Overview

HPE Hard Disk Drives

HPE Hard Disk Drives (HDDs) are engineered to deliver optimum performance, reliability, compatibility, and data security across HPE server and storage platforms making them the preferred choice for workloads ranging from small businesses to large enterprise.

Performance:
- HPE HDDs are tuned and tested with on-going quality monitoring throughout their lifecycle
- HPE optimizes HDD firmware for predictable and consistent HDD performance
- Full portfolio of high-performance Mission Critical and high-capacity Business Critical drive solutions

Reliability:
- HPE's industry-leading rigorous testing and qualification program, backed by 2.4 million test hours[1]
- Pre-failure Alerts with HPE Smart Array Controller, Systems Insight Manager, and HPE Smart firmware
- 3x faster firmware and software updates with HPE Service Pack for ProLiant (HPE SPP)
- Best-in-class supply assurance program reduces downtime due to product delays

Compatibility:
- Simplify HDD planning and standardize HDDs across HPE server and storage solutions
- Common HDD carriers mean re-purposing drives in other servers is a snap

Security:
- HPE Digitally Signed Firmware helps prevent against malicious attacks
- HPE Smart Array SR Secure Encryption is a FIPS 140-2 Level 1 validated enterprise class controller-based encryption solution for data-at-rest on all SAS/SATA drives
- HPE Smart Carriers report drive activity and health

HPE HDDs are available for three types of workloads: Enterprise high-performance Mission Critical, Midline high-capacity Business Critical, and Entry-level storage solutions

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HPE HDD portfolio: Proven performance for every workload

Class	Enterprise		Midline	Entry*
Workload	High		Medium	Low
Usage	**Mission-critical, high I/O:** Email, enterprise resource planning (ERP), customer relationship management (CRM)		**High capacity, high availability storage:** Backup, archive, reference	**Low I/O:** Boot and backup
Interface	SAS 12Gb		SAS 12Gb SATA 6Gb	SATA 6Gb
RPM	15000	10000	7200	7200
Form factor	SFF & LFF	SFF	SFF & LFF	LFF
Capacities	Up to 900GB	Up to 2.4TB	Up to 12TB	Up to 4TB
Warranty	3 years	3 years	1 year	1 year
NOTE: * Supported on select HPE ProLiant servers only.				

Overview

What's New
- HPE 600GB Enterprise 15K SAS 12G LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware HDD
- HPE 300GB Enterprise 15K SAS 12G LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware HDD

Firmware Updates:

- Digitally Signed Firmware - Prevent unauthorized access to your data with the expansion of integrated HPE Digitally Signed Firmware (DS) on new drives; providing the security and assurance that drive firmware comes from a trusted source and protects against malicious attacks.

For advanced data protection and encryption, customers should consider HPE Smart Array Controllers with HPE Smart Array Secure SR Encryption. It is a controller-based data encryption solution for HPE servers that protect data-at-rest on any bulk attached storage. This solution meets stringent compliance regulations such as HIPAA and Sarbanes-Oxley.

HDD Selection
To streamline the configuration process for HPE ProLiant servers and to provide the best product availability, HPE recommends HDDs from the list located here: **http://www.hpe.com/products/recommend**
Best product availability is limited to US, Canada, and Latin America at this time.

Models

Category	Interface	Form factor	Format	Capacity	HDD Carrier No Carrier SKU (Raw/Non-Hot Plug)
Entry (7.2K)	**SATA 6G**	**LFF**	512n	HPE 1TB SATA 6G Midline 7.2K LFF (3.5in) RW 1yr Wty HDD	801882-B21
			512e	1TB	843266-B21*

NOTE: ^{He} Helium Drive.
NOTE: Refer to the appropriate Server QuickSpecs for full compatibility details.
NOTE: *Also known as "Desktop Drive"?, this drive has Generic Firmware (Non-HPE)

Overview

Category	Interface	Form Factor	Format	Capacity	HDD Carrier		
					Smart Carrier SKU	Low Profile SKU	Standard Carrier SKU
Enterprise (15K rpm)	**SAS 12G**	**LFF**	512n	300GB	P04693-B21 (SCC)		
				600GB	P04695-B21 (SCC)		
		SFF		300GB	870753-B21	-	
				600GB	870757-B21		
				900GB	870759-B21		
Enterprise (10K rpm)				300GB	872475-B21	-	
				600GB	872477-B21	-	
				1.2TB	872479-B21	-	
			512e	1.8TB	872481-B21	-	
				2.4TB	881457-B21	-	
Midline (7.2K rpm)	**SAS 12G**	**LFF**	512n	2TB	872485-B21	833926-B21	
				4TB	872487-B21	833928-B21	
				8TB	819201-B21	834031-B21	858384-B21
			512e	10TB		857646-B21[He]	
				12TB		881781-B21	
		SFF	512n	2TB	765466-B21	-	
				1TB	832514-B21	-	
Midline (7.2K rpm)	**SATA 6G**	**LFF**	512n	1TB	861691-B21	861686-B21	
				4TB	872491-B21	861683-B21	
			512e	6TB	861750-B21	861742-B21	
				8TB	819203-B21	834028-B21	
				10TB		857650-B21[He]	
				12TB		881787-B21[He]	
		SFF	512n	2TB	765455-B21	-	
				1TB	655710-B21	-	

Standard Features

What is HPE Hard disk drive?

