

TS-410 Turbo NAS

All-in-one NAS Server with iSCSI

for SOHO and Home Users

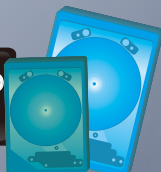
4-Bay • Hot-swappable RAID 0/ 1/ 5 / 6/ 5 + Hot Spare/ JBOD

- Dual Gigabit LAN: Failover, Load-Balancing & Multiple IP Setting
- Online RAID Capacity Expansion
- Online RAID Level Migration
- Built-in iSCSI Target Service
- Virtual Disk for Storage Expansion
- Most Advanced Backup Solution (Auto-Sync, Instant, Schedule Backup)
- Low Power Consumption & Quiet Operation
- Built-in UPnP/ DLNA Media Server for Digital Home Entertainment



eSATA_{x2}

2.5" & 3.5" HDD
dual support



Unleash the NAS Power with GUI V3
Simply the best user experience with Ajax technology



- Multi-browser Support
- Step-by-step Wizard
- 3 theme colors
- Fast user/ group/ share search
- Instant Language Switch
- QNAP RSS Feed
- And more...



Abundant SOHO & Home Server Features

- RAID Server
- iSCSI Target
- Web Server
- File Server
- FTP Server
- MySQL Server
- Media Server
- Download Station
- Backup Server
- Printer Server (Max. 3 sets)
- Remote Replication (Rsync)
- Surveillance Station
- Multimedia Station
- and more...



All-in-one NAS Server with iSCSI

for SOHO and Home Users



Overview

The QNAP TS-410 Turbo NAS is a high performance 4-bay, 2.5-inch and 3.5-inch SATA HDD network-attached storage server with iSCSI applications dedicated to SOHO, home and prosumer users. As a high capacity storage centre for data backup, management and sharing, the TS-410 Turbo NAS features excellent hardware design, outstanding performance, high reliability, and numerous powerful software applications.

Eye-catching industrial design and superior hardware specifications

The TS-410 Turbo NAS incorporates a Marvell 800MHz CPU and 256MB of DDRII RAM and is able to maintain superior performance in an intensive data access environment while offering low power consumption. The TS-410 supports four hot-swappable SATA hard drives, two Gigabit LAN ports for multi-IP settings, failover, and load-balancing, four USB ports and two eSATA ports for external storage backup.

Class-leading performance and compelling server applications

The TS-410 Turbo NAS supports cross-platform network services across Windows, Mac, Linux, and UNIX. Enhanced industry-leading features are also provided, e.g. EXT3 and

EXT4 file systems, built-in iSCSI target service (max 8 iSCSI targets), virtual disk drive (VDD) by built-in iSCSI initiator for storage expansion, RAID 0/ 1/ 5/ 6/ 5+spare, single and JBOD disk configurations, online RAID capacity expansion, online RAID level migration, RAID recovery, policy-based IP blocking, instant SMS alert notification, schedule power on/off, and 4 IP cameras (optional purchase) for network surveillance video recording.

Maximize the enjoyment of your home multimedia center

The built-in UPnP/ DLNA compliant media server (with TwonkyMedia enabled) of the Turbo NAS supports a wide range of DLNA media players such as Sony PS3 and Microsoft Xbox 360 gaming consoles and works well with NFS-supported High-Definition (HD) digital media players for HD video streaming. By installing the DLNA/ UPnP application on your iPhone or iPod touch, you can access the Turbo NAS on the local network and play the multimedia contents, e.g. videos, music, and photos on the server. In addition, the high-speed PC-less Download Station with the unique QGet utility enables you to manage the BT/ FTP/ HTTP download tasks remotely over the local network or the Internet.

ALL-in-One Server Features



UPnP Media Server (with built-in TwonkyMedia Server)

The Turbo NAS 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, or listen to your favorite music and Internet radio on your Hi-Fi system.



Multimedia Station for Photo Sharing

You can share your photos, video, or music online by the Multimedia Station of the Turbo NAS.



Music Sharing by iTunes Server

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.



PC-less Download Station

The Turbo NAS supports BitTorrent, FTP, and HTTP download without PC. TCP/ UDP, encrypted BT download function, and DHT (Distributed Hash Tables) are also supported. It supports to download BitTorrent, emule/ eDonkey and NZB files.



