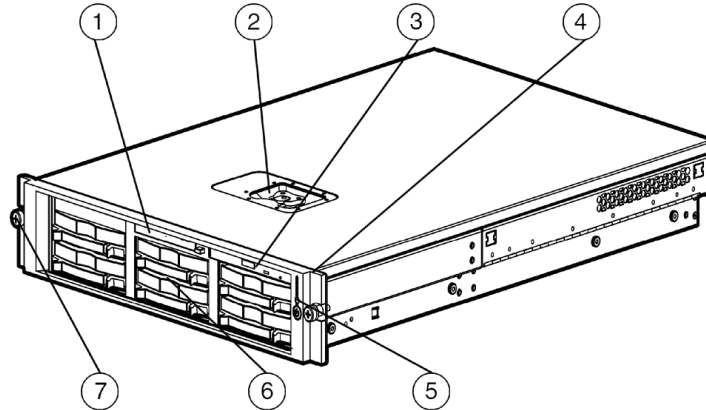


Overview



1. 1.44 MB (3.5") Floppy Disk Drive
2. Latching Mechanism (facilitates easy hood removal)
3. 24x Max CD-ROM (with easy front ejection removal)
4. Front LED's (show server status)
5. Unit identification button and LED (for easy in rack server identification)
6. Two 1" Wide Ultra3 SCSI 18.2GB Hot Plug Hard Drives
7. 2U Form Factor

What's New

- Intel® Pentium® III FC-PFA 1.26 GHz Processor

At A Glance

- ServerWorks HE-SuperLite Chipset
- Triple Peer PCI Architecture with 133 MHz Front Side Bus
- 1 GB PC133 MHz Registered ECC SDRAM memory
- Three PCI expansion slots: Two HP 64-bit/66 MHz and one standard 64-bit/33 MHz
- Two HP NC3163 Fast Ethernet NICs Embedded 10/100 WOL (Wake On LAN)
- Smart Array 5i Controller (integrated on system board)
- Two 1" Wide Ultra3 SCSI 18.2GB Hot Plug hard drives
- Redundant 400 Watt Power Supply, CE Mark Compliant, Universal Voltage
- Sliding rails and cable management arm for easy serviceability and in-rack tool-less access to major components
- Protected by HP Services, including a three-year, Next Business Day, on-site limited Global warranty and extended Pre-Failure Warranty, which covers processors, memory, and hard drives — Certain restrictions and exclusions apply. Consult the HP Customer Support Center at 1-800-345-1518 for details.

Product Description/ Overview

The HP OpenView Storage Management Appliance (previously SANworks Management Appliance) is a combined hardware and software solution that provides a centralized point for configuration, management and monitoring of storage elements, including switches and storage devices, while simplifying management tasks and reducing cost. It offers a comprehensive and cost-effective configuration, monitoring and storage management solution for the multiple platform SAN. Designed to connect directly to a SAN fabric, the Storage Management Appliance is a host-independent system that performs management functions without requiring host computers.

Overview

Feature List

- Simple, unobtrusive management of storage elements
- High SAN performance since the appliance is located out of the data path
- High SAN availability since data transfers occur independent of the appliance
- Support for multiple management and monitoring applications
- A web-based, centralized user interface
- Headless operation for increased security
- Role-based authorization
- Support for SSL encryption
- Support for mixed heterogeneous platforms
- More cycles for processing applications on host servers
- Centralized web-based configuration interface for easy storage management across multi-vendor storage resources
- Proactive automated responses to monitored events
- Automation of complex and repetitive storage management tasks
- Customer deployable and customizable scripts for policy-based automation
- Support for popular virus & data protection software
- Customer restore CD

Customer Benefits

- **Provides centralized web-based storage configuration** and monitoring to manage across network and multi-vendor platforms.
- **Simplifies SAN element management** through a single, scalable, host-independent graphical management interface for a range of storage configurations across heterogeneous SANs.
- **Improves security by providing** storage monitoring and management independent of host servers.
- **Provides high performance monitoring** by being located out of the data path.
- **Supports the Open SAN** by providing a host-independent SAN monitoring solution for heterogeneous devices.
- **Provides for SAN redundancy** through support for multiple appliance points of presence on a SAN.
- **Reduces Total Cost of SAN Ownership** through a comprehensive, highly scalable, host-independent management platform for various sized storage configurations.

