

QuickSpecs

HPE StoreEasy 3000 Gateway Storage

Overview

HPE StoreEasy 3850 Gateway Storage

The HPE StoreEasy 3850 Gateway Storage is an optimized, efficient, secure, and highly available file services gateway to address the file storage challenges of customers' medium to large organizations and their SAN environments. HPE StoreEasy 3850 Gateway Storage, built on industry leading HPE ProLiant DNA and Microsoft Windows Storage Server, integrates easily into new and existing SAN environments with a straightforward, consistent management experience for IT generalists or storage administrators. Using the HPE StoreEasy 3850 Gateway, organizations can leverage unused block capacity for file serving and maximize their SAN investment.

What's New

- New SKU available for StoreEasy 3850 Gateway Single Node model with Windows Storage Server 2016 Standard OS edition
 - Q0F52A – HPE StoreEasy 3850 WSS 2016 Gateway Single Node
- New SKU available to upgrade installed StoreEasy 3850 Gateway systems with a single node to dual node
 - Q0F68A – HPE StoreEasy 3850 Gateway Windows Storage Server 2016 Single Node Upgrade
- New hardware SKU available for StoreEasy 3850 Windows Storage Server 2016 Single node optional performance kits
 - Q0F55A – HPE StoreEasy 3850 E5-2609v4 10Gb Performance kit
- New software SKU available to upgrade either from Windows Storage Server 2012 or Windows Storage Server 2012 R2 to Windows Storage Server 2016
 - Q0F57A – HPE WSS2016 Standard Edition Upgrade kit
- HPE StoreEasy provisioning, management, and monitoring tool enhancements that ease administration and further reduce complexity in IT environments

HPE StoreEasy 3850 Gateway System

The HPE StoreEasy 3850 Gateway System sets the standard for performance and expandability in gateway services for your array or Fibre Channel SAN. The StoreEasy 3850 Gateway system consists of the StoreEasy 3850 Gateway 2U chassis and one or two StoreEasy 3850 Gateway Single Nodes. A StoreEasy 3850 Gateway System with two nodes provides high availability by clustering the nodes together. Up to four StoreEasy 3850 Gateway Systems can be configured together as an 8 node cluster.

Models

HPE StoreEasy 3850 Gateway Storage	K2R69A
HPE StoreEasy 3850 Gateway Single Node	K2R70A

NOTE: HPE StoreEasy 3850 Gateway Single Node (one or two factory installed in K2R69A).

NOTE: An HPE StoreEasy 3850 Gateway Single Node (K2R70A) can only be ordered and shipped within a StoreEasy 3850 Gateway System chassis.

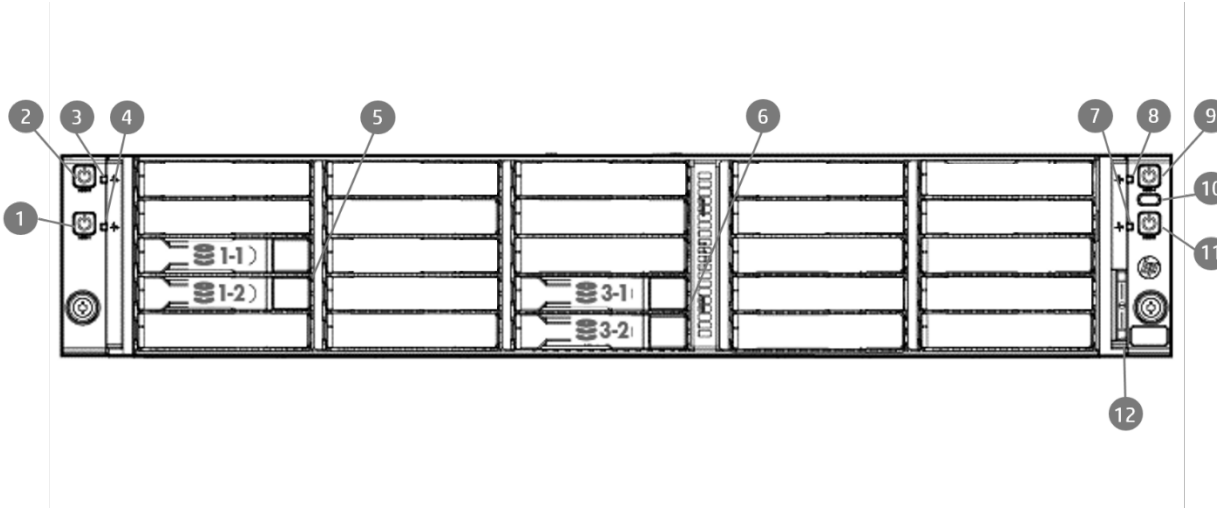
NOTE: HPE StoreEasy 3850 Gateway Storage (K2R69A) shipped from the factory with only one StoreEasy 3850 Gateway Single Node (K2R70A) can only be upgraded in the field to two nodes by ordering P9M56A - HPE StoreEasy 3850 Gateway Single Node Upgrade.

HPE StoreEasy 3850 WSS2016 Gateway Single Node	Q0F52A
HPE StoreEasy 3850 Gateway Windows Storage Server 2016 Single Node Upgrade	Q0F68A

NOTE: HPE StoreEasy 3850 Gateway Storage chassis (K2R69A) shipped from the factory with only one StoreEasy 3850 WSS2016 Gateway Single Node (Q0F52A) can only be upgraded in the field to two nodes by ordering Q0F68A - HPE StoreEasy 3850 WSS2016 Gateway Single Node Upgrade.

Overview

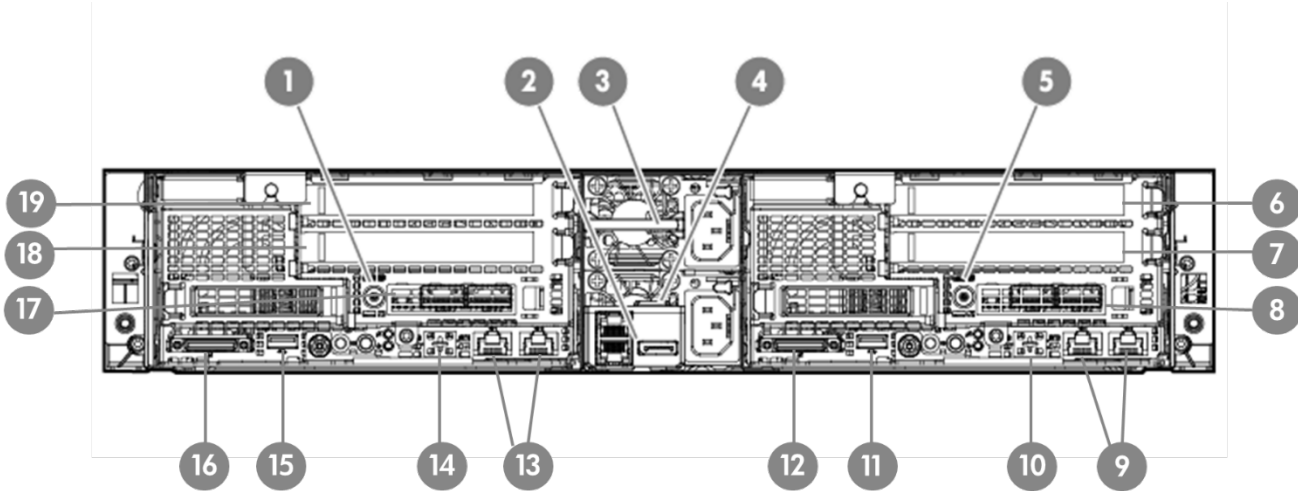
HPE StoreEasy 3850 Gateway System – Front View



