

### 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 StoreEasy 1660 and 1860 deliver a radically simplified admin experience through a new management console developed by HPE, 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 StoreEasy to your requirements with standard and higher performance configure-to-order models and options.

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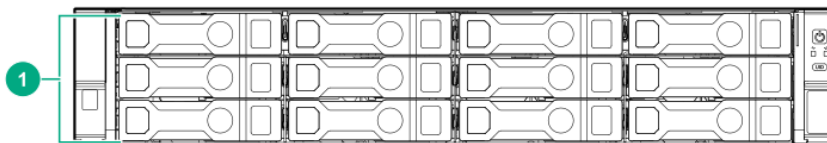
#### What's New

- New models and skus available
  - Q2P71A - HPE StoreEasy 1660 Performance Storage
  - Q2P72A - HPE StoreEasy 1660 Storage
  - Q2P73A - HPE StoreEasy 1660 16TB SAS Storage
  - Q2P74A - HPE StoreEasy 1660 32TB SAS Storage
  - Q2P75A - HPE StoreEasy 1660 64TB SAS Storage
  - Q2P76A - HPE StoreEasy 1860 Performance Storage
  - Q2P77A - HPE StoreEasy 1860 Storage
  - Q2P78A - HPE StoreEasy 1860 9.6TB SAS Storage
  - Q2P78A - HPE StoreEasy 1860 14.4TB SAS Storage
- iLO Advanced Premium Security Edition, TPM 2.0, and chassis intrusion protection included standard with all models
- Up to 60% more internal capacity with 4 LFF or SFF expansion cages (depending on model)
- Optional hybrid flash configurations with 1.8TB SSD bundles and SmartCache licenses

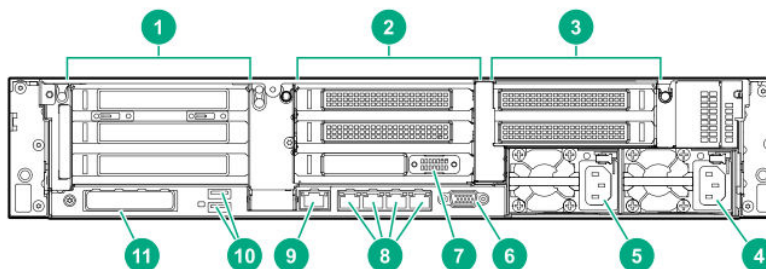
Overview

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 196TB internal storage capacity, and ready for external expandability enhance this ultra-dense 2U shared storage solution for small, medium, or large IT environments. 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 StoreEasy 1660 is built on a ProLiant DL380 Gen 10 Server and includes a rail kit.



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



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

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

**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).

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).

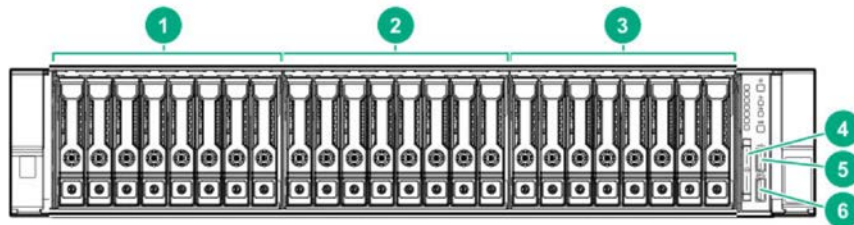
HPE StoreEasy 1660 64TB SAS Storage Q2P75A

**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).

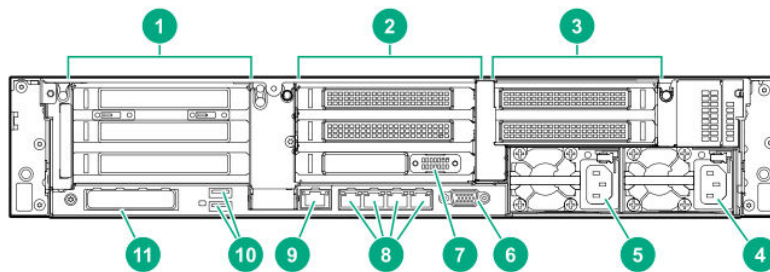
Overview

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. 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 StoreEasy 1860 is built on a ProLiant DL380 Gen10 server and includes a rail kit.



