QNAP®
QNAP SYSTEMS, INC.

Network Attached Storage
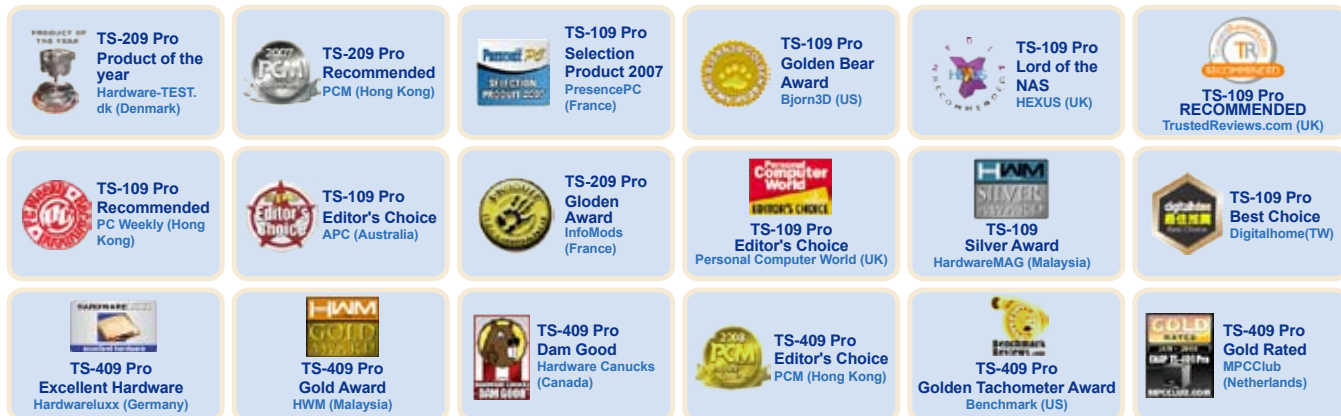### Professional Network Attached Storage Solution Provider

www.qnap.com

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Company Profile

QNAP, with more than 6 years experience in embedded systems, is devoted to be world's leading company in IA (Internet Appliance) field. Our extensive expertise and product lines cover network storage and digital surveillance. QNAP's IA products have received ISO 9001 certification, covering product design, manufacturing and supply. With the mission to be customer 's best partner, QNAP is dedicated to providing top quality products in the market and offering complete solution to our customers.

Awards

TS-209 Pro Product of the year Hardware-TEST. dk (Denmark)	**TS-209 Pro Recommended** PCM (Hong Kong)	**TS-109 Pro Selection Product 2007** PresencePC (France)
TS-109 Pro Golden Bear Award Bjorn3D (US)	**TS-109 Pro Lord of the NAS** HEXUS (UK)	**TS-109 Pro RECOMMENDED** TrustedReviews.com (UK)
TS-109 Pro Recommended PC Weekly (Hong Kong)	**TS-109 Pro Editor's Choice** APC (Australia)	**TS-209 Pro Gloden Award** InfoMods (France)
TS-109 Pro Editor's Choice Personal Computer World (UK)	**TS-109 Silver Award** HardwareMAG (Malaysia)	**TS-109 Pro Best Choice** Digitalhome(TW)
TS-409 Pro Excellent Hardware Hardwareluxx (Germany)	**TS-409 Pro Gold Award** HWM (Malaysia)	**TS-409 Pro Dam Good** Hardware Canucks (Canada)
TS-409 Pro Editor's Choice PCM (Hong Kong)	**TS-409 Pro Golden Tachometer Award** Benchmark (US)	**TS-409 Pro Gold Rated** MPCClub (Netherlands)

Why QNAP?

QNAP provides the best hardware and software design.
Up to 15 languages are supported in our global products.

Strong R&D and quality assurance capability:
- Competitive software and hardware design
- In-house system integration
- Outstanding testing facilities for quality assurance

Innovation is the core value of QNAP's corporate culture and products.
- The first NAS that supports unique "RAID Recovery" (patent-pending technology), TS-401T, 2007
- The first personal automatic backup device, QBack-25, 2006
- The first 2-bay SATA SOHO NAS with RAID 1 and hot-swap function, TS-201, 2006
- The first NAS with built-in P2P download client, TS-101, 2005
- The first 1-bay SATA NAS with unique fanless design, TS-101 (Best Choice of Computex 2006), 2006
- The first embedded network DVR with 4-channel full D1, real-time, MPEG-4 recording, VioGate 340, 2004
- The first 8-bay NAS for SMB- NAS 4300 (Best Choice of Computex 2003), 2003
- The first 1-bay NAS for home and SOHO users- NAS101R, 2003
- The first NAS integrated with wireless LAN and routing functions- NAS2108 RW, 2002
- The first centralized management software of network-based surveillance, supports up to hundreds of cameras- VioGate Master, 2002
- The first SMB NAS with remote replication function-NAS4100, 2002
- The first 4-bay desktop NAS with RAID-5, hot-swap, LCD display, and redundant power supply, 2001

QNAP offers complete network storage product line, including personal backup solution, all-in-one NAS server for home and SOHO, and high-performance NAS for SMB and corporate.

QNAP has been providing high quality storage solutions for more than 6 years and the products are widely recognized by worldwide customers. Over the years QNAP has been acclaimed for its product quality and won lots of grand awards, such as the Best Choice of Computex and Symbol of Excellence etc.

What Makes QNAP NAS Different?

The Most User-friendly User Interface

QNAP's user-friendly user interface design has been acclaimed by lots of product reviews and worldwide customers. All the advanced and complicated functions such as establishing application server and data sharing authority can be managed by the web-based user interface.

Hot-swappable Hard Disks & Automatic Data Rebuilding

Under RAID 1/ 5/ 6 configuration, users can replace a failed disk by a new one without shutting down the system. QNAP NAS will start rebuilding the data to the new hard disk automatically.

RAID Level Disk Configurations + Hot Spare

JBOD, RAID 0/ 1/ 5/ 6 and single disk configurations are provided to offer the users the most complete options for data protection. Hot spare is supported in RAID 5. When a hard drive fails, the system will start rebuilding data onto the hot spare disk. There is no need to replace the failed drive immediately.

Online RAID Capacity Expansion and Online RAID Level Migration

With Online RAID Capacity Expansion, users can select to purchase the most cost-effective hard drives for initial server setup and upgrade to larger ones in the future. All the stored data will be kept and seamlessly moved to the newly installed hard drives. With Online RAID Level Migration, users can start from one drive firstly and add more drive members to upgrade the RAID level in the future with the data retained. There is no need to turn off the server during the process.

LCD Display

Some of QNAP NAS devices are equipped with an LCD display to show the server status, IP address and other information.

Hot-swappable & Redundant Power Protection

QNAP supports industrial standard hot-swappable and redundant power supplies to keep the system running normally in case that any power supply fails.

Remote Data Management

QNAP NAS has unique Web File Manager feature. Users can administrate QNAP NAS and access the data by web browser (HTTP) or FTP client software (FTP) anywhere.

Data Backup & Remote Replication

Combining backup software and NAS, users can easily back up data to NAS. QNAP also provides some models that support data backup from one QNAP NAS to another or to a tape drive. Furthermore, backup jobs can be scheduled for multitasking, and can be done over LAN or WAN.

Embedded Linux

The embedded Linux kernel developed by QNAP for NAS solutions provides a highly stable and efficient platform. QNAP's proprietary OS is stored on flash disks rather than hard drives. That prevents virus infection or HDD damage. Even if all hard drives fail simultaneously, the NAS will work as usual.

Cross-platform Support

All QNAP storage products support different network file protocols. Data can be shared across Windows, Mac, or Unix/Linux OS.

Built-in DNS & DDNS Support

QNAP storage server supports dynamic DNS (DDNS), users can access the server by their own domain name.

Web Page Management

All upgrades and administration can be completed simply via a user-friendly web browser.

User Quota

The administrator can configure users' storage quota. Users who require more storage space can be allocated additional capacity.

Journaling File System

When the server experience abnormal shutdown, Journaling File System enables the server to reboot automatically and resume normal operation.

