TS-109 Pro II / TS-209 Pro II Series
Turbo NAS

QNAP
www.qnap.com

All-in-one NAS Server
for SMB, SOHO and Home Users

Are you looking for an ideal network storage solution? QNAP presents new generation- Turbo NAS Pro II series which fulfills all your demands!!!

Outstanding Performance with the Most Advanced Backup Solution
- 500MHz powerful CPU with 256MB DDRII and Gigabit LAN Interface
- Auto-sync/ instant/ schedule backup (professional backup software, NetBak replicator included!)
- Encrypted remote replication

Advanced Hard Drive Protection
- HDD S.M.A.R.T. (Self-monitoring Analysis and Reporting Technology) supported
- Unique HHS (bad block scanning and disk checking) supported

Comprehensive Log System for Protocol Management
- Monitor the connections to Turbo NAS via samba, FTP, AFP, HTTP, HTTPS, Telnet, and SSH
- Record the network services accessed by online users

Best Choice to Set up Your Own Web Server
- MySQL and SQLite dual support
- Built-in phpMyAdmin
- Built-in Joomla!
- Built-in DDNS support

Connect Turbo NAS II Series to Your Digital Home
- Built-in TwonkyMedia server for multimedia streaming via UPnP/ DLNA and NFS* compliant media players
- Enjoy your music by iTunes server
- Manage continuous download tasks by QGet software, anytime, anywhere
- Share your photo on the web-based photo album with access management

* for TS-109 Pro II/ TS-209 Pro II only

NEW
Memory Upgrade Version!!!

256MB DDRII Memory

Powerful 500MHz CPU

Abundant All-in-one NAS Server Features

- File Server
- FTP Server
- iTunes Server
- Remote Replication
- Backup Server
- Web Server
- Mirror Station
- Multimedia Station
- MySQL Server
- Media Server
- Download Station
- Printer Server (Max. 3 sets)

HDD S.M.A.R.T.
OS Support
PHP SQLite & MySQL
NetBak Replicator
SSL Security

Gigabit Ethernet
SATA I / II
Jumbo frame
UPnP DLNA

All-in-one NAS Server
for SMB, SOHO and Home Users
The World's Most Powerful & Reliable Mini NAS Barebone System
• TS-209 Pro II/ TS-109 Pro II - All-in-one NAS Server with Windows AD, NFS support for SMB and SOHO Users.
• TS-209 II/ TS-109 II - All-in-one NAS Server for Home office and Home users.

Overview

QNAP Turbo NAS Pro II series is an all-in-one, high performance NAS server designed for storage-hungry modern business and SOHO users to save, back up, manage, and share data. It also satisfies the need of modern business for centralized data management and brings more value-added features. The TS-109 Pro II and TS-209 Pro II series adopt high performance Marvell 500MHz CPU and 256MB DDRII large memory, which is a double of the memory size of the previous generation (TS-109/209 series) and becomes the best hardware specifications in the present SMB and SOHO NAS market. The Turbo NAS maintains superior system performance even if there are multiple accesses to various network services of the server concurrently.

Feature-rich NAS for modern business

The advanced functions which are only available in enterprise-level NAS models are now supported in QNAP Turbo NAS Pro II series. The HDD S.M.A.R.T. (Self-Monitoring Analysis and Reporting Technology) is supported for users to monitor the status of hard disk drive and check the potential problems. The comprehensive log system allows administrator to track the file-level connection logs and the status of all online users. The Turbo NAS provides numerous built-in functions which can be easily managed via the web interface, e.g. network storage, file server, encrypted FTP server, encrypted remote replication, printer server, etc. The intelligent backup software NetBak Replicator is also offered for users to back up data from multiple Windows PCs to the NAS. Also, Windows AD authentication is supported for efficient user account management and reduced maintenance cost.

