

### Overview

#### HPE StoreEasy 1X60 Storage

Whether you are a small, medium, or large distributed organization with remote offices, you need reliable, cost-efficient storage that can keep pace with users and growing volumes of file data without getting in the way of how your organization operates.

If you're in search of an easy-to-manage centralized space for securely storing documents, images, audio, and video files, look no further than HPE StoreEasy 1000 Storage: flexible, efficient, and reliable network-attached storage, right-sized for your organization's needs and budget, without compromising on quality or capabilities.

Built from the foundation of the most secure industry standard servers and running the Windows Storage Server 2016 Standard Edition operating system, the new HPE StoreEasy 1460, 1560 1660 and 1860 deliver a radically simplified admin experience through a new management console developed by Hewlett Packard Enterprise, lower-cost internal capacity expansion, better performance options for resource-intensive workloads, and more security protections built-in and included as standard to help you better protect your customers, employees, and organization against loss, corruption, and breaches.

Opt for pre-configured models that include the compute, capacity, and connectivity options most organizations need in a NAS, or tailor a HPE StoreEasy to your requirements with standard and higher performance configure-to-order models and options.

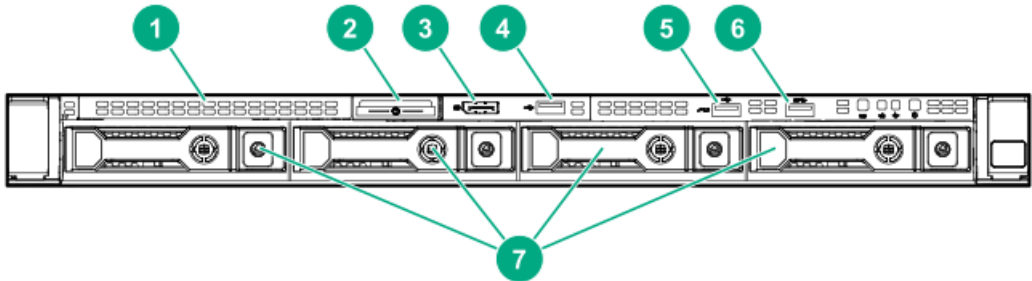
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Overview

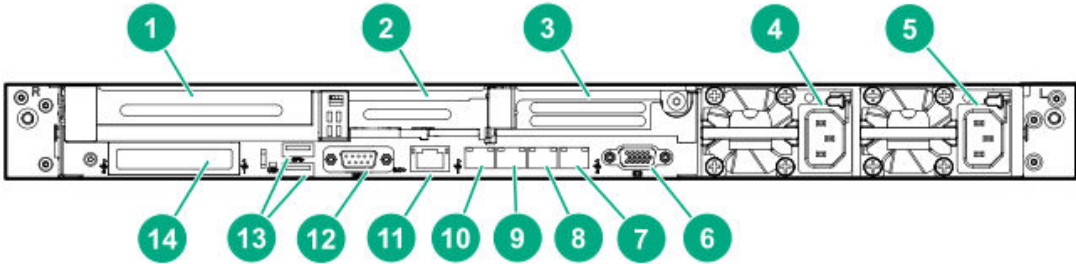
HPE StoreEasy 1460 Storage

HPE StoreEasy 1460 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. HPE StoreEasy 1460 models come with Windows Storage Server 2016 pre-installed from the factory on the four internal LFF drives. The HPE StoreEasy 1460 is built on a ProLiant DL360 Gen 10 Server and includes a rail kit.



HPE StoreEasy 1460 Storage Front View

- |                            |                     |
|----------------------------|---------------------|
| 1. Optical drive blank     | 5. iLO Service Port |
| 2. Serial label pull tab   | 6. USB 3.0 Port     |
| 3. Display port (optional) | 7. SATA drive bays  |
| 4. USB 2.0 port (optional) |                     |



HPE StoreEasy 1460 Storage Rear View

- |  |                            |
|--|----------------------------|
| 1. Slot 1 PCIe3  | 8. 1GbE NIC port 3         |
| 2. Slot 2 PCIe3  | 9. 1GbE NIC port 2         |
| 3. Slot 3 PCIe (optional – requires 2 <sup>nd</sup> processor) | 10. 1GbE NIC port 1        |
| 4. Power Supply 2  | 11. iLO Management port    |
| 5. Power Supply 1  | 12. Serial port (optional) |
| 6. Video port  | 13. USB 3.0 ports          |
| 7. 1GbE NIC port 4   | 14. FlexibleLOM (optional) |

Models.

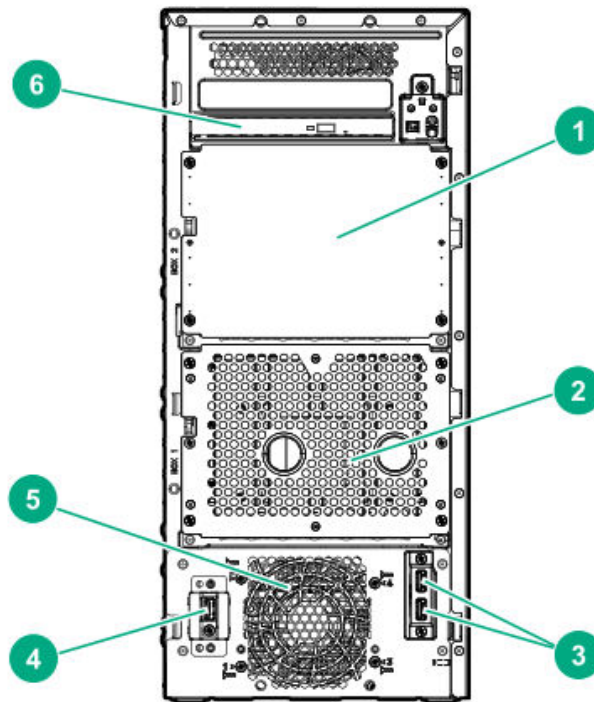
HPE StoreEasy 1460 8TB SATA Storage	Q2R92A
HPE StoreEasy 1460 16TB SATA Storage	Q2R93A
HPE StoreEasy 1460 32TB SATA Storage	Q2R94A

**NOTE:** For above products, the operating system is pre-installed on the 4 LFF drives.

## Overview

### HPE StoreEasy 1560 Storage

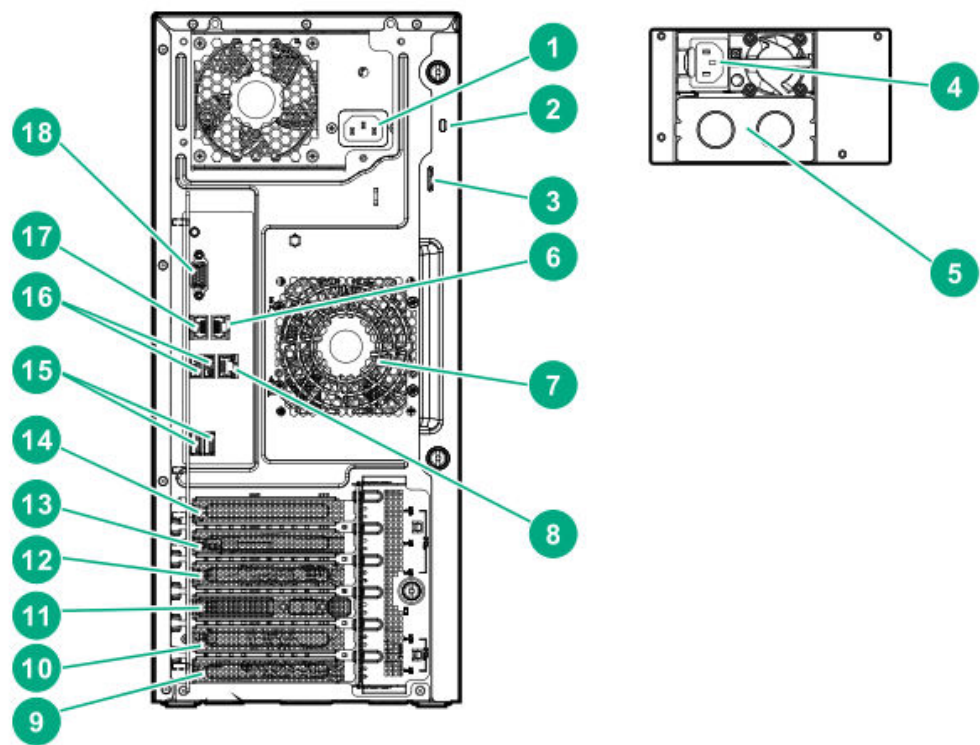
HPE StoreEasy 1560 Storage products are storage solutions that deliver multi-protocol file serving and application storage in a compact and affordable tower form factor package. They're easy to install and manage, making them perfect for a small workgroup, small businesses or remote offices. HPE StoreEasy 1560 models come with Windows Storage Server 2016 Standard Edition OS pre-installed from the factory on the four internal LFF drives. The HPE StoreEasy 1560 is built on a ProLiant ML110 Gen 10 Server.



**HPE StoreEasy 1560 Storage Front View**

- |                                |                                  |
|--------------------------------|----------------------------------|
| 1. LFF Drive Cage 2 (optional) | 4. iLO Service Port              |
| 2. LFF Drive Cage 1            | 5. PCIe Fan                      |
| 3. USB 3.0 connectors          | 6. Slim Optical Drive (optional) |

Overview



HPE StoreEasy 1560 Storage Rear View

- |  |                            |
|--|----------------------------|
| 1. Replaced by dual PS bay on HPE StoreEasy 1560 | 10. Slot 4 PCIe3 x16       |
| 2. Kensington security slot                      | 11. Serial port (optional) |
| 3. Padlock eye                                   | 12. Slot 3 PCIe3 x8        |
| 4. Hot-plug Power Supply bay 1                   | 13. Slot 2 PCIe3 x8        |
| 5. Hot-plug Power Supply bay 2 (optional)        | 14. Slot 1 PCIe3 x16       |
| 6. 1GbE NIC port 1                               | 15. USB 3.0 port           |
| 7. System fan                                    | 16. USB 2.0 port           |
| 8. iLO Management Port                           | 17. 1GbE NIC port 2        |
| 9. Slot 5 PCIe x8                                | 18. Video port             |

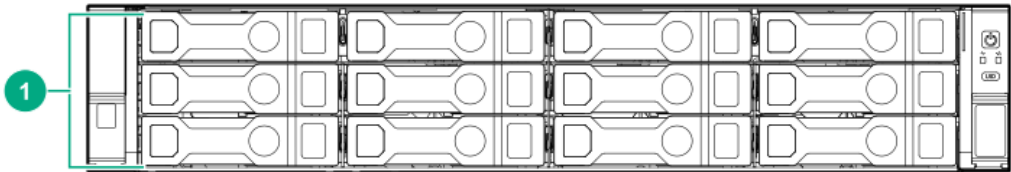
Models.

HPE StoreEasy 1560 8TB SATA Storage	Q2R96A
<b>NOTE:</b> (4 x 2TB 6G 7.2K RPM LFF SATA HDDs with pre-installed OS).	
HPE StoreEasy 1560 16TB SATA Storage	Q2R97A
<b>NOTE:</b> (4 x 4TB 6G 7.2K RPM LFF SATA HDDs with pre-installed OS).	

Overview

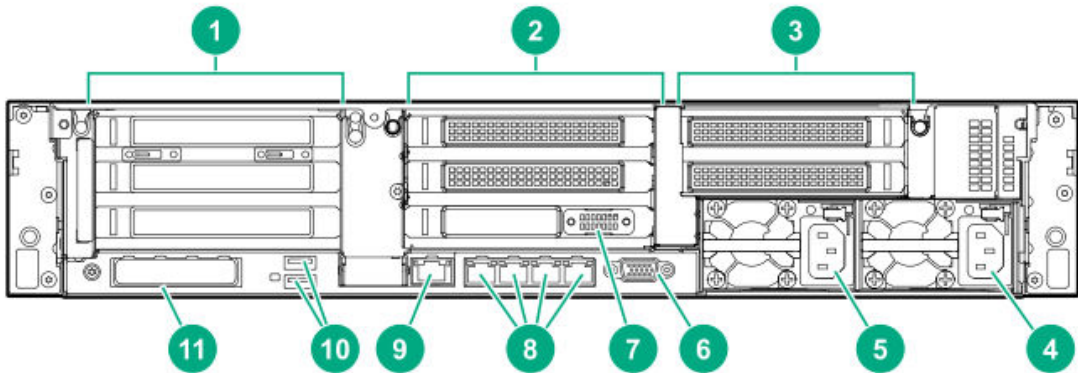
HPE StoreEasy 1660 Storage

HPE StoreEasy 1660 Storage products deliver high capacity and drives down your cost per GB. Four or six-core processing (depends on model selected), up to 16 LFF hot-plug drive slots, and ready for external expandability enhance this ultra-dense 2U shared storage solution for small, medium, or large IT environments. HPE StoreEasy 1660 models come with Windows Storage Server 2016 Standard Edition OS pre-installed from the factory on two M.2 Solid State Disks. The HPE StoreEasy 1660 is built on a ProLiant DL380 Gen 10 Server and includes a rail kit.



