Hewlett Packard Enterprise

HPE StoreEasy 1000 Storage Getting Started Guide

Abstract

This document contains setup, installation, and configuration information for the HPE StoreEasy 1000 Storage systems.

Acknowledgments

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Warranty

WARRANTY STATEMENT: To obtain a copy of the warranty for this product, see the warranty information website:

http://www.hpe.com/info/storagewarranty

Contents

1 Overview

The HPE StoreEasy 1000 Storage system provides multi-protocol file sharing and application storage for a range of business environments. Built on HPE ProLiant DNA and Microsoft Windows Storage Server, the StoreEasy 1000 Storage system easily integrates into new and existing environments and efficiently maximizes resources through file and data management without increasing costs. The StoreEasy 1000 Storage system provides the following advantages:

- Each system ships from the factory with preintegrated hardware and preloaded software to significantly reduce the time and complexity of installation.

- Hewlett Packard Enterprise and Microsoft management integration, including Microsoft Server Manager and System Center and Systems Insight Manager and Integrated Lights Out (iLO).

The StoreEasy 1000 Storage systems are based on the ProLiant server. The following table identifies the ProLiant model for each StoreEasy 1000 Storage product:

StoreEasy model	Platform
HP StoreEasy 1430 Storage	HPE ProLiant DL320e Gen8 server
HP StoreEasy 1440 Storage	HPE ProLiant DL360e Gen8 server
HP StoreEasy 1450 Storage	HPE ProLiant DL160 Gen9 server
HP StoreEasy 1550 Storage	HPE ProLiant ML110 Gen9 server
HP StoreEasy 1650 Storage	HPE ProLiant DL380 Gen9 server
HPE StoreEasy 1650 Expanded Storage	HPE Apollo 4200 Gen9 server
HP StoreEasy 1850 Storage	HPE ProLiant DL380 Gen9 server
HP StoreEasy 1530, 1540 Storage	HPE ProLiant ML310e Gen8 server
HP StoreEasy 1630, 1640 Storage	HPE ProLiant DL380e Gen8 server
HP StoreEasy 1830, 1840 Storage	HPE ProLiant DL380p Gen8 server

The 1430,1440, 1450, 1530,1540 and 1550 platforms are ideal for a remote office, small businesses, or workgroups. The 1630, 1640, 1650, 1650E, 1830, 1840 and 1850 platforms can accommodate medium and large IT environments.

NOTE: The StoreEasy 1000 Getting Started Guide provides information on all models within the StoreEasy 1000 Storage product family. The product name is listed generically where the same information is applicable to different models. For example, if the same information applies to 1530 and 1540, the model is listed as 15x0. Similarly, if the same information applies to 1450 and 1650, the model is listed as 1x50.

2 Setup and install

Specific details about installing the StoreEasy platform are in the Getting Started Guide for the applicable server.

Document	Location
HPE ProLiant DL320e Gen8 Getting Started Guide	Russian: **http://www.hpe.com/support/DL320eGen8_GSG_ru** Kazakh: **http://www.hpe.com/support/DL320eGen8_GSG_kk**
HPE ProLiant DL360e Gen8 Getting Started Guide	Russian: **http://www.hpe.com/support/DL360eGen8_GSG_ru** Kazakh: **http://www.hpe.com/support/DL360eGen8_GSG_kk**
HPE ProLiant DL160 Gen9 Getting Started Guide	Russian: **http://www.hpe.com/support/DL160Gen9_GSG_ru** Kazakh: **http://www.hpe.com/support/DL160Gen9_GSG_kk**
HPE ProLiant ML110 Gen9 Getting Started Guide	Russian: **http://www.hpe.com/support/ML110Gen9_GSG_ru** Kazakh: **http://www.hpe.com/support/ML110Gen9_GSG_kk**
HPE ProLiant DL380 Gen9 Getting Started Guide	Russian: **http://www.hpe.com/support/DL380Gen9_GSG_ru** Kazakh: **http://www.hpe.com/support/DL380Gen9_GSG_kk**
HPE Apollo 4200 Gen9 Getting Started Guide	Russian: **www.hp.com/support/Apollo4200Gen9_GSG_ru** Kazakh: **www.hp.com/support/Apollo4200Gen9_GSG_kk**
HPE ProLiant ML310e Gen8 Getting Started Guide	Russian: **http://www.hpe.com/support/ML310eGen8-GSG-ru** Kazakh:**hhttp://www.hpe.com/support/ML310eGen8-GSG-kk**
HPE ProLiant DL380e Gen8 Getting Started Guide	Russian: **http://www.hpe.com/support/DL380eGen8_GSG_ru** Kazakh: **http://www.hpe.com/support/DL380eGen8_GSG_kk**
HPE ProLiant DL380p Gen8 Getting Started Guide	Russian: **http://www.hpe.com/support/DL380pGen8-GSG-ru** Kazakh: **http://www.hpe.com/support/DL380pGen8-GSG-kk**

Cabling the storage system

The StoreEasy systems support both single domain and dual domain cabling using D2000, D3000, and D6000 disk enclosures, depending on the SmartArray RAID controller that is installed in the system. In addition to D2000 and D6000, the StoreEasy 1x50 systems also support single domain and dual domain cabling using the D3000 disk enclosure. See Table 1 (page 6) for details. In a single domain, external disk enclosures are connected, using a single data path, to the Smart Array controller[1] in the StoreEasy system. In a dual domain, external disk enclosures are connected, using two data paths, to a single Smart Array RAID controller in the StoreEasy system. For more detailed information about single and dual domains, see the technology brief entitled, "Redundancy in enterprise storage networks using dual-domain SAS configurations" located at: **http://h20565.www2.hp.com/portal/site/hpsc/public/kb/docDisplay/?docId=c01451157**

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1. Smart Array controllers included as standard with StoreEasy 1x50 products do not support external disk enclosures. An optional Smart Array controller with external ports need to be ordered to support external enclosures.

Table 1 Controller, disk enclosure, and single/dual domain support

Controller model	Supported in StoreEasy systems	Disk enclosure supported	Single domain support	Dual domain support
P222	1430, 1440, 1530, 1540	D2000	Y	N
P421	1430, 1440	D2000, D6000	Y	Y
P822	1430, 1440, 1630, 1640, 1830, 1840	D2000, D6000	Y	Y
P441	1450, 1550, 1650, 1650E, 1850	D2000	Y	Y
		D3000	Y	Y
		D6000	Y	N
P841	1450, 1550, 1650, 1650E, 1850	D2000, D3000, D6000	Y	Y

NOTE:

- If the dual domain support is required for show platforms, you can replace the P222 controller found in the 1440 and 1540 storage systems with a P822 controller.

- The StoreEasy 1450 and 1550 systems come standard with a Smart Array P440 storage controller. The StoreEasy 1650 comes with P840ar or P440ar and 1850 come standard with a Smart Array P440ar storage controller. These storage controllers are used to connect to the internal disk drives, including the OS drives.

- The StoreEasy 1650 Expanded Storage system comes standard with two controllers, P840ar and B140i.

- Optional P441 and P841 Smart Array controllers are used for connecting to external D2000, D3000, or D6000 disk enclosures.

Cabling guidelines

This section provides information on the types of cables to be used with D3000 and D2000/D6000 disk enclosures supported by the P441 controller and the cabling guidelines.

The following are the types of cables that you can use with the D3000 disk enclosures:

- External 0.5m (1ft) Mini SAS HD 4x to Mini SAS HD 4x Cable

- External 1.0m (3ft) Mini SAS HD 4x to Mini SAS HD 4x Cable

- External 2.0m (6ft) Mini SAS HD 4x to Mini SAS HD 4x Cable

- External 4.0m (13ft) Mini SAS HD 4x to Mini SAS HD 4x Cable

The following are the types of cables that you can use with the D2000/D6000 disk enclosures:

- 0.5m External Mini SAS High Density to Mini SAS Cable

- 1.0m External Mini SAS High Density to Mini SAS Cable

- 2.0m External Mini SAS High Density to Mini SAS Cable

- 4.0m External Mini SAS High Density to Mini SAS Cable

- 6.0m External Mini SAS High Density to Mini SAS Cable

When connecting disk enclosures to the StoreEasy system, consider the following guidelines:

- In a single domain configuration, the secondary I/O modules on the D6000 are not used, so they might or might not be installed. The cabling diagrams in this section show the secondary I/O modules are not installed.

