

New Business Series

- High performance platform featuring Intel Sandy Bridge Processor
- Reliable, affordable, and scalable storage with huge capacity
- Gigabit LAN ports and high-speed 10 GbE ready
- DDR3, SATA 6Gb/s, and USB 3.0 attributes
- Easy to deploy and maintain designed for midsize business

- Primary Applications**
- Centralized storage and file sharing
 - Backup center in businesses
 - Disaster recovery solution
 - Server virtualization
 - Video editing storage
 - IP-SAN storage
 - Private cloud storage



Superior Performance for IP-SAN, Virtualization, and Business Storage

		TS-1079 Pro	TS-879 Pro	TS-EC1279U-RP	TS-EC879U-RP	TS-1279U-RP	TS-879U-RP
Hardware	CPU	Dual-core Intel Sandy Bridge Processor		Quad-core Intel Xeon Processor		Dual-core Intel Sandy Bridge Processor	
	RAM	2 GB DDR3 RAM		4 GB DDR3 ECC RAM		2 GB DDR3 RAM	
	USB	USB 3.0: 1 front 1 rear USB 2.0: 4				USB 3.0: 2 rear USB 2.0: 4	
	eSATA			2			
	Internal Hard Disks	10	8	12	8	12	8
	Maximum Raw Capacity	30TB	24TB	36TB	24TB	36TB	24TB
	Hard Drive Interface	SATA 6Gb/s (backward compatible with SATA 3Gb/s)					
	Network Interface	2 x Gb LAN (default) Expandable for additional dual Gb LAN or 10 Gb LAN ports					
	Expansion Slots	1 (for network or storage expansion)		2 (for network and storage expansion)			
	Form Factor	Tower		2U, Rackmount			
	Dimensions	217.5(H) x 327(W) x 321.2(D) mm 8.56(H) x 12.8(W) x 12.65(D) inch		88(H) x 439(W) x 520(D) mm 3.46(H) x 17.28(W) x 20.47(D) inch			
	Weight	9.84 kg/21.67 lb (Net) 15.43 kg/33.98 lb (Gross)	8.39 kg/18.48 lb (Net) 13.98 kg/30.79 lb (Gross)	15.88 kg/35.0 lb (Net) 22.92 kg/50.53 lb (Gross)	12.52 kg/27.61 lb (Net) 20.76 kg/45.78 lb (Gross)	15.88 kg/35.0 lb (Net) 22.92 kg/50.53 lb (Gross)	12.52 kg/27.61 lb (Net) 20.76 kg/45.78 lb (Gross)
Software	Power	350W power supply					
	Fan	Smart fan: 2 (12cm, 12V DC)		Smart fan: 3 (6cm, 12V DC)			
	LCD Screen	Yes		No	Yes	No	Yes
	Power Consumption	121W (In operation)	101W (In operation)	167W (In operation)	132W (In operation)	165W (In operation)	130W (In operation)
	Operating System	QSM3.4 (QNAP Storage Manager 3.4)					
	Disk Management	Single disk, JBOD, RAID 0, 1, 5, 6, 10, 5 + hot spare, 6 + hot spare, 10 + hot spare, Global Hot Spare					
	Backup Server	Real-time Remote Replication (RTRR), Apple Time Machine support with backup management, QNAP NetBak Replicator backup software, backup to cloud storage (Amazon S3 & ElephantDrive), backup to external storage devices, block-level remote replication, third party backup software support					
Software	Server Virtualization	VMware vSphere (ESX/ESXi 4.x), Citrix XenServer, Windows Server 2008 Hyper-V					
	Security	AES 256-bit volume-based data encryption, IP filter, network access protection with auto-blocking, HTTPS connection, FTP with SSL/TLS (explicit), SFTP connection, encrypted remote replication (Rsync over SSH), importable SSL Certificate, email and SMS alerts					
	Network Port Trunking Modes	Balance-rr, active backup, balance XOR, broadcast, IEEE 802.3ad/link aggregation, balance-tlb, balance-alb					

** Note: The standard system is shipped without hard drives.

As the data value and volume of business data continue to rise, corporations need high-performance storage solutions which are secure, reliable, and easy to manage. The QNAP TS-X79 series, which serves as both IP-SAN (iSCSI) and NAS, can be easily utilized in different business and enterprise applications such as backup center, disaster recovery, file sharing, virtualization, and video editing storage.

