

TS-509 Pro

Turbo NAS

- 5-Bay Hot-swappable
- Dual Gigabit LAN Support
Failover, Load-Balancing & Multiple IP Setting Supported
- RAID 0/1/5/6/5+spare/JBOD
- Online RAID Capacity Expansion & RAID Level Migration
- Fail-Safe Dual OS Protection
- Touch-N-Go PC-less Installation

Superior performance for high-speed data sharing

Cross-platform Sharing

- Windows, Mac, Linux, and Unix
- Multiple file sharing protocols (SMB/CIFS, AFP, NFS)

Expand Storage Capacity and Migrate RAID Level

- Disk configurations: RAID 0, 1, 5, 6, 5+spare, single, and JBOD
- Online RAID capacity expansion: Replace the hard drives on the TS-509 Pro step by step to increase the storage capacity.
- Online RAID level migration: Add a hard disk drive to the disk configuration and migrate to higher RAID level for increased data redundancy.

Advanced Hard Drive Protection

- HDD S.M.A.R.T. (Self-monitoring Analysis and Reporting Technology) supported
- Unique HHS (HDD Health Scanning) for bad block scanning and disk checking

Complete Backup Solution

- QNAP backup software-NetBak Replicator
- Encrypted remote replication by rsync
- 3rd party backup software ready
- One touch USB auto copy

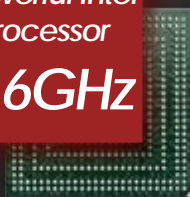
Comprehensive Log System for Protocol Management

- Monitoring the connections to the TS-509 Pro via samba, FTP, AFP, HTTP, HTTPS, Telnet, and SSH
- Record the network services accessed by online users



Powerful Intel
Processor

1.6GHz



- Superior cooling design
- Ultra-low system noise

Abundant Business Server Features

- File Server
- Backup Server
- FTP Server
- RAID Server
- Remote Replication (Rsync)
- Printer Server (Max. 3 sets)
- Web Server
- MySQL Server
- and more...



TS-509 Pro Turbo NAS

5-Bay, Hot-swappable, Dual Gigabit LAN, Advanced RAID NAS Server for Business

Overview

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 administrator. The QNAP TS-509 Pro Turbo NAS is the new generation all-in-one NAS server for SMB and enterprises. It 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, the TS-509 Pro brings business nowadays a truly new experience of instant data access and sharing, a protected mass storage, value-plus server features at the lowest maintenance cost.

Superior performance and reliable DOM architecture

Powered by Intel Celeron 1.6GHz CPU, 1GB DDRII memory, the 5-bay, hot-swappable TS-509 Pro delivers superior performance for multiple business applications and intensive concurrent data access. The Linux OS and applications of the TS-509 Pro are embedded in the flash DOM that higher stability is guaranteed. Moreover, the dual Gigabit LAN ports can be configured as Failover, Load balancing, or serving two different subnets

which enables more deployment options in a business network environment.

Advanced RAID redundancy with expandability and upgradeability

Advanced RAID configurations, RAID 0/ 1/ 5/ 6/ 5+Spare and JBOD are all supported. 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. With Online RAID Level Migration, users can start from one drive firstly and add more to upgrade the RAID level in the future with the data retained.

Easy setup and low-cost maintenance

The handy LCD display on the TS-509 Pro provides a 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 easy management. The schedule power on/off feature is available 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 convenient remote wakeup of the NAS in the local network.

Versatile Functions for Business Users

Complete Backup Solution

QNAP Backup Software-NetBak Replicator

The backup software, **NetBak Replicator**, is provided for the users to perform real-time synchronization or schedule backup from multiple PCs to the TS-509 Pro.

Encrypted Remote Replication by Rsync

Data on the TS-509 Pro can be backed up to or from another Turbo NAS or Rsync server over the network securely.

3rd Party Backup Software Ready

The TS-509 Pro works well with other backup software, e.g. Arconis True Image, CA BrightStor ARCserve Backup, EMC Retrospect, Symantec Backup Exec, and LaCie Silverkeeper.

OTB & Back up to External Device

The data on the NAS can be copied to the external USB device by configuring the one touch auto copy button (OTB) or web administration interface. The one touch button can also be configured to trigger instant data backup from the external USB device to the NAS.

