

Overview

The HP StorageWorks D2D100 (Disk-to-Disk) Backup System provides reliable, consolidated data protection for up to six servers in a single, self-managing device. It works with your backup software application to fully automate daily backup jobs, requiring less manual handling than tape-based systems - a real benefit for organizations with limited IT resources. The HP D2D100 Backup System also increases the reliability of your backups by reducing the risk of human error and issues with tape drive hardware and media, the major causes of failed backups.

This disk-to-disk backup solution lets you easily and quickly restore lost or corrupted files from online backups. Think what your users will say when you can restore their files in a matter of minutes rather than hours or even days. The HP D2D100 Backup System gets users back to work quickly, reducing downtime costs and frustration while contributing to the overall productivity of your business.

The HP StorageWorks D2D100 Backup System uses disk-based storage to emulate up to six tape drives or autoloaders. Working with your backup software application, the HP D2D100 Backup System provides automated backup for multiple servers at less than the cost of a single LTO tape autoloader. Consolidating your backups onto a single disk-based device can also simplify your data protection process. Not only are there fewer devices to manage, but the intuitive, browser-based management interface lets you monitor your backup device from anywhere at any time. The HP D2D100 Backup System can help to improve backup performance as well by supporting the direct backup of up to six servers simultaneously.

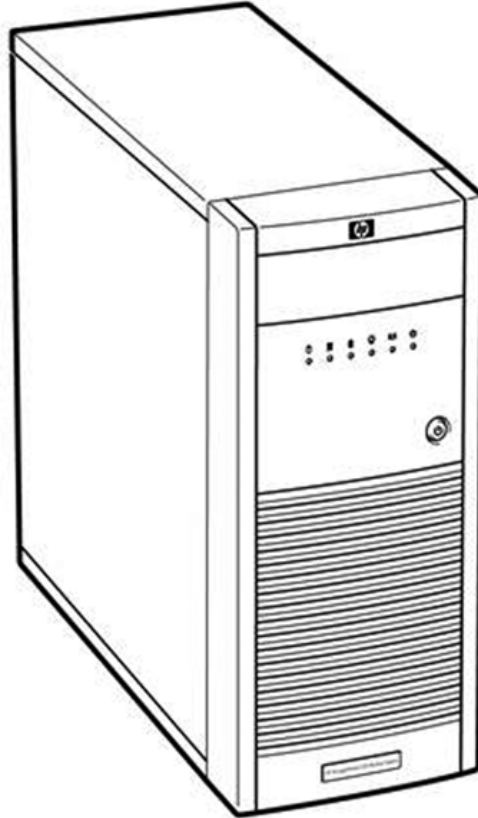
This simple solution fits right into your existing Windows or Linux environment, working with your current hardware and software in most cases. Tape is still used to provide backups that can be stored offsite for disaster recovery and long-term archiving requirements. Existing tape drives and backup software may be used with the HP D2D100 Backup System. Alternatively, the HP D2D100 Backup System is offered with an optional integrated LTO tape drive or with a Data Protector Express software kit that includes all the components needed to protect up to four servers. The new tape offload feature allows you to copy or export cartridges from the D2D100 Backup System to a physical tape without affecting the network.

If you are a small business looking for a better way to protect your data, the HP D2D100 Backup System delivers simplicity, affordability and reliability in a system designed expressly for your needs.

What's New

- The new HP D2D130 Backup System is now available, introducing new standards in family of HP D2D100 Backup Systems for capacity, performance, and virtual tape support.
 - Three new HP D2D130 models have been introduced: the D2D130 Backup System (base model), the D2D130 Backup System with HP Data Protector Express Software Kit and the D2D130 Backup System with an integrated HP Ultrium 920 SAS Tape Drive (LTO-3).
 - D2D100 Backup System models which include the HP Data Protector Express software kit now include the Data Protector Express D2Any2Any option to automate the copy to tape of backup data on the D2D100 Backup System.
 - The D2D100 Backup System's autoloader emulation now includes support for a mail slot, allowing your backup application to export cartridges from the "virtual" autoloader to physical tape, automatically deleting the data from the D2D100 Backup System to free up storage capacity.
 - The maximum cartridge size for emulated tape devices has been increased from 400 GB to 800 GB to accommodate directly attached HP LTO-3 tape drives.
 - The D2D100 Backup System now assigns barcodes to its emulated data cartridges. These can be modified by the user. Backup applications use barcodes to identify cartridges, which is especially important when using the mail slot to import and export cartridges.
 - The HP D2D100 Backup System can now be used for direct backup of Microsoft Windows Vista and Linux-based servers. Check the compatibility website at: <http://www.hp.com/go/connect> for further information about which versions of Linux are supported.
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Overview



HP StorageWorks D2D100 Backup System

Key Features

Simplify your life with "hands-free" daily backup

Make your backups more reliable

Take an affordable step toward consolidating your IT resources

Restore lost data faster

Back up multiple servers faster

Manage your backup system more easily

Reduce the time you spend on routine maintenance

Customer Benefits

Automating the backup process simplifies your data protection processes. Implementing unattended daily backup is especially good for businesses with limited IT resources.

Automation also makes your data protection processes more dependable by reducing the risks of human error and problems associated with tape hardware and media, the two biggest causes of failed backups. Backups happen when they should, day in and day out.

Schedule daily backups to the HP D2D100 Backup System to provide automated backup for up to six servers at less than the cost of a single LTO autoloader. It's an affordable way to consolidate your daily backups onto a single disk-based device, with the option of consolidating your tape backup as well.