HPE StoreEasy 1660 Storage Front View

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



HPE StoreEasy 1660 Storage Rear View

- |                                       |                        |
|---------------------------------------|------------------------|
| 1. Primary Riser slots 1-3            | 7. Not used            |
| 2. Primary Riser slots 4-6 (optional) | 8. 1Gb RJ-45 ports 1-4 |
| 3. Not used                           | 9. iLO management port |
| 4. Power Supply 1                     | 10. USB 3.0 ports      |
| 5. Power Supply 2                     | 11. FlexibleLOM slot   |
| 6. Video port                         |                        |

Models.

HPE StoreEasy 1660 Performance Storage	Q2P71A
HPE StoreEasy 1660 Storage	Q2P72A

**NOTE:** The above CTO models have no data drives pre-installed for capacity– StoreEasy Drive bundles should be ordered separately for complete configuration. There are 2 x SFF SSDs on a M.2 card in rear PCIe slot with pre-installed OS.

HPE StoreEasy 1660 16TB SAS Storage	Q2P73A
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**NOTE:** (8 x 2TB 12G 7.2K RPM LFF SAS HDDs pre-installed and 4 open LFF slots in front and 2 SFF SSDs on M.2 card in rear PCIe slot with pre-installed OS).

Overview

HPE StoreEasy 1660 32TB SAS Storage

Q2P74A

**NOTE:** (8 x 4TB 12G 7.2K RPM LFF SAS HDDs pre-installed and 4 open LFF slots in front and 2 SFF SSDs on M.2 card in rear PCIe slot with pre-installed OS).

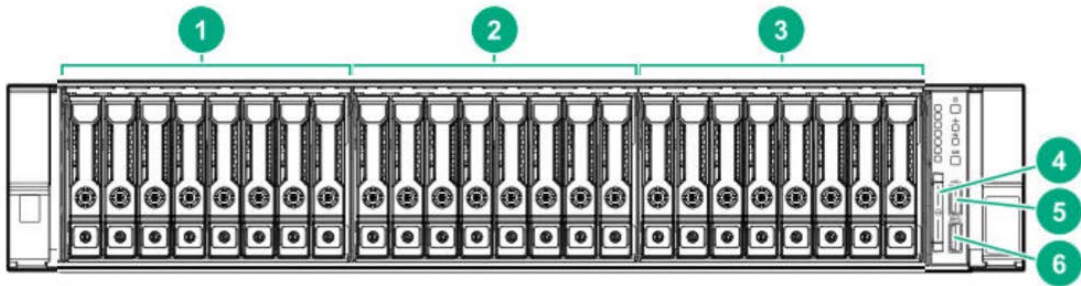
HPE StoreEasy 1660 64TB SAS Storage

Q2P75A

**NOTE:** (8 x 8TB 12G 7.2K RPM LFF SAS HDDs pre-installed and 4 open LFF slots in front and 2 SFF SSDs on M.2 card in rear PCIe slot with pre-installed OS).

HPE StoreEasy 1860 Storage

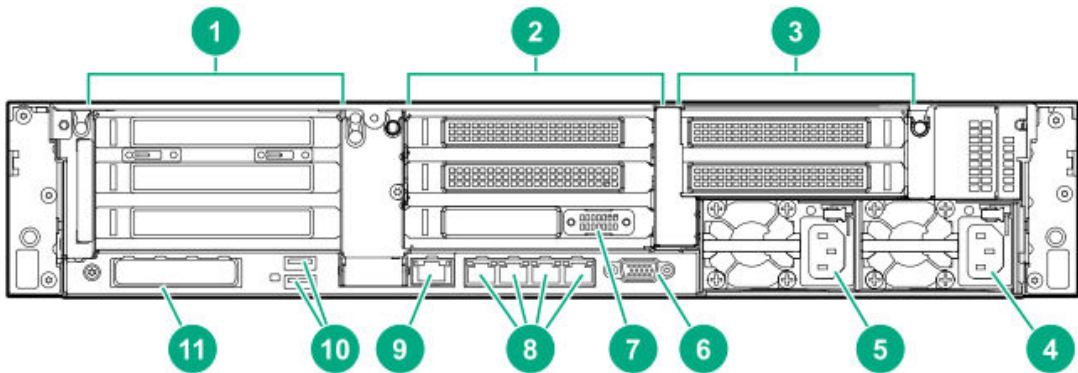
HPE StoreEasy 1860 Storage products deliver Enterprise-class performance, expandability, and flexibility. Four or six-core processing (depending on model selected), up to 28 internal SFF data drives for performance, and ready for external expandability enhance this 2U shared storage solution for small, medium, or large IT environments. HPE StoreEasy 1860 models come with Windows Storage Server 2016 Standard Edition OS pre-installed from the factory on two M.2 Solid State Disks. The HPE StoreEasy 1860 is built on a ProLiant DL380 Gen10 server and includes a rail kit.



HPE StoreEasy 1860 Storage Front View

- |   |                         |
|---|-------------------------|
| 1. 8 x SFF SATA/SAS Hot Pluggable Drive Bay 1 | 4 Serial label pull tab |
| 2. 8 x SFF SATA/SAS Hot Pluggable Drive Bay 2 | 5 iLO service port      |
| 3. 8 x SFF SATA/SAS Hot Pluggable Drive Bay 3 | 6 USB 3.0 port          |

Overview



HPE StoreEasy 1860 Storage Rear View

- |                                       |                        |
|---------------------------------------|------------------------|
| 1. Primary Riser slots 1-3            | 7. Not used            |
| 2. Primary Riser slots 4-6 (optional) | 8. 1Gb RJ-45 ports 1-4 |
| 3. Not used                           | 9. iLO management port |
| 4. Power Supply 1                     | 10. USB 3.0 ports      |
| 5. Power Supply 2                     | 11. FlexibleLOM slot   |
| 6. Video port                         |                        |

Models.

HPE StoreEasy 1860 Performance Storage	Q2P76A
HPE StoreEasy 1860 Storage	Q2P77A

**NOTE:** The above CTO models have no data drives pre-installed for capacity– HPE StoreEasy Drive bundles should be ordered separately for complete configuration. There are 2 x SFF SSDs on a M.2 card in rear PCIe slot with pre-installed OS.

HPE StoreEasy 1860 9.6TB SAS Storage	Q2P78A
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**NOTE:** (8 x 1.2TB 12G 10K RPM ENT SAS SFF HDDs pre-installed, 16 open SFF slots and 2 SFF SSDs in rear with pre-installed OS).

HPE StoreEasy 1860 14.4TB SAS Storage	Q2P79A
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**NOTE:** (8 x 1.8TB 12G 10K RPM 512e SAS SFF HDDs pre-installed, 16 open SFF slots and 2 SFF SSDs in rear with pre-installed OS).

## Standard Features

Processor/Cache Memory				
HPE StoreEasy 1460 (all models)	HPE StoreEasy 1560 (all models)	HPE StoreEasy 1660 Performance Model only	HPE StoreEasy 1860 Performance Model only	
Intel® Xeon-Bronze 3104 (1.7GHz/6-core/85W) Processor	Intel® Xeon-Bronze 3104 (1.7GHz/6-core/85W) Processor	Intel® Xeon-Silver 4112 (2.6GHz/4-core/85W) Processor	Intel® Xeon-Silver 4112 (2.6GHz/4-core/85W) Processor	
		HPE StoreEasy 1660 (all others models)	HPE StoreEasy 1860 (all others models)	
		Intel® Xeon-Bronze 3104 (1.7GHz/6- core/85W) Processor	Intel® Xeon-Bronze 3104 (1.7GHz/6-core/85W) Processor	

### Memory

Type	DDR4-2666 CAS-19-19-19 Registered (RDIMM)			
Maximum	24TB (Limit based on operating system license - WSS2016)			
Standard	8GB (1 x 8GB)	8GB (1 x 8GB)	16GB (1 x 16GB)	16GB (1 x 16GB)
DIMM Sockets	24	6	24	24

### Network Controller

NIC ports	4	2	4	4
Controller	1Gb Ethernet 4-port	1Gb Ethernet 4-port	1Gb Ethernet 4-port	1Gb Ethernet 4-port

### HPE StoreEasy 1460 - Primary PCIe Riser

Expansion Slots #	Technology	Bus Width	Connector Width	Form Factor	Notes
1	PCIe 3.0	X16	X16	Full-height, 3/4-length (up to 9.5in) slot	Proc 1
2	PCIe 3.0	X8	X8	Low-Profile slot	Proc 1

### HPE StoreEasy 1460 - Secondary PCIe Riser (optional)

Expansion Slots #	Technology	Bus Width	Connector Width	Form Factor	Notes
3	PCIe 3.0	X16	X16	Low Profile or Full-height; 3/4 length (up to 9.5")	Proc 2

### HPE StoreEasy 1560 - PCIe slots

Expansion Slots #	Technology	Bus Width	Connector Width	Form Factor	Notes
1	PCIe 3.0	X16	X16	Full-height, ¾ length (up to 9.5") Slot	Proc 1
2	PCIe 3.0	X4	X8	Full-height, half-length slot	Proc 1
3	PCIe 3.0	x8	x8	Full-height, half-length slot	Proc 1 (occupied by Smart Array P408i-p Controller)
4	PCIe 3.0	X16	X16	Full-height, full-length slot	Proc 1
5	PCIe 3.0	X4	x8	Full-height, half-length slot	PCH



## Standard Features

### HPE StoreEasy 1660/1860 - Primary PCIe Riser

Expansion Slots #	Technology	Bus Width	Connector Width	Form Factor	Notes
1	PCIe 3.0	x8	X8	Full-height, full-length slot	Proc 1
2	PCIe 3.0	X16	x16	Full-height, full-length slot	Proc 1 (Occupied by SAS Expander on HPE StoreEasy 1860)
3	PCIe 3.0	x8	x8	Full-height, half-length slot	Proc 1 (Occupied by M.2 SSD card on both HPE StoreEasy 1660 and 1860)

### HPE StoreEasy 1660/1860 Secondary PCIe Riser

Expansion Slots #	Technology	Bus Width	Connector Width	Form Factor	Notes
4	PCIe 3.0	X8	X8	Full height, full length slot	Proc 2
5	PCIe 3.0	x16	x16	Full height, full length slot	Proc 2
6	PCIe 3.0	x8	x8	Full-height, half-length slot	Proc 2

Storage Controller	HPE StoreEasy 1460	HPE StoreEasy 1560	HPE StoreEasy 1660	HPE StoreEasy 1860
<b>Controller(s)</b>	HPE Smart Array P408i-a SR Gen10 (8 Internal Lanes/2GB Cache/SmartCache) 12G SAS Modular Controller for data and OS drives	HPE Smart Array P408i-p SR Gen10 (8 Internal Lanes/2GB Cache/SmartCache) 12G SAS Modular Controller for data and OS drives	HPE Smart Array P816i-a SR Gen10 (16 Internal Lanes/4GB Cache/SmartCache) 12G SAS Modular Controller for data drives; HPE Smart Array S100i SR Gen10 SW RAID for OS drives only	HPE Smart Array P816i-a SR Gen10 (16 Internal Lanes/4GB Cache/SmartCache) 12G SAS Modular Controller for data drives; HPE Smart Array S100i SR Gen10 SW RAID for OS drives only
<b>RAID (for data drives using Smart Array controller)</b>	RAID 0, 1, 5, 6, 10, 50, 60, 1 ADM, 10 ADM (Advanced Data Mirroring) on Smart Array P816i – Not all RAID levels recommended or supported on HPE StoreEasy	RAID 0, 1, 5, 6, 10, 50, 60, 1 ADM, 10 ADM (Advanced Data Mirroring) on Smart Array P816i – Not all RAID levels recommended or supported on HPE StoreEasy	RAID 0, 1, 5, 6, 10, 50, 60, 1 ADM, 10 ADM (Advanced Data Mirroring) on Smart Array P816i – Not all RAID levels recommended or supported on HPE StoreEasy	RAID 0, 1, 5, 6, 10, 50, 60, 1 ADM, 10 ADM (Advanced Data Mirroring) on Smart Array P816i – Not all RAID levels recommended or supported on HPE StoreEasy
<b>Internal SAS connectors</b>	8 SAS lanes across 2 x4 internal Mini-SAS ports	8 SAS lanes across 2 x4 internal Mini-SAS ports	16 SAS lanes across 4 x4 internal Mini-SAS ports	16 SAS lanes across 4 x4 internal Mini-SAS ports
<b>External SAS connectors</b>	None	None	None	None