Item	Description
1	Power On/Standby button and system power LED (Node 1)
2	Power On/Standby button and system power LED (Node 2) – not active
3	Health LED (Node 2) – not active
4	Health LED (Node 1)
5	SSDs (Node 1)
6	SSDs (Node 3)
7	Health LED (Node 3)
8	Health LED (Node 4) – not active
9	Power On/Standby button and system power LED (Node 4) – not active
10	UID button/LED
11	Power On/Standby button and system power LED (Node3)
12	Chassis serial label pull tab

Overview

StoreEasy 3850 Gateway System - Rear view showing 2 nodes installed



Item	Description
1	StoreEasy 3850 Gateway Single Node (configured as Node 3)
2	TBD
3	Power Supply 2
4	Power Supply 1
5	StoreEasy 3850 Gateway Single Node (configured as Node 1)
6	PCIe slot 1 (Node 1)
7	PCIe slot 2 (Node 1)
8	FlexibleLOM (Node 1)
9	2 x 1GbE NIC connectors (Node 1)
10	Dedicated iLO port (Node 1)
11	USB 3.0 connector (Node 1)
12	SUV connector (Node 1)
13	2 x 1GbE NIC connectors (Node 3)
14	Dedicated iLO port (Node 3)
15	USB 3.0 connector (Node 3)
16	SUV connector (Node 3)
17	FlexibleLOM (Node 3)
18	PCIe slot 2 (Node 3)
19	PCIe slot 1 (Node 3)

Overview

Optimized: Built for enterprise-class file serving

The HPE StoreEasy 3850 Gateway comes with pre-configured hardware and either Microsoft Windows Storage Server 2016 or 2012 R2. Get your file gateway out of the box and online fast with tools that simplify installation and curb common configuration errors.

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

Efficient: Saves you money and time

The HPE StoreEasy 3850 Gateway supports large numbers of users and connected devices thanks to a high-performance file serving controller. Utilize a broad range of file access protocols, including iSCSI block access and Microsoft Hyper-V and SQL Server application storage over SMB.

Achieve an average of 50–60 percent space savings with granular data deduplication. In Windows Storage Server 2016-based StoreEasy 3850 Gateways, an enhanced deduplication engine supports large files, up to 1 TB, and file systems up to 64 TB.

Built-in file sync and share enables employees, mobile workers and distributed teams to access their work files from any Internet-connected desktop, smartphone, or tablet. Organizations can apply policies to wipe devices remotely and enforce lock screen passwords to protect data on employee devices.

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

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

Secure: Protect your data always

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

File Classification Infrastructure can dynamically identify files based on sensitivity and implement sophisticated access controls based on your organization's requirements using Active Directory Rights Management Services.

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

Opt to back up your file data to Microsoft Azure using your Azure subscription to protect against disasters and catastrophic failures. Also, optionally enable simplified and cost efficient compliance archiving with iTernity Compliant Archive Solution (iCAS), validated to meet the United States Securities and Exchange Commission (SEC) 17a-4(f) requirements.

Highly Available: Prevent business and user disruption

The HPE StoreEasy 3850 Gateway increases uptime with standard features as near continuous health monitoring with HPE Active Health System, mirrored operating system solid-state drives (SSDs), and advanced memory protection.

Confidently deploy large file systems with file system online self-healing that reduces the need to take systems offline. With online verification and precise, rapid repair that reduces downtime from file corruption from days or hours to minutes.

Overview

Take advantage of Double-Take Availability software by Carbonite for critical data protection with real-time byte-level replication. In the event of a failure, recover the data—with minimal loss—from the replicated data repository. Software installation files 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(s).

Standard Features

Operating System(s)	<p>Microsoft Windows Storage Server 2016 or 2012 R2, Standard Edition (depends on model) with HPE enhanced value and unique features</p> <ul style="list-style-type: none">• HPE-enhanced Initial Configuration Tasks Wizard: StoreEasy installation and network configuration wizards simplify installation and prevent network configuration errors for faster deployment.• HPE StoreEasy Dashboard consolidates all key status information such as capacity utilization, performance, and health in a single interface, reducing the need to navigate multiple tools and interfaces for system monitoring. Low capacity warning email alerts now available to minimize disruption.• HPE StoreEasy Tools menu within Windows Server manager consolidates the most commonly accessed tools and tasks that an administrator uses for day-to-day management of StoreEasy. The StoreEasy Tools menu provides management of storage pools, snapshots, emails and alerts, enclosure settings, and firmware updates. It also includes access to the Deduplication Evaluation tool, storage viewer and the initial configuration task wizard.• Windows Storage Server 2016 includes a set of new and enhanced features, in addition to all of the existing WSS2012 R2 features around advanced security and data services. StoreEasy 3850 system based on WSS 2016 has an improved deduplication engine that supports files up to 1TB and file systems up to 64TB. Additionally, new security and encryption technologies provide stronger protection against man-in-the-middle attacks.• Windows Storage Server 2012 R2 (WSS2012 R2) includes a robust range of file serving and storage capabilities. It addresses heterogeneous environments and it enables more efficient storage utilization. WSS2012 R2 delivers a level of performance and reliability comparable to more expensive storage solutions. It offers support for both file (SMB/CIFS and NFS) and block (iSCSI) protocols, allowing for a flexible mix of configurations supported by advanced data management tools.• WSS2016 or WSS2012 R2 leverages your Windows Server management skill sets and tools including Active Directory, PowerShell and System Center.• Extensive file access protocols 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. <p>NOTE: SMB 3.1.1 protocol only supported in WSS2016.</p> <ul style="list-style-type: none">- 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.- 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: Server for NFS has been updated to support continuous availability. These improvements make it possible to reliably store and run VMware ESX on a virtual machine that is running Windows Server by using the NFS v4.1 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.
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Standard Features

- At the same time, failover clustering isolates VMware ESX hypervisor hosts from intermittent glitches during failovers.
- iSCSI: Some applications require block storage. iSCSI Target Server can provide these applications with continuously available block storage. Since the storage is remotely accessible it can also consolidate block storage for central or branch office locations. By using boot-capable NICs or a software loader, you can deploy hundreds of diskless servers. This is ideal for large deployments of identical operating system images, such as a Hyper-V server farm or High Performance Computing (HPC) clusters.
 - File Server Resource Manager (FSRM): File Server Resource Manager is a set of features within the WSS2012 R2 and WSS2016 OS versions 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.
 - Storage Quality of Service (QOS) within WSS 2016: WSS 2016 provides a way to centrally monitor and manage storage performance for virtual machines using Hyper-V and the Scale-Out File Server roles.
 - Data Deduplication:
 - Data deduplication enables Windows Storage Server 2016 and Windows Storage Server 2012 R2 to store more data in less physical space for greater storage efficiency. Data deduplication uses variable size chunking and compression, which deliver optimization ratios of 2:1 for general file servers and up to 20:1 for virtualization data. Evaluate your deduplication savings with the included deduplication evaluation tool which allows you to determine the expected savings that you would get if deduplication is enabled on a particular volume. The Deduplication evaluation tool supports local drives and mapped or unmapped remote shares.
 - Data deduplication within Windows Storage Server 2016 has specific improvements for deduping large volumes and large files - up to 64 TB and 1TB respectively. In WSS 2012 R2, it was recommended to run deduplication on volumes under 10TB in size. WSS 2016's

Standard Features

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.

