QuickSpecs

HPE SATA Hard Drives

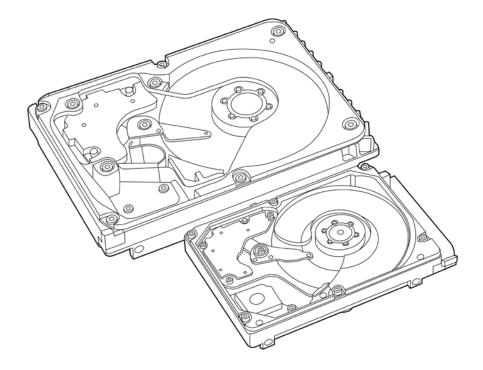
Overview

HPE Hard Disk Drives

HPE Hard Disk Drives (HDDs) delivers proven performance at industry leading capacities backed by high quality and reliability, preferred choice for many workloads ranging from small businesses to large enterprise.

HPE hard disk drives are optimized to deliver maximum performance on HPE server platforms, and are proven for applications that demand reliable performance in 24x7 operational environments. HPE HDDs offer customers great value per gigabyte without sacrificing performance. In addition, an industry-leading testing and qualification program ensures that our drives are rugged enough for any need.

HPE HDDs are available for three types of workloads —Entry, Midline and Enterprise, two interfaces—SAS and SATA, and in a variety of capacities—up to 10 TB and growing.



What's New

- HPE 6TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive
- HPE 10TB 6G SATA 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty Hard Drive
- HPE 8TB 6G SATA 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty Hard Drive
- HPE 1TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive
- HPE 3TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive

Hewlett Packard Enterprise

Overview

Models

NOTE: SATA Drive Write Cache is disabled by default to minimize the risk of data loss in case of power loss. For information on how to enable Drive Write Cache on SATA drives via supported controllers and HBAs and what precautions should be followed please visit: http://www.hp.com/go/SATA **NOTE:** The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server

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

HPE 6G SATA "SmartDrive" Carriers

6G SATA Hot Plug with SmartDrive SFF (2.5-inch) Midline (MDL) Drives
HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive

HP 500GB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	655708-B21
	000,00 555
6G SATA Hot Plug with SmartDrive SFF (2.5-inch) 512e (MDL) Drives	
HP 2TB 6G SATA 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765455-B21
HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive	765453-B21
NOTE: Not supported by VMWare: VMWare is not 512e "Aware".	

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

HPE 6TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive	846510-B21
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	753874-B21
HPE 4TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive	861678-B21
HP 4TB 6G SATA 7.2k rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	693687-B21
HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	628061-B21
HPE 3TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive	861693-B21
HPE 2TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive	861676-B21
HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	658079-B21
HPE 1TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive	861691-B21
HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	657750-B21
HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	658071-B21
6G SATA Hot Plug with SmartDrive LFF (3.5-inch) Midline 512e Drives	
HPE 8TB 6G SATA 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty Hard Drive	819203-B21
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive	765255-B21

HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 512e 1yr Warranty Hard Drive NOTE: Not supported by VMWare: VMWare is not 512e "Aware". 6G SATA Hot Plug with SmartDrive LFF (3.5-inch) Midline 512e Performance Drives

HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drive	793667-B21
HP 4TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Performance 1yr Warranty Hard Drives	793665-B21
NOTE: Not supported by VMWare: VMWare is not 512e "Aware".	

6G SATA Hot Plug with SmartDrive LFF (3.5-inch) Midline 512e Helium Drives

HPE 10TB 6G SATA 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty Hard Drive	857648-B21
HPE 8TB 6G SATA 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty Hard Drive	861594-B21
HP 8TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive	793695-B21
HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive	793683-B21
NOTE: Not supported by VMWare: VMWare is not 512e "Aware".	

HPE 6G SATA "Non-hot Plug" Carriers

6G SATA Non-hot Plug LFF (3.5-inch) Midline (MDL) Drives

765253-B21

655710-B21

QuickSpecs **HPE SATA Hard Drives Overview** HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive 659339-B21 HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive 659337-B21 HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive 659341-B21 6G SATA Non-hot Plug LFF (3.5-inch) Standard (STND) Drives HP 4TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Standard 1yr Warranty Hard Drive 801888-B21 HP 3TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Standard 1vr Warrantv Hard Drive 801886-B21 HP 2TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Standard 1yr Warranty Hard Drive 801884-B21 HP 1TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Standard 1yr Warranty Hard Drive 801882-B21 6G SATA Non-hot Plug LFF (3.5-inch) Entry (ETY) Drives **NOTE:** Supported on select 10 series servers only. HP 4TB 6G SATA 5.9K rpm LFF (3.5in) Non-hot Plug Entry 512e 1yr Warranty Hard Drive 815635-B21 HPE 3TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Entry 512e 1yr Warranty Hard Drive 843270-B21 HPE 2TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Entry 512e 1yr Warranty Hard Drive 843268-B21 HPE 1TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Entry 512e 1yr Warranty Hard Drive 843266-B21 HPE 500GB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Entry 512e 1yr Warranty Hard Drive 843264-B21 **HPE 6G SATA Hot Plug Hard Drives NOTE:** These drives are not supported by Gen8/Gen9 servers. SATA Hot Plug SFF (2.5-inch) Midline (MDL) Drives HP 1TB 3G SATA 7.2K rpm SFF (2.5-inch) Hot Plug Midline 1yr Warranty Hard Drive 625609-B21 HP 500GB 3G SATA 7.2K rpm SFF (2.5-inch) Midline 1yr Warranty Hard Drive 507750-B21 SATA Hot Plug LFF (3.5-inch) Midline (MDL) Drives HP 4TB 3G SATA 7.2k rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive 694374-B21 HP 3TB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1vr Warrantv Hard Drive 628059-B21 HP 2TB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive 507632-B21 HP 1TB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive 454146-B21 HP 500GB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive 458928-B21 SATA Hot Plug LFF (3.5-inch) Midline (MDL) 512e Drives HP 8TB 6G SATA 7.2K rpm LFF (3.5-inch) 512e Helium 1yr Warranty Hard Drive 793693-B21 HP 6TB 6G SATA 7.2K rpm LFF (3.5-inch) 512e Helium 1yr Warranty Hard Drive 793680-B21 **NOTE:** Not supported by VMWare: VMWare is not 512e "Aware". **HPE 6G SATA Quick Release Hard Drives** 6G SATA Quick Release SFF (2.5-inch) Midline (MDL) Drives **NOTE:** These drives are supported by the SL Gen8 servers and Moonshot server. HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) Quick Release Midline 1yr Warranty Hard Drive 632080-B21 HP 500GB 6G SATA 7.2K rpm SFF (2.5-inch) Quick Release Midline 1yr Warranty Hard Drive 632078-B21 6G SATA Quick Release LFF (3.5-inch) Midline (MDL) Drives **NOTE:** These drives are supported by the SL Gen8 servers. 697954-B21 HP 4TB 6G SATA 7.2k rpm LFF (3.5-inch) Quick-release Midline 1yr Warranty Hard Drive 647274-B21 HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) Quick Release Midline 1yr Warranty Hard Drive 672621-B21 HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) Quick Release Midline 1yr Warranty Hard Drive

Standard Features

Drive Quality

Today's entry-level servers and external storage solutions are seeing an increase in maximum storage capacity and demand for increased levels of drive quality. In the often-changing entry-level server and storage environment, storage has become a critical component of the information system, significantly defining both the systems reliability. This is why HPE drives undergo an intense qualification process that eliminates firmware and O/S incompatibilities. All drives are proven to perform in the HPE ProLiant and Modular Smart Array (MSA) storage systems for which they were designed.