File Server

The Turbo NAS allows you to create user ID and password, and define the authority and quota for each user.



QGet-Download Utility for Windows and Mac

You can use the QGet download utility provided by QNAP to manage the download tasks on multiple Turbo NAS servers.



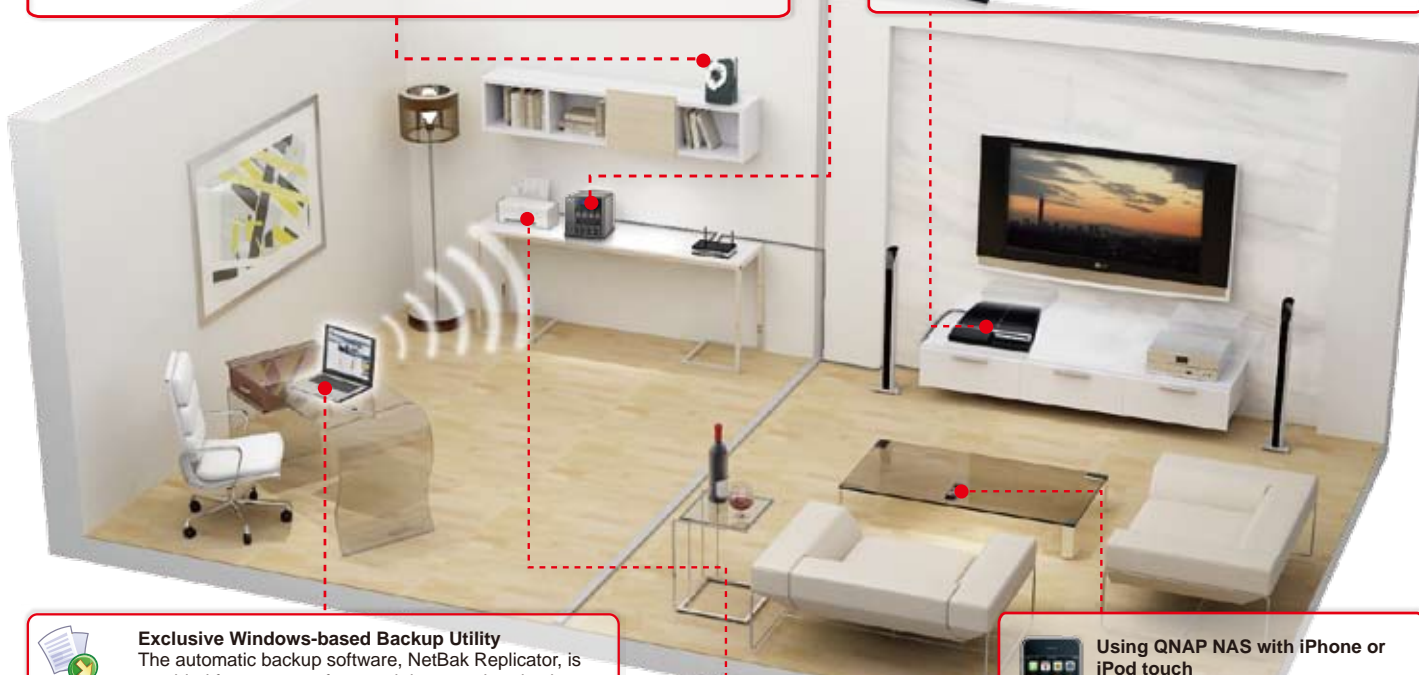
Surveillance Station

The Surveillance Station enables you to configure and connect IP cameras simultaneously and remotely manage the functions. The Surveillance Station of QNAP NAS supports all the leading network camera brands such as AXIS, D-Link, IPUX, LevelOne, Linksys, Panasonic and Vivotec, etc.



Supports PS3 and Xbox360

All the photos, music, and videos stored on the Turbo NAS can be played via PS3 or Xbox360 on your LCD TV or stereo Hi-Fi system.



Exclusive Windows-based Backup Utility

The automatic backup software, NetBak Replicator, is provided for you to perform real-time synchronization or schedule backup from multiple PCs to the Turbo NAS.



