QNAP

TurboNAS

Network Attached Storage (NAS) for Home & SOHO

- World-class Technology & Quality
- All-in-one NAS Features for Home & SOHO
- User-friendly Interface, Easy Setup & Operation
- Eco-friendly & Energy-efficient Design
- Advanced Cloud Computing Technology for Easy Data Access Anytime, Anywhere
- Media Center for Photos, Music, Video with BT Download
- On-the-go Data Access from iPad, iPhone, iPod touch & Android Mobile Devices
- Complete Backup Solution
- Advanced Disk Management & Data Protection

use-IP

www.use-ip.co.uk

01304 827609

	TS-419P II	TS-419P+	TS-412	TS-410	TS-219P II	TS-219P+
CPU	Marvell 2.0 GHz	Marvell 1.6 GHz	Marvell 1.2 GHz	Marvell 800 MHz	Marvell 2.0 GHz	Marvell 1.6 GHz
RAM	512MB	512MB	256 MB	256 MB	512MB	512MB
No. of Internal Hard Drives*	4 x SATA (II)	4 x SATA (II)	4 x SATA (II)	4 x SATA (II)	2 x SATA (II)	2 x SATA (II)
Compatible Hard Drives	2.5-inch/3.5-inch	2.5-inch/3.5-inch	2.5-inch/3.5-inch	2.5-inch/3.5-inch	2.5-inch/3.5-inch	2.5-inch/3.5-inch
Maximum Raw Capacity	12TB	12TB	12TB	12TB	6TB	6TB
Swappable	Yes (Hot-swappable)	Yes (Hot-swappable)	Yes (Hot-swappable)	Yes (Hot-swappable)	Yes (Hot-swappable)	Yes (Hot-swappable)
USB 2.0	4 (Front: 1, Rear: 3)	4 (Front: 1, Rear: 3)	4 (Front: 1, Rear: 3)	4 (Front: 1, Rear: 3)	3 (Front: 1, Rear: 2)	3 (Front: 1, Rear: 2)
eSATA	2	2	2	2	2	2
10/100/1000 Mbps Ethernet	2	2	2	2	1	1
Wake on LAN	Yes	Yes	No	No	Yes	Yes
Dimensions (H x W x D)	177 x 180 x 235mm	177 x 180 x 235mm	177 x 180 x 235mm	177 x 180 x 235mm	168.5 x 102 x 225mm	150 x 102 x 216mm
Weight (Net/Gross)	3kg/4.6kg	3kg/4.6kg	3kg/4.6kg	3kg/4.6kg	1.28kg/2.32kg	1.74kg/2.92kg
RAID Support	Single Disk, JBOD, RAID 0, 1, 5, 6, 10, 5 + Hot Spare				Single Disk, JBOD, RAID 0, 1	
External Power Adapter	96W	96W	96W	96W	60W	60W
Smart Fan	1 (9cm)	1 (9cm)	1 (9cm)	1 (9cm)	1 (7cm)	1 (7cm)
Power Consumption (Sleep/Operation) **	13W/31W	13W/31W	11W/26W	12W/20W	8W/16W	7W/19W
Transfer Performance (Read/Write MB/sec) **	109.6/ 75.1	106.9/71.5	96.7/52.5	66.3/40.5	107.9/96.4	106.1/82.5
Max No. of Users	4096	4096	4096	4096	2048	2048
Max No. of User Groups	512	512	512	512	256	256
Max No. of Network Shares	512	512	512	512	256	256
Max No. of Concurrent Connections	256	256	256	256	256	256
Max No. of IP Cameras	4	4	4	4	2	2

