

### Overview (New Models)

## HP StoreEasy 1000 Storage

Whether you are a small, medium, or large business with a branch or remote offices, storage worries should be the last thing on your mind. As you work with your large number of users, you need to accommodate their demands to store and access growing volumes of files such as business documents, images, audio files, and videos. You need efficient file storage that is secure, yet easy to manage.

HP is here to help. With the HP StoreEasy—a new breed of optimized, efficient, secure, and highly available storage systems—you stand to gain a lot. The HP StoreEasy 1000 Storage family is designed for small businesses, branch offices, and workgroup environments.

The HP StoreEasy Storage family caters to your unique storage needs. They integrate easily into new and existing environments offering your storage administrators and IT generalists a straightforward, consistent management experience.

With built-in security, your data remains well protected and available to your users when and where they want to access it. It also enables you to install and run endpoint protection such as antivirus on the system itself, reducing the cost and complexity of connecting an external endpoint protection server. With features including constant health monitoring, mirrored OS disks, advanced memory protection, reliable software support, and more, you can provide users with a highly available solution that keeps their data ready and highly available. Not to mention the support and expertise our highly skilled HP certified professionals can offer.

## What's New

- Brand new models - StoreEasy 1550 Storage

## Models

### HP StoreEasy 1450 Storage

HP StoreEasy 1450 Storage products are storage solutions that deliver multi-protocol file serving and application storage in a compact and affordable 1U rack-mount form factor. They're easy to install and manage, making them perfect for a small workgroup, small business or remote office. All StoreEasy 1450 models have Windows Storage Server 2012 R2, Standard Edition, pre-installed from the factory on the four internal LFF drives configured as RAID6. The StoreEasy 1450 is built on a HP ProLiant DL160 Gen 9 server and includes a rail kit and cable management arm.

#### HP StoreEasy 1450 Storage

K2R11A

**(NOTE: This model has no drives pre-configured - at least four drives of the same type/capacity, 100GB or greater, must be ordered for pre-installation of OS in the factory. The OS is not a field installable option.)**

#### HP StoreEasy 1450 4TB SATA Storage

K2R12A

(4 x 1TB 6G 7.2K RPM MDL SATA LFF HDDs pre-installed)

#### HP StoreEasy 1450 8TB SATA Storage

K2R13A

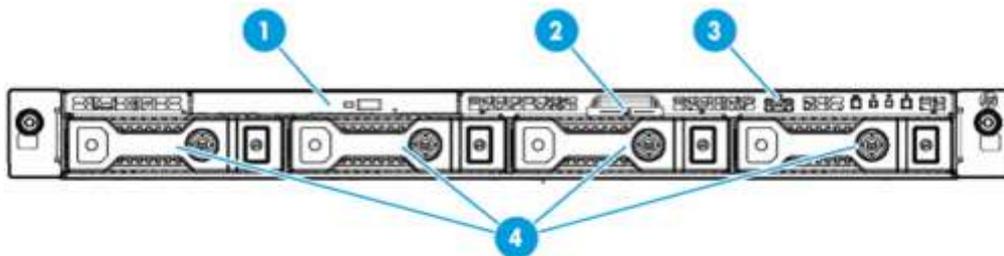
(4 x 2TB 6G 7.2K RPM MDL SATA LFF HDDs pre-installed)

#### HP StoreEasy 1450 16TB SATA Storage

K2R14A

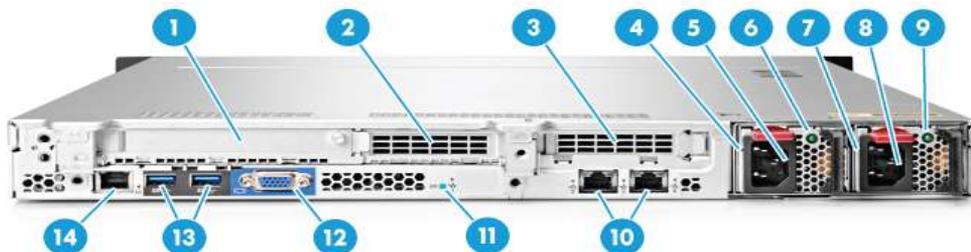
(4 x 4TB 6G 7.2K RPM MDL SATA LFF HDDs pre-installed)

### Overview (New Models)



#### Front View

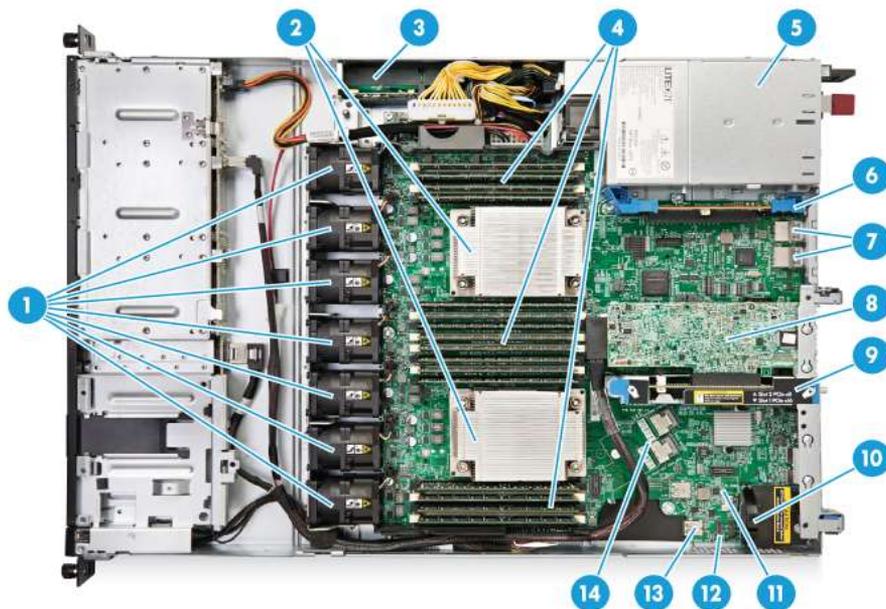
1. Optical Drive (optional)
2. Serial label pull tab
3. USB 2.0 connector
4. LFF Drive Bays



#### Rear view

1. PCIe3 slot 1 (primary, associated with processor 1)
2. PCIe3 slot 2 (primary, associated with processor 1 occupied by Smart Array P440)
3. PCIe3 slot 3 (secondary, associated with processor 2)
4. Power supply 1 bay
5. Power supply 1 Power Connector (Optional)
6. Power supply 1 LED (Optional)
7. Power supply 2 bay
8. Power supply 2 power connector
9. Power Supply 2 LED
10. Embedded 2x1GbE network adapter
11. Unit ID LED
12. Video Connector
13. USB3.0 connectors
14. Dedicated iLO connector

### Overview (New Models)



#### Internal View

1. Hot Swappable fans (up to 7)  
Processor heat sinks (processors with HP Smart Sockets placed below heat sinks)
2. HP Smart Storage Battery
3. DDR4 DIMM slots (up to 16)
4. Entry level power supply bay (1x900W shown)
5. Connector for secondary PCIe riser (associated with CPU2)
6. Embedded 2x1GbE network adapter
7. HP Smart Array P440 controller
8. Primary PCIe riser (2 PCIe3 slots associated with CPU1)
9. Dedicated iLO module connector
10. MicroSD card slot
11. Internal SATA ports (one for ODD and another one reserved)
12. Internal USB 3.0 connector
13. Embedded B140i SATA controller (not used in StoreEasy 1450)
- 14.

### Overview (New Models)

#### HP StoreEasy 1550 Storage

HP StoreEasy 1550 Storage products are storage solutions that deliver multi-protocol file serving and application storage in a compact and affordable tower form factor package. They're easy to install and manage, making them perfect for a small workgroup, small business or remote office. All StoreEasy 1550 models have Windows Storage Server 2012 R2, Standard Edition, pre-installed from the factory on the four internal LFF drives configured as RAID6. The StoreEasy 1550 is built on an HP ProLiant ML110 Gen 9 Server.

#### HP StoreEasy 1550 Storage

K2R62A

**(NOTE: This model has no drives pre-configured - at least four drives of the same type/capacity, 100GB or greater, must be ordered for pre-installation of OS in the factory. The OS is not a field installable option.)**

#### HP StoreEasy 1550 4TB SATA Storage

K2R63A

(4 x 1TB 6G 7.2K RPM MDL SATA LFF HDDs pre-installed)

#### HP StoreEasy 1550 8TB SATA Storage

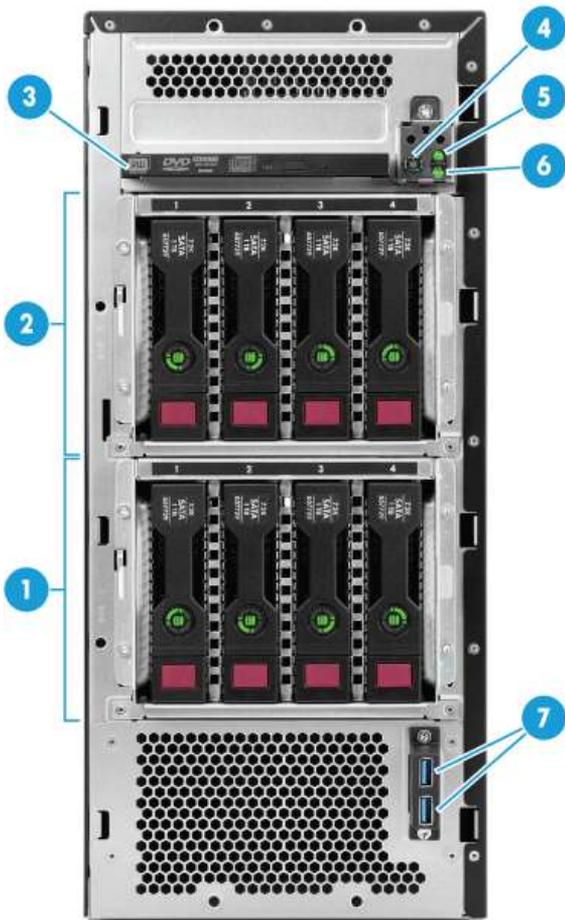
K2R64A

(4 x 2TB 6G 7.2K RPM MDL SATA LFF HDDs pre-installed)

#### HP StoreEasy 1550 16TB SATA Storage

K2R65A

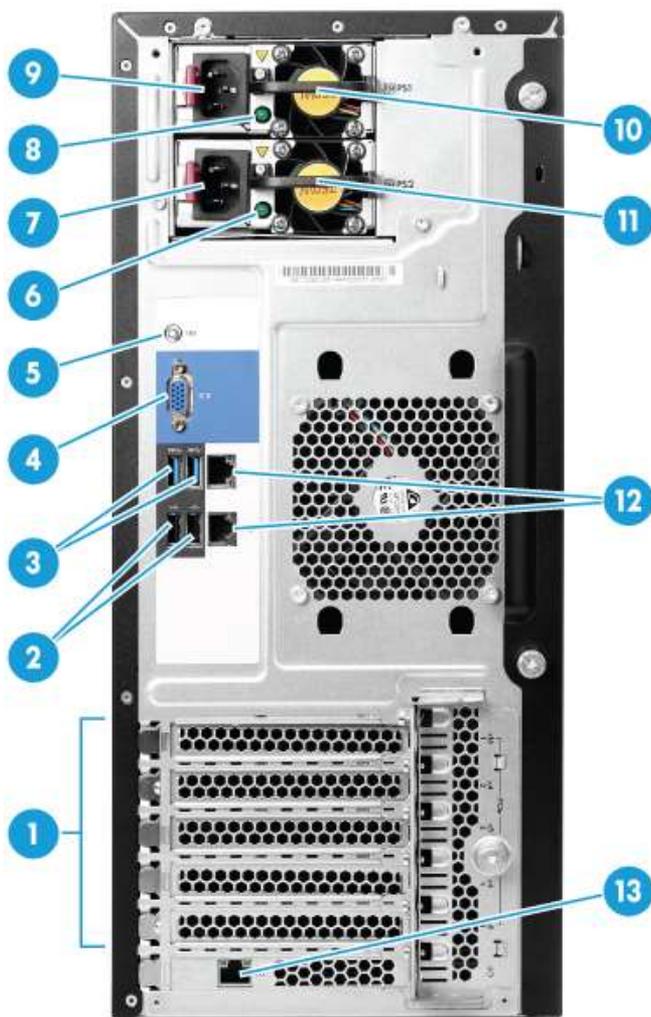
(4 x 4TB 6G 7.2K RPM MDL SATA LFF HDDs pre-installed)



### Overview (New Models)

#### Front View

1. Drive cage
2. Drive cage (optional)
3. Optical drive (optional)
4. Power button/LED
5. Health LED
6. NIC status LED
7. USB 3.0 (2) connectors



#### Rear View

### Overview (New Models)

1. PCIe3 Slots (Slots 1-5)
2. USB 2.0 (2) connectors
3. USB 3.0 (2) connectors
4. Video connector
5. UID button/LED
6. Power supply 2 LED
7. Power supply 2 power connection (optional)
8. Power supply 1 LED
9. Power supply 1 power connection
10. Power Supply 1 bay
11. Power Supply 2 bay (optional)
12. Network RJ-45 ports (2)
13. HP ML Gen9 dedicated iLO port

### HP StoreEasy 1650 Storage

HP StoreEasy 1650 Storage products deliver high capacity and drives down your cost per GB. Six-Core processing, up to 96TB internal storage capacity, and ready for external expandability enhance this ultra-dense 2U shared storage solution for small, medium, or large IT environments. All StoreEasy 1650 models have Windows Storage Server 2012 R2, Standard Edition, pre-installed from the factory on two rear internal 120B 6G Value Endurance SFF SSDs configured as RAID1. The StoreEasy 1650 is built on a HP ProLiant DL380 Gen 9 Server and includes a rail kit and cable management arm.

#### HP StoreEasy 1650 Storage

K2R15A

(12 open LFF HDD slots in front and 2 x 120GB 6G Value Endurance SFF SSDs in rear with pre-installed OS)

#### HP StoreEasy 1650 16TB SAS Storage

K2R16A

(8 x 2TB 6G 7.2K RPM LFF MDL SAS HDDs pre-installed, 4 open LFF slots and 2 x 120GB 6G Value Endurance SFF SSDs in rear with pre-installed OS)

#### HP StoreEasy 1650 32TB SAS Storage

K2R17A

(8 x 4TB 6G 7.2K RPM LFF MDL SAS HDDs pre-installed, 4 open LFF slots and 2 x 120GB 6G Value Endurance SFF SSDs in rear with pre-installed OS )

#### HP StoreEasy 1650 48TB SAS Storage

K2R18A

(8 x 6TB 6G 7.2K RPM LFF MDL SAS HDDs pre-installed, 4 open LFF slots and 2 x 120GB 6G Value Endurance SFF SSDs in rear with pre-installed OS )

#### HP StoreEasy 1650 90TB SATA Storage

M0S97A

(15 x 6TB 6G 7.2K RPM LFF MDL SATA HDDs pre-installed, 12 HDDs in front slots, 3 HDDs in rear slots (with pre-installed OS on two of the rear HDDs in a RAID 1 configuration. This sku also comes with 48GB of memory (3 x 16GB RDIMMS). All other specifications are the same as other StoreEasy 1650 skus

### Overview (New Models)



1. Health LED
2. Power On/Standby button and system power LED
3. NIC status LED
4. UID button/LED
5. 12 LFF Drive Bay



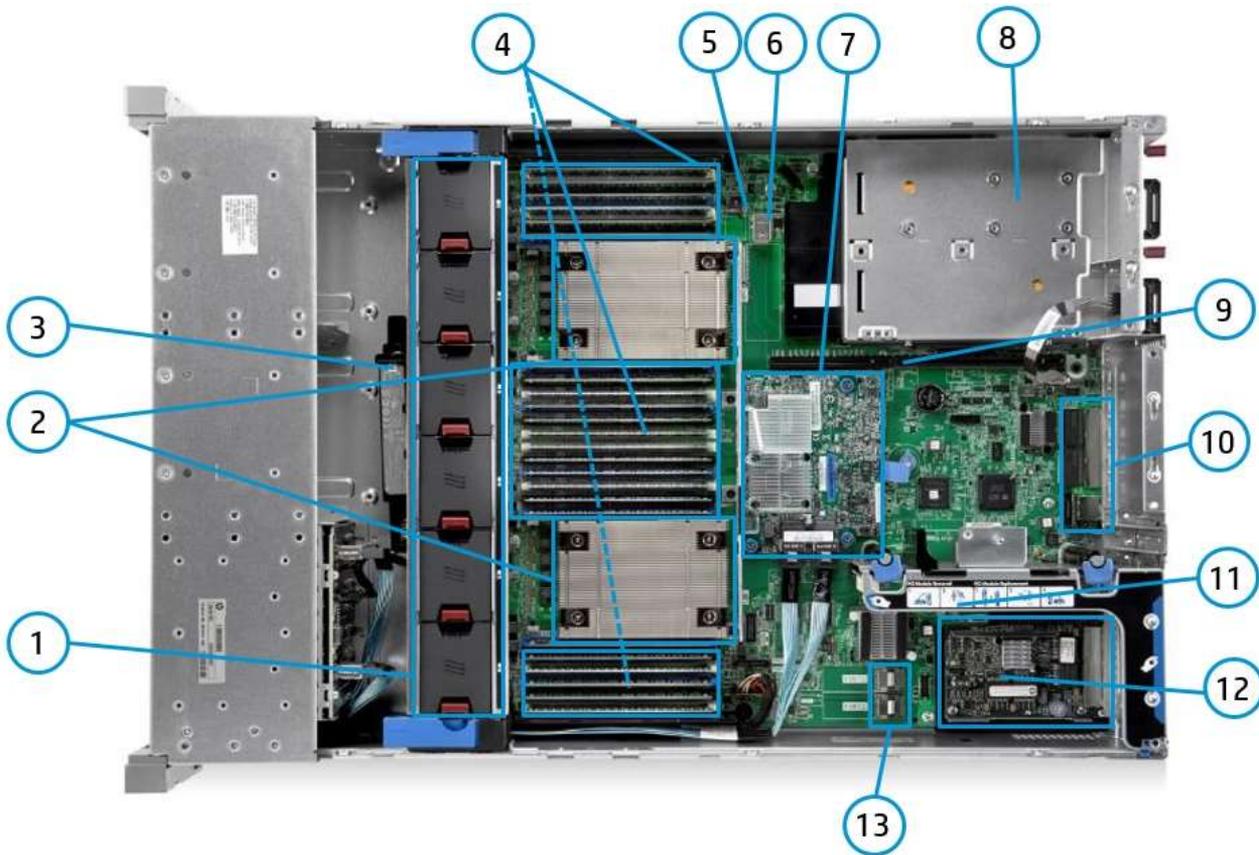
### Rear view\*

1. PCI Slots (Slots 1-3 top to bottom, riser shipped standard)
2. PCI Slots (Slots 4-6 top to bottom, requires optional second riser card and second processor; not available on SE1650 90TB sku# M0S97A)
3. Optional serial port
4. Rear 2 SFF drive slots (SE1650 90TB sku# M0S97A has 3 LFF drives in rear – see Note below)
5. HP Flexible Slot Power Supply bay 1 (800w shown)
6. Power supply Power LED
7. Power supply Power connection
8. HP Flexible Slot Power Supply bay 2 (800w shown)
9. Power supply Power LED
10. Power supply Power connection

### Overview (New Models)

11. VGA connector
12. Embedded 4x1GbE Network Adapter
13. Dedicated iLO connector
14. USB 3.0 connectors (2)
15. Unit ID LED
16. Optional FlexibleLOM ports (Shown: 4x1GbE)

\*Note for StoreEasy 1650 90TB sku# M0S97A section 2 shown above contains two LFF drive bays and section 3 and 4 contain one additional LFF drive bay



### Internal View

1. Fan cage shown with 6 standard Hot-plug fans (High Performance fans optional)
2. 2 Processors, heatsink showing, with HP Smart Socket Guide
3. HP Smart Storage Battery
4. DDR4 DIMM slots. Shown fully populated in 24 slots (12 per processor)
5. MicroSD card slot
6. Internal USB 3.0 connector
7. HP Flexible Smart Array (P440ar)
8. (Under) Hot Plug redundant HP Flexible Slot Power

### Overview (New Models)

supplies

9. Connection for second (optional) riser (Required second CPU)
10. Embedded 4x1Gbe NIC
11. Primary PCIe riser, standard (Optional double wide GPU riser)
12. Optional Flexible LOM slot
13. X4 SATA ports (1 and 2)

### HP StoreEasy 1850 Storage

HP StoreEasy 1850 Storage products deliver Enterprise-class performance, expandability, and flexibility. Six-Core processing, up to 24 internal SFF data drives for performance, and ready for external expandability enhance this ultra-dense 2U shared storage solution for small, medium, or large IT environments. All StoreEasy 1850 models have Windows Storage Server 2012 R2, Standard Edition, pre-installed from the factory on two rear internal 120GB 6G Value Endurance SFF SSDs configured as RAID1. The StoreEasy 1850 is built on a HP ProLiant DL380 Gen 9 server and includes a rail kit and cable management arm.

#### HP StoreEasy 1850 Storage

K2R19A

(24 open SFF slots in front and 2 x 120GB 6G Value Endurance SFF SSDs in rear with pre-installed OS)

#### HP StoreEasy 1850 9.6TB SAS Storage

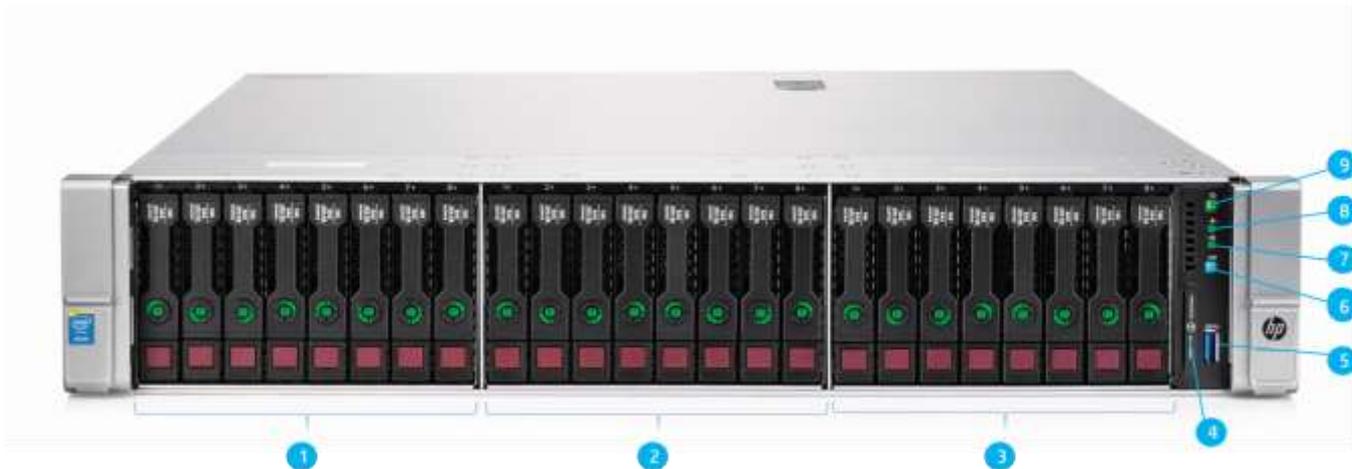
K2R20A

(8 x 1.2TB 12G 10K RPM ENT SAS SFF HDDs pre-installed, 16 open SFF slots and 2 x 120GB 6G Value Endurance SFF SSDs in rear with pre-installed OS)

#### HP StoreEasy 1850 14.4TB SAS Storage

K2R21A

8 x 1.8TB 12G 10K RPM 512e SAS SFF HDDs pre-installed, 16 open SFF slots and 2 x 120GB 6G Value Endurance SFF SSDs in rear with pre-installed OS



#### Front View

1. 8 SFF Drive Bay 1
2. 8 SFF Drive Bay 2

### Overview (New Models)

3. 8 SFF Drive Bay 3
4. Serial label pull tab
5. Front USB 3.0 connector
6. UID button/LED
7. NIC status LED
8. Health LED
9. Power On/Standby button and system power LED

Rear View – same as the rear view for the StoreEasy 1650

### Features and Benefits (New Models)

#### **Optimized: Tailored for file storage**

The HP StoreEasy Storage comes with pre-configured hardware with the latest generation storage OS for purpose-built file storage. StoreEasy installation and network configuration wizards simplify installation and prevent configuration errors for faster deployment.

HP StoreEasy Dashboard consolidates all key status information such as capacity utilization, performance, and health in a single interface and reduces the need to navigate multiple tools and interfaces for system management. Low capacity warning email alerts now available to minimize disruption.

Best practices driven storage provisioning tool discovers system storage and recommends the most efficient setup for optimum performance, optimum capacity, or a balanced configuration based on the available storage.

HDD bundles make it easier for you to buy, deploy and provision additional storage capacity over the life of the product.

#### **Efficient: Saves you money and time**

Achieve an average of 50–60 percent space savings with granular data deduplication.

File sync and share feature enable mobile workers to access their files from anywhere. Provides corporate data controls including data encryption, data wipe, user lock screen password enforcement, file classification, and storage quotas.

Use advanced data management to automatically improve use of resources, comply with data retention policies, and enhance protection of sensitive files.

Consolidate multiple workloads and IT services in a single platform with included support for a broad range of file access protocols, Microsoft® Hyper-V and SQL Server application storage, iSCSI block access, and IT infrastructure services such as print, Domain Name System (DNS), and DHCP.

Reduce your branch office WAN usage with Hosted BranchCache, automatically caching frequently accessed corporate data center files..

#### **Secure: Protect your data always**

The HP StoreEasy Storage protects data while at rest with file system encryption and BitLocker Drive Encryption, and while it is being transferred with SMB encryption and signing.

Use File Classification Infrastructure to dynamically identify files based on sensitivity and implement sophisticated access controls using Active Directory Rights Management Services.

Install and run endpoint protection, such as an antivirus, on the system itself—reducing the cost and complexity of connecting to an external endpoint protection server. Prevent against data loss with Volume Shadow Copy Service online snapshots and support for agent-based backup software.

Opt to utilize the power of HP LiveVault for easy data backup to the cloud with 7-year retention. Also, enable simplified and cost efficient compliance archiving with iTernity Compliant Archive Solution (iCAS), now validated to meet the United States Securities and Exchange Commission (SEC) 17a-4(f) requirements.

### Features and Benefits (New Models)

**Highly Available: Prevent business and user disruption** Increases uptime with such standard features as near continuous health monitoring with HP Active Health System, mirrored OS drives, redundant fans (not available on all models) and power, and advanced memory protection.

Confidently deploy large file systems leveraging file system online self-healing, online verification, and precise and rapid repair that massively reduces downtime from file corruption.

Take advantage of Vision Solutions Double-Take Availability software for critical data protection with real-time byte-level replication. In the event of a failure, recover the data—with a minimum of loss—from the replicated data repository. Software installation files now included with free 14-day evaluation license.

Get support from file storage experts with 3-Year Parts, 3-Year Labor, and 3-Year Onsite support with next business day response (StoreEasy 1650/1850) or 3-Year Parts, 1-Year Labor, and 1-Year Onsite support with next business day response (StoreEasy 1450/1550). All StoreEasy products also include one year of 24x7 software telephone support for the Windows Storage Server operating system.

### Standard Features (New Models)

#### Operating System

Microsoft Windows Storage Server 2012 R2, Standard Edition with HP enhanced value and unique features

- HP enhanced Initial Configuration Tasks Wizard: StoreEasy installation and network configuration wizards simplify installation and prevent network configuration errors for faster deployment.
- HP StoreEasy Dashboard consolidates all key status information such as capacity utilization, performance, and health in a single interface and reduces the need to navigate multiple tools and interfaces for system monitoring. Low capacity warning email alerts now available to minimize disruption.
- HP StoreEasy Pool Manager is a best practices driven storage provisioning tool that automatically discovers system storage and recommends the most efficient setup for optimum performance, optimum capacity, or a balanced configuration based on the available storage.
- HP StoreEasy Tools menu within Windows Server manager to access the most commonly accessed tools and tasks that an administrator uses for day-to-day management of StoreEasy. The StoreEasy Tools menu provides management of storage pools, snapshots, emails and alerts, enclosure settings, and firmware updates. It also includes access to the Deduplication Evaluation tool, storage viewer and the initial configuration task wizard.
  
- Windows Storage Server 2012 R2 (WSS2012 R2) includes a robust range of file serving and storage capabilities. It addresses heterogeneous environments and it enables more efficient storage utilization. WSS2012 R2 delivers a similar level of performance and reliability as more expensive storage solutions and it offers support for both file (CIFS/SMB and NFS) and block (iSCSI) protocols, allows for a flexible mix of configurations and includes advanced data management tools. WSS2012 R2 leverages your Windows Server management skill sets and tools including Active Directory, PowerShell and System Center.
- Extensive protocol support: SMB ( 2.0, 2.1, 3.0, 3.02), NFS (v2, v3, v4.1), WebDAV, HTTP/HTTPS, FTP/FTPS, iSCSI
  - SMB3 protocol: Leverage high performance continually available file shares to deliver feature-rich storage for business-critical applications and virtual servers using advanced new functionality.
  - SMB3 Multi-channel: Enable aggregation of network bandwidth and network fault tolerance when multiple paths are available between SMB clients and file servers.
  - 
  - NFS v4.1: For Windows Storage Server 2012 R2, Server for NFS has been updated to support continuous availability. These improvements make it possible to reliably store and run VMware ESX on a virtual machine that is running Windows Server 2012 by using the NFS protocol to share files. Additional improvements in failover clustering take advantage of better resilience to hardware and software outages that may afflict individual cluster nodes. At the same time, failover clustering isolates VMware ESX hypervisor hosts from intermittent glitches during failovers.
  - iSCSI: Some applications require block storage. iSCSI Target Server can provide these applications with continuously available block storage. Since the storage is remotely accessible it can also consolidate block storage for central or branch office locations. By using boot-capable NICs or a software loader, you can deploy hundreds of diskless

### Standard Features (New Models)

servers. This is ideal for large deployments of identical operating system images, such as a Hyper-V server farm or High Performance Computing (HPC) clusters.