- For single domain configurations, the maximum number of disk enclosures supported by the P441 or P841 controller are 1 D6000, 8 D2000s, or 8 D3000s (up to 200 drives total).

- For dual domain configurations, the maximum number of disk enclosures supported by the P441 controller are 8 D2000 or 8 D3000s (up to 200 drives total).

- For dual domain configurations, the maximum number of disk enclosures supported by the P841 controller are 1 D6000, 8 D2000s, or 8 D3000s (up to 200 drives total).

  NOTE:

  - The maximums listed are based on the number of drives per controller. Any StoreEasy system could have additional or alternate controllers installed, which would affect the overall number of supported disk enclosures. The maximum number of enclosures that can be connected to a controller is eight.

  - The P441 or P841 controllers support:
    - Up to 200 physical drives.

    - D2000 and D3000 disk enclosures; up to eight daisy chained in either single or dual domain configuration.

    - D6000 disk enclosure. Only one D6000 enclosure can be connected. Daisy chaining is not supported.

- In the cabling diagrams for the D2000/D3000 disk enclosure, the D2600 disk enclosure is used. Be aware that the cabling configuration is exactly the same for all D2000/D3000 disk enclosures.

- The D6000 disk enclosure does not support the use of SAS daisy chains; the D2000/D3000 disk enclosures supports SAS daisy chains. In a SAS daisy chain, the D2000/D3000 disk enclosures are connected to each other — I/O module A from each disk enclosure is connected together and I/O module B of each disk enclosure is connected together.

- Only supported, documented cabling configurations are shown. Only cabling configurations shown in this document or in related D2000/D3000 or D6000 documentation are supported configurations.

△ **CAUTION:** When cabling a dual domain configuration, ensure that you do not connect multiple controllers in the StoreEasy system to the same disk enclosure; this is an unsupported configuration and might result in data loss. If the StoreEasy system is configured incorrectly, and you attempt to use Pool Manager, Pool Manager will detect the configuration and display an error message. The controllers can be connected to different disk enclosures.

Single domain cabling diagrams with D6000 Disk Enclosures

The following diagrams show different StoreEasy systems in a single domain configuration with D6000 disk enclosures.

Figure 1 StoreEasy 1430,1440with the P822 controller
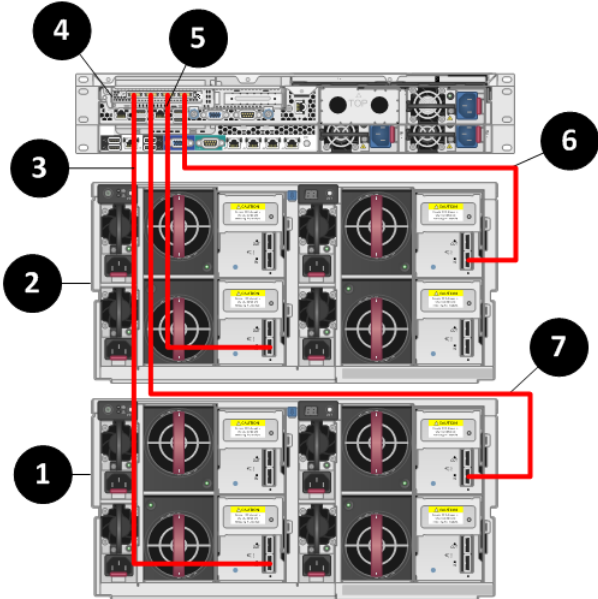
1. D6000 enclosure 1
2. D6000 enclosure 2
3. Connection to SAS port 1 on the primary I/O module (Drawer 2) of D6000 enclosure 2
4. P822 controller
5. Connection to SAS port 1 on the primary I/O module (Drawer 2) of D6000 enclosure 1
6. Connection to SAS port 1 on the primary I/O module (Drawer 1) of D6000 enclosure 1
7. Connection to SAS port 1 on the primary I/O module (Drawer 1) of D6000 enclosure 2

Figure 2 StoreEasy 1430,1440 with P421 and P222 controllers
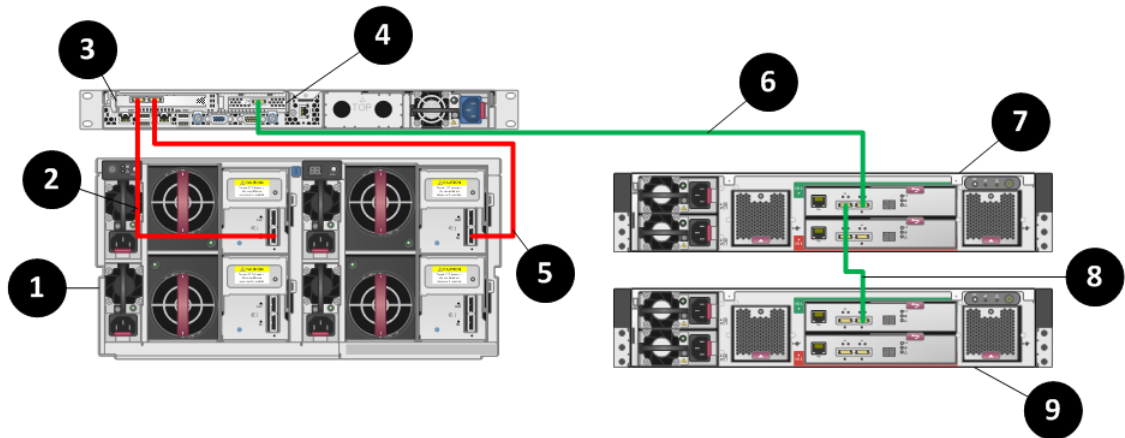
1. D6000 disk enclosure

2. Connection between SAS port 1 on the primary I/O module (Drawer 2) and the P421 controller

3. P421 controller

4. P222 controller

5. Connection between SAS port 1 on the primary I/O module (Drawer 1) and the P421 controller

6. Connection between the P222 controller and port 2 on I/O module of D2600 disk enclosure 1

7. D2600 disk enclosure 1

8. Connection between port 1 of I/O module B on D2600 disk enclosure 1 and port 2 of I/O module A on D2600 disk enclosure 2

9. D2600 disk enclosure 2

NOTE: The cabling diagram shown in Figure 3 (page 10) is exactly the same for the StoreEasy 1830, 1840using the P822 controller.

Figure 3 StoreEasy 1630, 1640 with the P822 controller
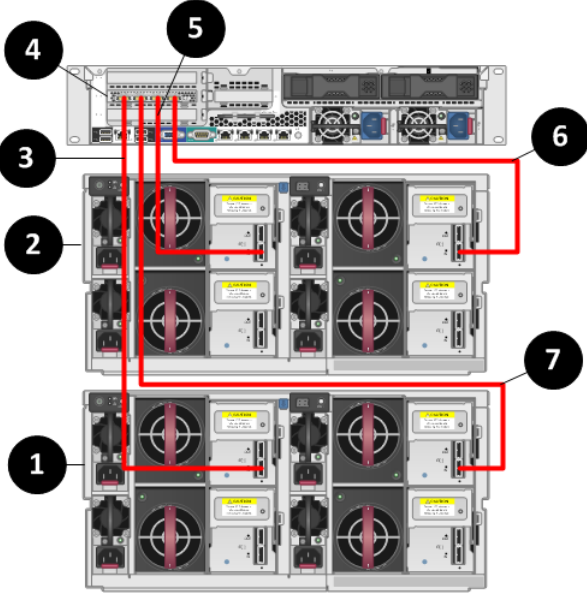
1. D6000 disk enclosure 1