Secure Data Storage, Access, and Sharing

- IP filter control: Users can allow or deny specified IP connections to the TS-509 Pro.
- SSL Security (HTTPS): The TS-509 Pro can be accessed and configured by web browser securely.
- Remote login your TS-509 Pro 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 the TS-509 Pro can be backed up to another QNAP NAS product over the Internet securely.

Cross-platform Data Sharing and Storage Center

Sharing Files across Windows, Mac, Linux, and Unix

The TS-509 Pro is designed for users to share the files across Windows, Mac, Linux, and Unix environment.

Support Windows AD

The Windows AD feature enables server manager to import user accounts from AD domain to NAS to reduce the time and effort for account setup, and users can use the same set of login name and password.

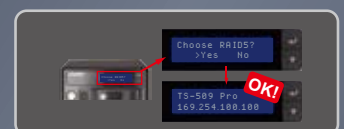
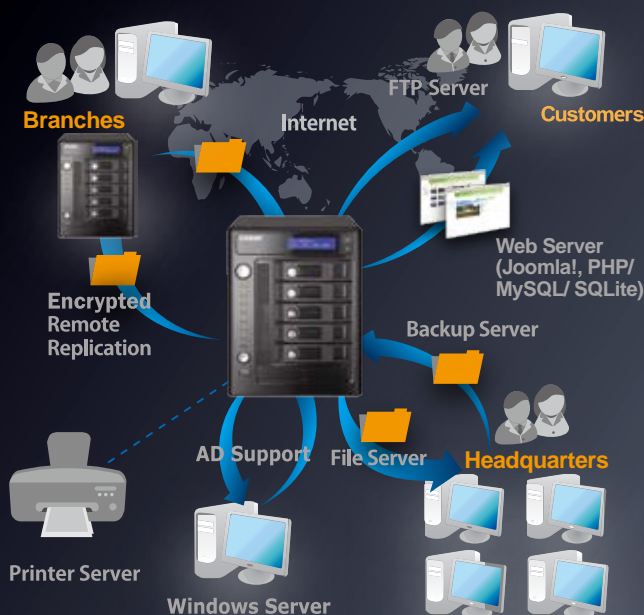
DOM Architecture and Fail-Safe Dual OS Protection

All the OS and applications of the TS-509 Pro are embedded on the DOM. The NAS allows system booting without accessing the physical disk sectors and that prevents unsuccessful system startup caused by bad block sectors or file errors on the hard drives. Two operating systems are built on the DOM for system booting alternatively upon every system startup. When one fails, the other one will be used to boot up instead, and the failed OS is recoverable from the other healthy OS.

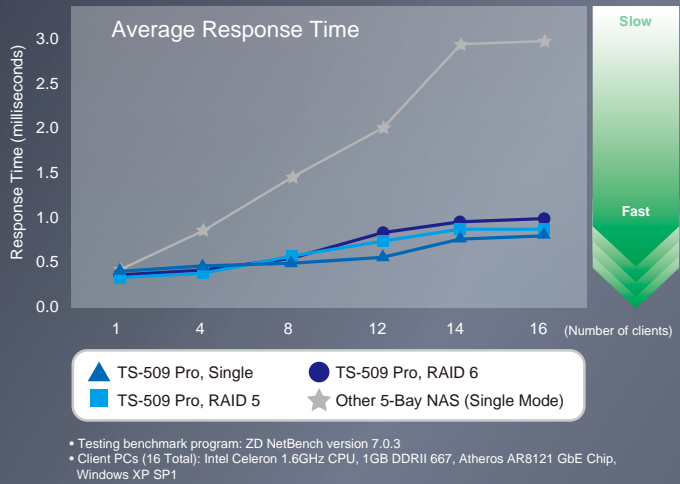
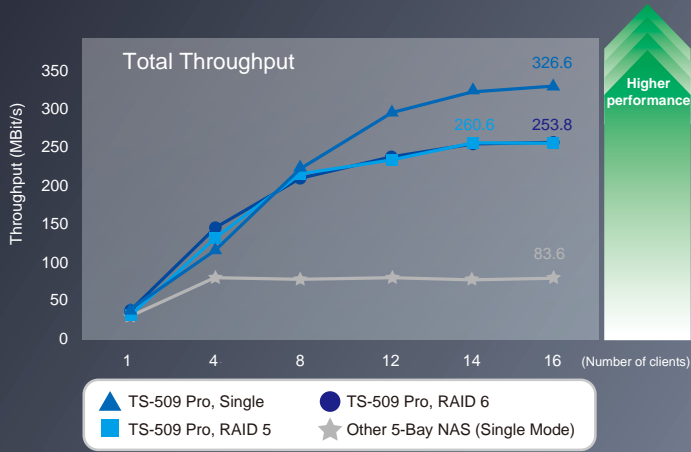
Touch-N-Go PC-less Installation

