up snapshot files! Replicate volume/LUN snapshots in the TS-AI642 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.

Host container applications

If you are curious about Docker or are a hobbyist developer, Container Station on the TS-AI642 integrates Docker® lightweight virtualization technology, allowing you to run all kinds of self-contained applications. You can download apps from the built-in Docker Hub®, including popular and fully-configured applications, and deploy them with just one click. From smart homes to multimedia applications, you can explore your creativity and bring containerized applications to life.

Besides Container Station, more apps (including tools for backup/sync, content management, communications, download, and entertainment) are available from the App Center. Simply click and install on-demand to further extend the functionality of your TS-AI642.

Comprehensive security and privilege settings

The TS-AI642 is loaded with flexible privilege settings and security measures. Besides IP blocking, QNAP Authenticator, 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 TS-AI642 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.

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Simplified privilege settings

The TS-AI642 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 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 TS-AI642 as a VPN server, and WireGuard® VPN service with an easy-to-use interface for setting up a secure connection.

Security Counselor

A security portal for the TS-AI642 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 TS-AI642 using the latest malware definitions. If infected files are detected, they will be immediately removed to ensure NAS data security.

The best file storage and collaboration center

The TS-AI642 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.

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File Station

Manage, access, and share all the files in the TS-AI642 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 TS-AI642 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.

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.

Free exFAT support

exFAT is a file system that supports files up to 16EB and is optimized for flash storage (such as SD cards and USB devices) - helping accelerate large media file transfer and sharing.

Flexible and economical storage expansion

QNAP provides easy ways to expand your storage capacity. Here are several ways to expand your TS-AI642 storage as needed to accommodate data and business growth.

Attach QNAP expansion enclosures

Connect expansion enclosures to the TS-AI642, and manage NAS storage expansion with the user-friendly Storage & Snapshots Manager app.

Mount cloud storage or remote file servers

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Mount cloud storage or remote file servers to expand the capacity of the TS-AI642 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.

A health check for your hard drives

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.

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