Performance

Only those drives whose quality is suitable for an entry-level, external storage enclosures and server environments are selected through the Hewlett Packard Enterprise qualification process. All our drives are proven to be reliable in the ProLiant server and MSA storage environment.

Native Command Queuing

Native Command Queuing (NCQ) is a technology designed to increase performance of SATA hard disk drives by allowing the individual hard disk to internally optimize the order in which received read and write commands are executed. This can reduce the amount of unnecessary going back-and-forth on the drive's heads, resulting in increased performance for workloads where multiple simultaneous read/write requests are outstanding, most often occurring in server or storage-type applications. Without NCQ the drive has to process and complete one command at a time. For NCQ to be enabled, it must be supported and turned on in the controller and in the hard drive itself.

NOTE: Please reference the HPE Smart Array Controller website for NCQ enabled controllers at:

http://www.hp.com/products/smartarray.

Please see SATA hard drive Technical Specifications section for specific capacities supported with NCQ.

Integration

Many issues customers have with third party Serial-ATA drives are integration related issues. When buying from another supplier, there is no guarantee that a drive has been correctly set for proper operation with ProLiant entry-level servers or MSA enclosures. These incompatibilities can create problems in configuration, can rob your system of performance, or at their worst, can result in data corruption. HPE hard drives are specifically designed and tested for flawless operation in your Hewlett Packard Enterprise equipment. The integration of hard drives in HPE systems means that cables, controllers, and firmware are right for your ProLiant entry level server or MSA enclosures.

Pre-Failure Alert

When used in conjunction with a SMART Array Controller and Systems Insight Manager, the SMART capable firmware in HPE hard drives enables extensive fault prediction capabilities. If potential problems develop in one of the drives, the Smart Array Controller, Systems Insight Manager and/or SMART hard disk drive lets you know in advance so you can have the drive replaced, before it fails, under warranty.

NOTE: All drives are protected by a Pre-Failure Alert when used with a HPE Smart Array controller and Systems Insight Manager, allowing hard drives to be replaced before failure under warranty. In addition, all drives are covered by a 1 or 3 year limited on-site warranty, regardless of the warranty period of the system in which they are installed. However, the drive warranty is automatically uplifted when used in a server or MSA for which a care pack is purchased. Please see the below HPE Care Pack Information section for additional services.

NOTE: SATA hard drives have a 1 year limited warranty regardless of the warranty period for the system in which they are installed.

Server and Storage Support

Please see the following URL for the latest list of supported servers and enclosures:

http://www.hp.com/servers/hdd-documentation

Service and Support

Service and Support

NOTE: HPE SATA and SAS Hard drives are covered under the HPE Support Service/ Service Contract applied to the HPE ProLiant Server. No separate HPE Support Service need to be purchased.

HPE Technology Services for Industry Standard Servers

HPE Technology Services delivers confidence, reduces risk and helps customers realize agility and stability powered by a rich portfolio of consulting and support services designed to add value to our core products and solutions Connect to Hewlett Packard Enterprise to help prevent problems and solve issues faster. Our support technology lets you to tap into the knowledge of millions of devices and thousands of experts to stay informed and in control, anywhere, any time.

Protect your business beyond warranty with HPE Support Services

HPE support services offer complete care and support expertise with committed response choices that are designed to meet your IT and business needs.

Connect your devices to HPE

Unlock all of the benefits of your technology investment by connecting your products to Hewlett Packard Enterprise. Achieve up to 77% reduction in down time, near 100% diagnostic accuracy and a single consolidated view of your environment. By connecting, you will receive 24x7monitoring, prefailure alerts, automatic call logging, and automatic parts dispatch. HPE Proactive Care Service and HPE Datacenter Care Service customers will also benefit from proactive activities to help prevent issues and increase optimization. All of these benefits are already available to you with your server storage and networking products, securely connected to HPE support.

Warranty

ATA, SATA and MDL SAS hard drives have a maximum warranty period of one (1) year regardless of the warranty period for the system in which they are installed.

Service Coverage

For ProLiant servers and storage systems, the service on the main product covers HPE-branded hardware options not designated by Hewlett Packard Enterprise as requiring separate coverage that are qualified for the server, are purchased at the same time or afterward, and are internal to the enclosure. The service also covers external monitors up to 22 inches in size and tower UPS products during their supported life of up to 5 years beyond sales discontinuance. These items will be covered at the same service level as the main product.

Maximum supported lifetime/maximum usage:

Parts and components that have exceeded their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product QuickSpecs, or the technical product data sheet will not be provided, repaired, or replaced as part of this service.

Data Retentive components that are specified by Hewlett Packard Enterprise as consumable parts and/or that have exceeded the maximum supported lifetime and/or the maximum usage limit as set forth in the manufacturer's operating manual, the product QuickSpecs, or the technical data sheet are not eligible for the defective media retention or the comprehensive defective material retention service feature option.

For more information

To learn more on services for HPE ESSN Options, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Or visit:

http://www.hp.com/services/proliant or http://www.hp.com/services/bladesystem

Technical Specifications

6G SATA Hot Plug with SmartDrive SFF (2.5-inch) Midline (MDL) Drives

HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive 655710-B21

 Capacity
 1,000,204MB

 Height
 0.62 in (15.6 mm)

 Width
 2.98 in (75.7 mm)

 Depth
 4.67 in (118.7 mm)

InterfaceSerial ATATransfer Rate6Gb/s

(Maximum)

Native Command Supported

Queuing

Seek TimeSingle Track.7 ms(typical reads, including settling)Average<8.5 ms</td>Full-Stroke16.96 ms

Logical Blocks

Rotational Speed 7,200 rpm uration Bytes/Sector 512

Physical Configuration Bytes/Sector 51

50° to 95° F (10° to 35° C)

1.953.525.168

Operating
Temperature
(system inlet air
temperature)

HP 500GB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive 655708-B21

 Capacity
 500,107MB

 Height
 0.62 in (15.6 mm)

 Width
 2.98 in (75.7 mm)

 Depth
 4.67 in (118.7 mm)

Interface Serial ATA
Transfer Rate 6Gb/s

(Maximum)

Native Command Supported

Queuing

Seek TimeSingle Track.7ms(typical reads, including
settling)Average
Full-Stroke<8.5ms</td>16.96ms

Rotational Speed 7200 **Physical Configuration** Bytes/Sector 512

Logical Blocks 976,773,168

Operating 50° to 95° F (10° to 35° C)

Temperature (system inlet air temperature)

6G SATA Hot Plug with SmartDrive SFF (2.5-inch) Midline (MDL) 512e Drives

HP 2TB 6G SATA 7.2K 765455-B21 Capacity 2,000,398MB

Technical Specifications

rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive

 Height
 0.62 in (15.6 mm)