You can use the handy LCD to finish the first time installation in 3 simple steps. The TS-509 Pro will automatically complete the hard disk formatting and RAID building.

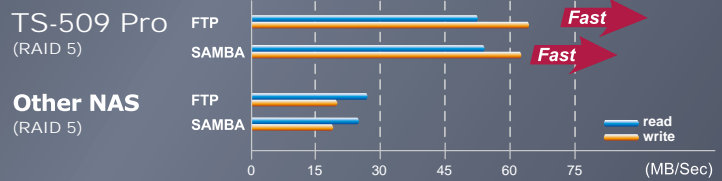
All-in-one Turbo NAS Applications for Business



File Server Performance (NetBench)



Superior Performance

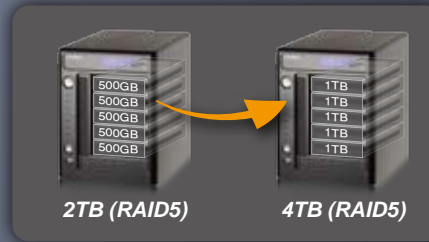


FTP/SAMBA Testing Environment: Pentium D 3.00 GHz/ 2GB RAM, Windows XP SP2, NETGEAR G5608 8 port GbE Switch
 FTP/SAMBA Testing Method: Connect the TS-509 Pro and PC to switch, upload/download 1GB File without Jumbo Frame, FTP Tool: File Zilla

Advanced RAID Management with Hot-swap Design

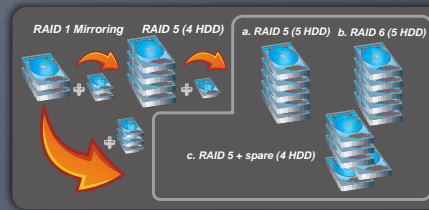
The TS-509 Pro offers advanced disk configurations for RAID 0, 1, 5, 6, 5 + Spare, Single, and JBOD. It also supports hot-swap design which offers the non-stop and easy-to-manage service.

Online RAID Capacity Expansion



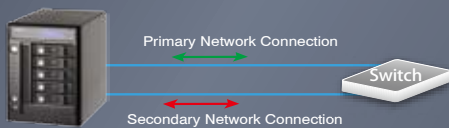
The storage capacity of a RAID configuration can be expanded by replacing the hard drives with larger ones. All the data will be kept and seamlessly moved to the newly installed hard drives. There is no need to turn off the server during the process.

Online RAID Level Migration

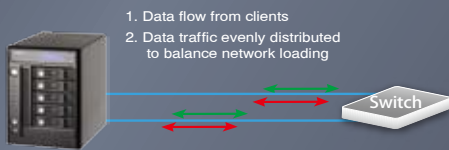


Users can upgrade the disk configuration to higher RAID level with the data retained. There is no need to turn off the server during the process.

Network Failover / Load-Balancing / Multi-IP Setting



Network Failover
Failover allows the NAS to sustain the failure of one network port to provide continuous services.



Load-Balancing
Bandwidth aggregation is supported to boost the file transfer speed (works with managed Ethernet switch with 802.3ad configured).



Multi-IP Setting
The NAS can be deployed with two different IP settings for sharing among different workgroups in two different subnets.

WOL Wake on LAN
Enable this option to power on the NAS remotely by Wake on LAN. Wake on LAN helps you manage your NAS conveniently.

9 6 Schedule Power on/off
The flexible schedule power on/off feature is provided on the TS-509 Pro for users 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.

