

16-bay Turbo NAS

TS-1635

High-capacity NAS with two 10GbE SFP+ ports and Annapurna Labs Alpine AL-514 quad-core 1.7GHz ARM Cortex-A15 processor



Easily build a private cloud with the Qcontactz contacts management function, Qsirch full-text search tool, and QmailAgent email client.



Qcontactz



Qsirch



QmailAgent

Tool-free installation for 12 x 3.5" HDD and 4 x 2.5" SSD
**High performance, energy efficient,
 and ultra-large data storage center
 with 4GB/8GB RAM**

Expandable with a 10GbE network card



Includes 2x integrated 10GbE SFP+ network ports

VJBOD allows you to expand the storage capacity of other QNAP NAS using the TS-1635



QIoT Containers helps structure IoT environments and quickly deploy applications



- Comprehensive Hybrid Backup Sync app for centralized data management and multi-point data backup, instant recovery, and flexible synchronization
- Supports SSD caching and features hardware-accelerated encryption
- Connect up to two QNAP UX-800P storage expansion units, both with the potential to install 8 disks to boost storage capacity

Easily establish a small surveillance system with **8 free camera licenses** (expandable to 40)



**Epic 16-bay storage capacity,
quad-core CPU and
dual 10GbE SFP+ ports**

TS-1635

**12 x 3.5" or 2.5" SATA
6Gb/s HDD/SSD**

32Gb/s total bandwidth, tiered storage and system cache

LCD Screen

Monitor the real-time status of the NAS with just a quick glance

1x PCIe Expansion Slot

PCIe Gen2 x2 bus, supports installing a 10GbE or GbE network card

2 x 10GbE SFP+ Network Ports

Future proof your IT infrastructure for high-speed 10GbE networks

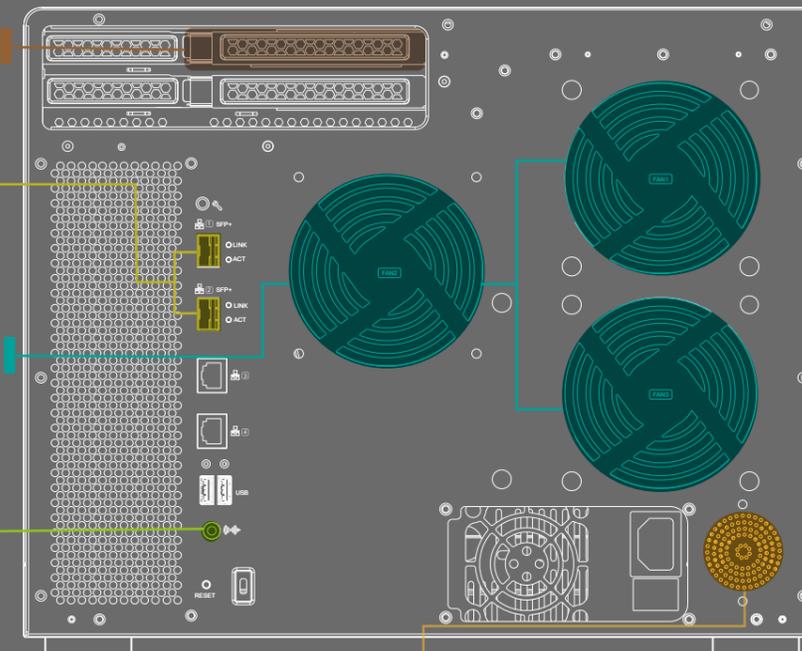
Efficient Cooling System

3x 9.2cm fans that are controlled based on hard drive and system temperatures, providing a cool and quiet NAS

3.5mm Audio Output

Connect the NAS to speakers or an audio system

Rear View

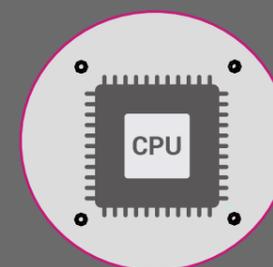


Integrated Speaker

Provides vocal system warnings and audio playback

Annapurna Labs Alpine AL-514 Quad-core 1.7GHz Energy-efficient Processor

ARM® Cortex-A15 architecture with power-saving and high-performance hardware encryption



A Fanless CPU Cooler

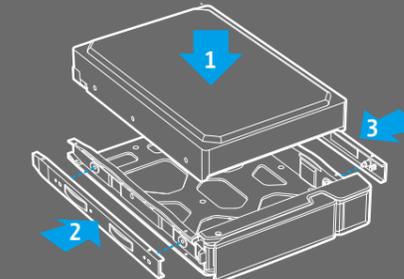
Efficient heat dissipation and near-silent running