- **File Server Resource Manager (FSRM):** File Server Resource Manager is a set of features within the WSS2012 R2 OS that allows you to manage and classify data that is stored on file servers. File Server Resource Manager includes the following features:
  - **Storage Quotas:** Quotas allow you to limit the space that is allowed for a volume or folder, and they can be automatically applied to new folders that are created on a volume. You can also define quota templates that can be applied to new volumes or folders.
  - **File screening:** File screens help you control the types of files that user can store on a file server. You can limit the extension that can be stored on your shared files. For example, you can create a file screen that does not allow files with an MP3 extension to be stored in personal shared folders on a file server.
  - **File Classification Infrastructure:** File Classification Infrastructure provides insight into your data by automating classification processes so that you can manage your data more effectively. You can classify files and apply policies based on this classification. Example policies include dynamic access control for restricting access to files, file encryption, and file expiration. Files can be classified automatically by using file classification rules or manually by modifying the properties of a selected file or folder.
  - **File Management Tasks:** File Management Tasks enables you to apply a conditional policy or action to files based on their classification. The conditions of a file management task include the file location, the classification properties, the date the file was created, the last modified date of the file, or the last time the file was accessed. The actions that a file management task can take include the ability to expire files, encrypt files, or run a custom command.
  - **Storage reports:** Storage reports are used to help you identify trends in disk usage and how your data is classified. You can also monitor a selected group of users for attempts to save unauthorized files.
- **Data Deduplication:** Data deduplication enables Windows Storage Server 2012 R2 to store more data in less physical space for greater storage efficiency. Data deduplication uses variable size chunking and compression, which deliver optimization ratios of 2:1 for general file servers and up to 20:1 for virtualization data. Evaluate your deduplication savings with the included deduplication evaluation tool which allows you to determine the expected savings that you would get if deduplication is enabled on a particular volume. The Deduplication evaluation tool supports local drives and mapped or unmapped remote shares.
- **Work Folders:** With Work Folders users can store and access work files on personal computers and devices, often referred to as bring-your-own device (BYOD), in addition to corporate PCs. Users gain a convenient location to store work files, and they can access them from anywhere. Organizations maintain control over corporate data by storing the files on centrally managed file servers, and optionally specifying user device policies such as encryption and lock-screen passwords. Work Folders can be deployed with existing deployments of Folder Redirection, Offline Files, and home folders. Work Folders stores user files in a folder on the server called a

### Standard Features (New Models)

sync share. You can specify a folder that already contains user data, which enables you to adopt Work Folders without migrating servers and data or immediately phasing out your existing solution. Work folders is supported on Windows 7, Windows 8 and Apple iPad clients.

- **Hosted Branch Cache:** Using client/server architecture, Windows 7/8 client computers can cache content on the local network via the Hosted Cache running on the StoreEasy 1000 Storage. Other clients who need the same content retrieve it directly from the Hosted Cache.
- **Volume Shadow Copy Service:** Creates point-in-time copies (snapshots) of files and folders at predetermined time intervals that can then be accessed from client computers.
- **VSS for Remote SMB File Shares:** Leverage proven Volume Shadow Copy Service (VSS) to offload snapshot and backup operations to remote storage from VSS hardware providers within Hyper-V virtual machines.
- **DFS Namespaces:** Enables you to group shared folders that are located on different servers into one or more logically structured namespaces. Each namespace appears to users as a single shared folder with a series of subfolders. However, the underlying structure of the namespace can consist of numerous file shares that are located on different servers and in multiple sites.
- **Distributed File System Replication (DFS-R):** Enables you to efficiently replicate folders (including those referred to by a DFS namespace path) across multiple servers and sites. DFS Replication uses a compression algorithm known as remote differential compression (RDC). RDC detects changes to the data in a file, and it enables DFS Replication to replicate only the changed file blocks instead of the entire file.
- **New VHDX Standard:** Deploy larger capacity virtual storage that can grow to 64 terabytes, is more resilient against corruption, and provides more efficient usage of new 4 KB sector hard disks with the new VHDX virtual storage standard.
- **Live Storage Migration:** Maintain maximized service-level availability even while moving virtual machine storage between host servers independent of the actual virtual machine.
- **Unlimited Client Access Licenses (CALs) included**

NOTE: Windows Storage Server 2012 R2 and Windows Server 2012 R2 are built on the same code base. Applications certified for Windows Server are expected to have the same application compatibility profile on Windows Storage Server. Windows Storage Server 2012 R2 and Windows Server 2012 have the same application frameworks, services and plumbing to support running the full breadth of Window-compatible applications. Applications that rely upon certain roles that are removed from Windows Storage Server 2012 R2, such as fax server, active directory domain controller or terminal services will not be able to leverage those roles. Independent Software Vendors (ISVs) ultimately decide what versions and editions of Windows are supported by their products and users should review ISV compatibility and support information before purchasing. HP StoreEasy customers should review the End User License Agreement (EULA) to see the types of applications that are permitted for installation. All versions of Windows Storage Server 2012 R2 can join Active Directory domains, but cannot be a domain controller.

- More information on Windows Storage Server 2012 R2 Standard Edition can be found here: <http://technet.microsoft.com/en-us/library/jj643303.aspx>

Processor / Cache Memory	StoreEasy 1450	StoreEasy 1550	StoreEasy 1650	StoreEasy 1850
	Intel® Xeon® E5-2603v3 (1.6GHz/6-	Intel® Xeon® E5-2603v3 (1.6GHz/6-	Intel® Xeon® E5-2609v3 (1.9GHz/6-	Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W)

### Standard Features (New Models)

	core/15MB/85W) Processor	core/15MB/85W) Processor	core/15MB/85W) Processor	Processor	
<b>Memory</b>	Type	DDR4 Registered (RDIMM)			
	Maximum (by O/S license)	2TB			
	Standard	<b>StoreEasy 1450</b>	<b>StoreEasy 1550</b>	<b>StoreEasy 1650</b>	<b>StoreEasy 1850</b>
	DIMM Sockets	8GB (1 x 8GB) 16	8GB (1 x 8GB) 8	16GB (2 x 8GB) 24	16GB (2 x 8GB) 24
<b>Network Controller</b>	NIC Ports	<b>StoreEasy 1450</b>	<b>StoreEasy 1550</b>	<b>StoreEasy 1650</b>	<b>StoreEasy 1850</b>
	Controller	2 Embedded 1GbEthernet 2-port 361i Adapter	2 Broadcom 5717 Dual-port 1Gb	4 Embedded 1Gb Ethernet 4-port 331i Adapter, plus optional HP Flexible LOM	4 Embedded 1Gb Ethernet 4-port 331i Adapter, plus optional HP Flexible LOM

### StoreEasy 1450 Expansion Slots

CPU1 PCIe riser slots	Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes
	1	PCIe 3.0	x16	x16		Full-height, half-length slot	Processor 1
	2	PCIe 3.0	x16	x16		Low profile slot	Smart Array P440

**NOTE:** Bus Width data indicates the number of physical electrical lanes running to the connector.

CPU 1 FlexibleLOM riser slots	Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes
	1	Flexible LOM	x8	x8		Flexible LOM	Processor 1 (can only be used for flexibleLOMs)
	2	PCIe 3.0	x8	x8		Flexible LOM	Processor 1

**NOTE:** This riser is mandatory for installing flexibleLOMs.

CPU2 riser PCIe slots	Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes
	3	PCIe 3.0	x16	x16		Low profile slot	Processor 2

**NOTE:** When populating slots on CPU2 riser, second processor must be installed.

**NOTE:** Only one of the CPU1 PCIe risers can be selected in any given configuration.

**NOTE:** One of the CPU 1 risers is mandatory for all configurations

### StoreEasy 1550 Expansion Slots

### Standard Features (New Models)

Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes
5	PCIe 3.0	x8	x8		Full-height, half-length slot	For processor 1
4	PCIe 3.0	x4	x4		Full-height, half-length slot	For processor 1
3	PCIe 3.0	x8	x8		Full-height, half-length slot	Smart Array P440
2	PCIe 3.0	x4	x4		Full-height, half-length slot	For processor 1
1	PCIe 3.0	x16	x16		Full-height, ¾ length (up to 9.5") Slot	For processor 1

**NOTE:** Bus number - Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number.

**NOTE:** Five total expansion PCIe 3.0 slots. One PCIe 3.0 x16 (x16 speed); Two PCIe 3.0 x 8 (x8 speed); Two PCIe 3.0 x 4 (x4 speed).

### StoreEasy 1650 and 1850 Expansion Slots

Primary Riser (Standard)	Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Form Factor	Notes
	1	PCIe 3.0	x8	x16	7	Full-height, half-length slot	Proc 1
	2	PCIe 3.0	x8	x16	10	Full-height, half-length slot	Proc 1
	3	PCIe 3.0	x8	x8	13	Half length, full height slot	Proc 1

\* Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number.

\*\* Indicates the number of physical electrical lanes running to the connector.

**NOTE:** All slots support PCIe cards to 150W or more depending on card, but an additional Power Cord Option is required (PN 669777-B21). See Option Section below for offering.

Slot 2 PCIe Riser (Optional 3-slot) 719073-B21	Expansion Slots #	Technology	Bus Width	Connector Width	Bus Number	Device Number	Form Factor	Notes
	4	PCIe 3.0	x16	x16	16		Full height, full length slot	Proc 2
	5	PCIe 3.0	x16	x16	20		Full height, full length slot	Proc 2
	6	PCIe 3.0	x8	x8	23		Full-height, half-length slot	Proc 2

### Standard Features (New Models)

\* Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number.

\*\* Indicates the number of physical electrical lanes running to the connector.

**NOTE:** When populating the second optional riser slot, the second processor must be installed.

**NOTE:** All slots support PCIe cards to 150W or more depending on card but an additional Power Cord Option is required (PN 669777-B21). See Option Section below for offering.

**NOTE:** Slot 2 PCIe Riser cannot be added to StoreEasy 1650 sku# M0S97A as the space is occupied by 2 LFF drive bays.

Storage Controller		StoreEasy 1450	StoreEasy 1550	StoreEasy 1650	StoreEasy 1850
Controller(s)		HP Smart Array P440/4GB FBWC	HP Smart Array P440/4GB FBWC	HP Smart Array P440ar/2GB FBWC	HP Smart Array P440ar/2GB FBWC
		12Gb 1-port Int SAS Controller	12Gb 1-port Int SAS Controller	12Gb 2-ports Int SAS Controller	12Gb 2-ports Int SAS Controller
RAID		6, 60, 5, 50, 1, 10, 1 ADM, 10 ADM	6, 60, 5, 50, 1, 10, 1 ADM, 10 ADM	6, 60, 5, 50, 1, 10, 1 ADM, 10 ADM	6, 60, 5, 50, 1, 10, 1 ADM, 10 ADM
Internal SAS connectors		1	1	2	2
External SAS connectors		None	None	None	None

Storage		StoreEasy 1450	StoreEasy 1550	StoreEasy 1650	StoreEasy 1850
Hard Drives	Internal	(4) Four 3.5" (Large Form Factor) hot-plug bays	(4) Four 3.5" (Large Form Factor) hot-plug bays standard, up to (4) Four additional 3.5" LFF bays as an option	(12) Twelve 3.5" (Large Form Factor) hot-plug bays in front and (2) Two 2.5" (Small Form Factor) hot-plug bays in rear  (12) Twelve 3.5" (Large Form Factor) hot-plug bays in front and (3) Three 3.5" (Large Form Factor) hot-plug bays in rear - sku# M0S97A only	(24) 2.5" (Small Form Factor) hot-plug bays in front and (2) Two 2.5" (Small Form Factor) hot-plug bays in rear
	External	Support for D2000, D3000, D6000 (requires an additional Smart	Support for D2000, D3000, D6000 (requires an additional Smart	Support for D2000, D3000, D6000 (requires an additional Smart	Support for D2000, D3000, D6000 (requires an additional Smart

### Standard Features (New Models)

Array controller than the standard SA P440)    Array controller than the standard SA P440)    Array controller than the standard SA P440ar )    Array controller than the standard SA P440ar )

#### Maximum Storage Capacity (raw)

	StoreEasy 1450	StoreEasy 1550	StoreEasy 1650	StoreEasy 1850
Internal SATA	32TB	48TB	96TB	48TB
Internal SAS	32TB	48TB	96TB	43.2TB
Internal plus External	1.568PB	2.352PB	3.936PBs	2.932PB
	P440 allows 4 x 8TB internal+ 192 x 8TB external using 16 D3600s(requires 2 P441s)	P440 allows 8 x 6TB internal+ 384 x 6TB external using 16 D3600s(requires 4 P441s)	15 x 8TB HDDs internal+480 x 8TB HDDs using 40 D3600s (requires 5 P441s)	24 x 1.8TB HDDs internal+480 x 6TB HDDs using 40 D3600s (requires 5 P441s)

#### Power Supply

StoreEasy 1450	StoreEasy 1550	StoreEasy 1650	StoreEasy 1850
900W Non-Redundant/800W Gold Redundant (redundant optional)	750W CS Gold Hot Plug Power Supply (redundant optional)	800 Watts Platinum, Hot Plug redundant	800 Watts Platinum, Hot Plug redundant

#### Power Cords

StoreEasy 1450	StoreEasy 1550	StoreEasy 1650	StoreEasy 1850
One high voltage power cord (IEC C13 to C14) standard	Regional or country specific power cord required.	Two high voltage power cords (IEC C13 to C14) standard	Two high voltage power cords (IEC C13 to C14) standard

**NOTE:** All StoreEasy 1X50s ship with a standard 6-foot IEC C-13/C-14 jumper cord (AOKO2A). This jumper cord is also included with each standard AC power supply option kit. If a different power cord is required, please check the [ProLiant Power Cables](#) web page.

**NOTE:** The HP StoreEasy 1550 Storage product is a tower server that ships standard with a 6' country specific NEMA power cord that allows connection to wall outlets in a home or office. If customers require additional local power cords, they can check the power cord matrix for the appropriate country specific sku. Please see the following power cord matrix: <http://www.hp.com/go/powercordmatrix>

#### System Fans

StoreEasy 1450	StoreEasy 1550	StoreEasy 1650	StoreEasy 1850
7 hot-plug redundant fans ship standard	2 hot-plug non redundant standard	6 hot-plug redundant fans ship standard	6 hot-plug redundant fans ship standard

#### Form Factor

StoreEasy 1450	StoreEasy 1550	StoreEasy 1650	StoreEasy 1850
1U rack mount (includes rail kit and	4.5U Tower	2U rack mount (includes rail kit and	2U rack mount (includes rail kit and

### Standard Features (New Models)

cable management  
arm)

cable management  
arm )

cable management  
arm )

#### Other Feature Specifications

See the corresponding ProLiant QuickSpecs for additional feature specifications.

StoreEasy 1450 (DL160 Gen 9):

<http://h20195.www2.hp.com/v2/GetDocument.aspx?docname=c04346224>

StoreEasy 1550 (ML110 Gen 9):

<http://h20195.www2.hp.com/v2/gethtml.aspx?docname=c04545452>

StoreEasy 1650 and 1850 (DL380 Gen 9):

<http://h20195.www2.hp.com/v2/GetDocument.aspx?docname=c04346247>

**NOTE:** Options offered in the HP ProLiant servers listed above will work in the respective StoreEasy product if supported on Windows Server 2012 R2, Standard Edition.

Because StoreEasy is a storage product not every possible option available in the equivalent ProLiant server is listed in the StoreEasy 1X50 QuickSpecs. Options that are shown in this document are the most common ones needed for the primary StoreEasy use model as a file storage product.

### Optional Software (New Models)

#### **HP Data Protector software**

HP Data Protector Software is enterprise data protection and disaster recovery, ensuring recovery from any disruption. Data Protector integrates a variety of techniques to eliminate backup and recovery windows. The capabilities to eliminate planned downtime range from online backup and backup of open files to zero-downtime, zero-impact backup. The software provides industry-leading instant recovery as well as several disaster recovery alternatives to eliminate unplanned downtime, allowing recovery of entire data centers in minutes.

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

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

#### **HP LiveVault**

HP LiveVault enables organizations to protect their critical application data and manage their long-term retention needs in the cloud. The LiveVault agent that is installed on HP StoreEasy Storage encrypts all data before transferring it. All data remains encrypted at HP's secure, offsite, underground data centers - as well as on the optional TurboRestore(TM) appliance which resides in the customer data center. To ensure the physical security and availability of stored data, the LiveVault service mirrors all data to a second, geographically dispersed data center for full failover and redundancy. For a 30 day free trial of HP LiveVault go to: <http://www.remotedatabackups.com/storeeasy>

#### **Double-Take Availability from Vision Solutions**

Protect your critical HP StoreEasy data with Double-Take Availability's real-time byte-level replication. In the event of a failure, recover the data—with a minimum of loss—from the replicated data repository. For more information read the [Technical White Paper](#).

#### **iCAS software by iTernity**

Get open, flexible, and expandable long-term archiving with iTernity Compliant Archive Solution (iCAS). Together, HP StoreEasy and iCAS are your key to legally compliant data archiving.

For more information on iTernity iCAS go to: [http://www.itenity.com/hp-icas\\_en.html](http://www.itenity.com/hp-icas_en.html)

### New Models (Pre-Configured)

These models come with factory-installed drives and the Microsoft Windows Storage Server 2012 R2 Standard Edition operating system pre-installed

### Choose a Pre-configured Model

**NOTE:** All options ship separately and are not factory integrated.

**NOTE:** Model names are based on raw storage capacity, not available user storage.

### HP StoreEasy 1000 Storage products

<b>Common Specifications</b>	Operating System	Microsoft® Windows Storage Server 2012 R2, Standard Edition
	Licenses	HP iLO Advanced including 1yr 24x7 Technical Support and Updates Single Server License <b>NOTE:</b> For more information, visit: <a href="http://www.hp.com/go/ilo">http://www.hp.com/go/ilo</a>

### StoreEasy 1450 Models

<b>Common Specifications</b>	<b>Processor</b>	(1) Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) Processor, 2 <sup>nd</sup> processor optional
	<b>Memory</b>	8GB (1 x 8GB Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory )
	<b>Storage Controller</b>	HP Smart Array P440/4GB FBWC 12Gb 1-port Int SAS Controller
	<b>Internal Drive Support</b>	Four 3.5" (Large Form Factor) hot-plug drive bays in front
	<b>Network Ports</b>	2 x Gigabit Ethernet
	<b>Expansion Slots</b>	2 x PCIe (one slot occupied by Smart Array P440)
	<b>Power</b>	1 x 900W Gold Non-Redundant
	<b>Form Factor</b>	1U Rack

<b>HP StoreEasy 1450 4TB SATA Storage</b> (4 x 1TB 6G 7.2K RPM MDL SATA LFF HDDs pre-installed)	K2R12A
<b>HP StoreEasy 1450 8TB SATA Storage</b> (4 x 2TB 6G 7.2K RPM MDL SATA LFF HDDs pre-installed)	K2R13A
<b>HP StoreEasy 1450 16TB SATA Storage</b> (4 x 4TB 6G 7.2K RPM MDL SATA LFF HDDs pre-installed)	K2R14A

### StoreEasy 1550 Models

<b>Common Specifications</b>	<b>Processor</b>	(1) Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) Processor, 2 <sup>nd</sup> processor optional
	<b>Memory</b>	8GB (1 x 8GB Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory )
	<b>Storage Controller</b>	HP Smart Array P440/4GB FBWC 12Gb 1-port Int SAS Controller

### New Models (Pre-Configured)

<b>Internal Drive Support</b>	Four 3.5" (Large Form Factor) hot-plug drive bays in front standard, up to four additional LFF drive bays available as an option
<b>Network Ports</b>	2 x Gigabit Ethernet
<b>Expansion Slots</b>	5 x PCIe (one slot occupied by Smart Array P440)
<b>Power</b>	1 x 750W Gold Non-Redundant
<b>Form Factor</b>	4.5U Tower

#### HP StoreEasy 1550 4TB SATA Storage

(4 x 1TB 6G 7.2K RPM MDL SATA LFF HDDs pre-installed)

K2R63A

#### HP StoreEasy 1450 8TB SATA Storage

(4 x 2TB 6G 7.2K RPM MDL SATA LFF HDDs pre-installed)

K2R64A

#### HP StoreEasy 1450 16TB SATA Storage

(4 x 4TB 6G 7.2K RPM MDL SATA LFF HDDs pre-installed)

K2R65A

### StoreEasy 1650 Models

<b>Common Specifications</b>	<b>Processor</b>	(1) Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W) Processor
	<b>Memory</b>	16GB (2 x 8GB Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory ) Sku# MOS97A only - 48GB (3 x 16GB Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory )
	<b>Storage Controller</b>	HP Smart Array P440ar/2GB FBWC 12Gb 2-ports Int SAS Controller
	<b>Internal Drive Support</b>	Twelve 3.5" (Large Form Factor) hot-plug drive bays in front, Two 2.5" (Small Form Factor) hot-plug drive bays in rear occupied by OS drives Sku# MOS97A only- Twelve 3.5" (Large Form Factor) hot-plug drive bays in front, Three 3.5" (Large Form Factor) hot-plug drive bays in rear, two of which are used as OS drives
	<b>Network Ports</b>	4 x Gigabit Ethernet
	<b>Expansion Slots</b>	3 x PCIe
	<b>Power</b>	2 x 800W Platinum Power Supply
	<b>Form Factor</b>	2U rack

#### HP StoreEasy 1650 16TB SAS Storage

(8 x 2TB 6G 7.2K RPM LFF MDL SAS HDDs pre-installed, 4 open LFF slots)

K2R16A

#### HP StoreEasy 1650 32TB SAS Storage

(8 x 4TB 6G 7.2K RPM LFF MDL SAS HDDs pre-installed, 4 open LFF slots )

K2R17A

#### HP StoreEasy 1650 48TB SAS Storage

(8 x 6TB 6G 7.2K RPM LFF MDL SAS HDDs pre-installed, 4 open LFF slots )

K2R18A

### New Models (Pre-Configured)

**NOTE:** When adding drives to the any of the 4 open LFF slots for the models above, HP recommends as a best practice to use all internal data drives of the same type and capacity.

#### HP StoreEasy 1650 48TB SAS Storage

M0S97A

(15 x 6TB 6G 7.2K RPM LFF MDL SAS HDDs pre-installed, 12 in front and 3 in rear )

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### StoreEasy 1850 Models

<b>Common Specifications</b>	<b>Processor</b>	(1) Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W) Processor
	<b>Memory</b>	16GB (2 x 8GB Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory )
	<b>Storage Controller</b>	HP Smart Array P440ar/2GB FBWC 12Gb 2-ports Int SAS Controller
	<b>Internal Drive Support</b>	Twelve 3.5" (Large Form Factor) hot-plug drive bays in front, Two 2.5" (Small Form Factor) hot-plug drive bays in rear occupied by OS drives
	<b>Network Ports</b>	4 x Gigabit Ethernet
	<b>Expansion Slots</b>	3 x PCIe
	<b>Power</b>	2 x 800W Platinum Power Supply
	<b>Form Factor</b>	2U rack

#### HP StoreEasy 1850 9.6TB SAS Storage

K2R20A

(8 x 1.2TB 12G 10K RPM ENT SAS SFF HDDs pre-installed, 16 open SFF slots)

#### HP StoreEasy 1850 14.4TB SAS Storage

K2R21A

(8 x 1.8TB 12G 10K RPM ENT SAS 512e SFF HDDs pre-installed, 16 open SFF slots)

**NOTE:** When adding drives to the any of the 16 open SFF slots for these models, HP recommends as a best practice to use all internal data drives of the same type and capacity.

### New Models (Drives Configure-to-Order)

The StoreEasy 1450 and 1550 models below have no internal drives pre-installed. These models require selection of drives for factory integration.

**NOTE:** 4 drives of the same type and capacity must be selected for the StoreEasy 1450 or 1550 model. This model cannot ship with less than 4 drives pre-configured so that the operating system can be pre-installed. The 4 drives will be configured as RAID 6 for OS installation. Other drive types and capacities can be used in external enclosures.

The StoreEasy 1650 and 1850 models come with 2 x120GB 6G SATA Value Endurance SFF (2.5-inch) SC Solid State Disk (SSD) drives factory configured as RAID 1 with OS pre-installed (the OS drives are in the two rear bays). The StoreEasy 1650 and 1850 can ship with just the OS drives and no data drives. If data drives are needed select the drives for factory integration.

**NOTE:** HP recommends that the internal data drives for these models be the same type and capacity. The data drives don't have to be the same as the OS drives.

### Choose a Base Model, then Select Hard Drives

**NOTE:** Options (other than drives selected as part of the configure-to-order process) ship separately and are not factory integrated.

### HP StoreEasy 1000 Storage products (Base models)

<b>Common Specifications</b>	Operating System Licenses	Microsoft® Windows Storage Server 2012 R2, Standard Edition HP iLO Advanced including 1yr 24x7 Technical Support and Updates Single Server License <b>NOTE:</b> For more information, visit: <a href="http://www.hp.com/go/ilo">http://www.hp.com/go/ilo</a>
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#### StoreEasy 1450 Storage

K2R11A

**NOTE:** This model does not include pre-configured HDDs. At least four drives of the same type/capacity, 100GB or greater, must be ordered for pre-installation of OS in the factory. This system cannot be shipped with less than 4 HDDs. The four drives will be factory configured as RAID 6 with the OS pre-installed.

<b>Specifications</b>	Same as the StoreEasy 1450 pre-configured models listed above	
<b>Drive Options</b>	Minimum Number of Drives Required	4
	Maximum Number of Drives Allowed	4

#### StoreEasy 1550 Storage

K2R62A

**NOTE:** This model does not include pre-configured HDDs. A minimum of 4 HDDs of the same type and a capacity greater than 100GB must be ordered for factory integration. This system cannot be shipped with less than 4 HDDs. The four drives will be factory configured as RAID 6 with the OS pre-installed.

<b>Specifications</b>	Same as the StoreEasy 1550 pre-configured models listed above	
<b>Drive Options</b>	Minimum Number of Drives Required	4
	Maximum Number of Drives Allowed	8 (requires optional LFF HDD card cage)

#### StoreEasy 1650 Storage

K2R15A

**NOTE:** This model does not include pre-configured data drives. It does include 2 x120GB 6G SATA Value Endurance SFF (2.5-inch) SC Solid State Disk (SSD) drives factory configured as RAID 1 with OS pre-installed (the OS drives are in the two rear SFF bays). Data drives can be added for factory integration.

### New Models (Drives Configure-to-Order)

<b>Specifications</b>	Same as the StoreEasy 1650 pre-configured models listed above	
<b>Drive Options</b>	Minimum Number of Drives Required	0
	Maximum Number of Drives Allowed	12

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### StoreEasy 1850 Storage

K2R19A

**NOTE:** This model does not include pre-configured data drives. It does include 2 x120GB 6G SATA Value Endurance SFF (2.5-inch) SC Solid State Disk (SSD) drives factory configured as RAID 1 with OS pre-installed (the OS drives are in the two rear SFF bays). Data drives can be added for factory integration.

<b>Specifications</b>	Same as the StoreEasy 1850 pre-configured models listed above	
<b>Drive Options</b>	Minimum Number of Drives Required	0
	Maximum Number of Drives Allowed	24

### Options (New Models)

#### The following options are available for both StoreEasy Pre-configured and Drive Configure-to-Order models

**NOTE:** Options ship separately and are not factory integrated

**NOTE:** Carefully match options to your model to ensure compatibility

#### Add Another Processor

<b>StoreEasy 1450/1550</b>	HP DL160 Gen9 Intel® Xeon® E5-2603v3 (1.6GHz/6-core/15MB/85W) Processor Kit	763235-B21
<b>StoreEasy 1650/1850</b>	HP DL380 Gen9 Intel® Xeon® E5-2609v3 (1.9GHz/6-core/15MB/85W) Processor Kit	719052-B21

#### Add More Memory

**NOTE:** HP recommends that you add the same type memory to the product that is shipped standard with the product

**NOTE:** Number of available DIMM sockets varies by model. **NOTE:** HP memory from previous generation servers are not fully compatible with Smart Memory features in Gen9 Servers.

<b>StoreEasy 1450/1550/ 1650/1850</b>	<b>Registered DIMMs (RDIMMs) for E5-2600v3 Series</b> HP 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit	726718-B21
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#### Add Optical Drives

<b>StoreEasy 1450/1550</b>	HP 9.5mm SATA DVD-ROM JackBlack Gen9 Optical Drive	726536-B21
	HP 9.5mm SATA DVD-RW JackBlack G9 Optical Drive	726537-B21

#### Add a Network Adapter

<b>StoreEasy 1450</b>	<b>1 Gigabit Ethernet adapters</b>	
	HP Ethernet 1Gb 4-port 366T Adapter	811546-B21
	HP Ethernet 1Gb 2-port 361T Adapter	652497-B21
	HP Ethernet 1Gb 4-port 331T Adapter	647594-B21
	HP Ethernet 1Gb 2-port 332T Adapter	615732-B21
	<b>10 Gigabit Ethernet adapters</b>	
	HP Ethernet 10Gb 2-port 530SFP Adapter	652503-B21
	HP Ethernet 10Gb 2-port 530T Adapter	656596-B21
	HP Ethernet 10Gb 2-port 560SFP+ Adapter	665249-B21
	HP Ethernet 10Gb 2-port 561T Adapter	716591-B21
	HP Ethernet 10Gb 2-port 546SFP+ Adapter	779793-B21
	<b>NOTE:</b> A minimum of two Gigabytes (2 GB) of server memory is required per each adapter.	
	<b>NOTE:</b> Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately. See cables/options below.	
	<b>FlexibleLOM Adapters</b>	
	HP Ethernet 1Gb 4-port 331FLR Adapter	629135-B22
	HP Ethernet 1Gb 4-port 366FLR Adapter	665240-B21
	HP Ethernet 10Gb 2-port 561FLR-T Adapter	700699-B21

### Options (New Models)

HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter	700751-B21
HP FlexFabric 10Gb 2-port 533FLR-T Adapter	700759-B21
HP Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	779799-B21
HP DL160 Gen9 FlexibleLOM Enablement Kit	781844-B21
<b>NOTE:</b> FlexibleLOM riser kit (P/N: 781844-B21) is required when any flexibleLOM is selected.	
<b>NOTE:</b> Please see the QuickSpecs for Technical Specifications and additional information: <a href="http://www.hp.com/go/ProLiantNICs">http://www.hp.com/go/ProLiantNICs</a> .	
HP InfiniBand FDR 2-port 545QSFP Adapter	702211-B21
HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	764284-B21
QLogic InfiniBand 4X QDR PCI-E G2 Dual Port HCA	583211-B21
<b>NOTE:</b> Please see the QuickSpecs for additional information: <a href="http://h18000.www1.hp.com/products/quickspecs/13078_div/13078_div.html">http://h18000.www1.hp.com/products/quickspecs/13078_div/13078_div.html</a>	

### StoreEasy 1550 1 Gigabit Ethernet adapters

HP Ethernet 1Gb 4-port 366T Adapter	811546-B21
HP Ethernet 1Gb 2-port 361T Adapter	652497-B21
HP Ethernet 1Gb 4-port 331T Adapter	647594-B21
HP Ethernet 1Gb 2-port 332T Adapter	615732-B21

### 10 Gigabit Ethernet adapters

HP Ethernet 10Gb 2-port 561T Adapter	716591-B21
HP Ethernet 10Gb 2-port 560SFP+ Adapter	665249-B21
HP Ethernet 10Gb 2-port 546SFP+ Adapter	779793-B21

**NOTE:** A minimum of two Gigabytes (2 GB) of server memory is required per each adapter.  
**NOTE:** Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately. See cables/options below.