2. D6000 disk enclosure 2

3. Connection between the P822 controller and SAS port 1 on the primary I/O module (Drawer 2) of D6000 disk enclosure 1

4. P822 controller

5. Connection between the P822 controller and SAS port 1 on the primary I/O module (Drawer 2) of D6000 disk enclosure 2

6. Connection between the P822 controller and SAS port 1 on the primary I/O module (Drawer 1) of D6000 disk enclosure 2

7. Connection between the P822 controller and SAS port 1 on the primary I/O module (Drawer 1) of D6000 disk enclosure 1

Figure 4 StoreEasy 1x50 with the P441 controller
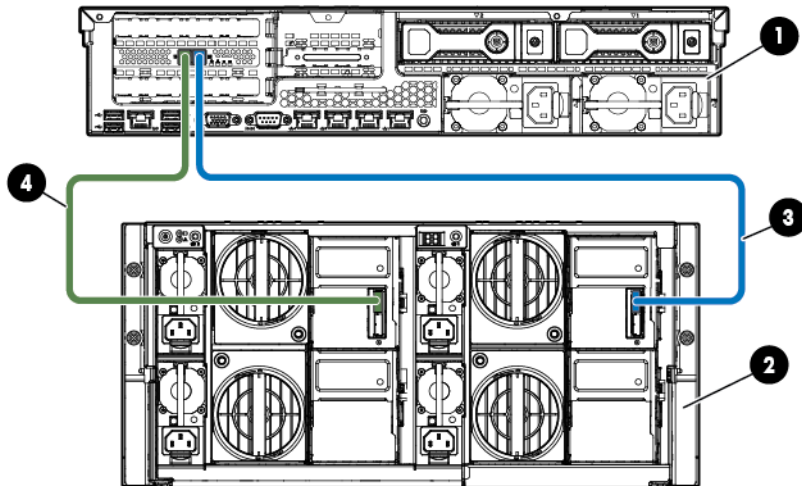
1. P441 controller

2. D6000 enclosure

3. Connection to SAS port 1 on the primary I/O module (left drawer) of D6000 enclosure

4. Connection to SAS port 1 on the primary I/O module (right drawer) of D6000 enclosure

Figure 7 (page 14) shows an example of a 1x50 system with a P441 connected to D2000/D3000 enclosures in a single domain configuration.

Single domain cabling diagrams with D2000 Disk Enclosures

The following diagrams show different StoreEasy systems in single domain configurations with the D2000 Disk Enclosure. With these cabling diagrams, SAS daisy chains are used to connect the disk enclosures together.

NOTE: The cabling diagram in Figure 5 (page 12) is exactly the same for the StoreEasy 1440 using the P222 controller.

**Figure 5 StoreEasy 1530,1540 with the P222 controller**
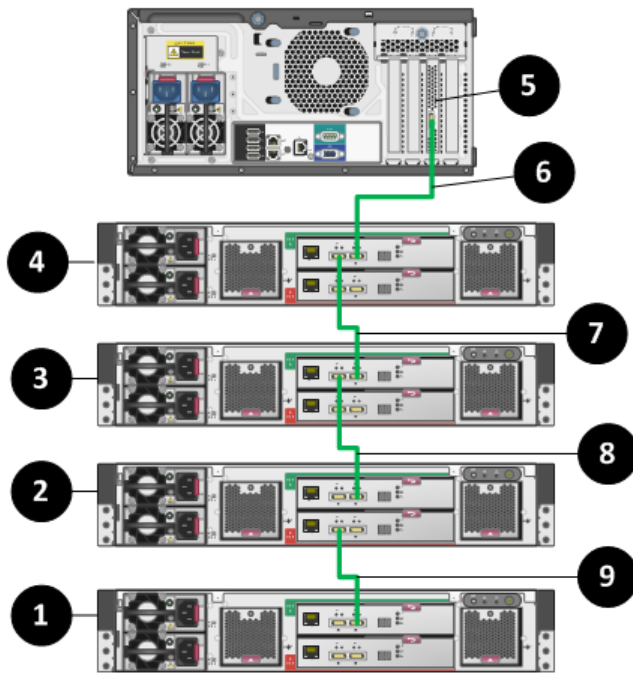
1. D2600 disk enclosure 1

2. D2600 disk enclosure 2

3. D2600 disk enclosure 3

4. D2600 disk enclosure 4

5. P222 controller

6. Connection from P222 controller to port 2 of I/O module A on disk enclosure 4

7. Connection from port 1 of I/O module A on disk enclosure 4 to port 2 of I/O module A on disk enclosure 3

8. Connection from port 1 of I/O module A on disk enclosure 3 to port 2 of I/O module A on disk enclosure 2

9. Connection from port 1 of I/O module A on disk enclosure 2 to port 2 of I/O module A on disk enclosure 1

NOTE: The cabling diagram in Figure 6 (page 13) is exactly the same for the StoreEasy 1440 and 1640 using the P822 controller.

Figure 6 StoreEasy 1830, 1840 with the P822 controller
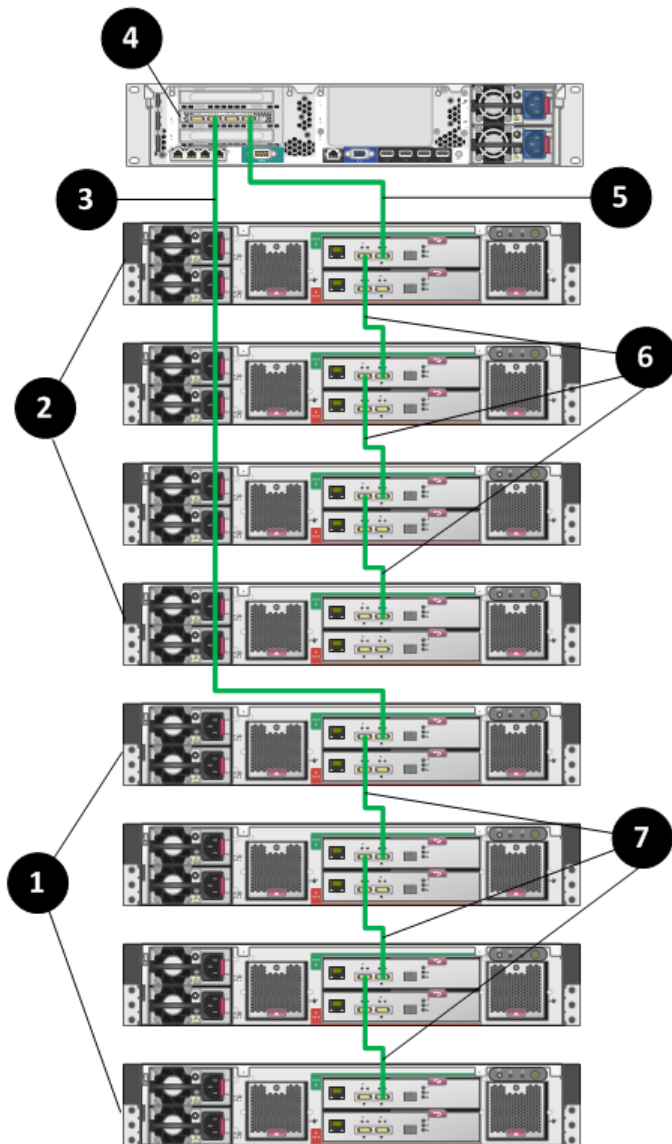
1. Group 1 of 4 D2600 disk enclosures

2. Group 2 of 4 D2600 disk enclosures

3. Connection from P822 controller to port 2 of I/O module A on the top disk enclosure in Group 1

4. P822 controller

5. Connection from P822 controller to port 2 of I/O module A on the top disk enclosure in Group 2

6. Connections between the disk enclosures in Group 2

7. Connections between the disk enclosures in Group 1

Figure 7 StoreEasy 1x50 with P441 controller connected to D2000/D3000 disk enclosures
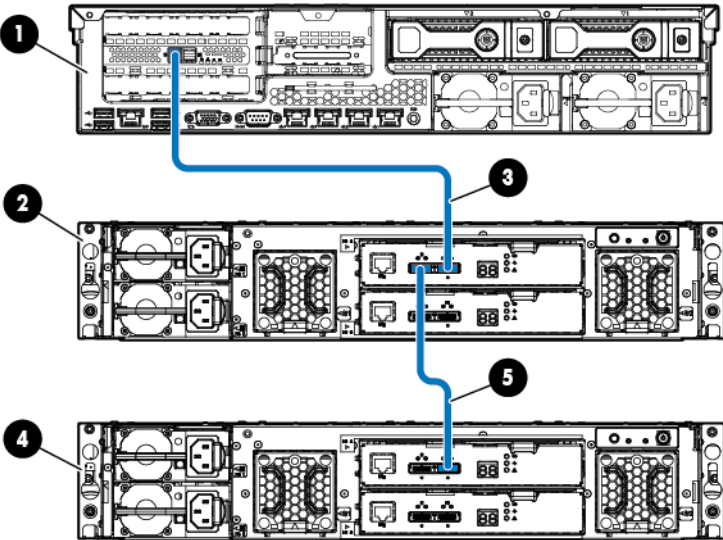
1. P441 controller