 Width
 2.98 in (75.7 mm)

 Depth
 4.67 in (118.7 mm)

Interface Serial ATA
Transfer Rate 6Gb/s

(Maximum)

Native Command Supported

Queuing

Seek TimeSingle Track.5 ms(typical reads, including
settling)Average<7.2 ms</td>Full-Stroke17 ms

Rotational Speed 7,200 rpm

50° to 95° F (10° to 35° C)

Physical Configuration Bytes/Sector 512

Logical Blocks 3,907,029,168

Operating
Temperature
(system inlet air temperature)

HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC 512e 1yr Warranty Hard Drive 765453-B21 Capacity

 Capacity
 1,000,204MB

 Height
 0.62 in (15.6 mm)

 Width
 2.98 in (75.7 mm)

 Depth
 4.67 in (118.7 mm)

Interface Serial ATA
Transfer Rate 6Gb/s

(Maximum)

Native Command Supported

Queuing

Seek TimeSingle Track.5 ms(typical reads, including settling)Average<7.2 ms</td>Full-Stroke17 msRotational Speed7200

Physical Configuration Bytes/Sector 512

Logical Blocks 1,953,525,168

Operating 50° to 95° F (10° to 35° C)

Temperature (system inlet air temperature)

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

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

 Capacity
 6,001,175MB

 Height
 1.06 in (26.8 mm)

 Width
 4.16 in (105.8 mm)

 Depth
 6.69 in (170.0 mm)

Technical Specifications

Interface Serial ATA **Transfer Rate** 6Gb/s

(Maximum)

Native Command

Queuing

Supported

Seek Time Single Track 0.25ms (typical reads, including Average 8.5 ms settling) Full-Stroke 22 ms

Rotational Speed 7,200 rpm

50° to 95° F (10° to 35° C)

Physical Configuration Bytes/Sector 512

> Logical Blocks 11,721,045,168

Operating Temperature (system inlet air temperature)

HPE 6TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty **Hard Drive**

846510-B21

Capacity 6,001,175MB Height 1.06 in (26.8 mm) Width 4.16 in (105.8 mm) 6.69 in (170.0 mm) **Depth**

Interface Serial ATA 6Gb/s **Transfer Rate**

(Maximum)

Seek Time

settling)

Native Command Queuing

Supported

0.8 ms Single Track (typical reads, including 8.5 ms Average Full-Stroke 15.7 ms

> Rotational Speed 7,200 rpm

Physical Configuration Bytes/Sector 512

> Logical Blocks 11,721,045,168

Operating 50° to 95° F (10° to 35° C) **Temperature**

(system inlet air temperature)

HPE 4TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty **Hard Drive**

861678-B21

Capacity 4,000,787MB Height 1.06 in (26.8 mm) Width 4.16 in (105.8 mm) 6.69 in (170.0 mm) Depth

Serial ATA **Interface Transfer Rate** 6Gb/s

(Maximum)

Native Command Queuing

Supported

Technical Specifications

Seek Time (typical reads, including Average

settling)

Single Track

0.25ms

Full-Stroke

7.6 ms 15_{ms}

512

Rotational Speed

7,200 rpm

Physical Configuration Bytes/Sector

Logical Blocks

7,814,037,168

Operating

Temperature (system inlet air temperature)

50° to 95° F (10° to 35° C)

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

693687-B21

Capacity

4,000,787MB

Height Width

1.06 in (26.8 mm) 4.16 in (105.8 mm) 6.69 in (170.0 mm)

Depth Interface

Serial ATA

Transfer Rate (Maximum)

6Gb/s

Native Command Queuing

Supported

Seek Time

Single Track

0.8 ms 8.5 ms

(typical reads, including Average settling)

Full-Stroke 16.2 ms

Rotational Speed

50° to 95° F (10° to 35° C)

7,200 rpm

512

Physical Configuration Bytes/Sector

Logical Blocks 7,814,037,168

Operating **Temperature**

(system inlet air temperature)

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

628061-B21

Capacity

3,000,592,982,016

Height 1.06 in (26.8 mm) Width 4.16 in (105.8 mm) 6.69 in (170.0 mm) Depth

Interface Serial ATA **Transfer Rate**

(Maximum)

Native Command

Queuing

6Gb/s

Supported

Seek Time (typical reads, including

settling)

Single Track

.5 ms Average 8.2 ms Full-Stroke 16.0 ms Rotational Speed 7,200 rpm

Physical Configuration Bytes/Sector 512

Technical Specifications

Logical Blocks

50° to 95° F (10° to 35° C)

5,860,533,168

Operating Temperature

(system inlet air temperature)

HPE 3TB 6G SATA 7.2K

rpm LFF (3.5in) SC Midline 1yr Warranty **Hard Drive**

861693-B21

Capacity

3,000,592,982,016

Height 1.06 in (26.8 mm) Width 4.16 in (105.8 mm) Depth 6.69 in (170.0 mm)

Interface Serial ATA **Transfer Rate** 6Gb/s

(Maximum)

Native Command

Queuing

Supported

Seek Time Single Track 0.32 ms (typical reads, including Average 7.45 ms settling) Full-Stroke 14.2 ms

> Rotational Speed 7,200 rpm

Physical Configuration Bytes/Sector 512

> Logical Blocks 5,860,533,168

Operating 50° to 95° F (10° to 35° C)

Temperature (system inlet air temperature)

HPE 2TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty **Hard Drive**

861676-B21

Capacity Height

2.000.398MB 1.06 in (26.8 mm) 4.16 in (105.8 mm) 6.69 in (170.0 mm)

Interface Serial ATA **Transfer Rate**

(Maximum)

Width

Depth

6Gb/s

Native Command Queuing

Supported

Seek Time (typical reads, including

settling)

0.25ms Single Track 7.6 ms Average

Full-Stroke 15ms Rotational Speed 7,200 rpm

Physical Configuration Bytes/Sector 512

> 3,907,029,168 Logical Blocks

50° to 95° F (10° to 35° C) **Operating**

Temperature (system inlet air temperature)

Technical Specifications

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

658079-B21

Capacity Height Width

Depth

2,000,398MB 1.06 in (26.8 mm) 4.16 in (105.8 mm) 6.69 in (170.0 mm)

Interface Serial ATA **Transfer Rate**

(Maximum)

6Gb/s

Native Command

Queuina

Supported

Seek Time

(typical reads, including Average settling)

.5 ms Single Track <8.5ms Full-Stroke 16.0 ms 7,200 rpm

Rotational Speed Physical Configuration Bytes/Sector 512

> Logical Blocks 3,907,029,168

50° to 95° F (10° to 35° C)

Operating Temperature

(system inlet air temperature)

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

657750-B21

Capacity 1,000,204MB Height 1.06 in (26.8 mm)

Width 4.16 in (105.8 mm) **Depth** 6.69 in (170.0 mm)

Interface Serial ATA **Transfer Rate** 6Gb/s

(Maximum)

Native Command

Queuing

Supported

Single Track

Seek Time (typical reads, including settling)