Disk-based data protection provides online access to your backup data, allowing lost or corrupted files to be restored in minutes rather than hours or days. This means you can get your end users up and running quickly after data loss, reducing downtime and its impact on productivity.

Backing up six servers simultaneously to a disk-based device, instead serial backups to a tape drive or autoloader, means that all backups get completed within your backup window.

A browser-based application lets you monitor your backup device from anywhere, locally or remotely. Check on available capacity, view and change device configurations, and easily update device firmware. Set up automatic email alerts to advise you of events that could put your backups at risk.

You won't be spending your time setting up RAID sets, de-fragmenting disks, applying security patches, and running virus protection. The HP D2D100 Backup System requires virtually no maintenance - it's a self-managing appliance that reduces your IT workload.

Overview

Get the best of both worlds - disk and tape

Moving daily backups to a disk-based appliance with an integrated tape drive for making offsite copies of your backups combines all the benefits of disk with the complete disaster recovery protection of tape. Choose whether to use your backup application to copy your data from the D2D100 Backup System to a tape drive connected to a server on the network or offload data to a tape drive directly attached to the D2D100 Backup System at any time of day without slowing down the network.

Integrate disk-based backup seamlessly into your current environment

The HP D2D100 Backup System makes your existing data protection regime more effective without major changes to your backup software or processes. Your backup application views this device as just another tape drive or autoloader, so you don't need to retrain your staff or completely change your backup regime.

Features and Benefits

Why Disk-to-Disk-to-Tape (D2D2T)? Backup to disk has only recently become an affordable option for smaller organizations. Backup to tape has long been the de facto standard for server backup, but disk-to-disk (D2D) backup offers some substantial advantages over tape backup, most importantly the ability to retrieve lost data much more quickly from backups held online. Tape storage retains its place as the foundation of a good data protection strategy because of its offline storage capability. Storing backup data offline and offsite provides protection from virtually all risks to data, and removable tape media allows this to be done easily and cost-effectively.

The HP StorageWorks D2D100 Backup System does disk-to-disk backup that delivers advantages over server backup using tape drives by:

- Automating the daily backup process to make it simpler and more reliable
- Reducing the time it takes to restore lost data, thus reducing productivity losses due to downtime
- Consolidating the backup of multiple servers onto a single device, making backups faster and device management easier

Storing backup data on disk alone has its risks, however, and does not provide complete protection in case of a site-wide disaster, such as fire, flood, or vandalism. HP recommends that you include tape as part of the overall backup regime and store the tapes offsite, away from the servers they protect. With a directly attached tape drive, the HP D2D100 Backup System can offload data to physical tape without having an impact on your production servers or your network.

One approach would be to use the HP D2D100 Backup System for daily backup, while utilizing tape drives or autoloaders for once-a-week full backups to tape. Tape backup can be done using a tape-to-tape copy from the "virtual tapes" in the HP D2D100 Backup System to physical tape or a direct backup from the server to physical tape. Such backup regimes combine the advantages of disk-to-disk backup with the disaster recovery protection of tape, providing you with the best of both worlds.

Better backup made simple

The HP D2D100 Backup System is designed with smaller businesses in mind, so it's easy to install and easy to use. It provides worry-free backup for up to six servers.

- Automation takes the manual labor out of daily backup - no one has to remember to change the backup tapes each day. Use HP Data Protector Express or other compatible backup software to set your backup schedule and then forget it. You can use your existing backup software without the need for retraining your staff, or, for a new installation, use the HP Data Protector Express software included with the D2D100 Backup System.
- When your users need to recover a lost file, you can retrieve it quickly and easily from the online backup data using your backup software. There are no tapes to locate and bring back from offsite storage. Cut down the time it takes you to restore a user's data from hours to minutes. It's the backup system that can make you look like a hero to your users.
- Using the D2D100 Backup System for daily backup means fewer tape cartridges to store and track. You may be able to reduce backup to tape to a weekly event, creating a weekly full backup to tape to meet offsite, disaster recovery and archiving requirements. With a tape drive directly attached to the D2D100 Backup System, copy to tape can be done at any time of day without having an impact on the network.
- The D2D100 Backup System integrates seamlessly into your existing IT environment. The install wizard takes you from power-on to ready for backup in just three easy steps. Because it's a preconfigured backup solution, you won't need to configure RAID sets or set up LUNs as you would with other types of disk-based backup products. And your backup software views the D2D100 Backup System as tape, so adding extra software components is not typically

Features and Benefits

- required.
 - A browser-based interface means that you can monitor and manage the D2D100 Backup System from anywhere on the network, locally or remotely. You can check available capacity, view and change tape emulation configurations, copy or export data to physical tape, set up tape copy schedules, set up or change e-mail alerts, upload new device firmware, or set up new "virtual" tape devices anytime, anywhere.
 - Unlike other disk-based backup devices that use Microsoft Windows operating systems, such as NAS or storage servers, the D2D100 Backup System requires no routine maintenance. It's a secure, self-managing device that doesn't need periodic disk defragmentation, security patches, or updates to virus protection.
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Reliable protection for your greatest asset

Today's businesses run on information, which is why IT has become such an integral part of our daily lives. Business executives and IT managers have a duty to ensure that their organization is protected from risks that could destroy their data - and their ability to conduct normal business operations. The D2D100 Backup System makes your data protection more reliable in a number of ways.