SNMP Management & E-mail Warning

SNMP management and e-mail warning enable real-time monitoring and instant alert to administrator upon events.

QNAP NAS

WINS Server

This function maps Windows computer names to IP addresses. It increases the speed of computer name resolution and reduces the network traffic.

Backup/Restore User's Settings

Users can back up the user settings like user ID and password, and restore the settings easily.

System Upgrade

Updated versions of QNAP firmware can be downloaded from http://www.qnap.com. Free upgrade service is available.

QNAP Storage Products

| | Portable | Tower | 1U Rack mount |

Target Market

Personal Backup Solution

QNAP provides a series of advanced and unique automatic backup solution for personal users.

QBack Series is equipped with professional backup software and advanced backup technology, including hands-free automatic backup, secure AES 256-bit data encryption, and e-mail backup. Different backup modes are provided with high-speed incremental backup technology to satisfy individual's demand for data backup. It is a series of high-speed and highly reliable data backup solution.

Home/ SOHO

QNAP provides a series of network attached storage (NAS) products: All-in-one Turbo NAS for home and SOHO users.

TS-109/ TS-101 Turbo NAS series are specially designed with power-saving, high performance, fanless and noiseless features. They are continuously upgraded to provide more user-friendly and attractive functions. Turbo NAS supports P2P download and multimedia applications. It is the best choice for users to establish a home-use NAS server for digital home.

QNAP has also re-designed and simplified the features of enterprise-level application server for SOHO and small business users. These features include FTP server, backup server, web server and remote data backup etc. The users can establish their own server via a simple web-based interface without the help of IT professionals. This is the most economic and reliable solution for SOHO users.

SOHO/ SMB and Corporate

QNAP provides a series of Turbo NAS solution for SMB and Corporate. We aim at providing SMB users a series of high performance, easy-to-maintain and low TCO (Total cost of Ownership), and reliable storage solution.

The hardware of Turbo NAS Series adopts power-saving embedded system which is easy to install. The RAID technology provides efficient and secure data storage. Moreover, there are redundant power supply (optional purchase), a handy LCD panel and dual network interface to support network fail-over, load-balancing and multi-IP settings.

With the high value-added software functions Windows Active Directory, Remote Replication and anti-virus engine (optional purchase), Turbo NAS provides all SMB users need for data storage, backup and convenient management in one purchase.

YOUR BEST STORAGE PARTNER

QNAP Personal Backup Solution

QBack-25S Intelligent HAB (Hands-Free Auto Backup) Storage Enclosure

Features

♦ Hands-free and real-time (one-way synchronization) automatic file backup
♦ 4 backup modes: Auto-Backup, Schedule Backup, Instant Backup, and One-Touch-Backup (OTB)
♦ Incremental backup, only modified files and newly created files will be backed up to save time
♦ Back up all files, Outlook & Outlook Express, My Documents, My Favorites and Desktop
♦ Advanced (AES 256-bit) data encryption technology
♦ Anti-shock design to prevent the HDD from unintentional drop damage
♦ Hard disk can be partitioned into 2 disks: Public and secure disks
♦ USB 2.0 interface for faster data transfer
♦ Optional 2.5" hard disk required (Max. 250GB)
♦ QBack Backup Software for Windows Vista(32-bit), XP, 2000, Sever 2003
♦ Guaranteed successful backup

QBack-25 stands out from the crowded competition of totally 28 branded external hard disk boxes.

QBack-25 was awarded "Editor's Choice from Techpowerup, an online media located in Australia and Germany.

Hardware Specifications

Hard Drive	2.5" SATA HDD, up to 160GB (the standard system is shipped without HDD)
Transfer Interface	USB 2.0
LED	Power/ Security
One Touch Button	One touch backup button
Anti-shock Design	PCB bubble & 4-corner anti-shock pad
Dimensions	131.7 x 77.7 x 16.7mm (5.18 x 3.06 x 0.66 inch)
Weight	60.5 g (without HDD)
Operation Temperature	0~40°C
Operation Humidity	0~85% R.H.

Auto-sync Backup **OTB** **AES256-bit Encryption**

Schedule Backup **My Document Backup** **USB 2.0**
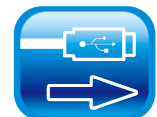
Smart Restore **Outlook & Outlook Express Windows E-mail**

Automatic Backup Software

Supported Operating System	Windows Vista(32-bit), XP, 2000, Server 2003
Professional Backup oftware	Expert mode: Auto-Backup Schedule Backup Instant Backup & Restore
	Express mode: Express backup and restore
	AES 256-bit data encryption
	Incremental backup
	Secure disk management/ file filter/ event management
Languages	English, Traditional Chinese, Simplified Chinese, Japanese, Korean, French, German, Italian, Spanish, Russian
Quick Install Wizard	Clear step-by-step configuration
	Can create disk partition (Public/ Secure disks)
	Set password to protect data

One Touch Backup Button
LED: Security
LED: Power/ Access

POWER(DC 5V)
USB

QNAP

QBack-35S Intelligent HAB (Hands-Free Auto Backup) Storage Enclosure

Features

♦ Hands-free and real-time automatic file backup (one-way synchronization) through the powerful QBack auto-backup software
♦ Multiple choices of backup modes: Auto-Backup (one-way synchronization), Schedule backup, Instant backup, and One-Touch-Button (OTB) backup.
♦ Incremental backup feature for all modes.
♦ Smart detection of backup file size and available storage capacity on the disk to ensure successful backup.
♦ Backup all mails in Outlook & Outlook Express, My Documents, My Favorites and Desktop.
♦ Advanced data encryption technology (AES 256-bit) to make sure the backup data is securely protected at all times.
♦ Hard disk can be partitioned into 2 disks: Public and Secure disks by Quick Install Wizard.
♦ USB 2.0 and eSATA dual-interface for faster backup file transfer.
♦ Optional 3.5" SATA hard disk required: up to 1TB.
♦ Microsoft Windows Vista (32-bit) supported.

QNAP NAS

Hardware Specifications

Hard Drive	3.5" SATA HDD, up to 1TB (the standard package is shipped without HDD)
Transfer Interface	USB 2.0 eSATA
LED	Power / Hard disk access
One Touch Button	One touch backup button
Dimensions	210(D) x 123(W) x 38.5(H) mm
Weight	550g (without HDD)
Operation Temperature	0~40˚C
Operation Humidity	0~85% R.H.

Auto-sync Backup   **USB OTB**   **AES256-bit Encryption**

Schedule Backup   **My Document Backup**   **USB 2.0**
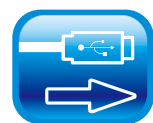
Smart Restore   **Outlook & Outlook Express Windows E-mail**   **eSATA**

Automatic Backup Software

Supported Operating System	Windows Vista (32-bit), XP, 2000, Server 2003	
Professional Backup oftware	Expert mode: Auto-Backup Schedule Backup Instant Backup & Restore	
	Express mode: Express backup and restore	
	AES 256-bit data encryption	
	Incremental backup	
	Secure disk management/ file filter/ event management	
Languages	English, Traditional Chinese, Simplified Chinese, Japanese, Korean, French, German, Italian, Spanish, Russian	
Quick Install Wizard	Clear step-by-step configuration	
	Can create disk partition (Public/ Secure disks)	
	Set password to protect data	

Stand

Power
HDD Access

LED Indicator

One Touch Backup Button

USB

eSATA

Power (DC 5V/12V)

Power Button

QNAP NAS Applications for Digital Home

BitTorrent

TS-109 II (256MB RAM)
TS-109 (128MB RAM)
TS-101

TS-209 II (256MB RAM)
TS-209 (128MB RAM)
TS-201

TS-409 (256MB RAM)

Connect Turbo NAS to Your Digital Home

QNAP's Turbo NAS is a perfect multimedia storage center as well as an engine of your digital home; you can share and enjoy the multimedia contents in a different way.

Enjoy the Multimedia Sharing

iTunes

iTunes Server

Music fans and Apple enthusiasts will be certainly rocked by the coolest music-sharing feature of the Turbo NAS! All your MP3 music can be collectively stored and streamed to Mac or Windows PC. It supports the playlist which users can just turn on the iTunes program and enjoy all the music around your home network!