- **Work Folders:** With Work Folders users can store and access work files on personal computers and devices, often referred to as bring-your-own device (BYOD), in addition to corporate PCs. Users gain a convenient location to store work files, and they can access them from anywhere. Organizations maintain control over corporate data by storing the files on centrally managed file servers, and optionally specifying user device policies such as encryption and lock-screen passwords. Work Folders can be deployed with existing deployments of Folder Redirection, Offline Files, and home folders. Work Folders stores user files in a folder on the server called a sync share. You can specify a folder that already contains user data, which enables you to adopt Work Folders without migrating servers and data or immediately phasing out your existing solution. 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.
- **Hosted BranchCache:** Using client/server architecture, Windows 7/8 client computers can cache content on the local network via the Hosted Cache running on the StoreEasy 3850 Gateway Storage. Other clients who need the same content retrieve it directly from the Hosted Cache.
- **Volume Shadow Copy Service:** Creates point-in-time copies (snapshots) of files and folders at predetermined time intervals that can then be accessed from client computers.
- **VSS for Remote SMB File Shares:** Leverage proven Volume Shadow Copy Service (VSS) to offload snapshot and backup operations to remote storage from VSS hardware providers within Hyper-V virtual machines.
- **DFS Namespace:** Enables you to group shared folders that are located on different servers into one or more logically structured namespaces. Each namespace appears to users as a single shared folder with a series of subfolders. However, the underlying structure of the namespace can consist of numerous file shares that are located on different servers and in multiple sites.
- **Distributed File System Replication (DFS-R):** Enables you to efficiently replicate folders (including those referred to by a DFS namespace path) across multiple servers and sites. DFS Replication uses a compression algorithm known as remote differential compression (RDC). RDC detects changes to the data in a file, and it enables DFS Replication to replicate only the changed file blocks instead of the entire file.
- **New VHDX Standard:** Deploy larger capacity virtual storage that can grow to 64 terabytes, is more resilient against corruption, and provides more efficient usage of new 4 KB sector hard disks with the new VHDX virtual storage standard.
- **Live Storage Migration:** Maintain maximized service-level availability even while moving virtual machine storage between host servers independent of the actual virtual machine.
- **Unlimited Client Access Licenses (CALs) included**

NOTE: Windows Server 2016 and Windows Storage Server 2016 are built on the same code base. Windows Server 2012 R2 and Windows Storage Server 2012 R2 are built on the same code base. Applications certified for Windows Server are expected to have the same application compatibility profile on Windows Storage Server. Windows Server and Windows Storage Server have the same application frameworks, services and plumbing to support running the full breadth of Window-compatible applications. Applications that rely upon certain roles that are removed from Windows Storage Server 2016 and 2012 R2, such as fax server, active directory domain controller or terminal services will not be able to leverage those roles. Independent Software Vendors (ISVs) ultimately decide what versions and editions of Windows Server or Windows Storage Server are supported by their products and users should review ISV compatibility and support information before purchasing. HPE StoreEasy customers should review the End User License Agreement (EULA) to see the types of applications that are

Standard Features

permitted for installation. All versions of Windows Storage Server can join Active Directory domains, but 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/>
- More information on Windows Storage Server 2012 R2 can be found here: <http://technet.microsoft.com/en-us/library/jj643303.aspx>

NOTE: The following specifications are for a HPE StoreEasy 3850 Gateway Single Node unless otherwise indicated.

Processor / Cache Memory	Intel Xeon E5-2609v3 (1.9GHz/6-core/15MB/85W) Processor for HPE StoreEasy 3850 Gateway node Intel Xeon E5-2609v4 (1.7GHz/8-core/15MB/85W) Processor for HPE StoreEasy 3850 WSS 2016 Gateway node
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Memory	Type Standard DIMM Sockets	DDR4 Registered (RDIMM) standard 32GB (4 x 8GB) 16
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Network Controller	NIC Ports	2 x 1GbE
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Expansion Slots	Expansion Slot #	Technology	Bus Width*	Source	Connector Width	Form Factor
	1	PCIe 3.0	x16	CPU1	X16	Low profile
	2	PCIe 3.0	X16	CPU1	x16	FHFLDW
	FlexibleLOM	PCIe 3.0	x8	CPU1	x16	FlexibleLOM

Storage Controller **NOTE:** HPE StoreEasy 3850 Gateway Storage nodes include a storage controller designed for internal SATA drives only, including the OS drives. An HBA is typically used to address external SAN or array storage for user data.

Controller(s)	HPE Dynamic Smart Array B140i Controller
RAID	0, 1, 1+0, and 5

Storage	Hard Drives
	Internal 24 x 2.5" (Small Form Factor) hot-plug drive bays in the StoreEasy 3850 Gateway System chassis NOTE: only four bays occupied standard – each StoreEasy 3850 Gateway Single Node will use two bays for its mirrored operating system SSDs

Standard Features

- 2 x 6G SATA SFF SSDs for Operating System mirrored pair for each StoreEasy 3850 WSS 2016 or WSS2012 R2 Gateway Single Node

External

Designed for attach to Fibre Channel (HBA required) or iSCSI (Microsoft iSCSI initiator included) arrays

Power Supply

2 x 800W Platinum Hot Plug Power Supply (located in StoreEasy 3850 Gateway System chassis)

Power Cords

NOTE: The HPE StoreEasy 3850 Gateway Systems are primarily connected to PDU's in data center racks and ship standard with a PDU 6-foot C-14 to C13 power cord (142258-001).

System Fans

8 (4+4 redundancy) non hot-plug in StoreEasy 3850 Gateway System chassis

Form Factor

StoreEasy 3850 Gateway System - 2U rack mount chassis
StoreEasy 3850 Gateway Single Node - 2U single slot tray (one or two nodes per chassis)
StoreEasy 3850 WSS 2016 Gateway Single Node - 2U single slot tray (one or two nodes per chassis)

Optional Software

Double-Take Availability Protect your critical HPE StoreEasy data with Double-Take Availability's real-time byte-level replication. In the event of a failure, recover the data—with a minimum of loss—from the replicated data repository.

iCAS 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 iTernity iCAS go to: http://www.iternity.com/HPE-icas_en.html

SAN / Array Compatibility

Host Bus Adapter (HBA) Support HPE StoreEasy 3850 Gateway Storage products are designed to be connected to a SAN or storage array by adding a recommended Fibre Channel or by using an iSCSI initiator.

