

Overview

Introduction

The HP StorageWorks NAS 1200s is an entry-level Network Attached Storage (NAS) solution that delivers quick and simple "just-in-time" NAS storage with multi-protocol file support and storage management for workgroups, small businesses, and remote locations. The NAS 1200s offers TCO-reducing ease of installation and management, and it can be managed remotely. Plus, it comes with HP Global Services, providing cost-effective support to ensure continuous availability. With Windows Storage Server 2003 operating system the HP StorageWorks NAS 1200s now support both file and print services from the same simple device.

The HP StorageWorks NAS 1200s is the first entry-level NAS device to offer quick-restore functionality to customers via DVD and a dual OS partition. Quick-restore functionality allows customers to be back up and running with a factory default image in minutes not hours.

HP StorageWorks NAS 1200s models are available with three different raw storage capacity points.

What Is NAS?

NAS is an acronym for Network Attached Storage. NAS solutions are specialized file-serving devices that support heterogeneous files in a high-capacity storage solution on Ethernet based networks. NAS solutions also provide specific features to simplify the tasks and reduce the resources associated with data storage and management. The objective of NAS technology is to simplify manageability and improve data access to clients and applications. A NAS solution will generally provide network accessible storage to a mix of clients and servers running different operating systems. HP StorageWorks NAS now support print services on all NAS products.

Product Highlights

Capacity	<ul style="list-style-type: none">● Product available in three different capacity points: 320 GB, 640 GB and 1 TB (raw capacity)
Easy Installation	<ul style="list-style-type: none">● Configuration via the web allows customers to have the NAS 1200s up and running on their network in minutes● All setup and configuration can be done over the LAN or directly connected to the system
Fault Tolerance	<ul style="list-style-type: none">● The NAS 1200s ships with a redundant OS partition for OS recovery and system protection
Fault Recovery	<ul style="list-style-type: none">● The NAS 1200s ships with a quick restore DVD for disaster recovery to reset the machine back to factory defaults (data destructive)
Snapshots	<ul style="list-style-type: none">● Incremental point in time copies that are flexibly scheduled throughout the day. An additional level of data availability that provides easy restoration of data without having to access tape, with limited utilization of time and space (Microsoft Shadow Copy)
Hot Swappable Support	<ul style="list-style-type: none">● ATA hot swappable drives allows customers to quickly change out a drive in the event of a failure without disabling client access or powering off the system
Integration	<ul style="list-style-type: none">● The NAS 1200s fits seamlessly into the customers existing network environment, no additional hardware is needed to configure the machine to serve in heterogeneous environments
Manageability	<ul style="list-style-type: none">● The NAS 1200s is manageable by a web based graphical user interface (GUI) or command console
Options Supported	<ul style="list-style-type: none">● The NAS 1200s supports an external USB DVD-ROM drive for Quick Restore functionality and upgrade support● The NAS 1200s support an external HP Tape device for direct backup.● The NAS 1200s is supported by HP OpenView Storage Mirroring software for host-based replication.

Overview

Benefits Of NAS

Cost-Effective

- Low acquisition cost that provides investment protection
- Provide both File and Print Services in the same simple to manage device.
- Provides a range of fixed capacity points to allowing customers to choose their capacity point not have it dictated to them
- Utilizes the latest Intel® Pentium 4 processors and the fastest ATA hard disk drives for optimal performance
- Provides data protection capabilities like software-based RAID and support for multiple backup and anti-virus packages
- Supports multiple management methods including Insight Manager, HP OpenView, web GUI and command console
- Supports numerous file serving protocols: CIFS, NFS, NCP, Appletalk, HTTP and FTP
- 1U form-factor provides a great storage solution that minimizes space requirements. Rackmount or desktop
- Microsoft® Windows® Storage Server 2003 operating system allows customers to use off the shelf backup and anti-virus packages
- Hot swap drives allow for quick repair and allow customers to self maintain their storage

