

# TS-109 Series

## Turbo Station

# All-in-one NAS Server

## for SMB/SOHO and Professional Users

Are you looking for the most ideal NAS for your office? QNAP presents the brand new TS-109 Series with the latest technology and highest performance.

### Most Advanced Backup Solution

- Auto-sync / Instant / Schedule Backup (NetBak Backup Software is Included!)
- Remote Replication
- Unique Q-RAID 1 Real-time Data Protection via USB/eSATA Box

### Best Performance with the Most Complete Business Server Features You Need

- Ultra-high-speed Download / Upload Performance
- FTP Server, File Server, and Windows AD Service\* Support
- Support Printer Server Function

### Best Choice to Set up Your Own Web Server

- PHP with MySQL and SQLite Dual Support
- Built-in DDNS Support

### Best UPnP/DLNA Media Server

- TwonkyMedia, the Most Powerful Media Server is Provided!
- Internet Radio

### Fanless/ Noise-free Design with the Best Cooling Technology

### Reliable and Power-saving

\*for TS-109 Pro only



### Your Own Server with Full Features in the Easiest Way!

- File Server
- Backup Server
- Printer Server
- FTP Server
- Web Server
- Media Server
- iTunes Server
- Mirror Station
- Download Station
- Disaster Recovery
- Multimedia Station
- MySQL Server



# All-in-one NAS Server

## TS-109 Series Turbo Station

The World's Most Powerful & Reliable Mini NAS Barebone System

- TS-109 Pro - All-in-one NAS Server with Windows ADS, NFS support for SMB and SOHO Users.
- TS-109 - All-in-one NAS Server for Home and SOHO Users.



## Overview

### Network Storage is a must in modern working environment

To enhance the work efficiency, it becomes increasingly essential for offices to establish a network storage system for centralized file sharing, network printing, FTP upload/download, and data backup etc.. However, most small business and SOHO users are often helpless when facing the challenges of setting up a network storage system.

### QNAP provides the best NAS solution!!!

As a leading network storage provider, QNAP offers the most ideal choice! QNAP TS-109 Series Turbo Station is an ultra-high-speed All-in-one NAS (Network Attached Storage) server. With the friendly web-based interface, users can easily set up a network system for all sorts of storage applications without MIS help.

### Versatile functions for small business

TS-109 Series supports many valuable functions like File Server, FTP Server, Printer Server, etc. to satisfy the needs of SOHO and SMB users. Meanwhile, Windows ADS (Active Directory Service) is supported to help create an easy-to-access environment and lower the maintenance cost by centralized management. With the dual support of MySQL and SQLite,

SOHO/SMB users can easily set up their own web and database server. Moreover, the editable php.ini support enables higher flexibility in creating web pages.

TS-109 Series provides the most complete backup solution for secure data protection: Remote Replication, Auto-Sync/Instant/Schedule backup by professional NetBak Replicator, and unique Q-RAID 1 mirroring for real-time data protection.

### TS-109 Series brings you more than simple storage!!!

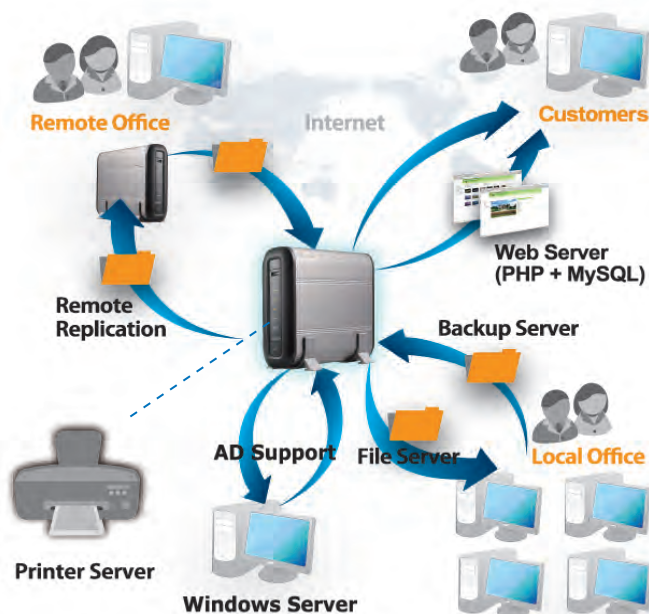
QNAP TS-109 Series Turbo Station provides variety features to enrich your digital life, such as Download Station, Multimedia Station, iTunes Server, UPnP/DLNA Media Server (TwonkyMedia) with Internet Radio, etc..

