

**NAS** storage 8100



**Full-range data protection and integrity**



 **TULSIENT**  
Solutions for the Information Age

## Features

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**Dual NIC  
Hot-swap Hard Disk  
Redundant Power Supply**

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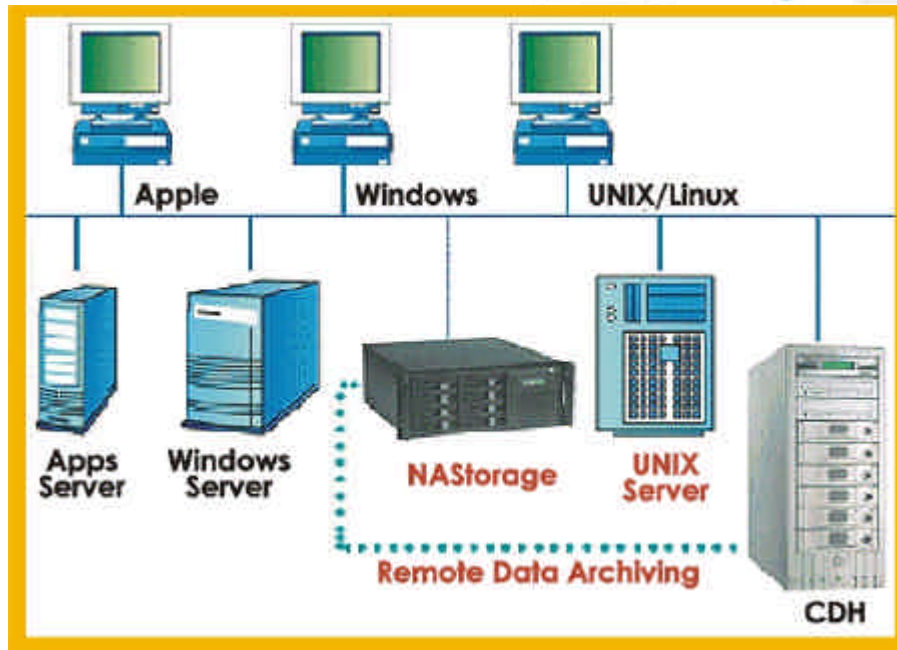
### Full Range Data Protection

- Provides RAID 0, 1, 5 data redundancy architectures to fit your data management strategy.
- Deploys multiple RAID groups simultaneously.
- Supports 8 Hot-swappable hard drives, the robust storage capacity over TB.
- Features with compact size mobile racks to equip four drives in 3-bay space.
- Global RAID hot-spare hard drives for all RAID groups.
- RAID 5 hot-expansion for RAID 5 online storage expansion.
- Built-in tape backup software.
- Remote data synchronization with NASStorage\*.
- Remote data archiving with FISC CDH\*.
- Using the journaling file system for faster recovery and data integrity from system failure and power losses.

### Superior System Availability

- The dual Fast Ethernet ports with fail over and load balance features to offer the uninterrupted and robust access to NASStorage.
- The embedded system resides in and boots up from the reliable flash memory.
- System configuration can be easily backed up and restored to assure system disaster recovery.
- The power management integrates with the smart signaling UPS system.
- The redundant power supply and hot-swap cooling fans keep the NASStorage away from accidental power or system failure.

# NAS storage 8100



## Reduced Management Overhead

Equipped with LCD front panel for amplified initial setup and monitoring. Web-based management console enables comprehensive system management. NASTart quick setup wizard walk-through enables installation in just minutes. The built-in DHCP support can be assigned IP address automatically. Supports multilingual administration interface.

## "Drive Roaming" Technology facilitates true plug & play RAID management

The "Drive Roaming" technology is the latest RAID enhancement technology. With this function, it is possible to change the location of a hard disk without reconfiguring the RAID. In NASStorage, the hard disks drives can be physically moved to any IDE channel. After Power-On, the NASStorage will recognize the RAID group the hard disks belong to and mount the volume automatically without losing your valuable data. This technology allows RAID members to be moved between different NASStorage systems.

## Intelligent System Monitoring

The embedded monitoring unit of system environment to ensure non-stop operation. The status of various system components is real-time monitored and notification using NMS utilities, such as HP Open View. The e-mail notification is used for sending alert messages about critical conditions.

The LCD front panel and built-in buzzer indicate the event messages while any abnormal status occurs. The "Web Reminder" function can display the system events while the administrator logs into the system administration web page. The intelligent mobile rack indicates the HDD status for individual drive.

## Best-of-breed network security integration

Offers file and folder level security permission for each file or folder to maximum the security flexibility for administration. Supports user and group disk quota allocation and control for effective

management of storage resources.  
 Employs Access Control List (ACL) to ensure appropriate access to data.  
 Integrates with Microsoft NT/2000 Domain and Active Directory environment  
 Supports Novell bindery server and NDS\*.  
 Integrates with NIS domain.

## Key Functions -----

### Hot Expansion for RAID

The exclusive online storage expansion function.  
 The hot-expansion function is used to enlarge the capacity of a RAID 5 group without shutting down the system. With the hot-swappable hard drives and RAID hot-expansion, it is now possible to expand your storage capacity on demand while getting the maximum system uptime. For example, assume that you only need 480GB of storage capacity.

You can connect five 120GB hard drives to NASStorage and create a RAID 5 group. year later, 480GB storage capacity might not be enough and you will need 240GB more. At this time, you just plug in two 120GB hard drives to NASStorage and join them into that RAID-5 group. You will get a RAID group with the capacity of 720GB (480GB + 240GB). All these are done while the system is still on-line.