4GB or 8GB RAM

Supports up to 16GB DDR3 SODIMM RAM

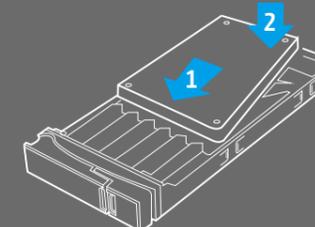
Tool-free HDD and SSD installation

3.5" HDD installation



★ Also supports screw-mounted 2.5" SSD/HDD

2.5" SSD installation

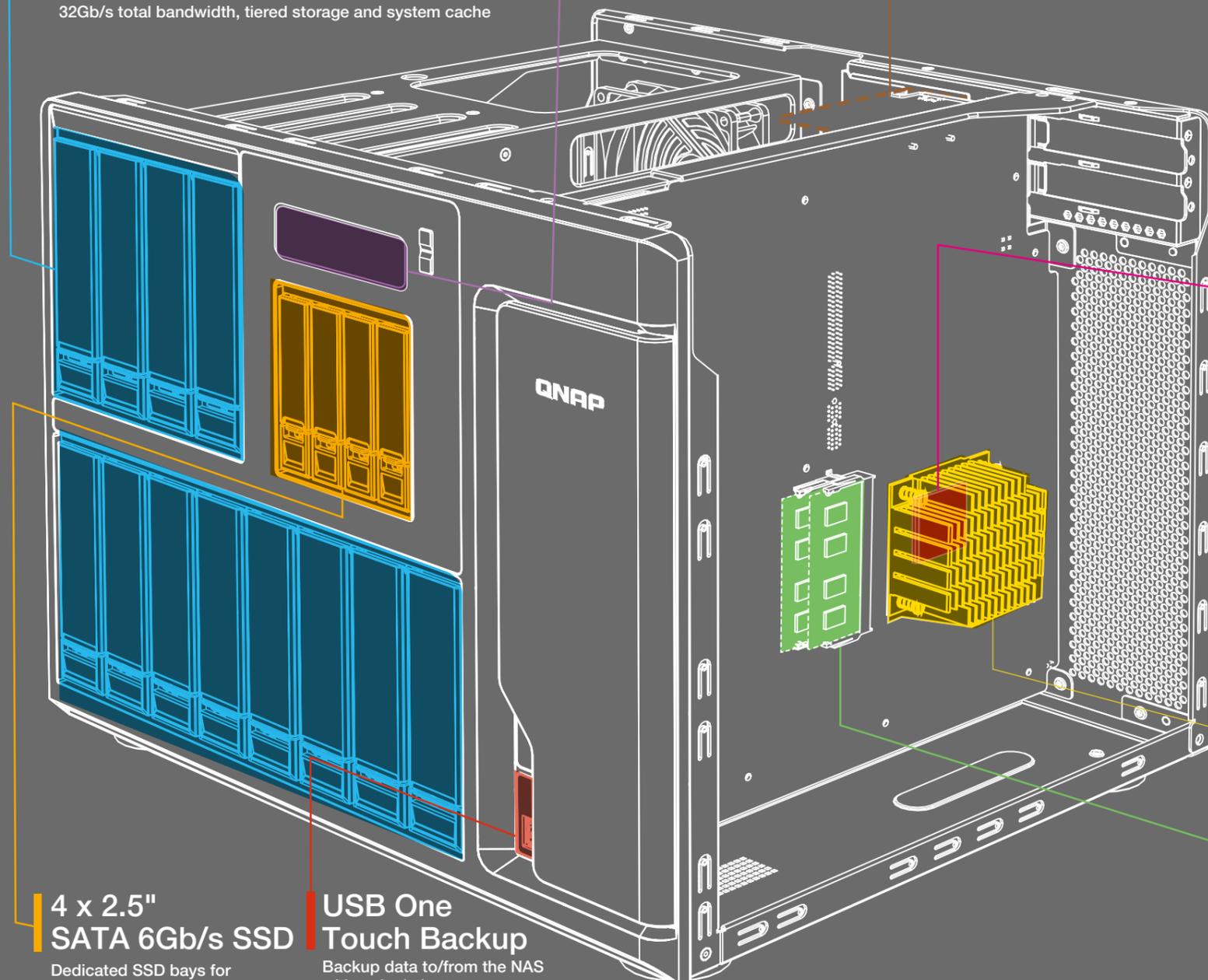


4 x 2.5" SATA 6Gb/s SSD

Dedicated SSD bays for caching or auto tiering

USB One Touch Backup

Backup data to/from the NAS with a single button

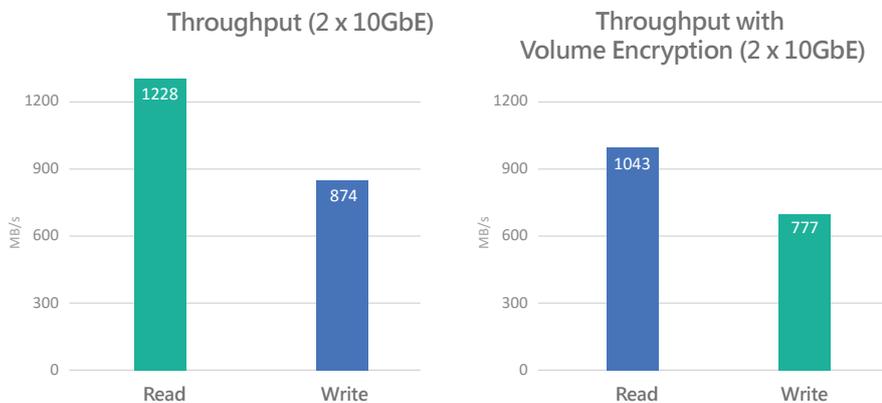


TS-1635 supports 16 hard drives, offering you a high-capacity and high value-for-money quad-core NAS data storage solution. The TS-1635 is in-built with two 10GbE LAN ports, allowing you to work in 10GbE network environments with high efficiency; it also supports VJBOD (Virtual JBOD) virtual network storage expansions for expanding the capacities of other QNAP NAS in a cost-effective and efficient manner; Container Station helps you develop and deploy Internet of things (IoT) applications quickly and add new value to your business. The TS-1635 can meet all your business needs in terms of data backup, recovery, private cloud, virtualization, storage and other functions. It is the best storage solution for 10GbE network environments.



10GbE high-speed network transmission