### Upgradeable and environmental-friendly

QNAP TS-109 Series Turbo Station supports large capacity SATA disk of up to 1TB and is extendable to 2TB by ultra-fast eSATA and USB 2.0 port. With its noise-free design and outstanding heat dissipation technology, TS-109 Series can run 24x7 silently at low power consumption of only 14.4W. It is ideal choice for small business looking for a quiet and energy-saving storage application.

## Versatile Functions for Small Business and SOHO

### Applications for SOHO and Small Business



#### Support Windows ADS \*

With Windows ADS (Active Directory Service) support, you can deploy your Turbo Station in small business environment easily! It enables Windows domain users to easily access the shared data with the Active Directory authentication. This not only saves server manager's time and effort in creating duplicated groups and accounts, but also lowers the maintenance cost by centralized management. (\*for TS-109 Pro only)



#### Ultra-high-speed Performance

TS-109 Series adopts the latest powerful Marvell 5182 CPU and large-sized 128MB DDRII memory for extra high performance (the highest performance of its class) in uploading mass data to and downloading them from the server.



#### Web Server

Owning a web server is no more a dream! With the dual support of MySQL and SQLite, SOHO/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.

#### High Volume Hard Drive Supported

Support SATA /II HDD up to 1TB, and extendable to 2TB by eSATA/USB port.

#### SSL security (HTTPS)

You can access and manage your Turbo Station by using web browser securely. All connections between PC and NAS including user ID, password, files, download tasks, etc. are encrypted in SSL tunnels and are well protected.

### Complete Backup Solution - Triple Backup for Highest Degree Security



#### Backup Server

Data backup may sound time- and effort-consuming for most users. QNAP's Turbo Station now brings you the enterprise-class technology to make backup extremely simple and efficient! The most intelligent automatic backup software, NetBak Replicator, is provided for users to perform real-time synchronization or schedule backup from multiple PCs to TS-109 Series.



#### RAID 1 mirroring

Imagine, your server's hard drive crashes and you lose everything. What would you do to have it back? QNAP's exclusive Q-RAID 1 provides the ultra-high-level redundancy, which helps to keep a real-time synchronized mirror in your external USB or eSATA hard drive box. In case the main storage is damaged, the backup disk can be installed to TS-109 Series to resume normal operation.



#### Remote Replication

Remote Replication provides a superior level of data protection. Files can be backed up from TS-109 Series to other QNAP NAS products in remote locations. Advanced options including data compression, block level incremental backup, and data synchronization save tremendous bandwidth and time for data backup.

### Your data center for file sharing and storage



#### File Server

The basic purpose of File Server is to allow users to store and share files. Users often concern that their private data or confidential files would be accessed by others. TS-109 Series professional server allows server manager to create user ID and password, and define the authority and quota for each user. Thus personal data stored on TS-109 Series are well protected.



#### FTP Server

Having troubles with sending large files by e-mail due to the limited capacity? You can establish your own FTP server by using TS-109 Series. You can manage the access authority of the FTP server and share your files with your friends or customers easily in a few steps.