HBA selection is left as your choice based on existing infrastructure and/or desired array support. Please see compatible HBAs listed in the 'Options' section below.

NOTE: See the following URL for additional information about Fibre Channel

HBAs: <https://www.hpe.com/us/en/product-catalog/storage/storage-adapters.hits-12.html>

HPE SAN / Array Support

HPE 3PAR StoreServ	https://www.hpe.com/us/en/storage/3par.html
Nimble Storage	https://www.hpe.com/us/en/storage/nimble.html
HPE MSA	https://www.hpe.com/us/en/storage/msa-shared-storage.html
HPE StoreVirtual	https://www.hpe.com/us/en/storage/enterprise-xp.html
HPE P9000/XP	https://www.hpe.com/us/en/storage/enterprise-xp.html
HPE P2000/MSA	https://www.hpe.com/us/en/storage/msa-shared-storage.html

HPE StoreEasy 3850 Gateway Storage products and third-party storage arrays/SAN interoperability statement

Hewlett Packard Enterprise will provide support for the HPE StoreEasy 3850 products when connected to third-party storage arrays, but Hewlett Packard Enterprise will not provide support on third-party storage arrays/SAN unless specifically called out in a Hewlett Packard Enterprise Support contract. Hewlett Packard Enterprise may support the third-party SAN environment attached to HPE StoreEasy 3850 product when specifically under contract with Hewlett Packard Enterprise, but that SAN coverage does not extend to supporting the SAN connectivity of the third-party array.

If you call HPE Services and the problem is determined to be caused by a third-party storage array or the storage arrays' connectivity into a non-Hewlett Packard Enterprise supported SAN, you will be directed to contact the third-party storage array supplier for support. Please refer to the third-party supplier for information relating to specific support of their storage arrays with Windows Storage Server 2012 R2 and Windows Storage Server 2016 Standard Editions respectively.

Models (Pre-configured)

Recommended

Offering the best combination of performance, value and availability, Recommended Options have been selected by HPE experts to provide the right technology for a range of workloads and market segments. Fully integrated into the ProLiant management and security experience, Recommended Options provide the best fit with timely availability.

Extended

Extended Options provide an extended catalog of products tailored for customers in specific markets or with specific workloads, requiring the utmost in performance or value. Fully integrated into the ProLiant management and security experience, Extended Options represent great value and performance but typically have a longer lead-time.

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

Step 1 – Select the 3850 Gateway System and add one or two nodes

	Part Number
HP StoreEasy 3850 Gateway System (chassis)	K2R69A
HP StoreEasy 3850 Gateway Single Node	K2R70A

NOTE: An HPE StoreEasy 3850 Gateway Single Node (K2R70A) can only be ordered and shipped within a StoreEasy 3850 Gateway System chassis.

NOTE: One or two 3850 Gateway Single Nodes (K2R70A) can be added to a StoreEasy 3850 Gateway System (sku K2R69A).

NOTE: An HPE StoreEasy 3850 Gateway System (K2R69A) shipped from the factory with only one StoreEasy 3850 Gateway Single Node (K2R70A) can only be upgraded in the field to two nodes by ordering P9M56A - HPE StoreEasy 3850 Gateway Single Node Upgrade. See upgrade section below.

Specifications- per node	Operating System	Microsoft Windows Storage Server 2012 R2, Standard
	Processor	Intel Xeon E5-2609v3 (1.9GHz/6-core/15MB/85W) Processor
	Memory	32 GB (4 x 8GB Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory)
	Network Ports	2 x 1GbE ports; FlexLOM Adapter (optional)
	Expansion Slots	2 x PCIe
	Storage Controller	HPE Dynamic Smart Array B140i Controller with 10 internal SATA connectors
	Internal Storage	2 x 6G SATA SFF SSDs for Operating System (connected to B140i and configured as RAID 1 mirrored pair)
	External Storage	Connected via HBA or iSCSI initiator

HP StoreEasy 3850 WSS 2016 Gateway Single Node	Q0F52A
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NOTE: An HPE StoreEasy 3850 WSS 2016 Gateway Single Node (Q0F52A) can only be ordered and shipped within a StoreEasy 3850 Gateway System chassis.

NOTE: One or two 3850 WSS 2016 Gateway Single Nodes (Q0F52A) can be added to a StoreEasy 3850 Gateway System (sku K2R69A).

NOTE: An HPE StoreEasy 3850 Gateway System (K2R69A) shipped from the factory with only one StoreEasy 3850 Gateway Single Node (Q0F52A) can only be upgraded in the field to two nodes by ordering Q0F68A - HPE StoreEasy 3850 WSS 2016 Gateway Single Node Upgrade. See upgrade section below.

Models (Pre-configured)

Specifications- per node	Operating System	Microsoft Windows Storage Server 2016, Standard
	Processor	Intel Xeon E5-2609v4 (1.7GHz/8-core/15MB/85W) Processor
	Memory	32 GB (4 x 8GB Single Rank x4 DDR4-2400 CAS-15-15-15 Registered Memory)
	Network Ports	2 x 1GbE ports; FlexLOM Adapter (optional)
	Expansion Slots	2 x PCIe
	Storage Controller	HPE Dynamic Smart Array B140i Controller with 10 internal SATA connectors
	Internal Storage	2 x 6G SATA SFF SSDs for Operating System (connected to B140i and configured as RAID 1 mirrored pair)
	External Storage	Connected via HBA or iSCSI initiator

Step 2 – Choose an optional Networking Adapter

NOTE: For two node systems the Networking Adapter must be the same for each node.

NOTE: Total slots per node available for PCIe is 2, total slots per node available for FlexLOM is 1.