Software Features/ Functionality

HP OpenView storage management appliance software v2.0. The web-based interface for storage management

HP OpenView Storage Management Appliance software v2.0 is the industry's first centralized, appliance-based monitoring and management interface for the Open SAN. Storage Management Appliance software provides a web-based aggregation and entry point for centralized storage management. This intuitive interface allows the user to organize, visualize, configure and monitor storage from a single navigation point on the SAN. It provides a launch site for a variety of value-added HP storage management applications as well as popular data and virus protection products, and provides navigation links to directly manage storage devices.

HSG Element Manager

HSG Element Manager is an easy to use, graphical storage configuration and monitoring tool for HSG80/60 storage that centralizes SAN management across network and multi-vendor platforms. Included with the Storage Management Appliance software, the HSG Element Manager reduces the job of storage management to simple point-and-click, across the switched Fibre Channel SAN. Features include:

- Easy configuration of RAID sets, virtual disks, SAN storage systems
- Event notification via email, pager alert, web interface display, SNMP traps
- Reliable monitoring provides field replaceable unit (FRU) level fault detection and notification, an SNMP agent with custom management information base (MIB) event logging
- Integration with HP Insight Manager 7, allowing HSG Element Manager to be launched from the Insight Manager console
- Unified storage management: from one web-based user interface to manage multiple StorageWorks subsystems
- Support for ACS 8.7F/S/P/L*
- Support for StorageWorks RAID Array/Modular Array enclosures
- Presents logical storage views

*NOTE: HSG Element Manager v1.0E is required for support of ACS 8.7F/S/P/L. HSG Element Manager v1.0E is included with HP OpenView Storage Management Appliance software v2.0 Service Pack 4 and can be downloaded from the web at: <http://h18006.www1.hp.com/products/sanworks/software/drivers/managementappliance/index.html>

Overview

Command View EVA (previously HSV Element Manager)

Virtual Controller Software (VCS) provides storage controller software capability for the HSV110 & HSV100 Array Controllers. Dual redundant HSV1xx Array Controllers are configured into the StorageWorks Enterprise Virtual Array (EVA), HP's ultra-high performance, ultra-high capacity, and ultra-high availability VersaStor-enabled "virtual" RAID (Vraid) storage solution. Additional information about Virtual Controller Software can be found online at

<http://h18006.www1.hp.com/products/storageworks/enterprise/index.html>

VCS is managed through Command View EVA (previously HSV Element Manager), a device management application with a graphical user interface that runs on the Storage Management Appliance and that is accessed via a Web browser. Up to 16 Enterprise Virtual Array storage systems (16 HSV1xx controller pairs) can be managed by a single Storage Management Appliance in an Enterprise Virtual Array SAN.

***NOTE:** Command View EVA v3.0a is the current version of software required for managing VCS v3.0. Command View EVA v3.0a software is available with Storage Management Appliance software v2.0 Service Pack 4, Storage Management Appliance software v2.0 Service Pack 4 can be found on the web at:

<http://h18006.www1.hp.com/products/sanworks/managementappliance/documentation.html>

The following guidelines apply to the maximum number of controller pairs managed by Command View EVA (HSV1xx controller pairs) and HSG Element Manager (HSG controller pairs):

Element Manager	Managed Controller Pairs	Maximum Number of Controller Pairs
Command View EVA	HSV1xx	16
HSG Element Manager	HSG	25

NOTE: Current guidelines allow only one (1) active Storage Management Appliance per management zone. Before beginning the migration procedure, review your storage environment to ensure compliance with these guidelines. For additional information concerning Storage Management Appliance migration please see the White Paper titled at <http://h18006.www1.hp.com/storage/whitepapers.html>

Automation Manager

Automation Manager provides an infrastructure that enables storage administrators to implement automated storage management solutions in their enterprise. This infrastructure supports policy-based automation for tasks and job scheduling for a heterogeneous set of platforms through the use of host agents. Proactive, automated responses can be defined for storage hardware-based events monitored by the Storage Management Appliance using customizable or user-defined scripts. Scripts are easily customized with the graphical user interface provided. Automation Manager is included with HP OpenView Storage Management Appliance software v2.0.

NOTE: These Web sites are available in English only.