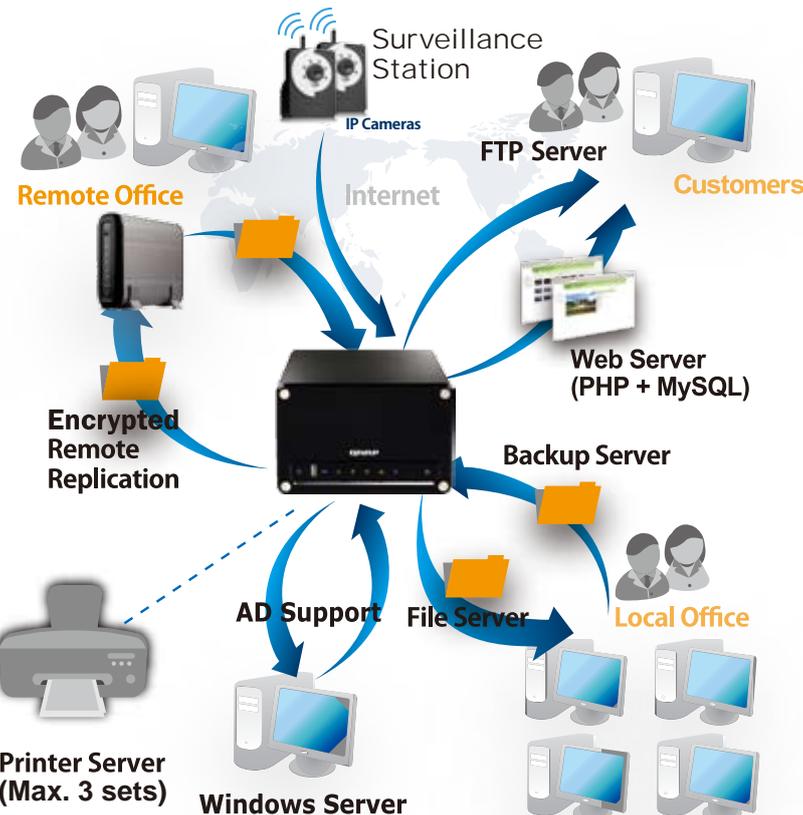## Upgraded BT engine for high-speed download

Besides the outstanding hardware specifications, the BitTorrent download performance of TS-109 Pro II and TS-209 Pro II series is largely enhanced. The high-speed DHT mode and TCP/UDP tracker protocols are supported to overcome the drawbacks of slow download of general embedded systems. You can now enjoy the level of P2P download speed as PC-based BT download. The optional firmware with encrypted BT is also provided on QNAP website for users who are suffered from traffic shaping by ISP to increase the download speed! QNAP also provides the remote management software-QGet to allow you to manage the download tasks of multiple NAS servers remotely over the local network or the Internet.

Supports DLNA, NFS*, samba multimedia sharing to set up the home multimedia centre

QNAP Turbo NAS is the NAS device with the highest compatibility with tens of different DLNA media players, Sony PS3, and Microsoft Xbox360 gaming consoles. With the upgraded TwonkyMedia version 4.4.4, the popular DivX video can be streamed to Sony PS3 from NAS. Users can enjoy more of the music, photos, and video sharing function in the home network. Moreover, the Turbo NAS Pro series works well with NFS supported High-Definition (HD) DMA for HD video streaming. They can also be connected to XBMC (modded from Xbox-gaming console) via samba for media playing. The high compatibility, energy-saving and reliable features have made QNAP Turbo NAS Pro II series the first choice for setting up the digital home multimedia center.

Versatile Functions for Small Business and SOHO Users

Applications for Small Business and SOHO Users

Surveillance Station

IP Cameras

FTP Server

Remote Office

Internet

Customers

Web Server
(PHP + MySQL)

Encrypted
Remote
Replication

Backup Server

AD Support   File Server   Local Office

Printer Server
(Max. 3 sets)

Windows Server

(* for Turbo NAS Pro II only)

Your Data Center for File Sharing and Storage

File Server
The Turbo NAS allows server manager to create user ID and password, and define the authority and quota for each user. The personal data stored on the Turbo NAS is well protected.

FTP Server
You can establish your own FTP server by the Turbo NAS, manage the access authority of the FTP server, and share your files with your friends or customers via FTP easily.

Sharing files across Windows, Mac, Linux*, and Unix*
The Turbo NAS is specially designed for different users to share the files across Windows, Mac, Linux*, and UNIX* environment.

Support Windows AD*
The Windows AD feature of Turbo NAS Pro II enables server manager to import user accounts from AD domain to NAS to reduce the time and effort for account setup. Users can use the same set of login name and password to access the domain and NAS.

Ultra-high-speed Performance
Turbo NAS Pro II series adopts the latest powerful Marvell 5182 CPU and large-sized 256MB DDRII memory which maintains superior system performance even if there are multiple accesses to various network services of the server concurrently.