- Using the scheduling capability of the backup software to automate backups to the HP D2D100 Backup System makes sure that backups happen when they should, day in and day out.
 - Disk-based backup removes the risk of human errors from handling tape media, a common cause of failed backups.
 - Having your backup data online makes finding and restoring lost files easier. Getting their data back fast makes users put more trust in your IT system.
 - The D2D100 Backup System can back up six servers simultaneously, unlike over-the-network backup to a tape drive or autoloader, where every backup job happens sequentially. This means that you don't have to worry about backup jobs not finishing within the backup window, leaving data unprotected or having an adverse impact on user productivity at the beginning of the workday.
 - The D2D100 Backup System employs software RAID 5 support to protect your data in the event of a hardware problem. In the event of a single disk failure, the D2D100 Backup System can completely recover your data while rebuilding your original data RAID set when the new disk drive is added.
 - The D2D100 Backup System uses integrated flash memory to store device software. Unlike other disk-based backup solutions, it can be quickly re-configured in the event of system failure without the need to reinstall device software.
 - The D2D100 Backup System is inherently more secure than a NAS-based storage system because it is a dedicated backup device. It is accessible only as a tape device, making it virtually invulnerable to accidental file deletion and virus or hacker attacks.
 - Built on HP ProLiant server technology, the HP D2D100 Backup System delivers high reliability using proven hardware from the industry leader in server solutions.
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Features and Benefits

An affordable way to improve your backup

The HP D2D100 Backup System makes automating the daily backup of multiple servers to disk affordable for all organizations.

- The D2D100 Backup System backs up as many as six servers simultaneously by emulating six LTO tape drives or autoloaders, each dedicated to a server on the network. It's equivalent to adding six LTO autoloaders for less than the price of one. And at half the cost of virtual tape libraries with similar capacity, it makes disk-to-disk backup affordable for smaller businesses with limited IT budgets.
- Using the D2D100 Backup System dramatically reduces the amount of time it takes to restore lost or corrupted data. This improves productivity by allowing employees get back to work faster, saving the organization both time and money and protecting against other associated issues with business downtime.
- The D2D100 Backup System's iSCSI interface plugs right into your existing Ethernet network. There's no need to purchase or allocate server hardware to manage this device, nor is there a need to purchase additional cables and host bus adapters for connectivity.
- Consolidating your daily backup onto a single, automated, disk-based device reduces your IT operational costs. Doing away with daily backup to tape also decreases media costs. HP recommends, at a minimum, that weekly full backups be copied to tape for protection against all types of site-wide disasters. You can use your existing tape drive or autoloader as part of your backup system, or you can purchase a D2D100 Backup System with an integrated LTO tape drive to consolidate your backup system.
- Purchasing the D2D100 Backup System with the Data Protector Express software kit provides a complete backup solution for four servers at a considerable discount over buying the hardware and software separately. If you need to upgrade your current backup software, the Data Protector Express software kit provides a cost-effective solution for your backup and restore requirements.

Adding tape storage to create the best data protection solution

The HP StorageWorks D2D100 Backup System should be used in conjunction with a tape device to extend the advantages of disk-based backup with the additional disaster protection of tape. There are several approaches to combining the D2D100 Backup System with physical tape, including directly attaching a tape drive to the D2D100 Backup System, using a tape device connected to a backup server, or using existing tape drives directly attached to each server.

D2D100 Backup System with direct-attach tape drive

The HP D2D100 Backup System now supports a directly attached HP Ultrium tape drive. Drives can be installed internally (half-height drives only) or externally to the unit and require an appropriate host bus adapter (SCSI or SAS). Only HP LTO-2, LTO-3, and LTO-4 drives are supported: Ultrium 448 (SCSI and SAS), Ultrium 460, Ultrium 920 (SCSI and SAS), Ultrium 960, Ultrium 1760, and Ultrium 1840. The D2D100 Backup System does not support directly attached tape autoloaders or libraries.

A tape drive directly attached to the D2D100 Backup System is not visible to the backup application on a host system or server. Backups are copied from the D2D100 Backup System to the direct-attach tape drive using one of the two following methods:

- Copying directly from any cartridge on the D2D100 Backup System to a physical tape using the D2D100 Backup System's management software. This method of copying to tape does not involve the backup application and leaves the data on the D2D100 Backup System cartridge intact. Direct copies can be scheduled to run as a regular job, fitting into the normal backup regime by copying full backups to physical tape after the disk-based backup has been completed. Tapes created in this way are exact copies of the cartridges on the D2D100 Backup System and are not cataloged separately by the backup application.

Features and Benefits

- Exporting a cartridge from an autoloader slot in the D2D100 Backup System using the backup application to move the cartridge into the autoloader's mail slot. The cartridge in the mail slot is then copied to physical tape using the export function in the HP D2D100 Backup System. This removes the virtual cartridge and its data from the D2D100 Backup System and frees up capacity. Your backup application will no longer log the presence of this tape cartridge as it has been removed from the virtual autoloader or tape drive; however, the physical tape cartridge can still be used to restore data if needed. The bar codes assigned to the emulated data cartridges get copied to the physical tape, so the backup application can recognize the tape when it is used to restore data to the server or to the D2D100 Backup System.

Neither of these methods creates network traffic because the tape-to-tape copy occurs within the D2D100 Backup System and its directly attached tape drive. Thus, copies can be scheduled at any time of the day. Tape cartridges created either way can be restored to the D2D100 Backup System using the mail slot to import the data or directly to the server using a tape drive connected to that server.