### StoreEasy 1650/1850

### 1 Gigabit Ethernet adapters

HP Ethernet 1Gb 4-port 366T Adapter	811546-B21
HP Ethernet 1Gb 4-port 331T Adapter	647594-B21
HP Ethernet 1Gb 2-port 361T Adapter	652497-B21
HP Ethernet 1Gb 2-port 332T Adapter	615732-B21

### 10 Gigabit Ethernet adapters

HP Ethernet 10Gb 2-port 530SFP Adapter	652503-B21
HP Ethernet 10Gb 2-port 530T Adapter	656596-B21
HP Ethernet 10Gb 2-port 546SFP+ Adapter	779793-B21
HP Ethernet 10Gb 2-port 557SFP+ Adapter	788995-B21
HP Ethernet 10Gb 2-port 560SFP+ Adapter	665249-B21
HP Ethernet 10Gb 2-port 561T Adapter	716591-B21

**NOTE:** StoreEasy 1650 and 1850 chassis ships with 4x1Gb Embedded.  
**NOTE:** A minimum of two Gigabytes (2 GB) of server memory is required per each adapter.  
**NOTE:** Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately. Please see the related NIC QuickSpecs for Technical Specifications and additional information: <http://www.hp.com/go/ProLiantNICs>.

### Options (New Models)

#### FlexibleLOM Adapters

HP Ethernet 1Gb 4-port 331FLR Adapter	629135-B21
HP Ethernet 1Gb 4-port 366FLR Adapter	665240-B21
HP FlexFabric 10Gb 2-port 533FLR-T Adapter	700759-B21
HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter	665243-B21
HP Ethernet 10Gb 2-port 561FLR-T Adapter	700699-B21
HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter	700751-B21
HP Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	779799-B21
HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter	727060-B21

**NOTE:** StoreEasy 1650 and 1850 chassis ships with 4x1Gb Embedded.

**NOTE:** Only one FlexibleLOM can be added to the server. These options are upgradeable and can be changed from the original configuration after the server is shipped.

**NOTE:** Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately. Please see the related NIC QuickSpecs for Technical Specifications and additional information: <http://www.hp.com/go/ProLiantNICs>.

HP InfiniBand FDR 2-port 545QSFP Adapter	702211-B21
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**NOTE:** The RHEL6.5 driver is not part of SPP, but may be downloaded here: [http://downloads.linux.hp.com/SDR/downloads/MLNX\\_OFED/](http://downloads.linux.hp.com/SDR/downloads/MLNX_OFED/).

HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+QSFP Adapter	764284-B21
HP InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter	764285-B21
HP InfiniBand QDR/Ethernet 10Gb 2-port 544+FLR-QSFP Adapter	764286-B21
QLogic InfiniBand 4X QDR PCI-E G2 Dual Port HCA	583211-B21

#### HP Security

HP Trusted Platform Module Option	488069-B21
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**NOTE:** The TPM (Trusted Platform Module) is a microcontroller chip that can securely store artifacts used to authenticate the server platform. These artifacts can include passwords, certificates and encryption keys. Windows® BitLocker™ Drive Encryption (BitLocker) is a data protection feature available in Windows Storage Server® 2012 R2. BitLocker leverages the enhanced security capabilities of a Trusted Platform Module (TPM) version 1.2. The TPM works with BitLocker to help protect user data and to ensure that a StoreEasy running Windows Storage Server 2012 R2 has not been tampered with while the system was offline. For more information about TPM, including a white paper, go to: [www.hp.com/go/TPM](http://www.hp.com/go/TPM).

**NOTE:** The TPM key is unique to every TPM deployed server and must be retained. Misplacing or losing the key could result in data loss.

### Add More Storage

HP StoreEasy Storage products come standard with at least one Smart Array Controller that supports internal drives.

**NOTE:** Expansion slot availability varies by model.

#### 2<sup>nd</sup> 4LFF Hot Plug Drive Cage Kit for StoreEasy 1540

HP ML110 Gen9 4LFF Hot Plug Drive Cage Kit	784584-B21
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#### SAS Controllers for 1450/1550/1650/1850

#### HP Smart Array Controllers

### Options (New Models)

HP Smart Array P441/4GB FBWC 12Gb 2-ports Ext SAS Controller	726825-B21
HP Smart Array P841/4GB FBWC 12Gb 4-ports Ext SAS Controller	726903-B21
<b>HP Smart Host Bus Adapters</b>	
HP H241 12Gb 2-ports Ext Smart Host Bus Adapter	726911-B21

#### Fibre Channel HBAs and CNAs for StoreEasy 1450

**NOTE:** For the complete listing of Fibre Channel Host Bus Adapters for Windows please see: <http://h18006.www1.hp.com/storage/saninfrastructure/hba.html>.

##### Emulex Fibre Channel HBAs

HP 81E 8Gb 1-port PCIe Fibre Channel Host Bus Adapter	AJ762B
HP 82E 8Gb 2-port PCIe Fibre Channel Host Bus Adapter	AJ763B
HP StoreFabric SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter	C8R38A
HP StoreFabric SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter	C8R39A

##### QLogic Fibre Channel HBAs

HP 81Q 8Gb 1-port PCIe Fibre Channel Host Bus Adapter	AK344A
HP 82Q 8Gb 2-port PCIe Fibre Channel Host Bus Adapter	AJ764A
HP StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter	QW971A
HP StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter	QW972A

##### Converged Network Adapter

HP StoreFabric CN1200E 10Gb Converged Network Adapter	E7Y06A
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#### Fibre Channel HBAs and CNAs for StoreEasy 1650/1850

**NOTE:** For the complete listing of Fibre Channel Host Bus Adapters for Windows please see: <http://h18006.www1.hp.com/storage/saninfrastructure/hba.html>.

##### Emulex Fibre Channel HBAs

HP 81E 8Gb 1-port PCIe Fibre Channel Host Bus Adapter	AJ762B
HP 82E 8Gb 2-port PCIe Fibre Channel Host Bus Adapter	AJ763B
HP StoreFabric SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter	C8R38A
HP StoreFabric SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter	C8R39A

##### QLogic Fibre Channel HBAs

HP 81Q 8Gb 1-port PCIe Fibre Channel Host Bus Adapter	AK344A
HP 82Q 8Gb 2-port PCIe Fibre Channel Host Bus Adapter	AJ764A
HP StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter	QW971A
HP StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter	QW972A

##### Converged Network Adapter

HP StoreFabric CN1100R Dual Port Converged Network Adapter	QW990A
HP StoreFabric CN1200E 10Gb Converged Network Adapter	E7Y06A

### HP Drives for StoreEasy 1450/1550/1650

#### StoreEasy LFF Drive Bundles

### Options (New Models)

HP StoreEasy 24TB SAS LFF(3.5in) Smart Carrier 4-pack HDD Bundle	K2R22A
<b>Note:</b> Bundle contains 4 x HP 6TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive (sku 761477-B21)	
HP StoreEasy 16TB SAS LFF(3.5in) Smart Carrier 4-pack HDD Bundle	E7W91A
<b>Note:</b> Bundle contains 4 x HP 4TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive (sku 695510-B21)	
HP StoreEasy 12TB SAS LFF(3.5in) Smart Carrier 4-pack HDD Bundle	E7W90A
<b>Note:</b> Bundle contains 4 x HP 3TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive (sku 652766-B21)	
HP StoreEasy 8TB SAS LFF(3.5in) Smart Carrier 4-pack HDD Bundle	E7W89A
<b>Note:</b> Bundle contains 4 x HP 2TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive (sku 652753-B21)	
HP StoreEasy 4TB SAS LFF(3.5in) Smart Carrier 4-pack HDD Bundle	E7W88A
<b>Note:</b> Bundle contains 4 x HP 1TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive (sku 652753-B21)	

#### SAS Hot Plug LFF (3.5-inch) Enterprise (ENT) Drives

HP 600GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive	765424-B21
HP 450GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive	737394-B21
HP 300GB 12G SAS 15K rpm LFF (3.5-inch) SC Converter Enterprise 3yr Warranty Hard Drive	737261-B21

#### SAS Hot Plug LFF (3.5-inch) Midline (MDL) Drives

HP 8TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive	793703-B21
<b>Note:</b> This drive is not available for the StoreEasy 1550	
HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive	793699-B21
<b>Note:</b> This drive is not available for the StoreEasy 1550	
HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765259-B21
HP 6TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	761477-B21
HP 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765257-B21
HP 4TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	695510-B21
HP 3TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	652766-B21
HP 2TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	652757-B21
HP 1TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	652753-B21

#### SAS Hot Plug LFF (3.5-inch) Performance Drives

HP 6TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive	793671-B21
<b>Note:</b> This drive is not available for the StoreEasy 1550	
HP 4TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive	793669-B21
<b>Note:</b> This drive is not available for the StoreEasy 1550	

#### SATA Hot Plug LFF (3.5-inch) Midline (MDL) Drives

HP 8TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive	793695-B21
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### Options (New Models)

**Note:** This drive is not available for the StoreEasy 1550

HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive 793683-B21

**Note:** This drive is not available for the StoreEasy 1550

HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive 765255-B21

HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive 753874-B21

HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive 765253-B21

HP 4TB 6G SATA 7.2k rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive 693687-B21

HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive 628061-B21

HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive 658079-B21

HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive 657750-B21

HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive 658071-B21

#### **SATA Hot Plug LFF (3.5-inch) Performance Drives**

HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive 793667-B21

**Note:** This drive is not available for the StoreEasy 1550

HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drives 793665-B21

**Note:** This drive is not available for the StoreEasy 1550

#### **12G SAS Hot Plug LFF (3.5-inch) Enterprise Value Solid State Drives**

HP 1.6TB 12G SAS Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive 762272-B21

**Note:** This drive is not available for the StoreEasy 1550

HP 800GB 12G SAS Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive 762270-B21

#### **6G SATA Hot Plug LFF (3.5-inch) Enterprise Mainstream Solid State Drives**

HP 800GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive 691860-B21

HP 400GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive 691856-B21

HP 200GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive 691854-B21

HP 100GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive 691852-B21

#### **6G SATA Hot Plug LFF (3.5-inch) SC Read Intensive Solid State Drives**

HP 960GB 6G SATA Read Intensive LFF 3.5-in SC Converter 3yr Wty Solid State Drive 789157-B21

**Note:** This drive is not available for the StoreEasy 1450

HP 480GB 6G SATA Read Intensive LFF 3.5-in SC Converter 3yr Wty Solid State Drive 789147-B21

**Note:** This drive is not available for the StoreEasy 1450

HP 240GB 6G SATA Read Intensive LFF 3.5-in SC Converter 3yr Wty Solid State Drive 789137-B21

**Note:** This drive is not available for the StoreEasy 1450

#### **6G SATA Hot Plug LFF Value Endurance (3.5-inch) Converter Enterprise Value G1 Solid State Drives**

HP 480GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty G1 Solid State Drive 756660-B21

HP 240GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty G1 Solid State Drive 756639-B21

HP 120GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty G1 Solid State Drive 756624-B21

#### **6G SATA Hot Plug LFF Value Endurance (3.5-inch) Converter Enterprise Value M1**

### Options (New Models)

#### Solid State Drives

HP 800GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive 764945-B21

**Note:** This drive is not available for the StoreEasy 1550

HP 480GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive 764943-B21

HP 240GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive 764941-B21

HP 120GB 6G SATA Value Endurance LFF 3.5-in SC Converter ENT Value 3yr Wty M1 Solid State Drive 764939-B21

#### 6G SATA Hot Plug LFF (3.5-inch) Enterprise Value Solid State Drives

HP 1.6TB 6G SATA Value Endurance LFF 3.5-in SC Converter Enterprise Value 3yr Wty Solid State Drive 757342-B21

HP 800GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive 718189-B21

HP 600GB 6G SATA Value Endurance LFF 3.5-in SC Converter Enterprise Value 3yr Wty Solid State Drive 739900-B21

HP 480GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive 718183-B21

HP 300GB 6G SATA Value Endurance LFF 3.5-in SC Converter Enterprise Value 3yr Wty Solid State Drive 739890-B21

HP 240GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive 718177-B21

#### 6G SATA Hot Plug LFF (3.5-inch) Enterprise Light G1 Solid State Drives

HP 960GB 6G SATA Light Endurance LFF 3.5-in SC Converter ENT Light 3yr Wty G1 Solid State Drive 756604-B21

#### HP Drives for StoreEasy 1850

#### StoreEasy SFF Drive Bundles

HP StoreEasy 7.2TB SAS SFF(2.5in) Smart Carrier 4-pack HDD Bundle K2R23A

**Note:** Bundle contains 4 x HP 1.8TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 512e 3yr Warranty Hard Drive (sku 791034-B21)

HP StoreEasy 4.8TB SAS SFF(2.5in) Smart Carrier 4-pack HDD Bundle E7W93A

**Note:** Bundle contains 4 x HP 1.2TB 6G SAS 10K rpm SFF (2.5-inch) SC Dual Port Enterprise 3yr Warranty Hard Drive (sku 718162-B21)

HP StoreEasy 3.6TB SAS SFF(2.5in) Smart Carrier 4-pack HDD Bundle E7W92A

**Note:** Bundle contains 4 x HP 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive (sku 652589-B21 )

#### SAS Hot Plug SFF (2.5-inch) Enterprise (ENT) Drives

HP 1.8TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 512e 3yr Warranty Hard Drive 791034-B21

HP 1.2TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive 781518-B21

HP 1.2TB 6G SAS 10K rpm SFF (2.5-inch) SC Dual Port Enterprise 3yr Warranty Hard Drive 718162-B21

HP 900GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive 785069-B21

HP 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive 652589-B21

### Options (New Models)

HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC 512e Enterprise 3yr Warranty Hard Drive	748387-B21
HP 600GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759212-B21
HP 600GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	781516-B21
HP 600GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652583-B21
HP 450GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759210-B21
HP 450GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652572-B21
HP 300GB 12G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	759208-B21
HP 300GB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	785067-B21
HP 300GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652611-B21
HP 300GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652564-B21
HP 146GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652605-B21
<b>SAS Hot Plug SFF (2.5-inch) Midline (MDL) Drives</b>	
HP 2TB 12G SAS 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765466-B21
HP 1TB 12G SAS 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765464-B21
HP 1TB 6G SAS 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	652749-B21
HP 500GB 6G SAS 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	652745-B21
<b>SATA Hot Plug SFF (2.5-inch) Midline (MDL) Drives</b>	
HP 2TB 6G SATA 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765455-B21
HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765453-B21
HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	655710-B21
HP 500GB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	655708-B21
<b>12G SAS Hot Plug SFF (2.5-inch) Enterprise Performance Solid State Drives</b>	
HP 400GB 12G SAS High Endurance SFF 2.5-in SC Enterprise Performance 3yr Wty Solid State Drive	741155-B21
<b>12G SAS Hot Plug SFF (2.5-inch) Enterprise Mainstream Solid State Drives</b>	
HP 1.6TB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive	779176-B21
HP 800GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive	779172-B21
HP 400GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive	779168-B21
HP 200GB 12G SAS Mainstream Endurance SFF 2.5-in ENT Mainstream SC 3yr Wty H2 Solid State Drive	779164-B21
HP 200GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	802578-B21
HP 400GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	802582-B21
HP 800GB 12G SAS Write Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	802586-B21
HP 1.92TB 12G SAS Read Intensive SFF 2.5-in SC 3yr Wty Solid State Drive	802891-B21

### Options (New Models)

#### **12G SAS Hot Plug SFF (2.5-inch) Enterprise Value Solid State Drives**

HP 1.6TB 12G SAS Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive 762263-B21

HP 800GB 12G SAS Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive 762261-B21

#### **6G SATA Hot Plug SFF (2.5-inch) Enterprise Mainstream Solid State Drives**

HP 800GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive 691868-B21

HP 400GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive 691866-B21

HP 200GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive 691864-B21

HP 100GB 6G SATA Mainstream Endurance SFF 2.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive 691862-B21

#### **6G SATA Hot Plug SFF (2.5-inch) Enterprise Value Solid State Drives**

HP 1.6TB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive 757339-B21

HP 800GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive 717973-B21

HP 600GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive 739898-B21

HP 480GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive 717971-B21

HP 300GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive 739888-B21

HP 240GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive 717969-B21

#### **6G SATA Hot Plug SFF Value Endurance (2.5-inch) Enterprise Value G1 Solid State Drives**

HP 480GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty G1 Solid State Drive 756657-B21

HP 240GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty G1 Solid State Drive 756636-B21

HP 120GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty G1 Solid State Drive 756621-B21

#### **6G SATA Hot Plug SFF (2.5-inch) Enterprise Light G1 Solid State Drives**

HP 960GB 6G SATA Light Endurance SFF 2.5-in SC Enterprise Light 3yr Wty G1 Solid State Drive 756601-B21

#### **6G SATA Hot Plug SFF Value Endurance (2.5-inch) Enterprise Value M1 Solid State Drives**

HP 800GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive 764929-B21

HP 480GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive 764927-B21

HP 240GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive 764925-B21

### Options (New Models)

HP 120GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty M1 Solid State Drive	764923-B21
<b>6G SATA Hot Plug LFF (3.5-inch) SC Read Intensive Solid State Drives</b>	
HP 240GB 6G SATA Read Intensive LFF 3.5-in SC Converter 3yr Wty Solid State Drive	789137-B21
HP 480GB 6G SATA Read Intensive LFF 3.5-in SC Converter 3yr Wty Solid State Drive	789147-B21
HP 960GB 6G SATA Read Intensive LFF 3.5-in SC Converter 3yr Wty Solid State Drive	789157-B21

### StoreEasy Disk Enclosures

HP StoreEasy 25 SFF Disk Enclosure B7E09A

**NOTE:** This enclosure is the HP D2700 Disk Enclosure. For more information see: [http://h18000.www1.hp.com/products/quickspecs/13404\\_div/13404\\_div.html](http://h18000.www1.hp.com/products/quickspecs/13404_div/13404_div.html)

**NOTE:** The 25 SFF Disk Enclosure will support (2) of the SFF Drive Bundles (B7E14A, B7E15A). If between 19 and 25 SFF drives are needed in the enclosure, individual SFF drives can be ordered or you can order a third SFF drive bundle and have two spare drives available as needed. See QuickSpecs listed above for individual drive information.

### SFF Drives bundles for StoreEasy SFF Enclosure

**NOTE:** HP recommends using all of the same capacity SFF drives within the enclosure.

**NOTE:** The Drive Bundles below can only be added to the StoreEasy Enclosure listed above. They cannot be added to a StoreEasy 1850 as they do not use the new hot plug SFF smart carriers.

HP StoreEasy 3.6TB SAS SFF(2.5in) 4-pack HDD Bundle (Contains 4 x 900GB SFF SAS HDDs - sku 619291-B21)	E7X00A
HP StoreEasy 4.8TB SAS SFF(2.5in) 4-pack HDD Bundle (Contains 4 x 1.2TB SFF SAS HDDs - sku 718160-B21)	E7X01A

### SFF Drives for StoreEasy Enclosure

HP 1.2TB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive	781162-B21
HP 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652589-B21
HP 600GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652583-B21

### D2000, D3000 or D6000 Disk Enclosures

HP StoreEasy products support all of HP's D2000, D3000 or D6000 Disk Enclosure product families. A Smart Array with external ports must be added to the StoreEasy 1450, 1550, 1650 and 1850 to add external Disk Enclosures. (See the D2000, D3000 or D6000 Disk Enclosure QuickSpecs for more information)

Model	Model Description	Part Number
<b>D2600</b>	HP D2600 Disk Enclosure	AJ940A
<b>D2600 6G SAS Dual Port MDL drives bundle</b>	HP D2600 w/12 6TB 6G SAS 7.2K LFF (3.5in) Dual Port MDL HDD 72TB Bundle	K2Q14A
	HP D2600 w/12 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 48TB Bundle	E7W32A
	HP D2600 w/12 3TB 6G SAS 7.2K LFF Dual port MDL HDD 36TB Bundle	QK765A
	HP D2600 w/6 3TB 6G SAS 7.2K LFF Dual port MDL HDD 18TB Bundle	QK766A

### Options (New Models)

	HP D2600 w/12 2TB 6G SAS 7.2K LFF DP MDL HDD 24TB Bundle	BK766A
	HP D2600 w/6 2TB 6G SAS 7.2K LFF DP MDL HDD 12TB Bundle	BK782A
	HP D2600 w/12 1TB 6G SAS 7.2K LFF Dual Port Midline HDD 12TB Bundle	BV899A
<b>D2600 3G SATA Port drives bundle</b>	HP D2600 w/12 2TB 3G SATA 7.2K LFF HDD 24TB Bundle	BK765A
<b>D2700</b>	HP D2700 Disk Enclosure	AJ941A
<b>D2700 6G SAS Dual Port drives bundle</b>	HP D2700 w/25 146GB 6G SAS 15K SFF Dual Port HDD 3.6TB Bundle	AW524A
	HP D2700 w/25 300GB 6G SAS 10K SFF Dual Port HDD 7.5TB Bundle	AW525A
	HP D2700 w/25 300GB 6G SAS 15K SFF Dual Port HDD 7.5TB Bundle	QW957A
	HP D2700 w/25 450GB 6G SAS 10K SFF Dual Port HDD 11.2TB Bundle	BK767A
	HP D2700 w/25 600GB 6G SAS 10K SFF Dual Port HDD 15TB Bundle	BK768A
	HP D2700 w/10 600GB 6G SAS 10K SFF Dual Port HDD 6TB Bundle	BK783A
	HP D2700 w/25 900GB 6G SAS 10K SFF Dual port HDD 22.5TB Bundle	QK771A
	HP D2700 w/10 900GB 6G SAS 10K SFF Dual port HDD 9TB Bundle	QK772A
<b>D2700 6G SAS Dual Port MDL drives bundle</b>	HP D2700 w/25 1TB 6G SAS 7.2K SFF Dual port MDL HDD 25TB Bundle	QK769A
	HP D2700 w/10 1TB 6G SAS 7.2K SFF Dual port MDL HDD 10TB Bundle	QK770A

Model	Model Description	Part Number
<b>HP D3600 Enclosure</b>	HP D3600 Enclosure	QW968A
<b>HP D3600 12G SAS Dual Port MDL drives bundle</b>	HP D3600 w/12 8TB 12G SAS 7.2K LFF (3.5in) Midline Smart Carrier HDD 96TB Bundle	MOS82A
	HP D3600 w/12 6TB 12G SAS 7.2K LFF (3.5in) Midline Smart Carrier HDD 72TB Bundle	MOS81A
	HP D3600 w/12 4TB 12G SAS 7.2K LFF (3.5in) Midline Smart Carrier HDD 48TB Bundle	MOS80A
<b>HP D3600 6G SAS Dual Port MDL drives bundle</b>	HP D3600 w/12 6TB 6G SAS 7.2K LFF (3.5in) Dual Port MDL SC HDD 72TB Bundle	K2Q13A
	HP D3600 w/12 4TB 6G SAS 7.2K LFF(3.5in) Midline Smart Carrier HDD 48TB Bundle	B7E38A
	HP D3600 w/12 3TB 6G SAS 7.2K LFF(3.5in) Midline Smart Carrier HDD 36TB Bundle	B7E37A
	HP D3600 w/12 2TB 6G SAS 7.2K LFF(3.5in) Midline Smart Carrier HDD 24TB Bundle	B7E36A
<b>HP D3700 Enclosure</b>	HP D3700 Enclosure	QW967A
<b>HP D3700 12G SAS Dual Port drives bundle</b>	HP D3700 w/25 2TB 12G SAS 10K SFF (2.5in) Enterprise Smart Carrier HDD 50TB Bundle	MOS89A
	HP D3700 w/25 1.8TB 12G SAS 10K SFF (2.5in) Enterprise Smart Carrier HDD 45TB Bundle	MOS87A
	HP D3700 w/25 1TB 12G SAS 10K SFF (2.5in) Enterprise Smart Carrier HDD 25TB Bundle	MOS88A
	HP D3700 w/25 1.2TB 12G SAS 10K SFF (2.5in) Enterprise Smart Carrier HDD 30TB Bundle	MOS86A
	HP D3700 w/25 900GB 12G SAS 10K SFF (2.5in) Enterprise Smart Carrier HDD 22.5TB Bundle	MOS85A
	HP D3700 w/25 600GB 12G SAS 10K SFF (2.5in) Enterprise Smart Carrier HDD 15TB	MOS84A

### Options (New Models)

	Bundle	
	HP D3700 w/25 300GB 12G SAS 10K SFF (2.5in) Enterprise Smart Carrier HDD 7.5TB Bundle	M0S83A
	HP D3700 w/25 300GB 12G SAS 15K SFF (2.5in) ENT SC HDD 7.5TB Bundle	K2Q10A
	HP D3700 w/25 600GB 12G SAS 15K SFF (2.5in) ENT SC HDD 15TB Bundle	K2Q11A
<b>HP D3700 6G SAS Dual Port drives bundle</b>	HP D3700 w/25 1.2TB 6G SAS 10K SFF(2.5in) ENT Smart Carrier HDD 30TB Bundle	B7E41A
	HP D3700 w/25 1TB 6G SAS 7.2K SFF(2.5in) Midline Smart Carrier HDD 25TB Bundle	B7E42A
	HP D3700 w/25 600GB 6G SAS 10K SFF(2.5in) ENT Smart Carrier HDD 15TB Bundle	B7E40A
	HP D3700 w/25 300GB 6G SAS 10K SFF(2.5in) ENT Smart Carrier HDD 7.5TB Bundle	B7E39A
	HP D3700 w/25 300GB 6G SAS 15K SFF(2.5in) ENT Smart Carrier HDD 7.5TB Bundle	C8S05A
<b>Model</b>	<b>Model Description</b>	<b>Part Number</b>
<b>D6000</b>	HP D6000 Dual I/O Module Disk Enclosure	QQ695A
	HP D6000 Disk Enclosure Dual I/O Module Kit	QQ696A
	HP D6000 w/35 2TB 6G SAS 7.2K LFF Dual port MDL HDD 70TB Bundle	QQ697A
	HP D6000 w/70 2TB 6G SAS 7.2K LFF Dual port MDL HDD 140TB Bundle	QQ698A
	HP D6000 w/35 3TB 6G SAS 7.2K LFF Dual port MDL HDD 105TB Bundle	QQ699A
	HP D6000 w/70 3TB 6G SAS 7.2K LFF Dual port MDL HDD 210TB Bundle	QQ700A
	HP D6000 w/35 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 140TB Bundle	E7W30A
	HP D6000 w/70 4TB 6G SAS 7.2K LFF Dual Port MDL HDD 280TB Bundle	E7W31A
	HP D6000 w/35 6TB 6G SAS 7.2K LFF (3.5in) Dual Port MDL HDD 210TB Bundle	K2Q15A
	HP D6000 w/70 6TB 6G SAS 7.2K LFF (3.5in) Dual Port MDL HDD 420TB Bundle	K2Q12A

### Add a Power Supply

The HP StoreEasy 1450 come standard with one power supply. Add a second power supply for redundancy.

<b>StoreEasy 1450</b>	HP 800W Gold (Redundant)/900W (Non-Redundant) AC Power Input Module	744689-B21
<b>StoreEasy 1550</b>	HP 750W Common Slot Gold Hot Plug Power Supply Kit	512327-B21
<b>StoreEasy 1450 I/O Expansion Option</b>	HP DL160 Gen9 Low Profile PCIe CPU2 Riser Kit <b>NOTE:</b> CPU 2 is required if this riser is to be installed, enables one PCIe3 slot.	725586-B21
<b>StoreEasy 1650 and 1850 I/O Expansion Option</b>	HP DL380 Gen9 Secondary 3 Slot GPU Ready Riser Kit <b>NOTE:</b> This is for slot 2 and supports double wide GPGPUs. Slot2: 2x Gen3 x16 FH/FL, 1xGen3 x8 FH/HL.	719073-B21

### Service and Support, HP Care Pack, and Warranty Information (New Models)

#### Warranty

HP StoreEasy 1650 and 1850 Storage products come with a standard 3-3-3 warranty (3 years parts exchange, 3 years labor and 3 years onsite, next business day response). HP StoreEasy 1450 and 1550 Storage products come with a standard 3-1-1 warranty (3 years parts exchange, 1 year labor and 1 year onsite, next business day response). Software media is warranted to be free of physical defect for a period of 90 days from delivery.

**NOTE:** Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

**Services Included with the Product** One year of HP Software Support for the Windows Storage Server OS, standard 9x5 business hours (software advisory and remedial software telephone support, and media and documentation distribution service).

#### Service and Support

##### Services to accelerate time to results

HP Storage Services bring you a rich portfolio of consulting and support services designed to add value to our core storage products and solutions. We have the know-how and experience to put storage technology to work for you. We work closely with you as your strategic partner, leveraging our full services portfolio to make sure that everything works to optimize your enterprise.

Choose from services aligned to our storage product offerings and lifecycle. From mission-critical onsite services to innovative web-based remote support, you choose the precise level of attention and support your business demands.

#### Discover, plan, and design

Choose from a rich portfolio of services to make the most of HP StoreEasy Storage, so you can efficiently and affordably consolidate, manage, and extract value from unstructured data.

**HP Services can help you discover needs and create a plan for simplifying the environment, reducing risk, and maximizing your storage investments**

**HP Backup Recovery Efficiency Analysis** - Assessment of how efficiently backup components are being used as the amount of data to be backed up continues to grow exponentially via analysis intelligence and a snapshot of your current backup environment. <http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8490ENW.pdf>

**HP Backup Recovery Impact Analysis** - Focus placed on service requirements and design as the key to success for gaining a clear understanding of the role of increasingly diverse data protection strategies. <http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA4-1175ENW.pdf>

**HP Backup Recovery Modernization** - Initial discovery, interviews, reference architecture design, proposal content development, vendor grading, and final recommendations carried out so as to require minimal resources and locations on your part. <http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA4-1199ENW.pdf>

**HP Storage Cloud Design Service** - Build a scalable, low-cost enterprise storage environment with inherent cloud benefits to meet big data needs.

#### Deploy and integrate

**We can help you configure, set up, and efficiently use your HP StoreEasy Storage, as well as help migrate data, improve capacity utilization, and establish information management standards used across backup,**

### Service and Support, HP Care Pack, and Warranty Information (New Models)

**replication, and archiving needs.**

**HP StoreEasy 1000/3000 Storage S Installation and Startup Service** -Expert system installation and setup by an HP technical specialist designed to reduce implementation time and cost, with your basic questions about the service answered during the included orientation session.