## Standard Features

Storage	HPE StoreEasy 1460	HPE StoreEasy 1560	HPE StoreEasy 1660	HPE StoreEasy 1860
<b>Hard Drives</b>				
<b>Internal</b>	4 LFF (3.5") hot-plug bays in front	4 LFF (3.5") hot-plug bays standard and 4 additional LFF (3.5") hot-plug bays optional (total of 8 internal LFF bays maximum)	12 LFF (3.5") hot-plug bays in front and optional 4 LFF hot-plug bays in mid-chassis drive cage (total of 16 internal LFF bays maximum)	24 SFF (2.5") hot-plug bays in front and optional 4 SFF hot-plug bays in rear drive cage (total of 28 SFF internal bays maximum)
<b>External</b>	Support for external D3X10 and D6020 Disk Enclosures requires optional Smart Array controller with external port	Support for external D3X10 and D6020 Disk Enclosures requires optional Smart Array controller with external port	Support for external D3X10 and D6020 Disk Enclosures requires optional Smart Array controller with external port	Support for external D3X10 and D6020 Disk Enclosures requires optional Smart Array controller with external port
<b>Maximum Storage Capacity (raw)</b>	<b>HPE StoreEasy 1460</b>	<b>HPE StoreEasy 1560</b>	<b>HPE StoreEasy 1660</b>	<b>HPE StoreEasy 1860</b>
<b>Internal</b>	32TB	64TB (with optional card cage and 4 x 12TB LFF HDDs)	192TB (with optional mid-chassis cage and 16 x 12TB LFF HDDs)	67.2TB (with optional rear cage and 28 x 2.4TB SFF HDDs)
<b>External</b>	Depends on number of Smart Arrays with external ports and type of external storage enclosure used			
<b>Power Supply</b>	1 x 500 Watts Platinum, hot-plug (2 <sup>nd</sup> redundant power supply optional)	1 x 500 Watts Platinum, hot-plug (2 <sup>nd</sup> redundant power supply optional)	2 x 800 Watts Platinum, hot-plug	2 x 800 Watts Platinum, hot-plug
<b>Power Cords</b>	<b>HPE StoreEasy 1460</b> One high voltage power cords (IEC C13 to C14) standard; two if second power supply added	<b>HPE StoreEasy 1560</b>	<b>HPE StoreEasy 1660</b> Two high voltage power cords (IEC C13 to C14) standard	<b>HPE StoreEasy 1860</b> Two high voltage power cords (IEC C13 to C14) standard
	<p><b>NOTE:</b> HPE StoreEasy 1460, 1660, and 1860 models ship with a standard 6-foot IEC C-13/C-14 jumper cord. This jumper cord is also included with each standard AC power supply option kit.</p> <p>The HPE StoreEasy 1560 model comes with a standard 6-foot 10A, C13—U.S. power cord (sku# AF556A). If you order the optional 2<sup>nd</sup> power supply you must order also order sku# AF556A to get the above power cord.</p> <p>If a different power cords are required for any HPE StoreEasy 1X60 model, please check the <b>ProLiant Power Cables</b> to determine what power cord options are available to order.</p>			
<b>System Fans</b>	Single processor system includes 5 hot-plug, redundant fans, standard Dual processor system includes 7 hot-plug redundant fans	2 non hot-plug redundant fans, standard	6 hot-plug, high-performance, redundant fans, standard	6 hot-plug, high-performance, redundant fans, standard
<b>Form Factor</b>	1U rack mount (includes rail kit)	Tower (4.5U) <b>NOTE:</b> Sliding Shelf - 874578-B21 is optional to support rack form factor.	2U rack mount (includes rail kit)	2U rack mount (includes rail kit)

## Standard Features

### Additional options

See the corresponding ProLiant QuickSpecs for additional options.

HPE StoreEasy 1460 (DL360 Gen 10)

<https://h20195.www2.hpe.com/v2/GetDocument.aspx?docname=a00008159enw>

HPE StoreEasy 1560 (ML110 Gen 10)

<https://h20195.www2.hpe.com/v2/GetDocument.aspx?docname=a00021851enw>

HPE StoreEasy 1660 (DL380 Gen10 LFF),

HPE StoreEasy 1860 (DL380 Gen10 SFF):

<https://h20195.www2.hpe.com/v2/Getdocument.aspx?docname=a00008180enw>

**NOTE:** Options offered in the HPE ProLiant servers listed above will work in the respective HPE StoreEasy product if supported on Windows Server 2016 Standard Edition.

Because HPE StoreEasy is a storage product, not every possible option available in the equivalent ProLiant server is listed in the HPE StoreEasy 1X60 QuickSpecs. Options that are shown in this document are the most common ones needed for the primary HPE StoreEasy usage model as a file storage product.

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## Features and benefits

### Focus on your business, not your file storage

- The HPE StoreEasy 1X60 Storage systems come with pre-configured hardware and Microsoft Windows Storage Server 2016 Standard Edition operating system for purpose-built file storage.
- HPE-enhanced Initial Configuration Tasks Wizard: HPE StoreEasy installation and network configuration wizards simplify installation and prevent network configuration errors for faster deployment.
- The HPE 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 HPE StoreEasy Tools menu provides management of storage pools, snapshots, emails alerts, enclosure settings, and firmware updates. It also includes access to the Deduplication Evaluation tool, storage viewer and the initial configuration task wizard.
- Optional download of the HPE StoreEasy management console is available through the HPE Support Center at any time during the warranty period of your HPE StoreEasy 1X60. The web-based GUI enables administrators to manage and monitor storage, performance, hardware events, quotas, snapshots, and more – providing an optimized task-focused experience that simplifies day-to-day management and storage provisioning.
- HPE StoreEasy hard drive bundles make it easier for you to buy, deploy and provision additional storage capacity over the life of the product.
- Windows Storage Server 2016 includes a set of new and enhanced features. HPE StoreEasy 1X60 systems based on WSS2016 have an improved deduplication engine that supports individual files up to 1TB in size and file systems up to 64TB in size. Additionally, new security and encryption technologies provide stronger protection against man-in-the-middle attacks.

### Optimized: Tailored for file storage

The Microsoft Windows Storage Server 2016 Standard Edition operating system includes a robust range of file serving and storage capabilities. They address heterogeneous environments and enable more efficient storage utilization. They deliver a similar level of performance and reliability as more expensive storage solutions and they offer support for both file (CIFS/SMB and NFS) and block (iSCSI) protocols, allow for a flexible mix of configurations and includes advanced data management tools. WSS2016 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 and 3.1.1), NFS (v2, v3, v4.1), WebDAV, HTTP/HTTPS, FTP/FTPS, iSCSI

**NOTE:** The SMB 3.1.1 protocol is only supported on Windows Storage Server 2016, Windows Server 2016 and Windows 10 operating systems.

- SMB 3.X.X protocol: Leverage high performance continually available file shares to deliver feature-rich storage for business-critical applications and virtual servers using advanced new functionality.
- SMB 3.1.1 protocol: Enhances security between SMB clients and StoreEasy. When both a client and HPE StoreEasy connect over SMB 3.1.1, SMB signing and encryption protects against an attacker tampering with or eavesdropping on any network packets. SMB 3.1.1 with AES-128-GCM, the latest fixed cryptographic algorithm, showed a 2x performance improvement compared with SMB 3.0 using AES-128-CCM in certain scenarios such as copying large files over an encrypted SMB connection.
- SMB 3.X.X Multi-channel: Enable aggregation of network bandwidth and network fault tolerance when multiple paths are available between SMB clients and file servers.
- SMB 3.1.1. Multichannel and Multi-NIC Cluster Networks: Allows the use of multiple NICs on the same cluster network subnet and automatically enables SMB Multichannel. This allows customers to maximize throughput of SMB 3.1.1 network traffic.
- NFS v4.1: With Windows Storage Server, Server for NFS supports continuous availability. This makes it possible to reliably store and run VMware ESX on a virtual machine that is running Windows Server 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.
- File Server Resource Manager (FSRM): File Server Resource Manager is a set of features within the Windows Storage Server 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.

## Features and benefits

- 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.
- WSS 2016 includes an Unlimited Client Access License (CAL)

**NOTE:** Windows Server 2016 and Windows Storage Server 2016 are built on the same code base. Applications certified for Windows Server 2016 are expected to have the same application compatibility profile on Windows Storage Server 2016. Windows Storage Server and Windows Server have the same application frameworks, services and plumbing to support running the full breadth of Windows-compatible applications. Applications that rely upon certain roles that are removed from Windows Storage Server 2016, 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. Customers should review the End User License Agreement (EULA) to see the types of applications that are permitted for installation on a HPE StoreEasy 1X60. All Windows Storage Server 2016 based systems can join an Active Directory domain, but they cannot be a domain controller.

More Information on Windows Storage Server 2016 can be found here:

<https://blogs.technet.microsoft.com/storageserver/2016/10/14/announcing-windows-storage-server-2016/>

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## Features and benefits

### Efficient: Saves you money and time

- Achieve an average of 50 percent space savings with granular data deduplication and compression.
  - Data deduplication enables Windows Storage Server 2016 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.
  - Data deduplication within Windows Storage Server 2016 has specific improvements for deduplicating large volumes and large files - up to 64 TB and 1TB respectively. WSS 2016's deduplication engine will run multiple threads in parallel using multiple I/O queues on a single volume and thereby improve the performance for deduping large volumes.
  - With the Work Folders feature in Windows Storage Server 2016 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. Work Folders is supported on Windows 10, Windows 8.1, Windows 8, Windows 7, Apple iOS and Android devices. New for Windows Storage Server 2016 version of Work Folders, when a Windows 10 client makes any changes to a file those changes are immediately synched to Work Folders and the client notified.
  - The file sync and share feature enables mobile workers to access their files from anywhere, and 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.
  - 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.
  - 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 HPE StoreEasy 1X60 Storage. Other clients who need the same content retrieve it directly from the Hosted Cache.
-

## Features and benefits

### Secure: Protect your data always

- HPE StoreEasy 1X60 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.
- 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.
- 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.
- 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 for simplified and cost-efficient compliant archiving with iTernity Compliant Archive Solution (iCAS), validated to meet the United States Securities and Exchange Commission (SEC) 17a-4(f) requirements and available through HPE Complete.

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### Highly Available: Prevent business and user disruption

- Increase uptime with such standard features as near continuous health monitoring with HPE 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 Carbonite's 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. All HPE StoreEasy products also include one year of 9x5 software telephone support for the Windows Storage Server operating system.

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### Carbonite Availability

Protect your critical HPE StoreEasy data with Carbonite 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 on how to obtain Carbonite Availability for replication using HPE StoreEasy 1X60, visit the [HPE Complete Carbonite Availability](#) product page.

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### iCAS Archiving software by iTernity

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

For more information on how to obtain the iCAS for archiving visit the [HPE Complete iTernity iCAS](#) product page.