10GbE (10 Gigabit Ethernet) high-speed network transmission is pertinent to businesses seeking high work efficiency. It is particularly important for operations requiring high bandwidths, such as resource-intensive virtualization applications, express backup, and for restoring a large number of files. The TS-1635 is reasonably priced to help SMBs build a safe and reliable 10GbE network storage environment.



Tested in QNAP laboratories. Data may vary due to differences in physical environments.

Test environment

NAS:

OS: QTS 4.2.2
 Disk Group: RAID 5; 16 x Intel SSD DC S3500 240GB
 SSD: Connect the NAS directly to the computers

Client Computer:

Intel® Core™ i7-4770 3.40GHz CPU; DDR3L 1600Hz 16GB; WD 1TB WD10EZEX; Intel Gigabit CT (MTU 1500); Windows® 7 Professional 64bit SP1
 IOMeter Settings: direct docking of the NAS, transfers 8GB file within 3 minutes. Block size: 64KB, SMB2.0

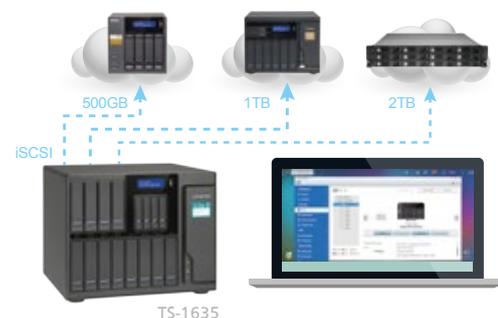
SSD cache acceleration

The TS-1635 provides dedicated 2.5" bays for up to 4 SSDs which can be used for storage volumes and SSD caching. It is perfect for improving the overall workflow of IOPS-demanding applications and allows the best of both cost and performance by combining SSDs with HDDs.