Recommended option for additional network connectivity is [HPE Ethernet 10Gb 2-port 561T Adapter - SKU# 716591-B21](#)

HPE Networking

Ethernet Options

10/25 Gigabit Ethernet adapters

Mellanox chipset-based with RDMA, RSS, I/O AT, VMQ, VMWNQ, MSI-X, EEE features¹

HPE Ethernet 10/25 Gb 2-port 640SFP28 Adapter 817753-B21

10 Gigabit Ethernet adapters

Intel chipset-based with RSS, VMQ, VMWNQ, VMDq, MSI-X, EEE features¹

HPE Ethernet 10Gb 2-port 560SFP+ Adapter 665249-B21

HPE Ethernet 10Gb 2-port 561T Adapter (RDMA and I/O AT features are also available with this NIC) 716591-B21

HPE Ethernet 10Gb 2-port 562SFP+ Adapter 727055-B21

Mellanox chipset-based with RDMA, RSS, VMQ, VMWNQ, MSI-X, EEE features¹

HPE Ethernet 10G 2-port 546SFP+ Adapter 779793-B21

Broadcom chipset-based with RSS, VMQ, VMWNQ, VMDq, MSI-X features¹

HPE Ethernet 10Gb 2-port 530T Adapter 656596-B21

HPE Ethernet 10Gb 2-port 530SFP Adapter 652503-B21

1 Gigabit Ethernet adapters

Intel chipset-based with RSS, I/O AT, VMQ, VMWNQ, VMDq, MSI-X, EEE features¹

HP Ethernet 1Gb 4-port 366T Adapter 811546-B21

HP Ethernet 1Gb 2-port 361T Adapter 652497-B21

Broadcom chipset-based with RSS, VMQ, VMWNQ, VMDq, MSI-X, EEE features¹

HP Ethernet 1Gb 4-port 331T Adapter 647594-B21

HP Ethernet 1Gb 2-port 332T Adapter 615732-B21

FlexibleLOM Adapters

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

Models (Pre-configured)

field upgradeable, integrate seamlessly with the StoreEasy system architecture and form factor

Intel chipset-based with RSS, VMQ, VMWNQ, VMDq, MSI-X,EEE features¹

HP Ethernet 10Gb 2-port 560FLR-SFP+ Adapter	665243-B21
HP Ethernet 10Gb 2-port 561FLR-T Adapter (RDMA and I/O AT features are also available with this NIC)	700699-B21
HP Ethernet 1Gb 4-port 366FLR Adapter	665240-B21
HPE Ethernet 10Gb 2-port 562FLR-SFP+ Adapter	727054-B21

Broadcom chipset-based with RSS,VMQ, VMWNQ, VMDq, MSI-X features¹

HP FlexFabric 10Gb 2-port 533FLR-T Adapter	700759-B21
HP FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter	700751-B21
HP Ethernet 1Gb 4-port 331FLR Adapter	629135-B22

Emulex chipset-based with RDMA, RSS, VMQ, VMWNQ, MSI-X features¹

HP FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter	727060-B21
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Mellanox chipset-based with RDMA, RSS, VMQ, VMWNQ, MSI-X features¹

HP Ethernet 10Gb 2-port 546FLR-SFP+ Adapter	779799-B21
HPE Ethernet 10/25Gb 2-port 640FLR-SFP28 Adapter	817749-B21

Qlogic chipset-based with RDMA, I/OAT, VMQ, VMWNQ, MSI-X, iSCSIa features¹

HPE Flexfabric 10Gb 4-port 536FLR-T Adapter	764302-B21
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1. Features description

RSS: Receive side scaling (RSS) is a network driver technology that enables the efficient distribution of network receive processing across multiple CPUs in multiprocessor systems.

EEE (Green Ethernet): Reduces power consumption during periods of low activity.

I/O AT: I/O Acceleration Technology (I/OAT), developed by Intel, is a set of features particularly designed to reduce the receiver-side packet processing overhead.

MSI-X: For PCI 3.0, a device can support up to 2,048 different messages. Devices that support PCI 3.0 MSI-X feature a dynamically programmable hardware table that contains entries for each of the interrupt sources in the device. Each entry in this table can be programmed with one of the messages that are allocated to a device, and can be independently masked.

VMDq: Virtual Machine Device Queues (VMDq) is a technology that allows the network adapter to create multiple separate queues, distributing the processing load across multiple cores.

VMWNQ: Enables VMs in your VMWare environment to take advantage of 10GbE, without this capability the max you can get is about 3 - 4 Gb.

VMQ : VMQ, in a Hyper-V implementation, uses hardware packet filtering to deliver packet data from an external virtual machine network directly to virtual machines, which reduces the overhead of routing packets and copying them from the management operating system to the virtual machine. This improves network performance to the VMs.

RDMA: Remote Direct Memory Access (RDMA) is a technology that allows computers in a network to exchange data in main memory without involving the processor, cache, or operating system of either computer. Like locally-based Direct Memory Access (DMA), RDMA improves throughput and performance because it frees up resources. RDMA also facilitates a faster data transfer rate.

iSCSIa : iSCSI acceleration reduces CPU utilization by up to 8x

InfiniBand Options

HP IB FDR/EN 40Gb 2P 544+FLR-QSFP Adptr	HP IB FDR 2P 545FLR-QSFP Adptr	764284-B21
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NOTE: Please see the QuickSpecs for Technical Specifications and additional information: <http://www.hpe.com/servers/ProLiantNICs>

HP IB QDR/EN 10Gb 2P 544+FLR-QSFP Adptr	
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Models (Pre-configured)

NOTE: Please see the QuickSpecs for Technical Specifications and additional information: <http://www.hpe.com/servers/ProLiantNICs>

764286-B21

Step 3: Choose optional Fibre Channel HBAs and CNAs

NOTE: HPE StoreEasy 3850 Gateway Storage products are designed and optimized for connection to SAN storage arrays using HBAs.

NOTE: For the complete listing of Fibre Channel Host Bus Adapters for Windows please see: <https://www.hpe.com/us/en/product-catalog/storage/storage-adapters.hits-12.html>

Emulex Fibre Channel HBAs - Recommended

HPE StoreFabric SN1100E 16Gb Single Port Fibre Channel Host Bus Adapter (Recommended) C8R38A

HPE StoreFabric SN1100E 16Gb Dual Port Fibre Channel Host Bus Adapter (Recommended) C8R39A

HPE 82E 8Gb 2-port PCIe Fibre Channel Host Bus Adapter (Recommended) AJ763B

QLogic Fibre Channel HBAs - Recommended

HPE 82Q 8Gb 2-port PCIe Fibre Channel Host Bus Adapter (Recommended) AJ764A

HPE StoreFabric SN1000Q 16GB 1-port PCIe Fibre Channel Host Bus Adapter (Recommended) QW971A

HPE StoreFabric SN1000Q 16GB 2-port PCIe Fibre Channel Host Bus Adapter (Recommended) QW972A

Converged Network Adapter - Recommended

HPE StoreFabric CN1200E 10GBASE-T Dual Port Converged Network Adapter (Recommended) N3U51A

HPE StoreFabric CN1100R 10GBASE-T Dual Port Converged Network Adapter (Recommended) N3U52A

Step 4 - Add an optional second processor

Recommended

HPE XL1x0r Gen9 Intel Xeon E5-2609v4 (1.7GHz/8-core/20MB/85W) Processor Kit (Recommended) 850288-B21

NOTE: The above processor kit can be ordered only with HP StoreEasy 3850 WSS 2016 Gateway Single nodes i.e. SKU# Q0F52A or Q0F68A

Step 5 – Add optional Memory kits

NOTE: Hewlett Packard Enterprise recommends that you add the same type memory to the product that is shipped standard with the product.

NOTE: For two node systems the amount of memory must be the same for each node.

Registered DIMMs (RDIMMs) - Recommended

HPE 32GB (1x32GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit (Recommended) 728629-B21

NOTE: The above memory kits can be ordered only with HP StoreEasy 3850 Gateway Single nodes i.e. SKU# K2R70A or P9M56A.