UPnP Media Server (with built-in TwonkyMedia Server)

QNAP Turbo NAS is a perfect media storage center and works well with UPnP/ DLNA (Digital Living Network Alliance) compliant DMA. Users can use the Turbo NAS and the DMA to play the digital image or video on TV or listen to music or Internet radio without turning any PC. The upgrade in DLNA TwonkyMedia version 4.4.4 on QNAP NAS supports the most popular DivX video streaming to and playing by Sony PS3. The music, image, and video sharing function of PS3 on the network is further exerted. The high compatibility, energy-saving and reliable features have made QNAP NAS the first choice for setting up the digital home multimedia centre.

Multimedia Server for Photo Sharing

Home users can share photos with family and friends by Turbo NAS. By uploading your photos to Turbo NAS, the server automatically generates a web-based photo album with thumbnails and details, such as date, resolution, focal length, and aperture. Home users can browse and share the digital photos in a convenient way!

Web Server with Built-in phpMyAdmin, Joomla!

With the built-in phpMyAdmin, Joomla!, MySQL and SQLite, home and SOHO users can easily set up their own web server. With the editable php.ini support, there is no need of going through all the hassles of setting up a web server. Users can either develop programs by themselves or download a variety of open-sourced applications, such as online shops, forums, blogs, etc.over the Internet.

P2P Download and FTP/ HTTP Download

Web-based Download Station

QNSP Turbo NAS serves as a continuous download machine without turning on your PC. The Turbo NAS supports download through BitTorrent, FTP, and HTTP. For BitTorrent download, the brand-new BT engine is embedded with the Turbo NAS. Users will enjoy the super high speed through TCP/ UDP, and encrypted BT download function. DHT (Distributed Hash Tables) is also supported.

Ultra High-speed BT Download with the New BT Engine

☑ **DHT (Distributed Hash Table)**

☑ **Encryption**

☑ **TCP & UDP tracker protocol**

PC

QNAP NAS New BT Engine

Other Devices

Slow   Fast   Ultra-Fast

NEW *BT Engine Embedded*
Super high speed download!!!
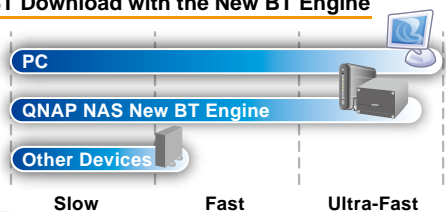
* The actual download performance varies to the network environment and the health of the torrents.

QGet, Remote P2P Download Management Software for both Mac and Windows PC

QGet is powerful P2P download management software of Turbo NAS. QGet can be installed on any computer running Windows 2000, XP and Vista (32-bit). Users can simultaneously manage BT, FTP and HTTP download tasks of multiple Turbo NAS servers. QGet is stylishly designed with intuitive and multilingual interface. Users can drag and drop torrent files to QGet directly or right click download links on IE browser (6.0 or above) and select Download by QGet for file download.

◼ Application Diagram of QGet

| Get your BT seeds | Drag the seeds to your NAS found on QGet | Download media | | Enjoy your digital life ! |

Internet → UPnP DLNA →

Photo
Music
Video

Remote PC or Notebook   NAS at Home
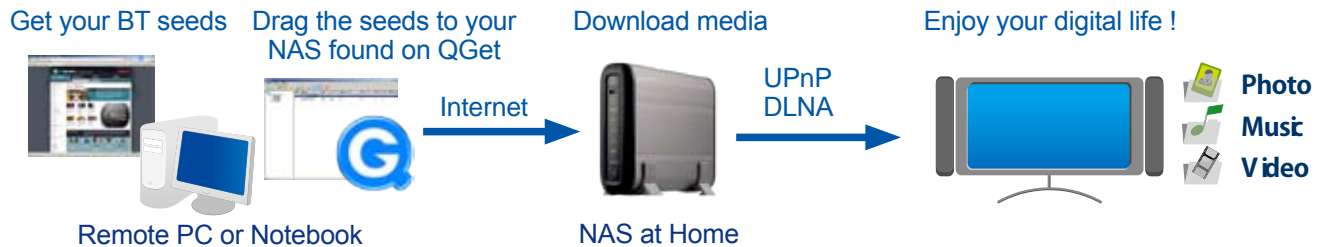
Other Friendly Design

One Touch Auto Copy

Data in USB flash disk or digital photos in your camera can be copied to specified folder automatically via USB interface of QNAP NAS for USB flash disk or digital photos backup. Just connect the device to Turbo NAS USB port and press the button, and then it goes!

Press the One Touch Auto Copy Button

USB Flash Disk
Digital Camera
QNAP
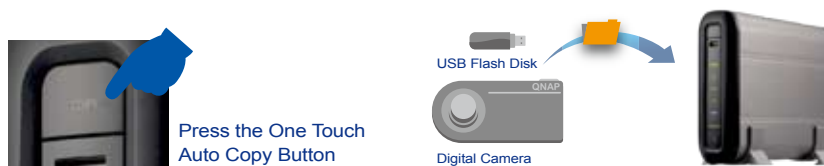
Network Recycle Bin

The files deleted from the network shares of the Turbo NAS will be moved to a particular recycle bin folder. Users can restore their data anytime in case of unintended file deletion.

Web File Manager

Turbo NAS provides unique Web File Manager function; users can easily access and manage the stored files by web browser.

HTTPS (SSL) Access

HTTPS login enables secure access to the Turbo NAS. Users can access to system administration, Web File Manager, Multimedia Station and Download Station in a secure way.

◼ Application at home

• Video
• Music
• Photo

QGet Remote management software

DLNA Media Player

Stylish aluminum case with outstanding heat dissipation

• Personal web
• Blog / Forum
• Photo album
• iTunes Server

BT download without PC

Router

DSL/Cable modem

NetBak backup software

Internet

QNAP NAS Applications for SOHO and Small Business

TS-109 Pro II (256MB RAM)
TS-109 Pro (128MB RAM)

TS-209 Pro II (256MB RAM)
TS-209 Pro (128MB RAM)

TS-409 Pro (256MB RAM)

The Challenge of Setting up a Server by SOHO and SMB Users

Lack of professional IT staff in SOHO or small-sized business:

To set up a server alone is a challenging job to most non-IT users. They have to understand Linux, software installation and configuration thoroughly in a short period. In addition, server maintenance is difficult that it involves creating account, setting authority, creating folders etc. These jobs all need IT professionals to complete.

Limited space:

SOHO or small-sized business users do not have their own server room and their office space is limited. PC will occupy office space. The server has to be located in server room or the loud noise will disturb the users.

Absence of file backup mechanism:

File server is generally used for saving files and data sharing; while useful tools are absent, it is seldom used for backup. If the computers are lost or the file system crashes, huge loss will be induced and much time will be spent to compensate the loss.

Benefits of QNAP Turbo NAS in SOHO and Small Business

QNAP's Turbo NAS supports many valuable software functions like File Server, Backup Server, FTP Server, Web Server and remote replication to satisfy the need of SOHO and SMB users. Lots of advanced and complicated functions which could only be done by IT professionals before can now be easily done by web browser.

The benefits of QNAP's Turbo NAS as a SOHO/Small business server:

Simple activation:

File Server, Backup Server, folder creation and access authority etc. are the embedded functions of QNAP's Turbo NAS. There is no need to install other software which is very convenient for non-professional users.

Simple web management interface:

User management, data sharing authority and other settings of Turbo NAS can be completed easily via the web browser.

Convenient and powerful backup software-NetBak Replicator:

It is a powerful software for you to perform schedule or real-time backup to Turbo NAS.

Support remote data backup:

Data on Turbo NAS can be backed up to a remote Turbo NAS by simple configuration.

Stable and energy-saving:

Turbo NAS adopts embedded hardware design which is stable and energy-saving. The power consumption is about 14W (1-bay NAS). Compared to a PC server, Turbo NAS helps you save electricity expense in a large extent.

Silent:

Turbo NAS (TS-109 series) uses aluminum alloy case for heat dissipation and employs fanless design which is absolutely quiet to use. You can turn on the server for 24 hours and the server will not generate any noise to disturb your work or rest.