FTP Server

You can establish your own FTP server by using the Turbo NAS and share the files conveniently with your friends or customers.



Printer Server

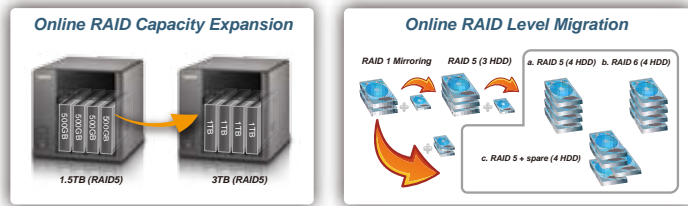
The NAS supports network printer sharing function (max 3 USB printers).



Using QNAP NAS with iPhone or iPod touch

By installing DLNA/ UPnP application on the iPhone or iPod touch, you can access QNAP NAS on the local network and play the multimedia contents, e.g. videos, music, and photos on the server.

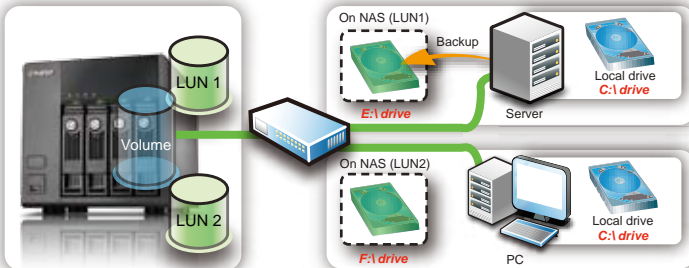
Advanced RAID Management with Hot-swap Design



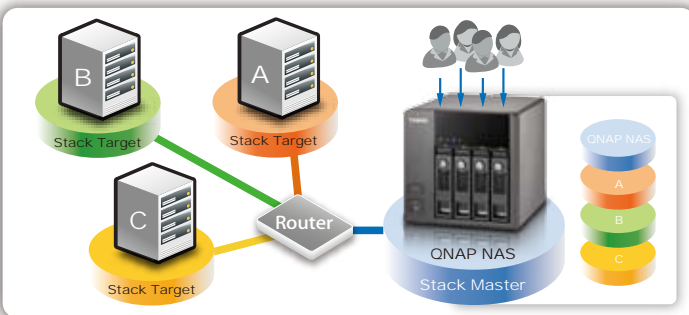
The TS-410 supports online RAID capacity expansion for expanding the storage capacity of the RAID configuration and online RAID level migration for upgrading the disk configuration to higher RAID level.

Flexible Built-in iSCSI Target Service

With the built-in iSCSI target feature, the NAS can be an ideal solution for backup or storage expansion. The users can easily create dedicated virtual drives on the NAS for their PCs or existing servers. The iSCSI drives on the NAS can be formatted as file system and used as local drives.



Virtual Disk Expansion



Virtual Disk Drive (VDD) adds flexibility to storage expansion along with ease of management. The unique "Virtual Disk Drive" adds flexibility to expand the capacity of NAS. By using the built-in iSCSI initiator, the NAS can connect to other iSCSI targets on the network and turn them into virtual disks, which become multiple single volumes on the NAS. Up to 8 virtual disks can be stacked. The NAS serves as the storage stack chaining master. The user only needs to connect to this single entry (QNAP NAS) and is able to reach and use all the iSCSI target storages on the network.

Software expansion via QPKG Center



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

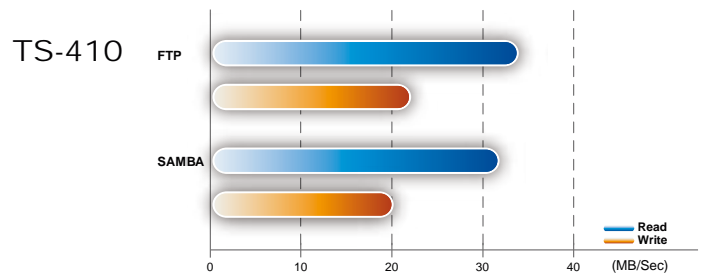


MLDonkey (eMule)
MLDonkey (eMule) is a door to the 'donkey' network, a decentralized network used to exchange big files on the Internet and present most features of the basic Windows donkey client. (e.g., eMule)



Optware Ipkg (Itsy Package Management System)
Ipkg, or the Itsy Package Management System, is a lightweight package management system designed for embedded devices. It is used in the Unslung operating system for the Linksys NSLU2, in OpenWRT, OpenMoko, Gumstix, iPAQ and now on QNAP NAS too.