Fast

Web Server
The Turbo NAS enables you to set up your own web server in the easiest way! MySQL, SQLite, built-in phpMyAdmin, Joomla!, and editable php.ini. are supported to simplify the complicated procedure you may face with Windows-based web server. With the Turbo NAS, you can use your own coding or download the free open source to set up interactive web sites, forums, or blogs etc.

UPS Support
The key function of UPS is to provide the power for a period of time during power failure. The 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.

UPS Support
APC MGE

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

x3

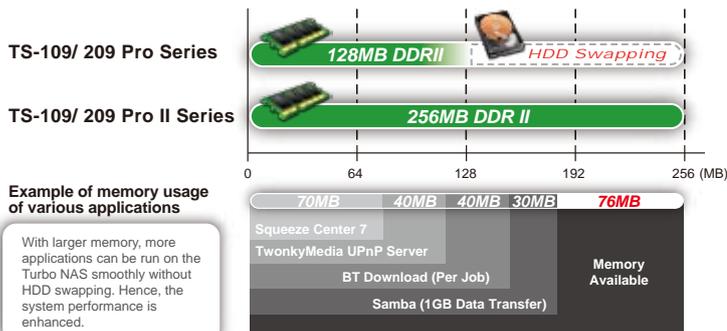## S.M.A.R.T. & Advanced HDD Health Scanning (HHS)

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.

Superior System Performance

TS-109/ 209 Pro Series — 128MB DDRII — *HDD Swapping*

TS-109/ 209 Pro II Series — 256MB DDR II

0   64   128   192   256 (MB)

Example of memory usage of various applications

With larger memory, more applications can be run on the Turbo NAS smoothly without HDD swapping. Hence, the system performance is enhanced.

70MB — 40MB — 40MB — 30MB — **76MB**

Squeeze Center 7
TwonkyMedia UPnP Server
BT Download (Per Job)
Samba (1GB Data Transfer)

Memory Available

Complete Backup Solution

Backup Server
The 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 the Turbo NAS. The NAS also supports third party backup software, e.g. Acronics True Image, CA BrightStor ARCserver Backup, EMC Retrospect, etc.

Encrypted Remote Replication
Encrypted remote replication provides high level of data protection. Files can be backed up from the 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.

Q-RAID 1 mirroring (for TS-109 Pro II/ TS-109 II)
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.

Secure Data Storage, Access, and Sharing

- Data stored on the NAS 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 the NAS.
- SSL Security (HTTPS): The NAS can be accessed and configured by web browser securely.
- Remote login to Turbo NAS by SSH (secure shell) or Telnet connection is supported.
- Secure FTP: Data can be transmitted with 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.

Relax from Work, Turbo NAS II Series Enriches Your Digital Life!

Your dream download machine

Download Station
The Turbo NAS serves as a continuous BitTorrent, FTP, or HTTP download center without turning on your PC. TCP/UDP and encrypted download are supported for enhanced download performance. The Turbo NAS can finish all download works in a more energy-saving way than the PC. You can manage the download tasks by the web browser or the exclusive QGet software. The QGet software can be used to manage the download tasks of multiple NAS servers over LAN or WAN.

Watch the photos and video on your LCD TV

UPnP Media Server (with built-in TwonkyMedia Server!!!)
The Turbo NAS is a perfect media storage center and works well with UPnP/ DLNA (Digital Living Network Alliance) compliant DMA. You 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 using any PC. The upgrade in DLNA TwonkyMedia version 4.4.4 on the Turbo 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. Moreover, the Turbo NAS Pro II series all supports NFS and NFS high-definition (HD) DMA player connection to stream and play HD videos. The NAS can also be connected to XBMC (modded from Xbox gaming console) via Samba for media playing. The high compatibility, energy-saving and reliable features have made the Turbo NAS the first choice for setting up the digital home multimedia centre.

Share photos with your friends around the world

Photo Sharing
You can share photos with your family and friends by the Turbo NAS. By uploading your photos to the NAS, 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 certainly be rocked by the coolest music-sharing feature of the NAS. All your MP3 music can be collectively stored on NAS and streamed to Mac or Windows PC. Just turn on the iTunes program and enjoy all the music around your home network!

