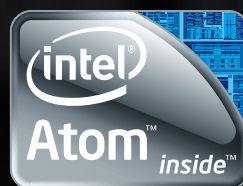


TS-239 Pro Turbo NAS

Superior Performance NAS with iSCSI for Business

- **2-Bay Hot-swappable**
- **Superior Performance for Data Sharing**
- **Built-in iSCSI Target Service**
- **AES 256-bit Volume-based Encryption**
- **Online RAID Capacity Expansion & Online RAID Level Migration**
- **Dual Gigabit LAN: Failover, Load-balancing & Multiple IP Setting**



- **Superior cooling design**
- **Ultra-low system noise**

Abundant Business Server Features

- **iSCSI Target**
- **Web Server**
- **MySQL Server**
- **Remote Replication (Rsync)**
- **File Server**
- **Backup Server**
- **FTP Server**
- **Printer Server (Max. 3 sets)**
- **and more...**



TS-239 Pro Turbo NAS

Overview

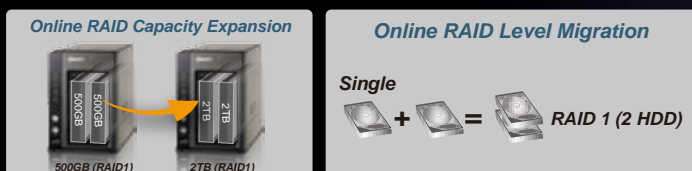
QNAP TS-239 Pro is the new generation 2-bay model of the worldwide award-winning Turbo NAS Series designed to deliver high performance and reliable server features such as advanced RAID protection, built-in iSCSI target service, and AES 256-bit volume-based encryption for small business. Powered by Intel 1.6 GHz CPU and 1GB DDRII memory, the TS-239 Pro is the 2-bay NAS with the best hardware specifications in the current market. The NAS comes with two Giga LAN ports which can be configured for network failover, load-balancing, and multi-IP setting. Advanced disk configurations such as RAID 0/1, JBOD, Online RAID Capacity Expansion and Online RAID Level Migration are supported.

The TS-239 Pro can serve as a NAS and an iSCSI target server. You can make use of the iSCSI target service to set up the NAS as a device for storage capacity expansion or a backup server of the existing servers on the

local network. The "Virtual Space Allocation" (Thin Provisioning) feature is provided that you can flexibly allocate the capacity of iSCSI LUN (Logical Unit Number) at the beginning regardless of the physical volume capacity of the NAS.

To meet the demand for high security data protection of the business users, the TS-239 Pro supports AES 256-bit volume-based encryption. The encrypted disk volumes of the NAS must be unlocked by the encryption password to be accessed, which eliminates the fear of confidential data leakage if the hard drives or the NAS were stolen. Moreover, the TS-239 Pro supports file sharing across Linux, UNIX, Mac, and Windows. It provides numerous applications, e.g. file server, FTP server, printer server, web server (with phpMyAdmin, MySQL, SQLite, Joomla!). It is an ideal storage solution for your office network.

Advanced RAID Management with Hot-swap Design



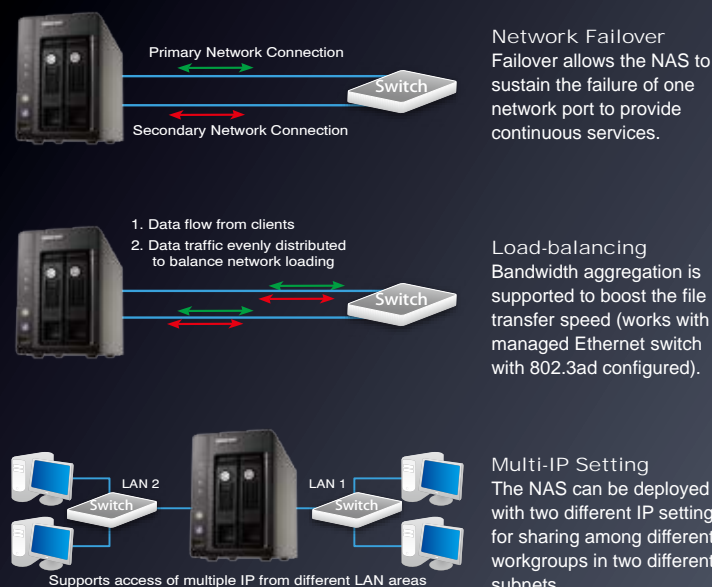
Online RAID Capacity Expansion and Online RAID Level Migration

The TS-239 Pro supports Online RAID Capacity Expansion for expanding the storage capacity of the RAID 1 configuration and Online RAID Level Migration for upgrading the disk configuration to higher RAID level. It also supports RAID 0, 1, single, and JBOD disk configurations. The hot-swap design allows you to replace a failed member drive of the RAID 1 configuration without turning off the server.