	TS-212	TS-210	TS-119P II	TS-119P+	TS-112	TS-110
CPU	Marvell 1.2 GHz	Marvell 800 MHz	Marvell 2.0 GHz	Marvell 1.6 GHz	Marvell 1.2 GHz	Marvell 800 MHz
RAM	256 MB	256 MB	512 MB	512 MB	256 MB	256 MB
No. of Internal Hard Drives*	2 x SATA (II)	2 x SATA (II)	1 x SATA (II)	1 x SATA (II)	1 x SATA (II)	1 x SATA (II)
Compatible Hard Drives	3.5-inch	3.5-inch	2.5-inch/ 3.5-inch	2.5-inch/3.5-inch	3.5-inch	3.5-inch
Maximum Raw Capacity	6TB	6TB	3TB	3TB	3TB	3TB
Swappable	No	No	Yes	Yes	No	No
USB 2.0	3 (Front: 1, Rear: 2)	3 (Front: 1, Rear: 2)	3 (Front: 1, Rear: 2)	3 (Front: 1, Rear: 2)	3 (Front: 1, Rear: 2)	3 (Front: 1, Rear: 2)
eSATA	No	No	1	1	1	1
10/100/1000 Mbps Ethernet	1	1	1	1	1	1
Wake on LAN	No	No	Yes	Yes	No	No
Dimensions (H x W x D)	165.5 x 85 x 218.4mm	165.5 x 85 x 218.4mm	168.5 x 73 x 225mm	150.2 x 67 x 216mm	165.5 x 60 x 218.4mm	165.5 x 60 x 218.4mm
Weight (Net/Gross)	0.9kg/1.9kg	0.91kg/1.9kg	1.04kg/1.8kg	1.06kg/1.86kg	0.79kg/1.7kg	0.79kg/1.7kg
RAID Support	Single Disk, JBOD, RAID 0, 1		Single Disk, Q-RAID1			
External Power Adapter	60W	60W	36W	36W	36W	36W
Smart Fan	1 (6cm)	1 (6cm)	1 (5cm)	1 (5cm)	1 (5cm)	1 (5cm)
Power Consumption (Sleep/Operation) **	6W/13W	6W/13W	4W/7W	5W/12W	5W/7W	5W/7W
Transfer Performance (Read/Write MB/sec) **	99.8/66.2	99.8/66.2	110.6/95.5	106.1/81.2	98.4/66.2	71.26/54
Max No. of Users	2048	2048	2048	2048	2048	2048
Max No. of User Groups	256	256	256	256	256	256
Max No. of Network Shares	256	256	256	256	256	256
Max No. of Concurrent Connections	256	256	256	256	256	256
Max No. of IP Cameras	2	2	2	2	2	2

* The system is shipped without hard drives. For the hard drive compatibility list, please visit http://www.qnap.com/pro_compatibility.asp
** Actual performance may vary depending on the operation environment.
Design and specifications are subject to change without notice.

QNAP Systems, Inc.
TEL: 886-2-2641-2000 FAX: 886-2-2641-0555
Address: 2F, No. 22, Zhongxing Rd, Xizhi Dist, New Taipei City 221, Taiwan

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For more information about QNAP NAS products, please visit http://www.qnap.com

P/N: 51000-023116-RS 201109 (ENG)

The Best Network Attached Storage Solutions Available

All-in-one Server Applications

- Printer server, supports up to 3 USB printers
- Supports mounting ISO images of CD and DVD discs as network shares for data archiving, storage and sharing
- Virtual host supported Web server to create multiple websites such as blogs and e-shops
- Software applications expansion by free QPKG add-ons developed by users worldwide
- Free firmware update available

User-friendly System Management

- System event notification by SMS, email, and Instant Messaging
- Supports up to 3 SNMP servers for centralized management and real-time monitoring of the NAS
- Easy to read graphical display of critical NAS statistics on disk & memory usage, CPU utilization
- Supports S.M.A.R.T. & advanced Hard Drive Health Scanning (HHS) for hard drives monitoring, checking, and bad blocks scanning

iSCSI Storage and Virtual Disk Drives (VDD)

- Single iSCSI LUN up to 32TB
- Flexible iSCSI volume allocation by thin provisioning
- Instant online capacity expansion of iSCSI volumes
- Supports CHAP authentication and iSCSI initiator access control by advanced ACL (access control list)
- Supports connection to multiple iSCSI targets and turning them into "virtual disk drives" for storage expansion of the NAS

Complete Networking Features

- Dual LAN NAS models support link aggregation for boosting network transfer and high network redundancy
- Supports popular DDNS providers
- Supports USB Wi-Fi dongle for wireless network connection
- Supports IPv6 (Internet Protocol version 6)

