

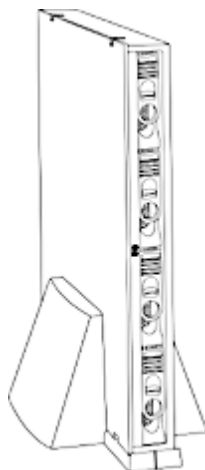
Overview

The HP StorageWorks Disk System 2120 (ds2120) delivers an industry leading, high-capacity 1U storage solution. This rack-optimized enclosure features open system compatibility with UNIX, Linux and Windows operating system support, and offers the industry's lowest cost of entry. Because it's built with HP's commitment to developing dependable products and service, the HP StorageWorks ds2120 ensures data integrity and manageability.

The ds2120 has four hot pluggable slots, with individual disk capacities from 36 to 300 GB. The ds2120 capacity reaches 1.2 TB with 300 GB drives.

The disks and enclosure can be optionally pre-installed in racks for ease of integration. For "set-it-and-forget-it" storage, your best choice is the ds2120.

HP StorageWorks Disk System 2120 (ds2120)



Models

HP StorageWorks Disk System 2120

The HP StorageWorks disk system 2120 enclosure design allows for specific configurations tailored to the needs of all HP server and workstation customers. Five models are available today:

ds2120, field rack-mount

A7382A

NOTE: Four drive enclosures. Must be ordered with at least one drive.

ds2120, desktide

A7382AD

NOTE: Four drive enclosure. Must be ordered with at least one drive.

ds2120, factory rack-mount

A7382AZ

NOTE: Must be ordered with at least one drive.

ds2120, field rack-mount, empty enclosure only

A7382AE

NOTE: Four drive enclosure. four drive enclosure

ds2120, desktide, empty enclosure only

A7382ED

NOTE: Four drive enclosure. four drive enclosure

NOTE: For complete compatibility information, refer to the Technical Specifications section of this document.

Overview

Key Features

- 1U rack height (Rittal/HP System E Solution racks, 2U with Original Rack solution).
 - Supports one to four (1-inch) hard disk drives.
 - Provides storage capacity up to 1.2 TB per enclosure (using 300 GB 1-inch disk drives).
 - House up to 42 enclosures in one 42U rack for a single rack storage capacity of over 50 TB of disk storage.
 - Hot pluggable disk drives
 - Easy removal of drives provides better serviceability. No tools are required.
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Customer Benefits

- **Large storage capacity in a very small footprint:** Optimizes rack space with up to 1.2TB of storage capacity in a 1U enclosure.
- **Serviceable:** Makes repairs a breeze with hot swappable disks.
- **Compact:** 1U form factor minimizes footprint.
- **Flexible:** Supports mixed disk capacities, and is backward compatible with U160 SCSI disks.
- **Scalable:** Scales up to 12 disk drives per host bus adapter to accommodate growing storage needs.
- **Supports HP core operating systems:** Includes support for HP-UX, Linux, Windows 2000 and Windows 2003.
- **Can support host-based high availability:** Can be configured easily to provide an inexpensive host-based mirrored storage solution, or a low cost RAID solution when used with a PCI disk array controller or a software RAID product.

Family Comparison

	ds2100	ds2110	ds2120
Announce Date	2000	March 2001	December 2004
Capacity	292 GB	584 GB	1.2 TB
SCSI Interface	U160	U160	U160

Product Highlights

Hot Pluggable	Hot pluggable technology is designed into the drive mechanisms. Hot pluggable components can be replaced without powering down the storage system or stopping I/O operations. This feature significantly enhances data availability.
Capacity	Up to 1.2 TB of storage can be provided in a 1U footprint using 4 x 300 GB disks
Compatibility and Integration Testing	Intensive compatibility and performance testing with HP servers ensures the highest level of integration available in the industry.
Rack Density	The HP StorageWorks Disk System 2120 models have a 1U height using the Rittal/HP System E Solution racks.
Fault Tolerance	The ds2120 provides a fault tolerant storage solution for host-based mirroring solutions such as MirrorDisk/UX.