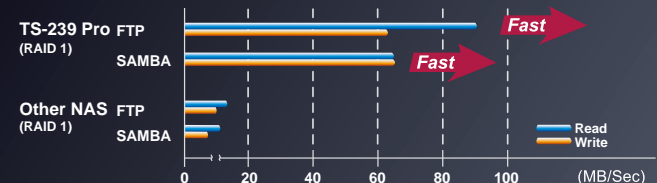
AES 256-bit Volume-based Data Encryption

The TS-239 Pro's dominant "volume-based encryption" feature enables you to build encrypted disk volumes on the NAS for the first time installation. The disk volume is securely protected by AES 256-bit encryption. An encryption key is required to unlock the encrypted volume to access the server data. This prevents data leakage if the server or the hard drives were stolen.

Benefits of Dual LAN Deployment



Ultra-high-speed Performance



FTP/SAMBA Testing Environment
Intel Core2 Quad Q6600 2.4GHz/2G RAM, ACER MCP73PV, WD6400AAKS 620GB, Intel PRO 1000 PT 82572, Windows Vista 32Bit SP1
FTP/SAMBA Testing Method
Connect the TS-239 Pro to the PC, upload/download a 5GB file with Jumbo Frame disabled. FTP Tool: FileZilla

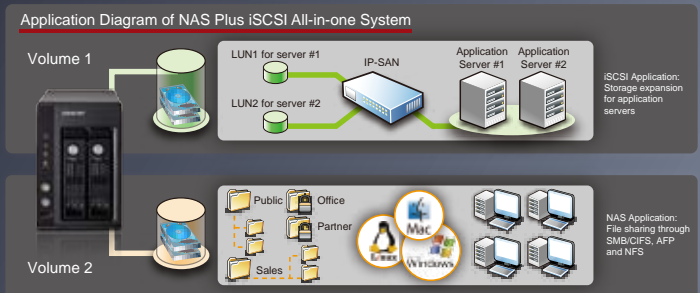
Built-in iSCSI Solution

Built-in iSCSI Target Service
For small business, a high-performance and flexible storage expansion solution for the existing application servers is required. However, DAS (Direct Attached Storage) is not an efficient solution and a Fiber Channel SAN is too expensive and complicated to implement.

The TS-239 Pro can act as a NAS and iSCSI target server at the same time. It provides a cost-efficient iSCSI solution to set up an IP-SAN. You can make use of the built-in iSCSI target service to add up to 8 iSCSI devices. Different iSCSI Target LUNs (Logical Unit Number) can be defined as storage expansion or backup destination of the existing application servers, such as database servers and mail servers.

Virtual Space Allocation (Thin Provisioning)

The "Virtual Space Allocation" (Thin Provisioning) feature is provided which allows you to flexibly allocate the capacity of iSCSI LUN (Logical Unit Number) at the beginning regardless of the physical volume capacity. When the physical storage capacity of the volume is going to be full, You can easily expand the storage capacity of the NAS by "Online RAID Capacity Expansion".



DOM Architecture and Fail-Safe Dual OS Protection

All the OS and applications are embedded on the DOM of the TS-239 Pro to allow system booting without accessing the physical disk sectors, which prevents unsuccessful system startup caused by bad block sectors or file errors on the hard drives. Two operating systems are built on the DOM for system booting alternatively upon every system startup. When one fails, the other one will be used to boot up instead, and the failed OS is recoverable from the other healthy OS.

All-in-one Turbo NAS Applications

Secure Measures for Data Storage and Access

- 1 Policy-based Unauthorized IP Blocking:** You can allow, deny or auto block specified IP address or network domain which attempts to connect to Turbo NAS via SSH/ Telnet/ HTTP(S)/ FTP/ samba/ AFP.
- 2 Comprehensive Event Log System:** Detailed logs of file-level data access to the Turbo NAS via samba, FTP, AFP, HTTP, HTTPS, Telnet, and SSH, and networking services accessed by online users are all recorded.
- 3 Syslog Setting:** All the system event logs and connection logs can be saved to a remote syslog server.
- 4 Remote Login** by SSH (secure shell) or Telnet connection is supported.
- 5 SSL Security (HTTPS):** The Turbo NAS can be accessed and configured by the web browser securely. 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.
- 6 Secure FTP:** The data can be transmitted with SSL/TLS (explicit) encryption. Passive FTP port range setup is also supported.
- 7 Write-only access right on FTP server:** The third party partners are allowed to upload data to the NAS but not able to read or edit the data via FTP.
- 8 Encrypted Remote Replication:** The data on the NAS can be backed up to or from another Turbo NAS over the network securely.
- 9 Share Folder Management:** For the security of Windows network environment, you can hide or show network share folders.
- 10 User Authority Management:** You can create user ID and password, and define the authority and quota for each user.