Scalable

Performance

Reliable

Manageable

Open

Compact

Standard

Serviceable

Overview

NAS 1200s Product Features

- 1U form factor
- Intel Pentium 4 2.4 GHz with 512KB L2 Cache (320 GB Model)
- Intel Pentium 4 2.8 GHz with 512KB L2 Cache (640 GB and 1 TB Models)
- 512MB of PC2100 DDR SDRAM DIMM Memory
- Four (4) Hot-plug 1" 7200 RPM PATA Hard Drives Standard
 - 4 x 80GB (320 GB Model)
 - 4 x 160GB (640 GB Model)
 - 4 x 250GB (1TB Model)
- Two Auto Sensing Gigabit NICs (embedded) 10/100/1000 (Wake on LAN)
- SCSI Controller (embedded) with external connector for backup device
- Factory Configured Dual OS partition for data protection
 - Automatic fail over to secondary partition in the event of a failure on the primary partition
- Factory Configured RAID 5 Data Volume
- Microsoft's Windows Storage Server 2003 (WSS 2003) Operating System
 - Industry standard operating system optimized for file serving which also supports print services
 - Web User Interface allows administrators to remotely manage users, create shares, and control backups and similar task from any location on the network or internet
 - Volume Shadow Copy Service (VSS) provides integrated Snapshot technology for quick retrieval of data that is inadvertently lost or deleted
 - Users can easily restore previous version of their own files without administrative assistants
 - Shadow copies can be scheduled or administratively initiated
 - Dynamic file system expansion
- Configuration Wizard that helps you set up your system
- Supports all leading Anti-virus software solutions
- Backup and disaster recovery options.
 - Snapshots
 - Backup to a SCSI attached backup device
 - Compatible with any Backup Software product that supports WSS 2003
- Quota management
 - Administrator can set soft and hard storage quotas for better control and system administration
- Network configuration support for:
 - SNMP and SMTP notification of critical events
 - Remote system log capabilities
 - UPS connection
 - User and group mapping
- Quick Restore functionality
 - Allow customers to quick restore their NAS 1200s units back to factory defaults with a Quick Restore DVD using an externally connected USB DVD-ROM drive.
 - Quick Restore DVD shipped with every NAS 1200s device
- HP support and diagnostic tools

Software Components

Optional Software from HP for NAS

- **HP Insight Manager** - The NAS 1200s support Insight Manager through SNMP. For more information on HP Insight Manager: <http://h18013.www1.hp.com/products/servers/management/hpsim/index.html>
- **HP OpenView Management tools** - The NAS 1200s supports Open View through SNMP. For more information HP OpenView: <http://www.managementsoftware.hp.com/>
- **HP OpenView Storage Data Protector** - The HP OpenView Storage Data Protector software is enterprise data protection and disaster recovery, ensuring recovery from any disruption. Data Protector integrates a variety of techniques to eliminate backup and recovery windows. The capabilities to eliminate planned downtime range from online backup and backup of open files to zero-downtime, zero-impact backup. The software provides industry-leading instant recovery as well as several disaster recovery alternatives to eliminate unplanned downtime, allowing recovery of entire data centers in minutes.

Data Protector is enabling organizations to reduce costs by automating routine tasks to maximize the effectiveness of the data protection staff. For the price of an entry-level product, it provides the enterprise functionality customers need. Data Protector scales from single server to distributed enterprise, covering an extensive range of heterogeneous applications, operating environments and storage configurations with a single solution.

The NAS 1200s supports using Data Protector as the backup software solution. For more information on HP OpenView Data Storage Protector:

<http://h18006.www1.hp.com/products/storage/software/dataprotector/index.html>

- **HP OpenView Storage Mirroring** - The NAS 1200s supports using Storage Mirroring as the replication software solution

Service and Support, HP Care Pack and Warranty Information

Storage Service Packages HP offers a portfolio of services ranging from Storage Design and Architecture that provides a complete multi-site design and implementation, to various levels of on-going maintenance support. Additionally the basic warranty service can be enhanced and/or HP Installation services can be purchased. Specifically Care Pack services include:

- Proactive 24 (P24)
- Support Plus 24 for Storage
- Support Plus for Storage
- 4-Hour, 24x7 Onsite, HW Support
- 4-Hour, 13x5 Onsite, HW Support
- Next Business Day Onsite, HW Support
- Installation for Storage (per event)
- Installation & Startup for Storage (per event)

HP offers an optional migration service to assist the customer in moving to the newest product release. This may be in the form of a defined kit and service, or may alternatively be performed on a time & material basis.

HP Services allows the customer to leverage HP's experience in selecting and configuring the most widely used security features, and provides an environment that is immediately more available due to increased change control and significantly improved data security.