Compatibility

HP's extensive compatibility testing program assures that your HP StorageWorks Disk System 2120 works with leading servers, operating systems, and backup applications - and not just those sold by HP. The ds2120 models work seamlessly in many environments, making them especially suitable if you have a mixed system environment. For the latest list of servers, workstations, operating systems, and backup software that support the ds2120, check the compatibility pages on our web site at:

<http://www.hp.com/go/storage>

HP Server Compatibility The HP StorageWorks ds2120 is supported on the following classes of HP systems:

- HP 9000 PA-RISC and IPF servers and workstations

For details of system HBA support visit SCSI platform support matrix for the latest hardware compatibility information.

OS Support The ds2120 is supported on the following OS:

- HP-UX
- Linux
- Microsoft Windows 2000 Server and Advanced Server
- Microsoft Windows 2003 Server

Service and Support, HP Care Pack, and Warranty Information

Warranty Hewlett-Packard provides a 1-year, next-day, 13x5 on-site, limited warranty for the ds2120 (Warranty Code 4G), plus 9x5 phone support for the duration of the warranty.

Warranty Upgrade Options To simplify installation, maximize uptime, and increase ROI, HP provides a range of optional service upgrades:

- Installation and start up
- On-site support
- Extended coverage hours
- Enhanced response times
- System management and performance services

For more information on HP storage services, please visit the following web site:

<http://www.hp.com/hps/storage/>

HP Care Pack Information 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 products 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>

Software Product Services Standalone telephone support
Rights to new license version
Media and documentation updates

Hardware Product Services Installation services
On-site maintenance (includes warranty support)
Response time upgrades during the warranty period
Post-warranty coverage

For additional hardware installation and maintenance information please refer to the URLs listed below:
http://h18005.www1.hp.com/services/carepaq/us/install/cp_storage.html
http://h18005.www1.hp.com/services/carepaq/us/hardware/cp_storage.html

Service and Support, HP Care Pack, and Warranty Information

Support Services

HP Services provides a three-year, limited warranty, fully supported by a worldwide network of resellers and service providers and 9x5 hardware technical phone support during the warranty period. In addition, available service offerings include a full range of optional packaged hardware and software services:

- Installation and start up
- Extended coverage hours and enhanced response times
- System management and performance services
- Availability and recovery services

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	Adapters
Bus Converters	Backplane RAID Controllers	Power Supplies	Cabling	Fans

Configuration Information

For more information refer to your HP Authorized reseller or Sales Representative, who can provide additional information from the HP Ordering and Configuration Guides
Select each required option with quantities specified.

		Product Number
Enclosure	ds2120, field rack-mount NOTE: Four drive enclosures. Must be ordered with at least one drive.	A7382A
	ds2120, deskside NOTE: Four drive enclosure. Must be ordered with at least one drive.	A7382AD
	ds2120, factory rack-mount NOTE: Must be ordered with at least one drive.	A7382AZ
	ds2120, field rack-mount, empty enclosure only NOTE: Four drive enclosure. Four drive enclosure	A7382AE
	ds2120, deskside, empty enclosure only NOTE: Four drive enclosure. four drive enclosure	A7382ED
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Disk Mechanisms	36GB 15k rpm SCSI drive	A7527A
	73GB 10k rpm SCSI drive	A7528A
	73GB 15k rpm SCSI drive	A7529A
	146GB 10k rpm SCSI drive	A7530A
	146GB 15k rpm SCSI drive	A7383A
	300GB 10k rpm SCSI drive	A7384A
	300 GB 15k rpm SCSI drive	AG492A
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Rack and Cable Options	Rittal/HP System E Rail Kit	A7552A
	Desk-side Pedestal Kit (to convert a rack-mount enclosure to a desk-side enclosure)	A7531A
	0.5-meter 68-pin HD to 68-pin HD SCSI Cable NOTE: 0D1 will appear after the part number on your sales order indicating factory integration.	C2978B
	1-meter 68-pin HD to 68-pin HD SCSI Cable NOTE: 0D1 will appear after the part number on your sales order indicating factory integration.	C2911C
	1.5-meter 68-pin HD to 68-pin HD SCSI Cable NOTE: 0D1 will appear after the part number on your sales order indicating factory integration.	C2979B
	2.5-meter 68-pin HD to 68-pin HD SCSI Cable NOTE: 0D1 will appear after the part number on your sales order indicating factory integration.	C2924C
	5-meter 68-pin HD to 68-pin HD SCSI Cable NOTE: 0D1 will appear after the part number on your sales order indicating factory integration.	C7521A
	1-meter VHDCI to 68-pin HD SCSI Cable NOTE: 0D1 will appear after the part number on your sales order indicating factory integration.	C2361B
	2.5-meter VHDCI to 68-pin HD SCSI Cable NOTE: 0D1 will appear after the part number on your sales order indicating factory integration.	C2362B