Versatile Functions for SOHO and SMB

Quiet and Noise-free Design

Volume Level

TS-109 Series (Sleeping mode)	26dB
TS-109 Series (In operation)	33dB
TS-409 Series (Sleeping mode)	36.4dB
TS-409 Series (In operation)	40.6dB
Other NAS	42dB
PC (In operation)	53dB

Quiet | A bit noisy | Noisy

Low Power Consumption

Power Consumption

TS-109 Series (Sleeping mode)	5.1 W
TS-109 Series (In operation)	13.2 W
TS-209 Series (Sleeping mode)	5.1 W
TS-209 Series (In operation)	22.8 W
TS-409 Series (Sleeping mode)	18.8 W
TS-409 Series (In operation)	44.6 W
PC server	350 W

FTP Server

The principle purpose of file server is for data storage and sharing. Data security and access management are the major concerns of most users. Turbo NAS allows server manager to create user ID and password, and define the authority and quota for each user. Thus, personal data stored on Turbo NAS is well protected.

File Server

Having troubles with sending large files by e-mail due to the limited capacity? You can establish your own FTP server by using Turbo NAS. You can manage the access authority of the FTP server and share your files with your friends or customers easily in a few steps.

Backup Server

Data backup may sound time and effort-consuming for most users. QNAP's Turbo NAS brings you the enterprise-class technology to make backup extremely simple and efficient! The intelligent automatic backup software, NetBak Replicator, is provided for users to perform real-time synchronization or schedule backup from multiple PCs to Turbo NAS. Furthermore, the data in Turbo NAS can also be backed up to external FAT format hard drive. Turbo NAS also works well with other backup software, e.g. Acronis True Image, CA BrightStor ARCserve Backup, and EMC Retrospect.

Encrypted Remote Replication

Encrypted remote replication provides high level of data protection. Files can be backed up from Turbo NAS to other QNAP NAS products in remote locations. Advanced options including data compression, block-level incremental backup, and data synchronization are supported to optimize the bandwidth and time for data backup.

Web Server with Built-in phpMyAdmin, Joomla!

With the built-in phpMyAdmin, Joomla! and dual support of MySQL and SQLite, SOHO and SMB users can easily set up their own web server. With the editable php.ini support, there is no need of going through all the hassles of setting up a web server. You can either develop programs by yourself or download a variety of open-sourced applications, such as online shops, forums, blogs, etc., over the Internet.

MySQL Server

Turbo NAS is the most affordable choice as a standalone database server for system integrators. It can be flexibly applied in various deployments such as a database server of another web server in remote site or as an additional backup database server to achieve system redundancy.

Printer Server

You can share your printer device over the network by simply connecting a USB printer (max. 3 sets) to Turbo NAS USB port and enabling the printer sharing function.

UPS Support

The key function of UPS is to provide the power for a period of time during power failure. Turbo NAS supports both APC and MGE UPS devices which help users store the data in time and avoid critical data loss when power outage occurs during data transfer.

YOUR BEST STORAGE PARTNER

QNAP NAS Applications for Business Users
High Performance, High Reliability, and Disaster-proof NAS Server

TS-409 Pro (256MB RAM)

TS-409U (512MB RAM)

The Most Advanced RAID Management:

To ensure the data security, TS-409 Series offers advanced disk configurations for RAID 0/ 1/ 5/ 6, 5 + Spare, Single, and JBOD. (RAID 6 is rarely provided in the same class of NAS server.) TS-409 Series' RAID 6 and RAID 5 even allow one more hard drive failure than other NAS of the same level. Therefore, when 2 drives fail in RAID 5 or 3 drives fail in RAID 6, TS-409 Series will enter read-only protection mode, and users can still rescue their critical data. This effectively lowers down the risk of data loss caused by failure of hard disks.

Online RAID Capacity Expansion and Online RAID Level Migration:

With Online RAID Capacity Expansion, users can select to purchase the most cost-effective hard drives for initial server setup and upgrade to larger ones in the future. All the stored data will be kept and seamlessly moved to the newly installed hard drives. There is no need to turn off the server during the process.
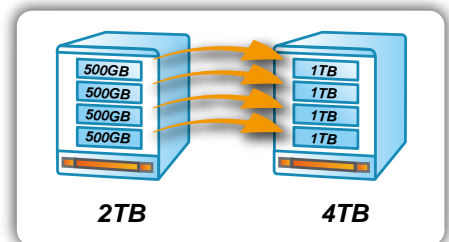
With Online RAID Level Migration, users can start from one drive firstly and add more drive members to upgrade the RAID level in the future with the data retained. There is no need to turn off the server during the process.
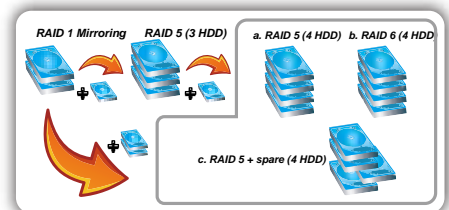
In e-business times, enterprise users need a trust-worthy NAS as a data storage center. The NAS is accessible by all kinds of OS users (Windows, Mac, Linux, and Unix). Windows AD support saves server manager's time and effort in access control, and also lowers the maintenance cost by centralized management.
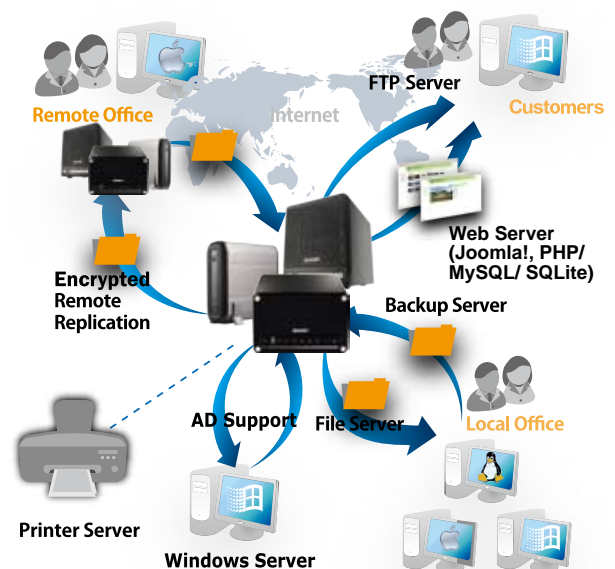
S.M.A.R.T. & Advanced HDD Health Scanning (HHS):

Turbo NAS supports Hard Disk Drive S.M.A.R.T. (Self-Monitoring Analysis and Reporting Technology) which enables users to monitor the hard drive status and check the potential problems. This tool helps prevent unexpected failure of hard drives and avoid critical data crash. Users can select the hard disk to check the health status, and have a quick overview of the selected drive on the summary page. Moreover, Turbo NAS is embedded with HHS Technology which supports disk checking and bad blocks scanning to prevent potential data loss.

Comprehensive Event Log System:

Detailed logs of file-level data access to Turbo NAS via samba, FTP, AFP, HTTP, HTTPS, Telnet, and SSH, and networking services accessed by on-line users are all recorded. Server managers can monitor the status of Turbo NAS closely

The Most Complete Backup Solutions:

Data backup may sound time and effort-consuming for most users. QNAP's Turbo NAS brings you the enterprise-class technology to make backup extremely simple and efficient! The intelligent automatic backup software, NetBak Replicator, is provided for users to perform real-time synchronization or schedule backup from multiple PCs to Turbo NAS Series. Furthermore, the data in Turbo NAS Series can also be backed up to external FAT format hard drive. Turbo NAS Series also works well with other backup software, e.g. Acronis True Image, CA BrightStor ARCserve Backup, and EMC Retrospect.

Secure data storage, access, and sharing:

• Data stored on Turbo NAS Series is well protected: Server manager can create user ID and password, and define the authority and quota of each user.
• IP filter control: Users can allow or deny specified IP connections to TS-409 Series.
• SSL Security (HTTPS): Turbo NAS Series can be accessed and configured by web browser securely.
• Remote login your Turbo NAS Series by SSH (secure shell) or Telnet connection.
• Secure FTP: Share and transmit your data over SSL/TLS (Explicit) encryption. Passive FTP port range setup is also supported.
• Smart FTP policy control: The maximum number of all FTP connections and a single account can be configured.
• Encrypted remote replication: Data on Turbo NAS Series can be backed up to another QNAP NAS products over the Internet securely.