2. D2000/D3000 enclosure 1

3. Connection between P441 controller and port 2 on I/O module A of D2600 enclosure

4. D2000/D3000 enclosure 2

5. Connection between port 1 of I/O module A of D2600 enclosure 1 and port 2 on I/O module A of D2600 enclosure2

Figure 8 StoreEasy 1x50 with a P441 controller connected to D2000/D3000 disk enclosures
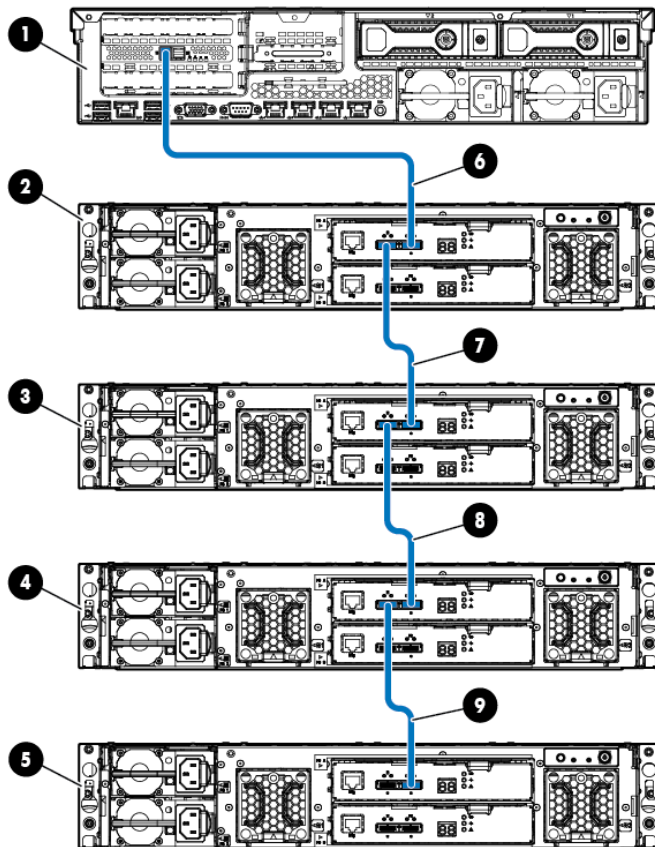
1. P441 controller

2. D2000/D3000 enclosure 1

3. D2000/D3000 enclosure 2

4. D2000/D3000 enclosure 3

5. D2000/D3000 enclosure 4

6. Connection from P441 controller to port 2 of I/O module A on disk enclosure 1

7. Connection from port 1 of I/O module A on disk enclosure 1 to port 2 of I/O module A on disk enclosure 2

8. Connection from port 1 of I/O module A on disk enclosure 2 to port 2 of I/O module A on disk enclosure 3

9. Connection from port 1 of I/O module A on disk enclosure 3 to port 2 of I/O module A on disk enclosure 4

Figure 9 StoreEasy 1x50 with the P441 controller utilizing multiple ports
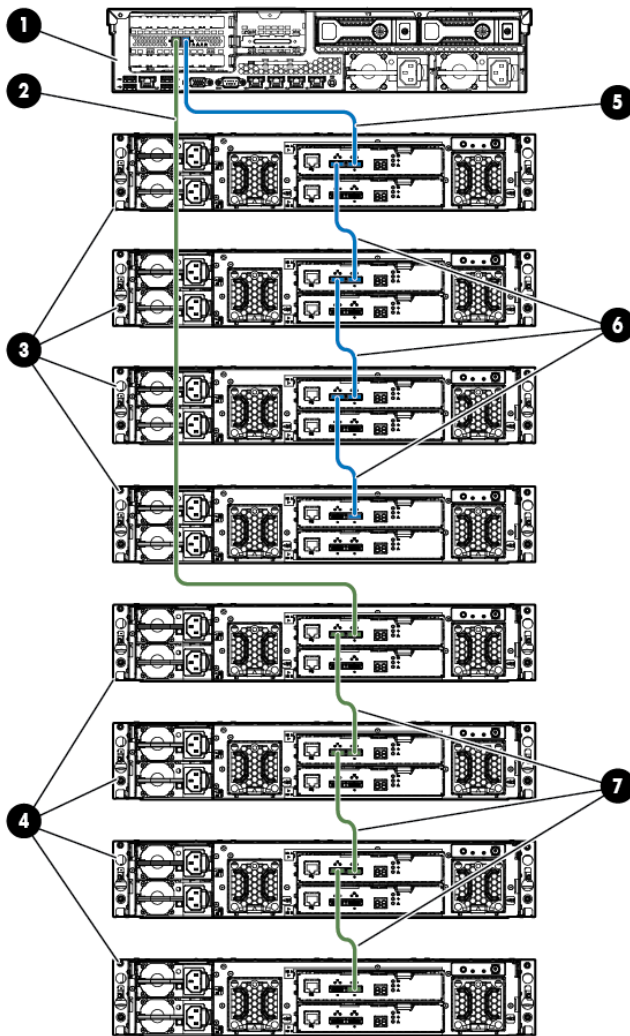
1. P441 controller

2. Connection from P441 controller to port 2 of I/O module A on top of the disk enclosures in Group 2

3. Group 1 of 4 D2000/D3000 enclosures

4. Group 2 of 4 D2000/D3000 enclosures

5. Connection from P441 controller to port 2 of I/O module A on top of the disk enclosures in Group 1

6. Connections between the disk enclosures in Group 1

7. Connections between the disk enclosures in Group 2

An alternate way of connecting the D2000 disk enclosures to the P822 controller is to have 4 groups of 2 disk enclosures each. This cabling option provides better fault tolerance because the worst case scenario (besides a controller failure) is losing access to two disk enclosures if one disk enclosure goes down. In Figure 10 (page 17), the worst case scenario is losing access to all four disk enclosures in a group if one disk enclosure goes down.

NOTE: The cabling diagram in Figure 10 (page 17) illustrates the StoreEasy 1640 but the cabling is exactly the same for the StoreEasy 1440 and 1840 using the P822 controller.

Figure 10 Alternate single domain configuration for better fault tolerance
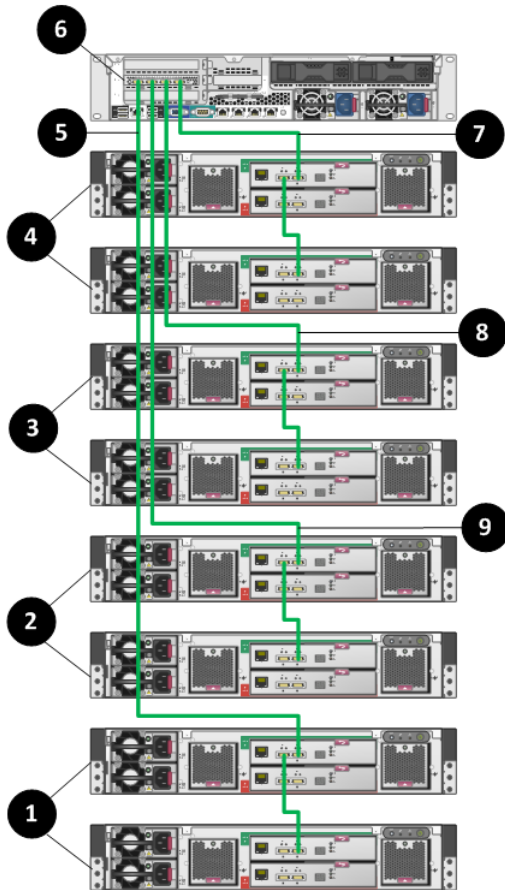
1. Group 1 of 2 D2600 disk enclosures

2. Group 2 of 2 D2600 disk enclosures

3. Group 3 of 2 D2600 disk enclosures

4. Group 4 of 2 D2600 disk enclosures

5. Connection from P822 controller to port 2 of I/O module A on the top disk enclosure in Group 1

6. P822 controller

7. Connection from P822 controller to port 2 of I/O module A on the top disk enclosure in Group 4

8. Connection from P822 controller to port 2 of I/O module A on the top disk enclosure in Group 3

9. Connection from P822 controller to port 2 of I/O module A on the top disk enclosure in Group 2

Dual domain cabling diagrams with D6000 Disk Enclosures

The following diagrams show different StoreEasy systems in dual domain configurations with D6000 Disk Enclosures.