Server-attached backup device

Depending on the features of your backup software application, virtual data cartridges on the D2D100 Backup System (which the backup application cannot distinguish from physical tape cartridges) may be copied to a tape device attached to any of the servers it protects using the backup application. This is a tape-to-tape copy from the virtual cartridge on the D2D100 Backup System to a physical tape cartridge. In this case, the tape device may be a tape drive, autoloader, or library using any format of tape, as long as the capacity of the tape cartridge is large enough to hold the data from the virtual cartridge. Depending on the backup application you are using, the tape device may be either directly attached to any network server or attached to a dedicated backup server. In using this type of tape-to-tape configuration, data does go over the network and will have an impact on both network and server performance. For this reason, HP recommends that this type of copy be done during non-business hours or using a separate network for backup.

Users of HP Data Protector Express with the D2Any2Any option or owners of the D2D100 Backup System with the Data Protector Express kit can specify the copy to tape job at the same time as creating the backup job to the D2D100 Backup System. This automates the moving and copying of backups from disk to tape and allows recovery from both disk and tape.

A complete solution with HP Data Protector Express software The HP StorageWorks D2D100 Backup System with Data Protector Express software kit is a total solution for protecting up to four servers. The Data Protector Express software kit represents a significant cost saving over purchasing backup software separately. Additional agents are available to extend this protection to more servers.

HP Data Protector Express software provides simple, reliable and efficient data protection. Designed for organizations without dedicated disaster recovery staff, it is easy to install, operate and manage. In addition to the HP D2D100 Backup System, Data Protector Express also supports other storage solutions such as tape, general purpose disk and optical devices as backup media. Agents provide online protection for networked file servers, application servers and Windows-based desktop machines. Data Protector Express delivers high performance that minimizes the impact of backup and recovery operations.

Compatibility

HP's extensive compatibility testing program assures that your HP StorageWorks D2D100 Backup System works with leading servers, operating systems, and backup applications, including those not manufactured by HP.

Server Compatibility

The HP D2D100 Backup System is supported on servers that use Microsoft Windows or Linux operating systems, including HP ProLiant Servers and a variety of third-party servers. For compatibility details on specific servers, refer to our website for the latest hardware compatibility information:

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

OS Support

The HP D2D100 Backup System is supported by the following operating systems:

- Windows 2000
- Windows XP
- Windows Vista
- Windows Server 2003 (including Windows Small Business Server)
- Linux (Red Hat 5.x, SuSE SLES10 SP1 or later)

When using a backup application, such as Data Protector Express or Symantec Backup Exec, that supports the backup of servers using other operating systems (NetWare, Unix, etc.) via software agents, the HP D2D100 Backup System can also be used to back up these servers by routing the backup data through a backup server operates on a supported operating system.

For more details of operating system compatibility, refer to our website for the latest information:

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

Software Support

The HP D2D100 Backup System is supported by a range of popular backup applications, including the easy-to-use HP Data Protector Express. For details of specific backup application compatibility, refer to our website for the latest information: <http://www.hp.com/go/connect>

Tape drive compatibility

The HP D2D100 Backup System supports direct connection of the following HP Ultrium tape drives using an appropriate host bus adapter:

- HP StorageWorks Ultrium 448 (half-height LTO-2) - internal or external models, both SCSI and SAS interfaces
- HP StorageWorks Ultrium 460 (full-height LTO-2) - external model
- HP StorageWorks Ultrium 920 (half-height LTO-3) - internal or external models, both SCSI and SAS interfaces
- HP StorageWorks Ultrium 960 (full-height LTO-3) - external model
- HP StorageWorks Ultrium 1760 (half-height LTO-4) - internal or external models, both SCSI and SAS interfaces
- HP StorageWorks Ultrium 1840 (full-height LTO-4) - external model

For further information about these products, visit the HP Web site at: www.hp.com/go/tape

Network Compatibility

For the best performance, the HP D2D100 Backup System should be connected to the servers it protects via a 1Gb (gigabit) Ethernet network. It is supported on all 1Gb Ethernet network interface cards (NICs) and switches. The HP D2D100 Backup System is also supported on 100 base-T Ethernet networks, but performance will be severely restricted. This product is not supported on networks using slower Ethernet technology. The D2D100 Backup System communicates over your Ethernet network using iSCSI technology:

- For Windows systems, this requires installation of the Microsoft iSCSI Initiator 2.02 (or above) software driver on each server that will be backed up to the HP D2D100 Backup System. This initiator is downloaded and installed from Microsoft automatically by the installation wizard and is also available via free download from the Microsoft website at: <http://www.microsoft.com>
- For supported Linux operating systems, a software iSCSI initiator is provided with the operating

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system but may need to be installed separately if not included in the initial operating system installation.

NOTE: For customers using the Symantec Backup Exec 10d software application, each iSCSI host (or server) will require the installation of an iSCSI host bus adapter for the HP D2D100 Backup System or an upgrade to Symantec Backup Exec 11d. If using an iSCSI host bus adapter, HP recommends purchasing a QLogic 1-Gbps TOE to PCI-X host bus adapter (QLA4050C-CK, QLA4050C-BK, or QLA4052-C). Please check with your local reseller or service provider regarding pricing and availability of this product. **For users of Data Protector Express or Backup Exec 11d, this restriction does not apply.**

Service and Support, HP Care Pack, and Warranty Information

HP Care Pack Services HP Care Pack Services offer upgraded service levels to extend and expand your standard product warranty with easy-to-buy, easy-to-use support packages that help you make the most of your hardware and software investments. They let you choose the support levels that meet your business requirements, from basic to mission-critical. They help you contain total cost of ownership.