UPS Support:

The key function of UPS is to provide the power for a period of time during power failure. TS-409 Series supports both APC and MGE UPS devices which help users store the data in time and avoid critical data loss when power outage occurs during data transfer.

Excellent Hot-swap Design

When HDD failure occurs, the administrator will be alerted by e-mail and LED indication. The failed drive can be replaced by hot swapping without turning off the server. The intelligent data rebuilding feature allows users to replace a failed drive by hot-swapping and enables automatic data rebuilding to the new drive without suffering from any system downtime.

TS-409 Pro
TS-409

TS-409U

QNAP
NAS

YOUR BEST STORAGE PARTNER

QNAP NAS Applications for Business Users

TS-401T **TS-411U** **WS-411U**

Active Directory (AD) Support

Active Directory is a directory service integrated to Windows 2003 Lightweight Directory Access Protocol (LDAP), featured with single management interface for managing items collectively and supports assigning different directory access privilege, which avoids excessive operation and lowers IT maintenance cost.

Key Features

♦ Supports quick and direct import to an organization's internal Active Directory basic structure, and lowers software installation and management cost by automatic configuration procedure.
♦ Centralized user and user group safe mode to assign directory access right; supports file resource access in the whole area.
♦ Secure access to system data.
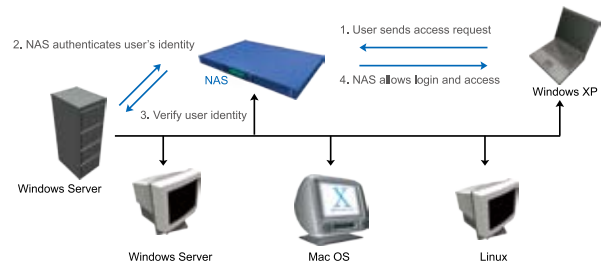
Network Failover / Load-balancing / Multi-IP Setting

QNAP's SMB NAS series are equipped with 2 Gigabit Ethernet LAN ports; it can be set up either on Fail-over or Load-Balancing mode.

Failover

The Fail-over function offers a more reliable network environment. When the primary network connection fails, the secondary network will automatically replace the failed one. Once the network problem is solved, the primary network connection will function normally.
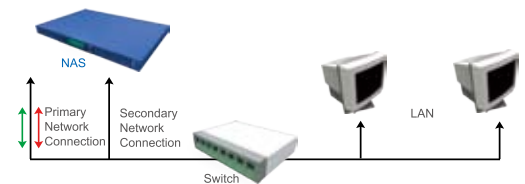
Load-balancing

Load-balancing increases system performance. If one of the network interfaces fails due to hardware or network problems, data transmission will be automatically switched to another normal interface.
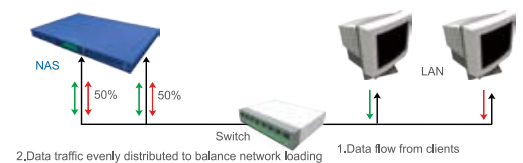
Multi-IP Setting

Multi-IP Setting supports network environment of multiple IP. NAS can be shared among different LAN areas of different domains within a company.
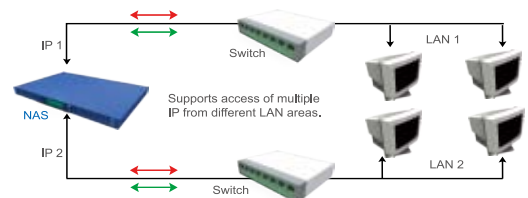
USB Storage Application

USB CD/DVD Backup & Restore

This function provides users a backup mechanism for offline data. NAS data can be burnt to CD or DVD, and can be restored from the disks to NAS folders.
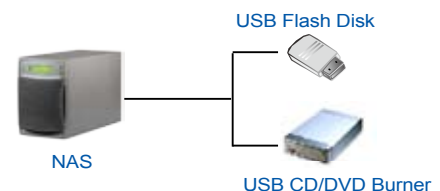
Remote Replication

"Remote replication" may seem to be a mechanism which is only affordable by IT professionals and large amount of investment. However, with QNAP NAS, you can back up data by remote replication-a powerful embedded function of QNAP NAS. There is no need to install any software. You can set up remote replication easily by web browser.

Technology Advantages

QNAP NAS support:

♦ Automatic data compression transmission mode, saving up to 2/3 of the transfer time.

♦ Schedule automatic file backup, ensuring easy management.

♦ Rapid differential backup according to the data changed.

♦ Able to do synchronization backup to ensure data consistency.

♦ Real-time remote replication, which allows data changes to be immediately transferred to the remote site storage server.

■ Practical Application- Enterprise

■ Practical Application- video surveillance systems in banks
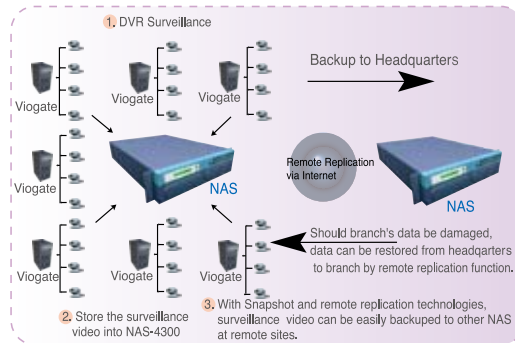
Anti-virus Scanning

Built-in Trend Micro anti-virus service is supported. Simply key in the authentication code to activate anti-virus service, no installation is needed.

■ Trend Micro Anti-virus Service

Access Files

Ensure PC Accessing Non-Virus Data

Log only. No action taken

Delete Files

Isolate Infected Files

Clear Virus
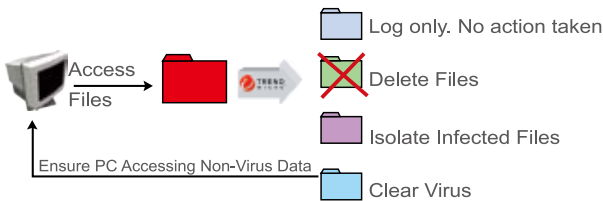
NetBak Replicator

QNAP provides powerful Windows backup software, NetBak Replicator, with all NAS series products. Users can back up important data on computer to the network shares on QNAP NAS. Users can upload any files or folders to QNAP NAS and back up the data.

Incremental Backup to Enhance Backup Speed

NetBak adopts "Incremental Backup" technology which enables backup of modified files only after the first time backup. Incremental backup is helpful to save the time and effort.

■ Incremental Backup

Automatic Error Skipping and Shutdown

NetBak provides a feature that user can choose to ignore the errors and continue the backup automatically. Besides, users can set to shut down the computer automatically after backup completes.
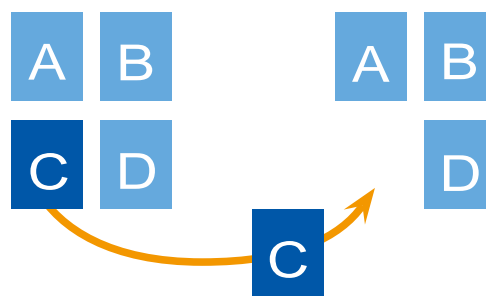
Main Functions

♦ Backup

File Filter : Users can select particular file types to be excluded from backup. The system will filter all files that belong to these file types when backing up the data.

Schedule : Users can specify a schedule for backing up data with this option, e.g. 12:00 every day.

Monitor : When this option is enabled, the system will upload all files or folders to the server instantly for backup when the files or folders are modified.

♦ Restore: Select this option to restore backup data to the original location of the file or to a new directory.

♦ Log: Enable this option to record events of NetBak Replicator.

♦ Default Configuration: NetBak Replicator will record all current settings of the user. When the users login again, this program will load the previous recorded settings for users to manage data backup.