[http://h20195.www2.hp.com/v2/GetDocument.aspx?cc=us&doclang=EN\\_US&docname=4AA2-6112ENW&doctype=data%20sheet&lc=en&searchquery=&jumpid=reg\\_r1002\\_usen\\_c-001\\_title\\_r0004](http://h20195.www2.hp.com/v2/GetDocument.aspx?cc=us&doclang=EN_US&docname=4AA2-6112ENW&doctype=data%20sheet&lc=en&searchquery=&jumpid=reg_r1002_usen_c-001_title_r0004)

**HP Storage Data Migration Services** - End-to-end data migration service providing seamless discovery, assessment, planning, and design, completely customizable to your organization's storage area network or network attached storage environment and using innovative software to help you migrate to HP storage quickly and efficiently.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA3-0774ENW.pdf>

**HP Storage and Data Consultant Residency Service** - Strategic augmentation of your current environment with HP resources who become your trusted advisor to provide answers that are right for your storage and backup environment.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA3-9481ENW.pdf>

**HP Proactive Select** - A flexible way to purchase services to fit your environment with an extensive menu of HP Proactive Select event and technical services, such as onsite firmware upgrades, health checks, assessments, and education.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA2-3842ENW.pdf>

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#### Operate and support

**Choose the right support to maximize uptime, free up your resources, and achieve improved value-as you get the most out of the existing IT assets while accelerating time-to-revenue.**

**HP Proactive Care 24x7** - Hardware and software support services designed specifically for your technology with rapid access to Advanced Solution Center Specialists plus firmware and software management and best practice advice

<http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf>

**HP Proactive Care Personalized Support** - An option-if you have HP Proactive Care- to bring increased personalization of the Proactive Care support experience through the assignment of an Account Service Manager (ASM) who provides IT best practice advice to help address IT issues and projects.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA4-3446ENW.pdf>

**HP Support Plus 24** - Support for environments where proactive help from HP is not required, with 24x7 hardware and software support onsite that includes third-party support with a maximum four-hour onsite response.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-6638EN.pdf>

**HP Education Services** - Comprehensive training for new, as well as experienced, storage administrators designed to expand your skills and keep you up to speed with the latest storage and virtualization technology from HP Storage.

<http://education.hp.com/curr-storsan.htm>

### Service and Support, HP Care Pack, and Warranty Information (New Models)

**Optimized Care -** Choose from three levels of operate and support care. Delivers the highest levels of performance and stability through deployment and proactive management practices. HP Proactive Care 24x7-Plus, 20 credits per year.

**Additional options -** HP Proactive Care Personalized Support (once per Proactive Care support new environment), an additional day of HP Personalized Support, and 10 additional HP Proactive Select credits per year.

**Standard Care-** maintains high level of uptime, along with expert help to cut the cost and complexity of implementation and support. **HP Proactive Care 24x7-Plus**, 10 credits per year. Additional options - HP Proactive Care Personalized Support (once per Proactive Care support new environment), an additional day of HP Personalized Support, and 10 additional HP Proactive Select credits per year.

**Basic Care-** Minimum recommended support. Support Plus 24- Plus, 10 credits per year. Additional options - 10 HP Proactive Select credits per year.

**Remote Support Automation** HP Insight Remote Support-Available at no additional cost to all warranty, HP Care Pack Service and service agreement customers, uses proven technology to deliver secure, reliable 24x7 remote monitoring, diagnosis and problem resolution.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA2-4676ENW.pdf>

<http://h18004.www1.hp.com/products/servers/management/insight-remote-support/overview.html>

**For more information** [www.hp.com/services/storage](http://www.hp.com/services/storage)  
To learn more on HP Storage Services, please contact your HP sales representative or HP Authorized Channel Partner  
HP Care Pack Services are sold by HP and HP Authorized Service Partners:

- Services for customers purchasing from HP or an enterprise reseller are quoted using HP order configuration tools.
- Customers purchasing from a commercial reseller can find HP Care Pack Services at [www.hp.com/go/lookuptool](http://www.hp.com/go/lookuptool)

### Memory (New Models)

See the HP ProLiant Gen 9 QuickSpecs for information on memory configurations.

StoreEasy 1450 (DL160 Gen 9): <http://h20195.www2.hp.com/v2/GetDocument.aspx?docname=c04346224>

StoreEasy 1550 (ML110 Gen 9): <http://www8.hp.com/h20195/v2/GetDocument.aspx?docname=c04545445>

StoreEasy 1650 and 1850 (DL380 Gen 9): <http://h20195.www2.hp.com/v2/GetDocument.aspx?docname=c04346247>

### Storage (New Models)

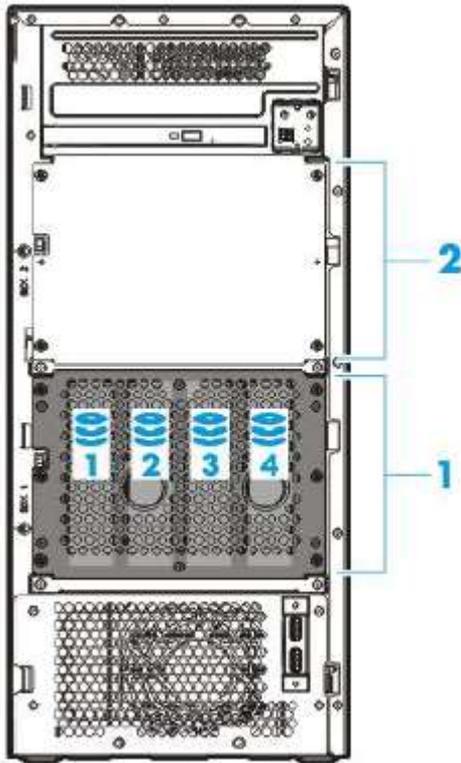
#### StoreEasy 1450



1-4

4 x LFF SATA/SAS/SSD Hot Pluggable Hard Drives Bays

#### StoreEasy 1550

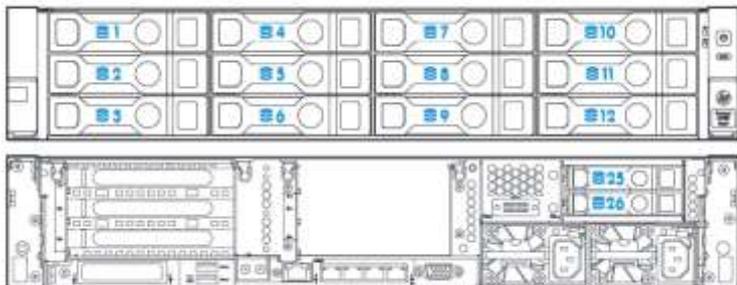


1-4

4 x LFF SATA/SAS/SSD Hot Pluggable Hard Drives Bays

### Storage (New Models)

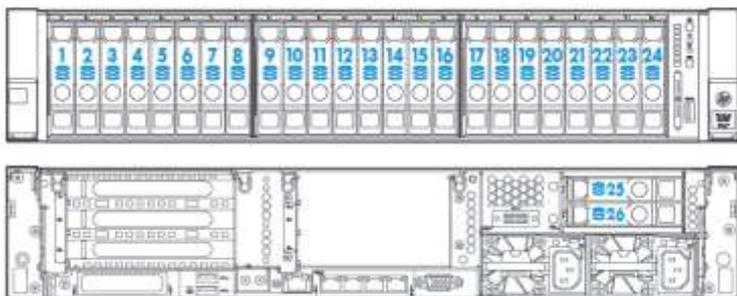
#### StoreEasy 1640 (12 LFF HDD in Front, 2 SFF in Rear)



1-12 12 x LFF SATA/SAS/SDD Hot Pluggable Hard Drive Bays

25-26 2 x SFF SATA/SAS/SSD Hot Pluggable Rear Hard Drive Bays (StoreEasy 1650 90TB SATA sku# M0S97A has three LFF Hard Drive Bays in rear – not shown)

#### StoreEasy 1840



1-24 24 x SFF SATA/SAS/SDD Hot Pluggable Hard drive bays

25-26 2 x SFF SATA/SAS/SSD Hot Pluggable Rear Hard Drive Bays

### Technical Specifications (New Models)

<b>StoreEasy 1450 Dimensions</b> (H x W x D)	4 LFF - 1.7 x 17.1 x 23.9 inches (4.29 x 43.46 x 60.76 cm)	
<b>Weight</b> (approximate)	Maximum:	33.04 lb (15kg) (all hard drives, power supplies, and processors installed)
	Minimum:	22.03 lb (10kg) (one hard drive, power supply, and processor installed)
<b>Input Requirements</b> for Standard 460W PSU, see power specifications tables for detail on 460W, 750W and 1200W power supplies)	Rated Line Voltage	100 to 240 VAC
	Rated Input Current	For 550W Power Supply: 6.7 A (at 100 VAC) 3.3 A (at 200 VAC)
	Rated Input Frequency	47 to 63 Hz
	Rated Input Power	For 550 W Power Supply: < 670 W (at 100 VAC), < 660 W (at 200 VAC),
<b>BTU Rating</b>	Maximum	For 550 W Power Supply: 2201 BTU/hr (at 100 VAC), 2153 BTU/hr (at 200 VAC)
<b>Power Specifications</b>	To review typical system power ratings use the Power Advisor which is available via the online tool located at URL: <a href="http://www.hp.com/go/proliant-energy-efficient">http://www.hp.com/go/proliant-energy-efficient</a> or <a href="http://www.hp.com/go/hppoweradvisor">http://www.hp.com/go/hppoweradvisor</a> - Click on the system of interest. Example: DL160 Gen9- Follow the instructions of the next screens.	
<b>Power Supply Output</b>	Rated Steady- State Power	For 550 W Power Supply: 550 W (at 100 VAC), 550 W (at 200 VAC),
	Maximum Peak Power	For 550 W Power Supply: 550 W (at 100 VAC), 550 W (at 200 VAC),
<b>System Inlet Temperature</b>	Standard Operating Support	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20°C/hr (36°F/hr). The upper limit and rate of change may be limited by the type and number of options installed. System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F).
	Extended Ambient Operating Support	For approved hardware configurations, the supported system inlet range is extended to be: 5° to 10°C (41° to 50°F) and 35° to

### Technical Specifications (New Models)

40°C (95° to 104°F) at sea level with an altitude derating of 1.0°C per every 175 m (1.8°F per every 574 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: <http://www.hp.com/servers/ashrae>.

For approved hardware configurations, the supported system inlet range is extended to be: 40° to 45°C (104° to 113°F) at sea level with an altitude derating of 1.0°C per every 125 m (1.8°F per every 410 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: <http://www.hp.com/servers/ashrae>.

System performance may be reduced if operating in the extended ambient operating range or with a fan fault.

**NOTE:** Supports A3 and A4 extended ambient.

	Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
<b>Relative Humidity</b>	Operating	Minimum to be the higher (more moisture) of -12°C (10.4°F) dew point or 8% relative humidity. Maximum to be the lower (less moisture) of 24°C (75.2°F) dew point or 90% relative humidity.
	(non-condensing) Non-operating	5% to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
<b>Altitude</b>	Operating	3048 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
<b>Acoustic Noise</b>	Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).	
	<b>Idle</b>	
	L WAd	Entry 5.1 B Base 5.2 B Performance 5.0 B
	L pAm	Entry 34.2 dBA Base 35.9 dBA Performance 34.9 dBA
	<b>Operating</b>	
	L WAd	Entry 5.3 B Base 5.3 B

### Technical Specifications (New Models)

	Performance 5.6 B
L pAm	Entry 36.3 dBA
	Base 36.2 dBA
	Performance 39.7 dBA

<b>Emissions Classification (EMC)</b>	FCC Rating	Class A
	Normative Standards	CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; GB9254; K22; K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1

**NOTE:** Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.

<b>HP Dynamic Smart Array B140i Controller</b>	<b>Number of PCI links</b>	Four
	<b>PCI link rate</b>	4Gb/s
	<b>Storage protocol support</b>	SATA
	<b>SAS/SATA peak data transfer rate</b>	6Gb/s
	<b>Number of SAS/SATA links</b>	10 links
	<b>SAS/SATA connectivity</b>	2x4 connectors; 2x1 connectors
	<b>Expander support</b>	No
	<b>Drives supported (max)</b>	Up to 10 Internal Drives
	<b>RAID support</b>	0, 1, 10, 5 SATA
	<b>Software management</b>	HP SSA, SMH, SIM
	<b>Warranty</b>	Server warranty
	<b>HP Secure Encryption license</b>	Not Supported
	<b>HP SmartCache License</b>	Not Supported
<b>HP Smart Storage Administrator</b>	Supported	

<b>HP Embedded Dual Port 361i Adapter</b>	<b>Network Interface</b>	10Base-T/100Base-TX/1000Base-TX
	<b>Compatibility</b>	IEEE 802.3 10Base-T
		IEEE 802.3ab 1000Base-T
		IEEE 802.3u 100Base-TX
		IEEE 1588, IEEE 802.1AS
IEEE 802.3az - Energy Efficient Ethernet (EEE)		

### Technical Specifications (New Models)

<b>Data Transfer Method</b>	PCI Express v 2.0, 5.0 GT/s, two lanes (x2)		
<b>Controller</b>	Intel I350 Powerville		
<b>Network Transfer Rate</b>	10Base-T (Half-Duplex)	10 Mb/s per port, 40 Mb/s combined	
	10Base-T (Full-Duplex)	20 Mb/s per port, 80 Mb/s combined	
	100Base-TX (Half-Duplex)	100 Mb/s per port, 400 Mb/s combined	
	100Base-TX (Full-Duplex)	200 Mb/s per port, 800 Mb/s combined	
	1000Base-TX (Half and Full-Duplex)	1000Mb/s per port, 4000 Mb/s combined	
<b>Connector</b>	Two RJ-45		
<b>Cable Support</b>	10 Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)	
	10/100/1000 Base-TX	Category 5 or higher UTP; up to 328 ft (100 m)	

<b>HP Smart Array P440</b>	<b>Dimensions</b> (excluding bracket)	Low Profile PCIe Form Factor 6.6 x 2.7 x 0.57 in (16.8 x 6.86 x 1.6 cm)	Low Profile PCIe Form Factor 19.05 cm x 24.13 cm x 5.72 cm (7.5 in x 9.5 in x 2.25 in)	Low Profile PCIe Form Factor 6.6 x 2.7 x 0.57 in (16.8 x 6.86 x 1.6 cm)
	<b>Disk Drive</b>	12Gb/s SAS (Serial Attached SCSI) capable 12Gb/s SAS (Serial Attached SCSI) 6Gb/s SATA (Serial AT Attachment)		
	<b>SAS Port Link Rate</b>	12Gb/s per physical link supported;		
	<b>PCIe Link Rate</b>	PCIe3 x8		
	<b>Cache Memory</b>	DDR3-1866MHz, 72-bit wide bus at 14.9GB/s (4GB cache module)		
	<b>Physical Drives Supported</b>	Up to 8 drives without 12G SAS Expander card; up to 48 drives with 2 SAS Expander card (ML350 Gen9)		
	<b>Logical Drives Supported</b>	Up to 64 logical drives		
	<b>Memory Addressing</b>	64-bit, supporting servers with memory space greater than 4 GiB (4.4GB)		
	<b>RAID Support</b>	RAID 6, 60 (Advanced Data Guarding) RAID 5, 50 (Distributed Data Guarding) RAID 1, 10 (Drive Mirroring) RAID 1 ADM, 10 ADM (Advanced Data Mirroring) RAID 0 (Striping)		
	<b>Upgradeable Firmware</b>	Upgradeable firmware with recovery ROM feature		

<b>StoreEasy 1550 Tower</b>	<b>Dimensions</b>	17.32(H) x 7.68(W) x 18.92(D) in (44 x 19.5 x 48.05 cm)	
	<b>Tower Weight</b>	Minimum:	27.56lb (12.5kg)
		Maximum:	55lb (24.9g)

### Technical Specifications (New Models)

<b>Input Requirements</b>	Range Line Voltage	100 to 240 VAC
	Rated Input Current	For 350W & 550W Power Supply:8A (at 100~240 VAC)
	Rated Input Frequency	50 to 60 Hz
	Rated Input Power	For 550 W Power Supply:< 639 W (at 100 VAC),< 605 W (at 200 VAC) For 350 W Power Supply:< 427 W (at 100 VAC),< 427 W (at 200 VAC)
<b>BTU Rating</b>	Maximum	For 550 W Power Supply:2204 BTU/hr (at 100 VAC),2113 BTU/hr (at 200 VAC) For 350 W Power Supply:1452 BTU/hr (at 100 VAC),1544 BTU/hr (at 200 VAC)
<b>Power Specifications</b>	To review typical system power ratings use the Power Advisor which is available via the online tool located at URL: <a href="http://www.hp.com/go/proliant-energy-efficient">http://www.hp.com/go/proliant-energy-efficient</a> or <a href="http://www.hp.com/go/hppoweradvisor">http://www.hp.com/go/hppoweradvisor</a> - Click on the system of interest.	
<b>Power Supply Output</b>	Rated Steady-State Power	For 550 W Power Supply:550 W (at 100 VAC),550 W (at 200 VAC),
	Maximum Peak Power	For 350 W Power Supply:350 W (at 100 VAC),350 W (at 200 VAC),
<b>System Inlet Temperature</b>	Standard Operating Support	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 304.8 m (1.8°F per every 1000 ft) above sea level to a maximum of 3048 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20°C/hr (36°F/hr). The upper limit and rate of change may be limited by the type and number of options installed. System performance during standard operating support may be reduced if operating with a fan fault or above 30°C(86°F).
	Extended Ambient Operating Support	For approved hardware configurations, the supported system inlet range is extended to be: 5° to 10°C (41° to 50°F) and 35° to 40°C (95° to 104°F) at sea level with an altitude derating of 1.0°C per every 175 m (1.8°F per every 574 ft) above 900 m (2953 ft) to a maximum of 3048 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: <a href="http://www.hp.com/servers/ashrae">http://www.hp.com/servers/ashrae</a> .
		For approved hardware configurations, the supported system inlet range is extended to be: 40° to 45°C (104° to 113°F) at sea level with an altitude derating of 1.0°C per every 125 m (1.8°F per every 410 ft) above 900 m (2953 ft) to a maximum of 3048 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: <a href="http://www.hp.com/servers/ashrae">http://www.hp.com/servers/ashrae</a> .

### Technical Specifications (New Models)

		System performance may be reduced if operating in the extended ambient operating range or with a fan fault. <b>NOTE:</b> Supports A3 extended ambient.
<b>Relative Humidity</b>	Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr(36°F/hr).
	Operating	Minimum to be the higher (more moisture) of -12°C (10.4°F) dew point or 8% relative humidity. Maximum to be the lower (less moisture) of 24°C (75.2°F) dew point or 90% relative humidity.
<b>Altitude</b>	Non-operating	5% to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
	Operating	3048 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457m/min (1500 ft/min).
<b>Acoustic Noise</b>	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457m/min (1500 ft/min).
	Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).	
	<b>Idle</b>	
	L WAd	3.6 Bels (LFF Non Hot-Plug Base) 3.6 Bels (LFF Hot-plug Base) 4.1 Bels (LFF Hot-plug Performance)
	L pAm	21 dBA (LFF Non Hot-Plug Base) 21 dBA (LFF Hot-plug Base) 27 dBA (LFF Hot-plug Performance)
	<b>Operating</b>	
	L WAd	3.6 Bels (LFF Non Hot-Plug Base) 3.7 Bels (LFF Hot-plug Base) 4.2 Bels (LFF Hot-plug Performance)
	L pAm	21 dBA (LFF Non Hot-Plug Base) 21 dBA (LFF Hot-plug Base) 25 dBA (LFF Hot-plug Performance)
	<b>NOTE:</b> Configurations tested for LFF non hot-plug based models included one (1) 1TB LFF SATA Midline HDD and Windows 2012 Enterprise 64-bit.	
	<b>NOTE:</b> Configurations tested for LFF hot-plug base models included one (1) 1TB LFF SATA Midline HDD and Windows 2012 Enterprise 64-bit.	
	<b>NOTE:</b> Configurations tested for LFF hot-plug performance models included four (4) 2TB LFF SATA Midline HDD and Windows 2012 Enterprise 64-bit.	
	<b>NOTE:</b> The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.	
<b>Emissions</b>	FCC Rating	Class B

### Technical Specifications (New Models)

<b>Classification</b>	Normative Standards	CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1
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**NOTE:** Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.

<b>HP Dynamic Smart Array B140i Controller</b>	<b>Number of PCI links</b>	Four
	<b>PCI link rate</b>	4Gb/s
	<b>Storage protocol support</b>	SATA
	<b>SAS/SATA peak data transfer rate</b>	6Gb/s
	<b>Number of SAS/SATA links</b>	10 links
	<b>SAS/SATA connectivity</b>	2x4 connectors; 2x1 connectors
	<b>Expander support</b>	No
	<b>Drives supported (max)</b>	Up to 10 Internal Drives
	<b>RAID support</b>	0, 1, 10, 5 SATA
	<b>Software management</b>	HP SSA, SMH, SIM
	<b>Warranty</b>	Server warranty
	<b>HP Secure Encryption license</b>	Not Supported
	<b>HP SmartCache License</b>	Not Supported
	<b>HP Smart Storage Administrator</b>	Supported

<b>HP Ethernet 1Gb 2-port 330i Adapter</b>	<b>Network Interface</b>	10Base-T/100Base-TX/1000Base-TX	
	<b>Compatibility</b>	IEEE 802.3 10Base-T IEEE 802.3ab 1000Base-T IEEE 802.3u 100Base-TX	
	<b>Data Transfer Method</b>	PCI Express, two lanes (x2)	
	<b>Controller</b>	BCM5717	
	<b>Network Transfer Rate</b>	10Base-T (Half-Duplex)	10 Mb/s per port, 40 Mb/s combined
		10Base-T (Full-Duplex)	20 Mb/s per port, 80 Mb/s combined
100Base-TX (Half-Duplex)		100 Mb/s per port, 400 Mb/s combined	

### Technical Specifications (New Models)

	Duplex)	
	100Base-TX (Full-Duplex)	200 Mb/s per port, 800 Mb/s combined
	100Base-TX (Half-Duplex)	1000Mb/s per port, 4000 Mb/s combined
	100Base-TX (Full-Duplex)	2000Mb/s per port, 8000 Mb/s combined
<b>Connector</b>	RJ-45	
<b>Cable Support</b>	10 Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)
	10/100/1000 Base-TX	Category 5 or higher UTP; up to 328 ft (100 m)

### StoreEasy 1650/1850

<b>Dimensions</b>	SFF Drives: 3.44 x 17.54 x 26.75 in (8.73 x 44.55 x 67.94 cm) LFF Drives: 3.44 x 17.54 x 28.75 in (8.73 x 44.55 x 73.02 cm) <b>NOTE:</b> Dimensions without Bezel.	
<b>Weight</b> (approximate)	Minimum:	32.6 lb (14.759 kg) (Minimum - 8SFF chassis with 1xSFF HDD and 7 HDD blanks, 1x processor, 1x power supply (plus blank), 1x Flexible Smart Array, 1x Riser installed)
	Maximum:	51.5 lb (23.6 kg) (Maximum - 12 LFF hard drives (No rear drives), 2x processors, 2x power supplies, 1x Flexible Smart Array, 2x Risers installed)
<b>Input Requirements</b> (per power supply)	Range Line Voltage	100 to 120 VAC 200 to 240 VAC
<b>BTU Rating</b>	Maximum	For 800W Power Supply: 3207 BTU/hr (at 100 VAC), 3071 BTU/hr (at 200 VAC), 3112 BTU/hr (at 240 VAC) for China Only For 500W Power Supply: 1979 BTU/hr (at 100 VAC), 1911 BTU/hr (at 200 VAC), 1965 BTU/hr (at 240 VAC) for China Only
<b>Power Supply</b>	Rated Steady-	For 1400W Power Supply: 1400W (at 100 VAC), 1400W (at 240

### Technical Specifications (New Models)

<b>Output</b> (per power supply)	State Power	VAC), 1400W (at 240 VAC) For 800W Power Supply: 800W (at 100 VAC), 800W (at 240 VAC), 800W (at 240 VAC) input for China only For 500W Power Supply: 500W (at 100 VAC), 500W (at 240 VAC), 500W (at 240 VAC) input for China only
	Maximum Peak Power	For 1400W Power Supply: 1400W (at 100 to 127 VAC), 1400W (at 200 to 240 1VAC), 1400W (at 240 VAC) input for China only For 800W Power Supply: 800W (at 100 to 127 VAC), 800W (at 200 to 240 1VAC), 800W (at 240 VAC) input for China only For 500W Power Supply: 500W (at 100 to 127 VAC), 500W (at 200 to 240 VAC), 500W (at 240 VAC) input for China only
<b>System Inlet Temperature</b>	Standard Operating Support	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 305 m (1.8°F per every 1000 ft) above sea level to a maximum of 3050 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 20°C/hr (36°F/hr). The upper limit and rate of change may be limited by the type and number of options installed. System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F).
	Extended Ambient Operating Support	For approved hardware configurations, the supported system inlet range is extended to be: 5° to 10°C (41° to 50°F) and 35° to 40°C (95° to 104°F) at sea level with an altitude derating of 1.0°C per every 175 m (1.8°F per every 574 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: <a href="http://www.hp.com/servers/Ashrae">http://www.hp.com/servers/Ashrae</a>
		For approved hardware configurations, the supported system inlet range is extended to be: 40° to 45°C (104° to 113°F) at sea level with an altitude derating of 1.0°C per every 125 m (1.8°F per every 410 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: <a href="http://www.hp.com/servers/Ashrae">http://www.hp.com/servers/Ashrae</a>
		System performance may be reduced if operating in the extended ambient operating range or with a fan fault.
<b>Relative Humidity</b>	Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
	Operating	Minimum to be the higher (more moisture) of -12°C (10.4°F) dew point or 8% relative humidity. Maximum to be the lower (less moisture) of 24°C (75.2°F) dew point or 90% relative humidity.
(non-condensing)	Non-operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
<b>Altitude</b>	Operating	3050 m (10,000 ft). This value may be limited by the type and

### Technical Specifications (New Models)

		number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
<b>Acoustic Noise</b>	Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).	
	<b>Idle</b>	
	L WAd	4.0 B Entry LFF 4.1 B Entry 4.2 B Base 5.7 B Base LFF 4.3 B Perf
	L pAm	23 dBA Entry LFF 24 dBA Entry 24 dBA Base 39 dBA Base LFF 25 dBA Perf
	<b>Operating</b>	
	L WAd	4.3 B Entry LFF 4.6 B Entry 4.8 B Base 5.9 B Base LFF 5.6 B Perf
	L pAm	25 dBA Entry LFF 29 dBA Entry 30 dBA Base 31 dBA Base LFF 39 dBA Perf
	<b>NOTE:</b> The Listed sound levels apply to standard shipping configurations (Entry LFF, Entry, Base, Base LFF and Performance models) additional options may result in increased sound levels. The Base LFF model leverages our High Efficiency Fans, other models are shipping with standard fan options.	
<b>Emissions Classification (EMC)</b>	FCC Rating	Class A
	Normative Standards	CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1

**NOTE:** Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.

**NOTE:** The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.

### Technical Specifications (New Models)

<b>HP Dynamic Smart Array B140i Controller</b>	<b>Number of PCI links</b>	Four
	<b>PCI link rate</b>	4Gb/s
	<b>Storage protocol support</b>	SATA
	<b>SAS/SATA peak data transfer rate</b>	6Gb/s
	<b>Number of SAS/SATA links</b>	10 links
	<b>SAS/SATA connectivity</b>	2x4 connectors; 2x1 connectors
	<b>Expander support</b>	No
	<b>Drives supported (max)</b>	Up to 10 Internal Drives
	<b>RAID support</b>	0, 1, 10, 5 SATA
	<b>Software management</b>	HP SSA, SMH, SIM
	<b>Warranty</b>	Server warranty
	<b>HP Secure Encryption license</b>	Not Supported
	<b>HP SmartCache License</b>	Not Supported
	<b>HP Smart Storage Administrator</b>	Supported

<b>HP Ethernet 1Gb 4-port 331i Adapter</b>	<b>Network Interface</b>	10Base-T/100Base-TX/1000Base-TX		
	<b>Compatibility</b>	IEEE 802.3 10Base-T		
		IEEE 802.3ab 1000Base-T		
		IEEE 802.3u 100Base-TX		
	<b>Data Transfer Method</b>	PCI Express, two lanes (x2)		
	<b>Controller</b>	BCM5719		
	<b>Network Transfer Rate</b>	10Base-T (Half-Duplex)	10 Mb/s per port, 40 Mb/s combined	
		10Base-T (Full-Duplex)	20 Mb/s per port, 80 Mb/s combined	
		100Base-TX (Half-Duplex)	100 Mb/s per port, 400 Mb/s combined	
		100Base-TX (Full-Duplex)	200 Mb/s per port, 800 Mb/s combined	
1000Base-TX (Half and Full-Duplex)		1000Mb/s per port, 4000 Mb/s combined		
1000Base-TX (Full-Duplex)		2000Mb/s per port, 8000 Mb/s combined		
<b>Connector</b>	Four RJ-45			
<b>Cable Support</b>	10 Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)		

### Technical Specifications (New Models)

10/100/1000 Base-TX Category 5 or higher UTP; up to 328 ft (100 m)

<b>HP Smart Array P440ar</b>	<b>Dimensions</b> (excluding bracket)	Flexible Smart Array Form Factor 5.3 x 4.1 x 1.2 in	Low Profile PCIe Form Factor 6.6 x 2.7 x 0.57 in (16.8 x 6.86 x 1.6 cm)
	<b>Disk Drive</b>	12Gb/s SAS (Serial Attached SCSI) 6Gb/s SATA (Serial AT Attachment)	
	<b>SAS Port Link Rate</b>	12Gb/s per physical link supported	
	<b>PCIe Link Rate</b>	PCIe3 x8	
	<b>Cache Memory</b>	DDR3-1866MHz, 72-bit wide bus at 14.9GB/s (2GB cache module)	
	<b>Physical Drives Supported</b>	Up to 26 drives	
	<b>Logical Drives Supported</b>	Up to 64 logical drives	
	<b>Memory Addressing</b>	64-bit, supporting servers with memory space greater than 4 GiB (4.4GB)	
	<b>RAID Support</b>	RAID 6, 60 (Advanced Data Guarding) RAID 5, 50 (Distributed Data Guarding) RAID 1, 10 (Drive Mirroring) RAID 1 ADM, 10 ADM (Advanced Data Mirroring) RAID 0 (Striping)	
	<b>Upgradeable Firmware</b>	Upgradeable firmware with recovery ROM feature	

### Overview

### Models

#### HP StoreEasy 1440 Storage

HP StoreEasy 1440 Storage products are storage solutions that deliver multi-protocol file serving and application storage in a compact and affordable 1U rack-mount form factor. They're easy to install and manage, making them perfect for a small workgroup, small business or remote office. All StoreEasy 1440 models have Windows Storage Server 2012 R2, Standard Edition, pre-installed from the factory on the four internal LFF drives configured as RAID6. The StoreEasy 1440 is built on a HP ProLiant DL360e Gen 8 server and includes a rail kit.