HP Care Pack warranty extensions can be purchased along with HP products to cost-effectively upgrade or extend your warranty. For many products, post-warranty HP Care Pack Services are available when your original warranty has expired.

Why purchase an HP Care Pack Service?

Your standard warranty protects against product defects. HP Care Pack Services help you guard against unplanned downtime, which can reduce your productivity and profitability. These convenient service packages:

- Protect your investment in HP products
- Provide consistent, predictable levels of support across your entire department or business
- Ease budget planning with fixed-cost support that includes parts and labor
- Give you direct access to proven technical and problem-solving expertise
- Offer a choice of response-time and repair-time commitments
- Deliver prompt, measurable results
- Are available whenever and wherever you do business

HP Care Pack availability may vary by country and product.

Supporting your Adaptive Enterprise journey

HP Services helps you make the Adaptive Enterprise real for your organization. The breadth, depth, and quality of HP hardware and software support services can help you improve the performance of your IT support processes and resolve the complex software and hardware problems that tax user productivity. HP Care Pack services help you increase IT environment stability, efficiency, and agility from the desktop to the data center, and improve the productivity of your employees.

Warranty and Services Included with the Product Hewlett-Packard provides a 1-year, next-day, parts exchange, limited warranty for StorageWorks D2D100 Backup System products, plus 9x5 phone support for the duration of the warranty.

For models that include an integrated tape drive, the tape drive carries its own separate warranty. Hewlett-Packard provides a 3-year, next-day, parts exchange, limited warranty for the StorageWorks Ultrium tape drive, plus 9x5 phone support for the duration of the warranty.

HP warrants only that the StorageWorks Data Protector Express software media will be free of physical defects for a period of ninety (90) days from delivery.

For more information about HP's Global Limited Warranty and Technical Support, visit:
ftp://ftp.compaq.com/pub/products/storageworks/warranty/EN_321708-008.pdf

Service and Support, HP Care Pack, and Warranty Information

Recommended Services In order to maximize ROI and product uptime, and minimize the cost of ownership, Hewlett Packard recommends:

3 years 24x7 Hardware Support

- Guards against downtime, which reduces productivity and profitability
- Eases budget planning with fixed-cost support that includes parts and labor
- Direct access to proven technical and problem-solving expertise

3 years 24x7 Software Support

- Improve the productivity of system managers and operators
- Improve system performance and reduce downtime due to software defects
- Expedite problem resolution through expert-level technical resources
- Enjoy consistent service coverage across geographically dispersed sites
- Update HP and selected third-party software at a predictable cost
- Take advantage of subscription savings on software updates
- Keep your license compliancy up-to-date

Available HP Care Pack Services

Extend your product warranty on the D2D100 Backup System with a wide choice of cost-saving support packages. For integrated tape drives, check the QuickSpecs for the relevant HP Care Pack Services.

HP Care Pack Services are sold by HP and HP authorized enterprise and commercial resellers. Services for customers purchasing via direct and enterprise resellers are quoted using HP order configuration tools. Additional information about HP Care Pack Service features and benefits is available at:

<http://www.hp.com/hps/carepack/services/>.

Key for HP Care Pack Service availability in the table below:

E = Service available for customers purchasing direct and via enterprise resellers

C = Service available for customers purchasing via commercial resellers

N/A = Service not applicable

HP Care Pack Services Deployment and Per Event Services	Service Available
HP Installation	E/C
HP Installation & Startup	N/A
HP Implementation	N/A

For more information about Deployment and Per Event Services for HP Storage, visit:

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

Service and Support, HP Care Pack, and Warranty Information

HP Care Pack Services Availability Services	1 yr	3 yr	4 yr	5 yr
HP Next Day Hardware Support	E/C	E/C	C	C
HP 4 Hr, 9x5 HW Support	E/C	E/C	C	C
HP 4 Hr, 13x5 Hardware Support	E/C	E/C	C	C
HP 4 Hr, 24x7 Hardware Support	E/C	E/C	C	C
HP 6 HR Call-to-Repair HW Support	E/C	E/C	C	C
HP Software Support	E/C	E/C	C	C
HP Software Support 24x7	E/C	E/C	C	C
HP Support Plus	E/C	E/C	C	C
HP Support Plus 24	E/C	E/C	C	C
HP Proactive Essentials 9x5, 10 SW Incidents	N/A	N/A	N/A	N/A
HP Proactive Essentials 9x5, 25 SW Incidents	N/A	N/A	N/A	N/A
HP Proactive Essentials 9x5 Unlimited	N/A	N/A	N/A	N/A
HP Proactive Essentials 24x7, 25 SW Incidents	N/A	N/A	N/A	N/A
HP Proactive Essentials 24x7, 50 SW Incidents	N/A	N/A	N/A	N/A
HP Proactive Essentials 24x7 Unlimited	N/A	N/A	N/A	N/A
HP Proactive 24 Service*	E/C	E/C	N/A	N/A
HP Critical Service*	E/C	E/C	N/A	N/A

* Both Proactive 24 & Critical Service relate only to 'reactive elements'. 'Proactive elements' are available on a time & materials basis. (SW is supported separately per package.)