HPE 8GB (1x8GB) Single Rank x8 DDR4-2400 CAS-17-17-17 Registered Memory Kit (Recommended) 805347-B21

HPE 16GB (1x16GB) Single Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit (Recommended) 805349-B21

HPE 32GB (1x32GB) Dual Rank x4 DDR4-2400 CAS-17-17-17 Registered Memory Kit (Recommended) 805351-B21

Models (Pre-configured)

NOTE: The above memory kits can be ordered only with HPE StoreEasy 3850 WSS 2016 Gateway Single nodes i.e. SKU# Q0F52A or Q0F68A.

Registered DIMMs (RDIMMs) - Extended

HPE 8GB (1x8GB) Single Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit (Extended) 726718-B21

HPE 16GB (1x16GB) Dual Rank x4 DDR4-2133 CAS-15-15-15 Registered Memory Kit (Extended) 726719-B21

NOTE: The above memory kits can be ordered only with HP StoreEasy 3850 Gateway Single nodes i.e. SKU# K2R70A or P9M56A.

NOTE: The HPE StoreEasy 3850 /3850 WSS 2016 Gateway Single Node comes standard with 32GB (4 x 8GB) of memory factory installed. For some installations, a customer may want to replace the 32GB memory that ships standard. The 16GB and 32GB Memory skus listed are supported in the 3850 Gateway node and can be ordered as an option for field installation only.

NOTE: HPE memory from previous generation servers (DDR3) is not compatible with this server. HPE SmartMemory is required to realize the memory performance improvements and enhanced functionality listed in this document for Gen9. For additional information, please see the HPE SmartMemory QuickSpecs at: <http://www.hpe.com/h20195/v2/GetHTML.aspx?docname=c04111535>

Step 6 – In place of Step 2, 3 or 4 you can add an optional Performance Kit

NOTE: A performance kit bundles an Intel Xeon E5-2609vX processor, 32 GB memory (4 x 8GB Single Rank x4 DDR4-2133 CAS-15-15-15) and one HPE 10GbE 560SFP+ 2-port Adapter

NOTE: For two node systems, two performance kits must be ordered – one for each node.

HPE StoreEasy 3850 Gateway Storage 10Gb Performance Kit K2R71A

NOTE: The above performance kit can be ordered only with HP StoreEasy 3850 Gateway Single nodes i.e. SKU# K2R70A or P9M56A.

HPE StoreEasy 3850 E5-2609v4 10Gb Performance Kit Q0F55A

NOTE: The above processor kit can be ordered only with HP StoreEasy 3850 WSS 2016 Gateway Single nodes i.e. SKU# Q0F52A or Q0F68A.

Step 7 – Add a System Recovery DVD

StoreEasy System HPE StoreEasy XX50 Recovery Software Media Kit P4A92A

Recovery DVD HPE StoreEasy XX50 WSS2016 Recovery Software Kit Q0F58A

The HPE StoreEasy XX50 Recovery Software Media Kits 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 3000 Administrator Guide for more information on performing a System Recovery.

NOTE: If desired the StoreEasy XX50 Recovery Software can be downloaded from Hewlett Packard Enterprise 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/index.do> <https://h20392.www2.hpe.com/portal/swdepot/displayProductInfo.do?productNumber=Q0F58-11001>

NOTE: For more information on how to perform a system recovery on a StoreEasy 3850 refer to the StoreEasy 3000 Administrator's Guide. The guide can be downloaded

Models (Pre-configured)

from <http://www.hpe.com/support> . 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.

NOTE: 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.

Step 8 – Add security hardware

HPE Security	Recommended	
	HPE Trusted Platform Module Option (Recommended)	726718-B21 488069-B21
	HPE Trusted Platform Module 2.0 Kit (Recommended)	745823-B21

Upgrades

StoreEasy 3850 Single Node Upgrade	HPE StoreEasy 3850 Gateway Single Node Upgrade NOTE: An HPE StoreEasy 3850 Gateway System (K2R69A) shipped from the factory with only one StoreEasy 3850 Gateway Single Node (K2R70A) can only be upgraded to two nodes by ordering sku P9M56A. NOTE: Technical specifications of sku P9M56A are the same as sku K2R70A as shown above.	P9M56A
StoreEasy 3850 WSS2016 Single Node Upgrade	HPE StoreEasy 3850 Gateway Windows Storage Server 2016 Single Node Upgrade NOTE: An HPE StoreEasy 3850 WSS2016 Gateway System (K2R69A) shipped from the factory with only one StoreEasy 3850 Gateway Single Node (Q0F52A) can only be upgraded to two nodes by ordering sku P9M56A. NOTE: Technical specifications of SKU# Q0F68A are the same as SKU# Q0F52A as shown above.	Q0F68A
StoreEasy 3000 Storage OS Upgrade Kits	HPE StoreEasy WSS2012 R2 Standard Edition Upgrade Kit HPE WSS2016 Standard Edition Upgrade Kit HPE StoreEasy 38xx Storage models running either Windows Storage Server 2012 or, Windows Storage Server 2012 R2 Standard Edition Operating System can be upgraded to the Windows Storage Server 2016, Standard Edition Operating System by purchasing Q0F57A upgrade kit. HPE StoreEasy 3840 Storage models running the Windows Storage Server 2012, Standard Edition Operating System can be upgraded to the Windows Storage Server 2012 R2, Standard Edition Operating System by purchasing this upgrade kit. This upgrade kit contains the physical media containing the new WSS2012 R2 OS image and a new Microsoft Certificate of Authenticity (COA) label that must be affixed to the StoreEasy 3840 chassis once the OS upgrade is complete. The new WSS2012 R2 COA label is required to provide legal proof or purchase of the new OS. NOTE: Because of the requirement to affix a new WSS2012 R2 COA label to the product after upgrade the WSS2012 R2 OS upgrade image cannot be provided as a software download. NOTE: Also because of the requirement to affix a new WSS2012 R2 COA label to the product after upgrade one WSS2012 R2 upgrade kit per one StoreEasy 3840 Storage	D4T73A Q0F57A

Models (Pre-configured)

system is required. I.e. one StoreEasy 3840 needs one upgrade kit (one COA label), two StoreEasy 3840s need two upgrade kits (two COA labels), etc.

Service and Support, HPE Pointnext operational services, and Warranty Information

Warranty

HPE StoreEasy 3850 Gateway Storage products come with a standard 3 Year, On-site Warranty Service for hardware components with next business day on-site response. Software media is warranted to be free of physical defect for a period of 90 days from delivery.

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

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

Service and Support **Services to accelerate time to results**

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

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

Discover, plan, and design

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

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

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

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

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

Deploy and integrate

We can help you configure, set up, and efficiently use your 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 cost, with your basic questions about the service answered during the included orientation session. <https://www.hpe.com/h20195/v2/getpdf.aspx/4AA2-6112ENN.pdf>

Service and Support, HPE Pointnext operational services, and Warranty Information

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 HPE storage quickly and efficiently.