HP StoreEasy 1440 Storage E7W70A

**(NOTE: This model has no drives pre-configured - at least four drives of the same type/capacity, 450GB or greater, must be ordered for pre-installation of OS in the factory. The OS is not a field installable option.)**

HP StoreEasy 1440 4TB SATA Storage E7W71A

(4 x 1TB 6G 7.2K RPM SATA LFF HDDs pre-installed)

HP StoreEasy 1440 8TB SATA Storage E7W72A

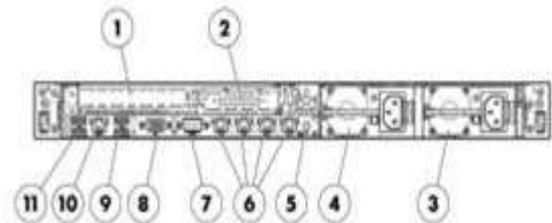
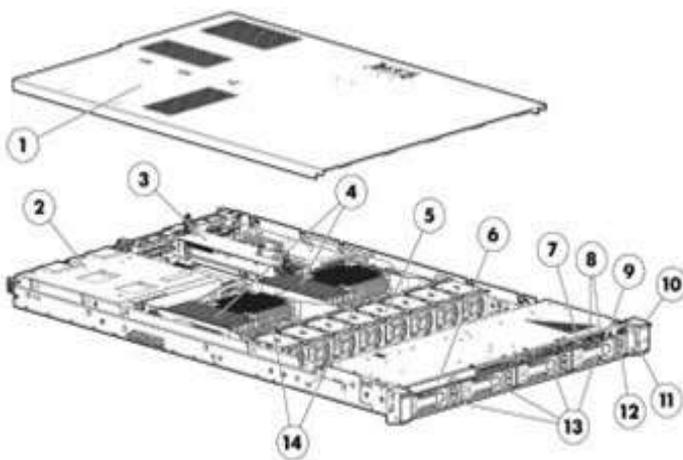
(4 x 2TB 6G 7.2K RPM SATA LFF HDDs pre-installed)

HP StoreEasy 1440 12TB SATA Storage E7W73A

(4 x 3TB 6G 7.2K RPM SATA LFF HDDs pre-installed)

HP StoreEasy 1440 16TB SATA Storage E7W74A

(4 x 4TB 6G 7.2K RPM SATA LFF HDDs pre-installed)



#### Front View:

1. Access panel
2. Redundant Hot Plug Power Supplies (1 standard, 1 optional)
3. Removable Riser Cage assembly for 1 x PCIe 3.0 x16 + 1 x PCIe 2.0 x8
4. 12 DIMM slots - DDR3 Registered (RDIMM)
5. Removable hot-plug fan modules for easy serviceability
6. Optical Disk Drive Bay (optional)
7. Video connector
8. USB connectors
9. Unit ID LED/button
10. Health LED

#### Rear View:

1. PCIe 3.0 Full-height/half-length (250mm) x16 expansion slot
2. PCIe 2.0 Low Profile x8 expansion slot
3. Power supply bay 1 (Primary Power Supply)
4. Power supply bay 2 (Shown populated: Optional)
5. Unit ID LED/button
6. HP Ethernet 1Gb 4-port 366i Adapter
7. Serial connector
8. Video connector
9. USB connectors
10. iLO connector

### Overview

- 11. NIC Activity LED
- 12. Power On/Standby button
- 13. Drive Bays
- 14. Up to two Intel® E5-2400/ E5-2400v2 Series processors
- 11. USB connectors

### HP StoreEasy 1540 Storage

HP StoreEasy 1540 Storage products are storage solutions that deliver multi-protocol file serving and application storage in a compact and affordable tower form factor package. They're easy to install and manage, making them perfect for a small workgroup, small business or remote office. All StoreEasy 1540 models have Windows Storage Server 2012 R2, Standard Edition, pre-installed from the factory on the four internal LFF drives configured as RAID6. The StoreEasy 1540 is built on an HP ProLiant ML310e v2 Gen 8 Server.

**NOTE:** A country specific power cord option must be ordered with the StoreEasy 1540. See power cord options section.

HP StoreEasy 1540 Storage E7W75A

**(NOTE:** This model has no drives pre-configured - at least four drives of the same type and capacity, 450GB or greater, must be ordered for pre-installation of OS in the factory. The OS is not a field installable option.)

HP StoreEasy 1540 4TB SATA Storage E7W76A

(4 x 1TB 6G 7.2K RPM SATA LFF HDDs pre-installed)

HP StoreEasy 1540 8TB SATA Storage E7W77A

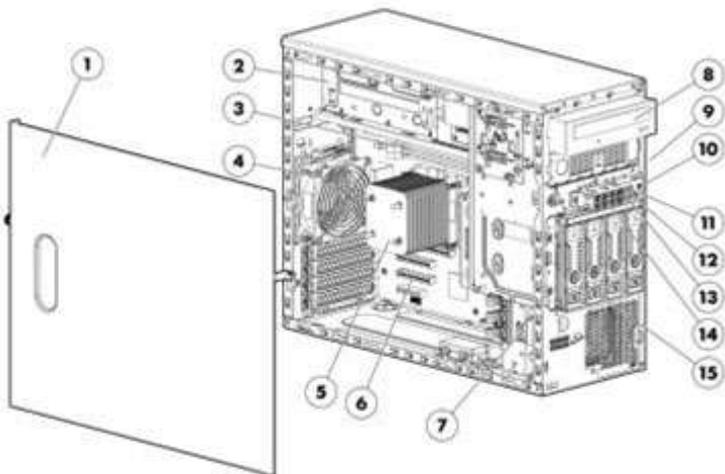
(4 x 2TB 6G 7.2K RPM SATA LFF HDDs pre-installed)

HP StoreEasy 1540 12TB SATA Storage E7W78A

(4 x 3TB 6G 7.2K RPM SATA LFF HDDs pre-installed)

HP StoreEasy 1540 16TB SATA Storage E7W79A

(4 x 4TB 6G 7.2K RPM SATA LFF HDDs pre-installed)



#### Front View:

- 1. Quick removal access panel
- 2. Power Supply
- 3. Four DIMM slots
- 4. Rear system fan (Processor Cooling)
- 5. Processor Heatsink
- 6. Four (4) PCIe expansion slots



#### Rear View

- 1. Power supply
- 2. NIC Connector 2
- 3. NIC Connector 1
- 4. UID LED Button
- 5. iLO connector
- 6. Two (2) USB3.0 Connectors

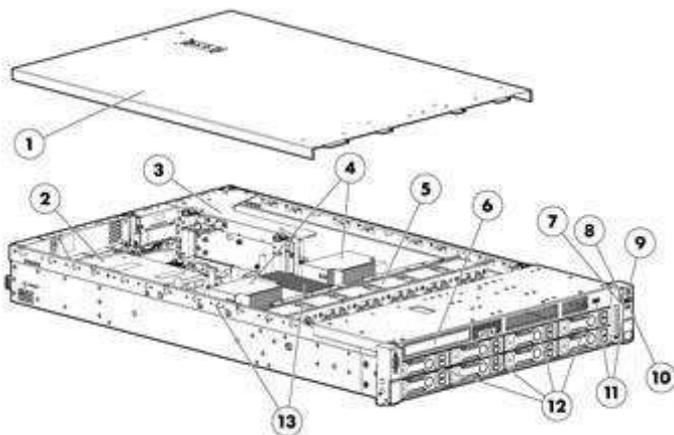
### Overview

- |                                                                |                       |
|----------------------------------------------------------------|-----------------------|
| 7. Front system fan (Expansion board cooling)                  | 7. Serial Connector   |
| 8. Half Height SATA DVD-ROM or DVD RW Optical Drive (optional) | 8. Video Connector    |
| 9. Media Drive Blank                                           | 9. Slot 4 PCIe x16    |
| 10. Power Button                                               | 10. Slot 3 PCIe x 8   |
| 11. NIC Activity LED                                           | 11. Slot 2 PCIe x8    |
| 12. System Health                                              | 12. Slot 1 PCIe x4    |
| 13. UID LED button                                             | 13. PCIe card bracket |
| 14. Four (4) USB connectors                                    |                       |
| 15. Four (4) LFF HDD cage                                      |                       |

### HP StoreEasy 1640 Storage

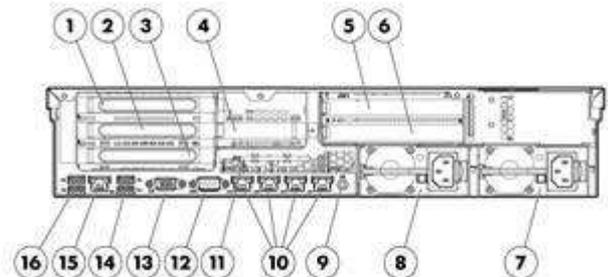
HP StoreEasy 1640 Storage products deliver high capacity and drives down your cost per GB. Quad-Core processing, up to 48TB internal storage capacity, and ready for external expandability enhance this ultra-dense 2U shared storage solution for small, medium, or large IT environments. All StoreEasy 1640 models have Windows Storage Server 2012 R2, Standard Edition, pre-installed from the factory on two rear internal 300GB 6G 10K RPM SFF drives configured as RAID1. The StoreEasy 1640 is built on a HP ProLiant DL380e Gen 8 Server and includes a rail kit.

HP StoreEasy 1640 Storage (12 open LFF HDD slots in front)	E7W80A
HP StoreEasy 1640 8TB SAS Storage (8 x 1TB 6G 7.2K RPM LFF SAS HDDs pre-installed, 4 open LFF slots)	E7W81A
HP StoreEasy 1640 16TB SAS Storage (8 x 2TB 6G 7.2K RPM LFF SAS HDDs pre-installed, 4 open LFF slots )	E7W82A
HP StoreEasy 1640 24TB SAS Storage (8 x 3TB 6G 7.2K RPM LFF SAS HDDs pre-installed, 4 open LFF slots )	E7W83A
HP StoreEasy 1640 32TB SAS Storage (8 x 4TB 6G 7.2K RPM LFF SAS HDDs pre-installed, 4 open LFF slots )	E7W84A



#### Front View:

1. Quick removal access panel
2. Redundant Hot Plug Power Supplies(upgradeable option)
3. Removable Riser Cage assembly



#### Rear View

1. Slot1 PCIe3 x8 (4, 1)
2. Slot2 PCIe3 x16 (8, 4, 1) (P822)
3. Slot3 PCIe3 x8 (8, 4, 1)

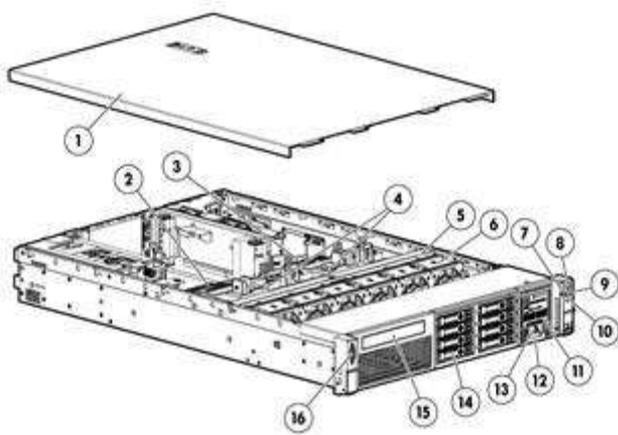
### Overview

- |                                                                     |                                                    |
|---------------------------------------------------------------------|----------------------------------------------------|
| 4. Up to 2 Intel E5-2400 Series Processors                          | 4. Slot4 PCIe2 x8 (4, 1)                           |
| 5. Removable Hot Plug Fans modules, (optional, full N+1 redundancy) | 5. Rear Drive Bay                                  |
| 6. N/A                                                              | 6. Rear Drive Bay                                  |
| 7. Health LED                                                       | 7. Power Supply bay1                               |
| 8. Network activity LED                                             | 8. Power Supply bay 2                              |
| 9. Power On /Standby button and system power LED button             | 9. Unit ID LED/Button                              |
| 10. Unit ID LED                                                     | 10. HP Ethernet 1Gb 4-port 366i Adapter (4 x 1GbE) |
| 11. USB connectors                                                  | 11. Service tool                                   |
| 12. 12 LFF Hot plug Hard Drive bays                                 | 12. Serial connector                               |
| 13. 12 DIMM slots                                                   | 13. Video connector                                |
|                                                                     | 14. USB connectors (2)                             |
|                                                                     | 15. iLO connector                                  |
|                                                                     | 16. USB connectors (2)                             |

### HP StoreEasy 1840 Storage

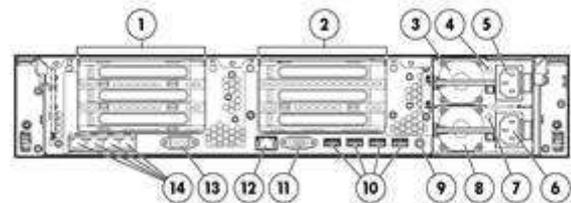
HP StoreEasy 1840 Storage products deliver Enterprise-class performance, expandability, and flexibility. Up to two quad-core processors, 2 PCIe slots (5 with 2nd processor), and with the included Smart Array P822 Storage Controller make it the file serving and application storage choice for medium business or datacenter class IT environments. All StoreEasy 1840 models have Windows Storage Server 2012 R2, Standard Edition, pre-installed from the factory on two internal 300GB 6G 10K RPM SFF drives configured as RAID1. The StoreEasy 1840 is built on a HP ProLiant DL380 Gen 8 server and includes a rail kit.

- |                                                                                                               |        |
|---------------------------------------------------------------------------------------------------------------|--------|
| HP StoreEasy 1840 Storage<br>(23 open SFF slots in front)                                                     | E7W85A |
| HP StoreEasy 1840 9.9TB SAS Storage<br>(11 x 900GB 6G 10K RPM SAS SFF HDDs pre-installed, 12 open SFF slots)  | E7W86A |
| HP StoreEasy 1840 13.2TB SAS Storage<br>(11 x 1.2TB 6G 10K RPM SAS SFF HDDs pre-installed, 12 open SFF slots) | E7W87A |



#### Front View:

1. Quick removal access panel
2. Second Intel Processor
3. First Intel Processor



#### Rear View

1. PCIe 3.0 Slots 1, 2, 3-PCIe 2.0 top to bottom
2. PCIe 3.0 Slots 4-6 top to bottom (required 2nd processor)
3. Power supply 1

### Overview

4. 24 DIMM slots
5. Air Baffle
6. Hot-plug fans, full N+1 redundancy
7. Health LED
8. Power On /Standby button and system power LED button
9. USB connector
10. Unit ID LED
11. Systems Insight Display
12. Asset Tag
13. USB connector
14. 25 SFF Hot plug Drive Bays (picture doesn't show all SFF slots installed)
15. Optional Slim Optical Bay (SATA DVD-RW /ROM Optical Drive)
16. Video connector
4. Power supply 1 Power LED
5. Power supply 1 Power connection (with Intelligent PDU communication)
6. Power supply 2 Power connection (with Intelligent PDU communication)
7. Power supply 2 Power LED
8. Power supply 2
9. Unit ID LED/Button
10. USB connectors (4)
11. Video connector
12. iLO connector
13. Serial connector
14. FlexibleLOM ports (Shown: 4 ports 1Gb)

### Features and Benefits

#### **Optimized: Tailored for Your File Storage**

The HP StoreEasy 1000 Storage comes with pre-configured hardware with the latest generation storage OS for purpose-built file storage. StoreEasy installation and network configuration wizards simplify installation and prevent configuration errors for faster deployment.

Best practices driven storage provisioning tool discovers system storage and recommends the setup for optimum performance, optimum capacity or a balanced configuration based on the available storage.

#### **Efficient: Saves You Money and Time**

HP StoreEasy 1000 Storage supports a large numbers of users with a high performance file serving controller and a wide range of disk drives including solid state disks (SSDs). A broad range of file access protocols, including Microsoft Hyper-V and SQL Server application storage over SMB3 or iSCSI.

File sync and share feature enable mobile workers to access their files from any Internet connection. Provides corporate data controls including data encryption, data wipe, user lock screen password enforcement, file classification and storage quotas.

Reduce your branch office WAN usage by automatically caching frequently accessed corporate datacenter files with Hosted BranchCache.

#### **Protection: Safeguards Your Data**

The HP StoreEasy 1000 Storage protects data while at rest with file system encryption and BitLocker® drive encryption, and while it is being transferred with SMB3 encryption and signing.

Use File Classification Infrastructure to dynamically identify files based on sensitivity and implement sophisticated access controls using Active Directory Rights Management Services.

Install and run endpoint protection such as antivirus on the system itself - reducing the cost and complexity of connecting an external endpoint protection server. Prevent against data loss with Volume Shadow Copy Service online snapshots and support for agent based backup software.

Leverage optional HP Autonomy LiveVault and HP Data Protector software for security and efficient policy driven offsite cloud and hybrid cloud backup.

#### **Highly Available: Prevents Your User and Organization Disruption**

The HP StoreEasy 1000 Storage increases uptime with such standard features as near continuous health monitoring with HP Active Health System, mirrored OS disks, redundant fans (not available on all models) and power, and advanced memory protection.

Confidently deploy large volumes leveraging improved file system online self-healing, online verification, and precise and rapid repair that massively reduces downtime from file corruption.

Built on HP ProLiant Gen8 Server series and Microsoft Windows Storage Server 2012 R2 for reliability and ease-of-use.

Three year onsite parts and labor warranty for the system, and one year of 24 x 7 software telephone support.

### Standard Features

#### Operating System

Microsoft Windows Storage Server 2012 R2, Standard Edition

- Windows Storage Server 2012 R2 (WSS2012 R2) includes a robust range of file serving and storage capabilities. It addresses heterogeneous environments and it enables more efficient storage utilization. WSS2012 R2 delivers a similar level of performance and reliability as more expensive storage solutions and it offers support for both file (SMB and NFS) and block (iSCSI) protocols, allows for a flexible mix of configurations and includes advanced data management tools. WSS2012 R2 leverages your Windows Server management skill sets and tools including Active Directory, PowerShell and System Center.
- Extensive protocol support: SMB ( 2.0, 2.1, 3.0, 3.02), NFS (v2, v3, v4.1), WebDAV, HTTP/HTTPS, FTP/FTPS, iSCSI
- SMB3: Leverage high performance continually available file shares to deliver feature-rich storage for business-critical applications and virtual servers using advanced new functionality.
- New VHDX Standard: Deploy larger capacity virtual storage that can grow to 64 terabytes, is more resilient against corruption, and provides more efficient usage of new 4 KB sector hard disks with the new VHDX virtual storage standard.
- Live Storage Migration: Maintain maximized service-level availability even while moving virtual machine storage between host servers independent of the actual virtual machine.
- SMB Multi-channel: Enable aggregation of network bandwidth and network fault tolerance when multiple paths are available between SMB clients and file servers.
- NFS v4.1: For Windows Storage Server 2012 R2, Server for NFS has been updated to support continuous availability. These improvements make it possible to reliably store and run VMware ESX on a virtual machine that is running Windows Server 2012 by using the NFS protocol to share files. Additional improvements in failover clustering take advantage of better resilience to hardware and software outages that may afflict individual cluster nodes. At the same time, failover clustering isolates VMware ESX hypervisor hosts from intermittent glitches during failovers.
- iSCSI: Some applications require block storage. iSCSI Target Server can provide these applications with continuously available block storage. Since the storage is remotely accessible it can also consolidate block storage for central or branch office locations. By using boot-capable NICs or a software loader, you can deploy hundreds of diskless servers. This is ideal for large deployments of identical operating system images, such as a Hyper-V server farm or High Performance Computing (HPC) clusters.
- **Data Deduplication:** Data deduplication enables Windows Storage Server 2012 R2 to store more data in less physical space and achieve storage efficiency that is significantly higher than was possible in previous releases of Windows Storage Server that used Single Instance Storage (SIS) or NTFS file system compression. Data deduplication uses variable size chunking and compression, which deliver optimization ratios of 2:1 for general file servers and up to 20:1 for virtualization data. Evaluate your deduplication savings with the included deduplication evaluation tool - When the deduplication feature is installed, the Deduplication Evaluation Tool (DDPEval.exe) is automatically installed to the \Windows\System32\ directory. This tool can be copied from any Windows Storage Server 2012 R2 installation to systems running Windows Server 2012 R2, Windows Server 2008 R2, or Windows 7. You can use it to determine the expected savings that you would get if deduplication is enabled on a particular volume. DDPEval.exe supports local drives, and it supports evaluating mapped or unmapped remote shares.
- **Volume Shadow Copy Service:** Creates point-in-time copies (snapshots) of files and folders at predetermined time intervals that can then be accessed from client computers.

### Standard Features

- **VSS for Remote SMB File Shares:** Leverage proven Volume Shadow Copy Service (VSS) to offload snapshot and backup operations to remote storage from VSS hardware providers within Hyper-V virtual machines.
- **Hosted Branch Cache:** Using client/server architecture, Windows 7/8 client computers can cache content on the local network via the Hosted Cache running on the StoreEasy 1000 Storage. Other clients who need the same content retrieve it directly from the Hosted Cache.
- **DFS Namespaces:** Enables you to group shared folders that are located on different servers into one or more logically structured namespaces. Each namespace appears to users as a single shared folder with a series of subfolders. However, the underlying structure of the namespace can consist of numerous file shares that are located on different servers and in multiple sites.
- **Distributed File System Replication (DFS-R):** Enables you to efficiently replicate folders (including those referred to by a DFS namespace path) across multiple servers and sites. DFS Replication uses a compression algorithm known as remote differential compression (RDC). RDC detects changes to the data in a file, and it enables DFS Replication to replicate only the changed file blocks instead of the entire file.
- **Work Folders:** With Work Folders users can store and access work files on personal computers and devices, often referred to as bring-your-own device (BYOD), in addition to corporate PCs. Users gain a convenient location to store work files, and they can access them from anywhere. Organizations maintain control over corporate data by storing the files on centrally managed file servers, and optionally specifying user device policies such as encryption and lock-screen passwords. Work Folders can be deployed with existing deployments of Folder Redirection, Offline Files, and home folders. Work Folders stores user files in a folder on the server called a sync share. You can specify a folder that already contains user data, which enables you to adopt Work Folders without migrating servers and data or immediately phasing out your existing solution
- **File Server Resource Manager (FSRM):** File Server Resource Manager is a set of features that allow you to manage and classify data that is stored on file servers. File Server Resource Manager includes the following features:
  - **Storage reports:** Storage reports are used to help you identify trends in disk usage and how your data is classified. You can also monitor a selected group of users for attempts to save unauthorized files.
  - **File Classification Infrastructure:** File Classification Infrastructure provides insight into your data by automating classification processes so that you can manage your data more effectively. You can classify files and apply policies based on this classification. Example policies include dynamic access control for restricting access to files, file encryption, and file expiration. Files can be classified automatically by using file classification rules or manually by modifying the properties of a selected file or folder.
  - **File Management Tasks:** File Management Tasks enables you to apply a conditional policy or action to files based on their classification. The conditions of a file management task include the file location, the classification properties, the date the file was created, the last modified date of the file, or the last time the file was accessed. The actions that a file management task can take include the ability to expire files, encrypt files, or run a custom command.
  - **Quota management:** Quotas allow you to limit the space that is allowed for a volume or folder, and they can be automatically applied to new folders that are created on a volume. You can also define quota templates that can be applied to new volumes or folders.
  - **File screening management:** File screens help you control the types of files that user can store on a file server. You can limit the extension that can be stored on your

### Standard Features

shared files. For example, you can create a file screen that does not allow files with an MP3 extension to be stored in personal shared folders on a file server.

- Initial Configuration Tasks Wizard: Simplifies and accelerates new device deployment by presenting basic system settings on your first boot.
- Server Manager
- Unlimited Client Access Licenses (CALs) included

**NOTE:** Windows Storage Server 2012 R2 and Windows Server 2012 R2 are built on the same code base. Applications certified for Windows Server are expected to have the same application compatibility profile on Windows Storage Server. Windows Storage Server 2012 R2 and Windows Server 2012 have the same application frameworks, services and plumbing to support running the full breadth of Window-compatible applications. Applications that rely upon certain roles that are removed from Windows Storage Server 2012 R2, such as fax server, active directory domain controller or terminal services will not be able to leverage those roles. Independent Software Vendors (ISVs) ultimately decide what versions and editions of Windows are supported by their products and users should review ISV compatibility and support information before purchasing. HP StoreEasy customers should review the End User License Agreement (EULA) to see the types of applications that are permitted for installation. All versions of Windows Storage Server 2012 R2 can join Active Directory domains, but cannot be a domain controller.

More information on Windows Storage Server 2012 R2 Standard Edition can be found here:  
<http://technet.microsoft.com/en-us/library/jj643303.aspx>

Processor / Cache Memory	StoreEasy 1440	StoreEasy 1540	StoreEasy 1640	StoreEasy 1840
	Intel® Xeon® E5-2403v2(1.8GHz/4-core/10MB/6.4GT/s QPI/80W, DDR3-1333) Processor	Intel® Core® i3-4130 (3.4GHz/2-core/3MB/54W, HT) Processor	Intel® Xeon® E5-2407v2(2.4GHz/4-core/10MB/6.4GT/s QPI/80W, DDR3-1333)	Intel® Xeon® E5-2609 v2 (2.5GHz/4-core/10MB/6.4GT-s QPI/80W)

Memory	Type	Unbuffered (UDIMM) or Registered (RDIMM) depending on model			
	Maximum (by O/S license)	2TB			
		StoreEasy 1440	StoreEasy 1540	StoreEasy 1640	StoreEasy 1840
Standard DIMM Sockets		8GB (2 x 4GB)	8GB (2x 4GB)	16GB (4 x 4GB)	16GB (4 x 4GB)
		12	4	12	24

Network Controller	StoreEasy 1440	StoreEasy 1540	StoreEasy 1640	StoreEasy 1840
NIC Ports	4	2	4	4
Controller	HP Ethernet 1Gb 4-port 366i Adapter	HP Ethernet 1Gb 2-port 332i Adapter	HP Ethernet 1Gb 4-port 366i Adapter	HP Ethernet 1Gb 4-port 331FLR Adapter

Expansion Slots	Expansion Slots	Technology	Bus Width**	Connector Width	Form Factor	Notes
StoreEasy 1440	1	PCIe 3.0	X16	X16	Full-height, half-length	SA P222 installed

### Standard Features

2      PCIe 2.0      X4      X8      (250mm)  
Low profile slot

\*Indicates the number of physical electrical lanes running to the connector.

	Expansion Slots #	Technology	Bus Width**	Connector Width	Form Factor	Notes
<b>StoreEasy 1540</b>	1	PCIe 2.0	X1	X4	Half Length/Full Height	
	2	PCIe 2.0	X1	x8	Full Length/Full Height	
	3	PCIe 3.0	X8	X8	Full Length/Full Height	SA P222 installed
	4	PCIe 3.0	X8	X16	Full Length/Full Height	

\*Indicates the number of physical electrical lanes running to the connector.

**NOTE:** No additional Smart Array Controllers can be added to the StoreEasy 1540

	Expansion Slots #	Technology	Bus Width**	Connector Width	Form Factor	Notes
<b>StoreEasy 1640</b>	1	PCIe Gen3.0	X4	X8	Full Length, Full Height Slot	
	2	PCIe Gen3.0	X8	X16	Half Length, Full Height Slot	
	3	PCIe Gen3.0	X8	X8	Half Length, Full Height Slot	SA P822 installed
	4	PCIe Gen2.0	X4	X8	Low Profile	

\*\* Indicates the number of physical electrical lanes running to the connector.

### StoreEasy 1840

Primary Riser (Standard)	Expansion Slots #	Technology	Bus Width**	Connector Width	Bus Number*	Form Factor	Notes
	1	PCIe 3.0	X16	X16	7	Full Length, Full Height Slot	
	2	PCIe 3.0	X8	X8	10	Half Length, Full Height Slot	SA P822 installed
	3	PCIe 2.0	X4	X8	13	Half Length,	

### Standard Features

Full Height  
Slot

\* Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number

\*\* Indicates the number of physical electrical lanes running to the connector.

**NOTE:** When populating the second optional riser slot, the second processor must be installed.

**NOTE:** All slots support up to 150w PCIe cards, but an additional Power Cord Option is required (PN 669777-B21). See Option Section below for offering.

#### StoreEasy 1840

PCIe Riser (Optional 3- slot)	Expansion Slots #	Technology	Bus Width**	Connector Width	Bus Number*	Form Factor	Notes
	4	PCIe 3.0	X16	X16	16	Full Length, Full Height Slot	Proc 2
	5	PCIe 3.0	X8	X8	20	Half Length, Full Height Slot	Proc 2
	6	PCIe 3.0	X4	X8	23	Half Length, Full Height Slot	Proc 2

\* Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number

\*\* Indicates the number of physical electrical lanes running to the connector.

**NOTE:** When populating the second optional riser slot, the second processor must be installed.

**NOTE:** All slots support up to 150w PCIe cards, but an additional Power Cord Option is required (669777-B21). See Option Section below for offering

#### StoreEasy 1840

PCIe Riser (Optional 2- slot)	Expansion Slots #	Technology	Bus Width**	Connector Width	Bus Number*	Form Factor	Notes
	4	PCIe 3.0	X16	X16	16	Full Length, Full Height	Proc 2
	5	PCIe 3.0	X16	X8	16	Half Length, Full Height	Proc 2

\* Default bus assignment (in decimal). Inserting cards with PCI bridges may alter the actual bus assignment number

\*\* Indicates the number of physical electrical lanes running to the connector.