Superior Performance

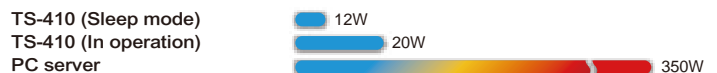


* Client PC: Intel® Core™2 Quad 2.34GHz CPU, 2GB RAM, NVIDIA nForce Networking Controller, Windows Vista 32-Bit SP1
* Testing Method: Connect the TS-410 and PC to switch, upload/download 5GB file, FTP program: FileZilla 3.1.5

Efficient Power Management

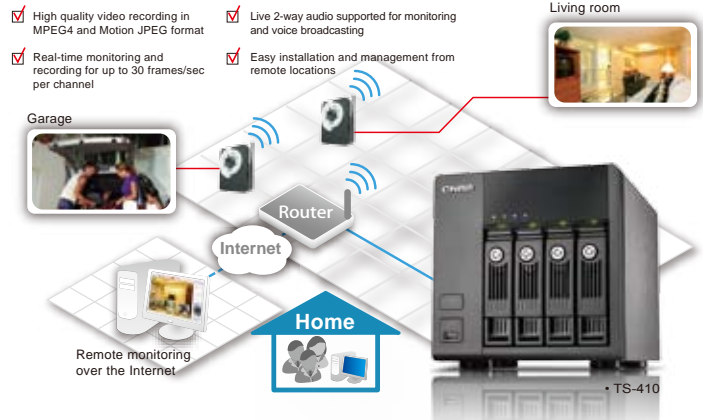
- Hard Disk Standby:** You can configure the hard disks to enter standby mode if there is no disk access within the specified period.
- Schedule Power on/ off:** The flexible schedule power on/ off feature enables you to manage the NAS server's up time according to the working hours. You can set the time for automatic system power on, power off, or restart on any days of the week.
- Power Resumption Settings:** The Turbo NAS can be configured to be turned on or off when the AC power resumes after a power loss.
- UPS Support & Advanced Standby Setting:** The Turbo NAS supports the majority of USB UPS devices (usbhid-ups supported). You can also set the time for the server to enter stand-by mode when an abnormal AC power supply is detected. When the power resumes, the server resumes to the operation status before the power outage.

Low Power Consumption



Surveillance Station

Live Audio & Video Monitoring, Recording, and Playback over the Internet



SABnzbd+
SABnzbd+ is a multi-platform binary newsgroup downloader written in Python language. The program works in the background and simplifies the downloading, verifying and extracting of files from Usenet. SABnzbd+ does not search for files, instead NZB files (similar to .torrent files, but for Usenet) are fed to SABnzbd+ from sites like newzbin.com, binsearch.info and tvnzb.com (Requires prior installation of Python)



Slim Server on Turbo Station (with SqueezeCenter 7)
Squeeze Center is the server software from Slim Device that manages common digital audio formats (.mp3, .flac, .ogg, etc.) and streams them to its players. Slim Server On Turbo Station (SSOTS) developed by flipflip is an add-on to the Turbo Station's firmware which provides the environment to run Squeeze Center 7 on it.



WordPress
WordPress is a free, open-source personal publishing system that allows you to easily create a complex blog, or web log, on your site. Written in PHP and supported by a MySQL database, WordPress offers intuitive administrative tools and sophisticated design features that make it easy to develop and integrate a personal or professional blog on your site.