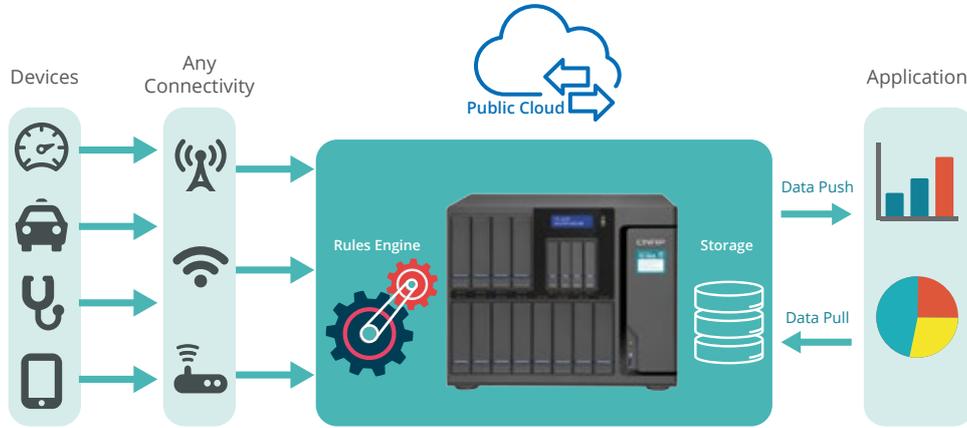
VJBOD: Maximize storage utilization across multiple QNAP NAS

Besides using expansion enclosures, there is an additional option to expand NAS storage capacity. QNAP VJBOD (Virtual JBOD) is network-based JBOD, allowing you to expand the storage of a QNAP NAS with multiple QNAP NAS units. The TS-1635 offers great potential for economically expanding the storage of other QNAP NAS with VJBOD, and to create virtual storage pools and volumes on virtual disks for operating NAS services.



Rapidly deploy IoT apps with Container Station

QNAP Container Station exclusively integrates LXC and Docker® lightweight virtualization technologies, allowing you to operate multiple isolated Linux® systems on the TS-1635 as well as download apps from the built-in Docker Hub® Registry. It supports container import/export and permission settings, and features an informative dashboard and flexible user interface for you to manage multiple containers. What's more, Container Station now also provides the QIoT Containers platform and offers countless handy containerized apps for developers to easily apply, rapidly develop, and conveniently deploy IoT applications. With the TS-1635's high potential storage capacity and its support for QIoT Containers, it can easily build a secure private cloud to store IoT data and to quickly create diverse IoT applications.



Qsirch: a smarter, faster way to search

The TS-1635 supports Qsirch, a proprietary search engine for quick file searching. In addition to previewing files with thumbnails, content abstract and keyword hints, Qsirch allows you to search through .eml files stored on the TS-1635 and to use customized search criteria such as date, size, sender and recipient. Qsirch even remembers your search history allowing you to quickly navigate to files you've previously searched for. The Google Chrome™ extension - Qsirch Helper - can also be used to search for files on your NAS when using Google Search™. Qsirch is a huge productivity boost that greatly reduces the time spent looking for files on the NAS, allowing you to focus on other tasks.



QmailAgent: a mailroom center for your private cloud

QmailAgent is an online email client that helps you manage multiple email accounts, allowing you to access all of your emails and to easily switch between different accounts. It provides complete functionality for composing, reading and organizing emails. You can even attach files, photos and documents directly from the TS-1635 when composing emails. iOS® and Android™ users can use the QmailClient app to quickly check multiple email accounts with mobile devices, and to browse & send emails using the QmailAgent on their TS-1635. You can use QmailAgent together with Qsirch, which supports searching through the .eml files stored on the TS-1635, to make searching through and managing massive amounts of emails much easier.



Qcontactz: easily manage huge amounts of contacts on the NAS

Qcontactz is a dedicated app for centrally storing and managing contact information for colleagues, business partners, family, and more. A near-limitless number of contacts can be stored on the TS-1635, with the ability to sort them into groups and to encrypt sensitive/confidential contact information. Qcontactz supports manually adding contact information and importing from multiple Google accounts, CSV files, and vCARD 3.0 files. Qcontactz can also export contacts as CSV or vCARD 3.0 files. Important and frequently-used contacts are also automatically learned by Qcontactz for greater organization, and a smart search function is provided. 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 iPhone and Android phones is also available for transferring contacts from your phone to your NAS and to remotely access all of the your contacts stored on the NAS.



QTS - Simple and efficient

Thanks to the intuitive user interface of QTS, your NAS experience is smarter, smoother and spectacular. Its modern flat design streamlines loading times, and the intelligent desktop allows you to quickly find desired functions, create desktop shortcuts or group shortcuts, monitor important system information on a real-time basis, and open multiple application windows to run multiple tasks concurrently, bringing greater working efficiency. QTS breaks the barriers of devices, platforms and geography to bring optimized cloud experiences to you.