#### Storage Controller

	StoreEasy 1440	StoreEasy 1540	StoreEasy 1640	StoreEasy 1840
Controller(s)	HP Smart Array P222/512 FBWC 6Gb 1-port Int/1-port Ext SAS Controller	HP Smart Array P222/512 FBWC 6Gb 1-port Int/1-port Ext SAS Controller	HP Smart Array P822/2GB FBWC 2-ports Int/4-ports Ext SAS Controller	HP Smart Array P822/2GB FBWC 2-ports Int/4-ports Ext SAS Controller
RAID	0,1,10,5,50,6,60,1 ADM, 10 ADM	0,1,10,5,50,6,60,1 ADM, 10 ADM	0, 1, 1+0, 5, 6, 50, 60, and 1 ADM	0, 1, 1+0, 5, 6, 50, 60, and 1 ADM
Internal SAS	1	1	2	2

### Standard Features

connectors

External SAS connectors	1	1	4	4
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**NOTE:** RAID 6, 6+0 can be enabled with 512 MB FBWC and Smart Array Advanced Pack 2.0 License key included with all StoreEasy models

### Storage

Hard Drives

	StoreEasy 1440	StoreEasy 1540	StoreEasy 1640	StoreEasy 1840
Internal	(4) Four 3.5" (Large Form Factor) hot-plug bays	(4) Four 3.5" (Large Form Factor) hot-plug bays	(12) Twelve 3.5" (Large Form Factor) hot-plug bays in front and (2) Two 2.5" (Small Form Factor) hot-plugs bays in rear	(25) 2.5" (Small Form Factor) hot-plug bays
External	Support for D2000, D3000, D6000 (D3000 or D6000 requires a different Smart Array controller than the standard SA P222)	Support for D2000, D3000, D6000 (D3000 or D6000 requires a different Smart Array controller than the standard SA P222)	Support for D2000, D3000, D6000	Support for D2000, D3000, D6000

### Maximum Storage Capacity (raw)

	StoreEasy 1440	StoreEasy 1540	StoreEasy 1640	StoreEasy 1840
Internal SATA	16TB	16TB	48TB	23TB
Internal SAS	16TB	16TB	48TB	27.6TB
Internal plus External	208TB	208TB	1.536PB	2.327PB
	P222 allows 4 x 4TB internal, 48 x 4TB external using 4 D2600s	P222 allows 4 x 4TB internal, 48 x 4TB external using 4 D2600s	12 x 4TB HDDs internal, plus 384 x 4TB HDDs using 32 D2600s (requires 4 P822s)	23 x 1.2TB HDDs internal, plus 586 x 4TB HDDs using 48 D2600s (requires 6 P822s)

### Power Supply

	StoreEasy 1440	StoreEasy 1540	StoreEasy 1640	StoreEasy 1840
	460 Watts Gold, Hot Plug (optional redundant)	460 Watts Gold, Hot Plug (optional redundant)	750 Watts Gold, Hot Plug Redundant	750 Watts Gold, Hot Plug Redundant

### Power Cords

	StoreEasy 1440	StoreEasy 1540	StoreEasy 1640	StoreEasy 1840
	One high voltage power cord (IEC C13 to C14) standard	Regional or country specific power cord required	Two high voltage power cords (IEC C13 to C14) standard	Two high voltage power cords (IEC C13 to C14) standard

**NOTE:** HP StoreEasy 1440, 1640 and 1840 no longer ship standard with a 12-foot NEMA 5-15P to C13 power cords (227099-001) that allow connection to 110V US wall outlets in a home or office. These products are primarily connected to PDU's in data center racks so they now ship standard with only a

### Standard Features

PDU 6-foot C-14 to C13 power cord (142258-001). If a user wishes to power a system using a 110V receptacle (NEMA-15) use the 12-foot NEMA 5-15 to C13 power cord (227099-001). See Power Cords section for Worldwide Power Cord options.

**NOTE:** The HP StoreEasy 1540 Storage product is a tower server that ships standard with a 6' country specific NEMA power cord that allows connection to wall outlets in a home or office. If customers require additional local power cords, they can check the power cord matrix for the appropriate country specific sku. Please see the following power cord matrix: <http://www.hp.com/go/powercordmatrix>  
To install the StoreEasy 1540 Storage product in a in a rack, the Tower to Rack Conversion kit (417705-B21 ) is required as well as a PDU power cord (416151-B21) to connect to a PDU in a data center rack.

	StoreEasy 1440	StoreEasy 1540	StoreEasy 1640	StoreEasy 1840
<b>System Fans</b>	5 fan modules ship standard, redundant	One (1) Non-redundant system fan ships standard One (1) Non-redundant PCIe fan ships standard	6 Hot-plug Redundant Fans ship standard	6 (N+1 redundancy standard)
<b>Form Factor</b>	1U Rack form factor(includes rail kit)	Micro ATX Tower (4U)	2U Rack form factor(includes rail kit)	2U Rack form factor(includes rail kit)

### Other Feature Specifications

See the corresponding ProLiant QuickSpecs for additional feature specifications.

StoreEasy 1440 (DL360e Gen 8):

[http://h18000.www1.hp.com/products/quickspecs/14327\\_div/14327\\_div.pdf](http://h18000.www1.hp.com/products/quickspecs/14327_div/14327_div.pdf)

StoreEasy 1540 (ML310e v2 Gen 8):

[http://h18000.www1.hp.com/products/quickspecs/14564\\_div/14564\\_div.pdf](http://h18000.www1.hp.com/products/quickspecs/14564_div/14564_div.pdf)

StoreEasy 1640 (DL380e Gen 8):

[http://h18000.www1.hp.com/products/quickspecs/14328\\_div/14328\\_div.pdf](http://h18000.www1.hp.com/products/quickspecs/14328_div/14328_div.pdf)

StoreEasy 1840 (DL380p Gen 8):

[http://h18004.www1.hp.com/products/quickspecs/14212\\_div/14212\\_div.html](http://h18004.www1.hp.com/products/quickspecs/14212_div/14212_div.html)

**NOTE:** Options offered in the HP ProLiant Servers listed above will work in the respective StoreEasy product if supported on Windows Server 2012 R2, Standard Edition.

Because StoreEasy is used as a storage product not every possible option available in the equivalent ProLiant server is listed in the StoreEasy 1X40 QuickSpecs. Options that are shown in this document are the most common ones needed for the primary StoreEasy use model of file serving

### Optional Software

#### **HP Data Protector software**

HP Data Protector Software is enterprise data protection and disaster recovery, ensuring recovery from any disruption. Data Protector integrates a variety of techniques to eliminate backup and recovery windows. The capabilities to eliminate planned downtime range from online backup and backup of open files to zero-downtime, zero-impact backup. The software provides industry-leading instant recovery as well as several disaster recovery alternatives to eliminate unplanned downtime, allowing recovery of entire data centers in minutes.

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

For more information on HP Data Protector: <http://www.hp.com/go/dataprotector>

#### **HP LiveVault**

HP LiveVault enables organizations to protect their critical application data and manage their long-term retention needs in the cloud. The LiveVault agent that is installed on HP StoreEasy Storage encrypts all data before transferring it. All data remains encrypted at HP's secure, offsite, underground data centers - as well as on the optional TurboRestore(TM) appliance which resides in the customer data center. To ensure the physical security and availability of stored data, the LiveVault service mirrors all data to a second, geographically dispersed data center for full failover and redundancy. For a 30 day free trial of HP LiveVault go to: <http://www.remotedatabackups.com/storeeasy>

### Models (Pre-Configured)

These models come with factory-installed drives and the Microsoft Windows Storage Server 2012 R2 Standard Edition operating system pre-installed

#### Choose a Pre-configured Model

**NOTE:** All options ship separately and are not factory integrated.

**NOTE:** Model names are based on raw storage capacity, not available user storage.

### HP StoreEasy 1000 Storage products

<b>Common Specifications</b>	Operating System	Microsoft® Windows Storage Server 2012 R2, Standard Edition
	Licenses	Smart Array Advanced Pack 2.0 License key <b>NOTE:</b> for more information, visit: <a href="http://www.hp.com/go/smartarray">www.hp.com/go/smartarray</a>
		HP iLO Advanced including 1yr 24x7 Technical Support and Updates Single Server License <b>NOTE:</b> For more information, visit: <a href="http://www.hp.com/go/ilo">http://www.hp.com/go/ilo</a>

### StoreEasy 1440 Models

<b>Common Specifications</b>	<b>Processor</b>	(1) Intel® Xeon® E5-2403v2(1.8GHz/4-core/10MB/6.4GTs QPI/80W, DDR3-1333)
	<b>Memory</b>	8GB (2 x 4GB Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory)
	<b>Storage Controller</b>	HP Smart Array P222/512 FBWC 6Gb 1-port Int/1-port Ext SAS Controller
	<b>Internal Drive Support</b>	(4) Four 3.5" (Large Form Factor) hot-plug drive bays
	<b>Network Ports</b>	4 x Gigabit Ethernet
	<b>Expansion Slots</b>	2 x PCIe (one slot occupied by Smart Array P222)
	<b>Power</b>	1 x 460W Gold Power Supply (optional redundant)
	<b>Form Factor</b>	1U Rack

<b>HP StoreEasy 1440 4TB SATA Storage</b>	E7W71A
(4 x 1TB 6G 7.2K RPM SATA LFF HDDs pre-installed)	
<b>HP StoreEasy 1440 8TB SATA Storage</b>	E7W72A
(4 x 2TB 6G 7.2K RPM SATA LFF HDDs pre-installed)	
<b>HP StoreEasy 1440 12TB SATA Storage</b>	E7W73A
(4 x 3TB 6G 7.2K RPM SATA LFF HDDs pre-installed)	
<b>HP StoreEasy 1440 16TB SATA Storage</b>	E7W74A
(4 x 4TB 6G 7.2K RPM SATA LFF HDDs pre-installed)	

### StoreEasy 1540 Models

<b>Common Specifications</b>	<b>Processor</b>	(1) Intel® Core™ i3-4130 (3.4GHz/2-core/3MB/54W, HT)
	<b>Memory</b>	8GB (2 x 4GB Dual Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory)
	<b>Storage Controller</b>	HP Smart Array P222/512 FBWC 6Gb 1-port Int/1-port

### Models (Pre-Configured)

<b>Internal Drive Support</b>	Ext SAS Controller (4) Four 3.5" (Large Form Factor) hot-plug drive bays
<b>Network Ports</b>	2 x Gigabit Ethernet
<b>Expansion Slots</b>	4 x PCIe (one slot occupied by Smart Array P222)
<b>Power</b>	1 x 460W Gold Power Supply (optional redundant)
<b>Form Factor</b>	4U Micro ATX Tower

**HP StoreEasy 1540 4TB SATA Storage** E7W76A

(4 x 1TB 6G 7.2K RPM SATA LFF HDDs pre-installed)

**HP StoreEasy 1540 8TB SATA Storage** E7W77A

(4 x 2TB 6G 7.2K RPM SATA LFF HDDs pre-installed)

**HP StoreEasy 1540 12TB SATA Storage** E7W78A

(4 x 3TB 6G 7.2K RPM SATA LFF HDDs pre-installed)

**HP StoreEasy 1540 16TB SATA Storage** E7W79A

(4 x 4TB 6G 7.2K RPM SATA LFF HDDs pre-installed)

**NOTE:** A regional or country specific power cord option must be ordered with StoreEasy 1540. See power cord options section.

### StoreEasy 1640 Models

<b>Common Specifications</b>	<b>Processor</b>	(1) Intel® Xeon® E5-2407v2 (2.4GHz/4-core/10MB/80W)
	<b>Memory</b>	16GB (4 x 4GB Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory)
	<b>Storage Controller</b>	HP Smart Array P822/2GB FBWC 2-ports Int/4-ports Ext SAS Controller
	<b>Internal Drive Support</b>	(12) Twelve 3.5" (Large Form Factor) hot-plug drive bays in front, Two 2.5" (Small Form Factor) hot-plug drive bays in rear occupied by OS drives
	<b>Network Ports</b>	4 x Gigabit Ethernet
	<b>Expansion Slots</b>	4 x PCIe (one slot occupied by Smart Array P222)
	<b>Power</b>	2 x 750W Gold Power Supply
	<b>Form Factor</b>	2U rack

**HP StoreEasy 1640 8TB SAS Storage** E7W81A

(8 x 1TB 6G 7.2K RPM LFF SAS HDDs pre-installed, 4 open LFF slots)

**HP StoreEasy 1640 16TB SAS Storage** E7W82A

(8 x 2TB 6G 7.2K RPM LFF SAS HDDs pre-installed, 4 open LFF slots )

**HP StoreEasy 1640 24TB SAS Storage** E7W83A

(8 x 3TB 6G 7.2K RPM LFF SAS HDDs pre-installed, 4 open LFF slots )

**HP StoreEasy 1640 32TB SAS Storage** E7W84A

(8 x 4TB 6G 7.2K RPM LFF SAS HDDs pre-installed, 4 open LFF slots )

**NOTE:** When adding drives to the any of the 4 open LFF slots for these models, HP recommends as a best practice to use all internal data drives of the same type and capacity.

### StoreEasy 1840 Models

<b>Common Specifications</b>	<b>Processor</b>	(1) Intel® Xeon® E5-2609 v2 (2.5GHz/4-core/10MB/6.4GT-s QPI/80W)
	<b>Memory</b>	16GB (4 x 4GB Single Rank x4 PC3L-12800R (DDR3-1600)

### Models (Pre-Configured)

	Registered CAS-11 Low Voltage Memory)
<b>Storage Controller</b>	HP Smart Array P822/2GB FBWC 2-ports Int/4-ports Ext SAS Controller
<b>Internal Drive Support</b>	(25) Twenty five 2.5" Small Form Factor (SFF) hot-plug drive bays, two bays occupied by OS drives
<b>Network Ports</b>	4 x Gigabit Ethernet
<b>Expansion Slots</b>	3 x PCIe standard, 6 x PCIe with optional riser (one slot occupied by Smart Array P822)
<b>Power</b>	2 x 750W Gold power supplies
<b>Form Factor</b>	2U Rack

#### HP StoreEasy 1840 9.9TB SAS Storage

E7W86A

(11 x 900GB 6G 10K RPM SAS SFF HDDs pre-installed, 12 open SFF slots)

#### HP StoreEasy 1840 13.2TB SAS Storage

E7W87A

(11 x 1.2TB 6G 10K RPM SAS SFF HDDs pre-installed, 12 open SFF slots )

**NOTE:** When adding drives to the any of the 12 open SFF slots for these models, HP recommends as a best practice to use all internal data drives of the same type and capacity.

### Models (Drives Configure-to-Order)

The StoreEasy 1440, and 1540 models below have no internal drives pre-installed. These models require selection of drive type and quantity for factory integration.

**NOTE:** 4 drives of the same type and capacity must be selected for the StoreEasy 1440 and 1540 models. These models cannot ship with less than 4 drives pre-configured so that the operating system can be pre-installed. The 4 drives will be configured as RAID 6 for OS installation. Other drive types and capacities can be used in external enclosures.

The StoreEasy 1640 and 1840 models come with 2 x300GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise drives factory configured as RAID 1 with OS pre-installed. (The OS drives are in the two rear bays of the StoreEasy 1630 and in two of the front bays for the StoreEasy 1840. The StoreEasy 1640 and 1840 can ship with just the OS drives and no data drives. If data drives are needed select the drive type and quantity for factory integration.

**NOTE:** HP recommends that the internal data drives for these models be the same type and capacity. The data drives don't have to be the same as the OS drives.

### Choose a Base Model, then Select Hard Drives

**NOTE:** Options (other than drives selected as part of the configure-to-order process) ship separately and are not factory integrated.

### HP StoreEasy 1000 Storage products (Base models)

<b>Common Specifications</b>	Operating System	Microsoft® Windows Storage Server 2012 R2, Standard Edition
	Licenses	Smart Array Advanced Pack 2.0 License key
		<b>NOTE:</b> For more information, visit: <a href="http://www.hp.com/go/smartarray">www.hp.com/go/smartarray</a>
		HP iLO Advanced including 1yr 24x7 Technical Support and Updates Single Server License
		<b>NOTE:</b> For more information, visit: <a href="http://www.hp.com/go/ilo">http://www.hp.com/go/ilo</a>

#### StoreEasy 1440 Storage

E7W70A

**NOTE:** This model does not include pre-configured HDDs. A minimum of 4 HDDs of the same type and a capacity greater than 146GB must be ordered for factory integration. This system cannot be shipped with less than 4 HDDs. The four drives will be factory configured as RAID 6 with the OS pre-installed.

<b>Specifications</b>	Same as the StoreEasy 1440 pre-configured models listed above	
<b>Drive Options</b>	Minimum Number of	4
	Drives Required	
	Maximum Number of	4
	Drives Allowed	

#### StoreEasy 1540 Storage

E7W75A

**NOTE:** This model does not include pre-configured HDDs. A minimum of 4 HDDs of the same type and a capacity greater than 146GB must be ordered for factory integration. This system cannot be shipped with less than 4 HDDs. The four drives will be factory configured as RAID 6 with the OS pre-installed.

**NOTE:** A country specific power cord option must be ordered with StoreEasy 1540. See power cord options section.

<b>Specifications</b>	Same as the StoreEasy 1540 pre-configured models listed above	
<b>Drive Options</b>	Minimum Number of	4
	Drives Required	
	Maximum Number of	4
	Drives Allowed	

### Models (Drives Configure-to-Order)

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#### StoreEasy 1640 Storage

E7W80A

**NOTE:** This model does not include pre-configured data drives. It does include 2 x 300GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise drives factory configured as RAID 1 with OS pre-installed in the rear bays. Data drives can be added for factory integration.

<b>Specifications</b>	Same as the StoreEasy 1640 pre-configured models listed above	
<b>Drive Options</b>	Minimum Number of	0
	Drives Required	
	Maximum Number of	12
	Drives Allowed	

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#### StoreEasy 1840 Storage

E7W85A

**NOTE:** This model does not include pre-configured data drives. It does include 2 x 300GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise drives factory configured as RAID 1 with OS pre-installed in two front bays. Data drives can be added for factory integration.

<b>Specifications</b>	Same as the StoreEasy 1840 pre-configured models listed above	
<b>Drive Options</b>	Minimum Number of	0
	Drives Required	
	Maximum Number of	23
	Drives Allowed	

### Options

#### The following options are available for both StoreEasy Pre-configured and Drive Configure-to-Order models

**NOTE:** Options ship separately and are not factory integrated

**NOTE:** Carefully match options to your model to ensure compatibility

#### Add Another Processor

<b>StoreEasy 1440</b>	HP DL360e Gen8 Intel® Xeon® E5-2403v2 (1.8GHz/4-core/10MB/80W) Processor Kit	708481-B21
<b>StoreEasy 1640</b>	HP DL380e Gen8 Intel® Xeon® E5-2407v2 (2.4GHz/4-core/10MB/80W) Processor Kit	708497-B21
<b>StoreEasy 1840</b>	HP DL380p Gen8 Intel® Xeon® E5-2609v2 (2.5GHz/4-core/10MB/80W) Processor Kit	715222-B21

#### Add More Memory

**NOTE:** HP recommends that you add the same type memory to the product that is shipped standard with the product

**NOTE:** Number of available DIMM sockets varies by model. **NOTE:** HP memory from previous generation servers are not fully compatible with Smart Memory features in Gen8 Servers.

<b>StoreEasy 1440 / StoreEasy 1540</b>	<b>Unbuffered with ECC DIMMs (UDIMMs)</b>	
	HP 4GB (1x4GB) Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit (StoreEasy 1440 only)	713981-B21
	HP 4GB (1x4GB) Dual Rank x8 PC3L-10600E (DDR3-1333) Unbuffered CAS-9 Low Voltage Memory Kit (StoreEasy 1540 only)	647907-B21
<b>StoreEasy 1640 / StoreEasy 1840</b>	<b>Registered DIMMs (RDIMMs)</b>	
	HP 4GB (1x4GB) Single Rank x4 PC3L-12800R (DDR3-1600) Registered CAS-11 Low Voltage Memory Kit	713981-B21
	<b>NOTE:</b> All DDR3 memory option kits consist of one DIMM per kit. <b>NOTE:</b> PC3L is a low voltage memory.	

#### Add Optical Drives

<b>StoreEasy 1440</b>	HP 9.5mm SATA DVD-ROM JackBlack Optical Drive	652238-B21
	HP 9.5mm SATA DVD-RW JackBlack Optical Drive	652241-B21
<b>StoreEasy 1540</b>	HP Half-Height SATA DVD ROM JackBlack Optical Drive	624189-B21
	HP Half-Height SATA DVD RW JackBlack Optical Drive	624192-B21

#### Add a Network Adapter

**NOTE:** Expansion slot availability varies by model.

**NOTE:** Multifunction Server Adapters support the installed Microsoft Windows Server Scalable Networking Pack, which enables TCP Chimney offload, Receive-side Scaling (RSS), and Network Direct Memory Access (NetDMA) features.

<b>StoreEasy 1440/1540</b>	<b>Gigabit Ethernet Adapters</b>	
	HP NC112T PCI Express Gigabit Server Adapter	503746-B21
	HP NC365T 4-port Ethernet Server Adapter	593722-B21
	HP Ethernet 1Gb 2-port 361T Adapter	652497-B21
	HP Ethernet 1Gb 4-port 331T Adapter	647594-B21
	HP Ethernet 1Gb 2-port 332T Adapter	615732-B21
	<b>10 Gigabit Ethernet Adapters</b>	
	<b>NOTE:</b> No more than two 10GbE I/O devices are supported in a single system.	
	<b>NOTE:</b> A minimum of two Gigabytes (2 GB) of server memory is required per each	

### Options

adapter.

**NOTE:** Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately. See [cables/options](#) below.

HP NC523SFP 10Gb 2-port Server Adapter	593717-B21
HP NC552SFP 10Gb 2-port Ethernet Server Adapter	614203-B21
HP Ethernet 10Gb 2-port 530SFP Adapter (StoreEasy 1440 only)	652503-B21
HP Ethernet 10Gb 2-port 530T Adapter (StoreEasy 1440 only)	656596-B21
HP Ethernet 10Gb 2-port 560SFP+ Adapter	665249-B21

**NOTE:** Please see the [QuickSpecs for Technical Specifications](#) and additional information: [www.hp.com/go/ProLiantNICs](http://www.hp.com/go/ProLiantNICs).

### StoreEasy 1640

#### Gigabit Ethernet adapters

HP NC112T PCI Express Gigabit Server Adapter	503746-B21
HP NC365T 4-port Ethernet Server Adapter	593722-B21
HP Ethernet 1Gb 4-port 331T Adapter	647594-B21
HP Ethernet 1Gb 2-port 332T Adapter	615732-B21
HP Ethernet 1Gb 2-port 361T Adapter	652497-B21

#### 10 Gigabit Ethernet Adapters

**NOTE:** No more than two 10GbE I/O devices are supported in a single system.

**NOTE:** A minimum of two Gigabytes (2 GB) of server memory is required per each adapter.

**NOTE:** Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately.

HP NC523SFP 10Gb 2-port Server Adapter	593717-B21
HP Ethernet 10Gb 2-port 530SFP Adapter	652503-B21
HP Ethernet 10Gb 2-port 530T Adapter	656596-B21
HP Ethernet 10Gb 2-port 560SFP+ Adapter	665249-B21
HP NC552SFP 10Gb 2-port Ethernet Server Adapter	614203-B21

**NOTE:** Please see the [QuickSpecs for Technical Specifications](#) and additional information: [www.hp.com/go/ProLiantNICs](http://www.hp.com/go/ProLiantNICs)

#### HP InfiniBand

QLogic InfiniBand 4X QDR PCI-E G2 Dual Port HCA	583211-B21
HP InfiniBand 4X QDR ConnectX-2 PCIe G2 Dual Port HCA	592520-B21
HP Infiniband FDR/Ethernet 10Gb/40Gb 2-port 544QSFP Adapter	649281-B21

### StoreEasy 1840

#### Gigabit Ethernet adapters

HP NC112T PCI Express Gigabit Server Adapter	503746-B21
HP NC365T 4-port Ethernet Server Adapter	593722-B21
HP Ethernet 1Gb 4-port 331T Adapter	647594-B21
HP Ethernet 1Gb 2-port 361T Adapter	652497-B21
HP Ethernet 1Gb 2-port 332T Adapter	615732-B21

#### 10 Gigabit Ethernet Adapters

**NOTE:** No more than two 10GbE I/O devices are supported in a single system.

**NOTE:** A minimum of two Gigabytes (2 GB) of server memory is required per each

### Options

adapter.

**NOTE:** Direct Attach Cable (DAC) for copper environments or fiber transceivers and cables for fiber-optic environments must be purchased separately.

HP NC523SFP 10Gb 2-port Server Adapter	593717-B21
HP Ethernet 10Gb 2-port 530SFP Adapter	652503-B21
HP Ethernet 10Gb 2-port 530T Adapter	656596-B21
HP Ethernet 10Gb 2-port 560SFP+ Adapter	665249-B21
HP NC552SFP 10Gb 2-port Ethernet Server Adapter	614203-B21
HP Ethernet 10Gb 2-port 570SFP+ Adapter	718904-B21
HP Ethernet 10Gb 2-port 571SFP+ Adapter	728987-B21
<b>HP InfiniBand</b>	
QLogic InfiniBand 4X QDR PCI-E G2 Dual Port HCA	583211-B21
HP InfiniBand 4X QDR ConnectX-2 PCIe G2 Dual Port HCA	592520-B21
HP Infiniband FDR/Ethernet 10Gb/40Gb 2-port 544QSFP Adapter	649281-B21

### HP Security

HP Trusted Platform Module Option	488069-B21
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**NOTE:** The TPM (Trusted Platform Module) is a microcontroller chip that can securely store artifacts used to authenticate the server platform. These artifacts can include passwords, certificates and encryption keys. Windows® BitLocker™ Drive Encryption (BitLocker) is a data protection feature available in Windows Server® 2008. BitLocker leverages the enhanced security capabilities of a Trusted Platform Module (TPM) version 1.2. The TPM works with BitLocker to help protect user data and to ensure that a server running Windows Server 2008 has not been tampered with while the system was offline. For more information about TPM, including a white paper, go to: [www.hp.com/go/TPM](http://www.hp.com/go/TPM).

**NOTE:** The TPM key is unique to every TPM deployed server and must be retained. Misplacing or losing the key could result in data loss.

### Add More Storage

HP StoreEasy Storage products come standard with at least one installed Smart Array Controller that supports internal drives. The Smart Array Controllers also have external ports for expansion to external storage.

**NOTE:** Expansion slot availability varies by model.

**NOTE:** Only one additional Smart Array Controller can be installed in the StoreEasy 1540 in slot 4.

#### StoreEasy 1440/1540

##### SAS Controllers

##### HP Smart Array P222 Controller

HP Smart Array P222/512 FBWC 6Gb 1-port Int/1-port Ext SAS Controller	631667-B21
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##### Smart Array P421 Controller

HP Smart Array P421/1GB FBWC 6Gb 2-ports Ext SAS Controller	631673-B21
HP Smart Array P421/2GB FBWC 6Gb 2-ports Ext SAS Controller	631674-B21
HP Smart Array P431/2GB FBWC 12Gb 2-ports Ext SAS Controller	698531-B21

##### Optional Upgrades (StoreEasy 1440 only)

HP 2GB P-series Smart Array Flash Backed Write Cache	631681-B21
HP SmartCache No Media 24x7 Technical Support 1 Svr License	D7S26A
HP SmartCache No Media 24x7 Technical Support Flexible License	D7S27A
HP SmartCache No Media 24x7 Technical Support Electronic License	D7S27AAE

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional

### Options

information:

[http://h18000.www1.hp.com/products/quickspecs/14227\\_div/14227\\_div.html](http://h18000.www1.hp.com/products/quickspecs/14227_div/14227_div.html)  
(Smart Array P222 Controller)

[http://h18000.www1.hp.com/products/quickspecs/14229\\_div/14229\\_div.html](http://h18000.www1.hp.com/products/quickspecs/14229_div/14229_div.html)  
(Smart Array P421 Controller and SmartCache)

#### Host Bus Adapter

HP H221 PCIe 3.0 SAS Host Bus Adapter 729552-B21

HP H222 Host Bus Adapter 650926-B21

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information:

[http://h18004.www1.hp.com/products/quickspecs/14336\\_div/14336\\_div.html](http://h18004.www1.hp.com/products/quickspecs/14336_div/14336_div.html)  
(HBA 220)

[http://h18004.www1.hp.com/products/quickspecs/14222\\_div/14222\\_div.html](http://h18004.www1.hp.com/products/quickspecs/14222_div/14222_div.html)  
(HBA 221)

[http://h18004.www1.hp.com/products/quickspecs/14337\\_div/14337\\_div.html](http://h18004.www1.hp.com/products/quickspecs/14337_div/14337_div.html)  
(HBA 222)

**SCSI HBA** (StoreEasy 1440 only)

HP SC11Xe Ultra320 Single Channel/ PCIe x4 SCSI Host Bus Adapter 412911-B21

**NOTE:** Please see the following QuickSpecs for additional information:

[http://h18000.www1.hp.com/products/quickspecs/12566\\_div/12566\\_div.html](http://h18000.www1.hp.com/products/quickspecs/12566_div/12566_div.html)  
(SC11Xe HBA)

**Fibre Channel HBA** (StoreEasy 1440 only)

**NOTE:** For detailed compatibility information please see:

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

#### Brocade Fibre Channel HBAs

HP 81B 8Gb 1-port PCIe Fibre Channel Host Bus Adapter AP769B

HP 82B 8Gb 2-port PCIe Fibre Channel Host Bus Adapter AP770B

#### Emulex Fibre Channel HBAs

HP 81E 8Gb 1-port PCIe Fibre Channel Host Bus Adapter AJ762B

HP 82E 8Gb 2-port PCIe Fibre Channel Host Bus Adapter AJ763B

HP StoreFabric SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter C8R38A

HP StoreFabric SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter C8R39A

#### QLogic Fibre Channel HBAs

HP 81Q 8Gb 1-port PCIe Fibre Channel Host Bus Adapter AK344A

HP 82Q 8Gb 2-port PCIe Fibre Channel Host Bus Adapter AJ764A

HP StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter QW971A

HP StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter QW972A

**Converged Network Adapter** (StoreEasy 1440 only)

HP CN1100E Dual Port Converged Network Adapter BK835A

HP CN1000Q Dual Port Converged Network Adapter BS668A

HP StoreFabric CN1100R Dual Port Converged Network Adapter QW990A

### Options

#### StoreEasy 1640/1840

#### SAS Controllers

##### Smart Array P421 Controller

HP Smart Array P421/1GB FBWC 6Gb 2-ports Ext SAS Controller 631673-B21

HP Smart Array P421/2GB FBWC 6Gb 2-ports Ext SAS Controller 631674-B21

##### HP Smart Array P431 Controller

HP Smart Array P431/2GB FBWC 12Gb 2-ports Ext SAS Controller 698531-B21

##### Smart Array P822 Controller

HP Smart Array P822/2GB FBWC 6Gb 2-ports-Int/4-ports Ext SAS Controller 615418-B21

#### Optional Upgrades

HP 2GB P-series Smart Array Flash Backed Write Cache 631681-B21

HP SmartCache No Media 24x7 Technical Support 1 Svr License D7S26A

HP SmartCache No Media 24x7 Technical Support Flexible License D7S27A

HP SmartCache No Media 24x7 Technical Support Electronic License D7S27AAE

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information:

[http://h18000.www1.hp.com/products/quickspecs/14229\\_div/14229\\_div.html](http://h18000.www1.hp.com/products/quickspecs/14229_div/14229_div.html)  
(Smart Array P421 Controller)

[http://h18000.www1.hp.com/products/quickspecs/14341\\_div/14341\\_div.html](http://h18000.www1.hp.com/products/quickspecs/14341_div/14341_div.html)  
(Smart Array P430 Controller)

[http://h18000.www1.hp.com/products/quickspecs/14341\\_div/14341\\_div.html](http://h18000.www1.hp.com/products/quickspecs/14341_div/14341_div.html)  
(Smart Array P822 Controller)

#### Host Bus Adapter

HP H221 PCIe 3.0 SAS Host Bus Adapter 729552-B21

HP H222 Host Bus Adapter 650926-B21

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information:

[http://h18004.www1.hp.com/products/quickspecs/14222\\_div/14222\\_div.html](http://h18004.www1.hp.com/products/quickspecs/14222_div/14222_div.html)  
(HBA 221)

[http://h18004.www1.hp.com/products/quickspecs/14337\\_div/14337\\_div.html](http://h18004.www1.hp.com/products/quickspecs/14337_div/14337_div.html)  
(HBA 222)

#### SCSI HBA (StoreEasy 1440 only)

HP SC11Xe Ultra320 Single Channel/ PCIe x4 SCSI Host Bus Adapter 412911-B21

**NOTE:** Please see the following QuickSpecs for additional information:

[http://h18000.www1.hp.com/products/quickspecs/12566\\_div/12566\\_div.html](http://h18000.www1.hp.com/products/quickspecs/12566_div/12566_div.html)  
(SC11Xe HBA)

#### Fibre Channel HBA

**NOTE:** For detailed compatibility information please see:

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

#### Brocade Fibre Channel HBAs

HP 81B 8Gb 1-port PCIe Fibre Channel Host Bus Adapter AP769B

HP 82B 8Gb 2-port PCIe Fibre Channel Host Bus Adapter AP770B

#### Emulex Fibre Channel HBAs

HP 81E 8Gb 1-port PCIe Fibre Channel Host Bus Adapter AJ762B

HP 82E 8Gb 2-port PCIe Fibre Channel Host Bus Adapter AJ763B

### Options

HP StoreFabric SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter C8R38A

HP StoreFabric SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter C8R39A

#### **QLogic Fibre Channel HBAs**

HP 81Q 8Gb 1-port PCIe Fibre Channel Host Bus Adapter AK344A

HP 82Q 8Gb 2-port PCIe Fibre Channel Host Bus Adapter AJ764A

HP StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter QW971A

HP StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter QW972A

#### **Converged Network Adapter**

HP CN1000Q Dual Port Converged Network Adapter BS668A

HP CN1100E Dual Port Converged Network Adapter BK835A

HP StoreFabric CN1100R Dual Port Converged Network Adapter QW990A

### StoreEasy 1840

#### **SCSI HBA**

HP SC11Xe Ultra320 Single Channel/ PCIe x4 SCSI Host Bus Adapter 412911-B21

**NOTE:** Please see the following QuickSpecs for additional information:

[http://h18000.www1.hp.com/products/quickspecs/12566\\_div/12566\\_div.html](http://h18000.www1.hp.com/products/quickspecs/12566_div/12566_div.html)

(SC11Xe HBA)

### HP Hard Drives for

### StoreEasy 1440/1540

**NOTE:** The HP StoreEasy 1440 and 1530 are equipped with entirely re-designed Large Form Factor (LFF 3.5 in) hot plug carriers for HP Qualified Hard Drives and Solid State Drives. These new carriers provide status and activity indicators as well as caution indicators for "Do Not Remove".