Figure 11 (page 18) shows the StoreEasy 1440 system with the P822 controller in a dual domain configuration. In this configuration, the worst case scenario (besides a controller failure) is losing ½ of the D6000 if there is an I/O module failure.

NOTE: The cabling diagram in Figure 11 (page 18) is exactly the same for the StoreEasy 1640 and 1840 using the P822 controller.

Figure 11 StoreEasy 1430,1440with the P822 controller in a dual domain
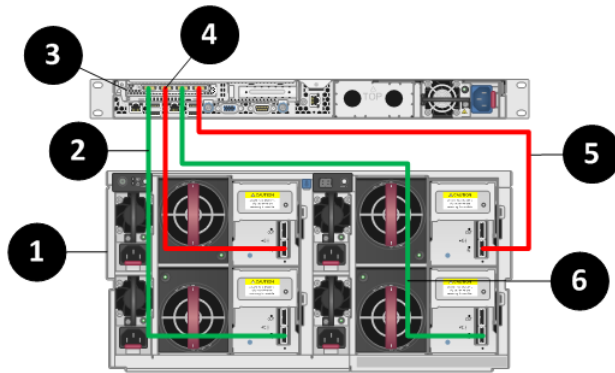
1. D6000 disk enclosure

2. Connection between the P822 and SAS port 1 on the secondary I/O module (Drawer 2)

3. P822 controller

4. Connection between the P822 and SAS port 1 on the primary I/O module (Drawer 2)

5. Connection between the P822 and SAS port 1 on the primary I/O module (Drawer 1)

6. Connection between the P822 and SAS port 1 on the secondary I/O module (Drawer 1)

Dual domain cabling diagrams with D2000/D3000 Disk Enclosures

In dual domain configurations with the D2000/D3000 Disk Enclosures, you have the option of cabling for best fault tolerance or best performance.

Figure 13 (page 20) illustrates best fault tolerance, which provides the best data protection in the event of an I/O module failure. The disk enclosures are put into two groups of four disk enclosures each. There is always one path to the disk enclosure from the controller (from either the top disk enclosure in the group or the bottom disk enclosure in the group). The green path carries the data if the red path is broken. Besides a controller failure, the worst case scenario is losing access to one I/O module if an I/O module fails. Figure 12 (page 19) also illustrates the SAS daisy chain between disk enclosures.

Figure 12 StoreEasy 1630, 1640 with the P822 controller in a dual domain configuration (best fault tolerance)
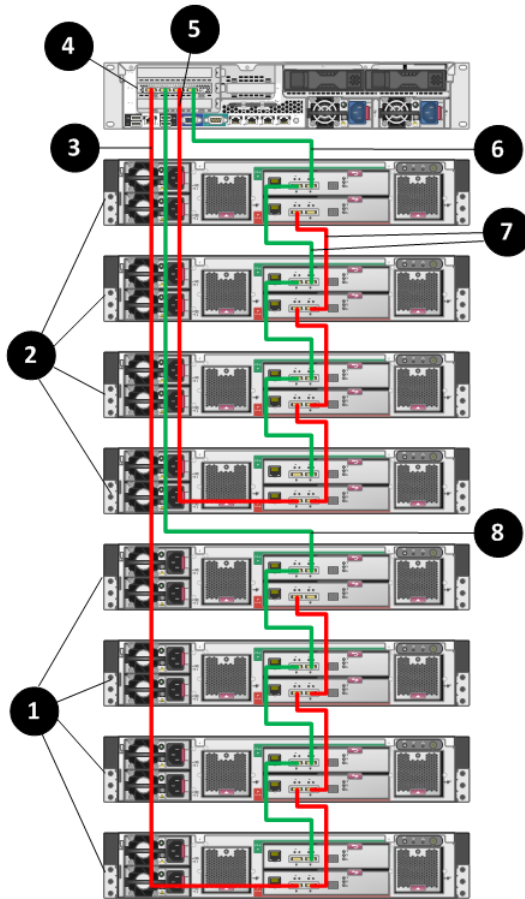
1. Group 1 of 4 D2600 disk enclosures

2. Group 2 of 4 D2600 disk enclosures

3. Connection from the P822 controller to port 1 of I/O module B on the bottom D2600 in Group 1

4. P822 controller

5. Connection from the P822 controller to port 1 of I/O module B on the bottom D2600 in Group 2

6. Connection from the P822 controller to port 2 of I/O module A on the top D2600 in Group 2

7. SAS daisy chain – port 1 of I/O module B on the top D2600 connects to port 2 of I/O module B on the bottom D2600 and port 1 of I/O module A on the top D2600 connects to port 2 of I/O module A on the bottom D2600

8. Connection from the P822 controller to port 2 of I/O module A on the top D2600 in Group 1

Figure 13 StoreEasy 1x50 with the P441 controller in a dual domain configuration (best fault tolerance)

1. P441 controller

2. Connection from P441 controller to port 2 of I/O module B on top of the disk enclosures in Group 2

3. Group 1 of 4 D2000/D3000 enclosures

4. Group 2 of 4 D2000/D3000 enclosures

5. Connection from P441 controller to port 2 of I/O module A on top of the disk enclosures in Group 1

6. Connections between the disk enclosures in Group 1

7. Connections between the disk enclosures in Group 2

Figure 14 (page 21) illustrates best performance. The difference between this cabling and fault tolerance cabling is that the beginning and ending connections from the controller to a disk enclosure are always to the first disk enclosure in the group. Essentially, the request from the controller to a disk enclosure moves faster because it does not have to travel through a series of disk enclosures. However, this cabling does not provide fault tolerance. If an I/O module in the first disk enclosure fails, you will lose access to all disk enclosures in the group.

NOTE: The cabling diagram in Figure 14 (page 21) is exactly the same for the StoreEasy 1440 and 1640 using the P822 controller.

Figure 14 StoreEasy 1830, 1840with the P822 controller in a dual domain configuration (best performance)
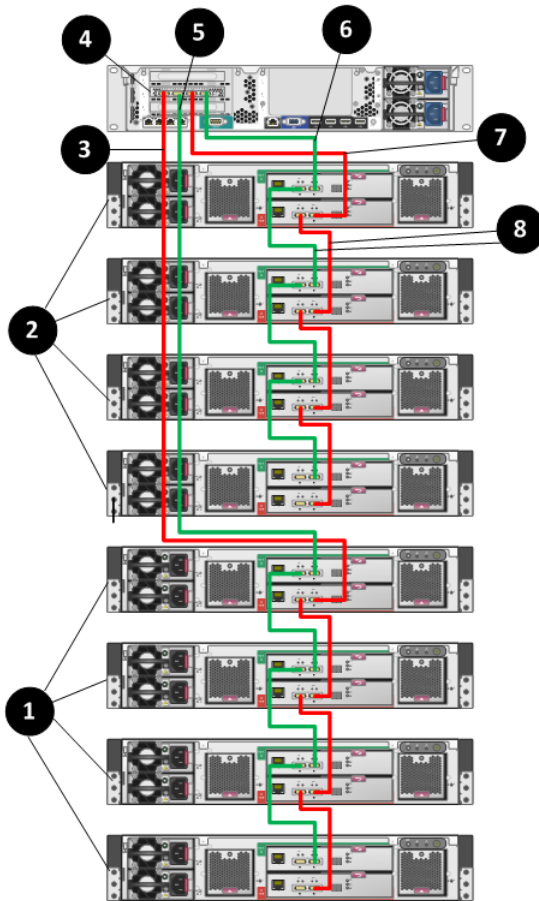
1. Group 1 of 4 D2600 disk enclosures