Average <8.5 ms Full-Stroke 16.5 ms Rotational Speed 7,200 rpm

.5 ms

Physical Configuration Bytes/Sector 512

> Logical Blocks 1,953,525,168

Operating Temperature

(system inlet air temperature)

50° to 95° F (10° to 35° C)

HPE 1TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty **Hard Drive**

861691-B21

Capacity 1,000,204MB 1.06 in (26.8 mm) Height Width 4.16 in (105.8 mm) 6.69 in (170.0 mm) **Depth**

Technical Specifications

Interface Serial ATA **Transfer Rate** 6Gb/s

(Maximum)

Native Command

Queuing **Seek Time**

settling)

Single Track 0.32 ms (typical reads, including Average 7.45 ms

50° to 95° F (10° to 35° C)

Full-Stroke 14.2 ms Rotational Speed 7,200 rpm

Physical Configuration Bytes/Sector 512

Supported

1,953,525,168 Logical Blocks

Operating Temperature

(system inlet air temperature)

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

658071-B21

Capacity 500,107MB Height 1.06 in (26.8 mm) Width 4.16 in (105.8 mm) 6.69 in (170.0 mm) **Depth**

Interface Serial ATA **Transfer Rate** 6Gb/s

(Maximum)

Native Command Supported

Queuing

Seek Time (typical reads, including

Physical Configuration

Single Track settling)

<8.5ms Average Full-Stroke 16.3ms

.5ms

Rotational Speed 7200 Bytes/Sector 512

Logical Blocks 976,773,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

6G SATA Hot Plug with SmartDrive LFF (3.5-inch) Midline 512e Drives

HPE 10TB 6G SATA 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty **Hard Drive**

857648-B21

10,000,831 MB Capacity Height 1.06 in (26.8 mm) Width 4.16 in (105.8 mm) Depth 6.69 in (170.0 mm)

Interface Serial ATA 6Gb/s **Transfer Rate**

(Maximum)

Native Command Supported

Queuing

Technical Specifications

Seek Time

(typical reads, including

Single Track

0.22 ms

settling)

Average Full-Stroke 8.0 ms 16.0 ms

512

Rotational Speed

7,200 rpm

Physical Configuration

Bytes/Sector Logical Blocks

19,532,873,728

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

HPE 8TB 6G SATA 7.2K rpm LFF (3.5in) 512e SC Midline 1 yr Warranty **Hard Drive**

861594-B21

Capacity

8.001.563MB Height 1.06 in (26.8 mm) 4.16 in (105.8 mm) Width Depth 6.69 in (170.0 mm)

Interface **Transfer Rate**

6Gb/s

Serial ATA

(Maximum)

Native Command

Queuing Seek Time

Single Track

Supported

0.22 ms

512

(typical reads, including settling)

Average 8.0 ms Full-Stroke 16.0 ms

Rotational Speed 7,200 rpm

Physical Configuration

Bytes/Sector Logical Blocks

15,628,053,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

Capacity

6G SATA Hot Plug with SmartDrive LFF (3.5-inch) Midline 512e Drives

HPE 8TB 6G SATA 7.2K rpm LFF (3.5in) 512e SC Midline 1 yr Warranty **Hard Drive**

819203-B21

8.001.563MB

1.06 in (26.8 mm) Height Width 4.16 in (105.8 mm) 6.69 in (170.0 mm) Depth

Serial ATA Interface **Transfer Rate**

(Maximum)

6Gb/s

Native Command Supported

Queuing

Seek Time (typical reads, including Single Track

Average

0.7ms 8.5 ms

settling)

Full-Stroke 15.7 ms 7,200 rpm Rotational Speed

Bytes/Sector

Physical Configuration 512

> Logical Blocks 15,628,053,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air

Technical Specifications

temperature)

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

765255-B21

Capacity Height Width Depth

6,001,175MB 1.06 in (26.8 mm) 4.16 in (105.8 mm) 6.69 in (170.0 mm)

Interface Serial ATA **Transfer Rate** 6Gb/s

(Maximum)

Native Command

Queuing

Supported

Single Track

Seek Time (typical reads, including

settling)

8.5 ms Average Full-Stroke 15.7 ms

Rotational Speed

Bytes/Sector 512 Logical Blocks 11,721,045,168

0.7ms

7,200 rpm

Physical Configuration

(system inlet air temperature)

Operating Temperature 50° to 95° F (10° to 35° C)

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

765253-B21

Capacity Height Width Depth

4,000,787MB 1.06 in (26.8 mm) 4.16 in (105.8 mm) 6.69 in (170.0 mm)

Serial ATA Interface **Transfer Rate** 6Gb/s (Maximum)

Native Command

Queuing

Supported

Seek Time (typical reads, including settling)

Single Track Average Full-Stroke

0.7ms 8.5 ms 15.7 ms

7,200 rpm

512

Rotational Speed **Physical Configuration** Bytes/Sector

> 7,814,037,168 Logical Blocks

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

6G SATA Hot Plug with SmartDrive LFF (3.5-inch) Midline 512e Performance Drives

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

793667-B21

6.001.175MB Capacity 1.06 in (26.8 mm) Height Width 4.16 in (105.8 mm) Depth 6.69 in (170.0 mm)

Technical Specifications

InterfaceSerial ATATransfer Rate6Gb/s

(Maximum)

Native Command

Queuing

Supported

Seek Time (typical reads, including

settling)

Single Track 0.25ms
Average 7.6ms
Full-Stroke 15ms

Full-Stroke 15ms Rotational Speed 7,200 rpm

Physical Configuration Bytes/Sector 512

Logical Blocks 11,721,045,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

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

 Capacity
 4,000,787MB

 Height
 1.06 in (26.8 mm)

 Width
 4.16 in (105.8 mm)

 Depth
 6.69 in (170.0 mm)

InterfaceSerial ATATransfer Rate6Gb/s

(Maximum)

Native Command

Queuing

Supported

Seek TimeSingle Track0.25ms(typical reads, including
settling)Average7.6ms

Full-Stroke 15ms
Rotational Speed 7,200 rpm

Physical Configuration Bytes/Sector 512

Logical Blocks 7,814,037,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

6G SATA Hot Plug with SmartDrive LFF (3.5-inch) Midline 512e Helium Drives

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

 Capacity
 8.001,563MB

 Height
 1.06 in (26.8 mm)

 Width
 4.16 in (105.8 mm)

 Depth
 6.69 in (170.0 mm)

Interface SATA
Transfer Rate 6 Gb/sec

Synchronous (Maximum)

Seek Time Single Track

(typical reads, including

Technical Specifications

settling)

Average 8.5 ms **Seek Time** Full-Stroke 16.0 ms (typical reads, including settling) Rotational Speed 7200 rpm

15,628,053,168

11,721,045,168

Physical Configuration Bytes/Sector 512

Physical Configuration Logical Blocks

Operating Temperature 50° to 95° F (10° to 35°

(system inlet air temperature)

C)

Capacity 8.001,563MB

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

793683-B21

Capacity 6,001,175MB Height 1.06 in (26.8 mm) Width 4.16 in (105.8 mm) 6.69 in (170.0 mm) Depth

Interface SATA 6 Gb/sec **Transfer Rate**

Synchronous (Maximum)