Secure

Data might seem insecure being open in a network, but the QNAP Turbo NAS offers a variety of security options such as encrypted access, IP filtering, policy-based automatic IP blocking, and more. In addition, full control of your NAS is given to you down to the user and folder access rights so you determine who can access and what can or cannot be accessed. The QNAP Turbo NAS is packed with security features to stop all unauthorized users from your data. The AES-256 volume-based encryption prevents your sensitive data from unauthorized access and data-breach even if the hard drives or the device were stolen.

Reliable

The QNAP Turbo NAS is reliable with built-in safety precautions to safeguard your data from any unforeseen problems. With multiple built-in features to guarantee no interruptions to your work flow, the QNAP Turbo NAS is an efficient asset to your work environment. The advanced RAID configurations and hot-swap capabilities are included to give you better RAID performance, protection and reduced rebuilding time. The dual OS embedded on the DOM architecture avoids the system from failing to startup. In addition, if one of the two operating systems fails, the healthy operating system will boot up and operate normally while repairing the failed operating system. The dual Gigabit LAN ports can also be configured as failover which allows the NAS server to sustain the failure of one network port to provide continuous services

Simple

Setting up local or remote access with a QNAP Turbo NAS is painless and does not require any IT skills. The setup process has been simplified so that most of the process is either automatic or an installation wizard will guide you through the whole procedure. Creating a user-friendly NAS is what QNAP strives for. No previous experience with a NAS is required to reap the full benefits of a NAS as storage and backup. The user-friendly web GUI allows users to easily control the NAS through icons and clearly-marked tabs so there is no need for an extensive knowledge of complex commands. Simple management tools such as instant SMS/Email alert which will inform you of any errors the NAS has, and the S.M.A.R.T. HDD feature which will show you the current status of your hard drives, will keep you up-to-date on your NAS at all times.

High Performance

The QNAP TS-X79 series delivers the most flexible, high-performing and scalable storage solution in the industry. With the expandable 4 ports and the optional 10 GbE card to amplify your throughput, the QNAP TS-X79 series significantly accelerates the process of data transmission which increases your work productivity. Furthermore, the powerful Intel processor delivers the necessary power to grant multiple users access and maximize data access with low latency.

Private Cloud Storage

Cloud computing is revolutionizing IT applications and the way to store data. Today's IT technology allows users to access data and applications across the Internet without the need of knowing where the server/storage devices are located. By using QNAP cloud computing technologies, businesses can build up private cloud storage in the cloud computing era. The QNAP cloud computing technology allows employees to access, share, and back up data anywhere, anytime via the Internet.

Centralized Storage and File Sharing

Cross-platform Sharing:

The QNAP NAS supports SMB/CIFS, NFS, and AFP for file sharing across Windows, Mac, Linux/UNIX networks. You can create user accounts and shared folders via the user-friendly web-based interface without IT expertise required.

Windows Active Directory (AD):

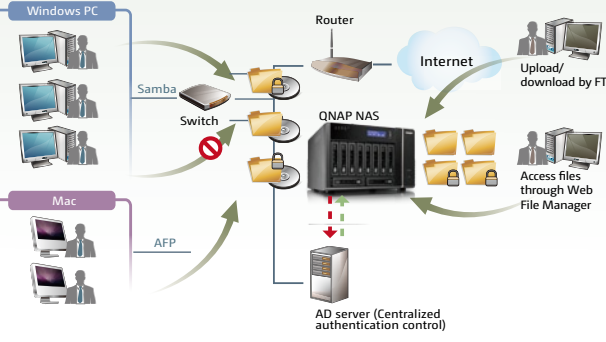
The Windows AD feature enables you to retrieve the user accounts from the Windows AD server to the NAS to reduce the time and effort for account setup. Users can use the same set of login name and password to access the NAS.

Shared Folder Aggregation:

You can connect to the shared folders of other servers on Microsoft Networking though the "portal folder" on the Turbo NAS. This saves your time and effort to login different servers one by one.

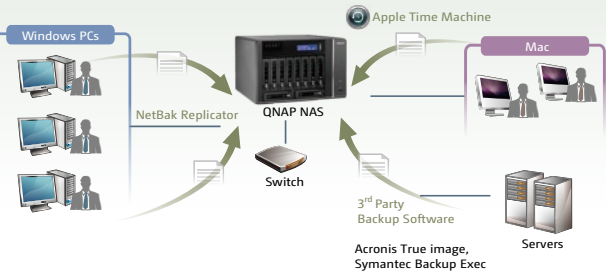
ISO File Archiving and Sharing:

The QNAP NAS supports mounting ISO images of CD and DVD discs as network shares for data archiving, storage, and sharing. This feature saves the space for storing the physical discs, reduces the risk of data loss caused by disc wearing and tearing, and enhances the performance of data sharing on a business network.