Software Specifications

Operating System
- Embedded Linux

Protocols
- CIFS/SMB, AFP (3.3), NFS (v3), FTP, FTPS, HTTP, HTTPS, Telnet, SSH, iSCSI, SNMP, SMTP, SMSC

Platforms
- Microsoft Windows 2000, XP, Vista (32-/64-bit), Windows 7 (32-/64-bit), Windows Server 2003/2008
- Apple Mac OS X
- Linux & UNIX

File System
- Internal: EXT3, EXT4
- External: EXT3, EXT4, NTFS, FAT32, HFS+

Networking
- TCP/IP IPv4 & IPv6 Dual Stack
- Dual Gigabit Ethernet with Jumbo Frame*
  - Port Trunking/NIC Teaming* (Modes: Balance-rr, Active Backup, Broadcast, Balance XOR, IEEE 802.3ad/Link Aggregation, Balance-tlb, Balance-alb)
  - Load Balancing, Failover, Multi-IP Settings
- DHCP Client, DHCP Server
- TFTP Server with PXE Booting Support
- UPnP & Bonjour Discovery
- Supports USB Wi-Fi Adapter

Security
- IP Filter
- Network Access Protection with Auto-blocking
- Importable SSL Certificate
- Security Access:
  - HTTPS Connections
  - FTP with SSL/TLS (Explicit)
  - SSH/SFTP Connections (Administrator Only)
  - Encrypted Remote Replication (Rsync over SSH)
- CIFS Host Access Control for Shared Folders
- Service Binding
- External Drive Encryption

Disk Management
- Single Disk, JBOD, RAID 0, 1, 5, 6, 10, 5+Hot Spare*
- Online RAID Capacity Expansion*
- Online RAID Level Migration*
- Hard Drive S.M.A.R.T.
- Bad Block Scan
- RAID Recovery*
- Bitmap*
- ISO Mounting: Max 256 ISO Images (via Web File Manager)

iSCSI (IP-SAN)
- iSCSI Target
  - Multi-LUNs per Target
  - Up to 256 LUNs
  - LUN Mapping & LUN Masking
  - SPC-3 Persistent Reservation
  - MPIO & MC/S
- iSCSI LUN Backup with Snapshot
- Virtual Disk Drive (via iSCSI Initiator)
  - Max No. of Virtual Disk Drives: 8

Power Management
- Scheduled Power on/off (Max 15 Settings)
- Automatic Power on after Power Recovery
- Network UPS with SNMP Management
- Internal Hard Drive Standby Mode
- Wake on LAN*

Access Right Management
- Max No. of Users: 4096*
- Max No. of User Groups: 512*
- Max No. of Network Shares: 512*
- Batch User Creation
- Import/Export User List
- User Quota Management
- Subfolder Access Right Management
- Supports Active Directory Authentication
  - Domain User Login via CIFS/SMB, AFP, FTP, and Web File Manager
  - NTLMv2 Authentication
- LDAP Directory Service
- RADIUS Server

Administration
- AJAX-based User Interface
- HTTP/HTTPS Connections
- SMS, Email & Instant Messaging Alerts*
- Smart Fan Control
- Dynamic DNS (DDNS)
- SNMP Traps (v2 & v3)
- Resource Monitor
- Network Recycle Bin for File Deletion via CIFS/SMB and AFP
- Comprehensive Logs (Events & Connections)
- Real-time Online User List
- Syslog Client
- Firmware Live Update
- System Settings Backup and Restore
- Restore to Factory Default

Multilingual Support
- Chinese (Traditional & Simplified), Czech, Danish, Dutch, English, Finnish, French, German, Italian, Japanese, Korean, Norwegian, Polish, Russian, Spanish, Swedish, Turkish

Browser Support
- Internet Explorer 7 & 8 or Later
- Firefox 3 or Later
- Safari 3 & 4 or Later
- Google Chrome

File Server
- Protocols: CIFS/SMB (Plus DFS Support), AFP, NFS, FTP/FTPS, HTTP/HTTPS (Web File Manager, WebDAV)
- Platforms: Windows, Mac OS, Linux/UNIX
- Web File Manager:
  - File Management by Web Browser
  - Smart File & Folder Search
  - ISO Mounting
  - Supports Google Docs (by Web File Manager)
- Antivirus