Configuration Information

5-meter VHDCI to 68-pin HD SCSI Cable NOTE: 0D1 will appear after the part number on your sales order indicating factory integration.	C2365B
SCSI Terminator LVD/SE 68-pin HD NOTE: 0D1 will appear after this part number on your sales order if factory integration is indicated.	C2364A
2-meter VHDS68/HDS68 LVD/SE self-terminating SCSI Cable for V-Class NOTE: 0D1 will appear after the part number on your sales order indicating factory integration.	C7541A
5-meter VHDS68/HDS68 LVD/SE self-terminating SCSI Cable for V-Class NOTE: 0D1 will appear after the part number on your sales order indicating factory integration.	C7520A

Related Options

Care Packs for Commercial Channel

NOTE: The support packs are on the disk system only and contains the support pricing of the drives.

Next Day	H7546A
Next Day, Electronic	H7546E
4-hour, 13x5 onsite	H2865A
4-hour, 13x5 onsite, Electronic	H2865E
4-hour, 24x7 onsite	H2866A
4-hour, 24x7 onsite, Electronic	H2866E
6 hour Call to Repair	H2867A
6 hour Call to Repair, Electronic	H2867E

Product Upfront Support Options for Enterprise Channel

NOTE: The Upfront Options are on the disk system only and contains the support pricing of the drives.

NOTE: The price band for Upfront Options is 897.

NOTE: The product number for optional installation is HA113A1. The price band is 564.

CATS Support Options - 1 Year

Next Day	HA101A1
4hr, 13x5 support	HA103A1
4hr, 24x7 support	HA104A1
6 hour Call-to-Repair	HA105A1
Support Plus	HA109A1
Support Plus 24	HA110A1
Proactive 24 Service	HA111A1
Critical Service	HA112A1

CATS Support Options - 3 year

Next Day	HA101A3
4hr, 13x5 support	HA103A3
4hr, 24x7 support	HA104A3
6 hour Call-to-Repair	HA105A3
Support Plus	HA109A3
Support Plus 24	HA110A3
Proactive 24 Service	HA111A3
Critical Service	HA112A3

Technical Specifications

Protocol Support	U160 (LVD)	
Dimensions (HxWxD)	Deskside	17.65 x 14.80 x 1.70 in (44.85 x 37.60 x 4.32 cm)
	Rack-mount	17.65 x 14.80 x 1.70 in (44.85 x 37.60 x 4.32 cm)
Shipping Dimensions	Deskside	7.5 in (19.05 cm) x 22.5 in (57.15 cm) x 22.0 in (50.80 cm)
	Rack-mount	7.5 in (19.05 cm) x 22.5 in (57.15 cm) x 22.0 in (50.80 cm)
Weight	Deskside	17.89 lb (8.11 kg) fully loaded
		10.90 lb (4.94 kg) without disks
	Rack-mount	17.89 lb (8.11 kg) fully loaded
		10.90 lb (4.94 kg) without disks
Shipping Weight	Rack-mount (without disks)	29.0 lb (13.15 kg)
Input Requirements	Input voltage range	90-264 VAC Auto-ranging
	Line Frequency Range	50/60 Hz
	Published input voltage range	100-240 VAC
	Input current	30 Amps peak
	External Fusing	4 amps
Relative Humidity (non-condensing)	Operating	5-95% at 40°C
	Storage	90% relative humidity at 65°C
Temperature Range	Operating	0°C to +35°C
	Storage	-40°C to +70°C

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The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

For hard drives, 1 GB = 1 billion bytes. Actual formatted capacity is less.