Backup Center in Businesses

The QNAP Turbo NAS is a complete backup destination that offers a high performance storage solution to meet any small or medium-sized businesses looking to simplify and centralize data management while safeguard their data from unauthorized users. With powerful applications such as the NetBak Replicator to monitor your data, information can automatically transfer from your Windows PC to your NAS instantly or scheduled. The QNAP Turbo NAS is even an ideal secondary storage for the Apple Time Machine. Many IT companies may already use third party software, and an array of backup software is supported by the QNAP NAS such as Acronis True image and Symantec Backup Exec.



Disaster Recovery Solution

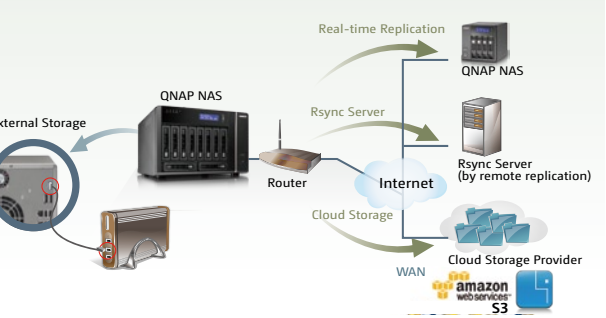
QNAP offers you peace of mind, business continuity, and high availability of data by providing the ability to recover your data from disasters with the QNAP Turbo NAS.

Real-time Remote Replication:

Real-time Remote Replication (RTRR) provides real-time or scheduled data replication between the local NAS and a remote NAS, an FTP server, or an external drive. By RTRR all newly added and modified files will be synchronized to a remote server or an external storage device automatically. Scheduled backup is supported to provide periodic replication from the NAS to a remote server or vice versa.

Cloud Storage Backup:

QNAP is ready to send your data to the clouds! The QNAP Turbo NAS supports Amazon S3 and ElephantDrive cloud backup storage which have several backup modes including real-time and scheduled backup. With the ElephantDrive you can monitor your cloud storage through a web browser, also a versioning control so that you can choose a point of time to restore your NAS. An extra set of all of your data will always be available, so you can remotely recover your data from anywhere with ease.



iSCSI and Virtualization Deployment

The QNAP Business Series Turbo NAS storages are fully VMware and Citrix ready and Windows Server 2008 Hyper-V clusters compliant.

NAS + iSCSI Combo Solution:

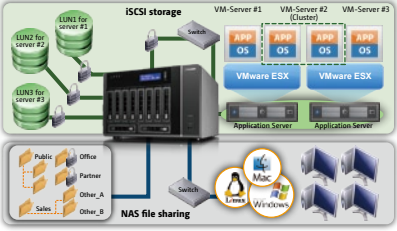
The Turbo NAS can serve as a NAS for file sharing and iSCSI storage concurrently.

Flexible Management:

The NAS supports multiple LUNs (Logical Unit Numbers) and iSCSI targets. The LUNs can be flexibly mapped to, unmapped from, and switched among different iSCSI targets.

Secure Deployment:

Designed with CHAP authentication and LUN masking, the advanced ACL (Access Control List) offers you the capability to block unauthorized access from the initiators.



Video Editing

Digital film and video production produces data-hungry digital materials that require high performance RAID storage with sustainable throughput to balance with the demanding output of video editing. The QNAP Turbo NAS fulfills your storage and video editing needs with the high-speed 10 GbE network interface. Digital videos can be quickly stored and edited on the NAS directly over the network. The QNAP Turbo NAS supports various network file sharing protocols such as NFS, AFP, and SMB/CIFS, so sharing files among PCs with different OS is easy. The scalable design of the NAS allows for the capacity to be expanded on the fly so your data can grow with your NAS.



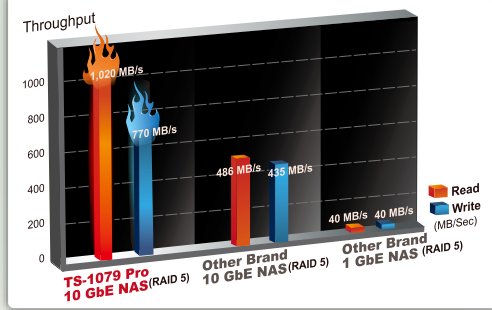
IP-SAN Storage

The built-in iSCSI feature of the Turbo NAS provides an affordable IP-SAN (Storage Area Network) alternative for business. The QNAP IP-SAN is an excellent solution for high IOPS (Input/Output Operations Per Second) intensive missions such as database service and OLTP (On-Line Transaction Processing). With the 10 GbE ready, it offers a high speed 10 GbE network to eliminate the I/O bottleneck and boosts the total throughput and IOPS. Compared with the Fiber Channel SAN you would save your investment in purchasing FC-SAN switch, Fiber Channel HBA (Host Bus Adapter) and FC-SAN storage.