Software Prerequisites

HP OpenView Storage Management Appliance software. Factory-installed version included with hardware; updates available for download from the web at:

<http://h18006.www1.hp.com/products/sanworks/softwaredrivers/managementappliance/index.html>

NOTE: This Web site is available in English only.

Automation Manager software prerequisites

- StorageWorks Command Scriptor
- Automation Manager host agents support the following operating system versions:
 - Microsoft® Windows® 2000 Server and Advanced Server SP2, SP3
 - Microsoft Windows NT® 4.0 SP6a
 - Microsoft Windows Server 2003
 - HP Tru64 UNIX® v5.1, v5.1a
 - Sun Solaris 7, 8
 - HP OpenVMS Alpha v7.22, v7.3, v7.3-1 (UCX support only)
 - HP-UX 11.0, 11.i
 - IBM AIX v4.3.3, v5.

Overview

Storage Management Appliance Supported Browsers

Operating System	Browser
Microsoft Windows NT 4.0 SP6a	IE 5.5, 6.0 SP14; NN6.2.31
Microsoft Windows 2000 Server and Advanced Server SP2 & SP3	IE 5.5, 6.0 SP14 ; NN6.2.31
Microsoft Windows Server 2003 (IA32)	IE 6.0 SP14
HP Tru64 UNIX v5.1, v5.1a	NN 6.2.3
Sun Solaris 7, 8	NN 6.2.3
HP-UX 11.0, 111	NN 6.2.1
HP OpenVMS v7.2-2, v7.3, v7.3-1	Compaq Secure Web Browser v1.02
Red Hat Linux v7.1, v7.2	NN6.2.33

Legend

IE = Internet Explorer

NN = Netscape Navigator

1 Command View EVA and HSG Element Manager supported with IE 5.5, 6.0 only.

2 Command View EVA not supported.

3 HSG Element Manager not supported.

4 HSG Element Manager requires Microsoft Hot Fix Q Article # 818506 with IE 6.0 SP1. It can be acquired from <http://support.microsoft.com/default.aspx?scid=kb;en-us;818506>

NOTE: This Web site is available in English only.

NOTE: Supported layered software products may have certain browser restrictions not reflected in this matrix. Ensure that you read and understand the Release Notes for each product before using.

Overview

Supported Hardware Devices

Storage Arrays

HP StorageWorks Enterprise Virtual Array, all models*
HP StorageWorks Enterprise Modular Array 16000 Fibre Channel
HP StorageWorks Enterprise Storage Array 12000 Fibre Channel
HP StorageWorks Enterprise Modular Array 12000 Fibre Channel
HP StorageWorks Modular Array 8000 Fibre Channel
HP StorageWorks Modular Array 6000 Fibre Channel

***NOTE:** HP StorageWorks eva3000 requires a minimum of Storage Management Appliance software v2.0 Service Pack 2 for support.
HP StorageWorks eva5000 with VCS v3.0 requires Service Pack 4.

Interconnect Devices

HP StorageWorks SAN Switch 2/16
HP StorageWorks SAN Switch/8 & /16
HP StorageWorks SAN Switch 2/8-EL & 2/16-EL
HP StorageWorks SAN Switch 8-EL & 16-EL
HP StorageWorks SAN Switch Integrated/32 & 64 (1 Gb/s)
HP StorageWorks Core Switch 2/64
Brocade Silkworm 2400, 2800, 2050, 2250, 6400, 6432
Brocade Silkworm 12000, 3200, 3600, 3800
HP StorageWorks Fibre Channel Arbitrated Loop Switch 8 (FC-AL)*
HP StorageWorks SAN Director 64
HP StorageWorks Director 2/64
HP StorageWorks Edge Switch 2/32
HP StorageWorks Edge Switch 2/16
McData ED-6064 Director (1 Gb/s)
McData ED-6064 Director (2 Gb/s)
McData ED-5000 Director
McData ES-3016
McData ES-3032
HP StorageWorks Modular Data Router II & III*
HP StorageWorks NAS Executor e7000*
HP StorageWorks NAS b3000*
HP StorageWorks NAS b2000*
HP StorageWorks NAS n2400*
Network Appliance F700 & F800 series filers

***NOTE:** These devices are supported by a subset of Storage Management Appliance software v2.0 event management and notification features.