To find HP Care Pack Services available via HP authorized commercial resellers, visit:

http://h30125.www3.hp.com/csn/salesmktg/elfpack/elf_nonlkup_ctrylang.asp?code=elnl

Service and Support, HP Care Pack, and Warranty Information

**HP Care Pack Service
Product Numbers**

Enterprise & Commercial Purchased Care Packs
(‘A’ stands for physical Care Pack, ‘E’ for electronic Care Pack)

Product Description

**Product
Number**

Installation Only

HW, "1-year", "NBD", "9x5", "on-site"	UD056E
HW, "1-year", "4-hour", "13x5", "on-site"	UE310E
HW, "1-year", "4-hour", "24x7", "on-site"	UE311E
HW, "1-year", "4-hour", "24x7", "on-site"	UE312E
HW, "1-year", "6hr CTR", "24x7", "on-site"	UE313E
HW, "3-year", "NBD", "9x5", "parts exchange"	UE309E
HW, "3-year", "NBD", "9x5", "on-site"	UE314E
HW, "3-year", "4-hour", "13x5", "on-site"	UE315E
HW, "3-year", "4-hour", "24x7", "on-site"	UE316E
HW, "3-year", "6hr CTR", "24x7", "on-site"	UE317E
HW, "4-year", "4-hour", "13x5", "on-site"	UF823E
HW, "4-year", "4-hour", "24x7", "on-site"	UF824E
HW, "5-year", "4-hour", "13x5", "on-site"	UF825E
HW, "5-year", "4-hour", "24x7", "on-site"	UF826E
HW, "1-year", "NBD", "9x5", "on-site", "Post Wty"	UF827PE
HW, "1-year", "4-hour", "13x5", "on-site", "Post Wty"	UF828PE
HW, "1-year", "4-hour", "24x7", "on-site", "Post Wty"	UF829PE
HW, "1-year", "6hr CTR", "24x7", "on-site", "Post Wty"	UF830PE
HP 1-year, Support PlusBackup Solution SVC ,Post Wty *	UF833PE
HP 1-year, Support Plus 24 Backup Sol SVC, Post Wty *	UF834PE
SW, "Data Protector Express", "1-year", "24x7", "agent SW support"	UD496E
SW, "Data Protector Express", "3-year", "9x5", "agent SW support"	UD497E
SW, "Data Protector Express", "3-year", "24x7", "agent SW support"	UD498E
HW / SW "3-year", Support Plus*	UF831E
HW / SW "3-year", Support Plus 24*	UF832E

* Applicable for models with Data Protector Express software kit only.

Service and Support, HP Care Pack, and Warranty Information

Enterprise Purchased Care Packs

Product Description	Multi-User Solution Band	Multi-User Solution Install Band	Product Number
HW Installation Only	N/A	5KK	HA113A1
HW, "3-year", "next-day", "13x5", "on-site"	80S/80T	N/A	HA101A3
HW, "3-year", "4-hour", "13x5", "on-site"	80S/80T	N/A	HA103A3
HW, "3-year", "4-hour", "24x7", "on-site"	80S/80T	N/A	HA104A3
HW, "3-year", "6hr CTR", "24x7", "on-site"	80S/80T	N/A	HA105A3
SW, "3-year", "Phone-in", "9x5"	80T	N/A	HA106A3
SW, "3-year", "Phone-in", "24x7"	80T	N/A	HA107A3
HW Only, Support Plus, "3-year", "13x5"	80S/80T	N/A	HA109A3
HW Only, Support Plus 24, "3-year", "24x7"	80S/80T	N/A	HA110A3
HW Only, Proactive 24, "3-year", "24x7"*	80S/80T	N/A	HA111A3
HW Only, Critical Service, "3-year", "24x7"*	80S/80T	N/A	HA112A3

NOTES:

- Both Proactive 24 & Critical Service relate only to 'reactive elements'; 'proactive elements' are available on time & materials basis.
- Band 80S relates to products carrying Data Protector Express Single Server Edition; band 80T relates to products carrying Data Protector Express software kit.
- Hardware and software uplifted support is purchased separately according to the product variant purchased or combined with Support Plus support offerings.
- The Care Pack information quoted above relates to 3-year offerings only, 1-year Care Packs are available for each offering (replace A3 with A1).

eSupport

HP eSupport is a portfolio of technology-based services that assist you with managing your business environment - from the desktop to the data center.

Support Portal

The HP support portal provides one-stop access to the information, tools and services you need to manage the daily operations of your IT environment.

Features include:

- Access to self-solve tools (including search technical knowledge base)
- Efficient logging and tracking of support cases
- Collaboration with other business and IT professionals
- Download of patches and drivers
- Access to diagnostic tools
- Proactive notification of relevant information

Access to certain features of the support portal requires an HP service agreement. To access the support portal, visit <http://www.hp.com/support>

Service and Support, HP Care Pack, and Warranty Information

HP Education Services For more information about HP Education Services for Storage and SAN, visit <http://education.hp.com/curr-storsan.html>

Additional Services Information For more information about Deployment, Per Event, Consulting and Education services for HP Storage, visit: <http://www.hp.com/hps/storage/>

For more information about HP Care Pack services for storage products, visit: http://www.hp.com/hps/carepack/storage/cp_networked.html

For more information about HP storage software, services and updates, visit: <http://h18006.www1.hp.com/storage/software.html>

If you have specific questions, contact your local HP representative. Contact information for a representative in your area can be found at "Contact HP" <http://www.hp.com/>

Configuration Information

Step 1 – Select a Configuration

Select one:

Model Name	Model Description	Part Number
HP StorageWorks D2D120 Backup System	D2D120 Backup System with 2 TB of disk storage Kit Contents: D2D120 Backup System tower Ethernet cable Power cord Installation poster HP StorageWorks D2D100 Backup System CD (contains installation wizard, device drivers, and documentation, all localized in multiple languages) HP StorageWorks Data Protector Express Single Server Edition software (CD and LTU)	EH884A
HP StorageWorks D2D120 Backup System with Data Protector Express software Kit	D2D120 Backup System with 2 TB of disk storage, plus Data Protector Express software needed to back up four servers Kit Contents: D2D120 Backup System tower Ethernet cable Power cord Installation poster HP StorageWorks D2D100 Backup System CD (contains installation wizard, device drivers, and documentation, localized in multiple languages) HP Data Protector Express Software Kit containing software CD and a license for one copy of Data Protector Express Backup Server (BB117BA) and three copies of Data Protector Express Network Server Agent (BB121BA) HP Data Protector Express D2Any2Any option (BB130AA)	EH924A
HP StorageWorks D2D120 Backup System with Ultrium 920 SAS tape drive	D2D120 Backup System with 2 TB of disk storage and a integrated Ultrium 920 SAS tape drive (LTO-3) Kit Contents: D2D120 Backup System tower Integrated Ultrium 920 SAS internal tape drive (EH847A) Integrated HP SC44Ge Host Bus Adapter (416096-B21) Integrated SAS cable (406594-001) Ethernet cable Power cord Installation poster HP StorageWorks D2D100 Backup System CD (contains installation wizard, device drivers, and documentation, localized in multiple languages) HP StorageWorks Tape CD (contains HP StorageWorks Library and Tape Tools utilities and localized user manuals) HP Ultrium 3 Data Cartridge (800 GB) HP StorageWorks Data Protector Express Single Server Edition software (CD and LTU)	EH885A
HP StorageWorks D2D130 Backup System	D2D130 Backup System with 3 TB of disk storage Kit Contents: D2D130 Backup System tower Ethernet cable Power cord	EH950A

Configuration Information

<p>HP StorageWorks D2D130 Backup System with Data Protector Express software Kit</p>	<p>Installation poster HP StorageWorks D2D100 Backup System CD (contains installation wizard, device drivers, and documentation, all localized in multiple languages) HP StorageWorks Data Protector Express Single Server Edition software (CD and LTU) D2D130 Backup System with 3 TB of disk storage, plus Data Protector Express software needed to back up four servers</p> <p>Kit Contents: D2D130 Backup System tower Ethernet cable Power cord Installation poster HP StorageWorks D2D100 Backup System CD (contains installation wizard, device drivers, and documentation, localized in multiple languages) HP Data Protector Express Software Kit containing software CD and a license for one copy of Data Protector Express Backup Server (BB117BA) and three copies of Data Protector Express Network Server Agent (BB121BA) HP Data Protector Express D2Any2Any option (BB130AA)</p>	<p>EH951A</p>
<p>HP StorageWorks D2D130 Backup System with Ultrium 920 SAS tape drive</p>	<p>D2D130 Backup System with 3 TB of disk storage and a integrated Ultrium 920 SAS tape drive (LTO-3)</p> <p>Kit Contents: D2D130 Backup System tower Integrated Ultrium 920 SAS internal tape drive (EH847A) Integrated HP SC44Ge Host Bus Adapter (416096-B21) Integrated SAS cable (406594-001) Ethernet cable Power cord Installation poster HP StorageWorks D2D100 Backup System CD (contains installation wizard, device drivers, and documentation, localized in multiple languages) HP StorageWorks Tape CD (contains HP StorageWorks Library and Tape Tools utilities and localized user manuals) HP Ultrium 3 Data Cartridge (800 GB) HP StorageWorks Data Protector Express Single Server Edition software (CD and LTU)</p>	<p>EH952A</p>

NOTE: For customers using the Symantec Backup Exec 10d software application, each iSCSI host (or server) will require the installation of an iSCSI host bus adapter for the HP D2D100 Backup System or an upgrade to Symantec Backup Exec 11d. If using an iSCSI host bus adapter, HP recommends purchasing a QLogic 1-Gbps TOE to PCI-X host bus adapter (QLA4050C-CK, QLA4050C-BK, or QLA4052-C). Please check with your local reseller or service provider regarding pricing and availability of this product. **For users of Data Protector Express or Backup Exec 11d, this restriction does not apply.**

Step 2- Related Options

<p>Rack-Mount Options</p>	<p>Utility Shelf</p>	<p>253449-B21</p>
<p>Tape Drive Options (one internal tape drive and/or one external tape drive may be directly</p>	<p>HP StorageWorks Ultrium 448 SCSI Internal HP StorageWorks Ultrium 448 SCSI External HP StorageWorks Ultrium 448 SAS Internal</p>	<p>DW016A DW017B DW085A</p>



Configuration Information

drive may be directly attached to the D2D100 Backup System using an appropriate HBA)	HP StorageWorks Ultrium 448 SAS External	DW086A
	HP StorageWorks Ultrium 920 SCSI Internal	EH841A
	HP StorageWorks Ultrium 920 SCSI External	EH842A
	HP StorageWorks Ultrium 920 SAS Internal	EH847A
	HP StorageWorks Ultrium 920 SAS External	EH848A
	HP StorageWorks Ultrium 1760 SAS Internal	EH919A
	HP StorageWorks Ultrium 1760 SAS External	EH920A
	HP StorageWorks Ultrium 1760 SCSI Internal	EH921A
	HP StorageWorks Ultrium 1760 SCSI External	EH922A
	HP StorageWorks Ultrium 460 External	Q1520B
	HP StorageWorks Ultrium 960 External	Q1539B
	HP StorageWorks Ultrium 1840 SAS External	EH861A
	HP StorageWorks Ultrium 1840 SCSI External	EH854A