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## Configuration Information

### Specifications for HPE StoreEasy 1460 models

<b>Processor</b>	1 x Intel® Xeon-Bronze 3104 (1.7GHz/6-core/85W) Processor; 2 <sup>nd</sup> processor optional
<b>Memory</b>	8GB (1 x HPE 8GB Single Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory)
<b>Storage Controller</b>	HPE Smart Array P408i-a SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS Modular Controller
<b>Internal Drive Support</b>	4 LFF (3.5") hot-plug drive bays in front
<b>Network Port(s)</b>	4 x 1GbE; optional FlexLOM adapter or PCIe NICs
<b>Expansion Slots</b>	2x PCIe; optional secondary riser with one additional PCIe slot
<b>Security</b>	Trusted Platform Module 2.0 and 1U Lockable Security Bezel
<b>Power</b>	1 x 500W Platinum standard; optional 2 <sup>nd</sup> redundant power supply
<b>Cooling</b>	5 hot-plug redundant fans (single processor), 7 hot-plug redundant fans (dual processors)
<b>Form Factor</b>	1U rack
<b>Operating Systems</b>	Microsoft® Windows Storage Server 2016, Standard Edition
<b>Licenses</b>	HPE iLO Advanced Premium Security Edition License with 1yr Support on Licensed Features

**NOTE:** For more information, visit: [iLO Supported Servers and Features](#)

**NOTE:** Options listed in the steps below are limited to those recommended for use with the StoreEasy 1460.

For a complete set of options and information, please reference the ProLiant DL360 Gen10 QuickSpecs

at: <https://h20195.www2.hpe.com/v2/GetDocument.aspx?docname=a00008159enw>

### Step 1: Choose a HPE StoreEasy 1460 BTO model

HPE StoreEasy 1460 Pre-configured Build-to-Order (BTO) models come with four factory-installed data drives and the Microsoft Windows Storage Server 2016 Standard Edition operating system pre-installed on a 150GB RAID10 partition across the four drives.

HPE StoreEasy 1460 8TB SATA Storage Q2R92A

**NOTE:** (4 x 2TB SATA 6G Midline 7.2K LFF Digitally Signed Firmware HDDs pre-installed in front slots).

HPE StoreEasy 1460 16TB SATA Storage Q2R93A

**NOTE:** (4 x 4TB SATA 6G Midline 7.2K LFF 512e Digitally Signed Firmware HDDs pre-installed in front slots).

HPE StoreEasy 1460 32TB SATA Storage Q2R94A

**NOTE:** (4 x 8TB SATA 6G Midline 7.2K rpm LFF 512e Helium Digitally Signed Firmware HDDs pre-installed in front slots).

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

**NOTE:** All options in steps 2 to 8 of Build-to-Order models are shipped separately and are not factory integrated.

### Step 2: Choose optional external storage controller to connect to external storage enclosures

#### HPE Smart Array SAS Controllers

HPE Smart Array E208e-p SR Gen10 (8 External Lanes/No Cache) 12G SAS PCIe Plug-in Controller 804398-B21

HPE Smart Array P408e-p SR Gen10 (8 External Lanes/4GB Cache) 12G SAS PCIe Plug-in Controller 804405-B21

HPE Smart Array SR Secure Encryption (Data at Rest Encryption/per Server Entitlement) E-LTU Q2F26AAE

**NOTE:** If you wish to enable Data at Rest Encryption on the HPE StoreEasy 1460 using the included Smart Array P408i-a or with an optional Smart Array P408e-P listed above, you must order the optional HPE Smart Array SR Secure Encryption E-LTU (SKU Q2F26AAE).

**HPE Special Reminder:** Before enabling encryption on the Smart Array controller module on this system, you must ensure that your intended use of the encryption complies with relevant local laws, regulations and policies, and approvals or licenses must be obtained if applicable.



## Configuration Information

For any compliance issues arising from your operation/usage of encryption within the Smart Array controller module which violates the above mentioned requirement, you shall bear all the liabilities wholly and solely. Hewlett Packard Enterprise will not be responsible for any related liabilities.

For more information see the [HPE Smart Array SR Secure Encryption QuickSpecs](#).

### D3000 or D6020 Disk Enclosures

The HPE StoreEasy 1460 models support the D3X10 or D6020 Disk Enclosure product families. A Smart Array controller with external ports must be added to the HPE StoreEasy 1460 to add external Disk Enclosures. (See the D3X10 or D6020 Disk Enclosure [QuickSpecs](#) for more information. The maximum number of disk enclosures supported is 8, a limit imposed by the disk enclosures and controllers used, and not specifically StoreEasy. )

### Step 3: Choose optional second Network Adapter

**NOTE:** SFP and SFP+ Adapters do not include a transceiver by default.

SFP transceiver(s) or direct connect cable(s) should be ordered according to the transceiver and cable compatibility matrix found at: <https://www.hpe.com/us/en/pdfViewer.html?resource=/content/hpe/country/us/en/resources/servers/reference-guide/transceiver-networking-server&parentPage=/us/en/products/servers/networking>

#### PCIe Network Adapters

HPE Ethernet 1Gb 2-port 332T Adapter	615732-B21
HPE Ethernet 1Gb 4-port 331T Adapter	647594-B21
HPE StoreEasy 10GbE 2-port 530T Adapter	Q2P91A
HPE StoreEasy 10GbE 2-port 530SFP+ Adapter	Q2P92A

#### FlexLOM Network Adapters

HPE Ethernet 1Gb 4-port 366FLR Adapter	665240-B21
HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter	727054-B21
HPE Ethernet 10Gb 2-port 535FLR-T Adapter	817721-B21

**NOTE:** FlexibleLOM Adapters provide flexibility in meeting networking needs now and adapt to any future requirements without using a standard PCIe slot. These options are field upgradeable, integrate seamlessly with the HPE StoreEasy system architecture and form factor. Only one FlexibleLOM can be added to the HPE StoreEasy 1460.

For more adapter options and information, please go to the ProLiant DL360 Gen10 QuickSpecs at:

<https://h20195.www2.hpe.com/v2/GetDocument.aspx?docname=a00008159enw>

### Step 4: Choose optional Riser Kit to add PCIe slot 3

HPE DL360 Gen10 Low Profile Riser Kit	867982-B21
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**NOTE:** The Riser Kit also requires the Intel® Xeon-Bronze 3104 Processor to be installed. The Riser Kit expands the number of available PCIe slots to 3.

### Step 5: Choose optional 2nd processor

HPE DL360 Gen10 Intel Xeon-Bronze 3104 (1.7GHz/6-core/85W) Processor Kit	860649-B21
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### Step 6: Choose optional extra memory kit

HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	835955-B21
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**NOTE:** There are 12 DIMM slots per processor for a total maximum of 24 DIMM slots. All HPE StoreEasy 1460 models come with one processor and one 8GB DIMM standard.

**NOTE:** Dual processor HPE StoreEasy 1460 systems must have the same number and type of memory DIMMs installed on each processor.

## Configuration Information

### Step 7: Choose optional 2nd power supply

HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit

865408-B21

### Step 8: Choose optional System Recovery Media

HPE StoreEasy XX60 Recovery Software Media Kit

Q2P95A

**NOTE:** The HPE StoreEasy XX60 Recovery Software Media Kit contains a System Recovery DVD that is used to re-install the factory operating system image. Booting the system from the System Recovery DVD will restore the operating system image and logical drive to the factory default state. This enables recovery of the system if all other means to boot the system fail. Refer to the HPE StoreEasy 1X60 Administrator Guide for more information on performing a System Recovery.

**NOTE:** If desired the HPE StoreEasy XX60 Recovery Software can be downloaded from the HPE's Software Depot at no charge, so that the user can create their own System Recovery DVD or System Recovery USB flash drive. The Recovery Software is available here:

<https://h20392.www2.hpe.com/portal/swdepot/displayProductsList.do?category=NAS>

**NOTE:** For more information on how to perform a system recovery on a HPE StoreEasy 1460 refer to the HPE StoreEasy 1X60 Administrator's Guide. The guide can be downloaded from <http://www.hpe.com/support>. Select HPE Support Center and search for the HPE StoreEasy product model in the drivers and download section.

**NOTE:** All data on the original operating system logical drive is erased during the System Recovery process. Back up any data on the operating system drives before performing the System Recovery if possible. While the System Recovery process makes every attempt to preserve the existing data volumes, you should have a backup of your data before recovering the system.

### Specifications for HPE StoreEasy 1560 models

<b>Processor</b>	1 x Intel® Xeon-Bronze 3104 (1.7GHz/6-core/85W) Processor
<b>Memory</b>	8GB (1 x HPE 8GB Single Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory)
<b>Storage Controller</b>	HPE Smart Array P408i-p SR Gen10 (8 Internal Lanes/2GB Cache) 12G SAS Modular Controller
<b>Internal Drive Support</b>	4 LFF (3.5") hot-plug drive bays standard; upgradable to 8 by adding second drive cage
<b>Network Port(s)</b>	2 x 1GbE; optional PCIe NICs
<b>Expansion Slots</b>	5x PCIe (one slot occupied by Smart Array P408i-p controller)
<b>Security</b>	Trusted Platform Module 2.0 and Lockable Security Bezel
<b>Power</b>	1 x 500W Platinum standard; optional 2nd redundant power supply
<b>Cooling</b>	2 non hot-plug redundant fans
<b>Form Factor</b>	4.5U tower
<b>Operating Systems</b>	Microsoft Windows Storage Server 2016, Standard Edition
<b>Licenses</b>	HPE iLO Advanced Premium Security Edition License with 1yr Support on Licensed Features

**NOTE:** For more information, visit: [iLO Supported Servers and Features](#)

**NOTE:** Options listed in the steps below are limited to those recommended for use with the StoreEasy 1560.

For a complete set of options and information, please reference the ProLiant ML110 Gen10 QuickSpecs at:

<https://h20195.www2.hpe.com/v2/getdocument.aspx?docname=a00021851enw>

## Configuration Information

### Step 1: Choose a HPE StoreEasy 1560 BTO model

HPE StoreEasy 1560 Pre-configured Build-to-Order (BTO) models come with four factory-installed data drives and the Microsoft Windows Storage Server 2016 Standard Edition operating system pre-installed on a 150GB RAID10 partition across the four drives.

HPE StoreEasy 1560 8TB SATA Storage

Q2R96A

**NOTE:** (4 x 2TB SATA 6G Midline 7.2K LFF Digitally Signed Firmware HDDs pre-installed).

HPE StoreEasy 1560 16TB SATA Storage

Q2R97A

**NOTE:** (4 x 4TB SATA 6G Midline 7.2K LFF 512e Digitally Signed Firmware HDDs pre-installed).

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

**NOTE:** All options in steps 2 to 8 of Build-to-Order models are shipped separately and are not factory integrated.

### Step 2: Choose optional external storage controller to connect to external storage enclosures

#### HPE Smart Array SAS Controllers

HPE Smart Array E208e-p SR Gen10 (8 External Lanes/No Cache) 12G SAS PCIe Plug-in Controller

804398-B21

HPE Smart Array P408e-p SR Gen10 (8 External Lanes/4GB Cache) 12G SAS PCIe Plug-in Controller

804405-B21

HPE Smart Array SR Secure Encryption (Data at Rest Encryption/per Server Entitlement) E-LTU

Q2F26AAE

**NOTE:** If you wish to enable Data at Rest Encryption on the HPE StoreEasy 1560 using the included Smart Array P408i-p or with an optional Smart Array P408e-P listed above, you must order the optional HPE Smart Array SR Secure Encryption E-LTU (SKU Q2F26AAE).

**HPE Special Reminder:** Before enabling encryption on the Smart Array controller module on this system, you must ensure that your intended use of the encryption complies with relevant local laws, regulations and policies, and approvals or licenses must be obtained if applicable.

For any compliance issues arising from your operation/usage of encryption within the Smart Array controller module which violates the above mentioned requirement, you shall bear all the liabilities wholly and solely. Hewlett Packard Enterprise will not be responsible for any related liabilities.

For more information see the [HPE Smart Array SR Secure Encryption QuickSpecs](#).

#### D3X10 or D6020 Disk Enclosures

The HPE StoreEasy 1560 models support the D3X10 or D6020 Disk Enclosure product families. A Smart Array controller with external ports must be added to the HPE StoreEasy 1560 to add external Disk Enclosures. (See the D3X10 or D6020 Disk Enclosure [QuickSpecs](#) for more information. The maximum number of disk enclosures supported is 8, a limit imposed by the disk enclosures and controllers used, and not specifically StoreEasy.).