- |   |                          |
|---|--------------------------|
| 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          |



- |                                       |                        |
|---------------------------------------|------------------------|
| 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                         |                        |

HPE StoreEasy 1860 Performance Storage

Q2P76A

HPE StoreEasy 1860 Storage

Q2P77A

**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 1860 9.6TB SAS Storage

Q2P77A

**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

Q2P78A

**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).

## Hardware Specifications of StoreEasy models

Processor/Cache Memory	StoreEasy 1660 Performance Model only	StoreEasy 1860 Performance Model only
	Intel® Xeon-Silver 4112 (2.6GHz/4-core/85W) Processor	Intel® Xeon-Silver 4112 (2.6GHz/4-core/85W) Processor
	StoreEasy 1660 (all other models)	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 (by O/S license)	24TB (WSS2016)
Standard	16GB (1 x 16GB)
DIMM Sockets	24

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

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 StoreEasy 1860)
	3	PCIe 3.0	x8	x8	Full-height, half-length slot	Proc 1 (Occupied by M.2 SSD card on both StoreEasy 1660 and 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

## Hardware Specifications of StoreEasy models

Storage Controller	StoreEasy 1660	StoreEasy 1860
<b>Controller(s)</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	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 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 StoreEasy
<b>Internal SAS connectors</b>	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

Storage	StoreEasy 1660	StoreEasy 1860
<b>Hard Drives Internal</b>	12 LFF (3.5") hot-plug bays in front and optional 4 LFF hot-plug bays in mid-chassis drive cage	24 SFF (2.5") hot-plug bays in front and optional 4 SFF hot-plug bays in rear drive cage
<b>External</b>	Support for external D3000 and D6020 Disk Enclosures requires optional Smart Array controller with external port	Support for external D3000 and D6020 Disk Enclosures requires optional Smart Array controller with external port

Maximum Storage Capacity (raw)		
<b>Internal</b>	192TB	67.2TB
<b>External</b>		

Power Supply	800 Watts Platinum, hot-plug redundant	800 Watts Platinum, hot-plug redundant

Power Cords	StoreEasy 1660	StoreEasy 1860
	Two high voltage power cords (IEC C13 to C14) standard	Two high voltage power cords (IEC C13 to C14) standard
	<p><b>NOTE:</b> All StoreEasy 1X60s (except the StoreEasy 1560) 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. If a different power cord is required, please check the <a href="#">ProLiant Power Cables</a> web page.</p> <p><b>NOTE:</b> The HPE StoreEasy 1550 Storage product is a tower storage system that ships standard with one 6' C13 US power cord that allows connection to wall outlets in a home or office. If a different regional or country specific power cord is required it should be ordered as an option. See StoreEasy 1550 ordering section for more details.</p>	

System Fans	6 hot-plug, high-performance, redundant fans, standard	6 hot-plug, high-performance, redundant fans, standard

Form Factor	2U rack mount (includes rail kit)	2U rack mount (includes rail kit)

## Hardware Specifications of StoreEasy models

**Additional options** See the corresponding ProLiant QuickSpecs for additional options.

StoreEasy 1660 (DL380 Gen10 LFF), 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 StoreEasy product if supported on Windows Server 2016 Standard Edition.

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

## 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: StoreEasy installation and network configuration wizards simplify installation and prevent network configuration errors for faster deployment.

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

The StoreEasy Pool Manager is a best practice driven storage provisioning tool that automatically discovers system storage and recommends the most efficient setup for optimum performance, optimum capacity, or a balanced configuration based on the available storage. Best practices driven storage provisioning tool discovers system storage and recommends the most efficient setup for optimum performance, optimum capacity or a balanced configuration based on the available storage.

The StoreEasy Tools menu within Windows Server manager to access the most commonly accessed tools and tasks that an administrator uses for day-to-day management of StoreEasy. The StoreEasy Tools menu provides management of storage pools, snapshots, emails alerts, enclosure settings, and firmware updates. It also includes access to the Deduplication Evaluation tool, storage viewer and the initial configuration task wizard.

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. 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.

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### 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 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.

## Features and benefits

- 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.
  - 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 StoreEasy 1X60. All Windows Storage Server 2016 based systems can join Active Directory domains, but cannot be a domain controller.