10 Gigabit Ethernet Network Ready

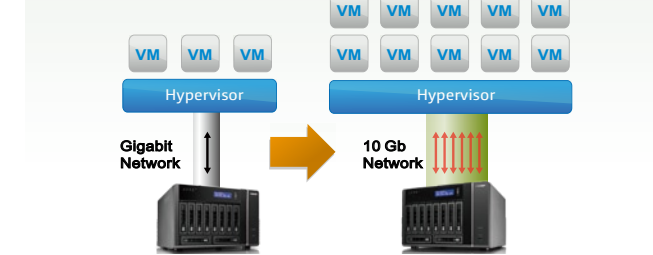
The QNAP Turbo NAS has an optional 10 GbE network card which can be added to fulfill the most demanding applications requiring high bandwidth. 10 GbE has the highest data transfer rate, it is ten times faster than the standard GbE.



© Testing Environment: Intel Xeon E5620/12GB DDR3 RAM, Intel M25 SSD, Windows 7 Enterprise 64 Bits, Intel X520-SP2 Server Adapter.

Powerful Storage Solution for Virtualized Data Center:

Application and processing requirements constantly evolve heightening the need for higher performance storage. Especially with virtualization of IT resources the need for high performance storage is essential. The QNAP Turbo NAS offers class-leading hardware matched with unparalleled 10 Gb speed for all your virtualization needs. The 10 Gb speed will increase the agility of data transmission in a virtualized environment intensifying NFS and iSCSI connection performance.



About QNAP



QNAP Systems, Inc. is a privately held company founded in 2004 and is dedicated to bringing world class NAS storage, professional NVR video surveillance, and network video players to consumer, small/medium business, and entry level enterprise market segments. QNAP leverages not only hardware design but also a growing core competency in software engineering that is precisely focused on bringing to market products that offer the highest available performance coupled with outstanding reliability, scalability, and ease of installation and use. QNAP is a multi-national company with headquarters in Taipei, Taiwan, and subsidiary offices in China and the United States.



Customer Service

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P/N: 51000-023067-RS

2011/6

Operating System

QSM3.4 (QNAP Storage Manager 3.4)

Protocols

CIFS/SMB, AFP (3.2), NFS (v3), FTP, HTTP, HTTPS, Telnet, SSH, iSCSI, SNMP, SMTP, SMSC

Platforms

- Microsoft Windows 2000, XP, Vista (32/64-bit), Windows 7 (32/64-bit), 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
- Optional Dual-port 10 GbE and 1 GbE Network Expansion Card
- Port Trunking/NIC Teaming (Modes: Balance-rr, Active Backup, Balance XOR, Broadcast, IEEE 802.3ad/Link Aggregation, Balance-tlb, and Balance-alb)
- Load Balancing, Failover, Multi-IP Settings
- Virtual LAN (VLAN)
- DHCP Client, DHCP Server
- UPnP & Bonjour Discovery

Security

- AES 256-bit Volume-based Data Encryption *
- IP Filter
- Network Access Protection with Auto-blocking
- HTTPS Connection
- FTP with SSL/TLS (Explicit)
- SFTP Connection
- Encrypted Remote Replication (Rsync over SSH)
- Importable SSL Certificate
- Email and SMS Alerts

Disk Management

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

iSCSI

- iSCSI Target

- Multi-LUNs per Target
- Up to 256 LUNs
- LUN Mapping & LUN Masking
- SPC-3 Persistent Reservation
- MPIO & MC/S
- Online LUN Expansion

- Virtual Disk Drive (via iSCSI Initiator)
- Stack Chaining Master
- Virtual Disk Drives: Max 8

Server Virtualization & Clustering

- VMware vSphere (ESX/ESXi 4.x)
- Citrix XenServer
- Windows Server 2008 Hyper-V
- Windows Server 2008 Failover Clustering