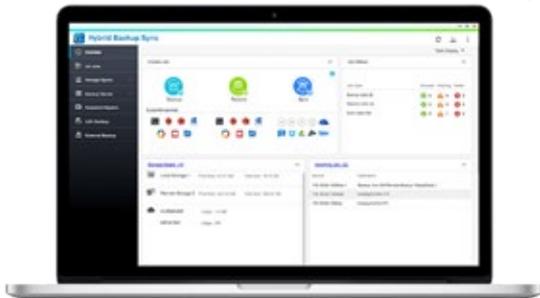
Cross-platform file sharing, centralized data storage

The TS-1635 supports SMB/CIFS, NFS, and AFP protocols for file sharing across Windows®, Mac®, Linux®/UNIX® networks. Data, logs and ISO images of CDs and DVDs can be centrally stored on the TS-1635 and protected by an integrated antivirus solution. The Windows AD® and LDAP services enable system administrators to configure user permissions by using an existing Windows AD server, LDAP server or built-in LDAP service. The TS-1635 supports SAMBA v4 and can act as a Windows domain controller to manage privilege settings.



Centralize backup, restoration and synchronization with Hybrid Backup Sync

Hybrid Backup Sync consolidates backup, restoration and synchronization functions into a single QTS app (via RTRR, rysnc, FTP, and CIFS/SMB protocols) and provides comprehensive data backup and disaster recovery solutions by easily transferring data to local/remote QNAP NAS, remote servers, and to cloud storage spaces. You can synchronize files between the TS-1635 and cloud storage in real time (including Amazon® Glacier, Azure™ Storage, Google Cloud Storage™, Google Drive™, Microsoft® OneDrive®, Dropbox®, Amazon® Drive, Yandex® Disk, Box®, Amazon® S3, OpenStack Swift and WebDAV cloud services). Hybrid Backup Sync supports multi-version backup, flexible job scheduling, file compression, and more.



Real-time file synchronization across multiple devices

Qsync utility turns your TS-1635 into a safe, high-capacity data center for file synchronization. Any file uploaded to the TS-1635 will be made available for all linked devices, such as computers, laptops or mobile devices. Qsync is especially useful for frequent travelers to manage files and always have the most up-to-date files on different devices. Qsync provides multiple ways for file synchronization and group file sharing, greatly enhancing the flexibility of team projects and collaboration. It also supports centralized configuration, and allows you to remotely erase the Qsync folder on lost devices to avoid data breaches (this data can be easily restored if the device is recovered/found).





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 to safeguard your office environment, or install the Vcam mobile app to turn your device into a network camera to instantly record to your TS-1635. The TS-1635 offers 8 free IP camera channels and you can expand up to 40 channels by purchasing additional licenses.



Verbal system warnings and audio output

The TS-1635 comes with a built-in speaker that supports verbal system warnings (available in Chinese and English). You will be notified immediately with precise alerts regarding system events, helping you to quickly respond. The built-in speaker also allows for direct audio playback, allowing for music files and sound effects to be played without needing extra equipment.



Expand storage capacity easily

The TS-1635 supports online capacity expansion by connecting two QNAP expansion enclosures for storing rapidly-growing data, especially ideal for storage-intensive applications such as video surveillance, data archiving, TV broadcast storage, and more. You can gradually expand the TS-1635's storage on demand, and use the QTS Storage Manager to easily handle the NAS capacity expansion and storage expansion enclosure management. With the support of QJBOD Express (JBOD enclosures roaming)*, you can just connect a large capacity QNAP expansion enclosure to the TS-1635, and migrate data to another NAS through the JBOD enclosure without network connectivity.

The maximum raw storage capacity available by connecting QNAP expansion enclosures:

QNAP NAS Model	QNAP Expansion Enclosure	No. of Expansion Enclosures	Total HDD No.(NAS + Enclosure)	Max. Raw Capacity (TB)**
TS-1635	UX-800P	2	28 x 3.5" + 4 x 2.5"	284
		1	20 x 3.5" + 4 x 2.5"	204
	UX-500P	2	22 x 3.5" + 4 x 2.5"	224
		1	17 x 3.5" + 4 x 2.5"	174

* RAID groups of storage pools cannot cross multiple enclosures.

** The maximum capacity is calculated by using 3.5" 10TB HDDs and 2.5" 1TB SSD drives.

Note: You can create a volume over 16TB, but its storage space cannot be expanded. Volumes smaller than 16TB can only be expanded up to 16TB by using online capacity expansion.