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



## Features and benefits

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

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### **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 StoreEasy 1X60 Storage. Other clients who need the same content retrieve it directly from the Hosted Cache.

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

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

## Features and benefits

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:** 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.

**Prevent business and user disruption**

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 StoreEasy products also include one year of 9x5 software telephone support for the Windows Storage Server operating system.

## Optional Software

**Double-Take  
Availability  
Replication software  
by Carbonite**

Protect your critical HPE StoreEasy data with Carbonite Double-Take Availability's real-time byte-level replication. In the event of a failure, recover the data—with a minimum of loss—from the replicated data repository. For more information on how to obtain Double-Take Availability for replication visit the [HPE Complete Carbonite Double-Take 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.

## StoreEasy 1660 configuration information

### 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 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 3yr Support on Licensed Features <b>NOTE:</b> For more information, visit: <b>iLO Supported Servers and Features</b>

### Step 1: Choose a StoreEasy 1660 model

#### BTO models

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.

HP 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).

HP 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 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 StoreEasy 1660 CTO models can ship with just the OS drives and no factory installed data drives. If data drives

## StoreEasy 1660 configuration information

are needed, select drives/drive bundles below for factory integration.

### StoreEasy 1660 Performance Storage

Q2P71A

### StoreEasy 1660 Storage

Q2P72A

**NOTE:** HPE 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

<b>Drive Options</b>	Minimum Number of internal drives required	0
	Maximum Number of internal drives allowed	16 (with optional mid-chassis drive cage)

### StoreEasy 1660 LFF Drive Bundles

HPE 40TB SAS LFF 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 32TB SAS LFF 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).

HPE24TB SAS LFF 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 16TB SAS LFF 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).

HPE 8TB SAS LFF 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 SSD Drive options (The following options are applicable for internal storage drives)

### SmartCache Kit

HPE 1.6TB LFF Smart Carrier Converter Smart Cache 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 StoreEasy 1660. For more detailed information about HPE SmartCache go to: <https://www.hpe.com/us/en/product-catalog/detail/pip.5364342.html>

**NOTE:** HPE supports only one SmartCache Kit installed in the StoreEasy 1660.

### SSDs

HPE 1.92TB SATA 6G Read Intensive LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD 877760-B21

HPE 1.92TB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD 877790-B21

HPE 960GB SATA 6G Mixed Use LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware SSD 877784-B21

**NOTE:** Maximum number of SSDs supported on StoreEasy 1660 is eight.

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

HPE StoreEasy 1660 4LFF Midplane HDD Cage Q2P93A

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

## StoreEasy 1660 configuration information

### 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

#### D3000 or D6020 Disk Enclosures

The StoreEasy 1660 models support all of D3000 or D6020 Disk Enclosure product families. A Smart Array controller with external ports must be added to the StoreEasy 1660 to add external Disk Enclosures. (See the D3000 or D6000 Disk Enclosure [QuickSpecs](#) for more information).

### Step 5: Choose optional second Network Adapter

#### PCIe Network Adapters

HPE StoreEasy 1GbE 4-port 332T Adptr	Q2P90A
HPE StoreEasy 10GbE 2-port 530T Adptr	Q2P91A
HPE StoreEasy 10GbE 2-port 530SFP+ Adptr	Q2P92A

#### FlexLOM Network Adapters

HPE Ethernet 1Gb 4-port 366FLR Adapter	665240-B21
HPE Ethernet 10Gb 2-port 562FLR-SFP+Adptr	727054-B21
HPE Eth 10Gb 2p 535FLR-T Adptr	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 StoreEasy system architecture and form factor. Only one FlexibleLOM can be added to the StoreEasy 1660.

### 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 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 Xeon 4112 Performance Kit	Q2P88A
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**NOTE:** The above Performance Kit can only be ordered with the StoreEasy 1660 Performance model (SKU# 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 Xeon 3104 Performance Kit	Q2P89A
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**NOTE:** The above Performance Kit can be ordered with all StoreEasy 1660 models except the StoreEasy 1660 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 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 StoreEasy 1660 models come with one processor and one 16GB DIMM standard.

## StoreEasy 1660 configuration information

### Step 9: 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 StoreEasy 1X60 Administrator Guide for more information on performing a System Recovery.