### Global Hot Spare Hard Drives

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### Journaling File System

**The Fundamental of Data Integrity.**  
 A journaling file system is a fault-resilient file system, which writes a journal that keeps track of where data has been written or removed. The journal keeps track of where the file system puts each extent. Then, if your system crashes, you can be back up and operational much more quickly with a journaling file system.

It also recovers unsaved data and stores it in the location where it would have gone if the computer had not crashed, making it an important feature for mission-critical applications. The journaling file system can ensure file system consistency and fast recovery in the unlikely event of a system crash or other abnormal failure. With the journaling file system, NASStorage can recover from an abnormal shutdown in a few minutes.

### UPS Integration

**Protect your NASStorage and data integrity with smart-signaling UPS system to avoid unscheduled shutdown**

NASStorage administration web page. Administrators can configure their NASStorage to monitor any UPS supporting smart signaling. In the event of an

Compared to other servers which just connect to the UPS without any management capability, NASStorage seamlessly integrates with the smart-signaling UPS system and Can monitor and configure the UPS condition from

extended power outage, NASStorage will be shut down gracefully and safely, preventing potential data corruption. Administrators can also get e-mail alert and view a log about power related event.

## Built-in Tape Backup

No more additional cost in other backup software. We have built in one for you. NASStorage builds in tape backup software for data protection. With the software, it is easy and comprehensive to make the pre-schedule or manual backup tasks. You can back up your selections either by schedules or immediately with just a few steps. Even better, all backup operations i.e. back up, restore, schedule, and view task progress are done on web browser interface. It does not require any specific OS platform; you can manage backup operations on Windows, UNIX or Macintosh. NASStorage supports both full backups and incremental backups for you to make backup plans.

Full backups copy all selected data into tapes, which provide full protection but usually take a long time. Incremental backups only copy new and modified files, taking much less backup time. Usually you can interleave full backups and incremental backups to balance between backup time and protection level.

NASStorage built-in tape backup software conforms to open standards by adopting UNIX-tar format. The backup tapes can be restored by any backup software, which supports UNIX-tar format. No more worries about being tied up to proprietary formats.

## Product Specifications-----



NASStorage™ 8100

### Hardware:

<b>CPU</b>	Celeron Processor 1.2GHz with 256KB L2 cache
<b>Memory</b>	Support 512MB PC-133 SDRAM 16MB Flash memory on DOM (Disk-On-Module)
<b>Network</b>	On-board Dual Intel Fast Ethernet interface Gigabit Ethernet interface (Optional)
<b>Storage</b>	High performance IDE RAID accelerator Up to 8 ATA-100/133 hard disk drives Support 2 IDE CD/DVD writers and/or tape drive
<b>Expansion Slot</b>	One PCI expansion slot for Gigabit Ethernet.
<b>LED Indicators</b>	Power, LAN1 Activity, LAN2 Activity, Disk Activity
<b>LCD Panel</b>	For IP setting and system information
<b>Serial Port</b>	For communicating to UPS with smart signaling.
<b>Environmental Monitoring Unit</b>	Monitoring System/CPU temperature, fan speed and CPU voltages.

### File System:

- **Journaling file-system**
- **Support large file system**
- **Up to 2 terabytes for a single file**
- **Volume expansion**
- **Support ISO9660/UDF for CD/DVD**

### Directory Services:

- **Microsoft Active Directory Service**
- **UNIX NIS**

### Data Redundancy:

- RAID 0, 1, 5 and JBOD
- Support multiple RAID volumes
- Hot-swappable hard disks with MR-423I HDD Module
- RAID hot expansion for RAID 5
- Support hot-spare disks with RAID 1 and 5
- Built-in Tape Backup Software\*
- Built-in Remote Data Synchronization with another NASStorage or CDH\*



## Network Environment:

### Network Operating

Microsoft Windows 95/98/Me/NT2000/XP

### System Capability

Unix: Solaris, FreeBSD, Linux and other UNIX variants MacOS 8.x, 9.x, OS X, Novell NetWare

### Network Protocols

TCP/IP, AppleTalk, IPX, HTTP, CIFS/SMB, NFS v3, FTP, AFP, BOOTP, RARP, DHCP; DNS; WINS; SMTP; SNMP

## Bundled Software:

- NASTart software for server discovery, quick setup, and system configuration backup/restore

## System Management:

- Web-based interface for system administration and alerts
- Alert email notification
- Run-time event logs
- SNMP trap event notification
- Up gradable firmware

## Hot-swappable Mobile Rack Module:

- The exclusive back plane designs for HDD hot-swapping.
- Equipped with 4 one-inch disk trays
- Ball-bearing fan for system cooling
- LED indicators for showing the status of HDD and power
- Safety button for HDD hot-swapping

## Physical Specifications:

### 9-Bay Tower and 4U Rack-mount Models

- Dimension  
431x177x450mm (H x W x D)
- Power Parameters:  
Input Voltage: 90~ 260V  
Wattage: 350 W  
Redundant Power Supply (Optional)

## Approvals:

FCC Class A, cUL, UL, CE, BSMI

## System Availability:

- Dual NIC with fail-over and load balancing features
- System configuration backup/restore
- Support UPS with smart signaling

## Security Management:

- File/Folder/Share-Level Security
- User-Level Security
- Support Access Control List
- Integrate with Microsoft NT/2000 domain and Active Directory environment
- User Disk Quota control

## Multilingual Support:

- **Localized web-pages:**

English, Traditional Chinese, Italian,  
Simplified Chinese, Korean, Spanish,  
Japanese, French, German

- **Code-pages:**  
English and western European, CJK  
DBCS, Unicode

### Operating Environment:

- Operating temperature:  
0°~40° C
- Operating Humidity:  
10%~80% non-condensing

### Warranty: One Year



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*\*\*\* Indicates the functions will be available on Q1 2003.*

*\*\* Specifications and product offerings subject to change without notice.*

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