QNAP NAS Applications for Advanced Business Users High Performance, High Reliability, and Disaster-proof NAS Server

TS-509 Pro

QNAP TS-509 Pro Turbo NAS

Modern business requires a centralized data center to protect information asset, back up critical data, share the information among workgroups or departments. A solid, efficient, and flexible data backup system is the key to greater business agility and also an increasingly important task for IT administrators. QNAP TS-509 Pro Turbo NAS is the new generation all-in-one NAS server which offers the most reliable and powerful storage solution. With superior performance, versatile server features, best-in-class RAID data protection, and rock-solid hot swappable hard drive design, TS-509 Pro brings business nowadays a truly new experience of instant data access and sharing, a protected mass storage, value-plus server features, and the lowest maintenance cost design.

Superior performance and advanced RAID redundancy

QNAP TS-509 Pro Turbo NAS is a 5-bay, hot-swappable All-in-one NAS (Network Attached Storage) Server designed for growing SMB and enterprises. Powered by Intel 1.6GHz CPU and 1GB DDRII memory, it delivers superior performance for multiple business applications and intensive concurrent data access. Advanced RAID configurations for non-stop service are also supported. RAID 5 is a widely adopted configuration for highly economic data protection that allows one drive failure with the system running. RAID 6 allows the failure of maximum two drives to offer business a more advanced data protection. The best-in-class RAID on TS-509 Pro brings users a higher level of data security by allowing one more hard drive failure than other NAS of the same level. In other words, users can rescue their critical data when 2 drives fail in RAID 5 or 3 drives fail in RAID 6 to avoid any data loss.

Multi-functional All-in-one NAS Server

The TS-509 Pro supports file sharing across Linux, Unix, Mac, and Windows platforms and offers abundant valuable server functions such as File Server, FTP Server, and Printer Server, etc. Windows AD (Active Directory) is supported to help create an easy-to-access environment and lower the maintenance cost. The Web Server comes with built-in Joomla! CMS, MySQL, and SQLite for users to easily set up their own web pages and database servers. Also, encrypted remote replication and backup to external devices are supported to enhance data protection. Various data storage and management mechanisms- FTP server with SSL/TLS encrypted technology, SSH login, and web page SSL login enable users to transfer, store, and share data securely.

A solution for present and future

The flexible Online RAID Capacity Expansion and RAID Level Migration features lower the total cost of ownership. With Online RAID Capacity Expansion, administrators can select to purchase the most cost-effective hard drives for initial server setup and upgrade to larger ones in the future. All the stored data will be kept and seamlessly moved to the newly installed hard drives without turning off the server. With Online RAID Level Migration, administrators can start from one drive firstly and add more to upgrade the RAID level in the future with the data retained.

Meet and exceed the demanding business and IT challenges

QNAP TS-509 Pro is equipped with dual Gigabit LAN ports to offer more benefits in business network environment. The NAS can be deployed with two different IP settings for sharing among different workgroups in two different subnets. The dual LAN ports can also be configured as load balancing mode for bandwidth aggregation to boost the file transfer speed, or failover which allows the server to sustain the failure of one network port to provide continuous services. Besides, the newly introduced QPKG software package platform enables the users to maximize the usage of TS-509 Pro by installing addtional software packages developed from the users & community worldwide. This can be done by simple 'download & install' clicking without going through any complicated process. As for the developers, the QPKG development framework guideline is easy and straightforward to follow that software developers/ engineers can add extra functionalities quickly to meet the company's needs.

Easy setup, low-cost maintenance

The handy LCD display on TS-509 Pro provides an extremely speedy and easy approach for IT administrators to initialize the NAS and set up the RAID configuration without using any computer. The system information and settings are also displayed for ease of management. Moreover, the hot-swap design is supported for replacing a failed hard drive of a RAID configuration without turning off the server to ensure non-stop services and minimize maintenance cost and effort. Besides, the HDD S.M.A.R.T. of the TS-509 Pro provides complete information of the hard drive status to prevent potential physical drive failure. The comprehensive log system summarizes detailed data access records and connection status. All errors and warning messages can also be sent to the administrator by emails as instant alert.

The most flexible schedule power on/off feature is now provided on the TS-509 Pro for IT administrators to flexibly manage the NAS server's up time according to the working hours. Also, the smart Wake on LAN is supported for ease of remote management in the local network.

Network Failover / Load-balancing / Multi-IP Setting

QNAP's SMB NAS series are equipped with 2 Gigabit Ethernet LAN ports; it can be set up either on Failover or Load-balancing mode.

Failover

The Failover function offers a more reliable network environment. When the primary network connection fails, the secondary network will automatically replace the failed one. Once the network problem is solved, the primary network connection will function normally.
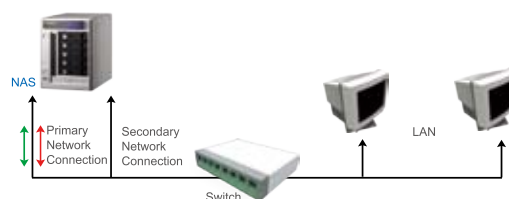
Load-balancing

The dual LAN ports can also be configured as load balancing mode for bandwidth aggregation to boost the file transfer speed (Work with link-aggregation supported managenemt Ethernet switch).
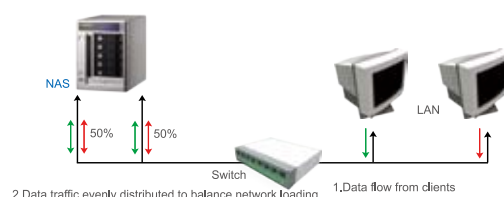
Multi-IP Setting

Multi-IP Setting supports network environment of multiple IP. NAS can be shared among different LAN areas of different domains within a company.
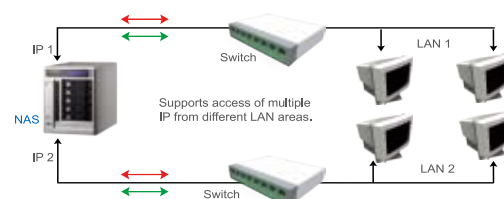
Configure Wake on LAN

Enable this option to power on the NAS remotely by Wake on LAN. Wake on LAN can help you easily remote manage your NAS, and it can saves your time.

Schedule power on/ off

The most flexible schedule power on/off feature is now provided on the TS-509 Pro for IT administrators to manage the NAS server's up time according to the working hours. You can set the time for automatic system power on, power off, or restart on any days of the week.