**NOTE:** If desired the StoreEasy 1660 Recovery Software can be downloaded from 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(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 StoreEasy 1660 refer to the StoreEasy 1X60 Administrator's Guide. The guide can be downloaded from <http://www.hpe.com/support> . Select HPE Support Center and search for the 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.

## StoreEasy 1860 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: The Xeon-Silver 4112 processor is only available on the StoreEasy 1860 Performance Storage model (SKU# Q2P76A).</b>
<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: One PCIe slot occupied by M.2 SSD card and one PCIe slot occupied by SAS Expander.</b>
<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 3yr Support on Licensed Features <b>NOTE: For more information, visit:</b> <b><a href="#">iLO Supported Servers and Features</a></b>

### Step 1: Choose a StoreEasy 1860 model

#### BTO models

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.

HP 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).**

HP StoreEasy 1660 32TB 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.**

#### CTO models

The 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 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.

StoreEasy 1860 Performance Storage Q2P76A

StoreEasy 1860 Storage Q2P77A



## StoreEasy 1860 configuration information

**NOTE:** HPE 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

<b>Drive Options</b>	Minimum Number of internal drives required	0
	Maximum Number of internal drives allowed	28 (with optional rear-chassis drive cage)

#### StoreEasy 1860 LFF Drive Bundles

HPE 7.2TB SAS SFF 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 4.8TB SAS SFF Smart Carrier 4-pack HDD Bundle Q2P85A

**NOTE:** Bundle contains 4 x HPE 8TB 12G SAS 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Wty Digitally Signed Firmware Hard Drive (SKU# 872481-B21).

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

#### SmartCache Kit

HPE 1.6TB SFF Smart Carrier Converter Smart Cache 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 StoreEasy 1860. For more detailed information about HPE SmartCache go to: <https://www.hpe.com/us/en/product-catalog/detail/pip.5364342.html>

**NOTE:** HPE supports only one SmartCache Kit installed in the StoreEasy 1860.

#### SSDs

HPE 3.84TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 877764-B21

HPE 1.92TB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 877758-B21

HPE 1.92TB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 877788-B21

HPE 960GB SAS 12G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 872390-B21

HPE 960GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 877782-B21

HPE 800GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 872376-B21

HPE 480GB SATA 6G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 875470-B21

HPE 480GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 868818-B21

HPE 400GB SAS 12G Mixed Use SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 872374-B21

HPE 240GB SATA 6G Read Intensive SFF (2.5in) SC 3yr Wty Digitally Signed Firmware SSD 868814-B21

**NOTE:** Maximum number of SSDs supported on StoreEasy 1860 is eight.

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

HPE StoreEasy 1860 4SFF Rear HDD Cage Q2P94A

**NOTE:** Expands the number of Small Form Factor (2.5") drive slots from 24 to 28

**NOTE:** If the 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.

## StoreEasy 1860 configuration information

### 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

#### D3000 or D6020 Disk Enclosures

The StoreEasy 1860 models support all of D3000 or D6020 Disk Enclosure product families. A Smart Array controller with external ports must be added to the StoreEasy 1860 to add external Disk Enclosures. (See the D3000 or D6000 Disk Enclosure [QuickSpecs](#) for more information).

### Step 5: Choose optional second Network Adapter

#### PCIe Network Adapters

HPE StoreEasy 1GbE 4-port 332T Adptr	Q2P90A
HPE StoreEasy 10GbE 2-port 530T Adptr	Q2P91A
HPE StoreEasy 10GbE 2-port 530SFP+ Adptr	Q2P92A

#### FlexLOM Network Adapters

HPE Ethernet 1Gb 4-port 366FLR Adapter	665240-B21
HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adptr	727054-B21
HPE Eth 10Gb 2p 535FLR-T Adptr	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 StoreEasy system architecture and form factor. Only one FlexibleLOM can be added to the StoreEasy 1860.

### 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 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 StoreEasy 1860 Rear HDD cage (SKU# Q2P94A) cannot be selected.

### Step 7: Choose optional Performance Kit

HPE StoreEasy 1X60 Xeon 4112 Performance Kit	Q2P88A
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**NOTE:** The above Performance Kit can only be ordered with the StoreEasy 1860 Performance model (SKU# 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 Xeon 3104 Performance Kit	Q2P89A
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**NOTE:** The above Performance Kit can be ordered with all StoreEasy 1860 models except the StoreEasy 1860 Performance model. The kit contains one Xeon-Bronze 3104 processor and one 16GB Dual Rank x8 DDR4-2666 CAS-19-19-19 RDIMM.