Establish a PC-less Home Multimedia Center by Using QNAP NAS and PS3 or Xbox 360

- All the multimedia contents stored on QNAP NAS can be automatically shared to a PS3 or an Xbox360 in the home network. Users can play their stored photos and videos on a TV, or listen to the music via their Hi-Fi system. QNAP NAS can be a perfect home storage and sharing center for establishing a PC-less, HD video-playing (via PS3, video resolution up to 1080p), highly accessible, and power-saving digital home theatre.
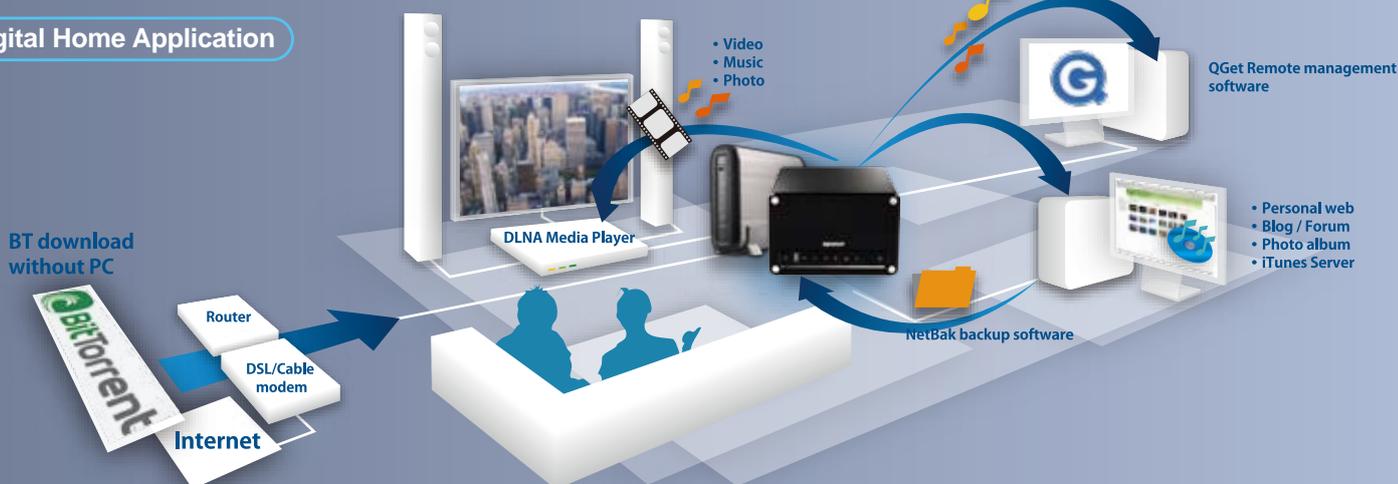
Digital Home Application

- Video
- Music
- Photo

QGet Remote management software

DLNA Media Player

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

BT download without PC

Router

DSL/Cable modem

Internet

NetBak backup software

Hardware Specifications

Processor
- SoC 500MHz

Memory
- 256MB DDRII RAM, 8MB Flash

HDD Capacity
- TS-109: 1 x 3.5" SATA I/II HDD, up to 1 TB (the standard system is shipped without HDD)
- TS-209: 2 x 3.5" SATA I/II HDD, up to 2 TB (the standard system is shipped without HDD)

LAN Port
- 1 x Gigabit RJ-45 Ethernet port

LED Indicators
- USB, Status, HDD, LAN, Power

USB
- 3 x USB 2.0, support USB printer, disk, digital camera, pen drive, USB hub, and USB UPS etc.

Buttons
- USB auto-copy button
- Power button
- Reset button

Alarm Buzzer
- System warning

Form Factor
- TS-109: Portable desktop
- TS-209: Compact cubic type

Dimensions
- TS-109: 210(D) x 60(W) x 182(H) mm
- TS-209: 214(D) x 175(W) x 115(H) mm

Weight
- TS-109
  Net weight: 1.2Kg/ Gross weight: 2.1Kg
- TS-209
  Net weight: 2.4Kg/ Gross weight: 3.5Kg

