

# HP ProLiant ML350 G4

## Storage Server

Data sheet



The HP ProLiant ML350 Storage Server is a network attached storage (NAS) solution for the price conscious small to medium business (SMB) or a remote office deploying file, print, and/or Microsoft® Exchange. Built with two industry leaders—HP and Microsoft—the ML350 Storage Server features an updated fourth generation ProLiant server with rock solid performance at an affordable price along with the reliability and dependability that have made ProLiant servers an industry standard. Microsoft Windows® Storage Server 2003 easily integrates into any Windows environment and supports file, print and Exchange.

The ML350 Storage Server provides internal storage capacity of up to 1.8 TB or you can take advantage of the scalability features and connect to either SCSI or Serial ATA (SATA) storage arrays. The ML350 Storage Server provides features that you expect such as easy setup and install, and heterogeneous file support that is enhanced with value added HP components. Management and support features of the server include remote management (optional), a disaster recovery DVD, and full support for Windows third party applications that complement file serving such as virus protection, replication and backup applications.

With the optional HP ProLiant iSCSI Feature Pack software the ML350 is capable of hosting file, print, and application storage (block) services on a single platform. Included with the iSCSI Feature Pack is HP Application Storage Manager. It delivers radically simple e-mail storage management to customers hosting Microsoft Exchange 2003 storage groups on HP Storage Servers.

With NAS capabilities the ML350 Storage Server is able to separate file serving from application servers. You can consolidate your file serving and create shared storage. Your client satisfaction will increase when file

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servicing is not disrupted by an application making a server unavailable due to its demands or an attack by a virus. The product design versatility of the ML350 Storage Server allows the tower model server to fit in an office environment and to be converted to a rack when business needs require data center consolidation.

**Features and benefits**

*Value:*

- Configuration flexibility allows you to customize the amount and type of user storage
- The storage controller allows you to connect to an external storage array
- Bundling the hardware and software provides greater value with a pre-tested and pre-configured solution that is ready to deploy

*Industry leaders:*

- HP NAS is built upon proven ProLiant server technology including Intel® Xeon™ processors

- HP ProLiant servers have a proven history of reliability, dependability and innovation based on standards
- Microsoft Windows Storage Server 2003 is based upon Windows Server 2003 with added features such as services for NFS, support for HP ProLiant Storage Server iSCSI Feature Pack software, directory quotas, and unlimited Client Access Licenses (CALs)

- Installation in a Windows environment is quick and easy

*Current and future needs:*

- Current needs can be met by utilizing the hot-swap SCSI bay drives with a capacity of up to 1.8 TB
- If current or future needs require even more capacity take advantage of the four PCI-X slots to attach external storage arrays either SCSI or SATA

# With NAS capabilities the HP ProLiant ML350 Storage Server is able to separate file serving from application servers. You can consolidate your file serving and create shared storage.

- The Smart Array 642 controller has 128 MB Battery-Backup Write Cache (BBWC) that improves performance and protects data integrity in the event of power loss

#### *NAS convenience:*

- Easy setup and installation are enhanced with HP's Rapid Start Wizard and the intuitive web UI for configuration and management tasks
- The ML350 Storage Server supports all the major file serving protocols including SMB/CIFS, NFS, NCP, AppleTalk, HTTP and FTP
- HP integrates additional features such as Services for UNIX® (SFU), Storage Manager Directory quota management, and Array Configuration Utility (ACU), which can be administered through the web UI
- Microsoft Windows Storage Server 2003 standard operating system features such as Shadow Copy, share management, network protocol management and server hardware management are all part of the web UI

#### *Manageability and support:*

- Remote management with HP Remote Insight Lights-Out Edition (RiLOE II) is an available option
- A Disaster Recovery DVD is provided should it be necessary to restore the operating system to factory default settings
- Windows supported third party software packages that complement file serving such as antivirus, backup, replications, etc. are supported

#### *Lower total cost of ownership:*

- Using NAS to separate file serving from application servers allows you to consolidate servers and create shared storage
- By separating file serving from application servers your file serving ability will not be disrupted when an application makes a server unavailable or a virus attacks the server

## HP ProLiant ML350 G4 Storage Server



<b>System design</b>	Intel® Xeon™ up to 3.0 GHz 1 MB L2 cache 800 MHz front side bus (FSB) Base Model, Intel Xeon up to 3.2 GHz 1 MB L2 cache 800 MHz FSB Internal SCSI Model
<b>Network interface</b>	Integrated NC7761 10/100/1000
<b>Form factor</b>	5U tower
<b>Management access</b>	10/100 Ethernet (RJ-45) and serial port
<b>Management</b>	Telnet; and web user interface
<b>Operating system</b>	Microsoft Windows Storage Server 2003
<b>Memory standard</b>	512 MB Base Model; 1 GB Internal SCSI Model
<b>Storage controller</b>	Smart Array 642 with 128 MB BBWC
<b>Internal storage capacity</b>	Up to 1.8 TB; Note: Base Model ships with no user storage, Internal SCSI Model has 1.2 TB raw storage capacity (4 x 300 GB)
<b>Remote management</b>	HP Remote Insight Lights-Out Edition II (RiLOE-II)
<b>Power supply</b>	725w, optional hot-plug redundant
<b>Fans</b>	Optional redundant system fan
<b>Drive type</b>	Hot-plug SCSI, customer can purchase disks as required, no minimum
<b>Data protection</b>	Hardware RAID 0, 1, 1+0, 5
<b>Restore functionality</b>	Dual operating system partition and Disaster Recovery DVD
<b>Hot-swappable drives</b>	Yes
<b>Dimensions (HxWxD)</b>	18.5 x 10.25 x 26 in/46.99 x 26.04 x 66.04 cm
<b>Temperature range</b>	50° F to 95° F/10° C to 35° C (operating) -40° F to 158° F/-40° C to 70° C (shipping)
<b>Humidity range</b>	10% to 90% (operating) 5% to 90% (non-operating)
<b>Weight</b>	60 lb/27.24 kg without hard drives