Seek Time Single Track

(typical reads, including

settling)

Average 8.5 ms **Seek Time** Full-Stroke 16.0 ms (typical reads, including settling) Rotational Speed 7200 rpm

Physical Configuration Bytes/Sector 512

Physical Configuration Logical Blocks Operating Temperature 50° to 95° F (10° to 35°

C)

(system inlet air temperature)

6G SATA Non-hot Plug LFF (3.5-inch) Midline (MDL) Drives

HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) Nonhot Plug Midline 1yr **Warranty Hard Drive**

628065-B21

Capacity 3,000,592,982,016 1.028 in (26.1 mm) Height Width 4.00 in (101.6 mm) Depth 5.75 in (146.0 mm)

Interface Serial ATA **Transfer Rate** 6Gb/s

(Maximum)

Native Command

Queuing

Seek Time Single Track .5 ms (typical reads, including 8.2 ms Average settling) Full-Stroke 16.0 ms

Supported

7,200 rpm Rotational Speed

Technical Specifications

Physical Configuration Bytes/Sector 512

Logical Blocks 5,860,533,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) Nonhot Plug Midline 1yr Warranty Hard Drive **659339-B21 Capacity** 2,000,398MB

 Height
 1.028 in (26.1 mm)

 Width
 4.00 in (101.6 mm)

 Depth
 5.75 in (146.0 mm)

Interface Serial ATA
Transfer Rate 6Gb/s

(Maximum)

Native Command

Queuing

Seek TimeSingle Track.5 ms(typical reads, including
settling)Average<8.5ms</td>Full-Stroke16.0 ms

Supported

Rotational Speed 7,200 rpm

Physical Configuration Bytes/Sector 512

Logical Blocks 3,907,029,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) Nonhot Plug Midline 1yr Warranty Hard Drive **659337-B21 Capacity** 1,000,204MB

 Height
 1.028 in (26.1 mm)

 Width
 4.00 in (101.6 mm)

 Depth
 5.75 in (146.0 mm)

Interface Serial ATA
Transfer Rate 6Gb/s

(Maximum)

Native Command Supported

Queuing

Seek TimeSingle Track(typical reads, includingAverage

settling) Full-Stroke 16.3ms

Rotational Speed 7,200 rpm

Physical Configuration Bytes/Sector 512

Logical Blocks 976,773,168

.5ms

<8.5 ms

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

Technical Specifications

HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) Nonhot Plug Midline 1yr **Warranty Hard Drive**

659341-B21

Capacity 500.107MB

Height 1.028 in (26.1 mm) Width 4.00 in (101.6 mm) Depth 5.75 in (146.0 mm)

Interface Serial ATA **Transfer Rate** 6Gb/s

(Maximum)

Native Command

Supported

Queuing

Seek Time Single Track .5 ms (typical reads, including Average <8.5 ms settling)

Full-Stroke 17.55 ms Rotational Speed 7,200 rpm

Physical Configuration Bytes/Sector 512

> Logical Blocks 1,953,525,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

6G SATA Non-hot Plug LFF (3.5-inch) Standard (STND) Drives

HP 4TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Standard 1yr **Warranty Hard Drive**

801888-B21

4,000,787MB Capacity Height 1.028 in (26.1 mm)

Width 4.00 in (101.6 mm) 5.75 in (146.0 mm) Depth

Interface Serial ATA

Transfer Rate (Maximum)

6Gb/s

Native Command

Queuing

Supported

Seek Time (typical reads, including

settling)

Single Track

<8.5ms Average

.8ms

Full-Stroke 16.2ms

Rotational Speed 7200

Physical Configuration Bytes/Sector 512

Logical Blocks 7,814,037,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

HP 3TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot 801886-B21

Capacity Height

3,000,592MB 1.028 in (26.1 mm)

Technical Specifications

Plug Standard 1yr **Warranty Hard Drive** Width 4.00 in (101.6 mm) Depth 5.75 in (146.0 mm)

Interface Serial ATA **Transfer Rate** 6Gb/s

(Maximum)

Native Command

Queuing

Single Track .8ms

Seek Time (typical reads, including <8.5ms Average settling) Full-Stroke 16.2ms

Supported

Rotational Speed 7200 Bytes/Sector 512

Physical Configuration Logical Blocks 5,860,533,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

HP 2TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Standard 1yr **Warranty Hard Drive**

801884-B21 Capacity 2,000,398MB

> Height 1.028 in (26.1 mm) Width 4.00 in (101.6 mm) Depth 5.75 in (146.0 mm)

Interface Serial ATA **Transfer Rate** 6Gb/s

(Maximum)

Native Command

Queuing

Supported

Seek Time (typical reads, including

settling)

Single Track .8ms Average <8.5ms Full-Stroke 16.2ms

7200 Rotational Speed Bytes/Sector 512

Physical Configuration Logical Blocks 3,907,029,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

HP 1TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Standard 1yr **Warranty Hard Drive**

801882-B21 Capacity 1,000,204MB

> Height 1.028 in (26.1 mm) Width 4.00 in (101.6 mm) Depth 5.75 in (146.0 mm)

Interface Serial ATA **Transfer Rate** 6Gb/s

(Maximum)

Native Command

Queuing

Supported

Technical Specifications

Seek Time (typical reads, including

settling)

Single Track

.8ms

Average Full-Stroke

<8.5ms 16.5ms

Rotational Speed

7200

Physical Configuration

Bytes/Sector Logical Blocks

512 1,953,525,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

6G SATA Non-hot Plug LFF (3.5-inch) Entry (ETY) Drives

NOTE: Supported on select 10 series servers only.

HP 4TB 6G SATA 5.9K rpm LFF (3.5in) Non-hot Plug Entry 512e 1yr **Warranty Hard Drive**

815635-B21

Capacity Height

4,000,787MB 0.63 in (16.0 mm) 3.00 in (72.2 mm)

Width Depth

5.38 in (136.6 mm)

Interface **Transfer Rate** Serial ATA 6Gb/s

(Maximum)

Native Command

Queuina

settling)

Supported

Seek Time (typical reads, including

Physical Configuration

Single Track 1.2ms Average <12ms Full-Stroke 25_{ms}

Rotational Speed 5900 Bytes/Sector 512e

Logical Blocks

980,270,955

Operating Temperature 41° to 140° F (5C° to 60° C)

(system inlet air temperature)

HP 3TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Entry 512e 1yr **Warranty Hard Drive**

843270-B21

3,000,593MB

Height 0.63 in (16.0 mm) Width 3.00 in (72.2 mm) 5.38 in (136.6 mm) Depth

Interface Serial ATA **Transfer Rate** 6Gb/s

(Maximum)

Supported

Native Command Queuing

Capacity

Seek Time (typical reads, including

settling)

Single Track Average

1.0ms <8.5ms

512e

Full-Stroke 18.00ms Rotational Speed 7200

Physical Configuration

Bytes/Sector

Page 20

Technical Specifications

Logical Blocks 5,860,533,167

Operating Temperature 41° to 140° F (5C° to 60° C)

(system inlet air temperature)

HP 2TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Entry 512e 1yr Warranty Hard Drive 843268-B21 Ca