For more information on these and other service options, please contact any of our worldwide sales offices or visit our web site at: <http://www.hp.com/hps/support>.

Product Services

- Installation services
- On-site maintenance (includes warranty support)
- Response time upgrades during the warranty period
- Post-warranty coverage
- Performance consulting via statement of work
- Migration service consulting via statement of work
- For additional hardware installation and maintenance information, please refer to the URLs listed below:
<http://h18005.www1.hp.com/services/carepaq/us/install/>
<http://h18005.www1.hp.com/services/carepaq/us/hardware/>

Installation and Startup Services

The Installation and Startup Service package provides installation and configuration of HP StorageWorks products. Major categories of work could include:

- Pre-installation consulting and planning
- Hardware installation, configuration and verification
- Service tools installed, configured and verified
- Customer orientation

Warranty

The HP StorageWorks NAS has a standard 3-1-1 warranty (3 years parts, one year onsite and one year carry-in)

Warranty Upgrade Options

- Response – Upgrade on-site response from next business day to same day 4-hours
- Coverage – Extend hours of coverage from 5 days x 9 hours to 7 days x 24 hours
- Duration – Select duration of coverage for a minimum period of 1 year or multiple years

The HP Care Pack is defined as an upgrade to the product warranty attribute, available for a specific duration and hours of coverage.

- HP Care Pack is not available for less than the product's warranty duration.
- HP Care Pack is available for sale anytime during the warranty period for most products, but the commencement date will be the same as the Warranty Start Date (delivery date to end user customer). Proof of purchase may be required.
- HP Care Pack services are prepaid.
- For additional HP Care Pack (hardware & software) information, as well as orderable part numbers, please refer to the URL listed below:

<http://h18005.www1.hp.com/services/carepaq/index.html>

Service and Support, HP Care Pack and Warranty Information

Components

The following brick level options/components do not have individual HP Care Pack Services. These items will be included in product HP Care Pack Services into which they are installed.

Disk Drives

Tape Drives

CD/DVD ROM

SCSI Hubs in SBBs

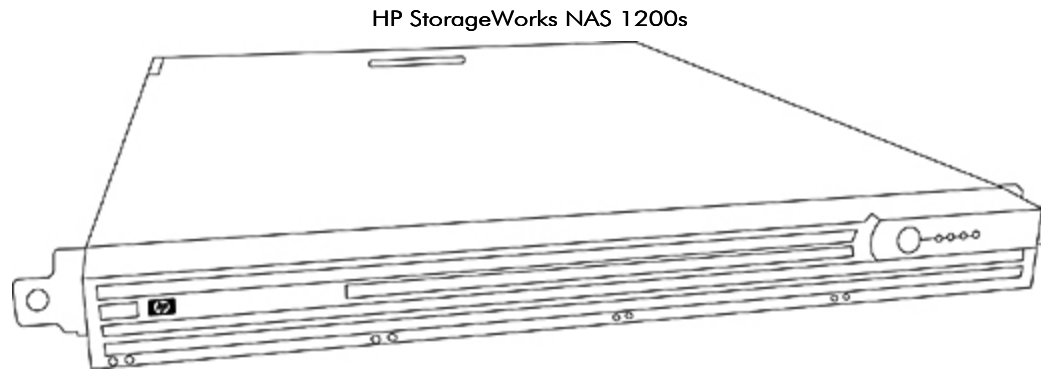
Bus Converters

Backplane RAID Controllers

Power Supplies

Cabling

Models



NOTE: The NAS 1200s is a fixed capacity box that is not upgradeable. Three capacity points are available.

Standard for all HP StorageWorks NAS 1200s	OS	Microsoft Windows Storage Server 2003
	Cache Memory	512-KB L2 Cache
	Memory	512 MB PC2100 Registered ECC DDR SDRAM DIMM Memory
	Network Controller	Dual auto sensing Gigabit NICs (embedded)
	Controller for backup device	SCSI card (embedded)
	Protocol Support	CIFS, NFS, NCP, Appletalk, HTTP and FTP
	OS Support	Microsoft Windows, HP-UX, AIX, Red Hat Linux, and other Unix O/S
	Form Factor	1U Form Factor – 1.75 x 17 x 23 in (4.45 x 43.18 x 58.42 cm)