FTP Server
- FTP over SSL/TLS (Explicit)
- Max No. of Concurrent Connections: 256
- Passive FTP Port Range Control
- FTP Bandwidth & Connection Control
- Supports FXP & Unicode

Backup Server
- USB One Touch Copy
- Apple Time Machine Support with Backup Management
- Backup to External Storage Devices
- QNAP NetBak Replicator & QBack Backup Utilities (Windows Users)
- Remote Replication
  - Backup to Cloud Storage (Amazon S3, ElephantDrive and Symform)
  - Block-level Remote Replication
  - Works as Both Rsync Server & Client
  - Encrypted Replication to/from QNAP NAS Server
- Real-time Remote Replication (RTRR)
- Third Party Backup Software Support: (Acronis True Image, CA BrightStor, ARCserve Backup, EMC Retrospect, Symantec Backup Exec, LaCie SilverKeeper)

Web Server
- HTTP/HTTPS Connections
- Virtual Hosts: Max 32
- Built-in MySQL Server
- Web-based Management via phpMyAdmin (QPKG)

Media Server
- Multimedia Station
  - Photo Viewing, Audio & Video Playback
  - Image Slideshow and Rotation
  - Automatic & Scheduled Thumbnail Generation for Easy Browsing
  - Display Photo Details from EXIF: Date, Exposure Time, Aperture, etc.
  - Display Audio Details from ID3 Tag: Album Cover, Title, Artist, Album, etc.
  - Access Authority Management
  - Multimedia (Video & Audio) Streaming
  - Cooliris 3D Wall Display
  - Web Publishing (Facebook, Myspace, MSN Live, Twitter, Plurk, and Blogger)
  - Photos Publishing by Email
  - Supported Formats:
    Photo: JPG/JPEG, GIF, PNG
    Audio: MP3
    Video: Playback: FLV, MPEG-4 (H.264 + AAC)
    Transcode: AVI, M4V, MPG/MPEG, RM/RMVB, WMV
- iTunes Server
  - Audio and Video Sharing
  - Smart Playlist for iTunes User (Windows & Mac)
- Mobile App
  QMobile for Apple Handheld Devices:
  - Compatible with iPhone, iPod touch and iPad
  - iPhone OS 4.0 or Later Required
  QMobile for Android Devices:
  - Compatible with Android OS 2.2 (or older versions)
- UPnP Media Server
  - Built-in TwonkyMedia Server
  - Real-time & Background Photo Transcoding
  - UPnP Media Player:
    Game Consoles: PlayStation3, PSP, Xbox360
    Digital Media Adapter/Player
    Mobile Devices with UPnP Applications
  - Supported Formats:
    Photos: JPG, JPE, JPEG, TIFF, TIF, GIF, PNG, BMP
    Audio: MP3, MP4, M4A, M4B, 3GP, APL, AC3, M1V, M4V, MOV, AAC, AMR, AWB, WAV, PCM, LPCM, MP1, MP2, AIF, AIFF, AIFC, SND, WMA, OGG, FLAC
    Video: MV, ASF, VDR, AVI, XVID, DIVX, FLV, MPG, MPE, MTS, MT2S, M2T,MPEG, SPTS, M2P, M2V, MP2T, MP2P, MPG2, MKV, DVR-MS, VOB

Download Station
- PC-less BT, FTP, HTTP Download (Max 500 Tasks)
- BT Download
  - TCP/UDP Tracker Protocol
  - Scheduled Download
  - Configurable Port Control
  - Configurable File Saving Directory
  - File Selection in the Seed
  - Bandwidth Control
  - UPnP NAT Port Forwarding
  - RSS Feeds Subscription
  - RSS Download (Broadcatching)
- HTTP/FTP Download
  - Configurable File Saving Directory
  - Bulk Download with Wildcard Settings
  - RapidShare Download
- QNAP Download Management Software: QGet
  - For Windows & Mac OS
  - Remote Download Tasks Management of Multiple NAS over LAN or WAN