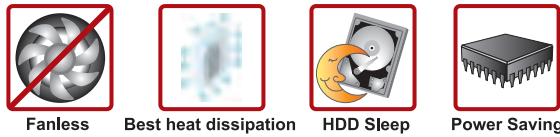


#### Sharing files across Windows, Mac, Linux\*, and Unix\*

TS-109 Series is specially designed for different users to share the files across Windows, Mac, Linux\*, and UNIX\* environment. (\*for TS-109 Pro only)

## No Fan Design

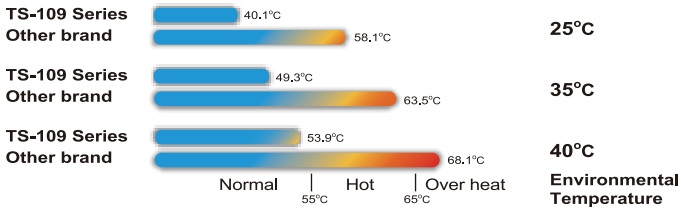
QNAP Turbo Station is the only NAS with No Fan design in the world. The aluminum casing is a giant heat-sink, dissipating heats from inside of TS-109 Series to ambient environment.



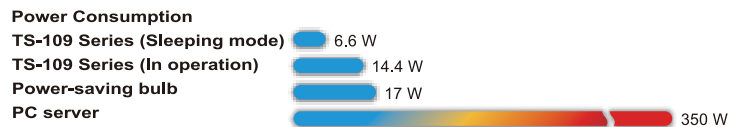
**Unique HHS (Bad Block Scanning and Disk Checking)**  
Do you have any idea about the health status of your hard disk drives? TS-109 Series is embedded with HHS (HDD Health Scanning) technology which supports disk checking and bad blocks scanning to prevent potential data loss.

**Printer Server**  
You can share your printer device over the network without duplicating investment by simply connecting a USB printer to TS-109's USB port and enabling the printer sharing function.

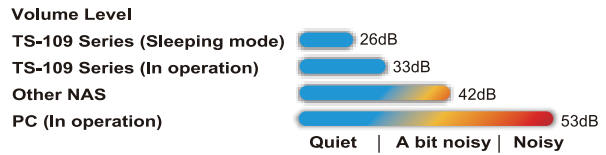
## Thermal Performance



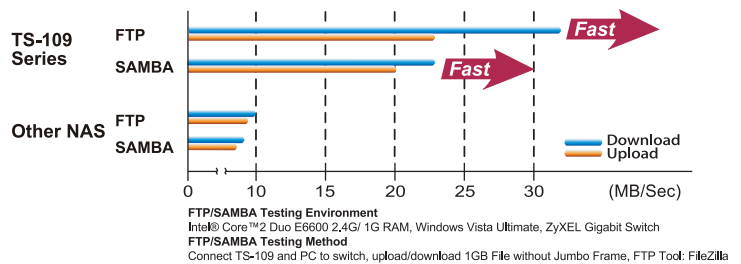
## Low Power Consumption



## Quiet and Noise-free Design



## Ultra-high-speed Performance



# Relaxing from Work, TS-109 Series Brings You More!!!

### Your dream download machine

**Download Station**  
TS-109 Series serves as a continuous download machine without turning on your PC. TS-109 Series supports download through BitTorrent, FTP and HTTP. With QNAP's powerful P2P download software- QGet, users can simultaneously manage download tasks of multiple Turbo Station Server.

### Watch the photos and video on your LCD TV

**UPnP Media Server (with built-in TwonkyMedia Server!!!)**  
TS-109 Series is a perfect media storage center and it works well with DLNA (Digital Living Network Alliance) compliant media players. You can play the photos and videos on TV. In addition, you can listen to your favorite music and Internet Radio on your Hi-Fi System.

### Share photos with your friends around the world

**Photo Sharing**  
Now you can share photos with your family and friends by TS-109 Series. The server automatically generates a web-based photo album with thumbnails and details, such as date, resolution, focal length, aperture, etc. You can browse and share the digital photos in a convenient way!

### Great feature for music lovers – iTunes Server

**iTunes Server**  
Music fans and Apple enthusiasts will be certainly rocked by the coolest music-sharing feature of TS-109 Series! All your MP3 music can be collectively stored and streamed to Mac or Windows PC. Just turn on the iTunes program and enjoy all the music around your home network!