Specifications for HP StorageWorks NAS 1200s Model 320 GB 349037-B21	Processor	(1) Intel Pentium 4 Processor 2.40 GHz standard
	Hard Drive (Internal storage)	Four (4) Hot-Plug 80 GB 1" 7200 RPM PATA hard drives standard
	Raw Storage Capacity	320 GB

Specifications for HP StorageWorks NAS 1200s Model 640 GB 349038-B21	Processor	(1) Intel Pentium 4 Processor 2.80 GHz standard
	Hard Drive (Internal storage)	Four (4) Hot-Plug 160 GB 1" 7200 RPM PATA hard drives standard
	Raw Storage Capacity	640 GB

Specifications for HP StorageWorks NAS 1200s Model 1 TB 349039-B21	Processor	(1) Intel Pentium 4 Processor 2.80 GHz standard
	Hard Drive (Internal storage)	Four (4) Hot-Plug 250 GB 1" 7200 RPM PATA hard drives standard
	Raw Storage Capacity	1 TB

Options

Host Based Data Replication

HP OpenView Storage Mirroring (SM) is an ideal entry host-based software product for IP networks. SM does not require high bandwidth Fibre Channel networks, high capacity replication and zero down time service levels. Storage Mirroring provides near real-time full application or file recovery up to the last byte replication. SM is an excellent choice for low bandwidth; low storage volume changes and meets business recovery goals within tens of minutes or hours. The immediate return on investment is realized in the reduced management cost associated with branch or small offices networks.

Product Highlights:

- High availability with Microsoft Windows 2000/NT/2003 servers
- Application aware and supported with Exchange, SQL and Oracle
- Host-based remote storage copy with TCP/IP networks
- Data distribution one-to-many or 'fan-out' to multiple destinations
- Data migration utility for transferring large data projects
- Centralize backup, data protection and recovery operations
- Built in scheduler for off hours replication
- Built in network bandwidth utilization management
- Disaster recovery between source and destination failover sites
- Powered by NSI Software's Double-Take patented 'Sequential Transfer Asynchronous Replication' technology
- Sequential transfer maintains write sequential across multiple files for data integrity
- Asynchronous replication allows hosts to continue processing for maximum performance

HP OpenView Storage Mirroring v4.3 MS media_doc 60d 336246-B22

HP OpenView Storage Mirroring Workgroup Edition v4.3 LTU 1 344954-B21

HP OpenView Storage Mirroring Workgroup Edition v4.3 LTU 10 344955-B21

For more information go to the HP OpenView Storage Mirroring website at:

<http://h18006.www1.hp.com/products/storage/software/sm/index.html>

Optical Drives

HP DVD writer dvd300e – 8x DVD-ROM; 40x CD-ROM Q2109A

HP USB DVD Writer dvd2 Q2099A

Multibay USB Cradle for drives listed below: DC373A-ABA

Multibay DVD-ROM Drive 168003-935

Multibay DVD/CD-RW Drive Q2109A

Multibay DVD-ROM Drive 138230-B25

Multibay DVD+RW Drive DG189A

Tape Backup Devices

Recommended HP StorageWorks Tape solutions for the NAS 1200s

DLT VS80m External or Rack-mount (called Array Module) Tape Drive

SDLT 220 External or Rack-mount Tape Drive

1/8 Autoloader Ultrium 230 & Rackmount kit

SSL1016 Ultrium SDLT 160/320 & Rackmount kit

For multiple NAS units, the MSL and ESL Tape Libraries can be used with SCSI connections

HP StorageWorks Supported Tape Solutions

20/40-GB DAT DDS-4, DAT 72 Tape Drive, Ultrium 230 and 460 for ProLiant, 40/80-GB DLT, DLT VS80, SDLT 320, 220, 1/8 Autoloader, SSL2020

For more information on HP Tape Backup Devices:

<http://h18006.www1.hp.com/storage/tapestorage.html>

Options

Power Cords	Central Europe – CORD, PWR,AC LINE,EUR,12'	157215-021
	UK, Hong Kong – CORD, PWR,AC,UK/SINGAPORE, 12'	157216-031
	Italy – CORD, PWR,AC LINE,ITL, 12'	157217-061
	Denmark – CORD, PWR,AC LINE,DAN, 12'	157218-081
	Switzerland – CORD, PWR,AC LINE,SWI, 12'	157219-111
	SE Asia, India – CORD, PWR,AC IND/SOUAF, 12'	157220-AR1
	Australia, China, New Zealand – CORD, PWR,AC LINE,AUS/N.ZEAL, 12'	227098-011

NOTE: The StorageWorks NAS 1200s is designated as a rackmount solution and ships standard with rackmount PDU power cables, if a customer desires to not rack the 1200s the appropriate power cord option kit must be ordered.