2. Group 2 of 4 D2600 disk enclosures

3. Connection from the P822 controller to port 2 of I/O module B on the top D2600 in Group 1

4. P822 controller

5. Connection from the P822 controller to port 2 of I/O module A on the top D2600 in Group 1

6. Connection from the P822 controller to port 2 of I/O module A on the top D2600 in Group 2

7. Connection from the P822 controller to port 2 of I/O module B on the top D2600 in Group 2

8. SAS daisy chain – port 1 of I/O module B on the top D2600 connects to port 2 of I/O module B on the bottom D2600 and port 1 of I/O module A on the top D2600 connects to port 2 of I/O module A on the bottom D2600

Figure 15 StoreEasy 1x50 with the P441 controller in a dual domain configuration (best fault tolerance)
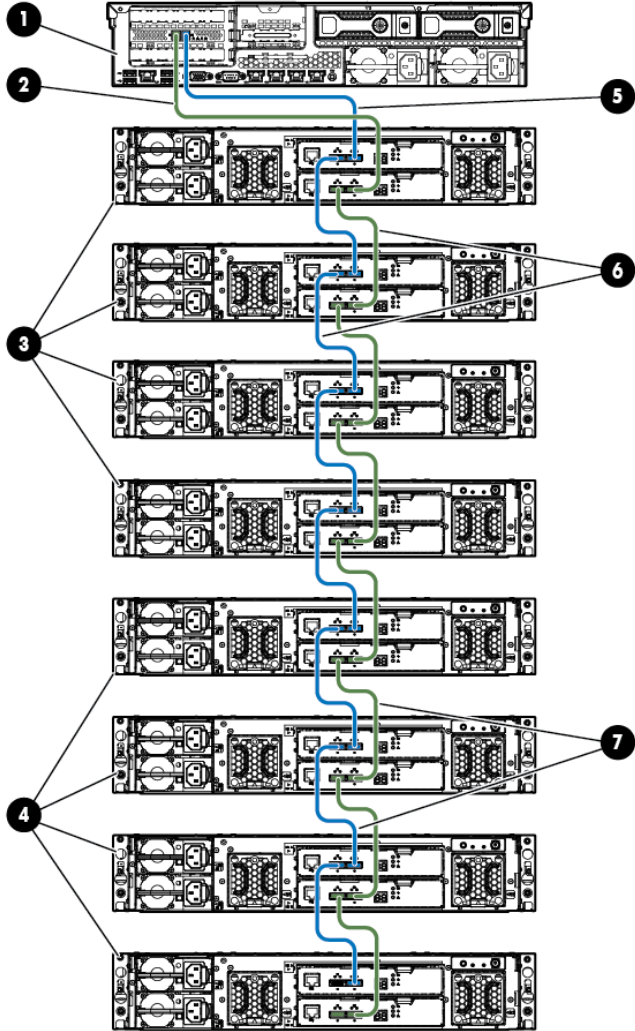

1. P441 controller

2. Connection from P441 controller to port 2 of I/O module B on top of the disk enclosures in Group 1

3. Group 1 of 4 D2000/D3000 enclosures

4. Group 2 of 4 D2000/D3000 enclosures

5. Connection from P441 controller to port 2 of I/O module A on top of the disk enclosures in Group 1

6. Connections between the disk enclosures in Group 1

7. Connections between the disk enclosures in Group 2

3 Specifications and requirements

Table 2 StoreEasy 1430 Storage

Dimension (H x W x D)	1.7 x 17.1 x 29.5 inches (4.32 x 43.46 x 75.0 cm)	
Weight (approximate)	Maximum (all hard drives, power supply, and processor installed)	4 LFF - 16.2/16.8 kg, 35.7/37.0 lb
	Minimum (one hard drive, power supply, and processor installed)	32 lb (14.51 kg)
Input Requirements (per power supply)	Rated Line Voltage	100 to 120 VAC
	Rated Input Current	6 Amps (at 100 VAC) to 3 Amps (at 200 VAC)
	Rated Input Frequency	50 to 60 Hz
Power Supply Output (per power supply)	Rated Steady-State Power	350W (at 100 to 120 VAC), 350W (at 200 to 240 VAC)
	Maximum Peak Power	400W (at 100 to 120 VAC), 400W (at 200 to 240 VAC)

Table 3 StoreEasy 1440 Storage

Dimension (H x W x D)	1.7 x 17.1 x 29.5 inches (4.32 x 43.46 x 75.0 cm)	
Weight (approximate)	Maximum	4 LFF (17.40 kg)
	Minimum	4 LFF (13.65 kg)
Input Requirements (per power supply)	Rated Line Voltage	100 to 120 VAC 200 to 240 VAC
	Rated Input Current	4.5 Amps (at 120VAC) to 2.2 Amps (at 240 VAC)
	Rated Input Frequency	50 to 60 Hz
BTU Rating	Maximum	1773 BTU / hr (at 120VAC) to 1715 (at 240 VAC)
Power Supply Output (per power supply)	Rated Steady-State Power	460W (at 100 to 120 VAC), 460W (at 200 to 240 VAC) 750W (at 100 to 120 VAC), 750W (at 200 to 240 VAC)
	Maximum Peak Power	460W (at 100 to 120 VAC), 460W (at 200 to 240 VAC) 750W (at 100 to 120 VAC), 750W (at 200 to 240 VAC)

Table 4 StoreEasy 1530,1540Storage

Dimension (H x W x D)	14.5.x 6.89 x 18.71 in (36.82 x17.5 x 47.52 cm)	
Weight (approximate)	Maximum (all hard drives, power supplies, and processors installed)	4 LFF (17.40 kg)
	Minimum (one hard drive, power supply, and processor installed)	4 LFF (13.65 kg)

Table 4 StoreEasy 1530,1540Storage *(continued)*

Input Requirements (per power supply)	Rated Line Voltage	100 to 240 VAC
	Rated Input Current	6 Amps
	Rated Input Frequency	47 to 63 Hz
	Rated Input Power	440W at 100 V AC input, 440W at 200V AC input
BTU Rating	Maximum	460W – 1773 BTU /hr (at 120VC), 1715 (at 240 VAC)
Power Supply Output (per power supply)	Rated Steady-State Power	350W (at 100 VAC), 350W (at 200 VAC
	Maximum Peak Power	350W (at 100 VAC), 350W (at 200 VAC)

Table 5 StoreEasy 1630, 1640 Storage

Dimension (H x W x D)	LFF Drives: 3.44 x 17.54 x 29.5 in (8.75 x 44.55 x 74.94 cm)	
Weight (approximate)	Maximum (all hard drives: front + rear, full power supply, and processor installed)	71.20 lb (32.30 kg)
	Minimum (one hard drive, single power supply, and processor installed. HDD not installed)	30.80 lb (14.00 kg)
Input Requirements (per power supply)	Rated Line Voltage	100 to 120 VAC, 200 to 240 VAC
	Rated Input Current	For 1200W Power Supply: 10 A (at 100 VAC), 4.9 A (at 200 VAC) For 750W Power Supply: 8.9 A (at 100 VAC), 4.3 A (at 200 VAC) For 460W Power Supply: 5.5 A (at 100 VAC), 2.6 A (at 200 VAC)
	Rated Input Frequency	50 to 60 Hz
	Rated Input Power	For 1200W Power Supply: 930W (at 100 VAC), 1348W (at 200 VAC) For 750W Power Supply: 857W (at 100 VAC), 824W (at 200 VAC) For 460W Power Supply: 526W (at 100 VAC), 505W (at 200 VAC)
BTU Rating	Maximum	For 1200W Power Supply: 3530 BTU/hr (at 100 VAC), 4600 BTU/hr (at 200 VAC)

Table 5 StoreEasy 1630, 1640 Storage *(continued)*

		For 750W Power Supply: 2925 BTU/hr (at 100 VAC), 2812 BTU/hr (at 200 VAC) For 460W Power Supply: 1794 BTU/hr (at 100 VAC), 1725 BTU/hr (at 200 VAC)
Power Supply Output (per power supply)	Rated Steady-State Power	For 1200W Power Supply: 800W (at 100 VAC), 900W (at 120 VAC) 1200W (at 200 to 240 VC) For 750W Power Supply: 750W (at 100 to 120 VAC), 750W (at 200 to 240 VAC) For 460W Power Supply: 460W (at 100 to 120 VAC), 460W (at 200 to 240 VAC)
	Maximum Peak Power	For 1200 W Power Supply: 800 W (at 100 VAC), 900 W (at 120 VAC) 1200 W (at 200 to 240 VC) For 750 W Power Supply: 750 W (at 100 to 120 VAC), 750 W (at 200 to 240 VAC) For 460 W Power Supply: 460 W (at 100 to 120 VAC), 460 W (at 200 to 240 VAC)