### Intelligent One Touch Auto Copy



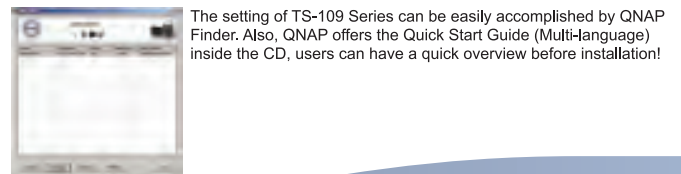
When USB device is installed, simply press the copy button and all USB data can be copied to TS-109 Series independent of PC.

### Delete the wrong file? Don't worry!!!

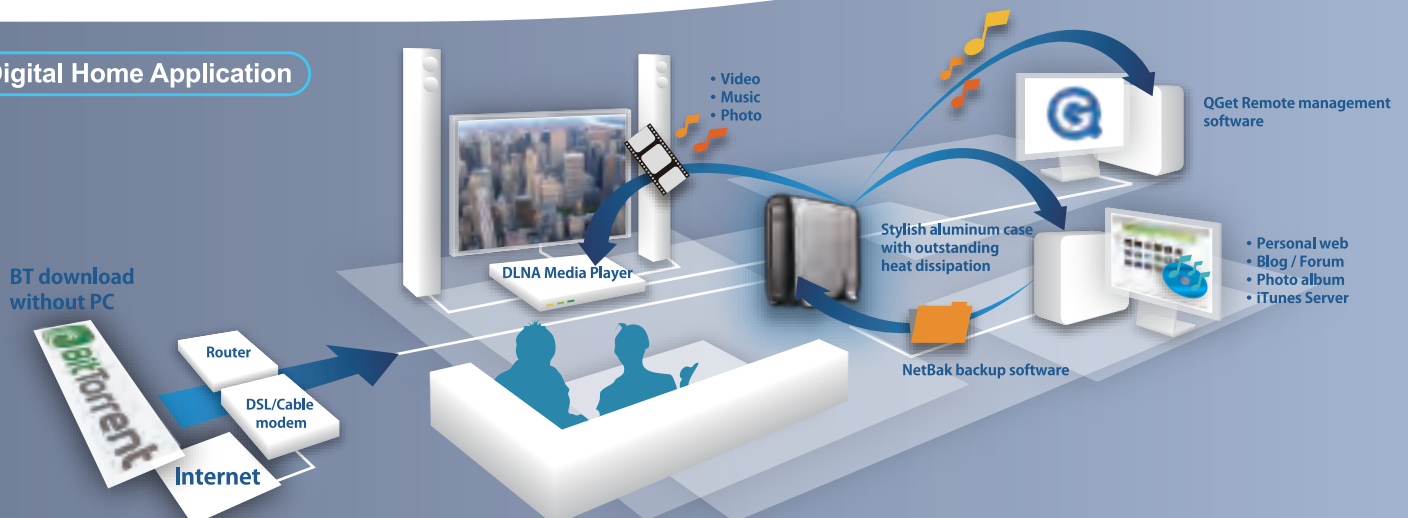


Can you imagine if you delete an important file on the NAS by mistake and lose it forever? You don't need to worry now! The files deleted from the network shares of the TS-109 Series will be moved to a particular recycle bin folder. You can restore your data anytime in case of unintended file deletion.