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

Power Supply
- External adaptor
  TS-109: 36W, 100~240V
  TS-209: 60W, 100~240V

Thermal Solution
- TS-109: Fanless
- TS-209: Smart fan

Secure Design
- K-Lock security slot for theft prevention

No Fan Design

QNAP TS-109 Pro II series is the only NAS with No Fan design in the world. The aluminum casing is a giant heat-sink, dissipating heat from TS-109 Pro II series to the ambient environment.
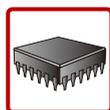
Fanless   **Best heat dissipation**   **HDD Sleep**   **Power Saving**

One Touch Copy Button
USB 2.0
USB
LED Indicators
Status
HDD
eSATA
LAN
Power
Power Button

USB 2.0
eSATA
Giga LAN
Reset Button
Power Connector
Power Cord Hook
K-Lock Security Slot

RAID-1 Mirroring with Hot-swap Design

TS-209 Pro II series supports RAID 1 Mirroring for non-stop service and easy maintenance. When data crash occurs, the administrator can be alerted by e-mail and LED indication. The hard disk drive can be replaced by hot swapping without turning off the server. The intelligent data rebuilding capability allows users to replace a failed drive by hot-swap. This enables automatic data rebuilding to the new drive without suffering from any system downtime.

Outstanding Design

Excellent mechanical design by HDD bracket to generate wind tunnel effect. HDD heat dissipation is carried out through the channel efficiently.

Power Button
USB 2.0 Port
One Touch Copy Button
LED Indicators: USB, Status, HDD1, HDD2, LAN & Power

Power Connector
Password & Network Setting Resrt Button
Giga LAN
USB2.0 x 2
K-Lock Security Slot

Software Specifications

Operation System
- Linux-embedded system

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

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

Supported Operating Systems
- Microsoft® Windows® 98/ ME/ NT/ 2000/ XP/ 2003/ Vista 32
- Mac OSX
- Linux* and Unix*

Disk Management
- Single disk, RAID 0, RAID 1 and JBOD (TS-209 only)
- Disk usage status management
- Check disk (Check Linux file system)
- HDD S.M.A.R.T.
- Bad blocks scan

User Management
- User quota management (per user)
- 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 (SMTP authentication)
- HDD standby mode
- Disk usage alert
- Automatic power on after power loss
- System firmware upgrade
- Change homepage Logo
- Backup, restore, reset system settings
- Smart fan setting
- Configurable management port
- Easy IP filter management
- Secure remote login by SSH connection; remote login by Telnet connection
- USB, SNMP UPS support
- Network recycle bin

Event Log
- Complete system logs (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, Danish, Finnish, Norwegian, and Polish

Backup Management
- PC client backup software-NetBak Replicator: Instant/ Schedule/ Auto-sync backup
- Encrypted remote replication
- TS-109: Q-RAID 1 TS-209: RAID 1 Mirroring
- Flexible data backup to external storage device via USB port (instant, schedule and auto-sync backup)

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 Server. Support up to 32 concurrent connections
- FTP with SSL/ TLS (explicit) mode
- Passive FTP port range control

Backup server
- Client-side backup software-NetBak Replicator supports instant, schedule, and auto-sync backup
- 3rd party backup software support: Arconics True Image, CA BrightStor ARCserve Backup, EMC Retrospect, Symantec Backup Exec

Print 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
- Establish users own web page and interactive websites with editable PHP.ini, SQLite and MySQL dual support, Joomla!

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 (built-in TwonkyMedia)

* for TS-109 Pro II/ TS-209 Pro II only

- Support DLNA media playing with PS3, Xbox360, PSP
- Support Nokia N95 (DLNA control point)

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

Multimedia Station
- Image slide show and rotation (+90°, -90°)
- Showing photo details: date, exposure time, aperture, etc.
- Auto thumbnails generation for easy browsing
- Photo album access authority management
- Multimedia files local play
- Automatic file categorization

Download Station
- New BT client: Support TCP, UDP, and optional encrypted BT download
- Support BitTorrent/ FTP/ HTTP download (without PC)
- Unique remote download control software: QGet (Windows-based application), allows you to control the download tasks of multiple Turbo NASes on one PC via LAN/ WAN
- BitTorrent download supports DHT
- Download configuration (current seed number, configurable port range, bandwidth control, download percentage, UPnP NAT port forwarding for BitTorrent download)
- Download task management (Automatic relaying if interrupted)
- Download status list management (download percentage)
- Support access from Mac by Mozilla Firefox

Surveillance Station
- Video recording, liveview and playback

BitTorrent™

QNAP
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