S.M.A.R.T. & Advanced HDD Health Scanning (HHS)



The TS-509 Pro supports Hard Disk Drive S.M.A.R.T (Self-Monitoring Analysis and Reporting Technology) for monitoring the hard drive status. Moreover, the NAS is embedded with HHS technology which supports disk checking and bad blocks scanning.

Ease of User and Share Folder Management

The NAS supports batch creation of users and share folders to save the time and effort of the server manager in account and folder creation. For the security of Windows network environment, server managers can hide or show network share folders

Software Expansion via QPKG Platform

The QPKG software package platform enables the users to maximize the usage of Turbo NAS by installing additional software packages developed from the users and community worldwide. This can be done by simple "download & install" clicking without going through any complicated process.

Web Server with Built-in phpMyAdmin, Joomla!

With the built-in phpMyAdmin, Joomla!, editable php.ini, MySQL and SQLite, you can easily set up your web server and other online applications such as online shops, forums, and blogs.

UPS Support



The TS-509 Pro supports both APC and MGE UPS devices which could avoid critical data loss when power outage occurs during data transfer.

Printer Server



The TS-509 Pro supports up to three USB printers for sharing among multiple departments and staff members.

Hardware Specifications

Processor

- Intel Celeron Processor 1.6GHz

Memory

- 1GB DDRII RAM, 128MB Flash (DOM)

HDD Capacity

- 5 x 2.5" or 5 x 3.5" SATA I/II HDD (the standard package is shipped without HDD)

HDD Tray

- 5 x Hot-swappable and lockable tray

LAN Port

- 2 x Gigabit RJ-45 Ethernet port

LED Indicators

- Status, HDD 1, HDD 2, HDD 3, HDD 4, HDD 5, LAN, USB

USB

- 5 x USB 2.0 (Front: 1; Back: 4), support USB printer, disk, pen drive, USB hub, and USB UPS etc.

eSATA

- 1* eSATA port (Back)

Buttons

- System: Power button, USB auto-copy button, Reset button

LCD panel

- Mono-LCD display with backlight
- Enter button, Select button for configuration

Alarm Buzzer

- System Warning

Form Factor

- Tower

Dimensions

- 261.1(D) x 188.5(W) x 261.1(H) mm (10.28(D) x 7.42(W) x 10.28(H) inch)

Weight

- Net weight: 6.4Kg/ 14.11lb
- Gross weight: 7.0Kg/ 15.43lb (full package)

Operation Environment

- Temperature 0~40°C
- Humidity 0~95% R.H.

Power Supply

- ATX 250W, Input: 100-264 Vac~, 46-63Hz, 5A

Secure Design

- K-Lock security slot for theft prevention

VGA

- Reserved VGA interface for maintenance

RS-232

- RS-232 x1

Fan

- 12cm quiet cooling fan (12V DC)

(built-in TwonkyMedia)

- Support media playing with PS3, Xbox360, PSP game consoles

iTunes Server

- iTunes server for music sharing on your network
- Support smart playlist for iTunes software

Multimedia Station

- Image slide show and rotation (+90°, -90°)
- Display photo details: date, exposure time, aperture, etc.
- Automatic thumbnail generation for easy browsing
- Photo album access authority management
- Multimedia files (video and audio) local playing
- Automatic file categorization

Download Station

- PC-less BitTorrent/ FTP/ HTTP download
- QNAP remote download control software: QGet (Windows-based application), allows you to control the download tasks of multiple Turbo NAS on one PC via LAN/ WAN
- BitTorrent download supports TCP/UDP, DHT
- BT schedule download supported
- BT download (up to 500 tasks)
- Download configuration (current seed number, configurable port range, bandwidth control, download percentage, UPnP NAT port forwarding for BitTorrent download)
- Download status list management (download percentage)
- Support access from Mac by Mozilla Firefox

Surveillance Station

- Supports 4 IP cameras (optional purchase) for network surveillance

Software Specifications

Operating System

- Linux-embedded system

Networking

- TCP/IP, DHCP Client, DHCP Server, CIFS/SMB, AFP, NFS, HTTP, HTTPS, FTP, DDNS, NTP
- Failover
- Load-balancing
- Multi-IP setting
- Port trunking (support 7 bonding modes)
- Network service discovery (UPnP & Bonjour)

File System

- EXT3, EXT4 (Internal/ external HDD)
- FAT (External HDD)
- NTFS (External HDD)