## Configuration Information

### Step 3: Choose optional second Network Adapter

**NOTE:** SFP and SFP+ Adapters do not include a transceiver by default.

SFP transceiver(s) or direct connect cable(s) should be ordered according to the transceiver and cable compatibility matrix found at:

<https://www.hpe.com/us/en/pdfViewer.html?resource=/content/hpe/country/us/en/resources/servers/reference-guide/transceiver-networking-server&parentPage=/us/en/products/servers/networking>

#### PCIe Network Adapters

HPE Ethernet 1Gb 2-port 332T Adapter	615732-B21
HPE Ethernet 1Gb 4-port 331T Adapter	647594-B21
HPE StoreEasy 10GbE 2-port 530T Adapter	Q2P91A
HPE StoreEasy 10GbE 2-port 530SFP+ Adapter	Q2P92A

For more adapters and information, please refer to the ML110 Gen10 QuickSpecs:

<https://h20195.www2.hpe.com/v2/getdocument.aspx?docname=a00021851enw>

### Step 4: Choose optional extra memory kit

HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	835955-B21
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**NOTE:** There are 6 DIMM slots available on the HPE StoreEasy 1560. All HPE StoreEasy 1560 models come with one processor and one 8GB DIMM standard.

### Step 5: Choose optional 2<sup>nd</sup> LFF drive cage

HPE ML110 Gen10 4LFF Drive Backplane Cage Kit	869491-B21
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**NOTE:** Adding the 2<sup>nd</sup> LFF drive cage requires adding the 2<sup>nd</sup> power supply (sku 865408-B21).

### Step 6: Choose additional HDDs for 2<sup>nd</sup> LFF drive cage optional 2<sup>nd</sup>

HPE 1TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	861686-B21
HPE 2TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	861681-B21
HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	861683-B21
HPE 6TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e HDD	861742-B21
HPE 8TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e Digitally Signed Firmware HDD	834028-B21
HPE 12TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Helium 512e Digitally Signed Firmware HDD	881787-B21

**NOTE:** As a best practice Hewlett Packard Enterprise recommends using the same drive capacity and type in both the first and second LFF drive cages. Also, Hewlett Packard Enterprise recommends ordering and installing 4 LFF drives simultaneously when ordering the 2<sup>nd</sup> drive cage.

For more drive options and information, please refer to the ML110 Gen10 QuickSpecs:

<https://h20195.www2.hpe.com/v2/getdocument.aspx?docname=a00021851enw>

### Step 7: Choose optional 2<sup>nd</sup> power supply

HPE 500W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	865408-B21
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## Configuration Information

### Step 8: Choose optional System Recovery option

HPE StoreEasy XX60 Recovery Software Media Kit

Q2P95A

**NOTE:** The HPE StoreEasy XX60 Recovery Software Media Kit contains a System Recovery DVD that is used to re-install the factory operating system image. Booting the system from the System Recovery DVD will restore the operating system image and logical drive to the factory default state. This enables recovery of the system if all other means to boot the system fail. Refer to the HPE StoreEasy 1X60 Administrator Guide for more information on performing a System Recovery.

**NOTE:** If desired the HPE StoreEasy XX60 Recovery Software can be downloaded from the HPE Software Depot at no charge, so that the user can create their own System Recovery DVD or System Recovery USB flash drive. The Recovery Software(s) are available here:

<https://h20392.www2.hpe.com/portal/swdepot/displayProductsList.do?category=NAS>

**NOTE:** For more information on how to perform a system recovery on a HPE StoreEasy 1560 refer to the HPE StoreEasy 1X60 Administrator's Guide. The guide can be downloaded from <http://www.hpe.com/support>. Select HPE Support Center and search for the HPE StoreEasy product model in the drivers and download section.

**NOTE:** All data on the original operating system logical drive is erased during the System Recovery process. Back up any data on the operating system drives before performing the System Recovery if possible. While the System Recovery process makes every attempt to preserve the existing data volumes, you should have a backup of your data before recovering the system.

### Specifications for HPE StoreEasy 1660 models

<b>Processor</b>	1 x Intel® Xeon-Silver 4112 (2.6GHz/4-core/85W) or Intel® Xeon-Bronze 3104 (1.7GHz/6-core/85W); 2 <sup>nd</sup> processor optional <b>NOTE:</b> The Xeon-Silver 4112 processor is only available on the HPE StoreEasy 1660 Performance Storage model (SKU# Q2P71A).
<b>Memory</b>	16GB (1 x HPE 16GB Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory)
<b>Storage Controller</b>	HPE Smart Array P816i-a SR Gen10 (16 Internal Lanes/4GB Cache/SmartCache) 12G SAS Modular Controller for data drives HPE Smart Array S100i SR Gen10 SW RAID for OS drives only
<b>Internal Drive Support</b>	12 LFF (3.5") hot-plug drive bays in front, optional 4LFF hot-plug mid-chassis drive cage
<b>Network Port(s)</b>	4 x 1GbE; optional FlexLOM adapter or PCIe NICs
<b>Expansion Slots</b>	3x PCIe; optional 3 slot secondary riser <b>NOTE:</b> One PCIe slot occupied by M.2 SSD card.
<b>Security</b>	Trusted Platform Module 2.0 and 2U Lockable Security Bezel
<b>Power</b>	2 x 800W Platinum
<b>Cooling</b>	6 hot-plug, high-performance redundant fans
<b>Form Factor</b>	2U rack
<b>Operating Systems</b>	Microsoft® Windows Storage Server 2016, Standard Edition
<b>Licenses</b>	HPE iLO Advanced Premium Security Edition License with 1yr Support on Licensed Features <b>NOTE:</b> For more information, visit: <a href="#">iLO Supported Servers and Features</a>

**NOTE:** Options listed in the steps below are limited to those recommended for use with the StoreEasy 1660.

For a complete set of options and information, please reference the ProLiant DL380 Gen10 QuickSpecs at:

<https://h20195.www2.hpe.com/v2/getdocument.aspx?docname=a00008180enw>

## Configuration Information

### Step 1: Choose a HPE StoreEasy 1660 model

#### BTO models

HPE StoreEasy 1660 pre-configured Build-to-Order (BTO) models come with factory-installed data drives and the Microsoft Windows Storage Server 2016 Standard Edition operating system pre-installed on 2 x SFF Solid State Disk (SSD) drives on a M.2 card in rear PCIe slot.

HPE StoreEasy 1660 16TB SAS Storage Q2P73A

**NOTE:** (8 x 2TB SAS 12G Midline 7.2K LFF Digitally Signed Firmware HDDs pre-installed in front slots, 4 open LFF slots).

HPE StoreEasy 1660 32TB SAS Storage Q2P74A

**NOTE:** (8 x 4TB SAS 12G Midline 7.2K LFF 512e Digitally Signed Firmware HDDs pre-installed in front slots, 4 open LFF slots).

HPE StoreEasy 1660 64TB SAS Storage Q2P75A

**NOTE:** (8 x 8TB SAS 12G Midline 7.2K rpm LFF 512e Helium Digitally Signed Firmware HDDs pre-installed in front slots, 4 open LFF slots).

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

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

**NOTE:** All options in steps 2 to 9 of Configure-to-Order models are available for pre-configured BTO models. Ordered options ship separately and are not factory integrated.

#### CTO models

The HPE StoreEasy 1660 models Configure-to-Order (CTO) models come with factory-installed data drives and the Microsoft Windows Storage Server 2016 Standard Edition operating system pre-installed on 2 x SFF Solid State Disk (SSD) drives on a M.2 card in rear PCIe slot. The HPE StoreEasy 1660 CTO models can ship with just the OS drives and no factory installed data drives. If data drives are needed, select drives/drive bundles below for factory integration.

HPE StoreEasy 1660 Performance Storage Q2P71A

HPE StoreEasy 1660 Storage Q2P72A

**NOTE:** Hewlett Packard Enterprise recommends as a best practice that all internal data drives for the CTO models be the same type and capacity.

### Step 2: Choose required internal storage drives

#### Drive Options

**Minimum Number of internal drives required** 0

**Maximum Number of internal drives allowed** 16 (with optional mid-chassis drive cage)

#### HPE StoreEasy 1660 LFF Drive Bundles

HPE StoreEasy 40TB SAS LFF (3.5in) Smart Carrier 4-pack HDD Bundle Q0F60A

**NOTE:** Bundle contains 4 x HPE 10TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Wty Digitally Signed Firmware HDD (SKU# 857644-B21).

HPE StoreEasy 32TB SAS LFF (3.5in) Smart Carrier 4-pack HDD Bundle N9Y12A

**NOTE:** Bundle contains 4 x HPE 8TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Wty Digitally Signed Firmware HDD (SKU# 861590-B21).

HPE StoreEasy 24TB SAS LFF (3.5in) Smart Carrier 4-pack HDD Bundle Q2P82A

**NOTE:** Bundle contains 4 x HPE 6TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD (SKU# 861754-B21).

HPE StoreEasy 16TB SAS LFF (3.5in) Smart Carrier 4-pack HDD Bundle Q2P81A

**NOTE:** Bundle contains 4 x HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD (SKU# 861756-B21).

## Configuration Information

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

Q2P80A

**NOTE:** Bundle contains 4 x HPE 2TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD (SKU# 872485-B21).

### HPE Drive options (The following options are applicable for internal storage drives)

#### SmartCache Kit

HPE StoreEasy 1.6TB LFF (3.5in) Smart Carrier Converter SmartCache Kit

Q2P86A

**NOTE:** The Smart Cache kit contains 2 x HPE 800GB SAS 12G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD (SKU# 872378-B21) for use with the SmartCache feature included with the HPE Smart Array P816i-a SR Gen10 Storage Controller which provides a Flash Acceleration data tier to the HPE StoreEasy 1660. For more detailed information about HPE SmartCache go to: <https://www.hpe.com/us/en/product-catalog/detail/pip.5364342.html>

#### SSDs

HPE 960GB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD P09689-B21

HPE 1.92TB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD P09693-B21

HPE 1.92TB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD P09724-B21

HPE 960GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD P09718-B21

HPE 480GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD P07924-B21

HPE 800GB SAS 12G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD P04529-B21

**NOTE:** The recommended number of SSDs for the HPE StoreEasy 1660 is 8; however the Smart Array controller can support up to 25 physical drives.

For more SSD options and information, please refer to the DL380 Gen10 QuickSpecs:

<https://h20195.www2.hpe.com/v2/getdocument.aspx?docname=a00008180enw>

#### HDDs

HPE 2TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD 872485-B21

HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD 872487-B21

HPE 6TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD 861754-B21

HPE 8TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD 819201-B21

HPE 10TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD 857644-B21

HPE 12TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD 881779-B21

HPE 14TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD P09153-B21

HPE 1TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD 861691-B21

HPE 2TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD 872489-B21

HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD 872491-B21

HPE 6TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD 861750-B21

HPE 8TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD 819203-B21

HPE 10TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD 857648-B21

HPE 12TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD 881785-B21

HPE 14TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD P09163-B21

**NOTE:** Other LFF SC HDDs are compatible with HPE StoreEasy 1660. This is not intended to be an exhaustive list. For more HDD options and information, please refer to the DL380 Gen10 QuickSpecs:

<https://h20195.www2.hpe.com/v2/getdocument.aspx?docname=a00008180enw>



## Configuration Information

### Step 3: Choose optional mid-chassis 4LFF drive cage

HPE StoreEasy 1660 4LFF Midplane Drive Cage

Q2P93A

**NOTE:** Expands the number of Large Form Factor (3.5") drive slots from 12 to 16.

### Step 4: Choose optional external storage controller to connect to external storage enclosures

#### HPE Smart Array SAS Controllers

HPE Smart Array E208e-p SR Gen10 (8 External Lanes/No Cache) 12G SAS PCIe Plug-in Controller

804398-B21

HPE Smart Array P408e-p SR Gen10 (8 External Lanes/4GB Cache) 12G SAS PCIe Plug-in Controller

804405-B21

HPE Smart Array SR Secure Encryption (Data at Rest Encryption/per Server Entitlement) E-LTU

Q2F26AAE

**NOTE:** If you wish to enable Data at Rest Encryption on the HPE StoreEasy 1660 using the included Smart Array P816i-a or with an optional Smart Array P408e-P listed above, you must order the optional HPE Smart Array SR Secure Encryption E-LTU (SKU Q2F26AAE).