NAS Devices

Overview

Supported Layered Software

- HP StorageWorks Business Copy v2.1, v2.1a (minimum Service Pack 2 required)
- HP StorageWorks Continuous Access EVA (minimum Service Pack 3 required)
- HP StorageWorks Secure Path Manager v4.0, V4.0A, V4.0B
- HP OpenView Storage Provisioner v1.0, v1.1
- HP OpenView Storage Area Manager v3.0 with SANMGR_00008 patch or later* (Service Pack 4 required)
- HP SANworks Network View v2.0B SP2 (Service Pack 4 required)
- HP Storage Allocation Reporter v1.0D SP2
- HP Proactive Remote Service v4.5, v5.0
- HP OpenView Storage Data Protector v5.0
- McAfee NetShield v4.5
- Symantec Norton Antivirus v7.6
- Trend Micro ServerProtect v5.31
- eTrust InoculateIT v6.0
- VERITAS Backup Exec v8.6
- VERITAS NetBackup Client v4.5
- Legato NetWorker v6.2

* The Storage Management Appliance II requires a 1 GB memory upgrade to support OpenView Storage Area Manager (HP part number: 201694-B21 ; includes two 512-MB DIMMs)

NOTE: Supported layered software products may have certain interoperability restrictions. Ensure that you read and understand all Documentation and Release Notes for each product before you install them on your Storage Management Appliance.

NOTE: HP only supports those software products that have been tested and qualified by HP Labs. Software not listed on this Supported Layered Software list will not be supported by HP if installed directly on a Storage Management Appliance.

Software Distribution Media

HP OpenView Storage Management Appliance software v2.0 update media and documentation is included with a new Storage Management Appliance II purchase.

Current customers may order a CD-ROM and updated hardcopy documentation set from the Web at:

<http://h18006.www1.hp.com/products/sanworks/softwaredrivers/managementappliance/index.html>. Web downloads for all software updates. Including Service Packs are also available for current Storage Management Appliance customers at:

<http://h18006.www1.hp.com/products/sanworks/softwaredrivers/managementappliance/index.html>

NOTE: These Web sites are available in English only.

Standard Features

Models	Storage Management Appliance II (previously SANworks Management Appliance II) 189715-002		
Processor	(1) Intel Pentium III 1.26 GHz Processor		
Cache Memory	512 KB level 2 ECC cache		
Memory	1 GB (Standard) PC133 MHz Registered ECC SDRAM		
Network Controller	2 – HP NC3163 Fast Ethernet NIC (embedded) PCI 10/100 WOL (Wake on LAN)		
Hard Drive	2 – 18.2 GB (internally mirrored) with 1" Wide/Ultra3 drive cage		
Optical Drive	24x IDE CD-ROM Drive		
Form Factor	Rack (2U), (3.5-inch)		
<hr/>			
Processor	Intel Pentium III 1.26 GHz Processor		
<hr/>			
Memory	Standard	1 GB (PC133 MHz Registered ECC SDRAM Memory)	
<hr/>			
Network Controller	Two HP NC3163 Fast Ethernet NIC (embedded) PCI 10/100 WOL (Wake on LAN)		
<hr/>			
Expansion Slots	I/O (3 Total, 0 available)		
	64-bit/33 MHz PCI	2	2 Emulex LP 8000, 1 Unused PCI slot
	32-bit/33 MHz PCI	1	2 Emulex LP 8000, 1 Unused PCI slot
<hr/>			
Storage	Diskette Drives	1.44 MB	
	CD-ROM	24x IDE CD-ROM Drive (Low-Profile)	
	Hard Drives	2 – 18.2 GB (internally mirrored) with 2" x 1" Wide Ultra3 drive cage	
<hr/>			
Interfaces	Parallel	1	Not Used
	Serial	2	Service
	Pointing Device (Mouse)	1	Optional for Diagnostic & Set-up
	Graphics	1	Optional for Diagnostic & Set-up
	Keyboard	1	Optional for Diagnostic & Set-up
	External SCSI (for tape only)	1	Not Used
	Network RJ-45	1	Network Portal
	USB	2	Not Used
<hr/>			
Form Factor	Rack (2U), (3.5 inch)		
<hr/>			
ProLiant Essentials Software	HP Insight Management Agents	HP Web-enabled Management Agents help systems administrators rapidly respond to potential and actual system events resulting in increased system stability and reduced troubleshooting complexity. They provide direct access to in-depth instrumentation built into ProLiant servers and send alerts to Insight Manager 7 and other management consoles. Agents provide a consolidated view of all system health and configuration information. For additional information about the Insight Management Agents and other HP management products for ProLiant servers, please visit the management Web site at: http://h18013.www1.hp.com/products/servers/management/index.html NOTE: This Web site is available in English only.	
<hr/>			
Industry Standard Compliance	ACPI 2.0 compliant PCI 2.2 compliant WOL Support Microsoft Logo certifications		