Supported Operating Systems

- Microsoft® Windows® 98/ ME/ NT/ 2000/ XP/ 2003/ Vista
- Mac OS X
- Linux & UNIX

Disk Management

- Single disk, RAID 0 (Disk Striping), RAID 1 (Disk Mirroring), RAID 5, RAID 5+ Hot spare, RAID 6, and JBOD (Linear Disk Volume)
- Multiple RAID
- Online RAID Capacity Expansion
- Online RAID Level Migration
- RAID Recovery
- Bitmap support for faster RAID rebuild (RAID 1/5/6)
- Disk usage status management
- Check disk (Check Linux file system)
- HDD S.M.A.R.T.
- Bad blocks scan
- Built-in iSCSI target service
- Virtual Disk Drive (VDD) for storage expansion (max. 8 Volumes)
- Support PC-less RAID setup via LCD panel for the first time installation

User Management

- User quota management (per user)
- Windows AD support
- User account management (max. 4,096 users)
- User group management (max. 512 groups)
- Support batch creating users

File System Management

- Network share management (max. 512 shares)
- Network volume status management
- Share folder level ACL support
- Hide share folder on Windows network
- Unicode support
- Journaling file system
- Web File Manager

System Tools

- E-mail alert (SMTP authentication)
- SMS alert
- SNMP
- HDD standby mode
- Disk usage alert
- Automatic power on after power loss
- QPKG add-on firmware supported
- System firmware upgrade
- Change homepage logo
- Backup, restore, reset system settings
- Smart fan setting
- Configurable management port
- Policy-based unauthorized IP blocking
- Easy IP filter management
- Secure remote login by SSH connection; remote login by Telnet connection
- USB, SNMP UPS support
- LCD control panel for easy 3 steps installation
- Wake on LAN service
- Schedule on/ off service (max. 15 settings)
- Network recycle bin
- Import SSL certificate
- Real-time System Resource Monitor

LCD

- Automatically set up the selected RAID configuration for the 1st time setup
- When the system is ready, users can check or configure the IP settings, physical disk info, volume info, system info, shut down or reboot the NAS, etc.

Event Logs

- Complete system logs (file level): system events management, connection logs, current connection of on-line users

Multilingual Support

- English, Traditional Chinese, Simplified Chinese, Japanese, Korean, French, German, Italian, Spanish, Russian, Swedish, Norwegian, Finnish, Danish, and Polish

Backup Management

- PC-client backup software-NetBak Replicator: Instant/ Schedule/ Auto-sync backup
- Remote Replication support Rsync
- Encrypted remote replication
- One touch USB copy for different destination folders
- Backup to external storage device

Multi-browser Support

- Internet Explorer 7 & 8
- Safari 3 & 4
- Firefox 3
- Google Chrome

Powerful All-in-one Server

File Server

- File sharing across Windows/ Mac/ Linux/ Unix and centralized management

FTP Server

- Support data access from remote location via FTP (max. 256 concurrent connections)
- FTP with SSL/ TLS (explicit) mode
- FXP supported
- FTP bandwidth control and connection control
- Passive FTP port range control

Backup Server

- QNAP client-side backup software - NetBak Replicator supports instant, schedule, and auto-sync backup
- 3rd party backup software support: Acronis True Image, CA Brightstor ARCserve Backup, EMC Retrospect, Symantec Backup Exec, LaCie Silverkeeper

Printer Server

- Network printer sharing via USB (support Windows & Mac platform)
- Support all-in-one printer (max. 3 sets)

Remote Replication

- Block-level remote replication supports instant, schedule backup management; support synchronization mode

Web Server

- Built-in phpMyAdmin, built-in Joomla!, editable php.ini, SQLite and MySQL dual support

MySQL Server

- Support MySQL database server

UPnP MediaServer

(built-in TwonkyMedia)

- Support UPnP/ DLNA multimedia technology: share stored photos and home videos on TV, listen to music on Hi-Fi system via DMP
- Enjoy more than hundreds of worldwide Internet radio

Package Contents



QNAP Systems, Inc.

TEL: 886-2-8698 2000 FAX: 886-2-8698 2270

Address: 21F, No. 77, Sec. 1, Xintai 5th Rd, Xizhi City, Taipei County, 221, Taiwan

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