**HPE Special Reminder:** Before enabling encryption on the Smart Array controller module on this system, you must ensure that your intended use of the encryption complies with relevant local laws, regulations and policies, and approvals or licenses must be obtained if applicable.

For any compliance issues arising from your operation/usage of encryption within the Smart Array controller module which violates the above mentioned requirement, you shall bear all the liabilities wholly and solely. Hewlett Packard Enterprise will not be responsible for any related liabilities.

For more information see the [HPE Smart Array SR Secure Encryption QuickSpecs](#).

#### D3X10 or D6020 Disk Enclosures

The HPE StoreEasy 1660 models support the D3X10 or D6020 Disk Enclosure product families. A Smart Array controller with external ports must be added to the HPE StoreEasy 1660 to add external Disk Enclosures. (See the D3X10 or D6020 Disk Enclosure [QuickSpecs](#) for more information. The maximum number of disk enclosures supported is 8, a limit imposed by the disk enclosures and controllers used, and not specifically StoreEasy).

### Step 5: Choose optional second Network Adapter

**NOTE:** SFP and SFP+ Adapters do not include a transceiver by default.

SFP transceiver(s) or direct connect cable(s) should be ordered according to the transceiver and cable compatibility matrix found at: <https://www.hpe.com/us/en/pdfViewer.html?resource=/content/hpe/country/us/en/resources/servers/reference-guide/transceiver-networking-server&parentPage=/us/en/products/servers/networking>

#### PCIe Network Adapters

HPE Ethernet 1Gb 2-port 332T Adapter

615732-B21

HPE StoreEasy 10GbE 2-port 530T Adapter

Q2P91A

HPE StoreEasy 10GbE 2-port 530SFP+ Adapter

Q2P92A

#### FlexLOM Network Adapters

HPE Ethernet 1Gb 4-port 366FLR Adapter

665240-B21

HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter

727054-B21

HPE Ethernet 10Gb 2-port 535FLR-T Adapter

817721-B21

**NOTE:** FlexibleLOM Adapters provide flexibility in meeting networking needs now and adapt to any future requirements without using a standard PCIe slot. These options are field upgradeable, integrate seamlessly with the HPE StoreEasy system architecture and form factor. Only one FlexibleLOM can be added to the HPE StoreEasy 1660.

For more adapter options and information, please refer to the DL380 Gen10 QuickSpecs:

<https://h20195.www2.hpe.com/v2/getdocument.aspx?docname=a00008180enw>



## Configuration Information

### Step 6: Choose optional Riser Kit

HPE DL Gen10 x8/x16/x8 Riser Kit

870548-B21

**NOTE:** The Riser Kit also requires the HPE StoreEasy 1660 Xeon-Silver 4112 or Xeon-Bronze 3104 Performance Kit to be installed. The Riser Kit expands the number of available PCIe slots to 5.

### Step 7: Choose optional Performance Kit

HPE StoreEasy 1X60 Intel Xeon 4112 Performance Kit

Q2P88A

**NOTE:** For HPE StoreEasy 1660 configuration, the above Performance Kit can be added to only the Performance model (Q2P71A). The kit contains one Xeon-Silver 4122 processor and one 16GB Dual Rank x8 DDR4-2666 CAS-19-19-19 RDIMM.

HPE StoreEasy 1X60 Intel Xeon 3104 Performance Kit

Q2P89A

**NOTE:** For HPE StoreEasy 1660 configuration, the above Performance Kit can be added to all models except for the Performance model. The kit contains one Xeon-Bronze 3104 processor and one 16GB Dual Rank x8 DDR4-2666 CAS-19-19-19 RDIMM.

### Step 8: Choose optional extra memory

HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit

835955-B21

**NOTE:** There are 12 DIMM slots per processor for a total maximum of 24 DIMM slots. All HPE StoreEasy 1660 models come with one processor and one 16GB DIMM standard.

### Step 9: Choose optional cable management arm

HPE 2U Cable Management Arm for Easy Install Rail Kit

733664-B21

**NOTE:** HPE StoreEasy 1660 models include a rail kit, but the cable management arm for that rail kit is optional and can be added separately.

### Step 10: Choose optional System Recovery option

HPE StoreEasy XX60 Recovery Software Media Kit

Q2P95A

**NOTE:** The HPE StoreEasy XX60 Recovery Software Media Kit contains a System Recovery DVD that is used to re-install the factory operating system image. Booting the system from the System Recovery DVD will restore the operating system image and logical drive to the factory default state. This enables recovery of the system if all other means to boot the system fail. Refer to the HPE StoreEasy 1X60 Administrator Guide for more information on performing a System Recovery.

**NOTE:** If desired the HPE StoreEasy XX60 Recovery Software can be downloaded from the HPE Software Depot at no charge, so that the user can create their own System Recovery DVD or System Recovery USB flash drive. The Recovery Software(s) are available here:

<https://h20392.www2.hpe.com/portal/swdepot/displayProductsList.do?category=NAS>

**NOTE:** For more information on how to perform a system recovery on a HPE StoreEasy 1660 refer to the HPE StoreEasy 1X60 Administrator's Guide. The guide can be downloaded from <http://www.hpe.com/support>. Select HPE Support Center and search for the HPE StoreEasy product model in the drivers and download section.

**NOTE:** All data on the original operating system logical drive is erased during the System Recovery process. Back up any data on the operating system drives before performing the System Recovery if possible. While the System Recovery process makes every attempt to preserve the existing data volumes, you should have a backup of your data before recovering the system.

## Configuration Information

### Specifications for HPE StoreEasy 1860 models

<b>Processor</b>	1 x Intel® Xeon-Silver 4112 (2.6GHz/4-core/85W) or Intel® Xeon-Bronze 3104 (1.7GHz/6-core/85W); 2 <sup>nd</sup> processor optional <b>NOTE:</b> The Xeon-Silver 4112 processor is only available on the HPE StoreEasy 1860 Performance Storage model (SKU# Q2P76A).
<b>Memory</b>	16GB (1 x HPE 16GB Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory)
<b>Storage Controller</b>	HPE Smart Array P816i-a SR Gen10 (16 Internal Lanes/4GB Cache/SmartCache) 12G SAS Modular Controller for data drives HPE Smart Array S100i SR Gen10 SW RAID for OS drives only
<b>Internal Drive Support</b>	24 SFF (2.5") hot-plug drive bays in front, optional 4SFF hot-plug rear-chassis drive cage
<b>Network Port(s)</b>	4 x 1GbE; optional FlexLOM adapter or PCIe NICs
<b>Expansion Slots</b>	3x PCIe; optional 3 slot secondary riser <b>NOTE:</b> One PCIe slot occupied by M.2 SSD card and one PCIe slot occupied by SAS Expander.
<b>Security</b>	Trusted Platform Module 2.0 and 2U Lockable Security Bezel
<b>Power</b>	2 x 800W Platinum
<b>Cooling</b>	6 hot-plug, high-performance redundant fans
<b>Form Factor</b>	2U rack
<b>Operating Systems</b>	Microsoft® Windows Storage Server 2016, Standard Edition
<b>Licenses</b>	HPE iLO Advanced Premium Security Edition License with 1yr Support on Licensed Features <b>NOTE:</b> For more information, visit: <a href="#">iLO Supported Servers and Features</a>

**NOTE:** Options listed in the steps below are limited to those recommended for use with the StoreEasy 1860.

For a complete set of options and information, please reference the ProLiant DL380 Gen10 QuickSpecs at: <https://h20195.www2.hpe.com/v2/getdocument.aspx?docname=a00008180enw>

### Step 1: Choose a HPE StoreEasy 1860 model

#### BTO models

HPE StoreEasy 1860 Pre-configured Build-to-Order (BTO) models come with factory-installed data drives and the Microsoft Windows Storage Server 2016 Standard Edition operating system pre-installed on 2 x SFF Solid State Disk (SSD) drives on a M.2 card in rear PCIe slot.

HPE StoreEasy 1860 9.6TB SAS Storage

Q2P78A

**NOTE:** (8 x 1.2TB SAS 12G Enterprise 10K SFF Digitally Signed Firmware HDD pre-installed in front slots, 16 open SFF slots).

HPE StoreEasy 1860 14.4TB SAS Storage

Q2P79A

**NOTE:** (8 x 1.8TB SAS 12G Enterprise 10K SFF 512e Digitally Signed Firmware HDD pre-installed in front slots, 16 open SFF slots).

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

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

**NOTE:** All options in steps 2 to 9 of Configure-to-Order models are available for pre-configured BTO models. Ordered options ship separately and are not factory integrated.

## Configuration Information

### CTO models

The HPE StoreEasy 1860 models Configure-to-Order (CTO) models come with factory-installed data drives and the Microsoft Windows Storage Server 2016 Standard Edition operating system pre-installed on 2 x SFF Solid State Disk (SSD) drives on a M.2 card in rear PCIe slot. The HPE StoreEasy 1860 CTO models can ship with just the OS drives and no factory installed data drives. If data drives are needed, select drives/drive bundles below for factory integration.

HPE StoreEasy 1860 Performance Storage Q2P76A

HPE StoreEasy 1860 Storage Q2P77A

**NOTE:** Hewlett Packard Enterprise recommends as a best practice that the internal data drives for the CTO models be the same type and capacity.

### Step 2: Choose required internal storage drives

#### Drive Options

Minimum Number of internal drives required	0
Maximum Number of internal drives allowed	28 (with optional rear-chassis drive cage)

### HPE StoreEasy 1860 SFF Drive Bundles

HPE StoreEasy 4.8TB SAS SFF (2.5in) Smart Carrier 4-pack HDD Bundle Q2P84A

**NOTE:** Bundle contains 4 x HPE 1.2TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD (SKU# 872479-B21).

HPE StoreEasy 7.2TB SAS SFF (2.5in) Smart Carrier 4-pack HDD Bundle Q2P85A

**NOTE:** Bundle contains 4 x HPE 1.8TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD (SKU# 872481-B21).

### HPE SSD Drive options (The following options are applicable for internal storage drives)

#### SmartCache Kit

HPE StoreEasy 1.6TB SFF (2.5in) Smart Carrier SmartCache Kit Q2P87A

**NOTE:** The Smart Cache kit contains 2 x HPE 800GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD (SKU# 872376-B21) for use with the SmartCache feature included with the HPE Smart Array P816i-a SR Gen10 Storage Controller which provides a Flash Acceleration data tier to the HPE StoreEasy 1860. For more detailed information about HPE SmartCache go to: <https://www.hpe.com/us/en/product-catalog/detail/pip.5364342.html>

### SSDs

HPE 800GB SAS 12G Write Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P04543-B21
HPE 800GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09090-B21
HPE 960GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06584-B21
HPE 1.6TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09092-B21
HPE 1.92TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06586-B21
HPE 3.2TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09094-B21
HPE 3.84TB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P06588-B21
HPE 6.4TB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD	P09096-B21

**NOTE:** The recommended number of SSDs for the HPE StoreEasy 1860 is 8. HPE recommends the use of SAS SSDs as the HPE StoreEasy 1860 includes a SAS expander.

## Configuration Information

### HDDs

HPE 1.2TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	872479-B21
HPE 1.8TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	872481-B21
HPE 2.4TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	881457-B21

**NOTE:** Other SFF SC HDDs are compatible with HPE StoreEasy 1860. This is not intended to be an exhaustive list.

For more SSD and HDD options and information, please refer to the DL380 Gen10 QuickSpecs:

<https://h20195.www2.hpe.com/v2/getdocument.aspx?docname=a00008180enw>

### Step 3: Choose optional mid-chassis drive cage

HPE StoreEasy 1860 4SFF Rear Drive Cage	Q2P94A
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**NOTE:** Expands the number of Small Form Factor (2.5") drive slots from 24 to 28

**NOTE:** If the HPE StoreEasy 1860 Rear HDD Cage is selected, the optional Riser Kit (SKU# 870548-B21) cannot be selected and the maximum number of PCIe slots is 2.

### Step 4: Choose optional external storage controller to connect to external storage enclosures

#### HPE Smart Array SAS Controllers

HPE Smart Array E208e-p SR Gen10 (8 External Lanes/No Cache) 12G SAS PCIe Plug-in Controller	804398-B21
HPE Smart Array P408e-p SR Gen10 (8 External Lanes/4GB Cache) 12G SAS PCIe Plug-in Controller	804405-B21
HPE Smart Array SR Secure Encryption (Data at Rest Encryption/per Server Entitlement) E-LTU	Q2F26AAE

**NOTE:** If you wish to enable Data at Rest Encryption on the HPE StoreEasy 1860 using the included Smart Array P816i-a or with an optional Smart Array P408e-P listed above, you must order the optional HPE Smart Array SR Secure Encryption E-LTU (SKU Q2F26AAE).