 Capacity
 2,000,398MB

 Height
 0.63 in (16.0 mm)

 Width
 3.00 in (72.2 mm)

 Depth
 5.38 in (136.6 mm)

Interface Serial ATA

Transfer Rate 6Gb/s
(Maximum)

(Maximann)

Native Command Queuina Supported

Seek Time (typical reads, including

(typical reads, including settling)

Single Track 1.0ms
Average <8.5ms
Full-Stroke 18.00ms

Rotational Speed 7200 Bytes/Sector 512e

Physical Configuration Bytes/Sector 512e
Logical Blocks 3,907,029,167

Operating Temperature 41° to 140° F (5C° to 60° C)

(system inlet air temperature)

HP 1TB 6G SATA 7.2K rpm LFF (3.5in) Non-hot Plug Entry 512e 1yr Warranty Hard Drive 843266-B21

 Capacity
 1,000,204MB

 Height
 0.63 in (16.0 mm)

 Width
 3.00 in (72.2 mm)

 Depth
 5.38 in (136.6 mm)

InterfaceSerial ATATransfer Rate6Gb/s

(Maximum)

Native Command Supported

Queuing

Seek Time Single Track
(typical reads, including Average

(typical reads, including settling)

Physical Configuration

Single Track 1.0ms
Average <8.5ms
Full-Stroke 18ms

Rotational Speed 7200 Bytes/Sector 512e

Logical Blocks 1,953,525,168

Operating Temperature 41° to 131° F (5C° to 131° C)

(system inlet air temperature)

Capacity

HP 500GB 6G SATA 7.2K 843264-B21

500.107MB

Technical Specifications

rpm LFF (3.5in) Non-hot Plug Entry 512e 1yr Warranty Hard Drive

 Height
 0.63 in (16.0 mm)

 Width
 3.00 in (72.2 mm)

 Depth
 5.38 in (136.6 mm)

InterfaceSerial ATATransfer Rate6Gb/s

(Maximum)

Native Command

Supported

Queuing

Seek Time
Single Track
(typical reads, including settling)

Average

Average <8.5ms
Full-Stroke 18ms
Rotational Speed 7200

Physical Configuration B

Bytes/Sector 512e Logical Blocks 976,773,168

1.0ms

(system inlet air

temperature)

Operating Temperature 41° to 140° F (5C° to 60° C)

SATA Hot Plug SFF (2.5-inch) Midline (MDL) Drives

NOTE: These drives are not supported by Gen8/Gen9 servers.

HP 1TB 3G SATA 7.2K rpm SFF (2.5-inch) Hot plug Midline 1yr Warranty Hard Drive 625609-B21

 Capacity
 1,000,204MB

 Height
 0.63 in (16.0 mm)

 Width
 3.00 in (72.2 mm)

 Depth
 5.38 in (136.6 mm)

InterfaceSerial ATATransfer Rate3Gb/s

(Maximum)

Native Command Supported

Queuing

Seek TimeSingle Track.7ms(typical reads, including settling)Average<8.5ms</td>Full-Stroke16.96ms

Rotational Speed 7200

Bytes/Sector 512

Physical Configuration Bytes/Sector 512

Logical Blocks 1,953,525,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

HP 500GB 3G SATA 7.2K rpm SFF (2.5-inch) Midline 1yr Warranty Hard Drive

507750-B21

 Capacity
 500,107MB

 Height
 0.63 in (16.0 mm)

 Width
 3.00 in (72.2 mm)

 Depth
 5.38 in (136.6 mm)

 Interface
 Serial ATA

Technical Specifications

Transfer Rate

3Gb/s

(Maximum)

Native Command

Queuing

Supported

Single Track

Seek Time (typical reads, including

settling)

Average

.5 ms 8.2 ms

512

Full-Stroke

17.55 ms

Rotational Speed

7,200 rpm

Physical Configuration

Bytes/Sector Logical Blocks

976.773.168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

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

NOTE: These drives are not supported by Gen8/Gen9 servers.

HP 4TB 3G SATA 7.2k rpm LFF (3.5-inch) Midline 1yr Warranty **Hard Drive**

694374-B21

Capacity Height Width Depth

1.04 in (26.4 mm) 4.36 in (110.7 mm) 7.25 in (184.2 mm)

4,000,787MB

Interface **Transfer Rate** Serial ATA 3Gb/s

(Maximum)

Native Command

Queuing

Supported

Seek Time (typical reads, including settling)

Single Track 0.8 ms Average 8.5 ms Full-Stroke 16.2 ms

Rotational Speed

7,200 rpm

Physical Configuration

Bytes/Sector 512

Logical Blocks

7,814,037,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

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

628059-B21

Capacity Height Width

3,000,592,982,016 1.04 in (26.4 mm) 4.36 in (110.7 mm)

Depth 7.25 in (184.2 mm)

Transfer Rate (Maximum)

Serial ATA 3Gb/s

Native Command

Supported

Queuing **Seek Time**

Interface

Single Track 0.5 ms

Technical Specifications

(typical reads, including

settling)

Average

< 8.5 ms

Full-Stroke

16.9 ms

Rotational Speed

7,200 rpm

512

Physical Configuration

Bytes/Sector Logical Blocks

3,907,029,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

HP 2TB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty **Hard Drive**

507632-B21

Capacity

2,000,398MB

Height 1.04 in (26.4 mm) Width 4.36 in (110.7 mm) Depth 7.25 in (184.2 mm)

Interface **Transfer Rate** Serial ATA

(Maximum)

3Gb/s

Native Command

Queuing

Supported

Seek Time (typical reads, including Single Track Average

0.5 ms < 8.5 ms

settling)

Full-Stroke 16.9 ms

Rotational Speed

7,200 rpm 512

Physical Configuration

Bytes/Sector Logical Blocks

3,907,029,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

HP 500GB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty **Hard Drive**

458928-B21

500.107MB

Capacity 1.04 in (26.4 mm) Height Width 4.36 in (110.7 mm) Depth 7.25 in (184.2 mm)

Interface Serial ATA **Transfer Rate** 3Gb/s

(Maximum)

Native Command

Queuing

Supported

Seek Time (typical reads, including

settling)

Single Track Average Full-Stroke

2.0 ms < 8.5 ms

Rotational Speed

Logical Blocks

21.0 ms

Physical Configuration

7,200 rpm 512

Bytes/Sector

976,773,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air

Technical Specifications

temperature)

SATA Hot Plug LFF (3.5-inch) Midline (MDL) 512e Helium Drives

NOTE: These drives are not supported by Gen8/Gen9 servers.