Power Management

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

Access Right Management

- User Accounts Management
- User Groups Management
- Groups Management
- Network Shares Management
- Batch User Creation
- Import/Export User List
- User Quota Management
- Supports Active Directory Authentication
- Domain Users Login via CIFS/SMB, AFP, FTP, and Web File Manager
- NTLMv2 Authentication

Administration

- AJAX-based User Interface
- HTTP/HTTPS Connections
- Email & SMS Alerts
- Smart Fan Control
- Dynamic DNS (DDNS)
- SNMP Traps (v2 & v3)
- UPS Support with SNMP & USB
- Resource Monitor
- Network Recycle Bin for File Deletion via CIFS/SMB and AFP
- Comprehensive Logs (Event & Connection)
- Real-time Online User List
- Syslog Client
- Firmware Live Update

- System Settings Backup and Restore
- Restore to Factory Default
- LCD Quick Installation (Touch-N-Go) ***

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

FTP Server

- FTP over SSL/TLS (Explicit)
- Concurrent Connections: Max 256
- Passive FTP Port Range Control
- FTP Bandwidth & Connection Control
- Supports FXP & Unicoide

Backup Server

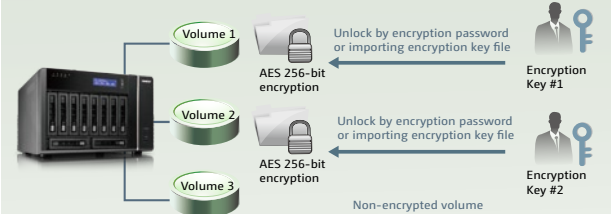
- Real-time Remote Replication (RTRR)
 - Work as Both RTRR Server & Client
 - Supports Real-time & Scheduled Backup
 - Supports Encryption, Compression, and File Filter
- Apple Time Machine Support with Backup Management
- QNAP NetBak Replicator Backup Software (Windows Client)
- Backup to Cloud Storage (Amazon S3 & ElephantDrive)
- Backup to External Storage Devices
- USB One Touch Backup (Import/Export) ****
- Block-level Remote Replication:
 - Work as Both Rsync Server & Client
 - Encrypted Replication to/from QNAP NAS Servers

* The data encryption functions may not be available in accordance to the legislative restrictions of some countries.
** The RAID configurations available vary according to the product models and the number of hard disk drives installed.
*** The Touch-N-Go function is not available for the TS-1279U-RP and the TS-EC1279U-RP.
**** The USB one touch backup function is available for the TS-879 Pro and the TS-1079 Pro.

Secure Encryption and Sharing

AES 256-bit Encryption:

The QNAP NAS supports volume-based encryption to protect sensitive data. This prevents the NAS data from unauthorized access and data breach even if the hard drives or the device were stolen.

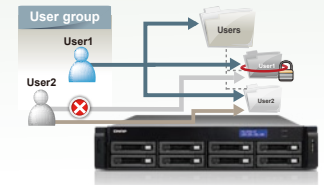


Advanced Folder Permissions:

Advanced folder permissions allow you to configure folder/subfolder access to the Turbo NAS. With this feature enabled, you can manage the folder permissions from Microsoft Windows or the web-based management interface of the NAS without complicated procedure.

Advantages

- Private subfolders management within a public shared folder
- Ownership protection on root shared folders
- Clean folder structure for group sharing and IT management
- Special permissions to dedicated user to perform data backup



Secure Measures for Data Storage and Access

Policy-based Unauthorized IP Blocking:

You can allow, deny or auto block specified IP address or network domain which attempts to connect to the Turbo NAS via SSH, Telnet, HTTP(S), FTP, Samba, or AFP.

Remote Login:

The Turbo NAS supports remote login by SSH (secure shell) or Telnet connection.

SSL Security (HTTPS):

The Turbo NAS supports HTTPS connection. You can upload a secure certificate and RSA private key in X.509PEM format issued by a trusted provider for the users to access the Turbo NAS by secure SSL login.

Secure FTP:

The Turbo NAS offers secure data transfer with SSL/TLS (explicit) encryption. Passive FTP port range setup is also supported.

Encrypted Remote Replication by Rsync:

The data on the Turbo NAS can be backed up to or from another Turbo NAS or Rsync server over the network securely.

Shared Folder Management:

You can select to hide or show the network shared folders of the Turbo NAS on Windows network.

User Authority Management:

You can create user ID and password, and define the authority and quota for each user.

Abundant Business Features

The Turbo NAS provides diversified server applications in the business environment.