Hardware Specifications

Processor

- Marvell 6281 800MHz

Memory

- 256MB DDRII RAM, 16MB Flash

HDD Capacity

- 4 x 2.5" or 4 x 3.5" SATA I/II HDD (the standard package is shipped without HDD)

HDD Tray

- 4 x hot-swappable and lockable tray

LAN Port

- 2 x Gigabit RJ-45 Ethernet port

LED Indicators

- Status, LAN, USB, eSATA, HDD 1-4

USB

- 4 x USB 2.0 (Front: 1; Back: 3)
- Supports USB printer, USB disk, pen drive, USB hub, and USB UPS, etc.

eSATA

- 2 x eSATA port (Back)

Buttons

- Power button, one touch copy button, reset button

Alarm Buzzer

- System warning

Form Factor

- Tower

Dimensions

- 177(H) x 180(W) x 235(D) mm
- 6.97(H) x 7.09(W) x 9.25(D) inch

Weight

- Net weight: 3kg (6.61 lb)
- Gross weight: 4.6kg (10.14 lb)

Operation Environment

- Temperature: 0~40°C/ 32~104°F
- Humidity: 0~95% R.H.

Power Supply

- External power adaptor, Input: 100-240V AC, 50/60Hz, Output: 12V DC, 10A, 120W

Secure Design

- K-Lock security slot for theft prevention

Fan

- Smart fan (9 cm, 12V DC)

Powerful All-in-one Server

File Server

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

FTP Server

- Supports data access from remote location via FTP (max. 128 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 (Windows & Mac)
- Supports all-in-one printer (max. 3 sets)

Remote Replication

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

Web Server

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

MySQL Server

- Supports MySQL database server

UPnP Media Server

(built-in TwonkyMedia)

- Supports UPnP or DLNA technology; the video, music, and photos on the NAS can be played by digital media players over the local network
- Internet radio (built-in TwonkyMedia)
- Media playing with PS3, Xbox360, PSP game consoles

- Supports Nokia N95 (DLNA control point)
- Supports iPhone/ iPod touch DLNA/ UPnP application

iTunes Server

- iTunes server for music sharing
- 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 software: QGet (Windows & Mac), allows you to manage the download tasks of multiple Turbo NAS on one PC via LAN/ WAN
- BitTorrent download supports TCP/ UDP, DHT
- BT schedule download
- 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)
- Supports 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
- Multi-IP setting
- Port trunking (support 7 bonding modes)
- Network service discovery (UPnP & Bonjour)
- Gigabit Jumbo frame

File System

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

Supported Operating Systems

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

Disk Management

- Single disk, RAID 0/1/5/6/ 5+hot spare/JBOD
- 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)

User Management

- User quota management (per user)
- Windows AD
- User account management (max. 2,048 users)
- User group management (max. 256 groups)
- Batch creating users

File System Management

- Network share management (max. 256 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 home page logo
- Back up, restore, reset system settings
- Smart fan setting
- Configurable management port
- Policy-based unauthorized IP blocking
- Secure remote login by SSH connection; remote login by Telnet connection
- USB, SNMP UPS support
- Schedule on/ off service (max. 15 settings)
- Network recycle bin
- Import SSL certificate
- Real-time System Resource Monitor

Event Logs

- Complete system logs (file level): system events management, 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

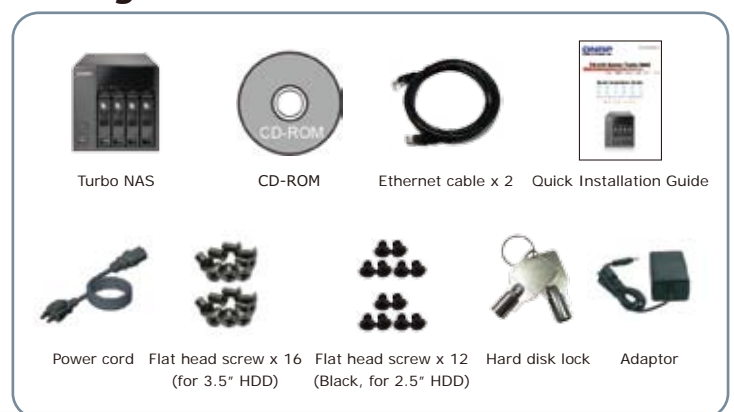
Backup Management

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

Multi-browser Support

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

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

QNAP is a registered trademark of QNAP Systems, Inc. Microsoft and Windows are either registered trademarks of Microsoft® Corporation in the United States and other countries. AppleTalk®, Mac® and Macintosh® are trademarks of Apple computer, Inc. registered in the U.S and other countries.