## Easy Installation



## Digital Home Application



## Hardware Specifications

### Processor

- High-speed SoC

### Memory

- 128MB DRAM, 8MB Flash

### HDD Capacity

- 1 x 3.5" SATA I/II HDD, up to 1TB, expandable to 2TB via eSATA/USB (the HDD is not included)

### LAN Port

- 1 x Gigabit RJ-45 Ethernet port

### LED Indicators

- USB, Status, eSATA, HDD, LAN, Power

### USB

- 3 x USB 2.0, support USB printer, disk, digital camera, pen drive, card reader, USB hub

### eSATA

- 1 x eSATA port

### Buttons

- Intelligent USB auto copy button
- Power Button
- Reset Button

### Alarm Buzzer

- System warning

### Form Factor

- Portable desktop

### Dimensions

- 210(D) x 60(W) x 182(H) mm

### Weight

- Net weight: 1.2Kg
- Gross weight: 2.1Kg

### Operation

- Temperature 0~35°C

### Environment

- Humidity 0~85% R.H

### Power Supply

- External power adapter, 12V, 36W, 100~240V

### Power Consumption

- Sleep mode 6.6W
- In operation 14.4W

### Energy-saving Design

- Fanless, HDD sleep mode
- Low power consumption & noise-free

### Thermal Solution

- Heat dissipation by aluminum case

### Secure Design

- K-Lock security slot for theft prevention
- Power cord hook for kicking-off prevention

## Software Specifications

### Operation System

- Linux embedded system

### Networking

- TCP/IP, DHCP Client, DHCP Server, CIFS/SMB, AFP, NFS, HTTP, HTTPS, FTP, DDNS, NTP, Jumbo Frame

### File System

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

### OS Supported

- Microsoft® Windows® 98/ME/NT/2000/XP/2003/Vista
- Mac OS9/OSX

### Linux and Unix\*

### Disk Management

- User quota management (Per user)
- Q-RAID 1 with external USB / eSATA Hard disk
- Disk usage status
- Check disk (Check Linux file system)
- Bad blocks scan

### User Management

- Windows AD service support\*
- User account management (max 256 users)
- User group management (max 128 groups)

### File System Management

- Network share management (max 256 Shares)

- Share folder level ACL support

- Unicode support

- Journaling file system

- Unique web file manager

### System Tools

- E-mail alert (support SMTP authentication)
- HDD standby mode setting
- disk usage alert
- Auto power on after power loss
- System firmware upgrade
- Change homepage Logo
- Backup, Restore, Reset system setting
- Network recycle bin

### Event Log

- Display system log / alert / error

### Multi-language

- English, Traditional Chinese, Simplified Chinese, Japanese, Korean, French, German, Italian, Spanish, and Russian

### Triple Backup Solution

- Support client backup software NetBak Replicator: Instant / Schedule / Auto-sync backup
- Remote Replication: Remote file backup
- Unique Q-RAID 1 mirroring backup to external HDD via USB or eSATA

\* For TS-109 Pro only

## Powerful All-in-one Server

### File Server

- Share files across Windows/ Mac/ Linux\*/ Unix\* and centralized management

### FTP Server

- Access file from remote location via FTP server
- Support up to 32 concurrent connections

### Backup Server

- Client-side backup software-NetBak Replicator supports instant, schedule and real-time backup

### Mirror Station

- Protect data by Q-RAID 1 technology

### Print Server

- Network printer sharing via USB (Support Windows platform only)

### Disaster Recovery

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

### Web Server

- Establish users' own websites with PHP; SQLite and MySQL dual support

### MySQL Server

- Support MySQL database Server

### UPnP MediaServer

- 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 (TwonkyMedia)

### iTunes Server

- Act as an iTunes server on your network, and you can play all your music files by iTunes software on your PC/Laptop

### Multimedia Station

- Image slide show, Rotate
- Showing photo's details: dates, exposure time, aperture, etc
- Auto generating thumbnails for easy browsing
- Album management
- Multimedia (video, audio) file local play
- Automatic file categorization

### Download Station

- Support BitTorrent/FTP/HTTP Download(without PC)
- Unique remote control software: QGet (Windows based application), allows you to control multiple Turbo Stations on one PC
- BitTorrent download supports DHT
- Download task management (Current seed number, configurable port range, bandwidth control, download percentage, UPnP NAT port forwarding for BitTorrent download)
- Support access from Mac by Mozilla Firefox

\* For TS-109 Pro only



## 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, R.O.C.

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