**HPE Special Reminder:** Before enabling encryption on the Smart Array controller module on this system, you must ensure that your intended use of the encryption complies with relevant local laws, regulations and policies, and approvals or licenses must be obtained if applicable.

For any compliance issues arising from your operation/usage of encryption within the Smart Array controller module which violates the above mentioned requirement, you shall bear all the liabilities wholly and solely. Hewlett Packard Enterprise will not be responsible for any related liabilities.

For more information see the [HPE Smart Array SR Secure Encryption QuickSpecs](#).

### D3X10 or D6020 Disk Enclosures

The HPE StoreEasy 1860 models support the D3X10 or D6020 Disk Enclosure product families. A Smart Array controller with external ports must be added to the HPE StoreEasy 1860 to add external Disk Enclosures. (See the D3X10 or D6020 Disk Enclosure [QuickSpecs](#) for more information. The maximum number of disk enclosures supported is 8, a limit imposed by the disk enclosures and controllers used, and not specifically StoreEasy).

### Step 5: Choose optional second Network Adapter

**NOTE:** SFP and SFP+ Adapters do not include a transceiver by default.

SFP transceiver(s) or direct connect cable(s) should be ordered according to the transceiver and cable compatibility matrix found at:

<https://www.hpe.com/us/en/pdfViewer.html?resource=/content/hpe/country/us/en/resources/servers/reference-guide/transceiver-networking-server&parentPage=/us/en/products/servers/networking>

#### PCIe Network Adapters

HPE Ethernet 1Gb 2-port 332T Adapter	615732-B21
HPE StoreEasy 10GbE 2-port 530T Adapter	Q2P91A
HPE StoreEasy 10GbE 2-port 530SFP+ Adapter	Q2P92A

## Configuration Information

### FlexLOM Network Adapters

HPE Ethernet 1Gb 4-port 366FLR Adapter	665240-B21
HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter	727054-B21
HPE Ethernet 10Gb 2-port 535FLR-T Adapter	817721-B21

**NOTE:** FlexibleLOM Adapters provide flexibility in meeting networking needs now and adapt to any future requirements without using a standard PCIe slot. These options are field upgradeable, integrate seamlessly with the HPE StoreEasy system architecture and form factor. Only one FlexibleLOM can be added to the HPE StoreEasy 1860.

For more adapter options and information, please refer to the DL380 Gen10 QuickSpecs:

<https://h20195.www2.hpe.com/v2/getdocument.aspx?docname=a00008180enw>

### Step 6: Choose optional Riser Kit

HPE DL Gen10 x8/x16/x8 Riser Kit	870548-B21
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**NOTE:** The Riser Kit also requires the HPE StoreEasy 1860 Xeon-Silver 4112 or Xeon-Bronze 3104 Performance Kit to be installed. The Riser Kit expands the number of available PCIe slots to 4.

**NOTE:** If the Riser Kit is selected, the optional HPE StoreEasy 1860 Rear HDD cage (SKU# Q2P94A) cannot be selected.

### Step 7: Choose optional Performance Kit

HPE StoreEasy 1X60 Intel Xeon 4112 Performance Kit	Q2P88A
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**NOTE:** For HPE StoreEasy 1860 configuration, the above Performance Kit can be added to only the Performance model (Q2P76A). The kit contains one Xeon-Silver 4122 processor and one 16GB Dual Rank x8 DDR4-2666 CAS-19-19-19 RDIMM.

HPE StoreEasy 1X60 Intel Xeon 3104 Performance Kit	Q2P89A
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**NOTE:** For HPE StoreEasy 1860 configuration, the above Performance Kit can be added to all models except for the Performance model. The kit contains one Xeon-Bronze 3104 processor and one 16GB Dual Rank x8 DDR4-2666 CAS-19-19-19 RDIMM.

### Step 8: Choose optional extra memory

HPE 16GB (1x16GB) Dual Rank x8 DDR4-2666 CAS-19-19-19 Registered Smart Memory Kit	835955-B21
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**NOTE:** There are 12 DIMM slots per processor for a total maximum of 24 DIMM slots. All HPE StoreEasy 1860 models come with one processor and one 16GB DIMM standard.

### Step 9: Choose optional cable management arm

HPE 2U Cable Management Arm for Easy Install Rail Kit	733664-B21
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**NOTE:** HPE StoreEasy 1860 models include a rail kit, but the cable management arm for that rail kit is optional and can be added separately.

### Step 10: Choose optional System Recovery option

HPE StoreEasy XX60 Recovery Software Media Kit	Q2P95A
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**NOTE:** The HPE StoreEasy XX60 Recovery Software Media Kit contains a System Recovery DVD that is used to re-install the factory operating system image. Booting the system from the System Recovery DVD will restore the operating system image and logical drive to the factory default state. This enables recovery of the system if all other means to boot the system fail. Refer to the HPE StoreEasy 1X60 Administrator Guide for more information on performing a System Recovery.

**NOTE:** If desired the HPE StoreEasy XX60 Recovery Software can be downloaded from the HPE Software Depot at no charge, so that the user can create their own System Recovery DVD or System Recovery USB flash drive. The Recovery Software(s) are available here:

<https://h20392.www2.hpe.com/portal/swdepot/displayProductsList.do?category=NAS>

## Configuration Information

**NOTE:** For more information on how to perform a system recovery on a HPE StoreEasy 1860 refer to the HPE StoreEasy 1X60 Administrator's Guide. The guide can be downloaded from <http://www.hpe.com/support>. Select HPE Support Center and search for the HPE StoreEasy product model in the drivers and download section.

**NOTE:** All data on the original operating system logical drive is erased during the System Recovery process. Back up any data on the operating system drives before performing the System Recovery if possible. While the System Recovery process makes every attempt to preserve the existing data volumes, you should have a backup of your data before recovering the system.

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## Service and Support

### Warranty

HPE StoreEasy 1460, 1560, 1660 and 1860 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.

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### Services Included with the Product

One year of Hewlett Packard Enterprise Software Support for the Windows Storage Server 2016 Operating System, standard 9x5 business hours (software advisory and remedial software telephone support, and media and documentation distribution service).

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### Windows Storage Server 2016 Support Statement

Standard support for the Microsoft Windows Storage Server 2016 operating system includes (but is not limited to) initial configuration, troubleshooting of operating system installation and/or recovery issues, hardware and driver problems, and system-specific / storage-centric features (Volume / File system creation; File/Folder/Share Permissions; Active Directory integration.; DFS-R; DFS-N; failover clustering; quotas; deduplication; NFS, SMB, iSCSI protocols; performance tuning; etc.). HPE Support Services will not troubleshoot a Microsoft Operating System feature that has been deprecated or has limited functionality as per design by Microsoft. HPE Support Services will not troubleshoot third-party software or issues related to Microsoft Active Directory Services that are external to the HPE HPE StoreEasy system that may be hindering implementation of Active Directory integration and/or clustering services. In those cases, customers should resolve issues with their third-party software vendor and/or by opening a support case with Microsoft directly.

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## Service and Support

### Protect your business beyond warranty with HPE Support Services

HPE Pointnext provides a comprehensive portfolio including Advisory and Transformational, Professional, and Operational Services to help accelerate your digital transformation. From the onset of your transformation journey, Advisory and Transformational Services focus on designing the transformation and creating a solution roadmap. Professional Services specializes in creative configurations with flawless and on-time implementation, and on-budget execution. Finally, operational services provides innovative new approaches like Flexible Capacity and Datacenter Care, to keep your business at peak performance. Hewlett Packard Enterprise is ready to bring together all the pieces of the puzzle for you, with an eye on the future, and make the complex simple.

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### Connect your devices:

Unlock all of the benefits of your technology investment by connecting your products to Hewlett Packard Enterprise. Reduce down time, increase diagnostic accuracy and have a single consolidated view of your environment. By connecting, you will receive 24x7 monitoring, pre-failure alerts, automatic call logging, and automatic parts dispatch. HPE Proactive Care Service and HPE Datacenter Care Service customers will also benefit from proactive activities to help prevent issues and increase optimization. All of these benefits are already available to you with your server storage and networking products, securely connected to HPE support.

Learn more about getting connected at <http://www.hpe.com/services/getconnected>

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### Discover, plan, and design

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

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

**HPE 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.

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

## Service and Support

### Deploy and integrate

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

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**HPE StoreEasy 1000/3000 Storage Installation and Startup Service** -Expert system installation and setup by a Hewlett Packard Enterprise technical specialist designed to reduce implementation time and cost, with your basic questions about the service answered during the included orientation session. <https://h20195.www2.hpe.com/v2/Getdocument.aspx?docname=4AA2-6112ENW>

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**HPE 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 Hewlett Packard Enterprise storage quickly and efficiently.

<https://www.hpe.com/us/en/services/nimble-storage.html>

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**HPE Technical Services Support Credits** offer flexible services and technical skills to meet your changing IT demands. With a menu of service that is tailored to suit your needs, you get additional resources and specialist skills to help you maintain peak performance of your IT. Offered as annual credits, you can plan your budgets while proactively responding to your dynamic business.

### 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.

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#### HPE Proactive Care Support Service

HPE Proactive Care gives customers an enhanced call experience. When your products are connected to HPE, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice. This service includes available response times of next business day, 4 hour response or 6 hour to repair with answers to software questions within two hours. Hewlett Packard Enterprise is the only leading manufacturer who makes this level of coverage available as a standard service offering for your most valuable servers.

<http://www.hpe.com/services/proactivecare>

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#### HPE Foundation Care Support Service

HPE Foundation Care connects you to Hewlett Packard Enterprise 24 hours a day, seven days a week for assistance on resolving issues –This service includes available response times of next business day, 4 hour response or 6 hour to repair with answers to software questions within two hours. Hewlett Packard Enterprise is the only leading manufacturer who makes this level of coverage available as a standard service offering for your most valuable servers. In addition, Collaborative software support is included and provides troubleshooting assistance on industry leading software running on your server. Simplify your support experience and make Hewlett Packard Enterprise your first call to help resolve hardware or software problems.

<http://www.hpe.com/services/foundationcare>

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#### HPE Datacenter Care service

HPE Datacenter Care helps improve IT stability and security, increase the value of IT, and enable agility and innovation. It is a structured framework of repeatable, tested, and globally available services “building blocks.” You can deploy, operate, and evolve your datacenter wherever you are on your IT journey. With HPE Datacenter Care, you benefit from a personalized relationship with Hewlett Packard Enterprise via a single point of accountability for HPE and others’ products. For more information, visit

<http://www.hpe.com/services/datacentercare>

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#### HPE Education Services

Keep your IT staff trained making sure they have the right skills to deliver on your business outcomes. Book on a class today and learn how to get the most from your technology investment. <http://www.hpe.com/ww/learn>



## Service and Support

### Optimized Care

#### **HPE Proactive Care\* with 6 hour call-to-repair commitment, three year Support Service**

HPE Proactive Care gives customers an enhanced call experience. When your products are connected to HPE, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice. This Service combines three years' proactive reporting and advice with our highest level of hardware support – the HPE 24x7, six hour hardware call-to-repair. Hewlett Packard Enterprise is the only leading manufacturer who makes this level of coverage available as a standard service offering for your most valuable servers.

<https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf>

\*HPE Proactive Care and HPE Proactive Care Advanced require that the customer connect their devices to make the most of these services and receive all the deliverables. HPE Insight Remote Support is available at no additional cost with a HPE warranty, HPE Support Service or HPE contractual support agreement.

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### Standard Care

#### **HPE Proactive Care\* with 24x7 coverage, three year Support Service**

HPE Proactive Care gives customers an enhanced call experience. When your products are connected to HPE, Proactive Care helps prevent problems and maintains IT stability by utilizing personalized proactive reports with recommendations and advice. This Service combines three years proactive reporting and advice with our 24x7 coverage, four hour hardware response time when there is a problem. <https://www.hpe.com/h20195/v2/GetPDF.aspx/4AA3-8855ENW.pdf>

\*HPE Proactive Care and HPE Proactive Care Advanced require that the customer connect their devices to make the most of these services and receive all the deliverables. HPE Insight Remote Support is available at no additional cost with a HPE warranty, HPE Support Service or HPE contractual support agreement.