		TS-101	TS-109	TS-109 II	TS-201
Software	OS	Embedded Linux	Embedded Linux	Embedded Linux	Embedded Linux
System Specification	CPU	Freescale 8241 266MHz	Marvell 5182 500MHz	Marvell 5182 500MHz	Freescale 8241 266MHz
	DRAM/ Flash	64MB/ 16MB	128MB DDRII RAM/ 8MB	256MB DDRII RAM/ 8MB	128MB RAM/ 16MB
	HDD	1 x 3.5" SATA I/II HDD (up to 1TB)	1 x 3.5" SATA I/II HDD (up to 1TB)	1 x 3.5" SATA I/II HDD (up to 1TB)	2 x 3.5" SATA I/II HDD hotswap (up to 2TB)
Network Specification	LAN Ports	1 x Gigabit LAN	1 x Gigabit LAN	1 x Gigabit LAN	1 x Gigabit LAN
IO Interface	USB	3 x USB2.0	3 x USB2.0	3 x USB2.0	3 x USB2.0
	eSATA	1 x eSATA	1 x eSATA	1 x eSATA	-
	SCSI	-	-	-	-
	VGA	-	-	-	-
System Information Display	LED indicators	Power, LAN, eSATA, HDD, Status, USB	Power, LAN, eSATA, HDD, Status, USB	Power, LAN, eSATA, HDD, Status, USB	Power, LAN, HDD, Status, USB
	LCD display/button	-	-	-	-
	Buttons	Power, Reset, USB Auto Copy	Power, Reset, USB Auto Copy	Power, Reset, USB Auto Copy	Power, Reset, USB Auto Copy
	Alarm buzzer	System warning	System warning	System warning	System warning
Physical Specification	Form factor	Portable	Portable	Portable	Tower
	Dimensions	210(D)x60(W)x182(H) mm	210(D)x60(W)x182(H) mm	210(D)x60(W)x182(H) mm	276(D)x343(W)x44(H) mm
	Weight	Net weight : 1.2KG Gross weight : 2.1KG	Net weight : 1.2KG Gross weight : 2.1KG	Net weight : 1.2KG Gross weight : 2.1KG	Net weight : 2.4KG Gross weight : 3.1KG
Operation Environment	Temperature	0~35°C	0~35°C	0~35°C	0~40°C
	Humidity	0~95% R.H	0~95% R.H	0~95% R.H	0~95% R.H
Power Supply	Power supply specification	External power adapter 36W, 100~240V	External power adapter 36W, 100~240V	External power adapter 36W, 100~240V	External power adapter 60W, 100~240V
Network Transport Protocols	TCP/IP	○	○	○	○
	Apple talk	○	○	○	○
Network File Protocols	Microsoft Networks (CIFS/SMB), Apple (AFP)	○	○	○	○
	Linux (NFS)	×	×	×	×
	Internet (HTTP) File Transfer Protocol(FTP)	○	○	○	○
	Secure Internet (HTTPS)	○	○	○	○
Network Security	Microsoft AD Authentication	×	×	×	×
Network Client Type	Microsoft Windows 98/ME/NT/2000/ XP/2003/Vista (32-bit)	○	○	○	○
	Macintosh System, OSX	○	○	○	○
	Linux/ Unix	×	×	×	×
LAN Configuration Advanced Network Configuration	Fixed / Dynamic IP address	○	○	○	○
	Failover	×	×	×	×
	Multi-IP setting	×	×	×	×
	DHCP server	○	○	○	○
	Dynamic DNS	○	○	○	○
	Jumbo frame	○	○	○	○
Disk Configuration	RAID 0 (disk stripping)	×	×	×	○
	RAID 1 (disk mirroring)	Q-RAID 1	Q-RAID 1	Q-RAID 1	○
	RAID 5 (disk stripping with parity)	×	×	×	×
	RAID 6	×	×	×	×
	RAID 5 + Spare	×	×	×	×
	JBOD (Liner disk volume)	×	×	×	○
	Single disk	○	○	○	○
	Online RAID Level Migration	×	×	×	×
	Online RAID Capacity Expansion	×	×	×	×
Disk Management	HDD S.M.A.R.T.	×	○	○	○
	Hot-swapple	×	×	×	○
	HHS (HDD health scan, bad block scan)	○	○	○	○
	Disk usage status management	○	○	○	○
File System Management	Journaling file system	○	○	○	○
	Unicode support	○	○	○	○
	Share folder level ACL support	○	○	○	○
	Users quota setting	○	○	○	○
	USB flash disk auto-copy	○	○	○	○
System Management	Web-based administration	○	○	○	○
	System temperature monitor	×	○	○	×
	E-mail alert	○	○	○	○
	LCD panel display	×	×	×	×
	LED display / alarm buzzer	○	○	○	○
	System software upgrade	○	○	○	○
	Support network time protocol	○	○	○	○
	Multi users account setting	×	×	×	×
System Setup and Configuration	Web-based GUI for system administration	○	○	○	○
	Quick Install Wizard	○	○	○	○
	Save and restore configuration	○	○	○	○
	LCD panel configuration	×	×	×	×
	Reset button	○	○	○	○
Multilingual Support		10	15	15	15
UPS Support	SNMP/ USB	○	○	○	○
Additional Server Service	USB port support printer server	○	○	○	○
Backup Management	Support client backup software NetBak Replicator	○	○	○	○
	Built-in tape backup software function	×	×	×	×
	Schedule to remote replication backup	○	○	○	○
	Block level remote replication	○	○	○	○
Event Log	Display all current login users	×	○	○	○
	Display system log/alert/error	○	○	○	○

*Designs and specifications are subject to change without notice. Please contact QNAP for updated information.
15: English, German, French, Italian, Spanish, Polish, Swedish, Danish, Norwegian, Finnish, Russian, Japanese, Korean, Traditional Chinese, Simplified Chinese
10: English, Traditional Chinese, Simplified Chinese, Japanese, Korean, French, German, Italian, Spanish, Russian
8: English, Traditional Chinese, Simplified Chinese, Japanese, Korean, French, German, Spanish
6: English, Traditional Chinese, Simplified Chinese, Japanese, French, German

* To be supported in future firmware and utilities

	TS-209	TS--209 II	TS-409	TS-109 Pro	TS-109 Pro II	TS-209 Pro
OS	Embedded Linux	Embedded Linux	Embedded Linux	Embedded Linux	Embedded Linux	Embedded Linux
CPU	Marvell 5182 500MHz	Marvell 5182 500MHz	Marvell 5281 500MHz	Marvell 5182 500MHz	Marvell 5182 500MHz	Marvell 5182 500MHz
RAM	128MB DDRII RAM/ 8MB	256MB DDRII RAM/ 8MB	256MB DDRII RAM/ 8MB	128MB DDRII RAM/ 8MB	256MB DDRII RAM/ 8MB	128MB DDRII RAM/ 8MB
HDD	2 x 3.5" SATA I/II HDD hotswap (up to 2TB)	2 x 3.5" SATA I/II HDD hotswap (up to 2TB)	4 x 3.5" SATA I/II HDD hotswap (up to 4TB)	1 x 3.5" SATA I/II HDD (up to 1TB)	1 x 3.5" SATA I/II HDD (up to 1TB)	2 x 3.5" SATA I/II HDD hotswap (up to 2TB)
LAN	1 x Gigabit LAN	1 x Gigabit LAN	1 x Gigabit LAN	1 x Gigabit LAN	1 x Gigabit LAN	1 x Gigabit LAN
USB	3 x USB2.0	3 x USB2.0	3 x USB2.0	3 x USB2.0	3 x USB2.0	3 x USB2.0
eSATA	-	-	-	1 x eSATA	1 x eSATA	-
	-	-	-	-	-	-
	-	-	-	-	-	-
LED	Power, LAN,HDD, Status, USB	Power, LAN,HDD, Status, USB	Power, LAN,HDD, Status, USB	Power, LAN, eSATA, HDD, Status, USB	Power, LAN, eSATA, HDD, Status, USB	Power, LAN,HDD, Status, USB
	-	-	-	-	-	-
Button	Power, Reset, USB Auto Copy	Power, Reset, USB Auto Copy	Power, Reset, USB Auto Copy	Power, Reset, USB Auto Copy	Power, Reset, USB Auto Copy	Power, Reset, USB Auto Copy
Buzzer	System warning	System warning	System warning	System warning	System warning	System warning
Form	Tower	Tower	Tower	Portable	Portable	Tower
Dimensions	276(D)x343(W)x44(H) mm	276(D)x343(W)x44(H) mm	225(D)x176(W)x188(H) mm	210(D)x60(W)x182(H) mm	210(D)x60(W)x182(H) mm	276(D)x343(W)x44(H) mm
Weight	Net weight : 2.4KG Gross weight : 3.1KG	Net weight : 2.4KG Gross weight : 3.1KG	Net weight : 3KG Gross weight : 4.75KG	Net weight : 1.2KG Gross weight : 2.1KG	Net weight : 1.2KG Gross weight : 2.1KG	Net weight : 2.4KG Gross weight : 3.1KG
Temp	0~40°C	0~40°C	0~40°C	0~35°C	0~35°C	0~40°C
Humidity	0~95% R.H	0~95% R.H	0~95% R.H	0~95% R.H	0~95% R.H	0~95% R.H
Power	External power adapter 60W, 100~240V	External power adapter 60W, 100~240V	External power adapter 96W, 100~240V	External power adapter 36W, 100~240V	External power adapter 36W, 100~240V	External power adapter 60W, 100~240V
	○	○	○	○	○	○
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	×	×	×	○	○	○
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	×	×	×	○	○	○
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	○	○	○	Q-RAID 1	Q-RAID 1	○
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	×	×	×	×	×	×
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	15	15	15	15	15	15
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	○	○	○	○	○	○
	○	○	○	○	○	○
	○	○	○	○	○	○

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6: English, Traditional Chinese, Simplified Chinese, Japanese, French, German