<https://www.hpe.com/h20195/V2/GetPDF.aspx/4AA3-0774ENW.pdf>

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

<https://www.hpe.com/h20195/V2/GetPDF.aspx/4AA3-9481ENW.pdf>

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

<https://www.hpe.com/h20195/V2/GetPDF.aspx/4AA2-3842ENW.pdf>

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

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

HPE Proactive Care Personalized Support - An option-if you have HPE Proactive Care- to bring increased personalization of the Proactive Care support experience through the assignment of an Account Service Manager (ASM) who provides IT best practice advice to help address IT issues and projects. <https://www.hpe.com/h20195/V2/GetPDF.aspx/4AA4-3446ENW.pdf>

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

<https://www.hpe.com/h20195/V2/GetPDF.aspx/5981-6638EN.pdf>

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

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

Optimized Care - Delivers the highest levels of performance and stability through deployment and proactive management practices

Choose from three levels of operate and support care
HPE Proactive Care 24x7-Plus, 20 credits per year

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

Service and Support, HPE Pointnext operational services, and Warranty Information

Standard Care- HPE Proactive Care 24x7-Plus, 10 credits per year maintains high level of uptime, along with expert help to cut the cost and complexity of implementation and support

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

Basic Care- Support Plus 24- Plus, 10 credits per year
Minimum recommended support

Additional options - 10 HPE Proactive Select credits per year

Remote Support Automation

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

<https://www.hpe.com/h20195/V2/GetPDF.aspx/4AA2-4676ENW.pdf>
<https://h20392.www2.hpe.com/portal/swdepot/displayProductInfo.do?productNumber=RSSWMBASE>

For more information

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

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:

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

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.

Technical Specifications - StoreEasy 3850 Gateway

StoreEasy 3850 Gateway System	Dimensions	Height	3.44 in (8.73 cm)
		Width	17.64 in (44.81 cm)
		Depth	32.4 in (82.27 cm)
	Shipping Dimensions	Height	11.5 in (29.2 cm)
		Width	23 in (58.4 cm)
		Depth	37.12 in (94.3 cm)
	Chassis Weight	Empty	21.74 lb (9.86 kg)
	Max Enclosure Weight	Approximate	51.69 lb (23.45 kg)
	Temperature Range	Operating	50° to 95° F (10° to 35° C)
		Non-Operating	-22° to 140° F (-30° to 60° C)
	Relative Humidity	Operating	10 to 90% relative humidity (Rh), 28°C (82.4°F) maximum wet bulb temperature, non-condensing.
		Non-Operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.

NOTE: Operating temperature has an altitude derating of 1.8° F (1° C) per 1,000 ft (304.8 m). No direct sunlight. Upper operating limit is 10,000 ft (3,048 m) or 70Kpa/10.1 psia. Upper non-operating limit is 30,000 ft (9,144 m) or 30.3 KPa/4.4 psia. Storage maximum humidity of 95% is based on a maximum temperature of 113° F (45° C). Altitude maximum for storage is 70 KPa.

Acoustic Noise (No data so far)	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).	
	Idle	
	LWAd	7.1 Bels
	LpAm	54 dBA
	Operating	
	LWAd	7.2 Bels
	LpAm	54 dBA

System Unit	Server Dimensions (L x W x D)	3.30 x 7.07 x 27.23 in (8.36 x 17.95 x 69.15 cm)	
	Weight (approximate)	Maximum (four hard drives and two processors installed)	14.27 lb (6.47 kg)
	System Inlet Temperature	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.

Technical Specifications - StoreEasy 3850 Gateway

Extended Ambient Operating Support	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: http://www.hpe.com/servers/ASHRAE For approved hardware configurations, the supported system inlet range is extended to be: 40° to 45°C (104° to 113°F) at sea level with an altitude derating of 1.0°C per every 125 m (1.8°F per every 410 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL: http://www.hpe.com/servers/ASHRAE System performance may be reduced if operating in the extended ambient operating range or with a fan fault.																																										
Relative Humidity (non-condensing)	<p>Non-operating -30° to 60°C (-22° to 140°F). Maximum rate of change is 20°C/hr (36°F/hr).</p> <p>Operating Minimum to be the higher (more moisture) of -12°C (10.4°F) dew point or 8% relative humidity. Maximum to be the lower (less moisture) of 24°C (75.2°F) dew point or 90% relative humidity.</p>																																										
Altitude	<p>Non-operating 5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.</p> <p>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).</p>																																										
Acoustic Noise	<p>Listed are the declared A-Weighted sound power levels (LWAd) and measured 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.</p> <table border="0" style="margin-left: 40px;"> <thead> <tr> <th></th> <th>Configuration</th> <th>SKU</th> <th>Entry</th> <th>Base</th> <th>Performance</th> </tr> </thead> <tbody> <tr> <td colspan="6">Idle</td> </tr> <tr> <td>LWAd</td> <td>6.9 B</td> <td>6.9 B</td> <td>6.9 B</td> <td></td> <td></td> </tr> <tr> <td>LpAm</td> <td>51 dBA</td> <td>51 dBA</td> <td>51 dBA</td> <td></td> <td></td> </tr> <tr> <td colspan="6">Operating</td> </tr> <tr> <td>LWAd</td> <td>8.0 B</td> <td>8.3 B</td> <td>8.7 B</td> <td></td> <td></td> </tr> <tr> <td>LpAm</td> <td>62 dBA</td> <td>66 dBA</td> <td>72 dBA</td> <td></td> <td></td> </tr> </tbody> </table>		Configuration	SKU	Entry	Base	Performance	Idle						LWAd	6.9 B	6.9 B	6.9 B			LpAm	51 dBA	51 dBA	51 dBA			Operating						LWAd	8.0 B	8.3 B	8.7 B			LpAm	62 dBA	66 dBA	72 dBA		
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FCC Rating	Class A																																										

Technical Specifications - StoreEasy 3850 Gateway

Emissions Classification
(EMC)

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

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

HPE 800W Flex Slot Platinum Hot Plug Power Supply (720479-B21)	HPE 's Generic Part Number		723599-001					
	HPE 's Spares Part Number		754381-001					
Input Voltage Range (V rms)	100-240							
Frequency Range (Nominal) (Hz)	50-60							
Nominal Input Voltage (V rms)	100	120	127	200	208	220	230	240
Maximun Rated Output Wattage Rating (Watts)	800	800	800	800	800	800	800	800
Nominal Input Current (A rms)	9.1	7.5	7.0	4.4	4.2	4.0	3.8	3.7
Maximun Rated Input Wattage Rating (Watts)	906	891	878	871	870	869	868	868
Maximun Rated VA (Volt-Amp)	915	900	887	880	879	877	876	877
Efficiency (%)	88.3	89.8	91.1	91.9	92.0	92.1	92.2	92.1
Power Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Leakage Current (mA)	0.32	0.38	0.40	0.63	0.65	0.69	0.72	0.75
Maximun Inrush Current (A peak)	30							
Maximun Inrush Current Duration (ms)	10							
Maximun British Thermal Unit Rating (BTU-Hr)	3090	3040	2997	2972	2968	2963	2960	2963