Standard Features

Manageability	Insight Manager 7 Tivoli NV, Storage Manager CA Unicenter
Power Supply	400 Watt (x2), CE Mark Compliant with configured Redundant Power Supply, Universal Voltage
Required Cabling	For required cabling information, refer to the SANworks Management Appliance Configuration Guide (Part Number 244979-003, 3R-Q970C-01), the SANworks Management Appliance Site Planning Requirements (Part Number AV-RSOEA-TE), and the SANworks Management Appliance Rack Install Poster (Part Number AV-RSODA-TE).
Space Requirements	<ul style="list-style-type: none">● Clearance in the front of the rack should be a minimum of 36 in for the front door to open all the way and for adequate airflow.● Clearance in the back of the rack should be a minimum of 36 in to allow for servicing and for adequate airflow.
Power Requirements	<ul style="list-style-type: none">● For redundancy, assure that the power cords are plugged into two separate AC supplied branch circuits.● The overall system AC current load must not exceed 80 percent of the branch circuit AC current rating.● If power strips are used, the load should not exceed 80 percent of the power strip's marked electrical current rating.
Grounding Requirements	For proper operation and safety, the equipment must be properly grounded in accordance with NFPA 70-1993, Article 250. All power distribution devices, branch wiring, and receptacles must be "Listed" grounding-type devices. When using power strips for electrical distribution, make sure that ground integrity is maintained for each connection made. Plug each component into a reliably grounded outlet.
Airflow Requirements	The Storage Management Appliance II draws cool air in through the front door and exhausts warm air out the rear. Therefore, the front door of the rack must be adequately ventilated to allow ambient room air to enter the cabinet, and the rear door must be adequately ventilated to allow the warm air to escape from the cabinet. Do not block the ventilation apertures.
OS Support	HP OpenView Storage Management Appliance software (factory-installed version included) Updates and Service Packs available for order or download from the web at: http://h18006.www1.hp.com/products/sanworks/softwaredrivers/managementappliance/index.html NOTE: This Web site is available in English only.

Service and Support, HP Care Pack and Warranty Information

Software Licensing

Hewlett-Packard Company grants the right to the use of the HP OpenView Storage Management Appliance (hardware and base software contained on the Storage Management Appliance) with purchase.

Warranty

- Hardware: (3-1-1) Three-year warranty, first year, on-site, next day response, years two and three, parts exchange.
- Software: HP warrants that the software media will be free of physical defects for a period of 90 days from delivery.

Additional warranty protection can be purchased with HP Care Pack Services or contractual services.

NOTE: Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.

HP Installation and HP Care Pack Services Overview

Upgrades to the warranty are available as HP Care Pack & contractual services. These services are available to upgrade the warranty to (full year & Multi-year coverage with call window of 9 hours by 5 days or 24x7 for hardware support, software advisory and remedial software telephone support, new version license rights, and media and documentation distribution service.

Hardware Product Services Installation services

On-site Maintenance (includes warranty support)
Response time upgrades during the warranty period
Post-warranty coverage

For additional software and hardware installation and on-going maintenance information please refer to the following URLs:

http://h18000.www1.hp.com/services/carepaq/us/hardware/cp_storage.html

http://h18005.www1.hp.com/services/carepaq/us/install/cp_storage.html

http://h18005.www1.hp.com/services/carepaq/us/priority/cp_storage.html

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 period of 1 or multi-year
- Additional Warranty protection and/or HP Installation packages can be purchased

HP Care Pack Information and Installation Services

NOTE: Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.