For the best use of storage space on your NAS, please create multiple volumes.

Install-on-demand apps via App Center

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 TS-1635's functionality.



TS-1635 Turbo NAS



Hardware Specifications

Ordering P/N	TS-1635-8G	TS-1635-4G
Processor	Annapurna Labs Alpine AL-514 quad-core 1.7 GHz ARM® Cortex-A15 processor	
Hardware encryption acceleration	✓	
System memory	8GB DDR3 (1 x 8GB)	4GB DDR3 (1 x 4GB)
Maximum memory	16GB DDR3 RAM	
Total memory slots	2 x SODIMM DDR3 (For dual-DIMM configurations, you need to install a pair of DDR3 memories with the same speed, capacity, and chip)	
Flash	512MB	
Drive type	12 x 3.5"/2.5" SATA 6Gb/s HDD/SSD + 4 x 2.5" SATA 6Gb/s SSD	
10GbE LAN port	2 x 10Gigabit SFP+ LAN ports	
GbE LAN port	2 x Gigabit RJ45 LAN ports	
USB port	3 x USB 3.0 ports	
PCIe slot	1 x PCIe Gen2 (x2)	
LED	Status/Power/ LAN/ HDD 1 - 12, SSD 1 - 4	
Button	Power, System Reset	
Others	Kensington security slot, System maintenance port	
Dimension	303.84 x 369.89 x 319.8 mm 11.96 x 14.56 x 12.59 inch (HxWxD)	
Weight	Net Weight: 12.22 kg (26.94 lbs)	Net Weight: 12.32 kg (27.16 lbs)
Operating temperature	0 ~ 40°C	
Relative humidity	5 ~ 95% RH non-condensing; wet bulb: 27°C	
Power consumption	Hard drive sleep: 38.37W Operation: 78.45W (With installation of 12 1TB HDDs and 4 120GB SSDs)	
Power	100-240V~, 3-1.5A, 60-50Hz, 250W PSU	
Fan	3 x 9.2cm system fan (12V DC)	

Software Specifications

Networking protocols	CIFS, AFP, NFS, FTP, WebDAV, iSCSI, Telnet, SSH, SNMP, VPN (PPTP, OpenVPN), L2TP
File system	Internal: EXT4 External: EXT3, EXT4, NTFS, FAT32, HFS+
Supported client O.S.	Windows 7 (32/64-bit), Windows 8 (32/64-bit), Windows Server 2012/2012R2, Apple Mac OS 10.6+, Linux & UNIX
Storage management	QNAP storage pools with flexible Volume/LUN; RAID 0/1/5/6/10, + hot spare, single, JBOD volume types; Storage expansion via max 2 QNAP UX-500P/UX-800P expansion units; SSD read/write cache
File sharing	Max 4096 user accounts, max 512 user groups, max 512 shared folders, max 700 concurrent connections
Applications	Qsirch, Surveillance Station (free 8, max 40), Photo Station, Music Station, Video Station, Download Station, Notes Station, Container Station, Proxy Server, and more
Utilities	Qfinder Pro (Windows/Mac), Qsync (Windows/Mac), myQNAPcloud Connect (Windows), QVR Client (Mac)
Android/iOS apps	Qfile, Qmanager, Qmusic, Qvideo, Qphoto, Qnotes, Qget, Vmobile, Vcam

Accessories

Type	Ordering P/N	Description
Expansion Unit	 UX-800P	QNAP 8-bay expansion unit Dimensions (H x W x D): 185.2 x 298.2 x 235.4 mm Net Weight: 7.3 kg/16.08 lbs
	 UX-500P	QNAP 5-bay expansion unit Dimensions (H x W x D): 185.2 x 210.6 x 235.4 mm Net Weight: 5.1 kg/11.24 lbs
Expansion Card	 LAN-10G1SR	Single-port 10GbE SFP+ NIC
	 LAN-1G1T-1210	Dual-port GbE RJ45 NIC
Memory	 RAM-8GDR3-SO-1600	8GB DDR3-1600 SO-DIMM
	 RAM-4GDR3-SO-1600	4GB DDR3-1600 SO-DIMM

Package Contents

TS-1635 NAS, quick installation guide, 2 GbE RJ45 Ethernet cables, power cable, 2.5" SSD mounting screws pack for 3.5" hard drive trays

Model specifications are subject to change without notice. Please refer to www.qnap.com for the latest information.

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