Printer Server
- Network Printer Sharing (USB)
- Supports up to 3 Printers
- Supports Internet Printing Protocol (IPP)
- Supports Apple Bonjour
- Advanced Printing Management
  - Printing Job Display and Management
  - Access Right Control

Surveillance Station
- Supports IP Cameras : Up to 4* (Optional Purchase)
- Network Surveillance: Remote Monitoring, Video Recording, and Playback

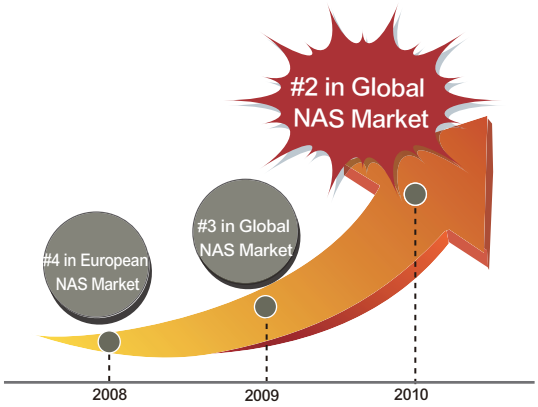
QPKG
- Web Applications
  Joomla!, phpMyAdmin, WordPress, GPLI, AjaXplorer, VtigerCRM, eyeOS, Magento
- P2P Applications
  MLDonkey (eMule) , SABnzbd+, NZBGet, Transmission
- Media Server
  Squeezebox Server, IceStation
- Server Application
  Asterisk/XDove (Mail Server) , OpenLDAP
- Misc.
  Optware IPKG, Python, iStat, pyLoad
- ...and more

* Features may vary by model

Class-leading QNAP Turbo NAS

Highly Regarded Worldwide

QNAP is ranked as the #1 Asian supplier of stand-alone NAS products in the sub-$5,000 price band in terms of vendor revenue, according to Gartner research report 2010. This reflects QNAP's ongoing commitment to developing and marketing high quality network storage products which meet and exceed our customer's expectations.



Newest Technology, Highest Quality

QNAP NAS products combine sleek design, powerful performance, and quiet operation to deliver an exceptional user experience.

Advanced Cloud Computing Technology

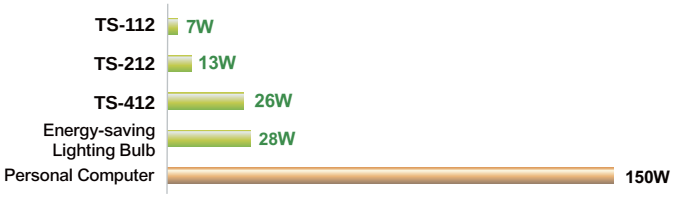
QNAP NAS helps users reap the benefits of cloud computing by offering MyCloudNAS service for users to access the NAS and share files with friends and family on the Internet.

- Secure measures for data storage and access
- Play & share photos, music & videos
- Remote NAS configuration
- Secure access by HTTPS (HTTP over SSL)
- DDNS for quick server access on the Internet
- MyCloudNAS Access Code for secure access control on publishing NAS services

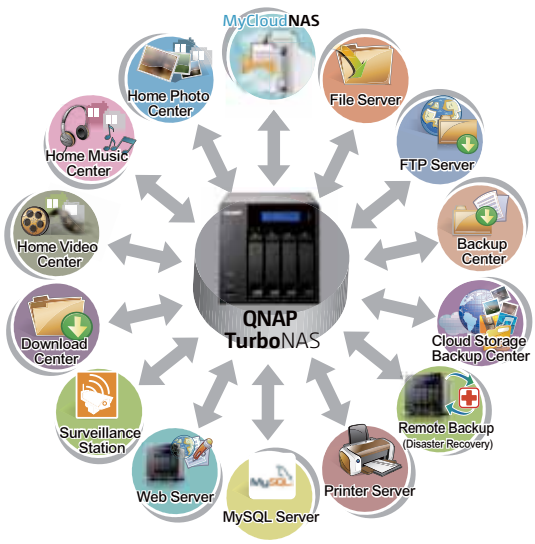
Eco-friendly, Energy-efficient Design

QNAP NAS features the latest green technologies to protect the environment and save money on your energy bill.