- 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 duration of the product warranty.
- 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 and software) information, as well as orderable part numbers, please refer to the following URL:

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

Service and Support, HP Care Pack and Warranty Information

HP Care Pack Services for the HP OpenView Storage Management Appliance

- 9x5, 4-Hour Hardware On-Site Coverage
- 2-Hour Software phone support - 3 Years
- FM-HBSEE-36/262186-002
- 24x7, 4-Hour Hardware On-Site Coverage
- 2-Hour Software phone support - 3 Years
- FM-HASEE-36/262188-002

HP Care Pack Priority Services in EMEA

HP Care Pack Priority Services brings a totally new approach that removes the complexity from evaluating, planning and purchasing services on HP's Alpha and Storage platforms. HP Care Pack Priority Services are easy to purchase and easy to use and cover all external storage products not covered under Server based HP Care Pack services.

Standard Offerings :

- HP Care Pack Priority Services provide an integrated hardware and software support that ensure consistent coverage across storage configurations
- HP Care Pack Priority Service offers a rapid four-hour response with guaranteed work-through to completion for three years
- HP Care Pack Priority Services have a standard call window of Monday to Friday 08:00 - 17:00 with uplifts to full 24x7 over three years with four-hour response time and work through to completion
- HP Care Pack Priority Services also provide software support, with a two-hour response time for telephone access to highly trained support personnel.

For more information on how to order HP Care Pack Priority Services in EMEA please contact you local Certified Integration Partner or Authorised Reseller or HP Services.

Sample part numbers:

- FM-PRI24-36, 3 year, uplift to 7x24, 4hr hardware response, 2 hr software response
- FM-PRIEX-36, 3 year, uplift to 7x24, 2hr hardware response, 30 minute software response

HP OpenView Storage Management Appliance Installation and Start-up Service

- One day on-site
- HP will install the hardware and included software application components, and configure the applications for successful discovery and monitoring of managed elements on the customer's SAN
- Includes an orientation session, which provides the customer with direction on the configuration and usability of the Storage Management Appliance and its related software
- North America part number: 236030-002
- EMEA part numbers:

QR-SMSMA-IS

HP OpenView Storage Management Appliance I & S

QR-SMOVS-IS

HP OpenView Storage Provisioner I & S

FM-SWADD-IN

Install one Add-on Software

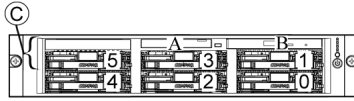
QR-SMSNI-BA †

Incremental I&S - ½ Day

QR-SMSNI-BB †

Incremental I&S - 1 Day

Storage



0,1	Two 18.2 GB Ultra3 Drives
2,3,4,5	Not Used
A	1.44 MB Diskette Drive
B	24x IDE CD-ROM (MultiBay)
C	Not Used

Drive Support

	Quantity Supported	Position Supported	Controller
Removable Media			
1.44 MB Diskette Drive	Up to 1	A	Integrated
IDE CD-ROM Drive	Up to 1	B	Integrated IDE
Hard Drives			
Wide Ultra3 Hot Pluggable Drives			
2 – 18.2 GB 10,000 rpm	Two	2, 3	64-Bit/66 MHz Dual Channel Wide Ultra3 SCSI Adapter

TechSpecs

System Unit	Dimensions (HxWxD)	3.38 x 17.5 x 25.75 in (8.59 x 44.45 x 65.45 cm)
	Weight	Maximum: 60 lb (27.22 kg) No drives: 47.18 lb (20.41 kg)
Input Requirements (per power supply)	Range Line Voltage	90 to 132 VAC/180 to 265 VAC
	Nominal Line Voltage	100 to 120 VAC/220 to 240 VAC
	Rated Input Current	6A (110V) to 3A (220V)
	Rated Input Frequency	50 to 60 Hz
	Rated Input Power	600W
BTU Rating	1,475 BTU/HR	
SCSI Connectors	Three HD68 connectors (2 internal, 1 external) supporting Ultra2	
Power Supply Output Power (per power supply)	Rated Steady-State Power	400W
	Maximum Peak Power	400W
Temperature Range	Operating	50° to 95° F (10° to 35° C)
	Shipping	-40° to 158° F (-40° to 70° C)
Relative Humidity (non-condensing)	Operating	10% to 90%
	Non-operating	5% to 95%
Maximum Wet Bulb Temperature	82.4° F (28° C)	
Acoustic Noise	Idle (Fixed Disk Drives Spinning)	
	L Wad (BELS)	6.6
	L pAm (dBA)	49
	Operating (Random Seeks to Fixed Disks)	
	L Wad (BELS)	6.8
	L pAm (dBA)	50