**NOTE:** The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.

**NOTE:** Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

#### **StoreEasy 1440/1540 LFF Smart Carrier Drive Bundles**

HP StoreEasy 4TB SAS LFF(3.5in) Smart Carrier 4-pack HDD Bundle E7W88A

HP StoreEasy 8TB SAS LFF(3.5in) Smart Carrier 4-pack HDD Bundle E7W89A

HP StoreEasy 12TB SAS LFF(3.5in) Smart Carrier 4-pack HDD Bundle E7W90A

HP StoreEasy 16TB SAS LFF(3.5in) Smart Carrier 4-pack HDD Bundle E7W91A

#### **SAS Hot Plug SmartDrive LFF (3.5-inch) Enterprise Drives**

HP 600GB 6G SAS 15K rpm LFF (3.5-inch) SC Enterprise 3yr Warranty Hard Drive 652620-B21

HP 450GB 6G SAS 15K rpm LFF (3.5-inch) SC Enterprise 3yr Warranty Hard Drive 652615-B21

#### **SAS Hot Plug SmartDrive LFF (3.5-inch) Midline Drives**

HP 6TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive 761477-B21

HP 4TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive 695510-B21

HP 3TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive 652766-B21

HP 2TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive 652757-B21

HP 1TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive 652753-B21

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information:

[http://h18000.www1.hp.com/products/quickspecs/12244\\_div/12244\\_div.html](http://h18000.www1.hp.com/products/quickspecs/12244_div/12244_div.html)

(Worldwide)

### Options

#### 6G SATA Hot Plug with SmartDrive LFF (3.5-inch) Midline (MDL) Drives

HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive 753874-B21

HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive 658071-B21

**NOTE:** SATA hard drives have a 1-year warranty. Please see the QuickSpecs for Technical Specifications and additional information:

[http://h18000.www1.hp.com/products/quickspecs/13021\\_div/13021\\_div.html](http://h18000.www1.hp.com/products/quickspecs/13021_div/13021_div.html)  
(Worldwide)

#### 6G SATA Value Endurance Hot Plug LFF (3.5-inch) Enterprise Boot Solid State Drives

HP 120GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Boot 3yr Wty Solid State Drive 718171-B21

HP 80GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Boot 3yr Wty Solid State Drive 734362-B21

#### 6G SATA Value Endurance Hot Plug LFF (3.5-inch) Enterprise Value Solid State Drives

HP 800GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive 718189-B21

HP 600GB 6G SATA Value Endurance LFF 3.5-in SC Converter Enterprise Value 3yr Wty Solid State Drive 739900-B21

HP 480GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive 718183-B21

HP 300GB 6G SATA Value Endurance LFF 3.5-in SC Converter Enterprise Value 3yr Wty Solid State Drive 739890-B21

HP 240GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive 718177-B21

#### 6G SATA ME Hot Plug LFF (3.5-inch) Enterprise Mainstream Solid State Drives

HP 800GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive 691860-B21

HP 400GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive 691856-B21

HP 200GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive 691854-B21

HP 100GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive 691852-B21

### HP Hard Drives for StoreEasy 1640

**NOTE:** The HP StoreEasy 1640 is equipped with entirely re-designed Large Form Factor (LFF 3.5 in) hot plug carriers for HP Qualified Hard Drives and Solid State Drives. These new carriers provide status and activity indicators as well as caution indicators for "Do Not Remove".

**NOTE:** The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.

**NOTE:** Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

#### StoreEasy 1640 LFF Smart Carrier Drive Bundles

HP StoreEasy 4TB SAS LFF(3.5in) Smart Carrier 4-pack HDD Bundle E7W88A

### Options

HP StoreEasy 8TB SAS LFF(3.5in) Smart Carrier 4-pack HDD Bundle	E7W89A
HP StoreEasy 12TB SAS LFF(3.5in) Smart Carrier 4-pack HDD Bundle	E7W90A
HP StoreEasy 16TB SAS LFF(3.5in) Smart Carrier 4-pack HDD Bundle	E7W91A
<b>SAS Hot Plug SmartDrive LFF (3.5-inch) Enterprise Drives</b>	
HP 600GB 6G SAS 15K rpm LFF (3.5-inch) SC Enterprise 3yr Warranty Hard Drive	652620-B21
HP 450GB 6G SAS 15K rpm LFF (3.5-inch) SC Enterprise 3yr Warranty Hard Drive	652615-B21
<b>SAS Hot Plug SmartDrive LFF (3.5-inch) Midline Drives</b>	
HP 6TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	761477-B21
HP 4TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	695510-B21
HP 3TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	652766-B21
HP 2TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	652757-B21
HP 1TB 6G SAS 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	652753-B21
<b>NOTE: Please see the QuickSpecs for Technical Specifications and additional information:</b>	
<a href="http://h18000.www1.hp.com/products/quickspecs/12244_div/12244_div.html">http://h18000.www1.hp.com/products/quickspecs/12244_div/12244_div.html</a> (Worldwide)	
<b>6G SATA Hot Plug with SmartDrive LFF (3.5-inch) Midline (MDL) Drives</b>	
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	753874-B21
HP 4TB 6G SATA 7.2k rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	693687-B21
HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	628061-B21
HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	658079-B21
HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	657750-B21
HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	658071-B21
<b>NOTE: Please see the QuickSpecs for Technical Specifications and additional information:</b>	
<a href="http://h18000.www1.hp.com/products/quickspecs/13021_div/13021_div.html">http://h18000.www1.hp.com/products/quickspecs/13021_div/13021_div.html</a> (Worldwide)	
<b>6G SATA Value Endurance Hot Plug LFF (3.5-inch) Enterprise Boot Solid State Drives</b>	
HP 120GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Boot 3yr Wty Solid State Drive	718171-B21
HP 80GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Boot 3yr Wty Solid State Drive	734362-B21
<b>6G SATA Value Endurance Hot Plug LFF (3.5-inch) Enterprise Value Solid State Drives</b>	
HP 800GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive	718189-B21
HP 600GB 6G SATA Value Endurance LFF 3.5-in SC Converter Enterprise Value 3yr Wty Solid State Drive	739900-B21
HP 480GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive	718183-B21
HP 300GB 6G SATA Value Endurance LFF 3.5-in SC Converter Enterprise Value 3yr Wty Solid State Drive	739890-B21
HP 240GB 6G SATA Value Endurance LFF 3.5-in SC Enterprise Value 3yr Wty Solid State Drive	718177-B21
<b>6G SATA ME Hot Plug LFF (3.5-inch) Enterprise Mainstream Solid State Drives</b>	

### Options

HP 800GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691860-B21
HP 400GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691856-B21
HP 200GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691854-B21
HP 100GB 6G SATA Mainstream Endurance LFF 3.5-in SC Enterprise Mainstream 3yr Wty Solid State Drive	691852-B21

**NOTE:** Please see the QuickSpecs for Technical Specifications and additional information:

[http://h18000.www1.hp.com/products/quickspecs/14038\\_div/14038\\_div.html](http://h18000.www1.hp.com/products/quickspecs/14038_div/14038_div.html) (Worldwide)

#### Hard Drive Kits

**NOTE:** All Factory shipped models will be populated with sufficient hard drive blanks based on the number of initial hard drives ordered with the system.

HP Large Form Factor Hard Drive Blank Kit	666986-B21
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### HP Hard Drives for StoreEasy 1840

**NOTE:** The HP StoreEasy 1840 is equipped with entirely re-designed Small Form Factor (SFF 2.5 in) hot plug carriers for HP Qualified Hard Drives and Solid State Drives. These new carriers provide status and activity indicators as well as caution indicators for "Do Not Remove".

**NOTE:** The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.

**NOTE:** Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

#### StoreEasy 1840 LFF Smart Carrier Drive Bundles

HP StoreEasy 4.8TB SAS SFF(2.5in) Smart Carrier 4-pack HDD Bundle	E7W93A
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**Note:** Bundle contains 4 x HP 1.8TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 512e 3yr Warranty Hard Drive (sku 791034-B21)

HP StoreEasy 3.6TB SAS SFF(2.5in) Smart Carrier 4-pack HDD Bundle	E7W92A
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HP StoreEasy 4.8TB SAS SFF(2.5in) Smart Carrier 4-pack HDD Bundle	E7W93A
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#### SAS Hot Plug with SmartDrive SFF (2.5-inch) Enterprise Drives

HP 1.8TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 512e 3yr Warranty Hard Drive	791034-B21
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HP 1.2TB 12G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	781518-B21
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HP 1.2TB 6G SAS 10K rpm SFF (2.5-inch) SC Dual Port Enterprise 3yr Warranty Hard Drive	718162-B21
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HP 900GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652589-B21
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HP 600GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652583-B21
------------------------------------------------------------------------------	------------

HP 450GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652572-B21
------------------------------------------------------------------------------	------------

HP 300GB 6G SAS 10K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652564-B21
------------------------------------------------------------------------------	------------

HP 300GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652611-B21
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HP 146GB 6G SAS 15K rpm SFF (2.5-inch) SC Enterprise 3yr Warranty Hard Drive	652605-B21
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#### SAS Hot Plug SmartDrive SFF (2.5-inch) Midline Drives

### Options

HP 1TB 6G SAS 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	652749-B21
HP 500GB 6G SAS 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	652745-B21
<b>6G SATA Hot Plug with SmartDrive SFF (2.5-inch) Midline (MDL) Drives</b>	
HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	655710-B21
HP 500GB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	655708-B21
<b>6G SATA Value Endurance Hot Plug SFF (2.5-inch) Enterprise Boot Solid State Drives</b>	
HP 120GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Boot 3yr Wty Solid State Drive	717965-B21
HP 80GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Boot 3yr Wty Solid State Drive	734360-B21
<b>6G SATA Value Endurance Hot Plug SFF (2.5-inch) Enterprise Value Solid State Drives</b>	
HP 800GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	717973-B21
HP 480GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	717971-B21
HP 600GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	739898-B21
HP 300GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	739888-B21
HP 240GB 6G SATA Value Endurance SFF 2.5-in SC Enterprise Value 3yr Wty Solid State Drive	717969-B21

#### Hard Drive Kits

**NOTE:** All Factory shipped models will be populated with sufficient hard drive blanks based on the number of initial hard drives ordered with the system.

**NOTE:** The part numbers for single HDD blanks below are provided should the customer require replacement HDD blanks for their server.

HP Small Form Factor Hard Drive Blank Kit	666987-B21
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#### StoreEasy Disk Enclosures

**NOTE:** The enclosures listed below can be used to add external storage capacity to a HP StoreEasy 1440, 1540, 1640 or 1840.

HP StoreEasy 25 SFF Disk Enclosure	B7E09A
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**NOTE:** This enclosure is the HP D2700 Disk Enclosure. For more information see: [http://h18000.www1.hp.com/products/quickspecs/13404\\_div/13404\\_div.html](http://h18000.www1.hp.com/products/quickspecs/13404_div/13404_div.html)

**NOTE:** The 25 SFF Disk Enclosure will support (2) of the SFF Drive Bundles (B7E14A, B7E15A). If between 19 and 25 SFF drives are needed in the enclosure, individual SFF drives can be ordered or you can order a third SFF drive bundle and have two spare drives available as needed. See QuickSpecs listed above for individual drive information.

**NOTE:** HP recommends using all of the same capacity SFF drives within the

### Options

enclosure.

**NOTE:** For the above enclosures with either StoreEasy 1440 or StoreEasy 1540 you can connect any combination of up to (4) HP StoreEasy 12 LFF enclosures or StoreEasy 25 SFF enclosures.

**NOTE:** For the above enclosures with either StoreEasy 1640 or StoreEasy 1840 the number of enclosure you can connect varies, but if using only B7E08A the maximum is 17 enclosures and if using only B7E09A the maximum is 8 enclosures. The number of enclosures is dependent on the numbers of drives supported by the included SmartArray P822. For more information see the SmartArray P822 QuickSpecs.

#### SFF Drives bundles for StoreEasy SFF Enclosure

**NOTE:** The Drive Bundles below can only be added to the StoreEasy Enclosures listed above. They cannot be added to a StoreEasy1440, 1540, 1640 or 1840 as they do not use the new hot plug SFF smart carriers used by ProLiant Gen 8 servers.

HP StoreEasy 3.6TB SAS SFF(2.5in) 4-pack HDD Bundle E7X00A  
(Contains 4 x 900GB SFF SAS HDDs - sku 619291-B21)

HP StoreEasy 4.8TB SAS SFF(2.5in) 4-pack HDD Bundle E7X01A  
(Contains 4 x 1.2TB SFF SAS HDDs - sku 718160-B21)

#### Drives for StoreEasy Enclosures

HP 6TB 6G SAS 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive 782669-B21

HP 1.2TB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive 718160-B21

HP 900GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive 619291-B21

HP 600GB 6G SAS 10K rpm SFF (2.5-inch) Dual Port Enterprise 3yr Warranty Hard Drive 581286-B21

#### HP D3000 Enclosures

HP StoreEasy products support HP's new D3000 enclosure product family. (StoreEasy 1440 and 1540 require a different Smart Array controller than the SA P222 that is included in those products. See the [HP D3000 QuickSpecs](#) for more information.

### Add a Power Supply

The HP StoreEasy 1440 and 1530 Storage products come standard with one 460W power supply. Add a second power supply for redundancy.

StoreEasy 1440/1530 HP 460W CS Gold Ht Plg Power Supply Kit 503296-B21

### Options

#### Add a Power Cord

**NOTE:** A regional or country specific power cord option must be ordered with StoreEasy 1540.

<b>StoreEasy 1540</b>	HP C13 - Nema 5-15P US/CA 110V 10Amp 1.83m Power Cord	AF556A
	HP C13 - GB-1002 CN 250V 10Amp 1.83m Power Cord	AF557A
	HP C13 - IRAM -2073 AR 250V 10A 2.5m Power Cord	AF558A
	HP C13 - Nema 5-15P TH/PH 250V 10Amp 1.83m Power Cord	AF559A
	HP C13 - KSC- 8305 KR 250V 10Amp 1.83m Power Cord	AF560A
	HP C13 - CNS-690 TW 110V 13Amp 1.83m Power Cord	AF561A
	HP C13 - IS-1293 IN 240V 6Amp LV 2.0m Power Cord	AF562A
	HP C13 - AS3112-3 AU 250V 10Amp 2.5m Power Cord	AF569A
	HP C13 - SEV 1011 CH 250V 10Amp 1.83m Power Cord	AF565A
	HP C13 - DK-2.5A DK 250V 10Amp 1.83m Power Cord	AF566A
	HP C13 - CEE-VII EU 250V 10Amp 1.83m Power Cord	AF568A
	HP C13 - SI-32 IL 250V 10Amp 1.83m Power Cord	AF564A
	HP C13 - CEI-23-50 IT/CL 250V 10Amp 1.83m Power Cord	AF571A
	HP C13 - JIS C8303 JP 100V 12Amp 2.0m Power Cord	AF572A
	HP C13 - BS-1363A UK/HK/SG 250V 10Amp 1.83m Power Cord	AF570A
	HP C13 - SABS-164 ZA 250V 10Amp 2.5m Power Cord	AF567A
	HP C13 - NBR-14136 BR 250V 10Amp 1.83m Power Cord	AF591A
<b>StoreEasy 1540 Rack Option</b>	HP Tower to Rack Conversion Tray Universal Kit	417705-B21
<b>StoreEasy 1840 I/O Expansion Option</b>	HP DL380p/560 Gen8 3 Slot PCI-E Riser Kit <b>NOTE:</b> Second processor required if selected.	653206-B21

### Service and Support, HP Care Pack, and Warranty Information

#### Warranty

HP StoreEasy 1X40 Storage products come with a standard 3-3-3 warranty (3 years parts exchange, 3 years labor and 3 years onsite, next business day response). Software media is warranted to be free of physical defect for a period of 90 days from delivery.

**NOTE:** Hard drives have either a one year or three year warranty; refer to the specific hard drive QuickSpecs for details.

**Services Included with the Product** One year of HP Software Support, standard 9x5 business hours (software advisory and remedial software telephone support, and media and documentation distribution service).

#### Service and Support

##### Services to accelerate time to results

HP Storage Services bring you a rich portfolio of consulting and support services designed to add value to our core storage products and solutions. We have the know-how and experience to put storage technology to work for you. We work closely with you as your strategic partner, leveraging our full services portfolio to make sure that everything works to optimize your enterprise.

Choose from services aligned to our storage product offerings and lifecycle. From mission-critical onsite services to innovative web-based remote support, you choose the precise level of attention and support your business demands.

#### Discover, plan, and design

Choose from a rich portfolio of services to make the most of HP StoreEasy Storage, so you can efficiently and affordably consolidate, manage, and extract value from unstructured data.

**HP Services can help you discover needs and create a plan for simplifying the environment, reducing risk, and maximizing your storage investments**

**HP Backup Recovery Efficiency Analysis** - Assessment of how efficiently backup components are being used as the amount of data to be backed up continues to grow exponentially via analysis intelligence and a snapshot of your current backup environment. <http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8490ENW.pdf>

**HP Backup Recovery Impact Analysis** - Focus placed on service requirements and design as the key to success for gaining a clear understanding of the role of increasingly diverse data protection strategies. <http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA4-1175ENW.pdf>

**HP Backup Recovery Modernization** - Initial discovery, interviews, reference architecture design, proposal content development, vendor grading, and final recommendations carried out so as to require minimal resources and locations on your part. <http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA4-1199ENW.pdf>

**HP Storage Cloud Design Service** - Build a scalable, low-cost enterprise storage environment with inherent cloud benefits to meet big data needs.

#### Deploy and integrate

**We can help you configure, set up, and efficiently use your HP StoreEasy Storage, as well as help migrate data, improve capacity utilization, and establish information management standards used across backup, replication, and archiving needs.**

**HP StoreEasy 1000/3000 Storage S Installation and Startup Service** -Expert system installation and setup by an HP technical specialist designed to reduce implementation time and cost, with your basic questions

### Service and Support, HP Care Pack, and Warranty Information

about the service answered during the included orientation session.

[http://h20195.www2.hp.com/v2/GetDocument.aspx?cc=us&doclang=EN\\_US&docname=4AA2-6112ENW&doctype=data%20sheet&lc=en&searchquery=&jumpid=reg\\_r1002\\_usen\\_c-001\\_title\\_r0004](http://h20195.www2.hp.com/v2/GetDocument.aspx?cc=us&doclang=EN_US&docname=4AA2-6112ENW&doctype=data%20sheet&lc=en&searchquery=&jumpid=reg_r1002_usen_c-001_title_r0004)

**HP Storage Data Migration Services** - End-to-end data migration service providing seamless discovery, assessment, planning, and design, completely customizable to your organization's storage area network or network attached storage environment and using innovative software to help you migrate to HP storage quickly and efficiently.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA3-0774ENW.pdf>

**HP Storage and Data Consultant Residency Service** - Strategic augmentation of your current environment with HP resources who become your trusted advisor to provide answers that are right for your storage and backup environment.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA3-9481ENW.pdf>

**HP Proactive Select** - A flexible way to purchase services to fit your environment with an extensive menu of HP Proactive Select event and technical services, such as onsite firmware upgrades, health checks, assessments, and education.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA2-3842ENW.pdf>

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#### Operate and support

**Choose the right support to maximize uptime, free up your resources, and achieve improved value-as you get the most out of the existing IT assets while accelerating time-to-revenue.**

**HP Proactive Care 24x7** - Hardware and software support services designed specifically for your technology with rapid access to Advanced Solution Center Specialists plus firmware and software management and best practice advice

<http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA3-8855ENW.pdf>

**HP Proactive Care Personalized Support** - An option-if you have HP Proactive Care- to bring increased personalization of the Proactive Care support experience through the assignment of an Account Service Manager (ASM) who provides IT best practice advice to help address IT issues and projects.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA4-3446ENW.pdf>

**HP Support Plus 24** - Support for environments where proactive help from HP is not required, with 24x7 hardware and software support onsite that includes third-party support with a maximum four-hour onsite response.

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-6638EN.pdf>

**HP Education Services** - Comprehensive training for new, as well as experienced, storage administrators designed to expand your skills and keep you up to speed with the latest storage and virtualization technology from HP Storage.

<http://education.hp.com/curr-storsan.htm>

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**Optimized Care -** Choose from three levels of operate and support care  
Delivers the highest levels of HP Proactive Care 24x7-Plus, 20 credits per year

performance and stability through **Additional options** - HP Proactive Care Personalized Support (once per Proactive Care support new

### Service and Support, HP Care Pack, and Warranty Information

deployment and proactive management practices environment), an additional day of HP Personalized Support, and 10 additional HP Proactive Select credits per year

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**Standard Care-** maintains high level of uptime, along with expert help to cut the cost and complexity of implementation and support **HP Proactive Care 24x7-Plus**, 10 credits per year  
Additional options - HP Proactive Care Personalized Support (once per Proactive Care support new environment), an additional day of HP Personalized Support, and 10 additional HP Proactive Select credits per year

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**Basic Care-** Minimum recommended support Support Plus 24- Plus, 10 credits per year  
Additional options - 10 HP Proactive Select credits per year

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**Remote Support Automation** HP Insight Remote Support-Available at no additional cost to all warranty, HP Care Pack Service and service agreement customers, uses proven technology to deliver secure, reliable 24x7 remote monitoring, diagnosis and problem resolution.  
<http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA2-4676ENW.pdf>

<http://h18004.www1.hp.com/products/servers/management/insight-remote-support/overview.html>

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**For more information** [www.hp.com/services/storage](http://www.hp.com/services/storage)  
To learn more on HP Storage Services, please contact your HP sales representative or HP Authorized Channel Partner  
HP Care Pack Services are sold by HP and HP Authorized Service Partners:

- Services for customers purchasing from HP or an enterprise reseller are quoted using HP order configuration tools.
- Customers purchasing from a commercial reseller can find HP Care Pack Services at [www.hp.com/go/lookuptool](http://www.hp.com/go/lookuptool)

### Memory

See the HP ProLiant Gen 8 QuickSpecs for information on memory configurations.

StoreEasy 1440 (DL360e Gen 8): [http://h18000.www1.hp.com/products/quickspecs/14326\\_div/14326\\_div.pdf](http://h18000.www1.hp.com/products/quickspecs/14326_div/14326_div.pdf)

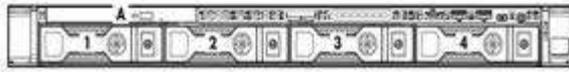
StoreEasy 1540 (ML310e v2 Gen 8): [http://h18000.www1.hp.com/products/quickspecs/14339\\_div/14339\\_div.pdf](http://h18000.www1.hp.com/products/quickspecs/14339_div/14339_div.pdf)

StoreEasy 1640 (DL380e Gen 8): [http://h18000.www1.hp.com/products/quickspecs/14328\\_div/14328\\_div.pdf](http://h18000.www1.hp.com/products/quickspecs/14328_div/14328_div.pdf)

StoreEasy 1840 (DL380p Gen 8): [http://h18004.www1.hp.com/products/quickspecs/14212\\_div/14212\\_div.html](http://h18004.www1.hp.com/products/quickspecs/14212_div/14212_div.html)

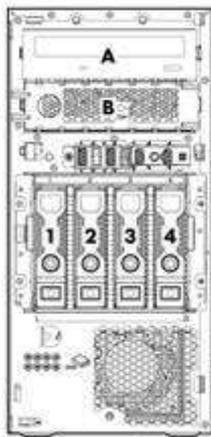
### Storage

#### StoreEasy 1440



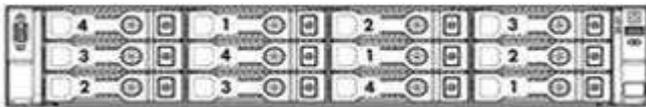
- A Optional DVD-ROM/DVD-RW
- 1-4 4 x LFF SATA/SAS/SSD Hot Pluggable Hard Drives Bays

#### StoreEasy 1540



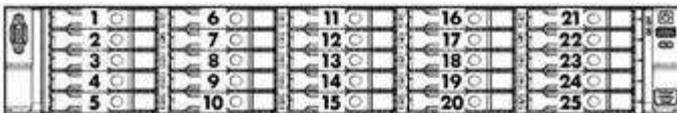
- 1-4 4 x 3.5" (LFF) SAS/SATA hard drive bays
  - A Removable Optical Drive
  - B Removable Optical Drive
- NOTE.** Once Redundant Power Supply is installed, Bay A will be the only media bay available for use.

#### StoreEasy 1640 (12 LFF HDD in Front, 2 SFF in Rear)



- 12 x LFF (1:1) SATA/SAS/SSD Hot Pluggable Hard drive bays

#### StoreEasy 1840



- 1-25 Twenty-five SFF SAS hot plug drive bays.
- NOTE:** This configuration does not support optical drive.
- NOTE:** This configuration has a built-in expander that is driven by the embedded controller.

### Technical Specifications

<b>StoreEasy 1440 Storage</b>	<b>Dimensions</b> (H x W x D) (with bezel)	1.7 x 17.1 x 29.5 inches (4.32 x 43.46 x 75.0 cm)
<b>Weight</b> (approximate)	Maximum Minimum	4 LFF (17.40 kg) 4 LFF (13.65kg)
<b>Input Requirements</b> (for Standard 460W PSU, see power specifications tables for detail on 460W, 750W and 1200W power supplies)	Rated Line Voltage Rated Input Current Rated Input Frequency	100 to 120 VAC 200 to 240 VAC 4.5 Amps (at 120VAC) to 2.2 Amps (at 240 VAC) 50 to 60 Hz
<b>BTU Rating</b>	Maximum	1773 BTU / hr (at 120 VAC), 1715 (at 240 VAC)
<b>Power Supply Output</b> (per power supply)	Rated Steady-State Power  Maximum Peak Power	460 W (at 100 to 120 VAC), 460 W (at 200 to 240 VAC) 750 W (at 100 to 120 VAC), 750 W (at 200 to 240 VAC)  460 W (at 100 to 120 VAC), 460 W (at 200 to 240 VAC) 750 W (at 100 to 120 VAC), 750 W (at 200 to 240 VAC)
<b>System Inlet Temperature</b>	Operating  Non-operating	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 304.8 m (1.8°F per every 1000 ft) above sea level to a maximum of 3048 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 10°C/hr (18°F/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 30°C (86°F).  -30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
<b>Relative Humidity</b> (non-condensing)	Operating Non-operating	10 to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing. 5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
<b>Altitude</b>	Operating Non-operating	3048 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min). 9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
<b>Acoustic Noise</b>	Listed are the declared A-Weighted sound power levels (LWAd) and declared average	

### Technical Specifications

bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).