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

793680-B21

Capacity Height

6,001,175MB 1.04 in (26.4 mm)

Width 4.36 in (110.7 mm) 7.43 in (188.7 mm) Depth

Interface **Transfer Rate**

Synchronous (Maximum)

Seek Time

Single Track

SATA

6 Gb/sec

(typical reads, including

settling)

Seek Time (typical reads, including settling)

Average 8.5 ms Full-Stroke 16.0 ms Rotational Speed 7200 rpm Bytes/Sector 512

11,721,045,168

15.628.053.168

Physical Configuration Physical Configuration

Logical Blocks

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

HP 8TB 6G SATA 7.2K rpm LFF (3.5-inch) 512e Helium 1yr Warranty **Hard Drive**

793693-B21

Capacity 8,001,563MB

Height 1.04 in (26.4 mm) Width 4.36 in (110.7 mm) Depth 7.43 in (188.7 mm)

SATA Interface **Transfer Rate** 6 Gb/sec

Synchronous (Maximum)

Seek Time Single Track

(typical reads, including

settling)

Average 8.5 ms **Seek Time** Full-Stroke 16.0 ms (typical reads, including settling) Rotational Speed 7200 rpm 512

Logical Blocks

Physical Configuration Bytes/Sector

Operating Temperature 50° to 95° F (10° to 35°

(system inlet air C)

temperature)

Physical Configuration

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

Technical Specifications

NOTE: These drives are not supported by Gen8/Gen9 servers.

HP 2TB 3G SATA 7.2K
rpm LFF (3.5-inch) Non-
hot Plug Midline 1yr
Warranty Hard Drive

507774-B21

Capacity 2,000,398MB Height 1.028 in (26.1 mm) Width 4.00 in (101.6 mm) 5.75 in (146.0 mm) Depth

Interface Serial ATA **Transfer Rate** 3Gb/s (Maximum)

Native Command

Queuing

Supported

Seek Time (typical reads, including

settling)

Single Track 0.5 ms <8.5 ms Average Full-Stroke 16.9 ms

Rotational Speed

7,200 rpm

Physical Configuration

Bytes/Sector 512

Logical Blocks 3,907,029,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

HP 1TB 3G SATA 7.2K rpm LFF (3.5-inch) Nonhot Plug Midline 1yr **Warranty Hard Drive**

507772-B21

Capacity 1,000,204MB

Height 1.028 in (26.1 mm) Width 4.00 in (101.6 mm) 5.75 in (146.0 mm) Depth

Serial ATA Interface **Transfer Rate** 3Gb/s

(Maximum)

Supported

Native Command Queuing

Seek Time

(typical reads, including settling)

Single Track Average Full-Stroke

<8.5 ms 25.0 ms

7,200 rpm

2.0 ms

Bytes/Sector 512

Rotational Speed

Physical Configuration

Logical Blocks 1,953,525,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

HP 500GB 3G SATA 7.2K rpm LFF (3.5-inch) Nonhot Plug Midline 1yr **Warranty Hard Drive**

458941-B21

Capacity 500.107MB

Height 1.028 in (26.1 mm) Width 4.00 in (101.6 mm) 5.75 in (146.0 mm) Depth

Interface Serial ATA

Technical Specifications

Transfer Rate

3Gb/s

(Maximum)

Native Command

Supported

Queuing

Seek Time (typical reads, including

settling)

Single Track Average

2.0 ms < 8.5 ms

Full-Stroke Rotational Speed 21.0 ms 7,200 rpm

Physical Configuration

Bytes/Sector 512

Logical Blocks 976.773.168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

6G SATA Quick Release SFF (2.5-inch) Midline (MDL) Drives (Gen8 only)

HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) Quick Release Midline 1yr **Warranty Hard Drive**

632080-B21

Capacity

1,000,204MB Height 0.74 in (18.8mm) 2.91 in (73.9 mm) Width Depth 3.95 in (100.2 mm)

Interface **Transfer Rate** Serial ATA 6Gb/s

(Maximum)

Native Command

Queuina **Seek Time**

settling)

Supported

Single Track (typical reads, including Average Full-Stroke

.7ms <8.5ms 16.96ms

Rotational Speed

7200 Bytes/Sector 512

976,773,168 Logical Blocks

Operating Temperature 50° to 95° F (10° to 35° C)

Physical Configuration

(system inlet air temperature)

HP 500GB 6G SATA 7.2K rpm SFF (2.5-inch) Quick Release Midline 1yr **Warranty Hard Drive**

632078-B21

Capacity Height

500.107MB 0.74 in (18.8mm) 2.91 in (73.9 mm) 3.95 in (100.2 mm)

Interface Serial ATA **Transfer Rate** 6Gb/s

(Maximum)

Width

Depth

Native Command

Queuing

Supported

Seek Time Single Track .7ms (typical reads, including Average <8.5ms

Technical Specifications

settling) Full-Stroke 16.96ms

> 7200 Rotational Speed

Physical Configuration Bytes/Sector 512

Logical Blocks 976,773,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

6G SATA Quick Release LFF (3.5-inch) Midline (MDL) Drives (Gen8 only)

HP 4TB 6G SATA 7.2k rpm LFF (3.5-inch) Quick Release Midline 1yr **Warranty Hard Drive**

697954-B21

4,000,787MB Capacity Height 1.16 in (29.6 mm) Width 4.16 in (105.6 mm) 5.79 in (147.0 mm) Depth

Interface Serial ATA **Transfer Rate** 6Gb/s (Maximum)

Native Command

Queuing

Supported

Seek Time Single Track (typical reads, including settling)

Average 8.5ms Full-Stroke 16.2ms

0.8ms

Rotational Speed 7200

Physical Configuration Bytes/Sector 512

> Logical Blocks 7,814,037,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) Quick Release Midline 1yr **Warranty Hard Drive**

647274-B21

Capacity 3,000,592,982,016 Height 1.16 in (29.6 mm) Width 4.16 in (105.6 mm) Depth 5.79 in (147.0 mm)

Interface Serial ATA **Transfer Rate** 6Gb/s

(Maximum)

Native Command

Queuing

Supported

Seek Time (typical reads, including settling)

Single Track .5ms <8.5ms Average Full-Stroke 16.3ms 7200

Rotational Speed **Physical Configuration** Bytes/Sector 512

> Logical Blocks 976,773,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air

Technical Specifications

temperature)

HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) Quick Release Midline 1yr **Warranty Hard** Drive

672621-B21

Capacity 1,000,204MB Height 1.16 in (29.6 mm) Width 4.16 in (105.6 mm) 5.79 in (147.0 mm) Depth

Interface Serial ATA **Transfer Rate** 6Gb/s

(Maximum)

Native Command Queuing

Supported

Seek Time (typical reads, including

Single Track Average Full-Stroke

Logical Blocks

< 8.5 ms 16.5 ms

.5 ms

settling)

Rotational Speed 7,200 rpm 512

Physical Configuration Bytes/Sector

1,953,525,168

Operating Temperature 50° to 95° F (10° to 35° C)

(system inlet air temperature)

Environment-friendly End-of-life Products and **Approach**

Management and Recycling

Hewlett Packard Enterprise offers end-of-life product return, trade-in, and recycling programs, in many geographic areas, for our products, Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner.

http://www8.hp.com/us/en/hpe/hpinformation/livingprogress/environmentalprogress/productrecycling.html#.V-IPA_krKiM

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

http://www8.hp.com/us/en/hpe/hpinformation/livingprogress/environmentalprogress/productrecycling.html#.V-IPA_krKiM

NOTE: To support HPE hard drives exceeding 2.2TB, HPE Smart Array Firmware version 5.0 or later is required for the following controllers:

- HPE Smart Array P212 Controller
- HPE Smart Array P410 Controller •
- HPE Smart Array P411 Controller
- HPE Smart Array P711m Controller
- HPE Smart Array P812 Controller

Technical Specifications

To use hard drives exceeding 2.2TB, you must create a boot volume using offline ACU version 8.75 or later. HPE Smart Array controllers do not support boot volumes exceeding 2.2TB.