1.44-MB Diskette Drive	Diskette Size	3.5 in	
	LED Indicators (front panel)	Green	
	Read/Write Capacity per Diskette (high/mid/low density)	1.44 MB/1.2 MB/720 KB formatted	
	Drives Supported	One	
	Drive Height	12.7 mm	
	Drive Rotation	300/360/300 rpm	
	Transfer Rate (high/mid/low)	500/500/250 Kb/s	
	Bytes/Sector	512	
	Sectors/Track (high/mid/low)	18/15/9	
	Tracks/Side (high/low)	80/80	
	Access Times	Track-to-Track (high/mid/low)	3/3/6 ms
		Average (high/mid/low)	174/94/94 ms
		Settling Time	15 ms
		Latency Average	100 ms/83.3 ms/100 ms
	Cylinders (high/low)	80/80	
Read/Write Heads	Two		

TechSpecs

Hot Plug Wide Ultra3
SCSI Hard Drives 18.2 GB 10K
142673-B22

Capacity	18209.3 MB	
Height	1 in (2.54 cm)	
Width	4 in (10.16 cm)	
Interface	Wide Ultra3 SCSI	
Transfer Rate Synchronous (Maximum)	160 MB/s	
Seek Time (typical reads, including settling)	Single Track	0.9 ms
	Average	5.5 ms
	Full-Stroke	12 ms
	Rotational Speed	10,000 rpm
Physical Configuration	Logical Blocks	35,566,080
Operating Temperature	50° to 95° F (10° to 35° C)	

24X Max IDE CD-ROM
Drive (MultiBay)

Disk	Applicable Disk	CD-DA, CD-ROM (Mode 1 and 2) CD-XA, CD-I (Mode 2, Form 1 and 2) CD-I Ready, CD Extra, Video CD, CD-Bridge Photo CD (Single and Multi-session) CD-WO
	Capacity	550 MB (Mode 1, 12 cm) 640 MB (Mode 2, 12 cm)
	Diameter	4.7 in, 3.15 in/12 cm, 8 cm
	Rotational Speed	4200 rpm maximum
	Center Hole	0.6 in/15 mm diameter
	Thickness	1.2 mm
	Track Pitch	1.6 μm
Block Size	Mode 0	2,368, 2,352 bytes
	Mode 1	2,352, 2,340, 2,336, 2,048 bytes
	Mode 2	2,352, 2,340, 2,336, 2,048 bytes
Interface	IDE (ATAPI)	
Access Times (typical)	Random	< 140 ms
	Full-Stroke	< 300 ms
Data Transfer Rate	Sustained	150 KB/s (sustained 1X)
	Burst	2100 to 3600 KB/s
Cache Buffer	128 KB	
Start-up Time (typical)	< 10 seconds	
Stop Time	< 5 seconds	
Operating Conditions	Temperature	41° to 120° F (5° to 55° C)
	Humidity	10% to 80%
Dimensions	(HxWxD, maximum)	0.51 x 5.24 x 5.2 in (1.3 x 13.31 x 13.21 cm)
	Weight	< 340g

TechSpecs

HP NC3163 Fast Ethernet NIC Embedded 10/100 WOL	Network Interface	10Base-T/100Base-TX
	Compatibility	IEEE 802.3/802.3u compliant
	Data Transfer Method	32-bit bus-master PCI
	Network Transfer Rate	
	10Base-T (Half-Duplex)	10 Mb/s
	10Base-T (Full-Duplex)	20 Mb/s
	100Base-TX (Half-Duplex)	100 Mb/s
	100Base-TX (Full-Duplex)	200 Mb/s
	Connector	RJ-45
	Cable Support	
10Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)	
100Base-TX	Category 5 UTP; up to 328 ft (100 m)	

Rack Mounts	Standard – Included	Includes hardware to mount into 9000 Series Rack
	Optional	For mounting Storage Management Appliance II in an eSeries Rack, part number 342237-B21 is required.

Power Cords	Standard - Included	X2 CORDS, AC, Nema, SJT, 163719-002
		16AWG, 12FT
		X2 CORDS, AC, IEC-IEC, 10FT 142263-003

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