#### Idle

LWAd	(1P non-redundant) 4.7 B Average Bystander (2P redundant) 5.0B Average Bystander
LpAm	(1P non-redundant) 33dBA (2P redundant) 35 dBA

#### Operating

LWAd	(1P non-redundant) 4.7 B Average Bystander (2P redundant) 5.0B Average Bystander
LpAm	(1P non-redundant) 33 dBA (2P redundant) 35 dBA

#### Emissions Classification (EMC)

FCC Rating	Class A
Normative Standards	CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1

**NOTE:** Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.

<b>HP Dynamic Smart Array B120i Controller</b>	<b>Dimensions</b>	Embedded
	<b>Disk Drive and Enclosure Interface - Transfer rate</b>	Up to 6Gb/s SATA (Serial ATA)
	<b>SAS Connectors</b>	6 internal SATA connectors
	<b>Server Interface</b>	x4 PCIe 2.0
	<b>SAS Speed</b>	6Gb/s SATA links
	<b>Cache Memory</b>	Zero Memory RAID has no cache memory
	<b>Logical Drives Supported</b>	Up to 8 logical volumes (6 physical drives)
	<b>Host Memory Addressing</b>	64-bit, supporting greater than 4GB server memory space
	<b>RAID Support</b>	RAID 0 (Striping), RAID 1 (Mirroring) RAID 1+0 (Striping & Mirroring)

<b>HP Smart Array P222</b>	<b>Dimensions</b> (not including bracket)	Low Profile PCIe Form Factor 19.05 cm x 24.13 cm x 5.72cm (7.5 in x 9.5 in x 2.25 in)
	<b>Disk Drive and Enclosure Protocol Support - Transfer rate</b>	6Gb/s SAS (Serial Attached SCSI) 6Gb/s SATA (Serial ATA)
	<b>SAS Connectors</b>	1 internal (SFF-8087)/1 external (Mini-SAS SFF-8088) x8 wide port connectors
	<b>Cache Memory Speed</b>	DDR-3/800 MHz with 40-bit wide bus provides up to 4.2 GB/s maximum bandwidth.
	<b>Server Interface</b>	x8 5G PCIe 3.0 provides 4GB/s maximum bandwidth.

### Technical Specifications

<b>SAS Speed</b>	x8 6G SAS provides 4.8GB/s maximum bandwidth.
<b>Cache Memory</b>	40-bit 512MB ECC protected cache
<b>Logical Drives Supported</b>	Up to 64 logical volumes
<b>Maximum Volume Capacity</b>	12TB (4 x 3TB SAS/SATA 3.5" MDL HDD) internal 144TB (48 x 3TB SAS/SATA 3.5" MDL HDD) external with 4xD2600 90TB (100 x 900GB SAS 2.5" HDD) external with 4xD2700
<b>Memory Addressing</b>	64-bit, supporting servers memory space greater than 4 GB
<b>RAID Support</b>	RAID 6, 60 (Advanced Data Guarding) RAID 1, 10 (Drive Mirroring) RAID 1 ADM, 10 ADM (Advanced Data Mirroring) RAID 0 (Striping)
<b>Upgradeable Firmware</b>	Upgradeable Firmware with Recovery ROM feature

<b>HP Ethernet 1Gb 4-port 366i Adapter</b>	<b>Network Interface</b>	10Base-T/100Base-TX/1000Base-TX	
	<b>Compatibility</b>	IEEE 802.3 10Base-T	
		IEEE 802.3ab 1000Base-T	
		IEEE 802.3u 100Base-TX	
		IEEE 1588, IEEE 802.1AS	
		IEEE 802.3az - Energy Efficient Ethernet (EEE)	
	<b>Data Transfer Method</b>	PCI Express, four lanes (x4)	
	<b>Controller</b>	Intel I350 Powerville	
	<b>Number of Ports</b>	4	
	<b>Network Transfer Rate</b>	10Base-T (Half-Duplex)	10 Mb/s per port, 40 Mb/s Combined
10Base-T (Full-Duplex)		20 Mb/s per port, 80 Mb/s Combined	
100Base-TX (Half-Duplex)		100 Mb/s per port, 400 Mb/s Combined	
100Base-TX (Full-Duplex)		200 Mb/s per port, 800 Mb/s Combined	
1000Base-TX (Half and Full-Duplex)		1000Mb/s per port, 4000 Mb/s Combined	
<b>Connector</b>	Four RJ-45		
<b>Cable Support</b>	10Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)	
	10/100/1000Base-TX	Category 5 UTP; up to 328 ft (100 m)	

<b>StoreEasy 1540 Tower Storage</b>	<b>Dimensions</b> (H x W x D) (with feet/bezel)	14.5 x 6.89 x 18.71 in (36.82 x 17.5 x 47.52 cm)	
	<b>Tower Weight</b> (approximate)	Maximum (all hard drives, power supplies, and processors installed)	41.8 lb (18.96 kg)
		Minimum (one hard drive, power supply, and processor installed)	25.29 lb (11.47 kg)

### Technical Specifications

<b>Input Requirements</b> (per power supply)	Rated Line Voltage	100 to 240 VAC
	Rated Input Current	6 Amps
	Rated Input Frequency	47 to 63 Hz
	Rated Input Power	440W at 100 V AC input 440W at 200V AC input
<b>BTU Rating</b>	Maximum	460W - 1773 BTU / hr (at 120 VAC), 1715 (at 240 VAC)
<b>Power Supply Output</b> (per power supply)	Rated Steady-State Power	350 W (at 100 VAC), 350 W (at 200 VAC)
	Maximum Peak Power	350 W (at 100 VAC), 350 W (at 200 VAC)
<b>System Inlet Temperature</b>	Operating	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 304.8 m (1.8°F per every 1000 ft) above sea level to a maximum of 3048 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 10°C/hr (18°F/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 30°C (86°F).
	Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
<b>Relative Humidity</b> (non-condensing)	Operating	10 to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing.
	Non-operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
<b>Altitude</b>	Operating	3048 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
<b>Acoustic Noise</b>	Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109).	
	<b>Idle</b>	
		LWAd 4.0 B
		LpAm 26dB-A
	<b>Operating</b>	
		LWAd 4.0 B
		LpAm 26dB-A
	<b>NOTE:</b> The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.	
<b>Emissions Classification</b> (EMC)	<b>FCC Rating</b>	Class B
	<b>Normative Standards</b>	CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-

### Technical Specifications

3; EN 60950-1; IEC 60950-1

**NOTE:** Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.

<b>HP Dynamic Smart Array B120i Controller</b>	<b>Dimensions</b>	Embedded	
	<b>Disk Drive and Enclosure Interface - Transfer rate</b>	Up to 6Gb/s SATA (Serial ATA)	
	<b>SAS Connectors</b>	6 internal SATA connectors	
	<b>Server Interface</b>	x4 PCIe 2.0	
	<b>SAS Speed</b>	6Gb/s SATA links	
	<b>Cache Memory</b>	Zero Memory RAID has no cache memory	
	<b>Logical Drives Supported</b>	Up to 8 logical volumes (6 physical drives)	
	<b>Host Memory Addressing</b>	64-bit, supporting greater than 4GB server memory space	
	<b>Hot Plug Support</b>	Yes	
	<b>RAID Support</b>	RAID 0 (Striping), RAID 1 (Mirroring) RAID 1+0 (Striping & Mirroring)	
<b>HP Smart Array P222</b>	<b>Dimensions</b> (not including bracket)	Low Profile PCIe Form Factor 19.05 cm x 24.13 cm x 5.72cm (7.5 in x 9.5 in x 2.25 in)	
	<b>Disk Drive and Enclosure Protocol Support - Transfer rate</b>	6Gb/s SAS (Serial Attached SCSI) 6Gb/s SATA (Serial ATA)	
	<b>SAS Connectors</b>	1 internal (SFF-8087)/1 external (Mini-SAS SFF-8088) x8 wide port connectors	
	<b>Cache Memory Speed</b>	DDR-3/800 MHz with 40-bit wide bus provides up to 4.2 GB/s maximum bandwidth.	
	<b>Server Interface</b>	x8 5G PCIe 3.0 provides 4GB/s maximum bandwidth.	
	<b>SAS Speed</b>	x8 6G SAS provides 4.8GB/s maximum bandwidth.	
	<b>Cache Memory</b>	40-bit 512MB ECC protected cache	
	<b>Logical Drives Supported</b>	Up to 64 logical volumes	
	<b>Maximum Volume Capacity</b>	12TB (4 x 3TB SAS/SATA 3.5" MDL HDD) internal 144TB (48 x 3TB SAS/SATA 3.5" MDL HDD) external with 4xD2600 90TB (100 x 900GB SAS 2.5" HDD) external with 4xD2700	
	<b>Memory Addressing</b>	64-bit, supporting servers memory space greater than 4 GB	
	<b>RAID Support</b>	RAID 6, 60 (Advanced Data Guarding) RAID 1, 10 (Drive Mirroring) RAID 1 ADM, 10 ADM (Advanced Data Mirroring) RAID 0 (Striping)	
	<b>Upgradeable Firmware</b>	Upgradeable Firmware with Recovery ROM feature	
	<b>HP Ethernet 1Gb 2-port</b>	<b>Network Interface</b>	10Base-T/100Base-TX/1000Base-TX

### Technical Specifications

<b>332i Adapter</b>	<b>Compatibility</b>	IEEE 802.3 10Base-T		
		IEEE 802.3ab 1000Base-T		
		IEEE 802.3u 100Base-TX		
		Energy Efficient Ethernet (EEE) compliant with IEEE Std 802.3az (default is disabled)		
	<b>Data Transfer Method</b>	PCI-e, two lanes (x2)		
	<b>Controller</b>	BCM5720		
	<b>Network Transfer Rate</b>	10Base-T (Half-Duplex)	10 Mb/s per port, 20 Mb/s Combined	
		10Base-T (Full-Duplex)	20 Mb/s per port, 40 Mb/s Combined	
		100Base-TX (Half-Duplex)	100 Mb/s per port, 200 Mb/s Combined	
		100Base-TX (Full-Duplex)	200 Mb/s per port, 400 Mb/s Combined	
1000Base-TX (Half-Duplex)		1000Mb/s per port, 2000 Mb/s Combined		
1000 Base-TX (Full-Duplex)		2000Mb/s per port, 4000 Mb/s Combined		
<b>Connector</b>	RJ-45			
<b>Cable Support</b>	10Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)		
	10/100/1000Base-TX	Category 5 or better; up to 328 ft (100 m)		

### StoreEasy 1640 Dimensions - with LFF Drives: 3.44 x 17.54 x 29.5 in (8.75 x 44.55 x 74.94 cm)

#### bezel

(H x W x D)

#### Weight

(approximate)

Maximum 71.20 lb (32.30 kg)

(all hard drives: front + rear, full power supply, and processor installed)

Minimum 30.80 lb (14.00 kg)

(one hard drive, single power supply, and processor installed. HDD not installed)

#### Input

#### Requirements

(per power supply)

Rated Line Voltage

100 to 120 VAC

200 to 240 VAC

Rated Input Current

For 1200 W Power Supply:

10 A (at 100 VAC),

4.9 A (at 200 VAC)

For 750 W Power Supply:

8.9 A (at 100 VAC),

4.3 A (at 200 VAC)

For 460 W Power Supply:

5.5 A (at 100 VAC),

2.6 A (at 200 VAC)

Rated Input Frequency

50 to 60 Hz

Rated Input Power

For 1200 W Power Supply:

930 W (at 100 VAC),

### Technical Specifications

		1348 W (at 200 VAC) For 750 W Power Supply: 857 W (at 100 VAC), 824 W (at 200 VAC) For 460 W Power Supply: 526 W (at 100 VAC), 505 W (at 200 VAC)
<b>BTU Rating</b>	Maximum	For 1200 W Power Supply: 3530 BTU/hr (at 100 VAC), 4600 BTU/hr (at 200 VAC) For 750 W Power Supply: 2925 BTU/hr (at 100 VAC), 2812 BTU/hr (at 200 VAC) For 460 W Power Supply: 1794 BTU/hr (at 100 VAC), 1725 BTU/hr (at 200 VAC)
<b>Power Supply Output</b> (per power supply)	Rated Steady-State Power	For 1200 W Power Supply: 800 W (at 100 VAC), 900 W (at 120 VAC), 1200 W (at 200 to 240 VAC) For 750 W Power Supply: 750 W (at 100 to 120 VAC), 750 W (at 200 to 240 VAC) For 460 W Power Supply: 460 W (at 100 to 120 VAC), 460 W (at 200 to 240 VAC)
	Maximum Peak Power	For 1200 W Power Supply: 800 W (at 100 VAC), 900 W (at 120 VAC), 1200 W (at 200 to 240 VAC) For 750 W Power Supply: 750 W (at 100 to 120 VAC), 750 W (at 200 to 240 VAC) For 460 W Power Supply: 460 W (at 100 to 120 VAC), 460 W (at 200 to 240 VAC)
<b>System Inlet Temperature</b>	Operating	10° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 304.8 m (1.8°F per every 1000 ft) above sea level to a maximum of 3048 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 10°C/hr (18°F/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 30°C (86°F).
	Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
<b>Relative Humidity</b>	Operating	10 to 90% relative humidity (Rh), 28°C (82.4°F) maximum

### Technical Specifications

	(non-condensing)	wet bulb temperature, non-condensing.
	Non-operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
<b>Altitude</b>	Operating	3048 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
<b>Acoustic Noise</b>	Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109). NOTE: The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.	
	<b>Idle</b>	<b>2P Redundant SKU</b>
	LWAd	5.4 B
	LpAm	38 dBA
	<b>Operating</b>	<b>2P SKU</b>
	LWAd	5.7 B
	LpAm	41 dBA
	<b>NOTE:</b> The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.	
<b>Emissions Classification (EMC)</b>	<b>FCC Rating</b>	Class A
	<b>Normative Standards</b>	CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS14336-1; CNS13438; GB4943; GB9254; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1
	<b>NOTE:</b> Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.	
	<b>NOTE:</b> The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.	

<b>HP iLO 4 On System Management</b>	<b>Architecture</b>	PCI Express based health and remote management ASIC
	<b>Processor</b>	Embedded ARM processor core operating at 400MHz
	<b>Upgradeability</b>	Firmware upgradeable via Flash ROM
	<b>Video Support</b>	1920 x 1200 (16 bpp) DVR max resolution
	<b>Interfaces</b>	HP iLO Dedicated Network connection (10/100/1000 Mb/s) on rack, tower and SL systems HP iLO Shared Network connection (10/100/1000 Mb/s) on rack, tower and SL systems HP iLO network connection to blades (100 Mb/s) to Onboard Administrator (with 10/100/1000 Mb/s uplink) on blade systems
	<b>Memory</b>	16 MB Flash

### Technical Specifications

	256 MB DDR 3 with ECC (112 MB after ECC and video)
<b>Operating System Support</b>	For information on HP's Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server including how to purchase from HP, please visit our OS Support Site at: <a href="http://www.hp.com/go/ossupport">http://www.hp.com/go/ossupport</a>
<b>Client System Support</b>	For information on Client System Support, please visit the HP iLO Feature Comparison Site at: <a href="http://www.hp.com/go/compareilo">www.hp.com/go/compareilo</a>
<b>Client Browser Support</b>	Microsoft Internet Explorer 9 <b>NOTE:</b> For customers using Protected Mode, please use the Java based version of Integrated Remote Console. Microsoft Internet Explorer 8 <b>NOTE:</b> For customers using Protected Mode, please use the Java based version of Integrated Remote Console. Microsoft Internet Explorer 7
	Firefox Extended Support Release (ESR) 10 (on supported Windows and Linux systems) Firefox 3.6 (on supported Windows and Linux systems)
<b>Command Line Support</b>	Secure Shell and serial port access Secure Socket Layer Secure Shell version 2
<b>Security</b>	Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser, CLP and XML scripting interface AES encryption of video RC4 encryption of video
<b>Directory Support Services</b>	Active Directory v1.0 (Windows 2003)
<b>Driver Support</b>	HP ProLiant iLO 4 Management Controller Driver Package
<b>Management protocols supported</b>	SNMP, IPMI 2.0 (system and LAN interface), DMTF Systems Management Architecture for Server Hardware Command Line Protocol (SMASH CLP), HP RIBCL XML

#### HP Ethernet 1Gb 4-port 366i Adapter

<b>Network Interface Compatibility</b>	10Base-T/100Base-TX/1000Base-TX IEEE 802.3 10Base-T IEEE 802.3ab 1000Base-T IEEE 802.3u 100Base-TX IEEE 1588, IEEE 802.1AS IEEE 802.3az - Energy Efficient Ethernet (EEE)
<b>Data Transfer Method</b>	PCI Express v 2.0, 5.0 GT/s, two lanes (x2)
<b>Controller</b>	I350 Powerville
<b>Number of Ports</b>	4
<b>Network Transfer Rate</b>	10Base-T (Half-Duplex) 10 Mb/s per port, 40 Mb/s combined 10Base-T (Full-Duplex) 20 Mb/s per port, 80 Mb/s combined 100Base-TX (Half-Duplex) 100 Mb/s per port, 400 Mb/s combined

### Technical Specifications

	100Base-TX (Full-Duplex)	200 Mb/s per port, 800 Mb/s combined
	1000Base-TX (Half and Full-Duplex)	1000Mb/s per port, 4000 Mb/s combined
<b>Connector</b>	Two RJ-45	
<b>Cable Support</b>	10Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)
	10/100/1000Base-TX	Category 5 or higher UTP; up to 328 ft (100 m)

**StoreEasy 1840 Dimensions** (H x W x D) (with bezel) SFF Drives: 3.44 x 17.54 x 27.50 in (8.73 x 44.55 x 69.85 cm)

<b>Weight</b> (approximate)	Maximum (all hard drives, power supply, and processor installed)	61.00 lb (27.66 kg)
	Minimum (one SFF hard drive, power supply, and processor installed, ODD not installed)	41.0 lb (18.59 kg)
<b>Input Requirements</b> (per power supply)	Rated Line Voltage	100 to 120 VAC 200 to 240 VAC
	Rated Input Current	For 1200 W Power Supply: 10 A (at 100 VAC), 4.9 A (at 200 VAC) For 750 W Power Supply: 8.9 A (at 100 VAC), 4.3 A (at 200 VAC) For 460 W Power Supply: 5.5 A (at 100 VAC), 2.6 A (at 200 VAC)
	Rated Input Frequency	50 to 60 Hz
	Rated Input Power	For 1200 W Power Supply: 930 W (at 100 VAC), 1348 W (at 200 VAC) For 750 W Power Supply: 857 W (at 100 VAC), 824 W (at 200 VAC) For 460 W Power Supply: 526 W (at 100 VAC), 505 W (at 200 VAC)
<b>BTU Rating</b>	Maximum	For 1200 W Power Supply: 3530 BTU/hr (at 100 VAC), 4600 BTU/hr (at 200 VAC) For 750 W Power Supply: 2925 BTU/hr (at 100 VAC), 2812 BTU/hr (at 200 VAC) For 460 W Power Supply:

### Technical Specifications

		1794 BTU/hr (at 100 VAC), 1725 BTU/hr (at 200 VAC)
<b>Power Supply Output</b> (per power supply)	Rated Steady-State Power	For 1200 W Power Supply: 800 W (at 100 VAC), 900 W (at 120 VAC), 1200 W (at 200 to 240 VAC) For 750 W Power Supply: 750 W (at 100 to 120 VAC), 750 W (at 200 to 240 VAC) For 460 W Power Supply: 460 W (at 100 to 120 VAC), 460 W (at 200 to 240 VAC)
	Maximum Peak Power	For 1200 W Power Supply: 800 W (at 100 VAC), 900 W (at 120 VAC), 1200 W (at 200 to 240 VAC) For 750 W Power Supply: 750 W (at 100 to 120 VAC), 750 W (at 200 to 240 VAC) For 460 W Power Supply: 460 W (at 100 to 120 VAC), 460 W (at 200 to 240 VAC)
<b>System Inlet Temperature</b>	Operating	° to 35°C (50° to 95°F) at sea level with an altitude derating of 1.0°C per every 304.8 m (1.8°F per every 1000 ft) above sea level to a maximum of 3048 m (10,000 ft), no direct sustained sunlight. Maximum rate of change is 10°C/hr (18°F/hr). The upper limit may be limited by the type and number of options installed. System performance may be reduced if operating with a fan fault or above 30°C (86°F).
	Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
<b>Relative Humidity</b> (non-condensing)	Operating	10% to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing.
	Non-operating	5% to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.
<b>Altitude</b>	Operating	3048 m (10,000 ft). This value may be limited by the type and number of options installed. Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).
<b>Acoustic Noise</b>	Listed are the declared A-Weighted sound power levels (LWAd) and declared average bystander position A-Weighted sound pressure levels (LpAm) when the product is operating in a 23°C ambient environment. Noise emissions were measured in accordance with ISO 7779 (ECMA 74) and declared in accordance with ISO 9296 (ECMA 109). The listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels. <b>NOTE:</b> The Listed sound levels apply to standard shipping configurations. Additional options	

### Technical Specifications

may result in increased sound levels.

#### Idle

LWAd	4.1 B
LpAm	25 dBA

#### Operating

LWAd	4.3 B
LpAm	27 dBA

#### Emissions Classification (EMC)

#### FCC Rating

Class A

#### Normative Standards

CISPR 22; EN55022; EN55024; FCC CFR 47, Pt 15; ICES-003; CNS13438; GB9254; K22;K24; EN 61000-3-2; EN 61000-3-3; EN 60950-1; IEC 60950-1

**NOTE:** Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.

**NOTE:** The Listed sound levels apply to standard shipping configurations. Additional options may result in increased sound levels.

#### HP iLO 4 On System Management

##### Architecture

PCI Express based health and remote management ASIC

##### Processor

Embedded ARM processor core operating at 400MHz

##### Upgradeability

Firmware upgradeable via Flash ROM

##### Video Support

1920 x 1200 (16 bpp) DVR max resolution

##### Interfaces

HP iLO Dedicated Network connection (10/100/1000 Mb/s) on rack, tower and SL systems

HP iLO Shared Network connection (10/100/1000 Mb/s) on rack, tower and SL systems

HP iLO network connection to blades (100 Mb/s) to Onboard Administrator (with 10/100/1000 Mb/s uplink) on blade systems

##### Memory

16 MB Flash

256 MB DDR 3 with ECC (112 MB after ECC and video)

##### Operating System Support

For information on HP's Certified and Supported ProLiant Servers for OS and Virtualization Software and latest listing of software drivers available for your server including how to purchase from HP, please visit our OS Support Site at: <http://www.hp.com/go/ossupport>

##### Client System Support

For information on Client System Support, please visit the HP iLO Feature Comparison Site at: [www.hp.com/go/compareilo](http://www.hp.com/go/compareilo)

##### Client Browser Support

Microsoft Internet Explorer 9

**NOTE:** For customers using Protected Mode, please use the Java based version of Integrated Remote Console.

Microsoft Internet Explorer 8

**NOTE:** For customers using Protected Mode, please use the Java based version of Integrated Remote Console.

Microsoft Internet Explorer 7

Firefox Extended Support Release (ESR) 10 (on supported Windows and Linux systems)

### Technical Specifications

<b>Command Line Support</b>	Firefox 3.6 (on supported Windows and Linux systems) Secure Shell and serial port access Secure Socket Layer Secure Shell version 2
<b>Security</b>	Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser, CLP and XML scripting interface AES encryption of video RC4 encryption of video
<b>Directory Support Services</b>	Active Directory v1.0 (Windows 2003)
<b>Driver Support</b>	HP ProLiant iLO 4 Management Controller Driver Package
<b>Management protocols supported</b>	SNMP, IPMI 2.0 (system and LAN interface), DMTF Systems Management Architecture for Server Hardware Command Line Protocol (SMASH CLP), HP RIBCL XML

<b>HP Ethernet 1Gb 4-port 331FLR Adapter</b>	<b>HP Flexible Network Technology</b>	HP Flexible Network Technology consists of replaceable network solutions to meet the customers require now or in the future.	
	<b>Network Interface</b>	10Base-T/100Base-TX/1000Base-TX	
	<b>Compatibility</b>	IEEE 802.3 10Base-T IEEE 802.3ab 1000Base-T IEEE 802.3ad 1000Base-TX IEEE 802.1p 100Base-TX IEEE 802.1q 100Base-TX	
	<b>Data Transfer Method</b>	PCI Express, four lanes (x4)	
	<b>Controller</b>	BCM5719	
	<b>Network Transfer Rate</b>	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
		1000Base-TX (Half and Full-Duplex)	2000 Mb/s
	<b>Connector</b>	Two RJ-45	
	<b>Cable Support</b>	10Base-T	Categories 3, 4 or 5 UTP; up to 328 ft (100 m)
		100Base-TX	Category 5 or higher UTP; up to 328 ft (100 m)
		1000BaseTX	Category 5 or higher UTP; up to 328 ft (100 m)

<b>Environment-friendly Products and Approach</b>	<b>End-of-life Management and Recycling</b>	Hewlett-Packard offers end-of-life HP product return, trade-in, and recycling programs in many geographic areas. For trade-in information, please go to: <a href="http://www.hp.com/go/green">http://www.hp.com/go/green</a> . To recycle your product, please go to: <a href="http://www.hp.com/go/green">http://www.hp.com/go/green</a> or contact your nearest HP sales office.
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### Technical Specifications

Products returned to HP will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: <http://www.hp.com/go/green>. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

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### Summary of Changes

Date	Version History	Action	Description of Change:
19-Jun-2015	From Version 20 to 21	Changes	Changes made on the following sections: Overview, Features and Benefits, Standard Features, Options and Service and Support
01-Jun-2015	From Version 19 to 20	Changed	Added the StoreEasy 1550 Storage model
30-Mar-2015	From Version 18 to 19	Changed	Added new models, changes were made on the entire document.
18-Dec-2014	From Version 17 to 18	Changed	Added SCSI HBA to StoreEasy 1640 options and other minor edits.
17-Oct-2014	From Version 16 to 17	Changed	Changed in the Options Section of the QS.
		Removed	Removed the HP StoreEasy 1X30 Storage from the document.
18-Jul-2014	From Version 15 to 16	Added	Added HP StoreEasy Windows Storage Server 2012 R2 Upgrade section
03-Jul-2014	From Version 13 to 15	Changed	Standard Features – Memory – StoreEasy 1640 Standard changed 12GB to 16GB and 3 x 4GB to 4 x 4GB; Standard Features – Storage External – added D3000 to supported products; Optional Software – HP LiveVault section – replaced URL; Models – Pre-Configured – StoreEasy 1640 Models – memory - changed 12GB to 16GB and 3 x 4GB to 4 x 4GB; Options – added HP D3000 Enclosures section
09-May-2014	From Version 12 to 13	Changed	Storage Controllers and Service and Support were revised.
11-Apr-2014	From Version 11 to 12	Changed	Changes were to Storage Controllers, Hard Drives, and Optional Software.
31-Mar-2014	From Version 10 to 11	Changed	Changes were made throughout.
31-Jan-2014	From Version 9 to 10	Changed	Updated the following: Standard Features - Windows Storage Server 2012 Note updated; Optional Software - HP Autonomy LiveVault updated; Configuration Information - Add a Network Adapter - 656596-B21 added "(StoreEasy 1430 only)" to the description; added 718904-B21 and 728987-B21 to the supported adapters; Add More Storage- StoreEasy 1430/1530 - removed BC377A and BC390AAE, added D7526A, D7527A and D7527AAE and removed link to DA14228 and added 729552-B21 and 650926-B21 and QW990A; StoreEasy 1630/1830 - added 698531-B21, D7526A, D7527A, removed BC377A and BC390AAE - removed links to DA14227, DA14228, DA13200 DA14336 and DA14343, added 729552-B21 and 650926-B21 added C8R38A and C8R39A and QW990A; Hard Drives for the StoreEasy 1430/1530 - added 652753-B21, 718171-B21; 734362-B21, 718189-B21, 739900-B21, 718183-B21, 739890-B21, 718177-B21, 691860-B21, 691856-B21, 691854-B21, and 691852-B21; Hard Drives for StoreEasy 1630 - - added 718171-B21; 734362-B21, 718189-B21, 739900-B21, 718183-B21, 739890-B21, 718177-B21, 691860-B21, 691856-B21, 691854-B21, and 691852-B21; removed 653124-B21 and 653122-B21. Hard Drives for StoreEasy 1830 - added 718162-B21, 717965-B21, 734360-

### Summary of Changes

			B21, 717973.B21, 717971-B21, 739898-B21, 739888-B21, 717969-B21, 653078-B21
04-Oct-2013	From Version 8 to 9	Changed	Updated the following sections  Standard Features - Storage Controller  Options - HP Hard Drives for StoreEasy 1830
20-Sep-2013	From Version 7 to 8	Changed	Updated the following: Options - StoreEasy Disk Enclosures - Updated existing NOTE and added new NOTE for the 25 SFF Disk Enclosure; Options - Drives for StoreEasy Enclosures - added 1.2TB SAS HDD - 693648-B21
19-Aug-2013	From Version 6 to 7	Changed	Changed What's New to read:  New StoreEasy 1630 with 2 SFF rear drives with pre-installed OS. 12 LFF slots open for data drives.  Changes made to update the HP StoreEasy 1630 Storage throughout the QuickSpecs.
28-Jun-2013	From Version 5 to 6	Changed	Drives for StoreEasy Enclosures was revised in Options  Note was added to Operating System in Standard Features  HP 10 GbE PCI-e Dual Port Network Interface Card was added to StoreEasy 1830 in Options  HP StoreFabric SN1000Q 16GB 1-port and 2-port PCIe Fibre Channel Host Bus Adapters were added to QLogic Fibre Channel HBAs in Options
10-Jun-2013	From Version 4 to 5	Changed	Overview: Updated What's New, HP StoreEasy 1430 Storage, HP StoreEasy 1530 Storage, HP StoreEasy 1630 Storage and HP StoreEasy 1830 Storage.  Features and Benefits: Updated Efficiently Save money and time, Secure: Protect your data and organization always and Highly Available, Prevent User and Organization disruption sections.  Optional Software: Update HP Data Protector software hyperlink.  Options: Updated HP Hard Drives for StoreEasy 1430/1530, HP Hard Drives for StoreEasy 1630, StoreEasy Disk Enclosures, Drives for StoreEasy Enclosures, Add a Power Cord StoreEasy 1530 and StoreEasy 1830 I/O Expansion Options sections.
19-Apr-2013	From Version 3 to 4	Changed	Standard Features: Updated Maximum Storage Capacity(raw) Models (Drives Configure-to-Order): Updated StoreEasy 1830 Storage  Options: Updated Add a Network Adapter section StoreEasy

### Summary of Changes

			1430/1530, StoreEasy 1630 and StoreEasy 1830 Service and Support, Hp Care Pack, and Warranty Information: Updated Warranty section
08-Mar-2013	From Version 2 to 3	Changed	Changes were made in the following sections: Standard Features: Updated Operating System section Options: in all sections updated parts and part numbers.
21-Dec-2012	From Version 1 to 2	Changed	Changes were made in the following sections: Overview: update Models Models (Drives Configure to Order): in Step 1 update hyperlink Options: in all sections updated parts and part numbers.

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