Summary of Changes

Date	Version History	Action	Description of Change
28-Nov-2016	From Version 35 to	Added	Added new HPE 6TB 6G SATA 7.2K rpm LFF (3.5in) SC
	36	Changed	Midline 1yr Warranty Hard Drive.
		Changed Removed	Overview, Models, and Technical Specifications were revised.
24 Cap 2014	From Version 34 to	Added	Obsolete Hard Drives were removed from the QuickSpecs.
26-Sep-2016	35	Added	Added new SATA HDD offering.
			HPE 10TB 6G SATA 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty Hard Drive
			HPE 8TB 6G SATA 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty Hard Drive
			HPE 1TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive
			HPE 3TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive
06-Jun-2016	From Version 33 to 34	Added	Added the following HPE drives to the Models and Technical Specifications sections:
			HPE 4TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive
			HPE 2TB 6G SATA 7.2K rpm LFF (3.5in) SC Midline 1yr Warranty Hard Drive
			HPE 8TB 6G SATA 7.2K rpm LFF (3.5in) 512e SC Midline 1yr Warranty Hard Drive
01-Dec-2015	From Version 32 to 33	Added	Added new 6G SATA Non-hot Plug LFF (3.5-inch) Entry Drives.
		Changed	Service and Support section and Technical Specifications were revised.
28-Sep-2015	From Version 31 to 32	Added	Added note to drives not supported by VMWare and note to drives supported on ML10v2 only.
01-Jun-2015	From Version 30 to 31	Added	Added the following to the Models and Technical Specifications sections: HPE 6TB 6G SATA 7.2K rpm LFF (3.5-inch) 512e Helium 1yr Warranty Hard Drive
			HPE 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive HPE 8TB 6G SATA 7.2K rpm LFF (3.5-inch) 512e Helium 1yr
			Warranty Hard Drive HPE 8TB 6G SATA 7.2K rpm LFF (3.5-inch) SC 512e Helium 1yr Warranty Hard Drive
		Changed	Service and Support section was revised.
30-Mar-2015	From Version 29 to	Added	Added new SATA Hard Drives offering.
	30	Changed	Overview, Service and Support, and Technical Specifications were revised.

Summary of Changes

09-Feb-2015	From Version 28 to 29	Added	Added the following to the Models and Technical Specifications Sections: 765253-B21 HPE 4TB 6G SATA 7.2K 3.5in 512e SC MDL HDD 765255-B21 HPE 6TB 6G SATA 7.2K 3.5in 512e SC MDL HDD What's New section was changed. Service and Support section was revised.
28-Aug-2014	From Version 27 to 28	Added	Added the following to the Models and Technical Specifications sections: HPE 6TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive
		Changed	Overview and What's New sections were revised.
18-Aug-2014	From Version 26 to	Changed	Models section was revised.
	27	Removed	Removed HPE 3TB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive from Models and Technical Specifications sections.
09-Dec-2013	From Version 25 to 26	Removed	Discontinued models were removed.
23-Nov-2013	From Version 24 to 25	Removed	Discontinued models were removed.
24-Jul-2013	From Version 23 to 24	Removed	Discontinued models were removed.
19-Feb-2013	From Version 22 to 23	Changed	Added the following to the Models and Technical Specifications sections: HPE 4TB 6G SATA 7.2k rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive HPE 4TB 6G SATA 7.2k rpm LFF (3.5-inch) Quick Release Midline 1yr Warranty Hard Drive HPE 4TB 3G SATA 7.2k rpm LFF (3.5-inch) Quick Release Midline 1yr Warranty Hard Drive HPE 4TB 3G SATA 7.2k rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive
11-May-2012	From Version 21 to 22	Changed	Changed "Smart Drive" to "SmartDrive" in the Models section.
09-Apr-2012	From Version 20 to 21	Changed	Change made in the Models section only.
22-Mar-2012	From Version 19 to 20	Changed	Changes made to the Models and Technical Specifications sections.
06-Mar-2012	From Version 18 to 19	Changed	Changes made throughout the entire QuickSpecs.
20-Oct-2011	From Version 17 to 18	Changed	Changes made in the North America and Canada versions only.
29-Aug-2011	From Version 16 to 17	Removed	Removed SATA Hot Plug SFF (2.5-inch) Entry (ETY) Drives
20-Jun-2011	From Version 15 to 16	Changed	Service and Support was completely revised and HPE 3TB 3G SATA 7.2K rpm LFF Midline and Non-hot Plug Midline Drives and HPE 500GB 3G SATA 7.2K rpm SFF Non-hot Plug Entry Drive were added.
25-Apr-2011	From Version 14 to 15	Removed	HPE 250GB 3G SATA 7.2K rpm SFF Midline Drive was removed from Models and Technical Specifications sections.
08-Apr-2011	From Version 13 to 14	Changed	Minor edit was made in Technical Specifications.
06-Apr-2011	From Version 12 to 13	Changed	Seek Time and Physical Configuration were revised for the HPE 1TB 3G SATA 7.2K rpm SFF Hot Plug Midline Hard Drive

Summary of Changes

			in Technical Specifications.
05-Apr-2011	From Version 11 to 12	Added	HPE 250GB and 1TB 3G SATA 7.2K rpm SFF Hot plug Midline 1yr Warranty Hard Drives were added throughout.
14-Jun-2011	From Version 10 to 11	Changed	Changes made in the North America and Canada versions only.
05-Oct-2010	From Version 9 to 10	Added	Service and Support section was added.
21-Jun-2010	From Version 8 to 9	Removed	HPE 750GB 3G SATA 7.2k rpm LFF Midline and Non-hot Plug Midline 1yr Warranty Hard Drives and HPE 250GB 3G SATA 7.2k rpm LFF Midline and Non-hot Plug Midline 1yr Warranty Hard Drives were removed.
01-Apr-2010	From Version 7 to 8	Changed	Changes made in the Technical Specifications section only.
16-Feb-2010	From Version 6 to 7	Added	HPE 2TB 3G SATA 7.2k rpm Midline 1yr Warranty and Nonhot Plug Midline 1y Wty Hard Drives, HPE 1TB 3G SAS 7.2k rpm Non-hot Plug Midline 1y Wty Hard Drive and HPE 250GB 2G SATA 7.2k rpm Entry 1yr Warranty and Non-hot Plug Entry 1y Wty Hard Drives were added to Models.
13-Jul-2009	From Version 5 to 6	Changed	Completely revised Models throughout the QuickSpecs, as well as made other minor additional edits within the Overview section.
09-Dec-2008	From Version 4 to 5	Changed	Completely revised the Pre-Failure Alert section in the Standard Features.
15-Sep-2008	From Version 3 to 4	Changed	The Models in the Overview and Technical Specifications sections were rewritten.
16-May-2008	From Version 2 to 3	Changed	Change made in the Technical Specifications sections.
12-May-2008	From Version 1 to 2	Changed	Changes made throughout the Overview and Technical Specifications sections.



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

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