Complete Backup Solution

NetBak Replicator (no license account limitation)
The backup software, NetBak Replicator, is provided for the NAS users to perform real-time synchronization or schedule backup from multiple PCs to the NAS.

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.

3rd Party Backup Software Ready

Acronis True Image, CA BrightStor ARCserve Backup, EMC Retrospect, Symantec Backup Exec, and LaCie Silverkeeper.

One Touch USB Auto Copy

The one touch button can be configured to trigger instant data backup from the external USB device to the NAS or the other way round (applies to the USB device connected to the front USB port of the NAS only).



Surveillance Station

The Surveillance Station enables you to configure and connect multiple IP cameras simultaneously for remote monitoring, video recording and playback.



Printer Server

You can connect a USB printer to the NAS to enable network printer sharing. The NAS supports up to 3 USB printers.



Web Server

With the built-in phpMyAdmin, Joomla!, editable php.ini, MySQL and SQLite, you can easily set up your web server and other online applications such as online shops, forums, and blogs.



MySQL Server

The Turbo NAS is the most affordable choice as a standalone database server. It can be applied as a database server of another web server or as an additional backup database server.

Software Expansion via QPKG Center



The QPKG software package platform enables you to maximize the usage of the Turbo NAS by installing additional software packages developed by the users and community worldwide.

Smart Hard Drive Tools



HDD S.M.A.R.T.

The NAS supports Hard Disk Drive S.M.A.R.T. (Self-monitoring Analysis and Reporting Technology) for you to monitor the hard drive condition and prevent potential data loss.



Hard Disk Drive Health Scanning (HHS)

The embedded HDD HHS technology is provided for disk checking and bad blocks scanning of the NAS to secure your server data.

Convenient System Tools



Wake on LAN

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



Recycle Bin

The files deleted from the network shares of the NAS will be moved to a particular recycle bin folder. You can restore your data anytime in case of unintended file deletion.



Batch Creation of Users and Network Shares

The NAS supports batch creation of users and network share folders to save your time and effort in user account and folder creation.



Instant SMS and Email Alert

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



Smart Fan

The fan rotation speed is automatically adjusted according to the server's temperature. You can also define the system temperatures to trigger high speed or low speed rotation of the fan.

Hardware Specifications

Processor

- Intel Atom 1.6GHz

Memory

- 1GB DDRII RAM, 128MB flash (DOM)

HDD Capacity

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

HDD Tray

- 2 x hot-swappable and lockable tray

LAN Port

- 2 x Gigabit RJ-45 Ethernet port

LED Indicators

- HDD 1, HDD 2, LAN, eSATA, power, USB

USB

- 3 x USB 2.0 (Front: 1; Back: 2)
- 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

- 150(H) x 102(W) x 216(D) mm
- 5.91(H) x 4.02(W) x 8.5(D) inch

Weight

- Net weight: 1.74kg/ 3.84 lb
- Gross weight: 2.92kg/ 6.44 lb

Operation Environment

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

Power Supply

- External power adaptor, 60W, Input: 110-240

Secure Design

- K-Lock security slot

VGA

- Reserved for maintenance

Fan

- 1 x quiet cooling fan (7 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. 256 concurrent connections)
- FTP with SSL/ TLS (explicit) mode
- FTP 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

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 2 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
- Failover
- Load-balancing
- Multi-IP setting
- Gigabit Jumbo frame

File System

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

Supported Operating Systems

- Microsoft® Windows® 98/ ME/ NT/ 2000/ XP/ 2003/ Vista
- Mac OS X
- Linux & UNIX

Disk Management

- Single disk, RAID 0/ 1 and JBOD
- Online RAID Capacity Expansion
- Online RAID Level Migration
- Disk usage status management
- Check disk (Check Linux file system)
- HDD S.M.A.R.T.
- Bad blocks scan
- AES 256-bit volume-based encryption
- Built-in iSCSI target service

User Management

- User quota management (per user)
- Windows AD
- User account management (max. 4,096 users)
- User group management (max. 512 groups)
- Batch creating users

File System Management

- Network share management (max. 512 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
- 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
- Wake on LAN
- Schedule on/ off service (max. 15 settings)
- Network recycle bin
- Import SSL certificate

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

Package Contents



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