* To be supported in future firmware and utilities

		TS-209 Pro II	TS-409 Pro	TS-409U	TS-401T
Software	OS	Embedded Linux	Embedded Linux	Embedded Linux	Embedded Linux
System Specification	CPU	Marvell 5182 500MHz	Marvell 5281 500MHz	Marvell 5281 500MHz	VIA C3 800MHz
	DRAM/ Flash	128MB DDRII RAM/ 8MB	256MB DDRII RAM/ 8MB	512MB DDRII RAM/ 8MB	256MB/ 32MB
	HDD	2 x 3.5" SATA I/II HDD hotswap (up to 2TB)	4 x 3.5" SATA I/II HDD hotswap (up to 4TB)	4 x 3.5" SATA I/II HDD hotswap (up to 4TB)	4 x 3.5" SATA I/II HDD (up to 2TB)
Network Specification	LAN Ports	1 x Gigabit LAN	1 x Gigabit LAN	1 x Gigabit LAN	2 x Gigabit LAN
IO Interface	USB	3 x USB2.0	3 x USB2.0	3 x USB2.0	2 x USB2.0
	eSATA	-	-	-	-
	SCSI	-	-	-	-
	VGA	-	-	-	-
System Information Display	LED indicators	Power, LAN,HDD, Status, USB	Power, LAN,HDD, Status, USB	Power, LAN,HDD, Status, USB	Power, Error, Network Status, Hard Disk
	LCD display/button	-	-	-	LCD Panel, Two Control Button
	Buttons	Power, Reset, USB Auto Copy	Power, Reset, USB Auto Copy	Power, Reset, USB Auto Copy	Power, Reset
	Alarm buzzer	System warning	System warning	System warning	System warning
Physical Specification	Form factor	Tower	Tower	1U Rack Mount	Tower
	Dimensions	276(D)x343(W)x44(H) mm	225(D)x176(W)x188(H) mm	409(D)x430(W)x44.45(H) mm	380(D)x168(W)x240(H) mm
	Weight	Net weight : 2.4KG Gross weight : 3.1KG	Net weight : 3KG Gross weight : 4.75KG	Net weight : 5.2KG Gross weight : 7KG	Net weight : 8KG Gross weight : 12KG
Operation Environment	Temperature	0~40℃	0~40℃	0~40℃	0~40℃
	Humidity	0~95% R.H	0~95% R.H	0~95% R.H	0~95% R.H
Power Supply	Power supply specification	External power adapter 60W, 100~240V	External power adapter 120W, 100~240V	Single power supply, Input: 115-230 Vac~, 47-63Hz, 3.0A	ATX Power, 150W, 95~265V, (Optional Redundant ATX Power Supply)
Network Transport Protocols	TCP/IP	○	○	○	○
	Apple talk	○	○	○	○
Network File Protocols	Microsoft Networks (CIFS/SMB), Apple (AFP)	○	○	○	○
	Linux (NFS)	○	○	○	○
	Internet (HTTP) File Transfer Protocol(FTP)	○	○	○	○
	Secure Internet (HTTPS)	○	○	○	○
Network Security	Microsoft AD Authentication	○	○	○	○
Network Client Type	Microsoft Windows 98/ME/NT/2000/ XP/2003/Vista (32-bit)	○	○	○	○
	Macintosh System, OSX	○	○	○	○
	Linux/ Unix	○	○	○	○
LAN Configuration Advanced Network Configuration	Fixed / Dynamic IP address	○	○	○	○
	Failover	×	×	×	○
	Multi-IP setting	×	×	×	○
	DHCP server	○	○	○	○
	Dynamic DNS	○	○	○	×
	Jumbo frame	○	○	○	○
Disk Configuration	RAID 0 (disk stripping)	○	○	○	○
	RAID 1 (disk mirroring)	○	○	○	○
	RAID 5 (disk stripping with parity)	×	○	○	○
	RAID 6	×	○	○	×
	RAID 5 + space	×	○	○	×
	JBOD(Liner disk volume)	○	○	○	○
	Single disk	○	○	○	○
	Online RAID Level Migration	×	○	○	×
	Online RAID Capacity Expansion	×	○	○	×
Disk Management	HDD S.M.A.R.T.	○	○	○	-
	Hot-swappble	○	○	○	×
	HHS (HDD health scan, bad block scan)	○	○	○	×
	Disk usage status management	○	○	○	○
File System Management	Journaling file system	○	○	○	○
	Unicode support	○	○	○	○
	Share folder level ACL support	○	○	○	○
	Users quota setting	○	○	○	○
	USB flash disk auto-copy	○	○	○	×
System Management	Web-based administration	○	○	○	○
	System temperature monitor	○	○	○	○
	E-mail alert	○	○	○	○
	LCD panel display	×	×	×	○
	LED display / alarm buzzer	○	○	○	○
	System software upgrade	○	○	○	○
	Support network time protocol	○	○	○	○
	Multi users account setting	×	×	×	○
System Setup and Configuration	Web-based GUI for system administration	○	○	○	○
	Quick Install Wizard	○	○	○	○
	Save and restore configuration	○	○	○	○
	LCD panel configuration	×	×	×	○
	Reset button	○	○	○	○
Multilingual Support		15	15	15	6
UPS Support	SNMP/ USB	○	○	○	○
Additional Server Service	USB port support printer server	○	○	○	○
Backup Management	Support client backup software NetBak Replicator	○	○	○	○
	Built-in tape backup software function	×	×	×	×
	Schedule to remote replication backup	○	○	○	○
	Block level remote replication	○	○	○	○
Event Log	Display all current login users	○	○	○	○
	Display system log/alert/error	○	○	○	○

*Designs and specifications are subject to change without notice. Please contact QNAP for updated information.
15: English, German, French, Italian, Spanish, Polish, Swedish, Danish, Norwegian, Finnish, Russian, Japanese, Korean, Traditional Chinese, Simplified Chinese
10: English, Traditional Chinese, Simplified Chinese, Japanese, Korean, French, German, Italian, Spanish, Russian
8: English, Traditional Chinese, Simplified Chinese, Japanese, Korean, French, German, Spanish
6: English, Traditional Chinese, Simplified Chinese, Japanese, French, German

* To be supported in future firmware and utilities

TS-411U	WS-411U	TS-509 Pro
Embedded Linux	Windows Storage Server 03 R2	Embedded Linux
Pentium M 1.6GHz	Pentium M1.6GHz	Celeron 1.6GHz
512MB/ 32MB	512MB/ -	1GB DDRII RAM/ 128MB
4x 3.5" SATA I/II HDD hotswap (up to 2TB)	4 x 3.5" SATA I/II HDD Hotswap	5x 3.5" SATA I/II HDD hotswap (up to 5TB)
2 x Gigabit LAN	2 x Gigabit LAN	2 x Gigabit LAN
2 x USB2.0	2 x USB2.0	5 x USB2.0
-	-	1
Ultra 320 SCSI (For SCSI Tape)	Ultra 320 SCSI (For SCSI Tape)	-
-	○	○
Power, Error, Network, Status, HDD	Power, Error, Network, Status, HDD	Status, HDD, LAN, USB
LCD Panel, Two Control Button	LCD Panel, Two Control Button	LCD Panel, Two Control Button
Power, Reset	Power	Power, Reset, OTB
System warning	System warning	System warning
1U Rack Mount	1U Rack Mount	Tower
570(D)x430(W)x44(H) mm	570(D)x430(W)x44(H) mm	261(D)x188.5(W)x253(H) mm
Net weight : 12KG Gross weight : 16KG	Net weight : 12KG Gross weight : 16KG	Net weight : 6.4KG Gross weight : 7.0KG
0~40℃	0~40℃	0~40℃
0~85% R.H	0~85% R.H	0~95% R.H
Redundant/ Hot Swap ATX Power Supply, 150W, 95~265V	Redundant/ Hot Swap ATX Power Supply, 150W, 95~265V	ATX Power Supply, 300W, 100~240V, 47-63Hz, 6A/ 3A
○	○	○
○	○	○
○	○	○
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○	by File Server Resource Manager	○
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6	8	15
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○	○	○
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○	○	○
○	○	○
○	✕	○
○	○	○

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