The hard drives on the NAS can be configured to enter standby mode after a period of idling to reduce the power consumption and extend their lifespan. The smart fan monitors the server and hard drive temperature and automatically adjusts the fan speed for quiet 24/7 operation. The NAS can be scheduled for automatic power on and off to save energy when no data access is required.



All-in-one Applications



Easy to Use

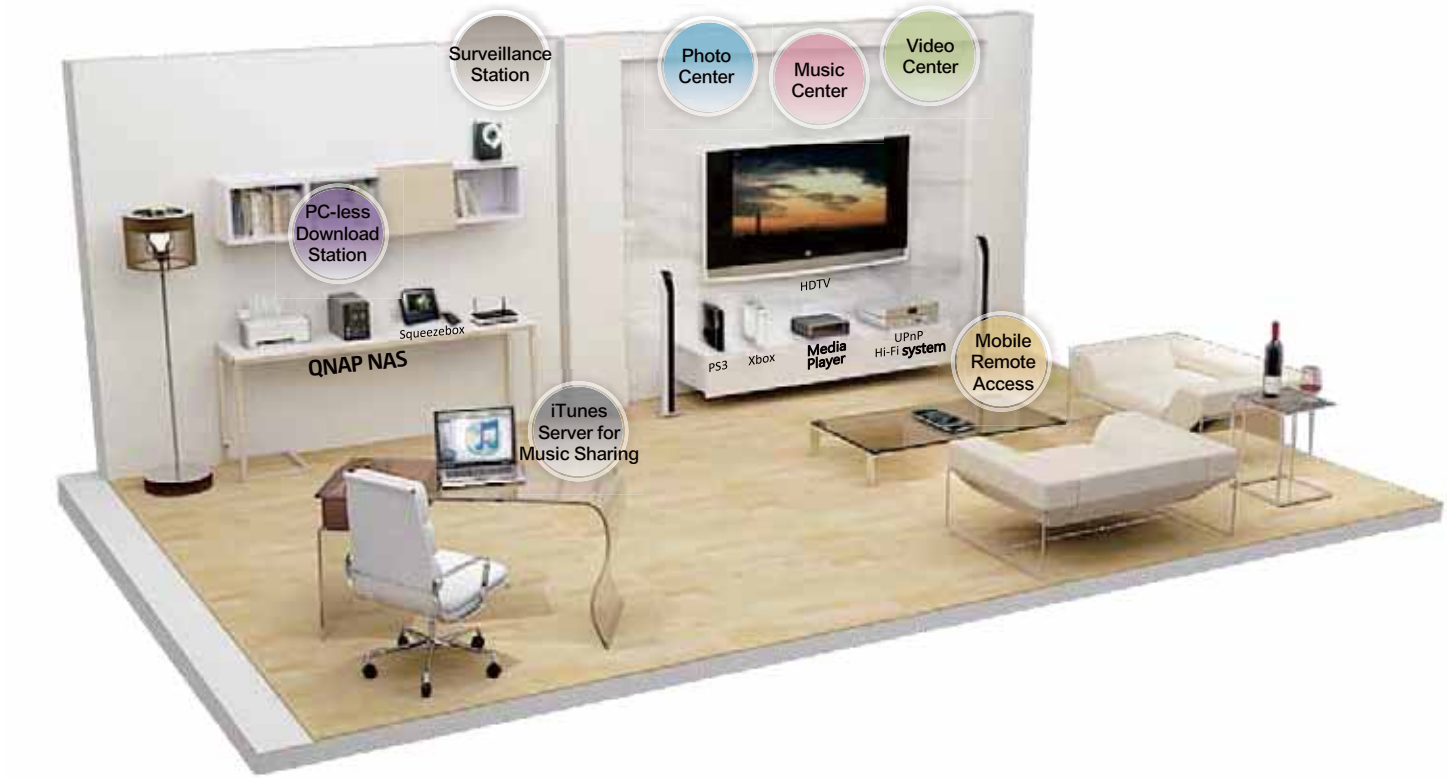
Intuitive & Interactive Web Interface

QNAP NAS offers a number of wizards to provide easy step-by-step guide of system and advanced features configuration.