## StoreEasy 1860 configuration information

### Step 8: Choose optional extra memory kit

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 StoreEasy 1860 models come with one processor and one 16GB DIMM standard.

### Step 9: 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 StoreEasy 1X60 Administrator Guide for more information on performing a System Recovery.

**NOTE:** If desired the StoreEasy 1660 Recovery Software can be downloaded from 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(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 StoreEasy 1660 refer to the StoreEasy 1X60 Administrator's Guide. The guide can be downloaded from <http://www.hpe.com/support>. Select HPE Support Center and search for the 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.

## Service and Support

### Warranty

HPE StoreEasy 1660 and HPE StoreEasy 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.

**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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### 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. HPE is ready to bring together all the pieces of the puzzle for you, with an eye on the future, and make the complex simple.

#### 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. <https://www.hpe.com/h20195/V2/GetPDF.aspx/4AA4-1175ENW.pdf>

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

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### 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.**

**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

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## Service and Support

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>

**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/h20195/V2/GetPDF.aspx/4AA3-0774ENW.pdf>

**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.

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### Operate and support

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

#### **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. HPE 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>

#### **HPE Foundation Care Support Service**

HPE Foundation Care connects you to HPE 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. HPE 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 HPE your first call to help resolve hardware or software problems.

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

#### **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 HPE via a single point of accountability for HPE and others' products. For more information, visit

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

#### **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 - HPE's 24x7, six hour hardware call-to-repair. HPE 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.

### 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.

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

HPE Foundation Care 24x7 gives you access to HPE 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 HPE your first call to help resolve hardware or software problems.

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

**Parts and Materials** HPE 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 HPE due to malfunction.

**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 HPE experts, access support resources or collaborate with peers.

## Service and Support

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

HPE's 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

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**For more information** <http://www.hpe.com/services>

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

## Technical Specifications

### System Unit

<b>Dimensions</b>	8.73 x 44.54 x 67.94 cm	SFF Drives:
	3.44 x 17.54 x 26.75 in	
	8.73 x 44.54 x 73.02 cm	LFF Drives:
	3.44 x 17.54 x 28.75 in	
<b>Weight (Approximate)</b>	Maximum: 19.5 kg	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)
	43.00 lbs	
	Minimum: 14.9 kg	Maximum: 12 LFF hard drives (no rear drives), 2x processors, 2x power supplies, 1x Smart Array, 2x Risers installed)
	32.75 lbs	
	Maximum: 24.5 kg	
	54 lbs	
	Minimum: 17.1 kg	
	37.75 lbs	
<b>Input Requirements</b> (per power supply)	Rated Line Voltage	100 to 120 VAC
		200 to 240 VAC
<b>BTU Rating</b>	Maximum	For 800W Power Supply: 3207 BTU/hr (at 100 VAC), 3071 BTU/hr (at 200 VAC), 3112 BTU/hr (at 240 VAC) for China Only For 500W Power Supply: 1979 BTU/hr (at 100 VAC), 1911 BTU/hr (at 200 VAC), 1965 BTU/hr (at 240 VAC) for China Only
<b>Power Supply Output</b> (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
<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 Temperature	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>  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)



## Technical Specifications

above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: <http://www.hpe.com/servers/ashrae>

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

	Non-operating	-30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).
<b>Relative Humidity</b>	Operating	8% to 90% - Relative humidity (Rh), 28°C maximum wet bulb temperature, non-condensing.
(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).
	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 ( $L_{WAd}$ ) 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 HPE 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>

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## Technical Specifications

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For information on the HPE Smart Array E208e-p SR Gen10 Controller please refer to their [QuickSpecs](#).

For information on the HPE Smart Array P408e-p SR Gen10 Controller please refer to their [QuickSpecs](#).

For information on the HPE Smart Array P816i-a SR Gen10 Controller please refer to their [QuickSpecs](#).

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### 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
05-Mar-2018	Version 1	Created	New QuickSpecs.



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Windows is a US registered trademark of Microsoft Corporation. Intel is a US registered trademark of Intel Corporation.

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

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