UPS Power Cord Reference Guide *Please see the UPS Power Cord Reference Guide for that lists cable descriptions, requirements, and specifications for UPS units.*

<ftp://ftp.compaq.com/pub/products/servers/ProLiantstorage/power-protection/powercordmatrix.pdf>.

HP Rack 10000 Series (Graphite Metallic)	HP S10614 (14U) Rack Cabinet - Shock Pallet	292302-B22
	HP 10842 (42U, 800mm wide) Rack Cabinet - Pallet	257415-B21
	HP 10842 (42U, 800mm wide) Rack Cabinet - Shock Pallet	257415-B22
	HP 10647 (47U) Rack Cabinet - Pallet	245160-B21
	HP 10647 (47U) Rack Cabinet - Shock Pallet	245160-B23
	HP 10642 (42U) Rack Cabinet - Pallet	245161-B21
	HP 10642 (42U) Rack Cabinet - Shock Pallet	245161-B22
	HP 10642 (42U) Rack Cabinet - Crated	245161-B23
	HP 10636 (36U) Rack Cabinet - Pallet	245162-B21
	HP 10636 (36U) Rack Cabinet - Shock Pallet	245162-B22
	HP 10636 (36U) Rack Cabinet - Crated	245162-B23
	HP 10622 (22U) Rack Cabinet - Pallet	245163-B21
	HP 10622 (22U) Rack Cabinet - Shock Pallet	245163-B22
	HP 10622 (22U) Rack Cabinet - Crated	245163-B23

NOTE: -B21 (pallet) used to ship empty racks shipped on a truck

-B22 (shock pallet) used to ship racks with equipment installed (by custom systems, VARs and Channels)

-B23 (crated) used for air shipments of empty racks

NOTE: It is mandatory to use a shock pallet in order to ship racks with equipment installed.

NOTE: Please see the Rack 10000 QuickSpecs for Technical Specifications such as height, width, depth, weight, and color:

http://h18000.www1.hp.com/products/quickspecs/10995_div/10995_div.HTML (Worldwide)

NOTE: For additional information regarding Rack 10000 Cabinets, please see the following URL:

<http://h18000.www1.hp.com/products/servers/proliantstorage/racks/10000series.html>.

Technical Specifications

Dimensions (HxWxD)	Rack	4.32 x 42.86 x 59.69 cm, 1.71 x 16.87 x 23.5 in
Weight	Rack	19.16 kg, 42.25 lb shipping, 12.24 kg, 27 lb out of box
LED Indicators (On Front Panel) (if applicable)		Drive, LAN and system power LED's
Cache		1 MB
Drives Supported		ATA drives. All models ship with hard drives pre-installed
Maximum Number of Drives		4, pre-installed
Input Requirements	Nominal Line Voltage	100 to 120 VAC/200 to 240 VAC
	Range Line Voltage	90 to 132 VAC/180 to 265 VAC
	Line Frequency	50 to 60 Hz
	Typical Input Current	2.5 Amps (100 VAC) , 1.3 Amps (200 VAC)
	Rated Input Power	250 Watts Max.
Drive Interface		IDE
Power		250 Watts (Power Cords supplied with the 1200s: US Power Cord - C13 to C19, IEC Jumper C13 to C14)
Reliability Features		
Relative Humidity (non-condensing)	Operating	10% to 80% @ 82° F (28° C) (wet bulb)
	Shipping	90% @ 82° F (28° C) (wet bulb)
Temperature Range	Operating	41° to 95° F (5° to 35° C)
	Shipping	-40° to 158° F (-40° to 70° C)
Product Service Options		Hard drives and the total unit are replaceable parts.
UPC Code		808736767637 model 320 GB, 808736767651 model 640 GB, 808736767675 model 1TB

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