Table 6 StoreEasy 1830, 1840Storage

Dimension (H x W x D)	SFF Drives: 3.44 x 17.54 x 27.50 in (8.73 x 44.55 x 69.85 cm)	
Weight (approximate)	Maximum (all hard drives, power supply, and processor installed)	61.00 lb (27.66 kg)
	Minimum (one SFF hard drive, power supply, and processor installed, ODD not installed)	41.0 lb (18.59 kg)
Input Requirements (per power supply)	Rated Line Voltage	100 to 120 VAC, 200 to 240 VAC
	Rated Input Current	For 1200W Power Supply: 10 A (at 100 VAC), 4.9 A (at 200 VAC) For 750W Power Supply: 8.9 A (at 100 VAC), 4.3 A (at 200 VAC) For 460W Power Supply: 5.5 A (at 100 VAC), 2.6 A (at 200 VAC)

Table 6 StoreEasy 1830, 1840Storage *(continued)*

	Rated Input Frequency	50 to 60 Hz
	Rated Input Power	For 1200W Power Supply: 930W (at 100 VAC), 1348W (at 200 VAC) For 750W Power Supply: 857W (at 100 VAC), 824W (at 200 VAC) For 460W Power Supply: 526W (at 100 VAC), 505W (at 200 VAC)
BTU Rating	Maximum	For 1200W Power Supply: 3530 BTU/hr (at 100 VAC), 4600 BTU/hr (at 200 VAC) For 750 W Power Supply: 2925 BTU/hr (at 100 VAC), 2812 BTU/hr (at 200 VAC) For 460 W Power Supply: 1794 BTU/hr (at 100 VAC), 1725 BTU/hr (at 200 VAC)
Power Supply Output (per power supply)	Rated Steady-State Power	For 1200W Power Supply: 800W (at 100 VAC), 900W (at 120 VAC), 1200W (at 200 to 240 VC) For 750W Power Supply: 750W (at 100 to 120 VAC), 750W (at 200 to 240 VAC) For 460W Power Supply: 460W (at 100 to 120 VAC), 460W (at 200 to 240 VAC)
	Maximum Peak Power	For 1200W Power Supply: 800W (at 100 VAC), 900W (at 120 VAC), 1200W (at 200 to 240 VC) For 750W Power Supply: 750W (at 100 to 120 VAC), 750W (at 200 to 240 VAC) For 460W Power Supply: 460W (at 100 to 120 VAC), 460W (at 200 to 240 VAC)

Table 7 StoreEasy 1450 Storage

Dimension (H x W x D)	8 SFF - 1.69 x 17.11 x 23.92 inches (4.29 x 43.46 x 60.76 cm) 4 LFF - 1.7 x 17.1 x 23.9 inches (4.29 x 43.46 x 60.76 cm)	
Weight (approximate)	Maximum (all hard drives, power supplies, and processors installed)	33.04 lb (15kg)

Table 7 StoreEasy 1450 Storage *(continued)*

	Minimum (one hard drive, power supply, and processor installed)	22.03 lb (10kg)
Input Requirements (per power supply)	Rated Line Voltage	100 to 240 VAC
	Rated Input Current	For 550W Power Supply: 6.7 A (at 100 VAC), 3.3 A (at 100 VAC)
	Rated Input Frequency	47 to 63 Hz
	Rated Input Power	For 550W Power Supply: < 670W (at 100 VAC), < 660W (at 200 VAC)
BTU Rating	Maximum	For 550W Power Supply: 2201 BTU/hr (at 100 VAC), 2153 BTU/hr (at 200 VAC)
Power Supply Output (per power supply)	Rated Steady-State Power	For 550W Power Supply: 550W (at 100 VAC), 550W (at 200 VAC)
	Maximum Peak Power	For 550W Power Supply: 550W (at 100 VAC), 550W (at 200 VAC)

Table 8 StoreEasy 1550 Storage

Dimension (H x W x D)	17.32(H) x 7.68(W) x 18.92(D) in (44 x 19.5 x 48.05 cm)	
Weight (approximate)	Maximum	55 lb (24.9g)
	Minimum	27.56 lb (12.5kg)
Input Requirements (per power supply)	Rated Line Voltage	100 to 120 VAC,
	Rated Input Current	For 350W & 550W Power Supply: 8A (at 100~240 VAC)
	Rated Input Frequency	50 to 60 Hz
	Rated Input Power	For 550W Power Supply: 639W (at 100 VAC), 605W (at 200 VAC) For 350W Power Supply: 427W (at 100 VAC), 427W (at 200 VAC)
BTU Rating	Maximum	For 550W Power Supply: 2204 BTU/hr (at 100 VAC),2113 BTU/hr (at 200 VAC) For 350W Power Supply: 1452 BTU/hr (at 100 VAC),1544 BTU/hr (at 200 VAC)
Power Supply Output (per power supply)	Rated Steady-State Power	For 550W Power Supply: 550W (at 100 VAC),550W (at 200 VAC)
	Maximum Peak Power	For 350W Power Supply: 350W (at 100 VAC),350 W (at 200 VAC)

Table 9 StoreEasy 1650 and 1850 Storage

Dimension (H x W x D)	SFF Drives: 3.44 x 17.54 x 26.75 in (8.73 x 44.55 x 67.94 cm) LFF Drives: 3.44 x 17.54 x 28.75 in (8.73 x 44.55 x 73.02 cm) **NOTE:** Dimensions without Bezel.	
Weight (approximate)	Maximum (Maximum - 12 LFF hard drives (No rear drives), 2x processors, 2x power supplies, 1x Flexible Smart Array, 2x Risers installed)	51.5 lb (23.6 kg)
	Minimum (Minimum - 8SFF chassis with 1xSFF HDD and 7 HDD blanks, 1x processor, 1x power supply (plus blank), 1x Flexible Smart Array, 1x Riser installed)	32.6 lb (14.759 kg)
Input Requirements (per power supply)	Rated Line Voltage	100 to 120 VAC, 200 to 240 VAC
BTU Rating	Maximum	For 1400W Power Supply: 1400W (at 100 VAC), 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
Power Supply Output (per power supply)	Rated Steady-State Power	For 1400W Power Supply: 1400W (at 100 VAC), 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 100 to 127 VAC), 1400W (at 200 to 240 1VAC), 1400W (at 240 VAC) input for China only

Table 9 StoreEasy 1650 and 1850 Storage *(continued)*

		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

Table 10 StoreEasy 1650 Expanded Storage

Dimension (H x W x D)	LFF Drives: 3.44 x 17.54 x 28.75 in (8.73 x 44.55 x 73.02 cm) **NOTE:** Dimensions without Bezel.	
Input Requirements (per power supply)	Rated Line Voltage	100 to 120 VAC 200 to 240 VAC
BTU Rating	Maximum	For 800W Power Supply: 3207 BTU/hr (at 100 VAC) 3071 BTU/hr (at 200 VAC)
Power Supply Output (per power supply)	Rated Steady-State Power	For 800W Power Supply: 800W (at 100 VAC) 800W (at 240 VAC)
	Maximum Peak Power	For 800W Power Supply: 800W (at 100 to 127 VAC) 800W (at 200 to 240)

Other specifications for the individual components are located in the Getting Started Guide for each product:

StoreEasy model	Document	Location
StoreEasy 1430 Storage	ProLiant DL320e Gen8 Getting Started Guide	Russian: **http://www.hpe.com/support/DL320eGen8_GSG_ru** Kazakh: **http://www.hpe.com/support/DL320eGen8_GSG_kk**
StoreEasy 1440 Storage	ProLiant DL360e Gen8 Getting Started Guide	Russian: **http://www.hpe.com/support/DL360eGen8_GSG_ru** Kazakh: **http://www.hpe.com/support/DL360eGen8_GSG_kk**
StoreEasy 1450 Storage	ProLiant DL160 Gen 9 Server Getting Started Guide	Russian: **http://www.hpe.com/support/DL160Gen9_GSG_ru** Kazakh: **http://www.hpe.com/support/DL160Gen9_GSG_kk**
StoreEasy 1550 Storage	ProLiant ML110 Gen9 Server Getting Started Guide	Russian: **http://www.hpe.com/support/ML110Gen9_GSG_ru** Kazakh: **http://www.hpe.com/support/ML110Gen9_GSG_kk**