The Ideal Digital Home Entertainment Center

Home Entertainment Center for Enjoying Photos, Music, and Videos

You can enjoy Full HD movies, music and photos on TV streamed from the NAS through PS3, Xbox 360, and other network media players, personal computers, and mobile devices. The NAS allows instant access to your multimedia collection from anywhere.



Home Photo Center

- View the entire albums on a widescreen TV through UPnP-compatible players
- Create and organize albums by a web browser; configure access control
- Edit background, select background frames and background music
- Publish photos in a few clicks to social networking sites such as Facebook, Twitter, MySpace, and more

PC-less Download Station

- QGet utility for download tasks management on Windows & Mac
- BT, HTTP, FTP, eMule & NZB download supported
- RSS downloader is supported for BT download to allow users to retrieve RSS feeds with torrent files, set up RSS filters, and let the NAS download files from the feeds automatically
- Supports RapidShare, Megaupload, HotFile, and other HTTP websites download

Home Music Center

- Organize all your music files in the "Media Center" and play your personal playlist in "My Jukebox"
- iTunes server and smart playlist supported
- Listen to your music on iPhone, iPod touch, iPad, and Android devices anywhere you have a 3G or Wi-Fi connection
- Experience high-quality music directly on Hi-Fi system

Mobile Remote Access

- Access the photos, music, and videos on the NAS by the QMobile app
- Play music, photos and videos on iPad, iPhone, iPod touch, or Android devices
- Enjoy multimedia files without taking up the storage space of the handheld devices
- Play the playlists created on the NAS by “My Jukebox” on the handheld devices

Home Video Center

- Huge storage capacity to store, back up, and manage all video collections
- Play HD videos by UPnP TV or media players
- Supports gaming consoles, such as PS3, Xbox360 to play HD (1080p) videos
- The NAS features high-speed data transfer to support multiple 1080p HD streams

Surveillance Station

- Real-time monitoring, recording, and playback
- Real-time video/audio monitoring & recording from multiple IP cameras
- Smart control of PTZ IP cameras by a web browser
- Supports leading IP camera brands such as AXIS, D-Link, IPUX, LevelOne, Linksys, Panasonic, and VIVOTEK

Complete Backup Solution

Local, remote, and cloud backup

QNAP NAS provides large storage capacities with excellent file transfer performance for data backup from local PCs & servers and disaster recovery options to back up your NAS data to a remote server or cloud storage safeguarding your critical information.

File Storage & Cross-platform Data Sharing

- Supports file sharing across Windows, Mac, Linux/UNIX
- Supports WebDAV for remote shared folders access via HTTP/HTTPS
- Web File Manager supports file management by dragging and dropping, multiple files upload & download, and files viewing by Google Docs

High Performance & Secure Measures for Data Storage & Access

- The NAS provides excellent data transfer performance of up to 109MB/s via Samba
- Supports remote login by SSH (secure shell) and SSL security (HTTPS) login
- Policy-based unauthorized IP blocking for SSH, Telnet, HTTP(S), FTP, Samba, or AFP connection

Local Backup

- Supports NetBak Replicator & QBack utilities for data backup or real-time data synchronization from Windows PC to the NAS
- PC-less one touch data copy for data backup between the NAS and external USB storage devices
- Supports auto backup, scheduled backup, and instant backup to external storage
- Supports Apple Time Machine backup
- Compatible with popular third-party software for backup and recovery

Users Management & Folders Access Control

- Multiple users & user groups creation
- Configurable storage quota for individual users
- NAS folders and subfolders permission control by the web-based management interface or Windows permissions control
- Detailed logs of file-level data access to the NAS via Samba, iSCSI, FTP, AFP, HTTP, HTTPS, Telnet and SSH; networking services accessed by online users are all recorded

Remote Backup

- Remote Replication supports instant and scheduled backup to another QNAP NAS or Rsync server
- Encrypted remote replication
- Supports Amazon S3 and ElephantDrive online backup and storage services

Advanced RAID Data Protection

- Exclusive RAID read only protection and RAID recovery
- Supports global hot spare and hot spare drive for RAID 5 & 6
- Online RAID Capacity Expansion
- Online RAID Level Migration