## HP ProLiant ML350 G4 Storage Server



Part number	Product name	Description
375637-XXX*	HP ProLiant ML350 Storage Server	Base Model—Intel Xeon 3.0 GHz processor 512 MB memory
375638-XXX*	HP ProLiant ML350 Storage Server	Internal SCSI Model—Intel Xeon 3.2 GHz processor, 1 GB memory, 1.2 TB raw storage (4 x 300 GB) SCSI drives
* Country code	The following are country codes for ordering a ML350 Storage Server solution specific to your country: XXX=001 US                      XXX=291 Japan XXX=011 Australia            XXX=371 Asia Pacific XXX=161 Latin America      XXX=421 Euro	
<b>Options:</b>		
287496-B21	512 MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (1 x 512 MB)	Base Model and Internal SCSI Model
287497-B21	1024 MB of Advanced ECC PC2100 DDR SDRAM DIMM Memory Kit (1 x 1024 MB)	Base Model and Internal SCSI Model
227251-001	Remote Insight Lights-Out Edition II (North American, Latin America)	Base Model and Internal SCSI Model
227251-021	Remote Insight Lights-Out Edition II Europe, Middle East, and Africa (EMEA)	Base Model and Internal SCSI Model
227251-371	Remote Insight Lights-Out Edition II (ROW)	Base Model and Internal SCSI Model
331346-B21	CD-RW/DVD-ROM Combo Drive Option	Base Model and Internal SCSI Model
238547-B22	ProLiant Rack Enabling Kit	Base Model and Internal SCSI Model
244059-B21	ML3xx Two Bay Hot-plug SCSI Drive Cage	Base Model and Internal SCSI Model
T3669A	HP ProLiant Storage Server iSCSI Feature Pack Standalone Edition Note: Includes HP ProLiant Application Storage Manager Software	Base Model and Internal SCSI Model
T3671A	HP ProLiant Storage Server iSCSI Snapshots Standalone Edition Note: Snapshots feature upgrade for T3769A	Base Model and Internal SCSI Model
T3674A	HP ProLiant Storage Server iSCSI Backup Feature Standalone Edition	Base Model and Internal SCSI Model

# HP ProLiant ML350 G4 Storage Server

## What's included

The HP ProLiant ML350 Storage Server ships with either (3.0 or 3.2 GHz) Intel Xeon Processors with 800 MHz front side bus, 512 MB or 1 GB memory, 6 expansion slots, NC7761 PCI Gigabit NIC (embedded), Smart Array 642 controller with 128 MB Battery-Backed Write Cache (BBWC), VHDCI SCSI internal to external cable kit, two (2) 36.4 GB Ultra 320 drives for operating system, 1.44 MB diskette drive, DVD Drive, 4 hot-plug hard drive bays for user storage, Microsoft Windows Storage Server 2003 operating system, Disaster Recovery DVD and web UI in a tower form factor (5U) server.

## Warranty and support

(3-3-3) Hardware Warranty; 3-year parts, 3-year on-site (standard business hours, next business day response), and 3-year labor. Note: The hardware warranty covers firmware and embedded non-saleable software. Saleable software carries its own warranty. HP's Limited Software Warranty; the software media will be free of physical defects for a period of ninety (90) days from delivery.

EXCLUSIVE REMEDY. The entire liability of HP and its suppliers and your exclusive remedy for software that does not conform to this Limited Warranty shall be the repair or replacement of the defective media. This warranty and remedy are subject to your returning the defective media during the warranty period to HP in the country in which you obtained the software.

Product installation is available, but not included in the warranty.

## Warranty and support options

The basic warranty service can be enhanced and HP installation services can be purchased. Support options with various response times and durations are available. These services include, but are not limited to, 4-hour same day and next day, as well as extended coverage periods, 24x7, 1-year and 3-year.

## Financial Services

HP Financial Services provides innovative financing and financial asset management programs to help you cost-effectively acquire, manage, and ultimately retire your HP solutions. For more information on these services, please contact your HP sales representative or find us on the web at: [www.hp.com/go/hpfinancialservices](http://www.hp.com/go/hpfinancialservices)

## HP Customer Support

HP Customer Support provides a broad spectrum of services to commercial and enterprise customers, including performance and availability services such as proactive mission-critical services and support management services for deployment of the entire IT infrastructure, including HP and multivendor environments. For more information on these services, contact your HP sales representative or visit [www.hp.com/hps/support](http://www.hp.com/hps/support)

## For more information

For more information on the HP ProLiant Storage Server family visit: [www.hp.com/go/storageservers](http://www.hp.com/go/storageservers)

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