StoreEasy model	Document	Location
StoreEasy 1650 Storage	ProLiant DL380 Gen 9 Server Getting Started Guide	Russian: **http://www.hpe.com/support/ DL380Gen9_GSG_ru** Kazakh: **http://www.hpe.com/support/ DL380Gen9_GSG_kk**
StoreEasy 1650 Expanded Storage	Apollo 4200 Gen9 Getting Started Guide	Russian: **www.hpe.com/support/ Apollo4200Gen9_GSG_ru** Kazakh: **www.hpe.com/support/ Apollo4200Gen9_GSG_kk**
StoreEasy 1850 Storage	ProLiant DL380 Gen 9 Server Getting Started Guide	Russian: **http://www.hpe.com/support/ DL380Gen9_GSG_ru** Kazakh: **http://www.hpe.com/support/ DL380Gen9_GSG_kk**
StoreEasy 1530,1540Storage	ProLiant ML310e Gen8 Getting Started Guide	Russian: **http://www.hpe.com/support/ ML310eGen8-GSG-ru** Kazakh: **http://www.hpe.com/support/ ML310eGen8-GSG-kk**
StoreEasy 1630, 1640 Storage	ProLiant DL380e Gen8 Getting Started Guide	Russian: **http://www.hpe.com/support/ DL380eGen8_GSG_ru** Kazakh: **http://www.hpe.com/support/ DL380eGen8_GSG_kk**
StoreEasy 1830, 1840Storage	ProLiant DL380p Gen8 Server Getting Started Guide	Russian: **http://www.hpe.com/support/ DL380pGen8-GSG-ru** Kazakh: **http://www.hpe.com/support/ DL380pGen8-GSG-kk**

4 Support and other resources

Accessing Hewlett Packard Enterprise Support

- For live assistance, go to the Contact Hewlett Packard Enterprise Worldwide website:
  www.hpe.com/assistance

- To access documentation and support services, go to the HP Support Center – Hewlett Packard Enterprise website:
  www.hpe.com/support/hpesc

Information to collect

- Technical support registration number (if applicable)

- Product name, model or version, and serial number

- Operating system name and version

- Firmware version

- Error messages

- Product-specific reports and logs

- Add-on products or components

- Third-party products or components

Accessing updates

- Some software products provide a mechanism for accessing software updates through the product interface. Review your product documentation to identify the recommended software update method.

- To download product updates, go to either of the following:

  ○ HP Support Center – Hewlett Packard Enterprise **Get connected with updates from HP** page:
    www.hpe.com/support/e-updates

  ○ Software Depot website:
    www.hpe.com/support/softwaredepot

- To view and update your entitlements, and to link your contracts, Care Packs, and warranties with your profile, go to the HP Support Center – Hewlett Packard Enterprise **More Information on Access to HP Support Materials** page:
  www.hpe.com/support/AccessToSupportMaterials

ⓘ **IMPORTANT:** Access to some updates might require product entitlement when accessed through the HP Support Center – Hewlett Packard Enterprise. You must have a Hewlett Packard Enterprise Passport set up with relevant entitlements.

Websites

Website	Link
Hewlett Packard Enterprise Information Library	**www.hpe.com/info/enterprise/docs**
HP Support Center – Hewlett Packard Enterprise	**www.hpe.com/support/hpesc**
Contact Hewlett Packard Enterprise Worldwide	**www.hpe.com/assistance**
Subscription Service/Support Alerts	**www.hpe.com/support/e-updates**
Software Depot	**www.hpe.com/support/softwaredepot**
Customer Self Repair	**www.hpe.com/support/selfrepair**
Insight Remote Support	**www.hpe.com/info/insightremotesupport/docs**
Single Point of Connectivity Knowledge (SPOCK) Storage compatibility matrix	**www.hpe.com/storage/spock**
Storage white papers and analyst reports	**www.hpe.com/storage/whitepapers**

Customer self repair

Hewlett Packard Enterprise customer self repair (CSR) programs allow you to repair your product. If a CSR part needs to be replaced, it will be shipped directly to you so that you can install it at your convenience. Some parts do not qualify for CSR. Your Hewlett Packard Enterprise authorized service provider will determine whether a repair can be accomplished by CSR.

For more information about CSR, contact your local service provider or go to the CSR website:

www.hpe.com/support/selfrepair

Remote support

Remote support is available with supported devices as part of your warranty, Care Pack Service, or contractual support agreement. It provides intelligent event diagnosis, and automatic, secure submission of hardware event notifications to Hewlett Packard Enterprise, which will initiate a fast and accurate resolution based on your product's service level. Hewlett Packard Enterprise strongly recommends that you register your device for remote support.

For more information and device support details, go to the following website:

www.hpe.com/info/insightremotesupport/docs

Documentation feedback

Hewlett Packard Enterprise is committed to providing documentation that meets your needs. To help us improve the documentation, send any errors, suggestions, or comments to Documentation Feedback (**docsfeedback@hpe.com**). When submitting your feedback, include the document title, part number, edition, and publication date located on the front cover of the document. For online help content, include the product name, product version, help edition, and publication date located on the legal notices page.

A Warranty and regulatory information

For important safety, environmental, and regulatory information, see *Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products*, available at **www.hpe.com/support/Safety-Compliance-EnterpriseProducts**.

Warranty information

HPE ProLiant and x86 Servers and Options

www.hpe.com/support/ProLiantServers-Warranties

HPE Enterprise Servers

www.hpe.com/support/EnterpriseServers-Warranties

HPE Storage Products

www.hpe.com/support/Storage-Warranties

HPE Networking Products

www.hpe.com/support/Networking-Warranties

Regulatory information

Belarus Kazakhstan Russia marking

EAC

Manufacturer and Local Representative Information

Manufacturer information:

- Hewlett Packard Enterprise, 3000 Hanover Street, Palo Alto, CA 94304, U.S.

Local representative information Russian:

- **Russia**:

  ЗАО "Хьюлетт-Паккард А.О.", 125171, Россия, г. Москва, Ленинградское шоссе, 16А, стр.3, тел/факс: +7 (495) 797 35 00, +7 (495) 287 89 05

- **Belarus**:

  ИООО «Хьюлетт-Паккард Бел», 220030, Беларусь, г. Минск, ул. Интернациональная, 36-1, офис 722-723, тел.: +375 (17) 392 28 18, факс: +375 (17) 392 28 21

- **Kazakhstan**:

  ТОО «Хьюлетт-Паккард (К), 050040, Казахстан, г. Алматы, Бостандыкский район, ул. Тимирязева, 28В, 1 этаж, тел./факс: +7 (727) 355 35 50, +7 (727) 355 35 51

Local representative information Kazakh:

- **Kazakhstan**:

ЖШС «Хьюлетт-Паккард (К)», Қазақстан, Алматы қ., Бостандық ауданы, Тимирязев к-сі, 28В, тел./факс: +7 (727) 355 35 50, +7 (727) 355 35 51

Manufacturing date:

The manufacturing date is defined by the serial number.

CCSYWWZZZZ (serial number format for this product)

Valid date formats include:

- YWW, where Y indicates the year counting from within each new decade, with 2000 as the starting point; for example, 238: 2 for 2002 and 38 for the week of September 9. In addition, 2010 is indicated by 0, 2011 by 1, 2012 by 2, 2013 by 3, and so forth.
- YYWW, where YY indicates the year, using a base year of 2000; for example, 0238: 02 for 2002 and 38 for the week of September 9.

Turkey RoHS material content declaration

Türkiye Cumhuriyeti: EEE Yönetmeliğine Uygundur

Ukraine RoHS material content declaration

Обладнання відповідає вимогам Технічного регламенту щодо обмеження використання деяких небезпечних речовин в електричному та електронному обладнанні, затвердженого постановою Кабінету Міністрів України від 3 грудня 2008 № 1057