File Server:

The Turbo NAS allows file sharing across Windows, Mac, Linux, and UNIX platforms. It also supports WebDAV for you to access the shared folders via HTTP/HTTPS protocol remotely.



FTP Server:

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



Backup Server:

The Turbo NAS offers you the most complete backup solution with Apple Time Machine support, remote replication to an Rsync server, Windows client backup software NetBak Replicator, third party backup software support, and so on.



Encrypted Remote Replication:

The data on the Turbo NAS can be backed up to or from other Turbo NAS or Rsync servers over the network.



Web Server:

You can host multiple websites on the Turbo NAS with the built-in web server and virtual host feature.



Printer Server:

The Turbo NAS offers cross-platform printer sharing over the network and remote printing over the Internet (max. 3 USB printers). It supports IPP (Internet Printing Protocol), print job management and Bonjour printing for Mac OS X.



Surveillance Station:

You can connect to the IP cameras via the Turbo NAS and set up a video surveillance system with comprehensive monitoring, recording, and playback features.



IPv6:

The Turbo NAS supports IPv6 (Internet Protocol Version 6) which makes your NAS a dual-stack IP host running IPv4 and IPv6 at the same time.

Advanced RAID Management with Hot-swap Design

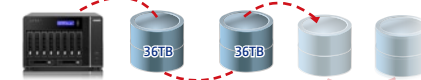
RAID is an advanced feature that the QNAP Turbo NAS offers to excel all data protection and performance aspects. The QNAP Turbo NAS has a scalable design in addition to the various levels of disk configurations such as single disk, JBOD, RAID 0, 1, 5, 6, 10, 5 + hot spare, 6 + hot spare, 10 + hot spare, and global hot spare.

Global Hot Spare:

The global hot spare function allows you to share spare drives to multiple RAID volumes on the Turbo NAS. When a hard drive fails in any RAID group the global hot-spare drive will automatically replace the failed drive to prevent data from being lost. Compared with the local spare drive, global spare function offers efficient use of spare drives.

Scalable Design*:

The QNAP Turbo NAS has a scalable design to grow with the data-hungry business.



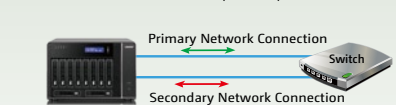
* The expansion solutions will be available in Q3, 2011

Multiple LAN Deployment

The Turbo NAS supports multiple bonding modes: Balance-rr (Round-Robin), Active Backup, Balance XOR, Broadcast, IEEE 802.3ad, Balance-tlb (Adaptive Transmit Load Balancing) and Balance-alb (Adaptive Load Balancing).

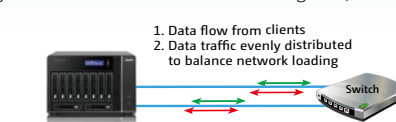
Failover:

The LAN ports of the Turbo NAS can be configured as failover which allows the NAS to sustain the failure of one network port to provide continuous services.



Load Balancing:

The LAN ports of the Turbo NAS can also be configured as load balancing mode for bandwidth aggregation to boost the file transfer speed. (It works with managed Ethernet switch with 802.3ad configured.)



Multi-IP Settings:

The Turbo NAS can be deployed with multiple different IP settings for sharing among different workgroups in two different subnets.



Support access of multiple IP from different LAN areas

System Management Tools

The Turbo NAS offers lots of features which help you manage the system efficiently.



Instant SMS and Email Alert:

You can configure the SMTP server and SMSC server settings on the Turbo NAS in order to receive instant system warning or error messages by email and/or SMS.



SNMP

(Simple Network Management Protocol):

You can collect the information, warning, or error of the Turbo NAS and send to maximum 3 SNMP servers for centralized management and real-time monitoring.



Wake on LAN:

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



Scheduled Power on/off:

You can create schedules to automatically turn on, turn off, or restart the Turbo NAS. Up to 15 schedules can be set.



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

S.M.A.R.T. (Self-Monitoring Analysis and Reporting Technology) helps you monitor the hard disks status. Moreover, the Turbo NAS supports HHS (HDD Health Scan) for disk checking and bad blocks scanning.

Comprehensive Event Logs



Detailed logs of file-level access to the Turbo NAS via Samba, iSCSI, FTP, AFP, HTTP, HTTPS, Telnet, and SSH, and networking services accessed by online users can all be recorded.

Available QPKG Software Plugins



You can maximize the usage of the Turbo NAS by installing additional QPKG software plugins developed by the users and community worldwide.



High Performance IP-SAN, iSCSI, NAS Storage

Secure, Reliable, and Simple