Host Bus Adapter (HBA) Options	HP SC11Xe Host Bus Adapter (SCSI)	412911-B21
	HP SC44Ge Host Bus Adapter (SAS)	416096-B21

Data Protector Express upgrade for HP D2D100 Backup System models EH884A, EH885A, EH950A, EH952A	Upgrade from Data Protector Express Single Server Edition to HP Data Protector Express Backup Server software media & LTU. (Models EH884A, EH885A, EH950A, EH952A all include Data Protector Express Single Server Edition. This is a feature reduced version of Data Protector Express that enables protection of a single machine. This upgrade part number delivers exactly the same part as BB117BA (Data Protector Express Backup Server) but at a reduced price. Registration of Data Protector Express Single Server Edition is necessary before installation of the upgrade to Data Protector Express.)	BB117BT
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Data Protector Express options for HP D2D100 Backup System models EH924A, EH951A	These models include the Data Protector Express Kit for D2D Backup System. This enables backup and recovery of up to 4 machines as well as an easy way to copy backup data from the D2D Backup System to other backup devices, such as tape, using the included D2Any2Any option. Additional servers are protected and functionality added by purchasing Data Protector Express options:	
	HP Data Protector Express Network Server Agent LTU. Add other machines to the Data Protector Express Storage Domain for centralized protection. One license per additional protected server-class machine.	BB121BA
	HP Data Protector Express Network Server Agent 3 pack LTU. Buy a three pack at a lower price than three individual Network Server Agents.	BB122BA
	HP Data Protector Express Online Application Agent LTU. Protect a Microsoft Exchange server or Microsoft SQL Server without taking it off-line. One LTU per application per machine.	BB125BA

Technical Specifications

	D2D110 Backup System (obsolete model)	D2D120 Backup System	D2D130 Backup System
Form Factor	Tower	Tower	Tower
Total Capacity (Raw)	1 TB	2 TB	3 TB
Total Capacity (Useable)	750 GB	1.5 TB	2.25 TB
Disk Drive Capacity, Type	250 GB, SATA 7200rpm, 3.5"	500 GB, SATA 7200rpm, 3.5"	750 GB, SATA 7200rpm, 3.5"
Number of Disk Drives	4	4	4
RAID Support	Software RAID 5	Software RAID 5	Software RAID 5
Performance* (maximum data transfer rate)	Up to 50 MB/s	Up to 50 MB/s	Up to 50 MB/s
Device Interface	1 x 1 Gb iSCSI (Ethernet) (also supports 100 base-T)	1 x 1 Gb iSCSI (Ethernet) (also supports 100 base-T)	1 x 1 Gb iSCSI (Ethernet) (also supports 100 base-T)
Tape Devices Emulated*	HP LTO Ultrium 3 Tape Drive, HP 1/8 Autoloader	HP LTO Ultrium 3 Tape Drive, HP 1/8 Autoloader	HP LTO Ultrium 3 Tape Drive, HP 1/8 Autoloader
Maximum Number of Tape Devices Emulated *	6	6	6
Maximum Number of Cartridges Emulated	96 (24 per tape device, up 800* GB per cartridge)	96 (24 per tape device, up 800* GB per cartridge)	96 (24 per tape device, up 800 GB per cartridge)
Maximum Number of Servers Supported per System*	6	6	6
Direct-attach Tape Drives Supported (maximum of one internal and/or one external tape drive - requires HBA)	HP Ultrium 448, 460, 920, 960, 1760, and 1840	HP Ultrium 448, 460, 920, 960, 1760, and 1840	HP Ultrium 448, 460, 920, 960, 1760, and 1840

* For existing D2D110 and D2D120 users, a free firmware upgrade is now available that will enable you to update your system to the specifications stated above. Please use the firmware upgrade feature in the HP D2D100 Backup System device management interface to complete this upgrade.

Technical Specifications

Dimensions (HxWxD)	Shipping	16.14 x 19.29 x 22.05 in (41.0 x 49.0 x 56.0 cm)
	Out of box	14.56 x 6.89 x 17.32 in (37.0 x 17.5 x 44.0cm)
Weight (without tape drive)	Shipping	32.0 lb (14.56 kg)
	Out of box	26.5 lb (12.0 kg)
Power Requirements	Range Input Voltage	100 to 127 VAC/200 to 240 VAC
	Normal Line Voltage	115 or 230 VAC
	Line Frequency	50 to 60 Hz
	Rated Input Current	Load 8A at 115VAC, 4A at 230VAC
	BTU Rating	1907 BTU
	Rated Steady-State Power	370W
	Maximum Peak Power	370W (per power supply)
Relative Humidity (non-condensing)	Operating	10% to 90%
	Shipping	10% to 90%
Temperature Range	Operating	50° to 95° F (10° to 35° C)
	Shipping	-40° to 140° F (-40° to 60° C)
Acoustic Noise	Idle (disks spinning)	5.5 L WAd (BELS)
	Operating (random seeks to disks)	6.0 L WAd (BELS)
LED Indicators (on Front Panel)	Five LED indicators: Power, System Status, Disk Full, Disk Failure, Network Status, Disk Activity	

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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.