StoreEasy 3850 Gateway Server Dimensions Single Node or StoreEasy (L x W x D)	3.30 x 7.07 x 27.23 in (8.36 x 17.95 x 69.15 cm)	
3850 WSS 2016 Gateway Single Node Weight (approximate)	Maximum (four hard drives and two processors installed)	14.27 lb (6.47 kg)
System Inlet Temperature	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.
	Extended Ambient Operating Support	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

Technical Specifications - StoreEasy 3850 Gateway

with an altitude derating of 1.0°C per every 175 m (1.8°F per every 574 ft) above 900 m (2953 ft) to a maximum of 3050 m (10,000 ft). The approved hardware configurations for this system are listed at the URL:

<http://www.hpe.com/servers/ASHRAE>

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

<http://www.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).																																										
Relative Humidity (non-condensing)	Operating	Minimum to be the higher (more moisture) of -12°C (10.4°F) dew point or 8% relative humidity. Maximum to be the lower (less moisture) of 24°C (75.2°F) dew point or 90% relative humidity.																																										
	Non-operating	5 to 95% relative humidity (Rh), 38.7°C (101.7°F) maximum wet bulb temperature, non-condensing.																																										
Altitude	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).																																										
	Acoustic Noise																																											
Listed are the declared A-Weighted sound power levels (LWAd) and measured 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.																																												
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NOTE: Product conformance to cited product specifications is based on sample (type) testing, evaluation, or assessment. This product or family of products is eligible to bear the appropriate compliance logos and statements.

Technical Specifications - StoreEasy 3850 Gateway

Environment-friendly Products and Approach	End-of-life Management and Recycling	Hewlett Packard Enterprise offers end-of-life Hewlett Packard Enterprise product return, trade-in, and recycling programs in many geographic areas. For trade-in information, or to recycle your product, please go to: https://www.hpe.com/us/en/about/environment/product-recycling.html or contact your nearest Hewlett Packard Enterprise sales office. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner.
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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 at: <https://www.hpe.com/us/en/about/environment/product-recycling.html>. 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
04-Sep-2018	Version 24	Changed	QuickSpecs updated with the current Recommended-Extended Options
05-Feb-2018	From Version 22 to 23	Changed	Overview and Models (Pre-configured) were revised.
23-Oct-2017	From Version 21 to 22	Changed	Care Pack naming and Service and Support- Parts and Materials updated.
07-Aug-2017	From Version 20 to 21	Changed	Changes were made throughout all document
03-Apr-2017	From Version 19 to 20	Changed	Changes made to the Models and Standard Features Sections
28-Nov-2016	From Version 18 to 19	Changed	Changes were made throughout all document
15-Aug-2016	From Version 17 to 18	Changed	Changes made to the Overview, Service and Support, Models and Standard Features Sections.
11-Mar-2016	From Version 16 to 17	Changed	Changes made to the Models and Technical Specifications Sections.
04-Dec-2015	From Version 15 to 16	Changed	Changes were made throughout all document
28-Sept-2015	From Version 14 to 15	Changed	Changes made to the What 's New and Models Sections
24-Jul-2015	From Version 13 to 14	Changed	Changes were made throughout all document
01-Jun-2015	From Version 12 to 13	Changed	Added the HPE StoreEasy 3850 Gateway Storage
07-Nov-2014	From Version 11 to 12	Removed	Removed all HPE StoreEasy 3830 Gateway references. (obsolete), remove some obsolete SKUs (QR559A and 650931-B21)
18-Jul-2014	From Version 10 to 11	Changed	Models (Pre-configured) added section – HPE StoreEasy Windows Storage Server 2012 R2 Upgrade – D4T73A
03-Jul-2014	From Version 9 to 10	Changed	Optional software – replaced link in the HPE Autonomy LiveVault and HPE LiveVault sections
09-May-2014	From Version 8 to 9	Changed	Changes were made throughout.
18-Apr-2014	From Version 7 to 8	Changed	Updated the following: Models - 3840 Gateway Storage - updated callout #4; Standard Features - Operating System - fixed typo in 3rd bullet; changed "16 terabytes" to "64 terabytes" in VHDX bullet. Updated Data Deduplication paragraph; Standard Features - Power Supply changed "460 Watts Platinum" to "750 Watts G; Optional Software - HPE Autonomy Live Vault - removed "Autonomy"; Models (Pre-configured) - Choose a Pre-configured Model - Add a Performance Kit - added "1Gb" to the description of the NC365T Adapter - E7X06A and fixed naming of E7X07A; Add Additional options - added "HPE InfiniBand" sub-sections with SKUs and notes; removed sub-section on "Windows Storage Server 2012 R2 Upgrade"; Optional Software - replaced sub-section on HPE LiveVault; Add additional options- HPE Networking - added 716591-B21, 718904-B21, 728987-B21; added HPE InfiniBand sub-section; HPE Fibre Channel - added C8R39A and QW990A adapters; SAS HBA - added 729552-B21 and 650926-B21 adapters with Notes and links
31-Mar-2014	From Version 6 to 7	Changed	Changes were made throughout.
26-Jul-2013	From Version 5 to 6	Changed	Operating System was revised in Standard Features Internal storage was revised in Standard Features, Models, and Storage
05-Jul-2013	From Version 4 to 5	Changed	Operating System was revised in Standard Features Internal storage was revised in Standard Features, Models, and Storage
10-Jun-2013	From Version 3 to 4	Changed	Overview: Updated What's New Intuitive wizard driven tool optimizes storage provisioning.

Summary of Changes

			<p>Deduplication evaluation tool that can be launched from StoreEasy interface and run against local data and remote file shares.</p> <p>Choice of headless mode for increased security and lower maintenance.</p> <p>“Optional onboard HPE Data Protector software and HPE Autonomy LiveVault for cloud and hybrid cloud backup and recovery.</p> <p>“Wizard-based easy clustering for gateways simplifies deployment of highly available file services for SANs.</p> <p>Features and Benefits: Completely updated the entire section.</p> <p>Standard Features: Updated Operating System section.</p> <p>Optional Software: UPdate HPE Data Protector software and HPE Autonomy LiveVault sections.</p> <p>Models (preconfigured) UPdated StoreEasy 3830 section completely.</p>
19-Apr-2013	From Version 2 to 3	Changed	<p>Overview: Update Models section information</p> <p>Standard Features: Updated Operating Systems section.</p> <p>Optional Software: Updated HPE Autonomy LiveVault section.</p> <p>Models (preconfigured): Updated HPE Networking section</p> <p>Service and Support, HPE Pointnext operational, and Warranty Information: Updated Warranty section.</p>
21-Dec-2012	From Version 1 to 2	Changed	<p>Changes were made in the following sections:</p> <p>Overview: update description</p> <p>Models (Pre-Configured): in Step 1 and HPE Fibre Channel updated descriptions and part numbers.</p>



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

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