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### Basic Care

#### **HPE Foundation Care 24x7, three-year Support Service**

HPE Foundation Care 24x7 gives you access to Hewlett Packard Enterprise 24 hours a day, seven days a week for assistance on resolving issues. This service includes need based Hardware onsite response within four hours. In addition, collaborative software support is included in this service that provides troubleshooting assistance on industry leading software running on your HPE server. Simplify your support experience and make Hewlett Packard Enterprise your first call to help resolve hardware or software problems.

<https://www.hpe.com/h20195/v2/getdocument.aspx?docname=4AA4-8876ENW>

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### HPE Support Center

The HPE Support Center is a personalized online support portal with access to information, tools and experts to support HPE business products. Submit support cases online, chat with Hewlett Packard Enterprise experts, access support resources or collaborate with peers.

Learn more <http://www.hpe.com/support/hpesc>

The HPE Support Center Mobile App\* allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalized IT support anywhere, anytime.

HPE Support Center is available at no additional cost with a HPE warranty, HPE Support Service or HPE contractual support agreement.

\*HPE Support Center Mobile App is subject to local availability

## Service and Support

### For more information

<http://www.hpe.com/services>

<https://www.hpe.com/us/en/services/operational.html>

<https://www.hpe.com/us/en/support.html> To learn more on HPE Storage Services, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. HPE Pointnext operational services are sold by Hewlett Packard Enterprise and Hewlett Packard Enterprise Authorized Service Partners:

Contact information for a representative in your area can be found at "Contact HPE" <https://www.hpe.com/us/en/contact-hpe.html>

- Services for customers purchasing from Hewlett Packard Enterprise or an enterprise reseller are quoted using Hewlett Packard Enterprise order configuration tools.
- Customers purchasing from a commercial reseller can find HPE Pointnext operational services at <http://ssc.hpe.com/portal/site/ssc/>

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### Parts and Materials

Hewlett Packard Enterprise will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction.

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## Technical Specifications

### HPE StoreEasy 1460

#### System Unit

<b>Dimensions</b>	4.29 x 43.46 x 74.98 cm 1.69 x 17.11 x 29.5 in	LFF Drives
<b>Weight</b> (approximate)	16.78 kg 37 lb	LFF maximum: Four drives, two processors, two power supplies, two heatsinks, one Smart Array controller and seven fans.
<b>Input Requirements</b> (per power supply)	Rated Line Voltage	100 to 120 VAC 200 to 240 VAC
<b>BTU Rating</b>	Maximum	For 500W Power Supply: 1979 BTU/hr (at 100 VAC), 1911 BTU/hr (at 200 VAC), 1965 BTU/hr (at 240 VDC) for China Only
<b>Power Supply Output</b> (per power supply)	Rated Steady-State Power	For 500W Power Supply: 500W (at 100 VAC), 500W (at 240 VAC), 500W (at 240 VDC) input for China
<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).  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.hpe.com/servers/ashrae">http://www.hpe.com/servers/ashrae</a>
	Extended Ambient Operating Support	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.hpe.com/servers/ashrae">http://www.hpe.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-condensing)	Operating	8% to 90% - Relative humidity (Rh), 28°C 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	3050 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).

Technical Specifications

Non-operating

9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).

Acoustic Noise

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. Please have your HPE representative provide information from the HPE EMESC website for further technical details regarding the configurations listed below.

Configuration SKU	Entry	Base	Performance
Idle			
LWAd	5.1 B	5.1 B	5.2 B
LpAm	35 dBA	35 dBA	36 dBA
Operating			
LWAd	5.3 B	5.2 B	5.9 B
LpAm	36 dBA	38 dBA	45 dBA

**NOTE:** Acoustics levels presented here are generated by the test configuration only. Acoustics levels will vary depending on system configuration. Values are subject to change without notification and are for reference only.

Emissions Classification (EMC)

To view the regulatory information for your product, view the Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products, available at the Hewlett Packard Enterprise Support Center:  
<http://www.hpe.com/support/Safety-Compliance-EnterpriseProducts>

HPE StoreEasy 1560

System Unit

Tower Dimensions	17.32 (H)x 7.68 (W) x 18.92. (D) in (44 x 19.5 x 48.05 cm)		
Tower Weight (approximate)	Minimum:	29.82 lbs (13.5 kg)	
	Maximum:	55.0 lbs (25.0 kg)	
Input Requirements (per power supply)	Rated Line Voltage	100 to 120 VAC	
	Rated Input	For 350W & 550W Power Supply:8A (at 100~240 VAC)	
	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)	
BTU Rating	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)	
Power Supply Output (per power supply)	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 200VAC),	

Technical Specifications

<b>System Inlet Temperature</b>	Standard Operating Temperature	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.							
	Extended Ambient Operating Support	<p>System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F).</p> <p>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 3048m (10,000 ft).</p> <p>The approved hardware configurations for this system are listed at the URL: <a href="http://www.hpe.com/servers/ashrae">http://www.hpe.com/servers/ashrae</a>.</p> <p>System performance may be reduced if operating in the extended ambient operating range or with a fan fault.</p>							
<b>Relative Humidity</b>  (non-condensing)	Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).							
	Operating	8% to 90% - Relative humidity (Rh), 28°C maximum wet bulb temperature, non-condensing.							
<b>Altitude</b>	Non-operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing..							
	Operating	3050 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).							
<b>Acoustic Noise</b>	Non-operating	9144 m (30,000 ft). Maximum allowable altitude change rate is 457 m/min (1500 ft/min).							
	<p>Listed are the declared A-Weighted sound power levels (<math>L_{WAd}</math>) and declared average bystander position A-Weighted sound pressure levels (<math>L_{pAm}</math>) 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. Please have your HPE representative provide information from the HPE EMESC website for further technical details regarding the configurations listed below.</p> <p><b>Idle</b></p> <table><tr><td>LWAd</td><td>4.0 Bels Entry 4.0 Bels Perf</td></tr><tr><td>LpAm</td><td>24.8 dBA Entry 24.1 dBA Perf</td></tr></table> <p><b>Operating</b></p> <table><tr><td>LWAd</td><td>4.0 Bels Entry 4.0 Bels Perf</td></tr><tr><td>LpAm</td><td>25.1 dBA Entry 24.1 dBA Perf</td></tr></table>		LWAd	4.0 Bels Entry 4.0 Bels Perf	LpAm	24.8 dBA Entry 24.1 dBA Perf	LWAd	4.0 Bels Entry 4.0 Bels Perf	LpAm
LWAd	4.0 Bels Entry 4.0 Bels Perf								
LpAm	24.8 dBA Entry 24.1 dBA Perf								
LWAd	4.0 Bels Entry 4.0 Bels Perf								
LpAm	25.1 dBA Entry 24.1 dBA Perf								

**NOTE:** Acoustics levels presented here are generated by the test configuration only. Acoustics levels will vary depending on system configuration. Values are subject to change without notification and are for reference only.

## Technical Specifications

### Emissions Classification (EMC) - Regulatory Information

To view the regulatory information for your product, view the Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products, available at the Hewlett Packard Enterprise Support Center:

<http://www.hpe.com/support/Safety-Compliance-EnterpriseProducts>

### HPE StoreEasy 1660 (LFF) and 1860 (SFF)

#### System Unit

##### Dimensions

8.73 x 44.54 x 67.94 cm 3.44 SFF Drives:  
x 17.54 x 26.75 in

8.73 x 44.54 x 73.02 cm 3.44 LFF Drives:  
x 17.54 x 28.75 in

##### Weight (approximate)

**Maximum:** 19.5 kg  
43.00 lbs

**Minimum:** 14.9 kg  
32.75 lbs

**Maximum:** 24.5 kg  
54 lbs

**Minimum:** 17.1 kg  
37.75 lbs

Minimum: 8 SFF chassis with 1x SFF HDD and 7 HDD blanks, 2x Drive Bay blanks, 1x processor including standard heatsink, 1x power supply (plus blank), 1x Smart Array, 1x Riser installed, cables for the above)

Maximum: 12 LFF hard drives (no rear drives), 2x processors, 2x power supplies, 1x Smart Array, 2x Risers installed)

##### Input Requirements (per power supply)

##### Rated Line Voltage

100 to 120 VAC  
200 to 240 VAC

##### BTU Rating

##### 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

##### Power Supply Output (per power supply)

##### Rated Steady-State Power

For 1400W Power Supply: 1400W (at 240 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 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

## Technical Specifications

<b>System Inlet Temperature</b>	<b>Standard Operating Temperature</b>	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.
	<b>Extended Ambient Operating Temperature</b>	<p>System performance during standard operating support may be reduced if operating with a fan fault or above 30°C (86°F).</p> <p>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.hpe.com/servers/ashrae">http://www.hpe.com/servers/ashrae</a></p> <p>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.hpe.com/servers/ashrae">http://www.hpe.com/servers/ashrae</a></p>
	<b>Non-operating</b>	System performance may be reduced if operating in the extended ambient operating range or with a fan fault.
<b>Relative Humidity</b> (non-condensing)	<b>Operating</b>	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
	<b>Non-operating</b>	8% to 90% - Relative humidity (Rh), 28°C maximum wet bulb temperature, non-condensing.
<b>Altitude</b>	<b>Operating</b>	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing..
	<b>Non-operating</b>	3050 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).

Technical Specifications

Acoustic Noise

Listed are the declared A-Weighted sound power levels ( $L_{WAd}$ ) and declared average bystander position A-Weighted sound pressure levels ( $L_{pAm}$ ) 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. Please have your Hewlett Packard Enterprise representative provide information from the HPE EMESC website for further technical details regarding the configurations listed below.

Idle

LWAd	4.8 B Entry
	4.4 B Base
	4.6 B Perf
LpAm	37 dBA Entry
	31 dBA Base
	31 dBA Perf

Operating

LWAd	4.8 B Entry
	4.4 B Base
	4.6 B Perf
LpAm	37 dBA Entry
	31 dBA Base
	31 dBA Perf

**NOTE:** Acoustics levels presented here are generated by the test configuration only. Acoustics levels will vary depending on system configuration. Values are subject to change without notification and are for reference only.

**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.

Emissions Classification (EMC) – Regulatory Information

To view the regulatory information for your product, view the Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products, available at the Hewlett Packard Enterprise Support Center:  
<http://www.hpe.com/support/Safety-Compliance-EnterpriseProducts>

HPE Smart Array

For latest information on [HPE Smart Array Gen10 Controllers for HPE ProLiant DL, ML and Apollo Servers](#) please refer to their QuickSpecs. (E208i-a,E208i-p,E208e-p,P408i-a,P408i-p,P408e-p,P816i-a)

Environment-friendly Products and Approach - End-of-life Management and Recycling

Hewlett Packard Enterprise offers [end-of-life product return, trade-in, and recycling programs](#) in many geographic areas, for our products. Products returned to Hewlett Packard Enterprise 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 Enterprise web site. These instructions may be used by recyclers and other WEEE treatment facilities as well as Hewlett Packard Enterprise OEM customers who integrate and re-sell Hewlett Packard Enterprise equipment.



## Summary of Changes

Date	Version History	Action	Description of Change
10-Jun-2019	Version 9	Changed	Overview, Features and Benefits and Configuration Information sections were updated.
06-May-2019	Version 8	Changed	Configuration Information section was updated
04-Mar-2019	Version 7	Changed	Configuration Information Section was updated.
04-Feb-2019	Version 6	Changed	Overview, Standard Features, Features and Benefits, Configuration Information and Service and Support sections were updated.
03-Dec-2018	Version 5	Changed	Standard Features,,Configuration Information and Service and Support sections were revised.
04-Jun-2018	Version 4	Changed	Overview, Standard Features,, HPE StoreEasy 1660 configuration information HPE StoreEasy 1860 configuration information, and Technical Specifications were updated.
16-Apr-2018	Version 3	Changed	Optimized: Tailored for file storage and Optional Software were revised.
02-Apr-2018	Version 2	Changed	Overview and multiple SKU description were updated.
05-Mar-2018	Version 1	New	New QuickSpecs.



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