Hewlett Packard Enterprise drives are tuned to deliver optimum performance for HPE Servers. They undergo an intense qualification process to eliminate firmware and O/S incompatibilities. HPE drive firmware is designed to maximize both functionality and compatibility with HPE ProLiant Rack and Tower Servers, Apollo family, Blade and Synergy Platforms.

Drive Quality and Performance

While selecting the drives in our Enterprise portfolio, only those drives with a performance level suitable for an enterprise environment are selected through the Hewlett Packard Enterprise qualification process and are labeled "best-in-class." HPE Midline drives undergo a similar qualification process to ensure that you get the economical reliability and performance you need for your low workload (less than 40% I/O) environments.

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 one or three-year limited on-site warranty period for the system in which they are installed. The drive warranty is automatically uplifted when used in a server or MSA for which a HPE Pointnext service contract is purchased. Please see the Support Services section below for additional services.

Smart Carriers

HPE Hard Drives with smart carriers are designed to provide an interface to communicate critical status and management information. System status LED icons and a spinning activity ring reflecting the data-writing process notify users of the current system status. A blue LED located behind the handle can be activated remotely to guide users to a specific drive tray, while a do-not-remove icon positioned on the tray's eject button lights up to warn users when the removal of the drive would cause data loss.

Helium Drives

Although hard drives are sealed, they have air inside. Air can create turbulence-induced risk vibrations which can limit the storage density of HDDs. Newer helium-filled drives virtually eliminate turbulence because helium is 1/7th as dense as air. This lower density allows the read/write mechanism to spin more easily and precisely, with less drag. Less internal turbulence means the drive platters can be closer together, allowing more platters and increasing the capacity potential in the same space. Less turbulence also means helium drives tend to use less power, and run cooler and quieter.

Support Matrix

Please see the following URL for the latest list of supported servers and enclosures:
https://www.hpe.com/us/en/servers/server-options.html

Standard Features

Warranty

Enterprise hard drives have a 3 year limited warranty regardless of the warranty period for the system in which they are installed.

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

Service and Support

Service and Support
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.

NOTE: HPE Hard drives are covered under the HPE Pointnext /Service Contract applied to the HPE ProLiant Server. No separate HPE Pointnext s need to be purchased.

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%1 reduction in down time, near 100%2 diagnostic accuracy and a single consolidated view of your environment. By connecting, you will receive 24x7monitoring, pre-failure alerts, automatic call logging, and automatic parts dispatch. HPE Proactive Care Service and HPE Datacenter Care Service customers will also benefit from proactive activities to help prevent issues and increase optimization.

All of these benefits are already available to you with your server storage and networking products, securely connected to HPE support.

1. IDC Whitepaper
2. HPE CSC Reports 2014-2015

HPE Support Center

Personalized online support portal with access to information, tools and experts to support HPE business products. Submit support cases online, chat with Hewlett Packard Enterprise experts, access support resources or collaborate with peers. Learn more
https://support.hpe.com/hpesc/public/home
HPE Support Center Mobile App allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalized IT support anywhere, anytime.
HPE Insight Remote Support and HPE Support Center are available at no additional cost with a Hewlett Packard Enterprise warranty, HPE Support Services or HPE contractual support agreement.
NOTE: HPE Support Center Mobile App above is subject to local availability.

Parts and materials

Hewlett Packard Enterprise will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.
Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.
The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction.

Service and Support

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, purchased at the same time or afterward and internal to the enclosure. These items will be covered at the same service level and for the same coverage period as the server unless the maximum supported lifetime and/or the maximum usage limitation has been reached.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction. It does not apply Disk or SSD/Flash Drives that have not failed. SSD/Flash Drives that are specified by Hewlett Packard Enterprise as consumable parts and/or that have reached maximum supported lifetime and/or the maximum usage limits 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 service feature option.

Subject to: Maximum supported lifetime: This is a period in years set to equal the warranty for the specific drive. After this period no further service coverage will be available for the drive. Maximum usage limit: This is the maximum amount of data that can be written to the drive. Drives that have reached this limit will not be eligible for services coverage.

For more information
To learn more on services for HPE Server Options, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Or visit:
https://www.hpe.com/us/en/product-catalog/servers/proliant-servers.html or
https://www.hpe.com/us/en/integrated-systems/bladesystem.html

Supporting Helpful Links
http://www.hpe.com/info/rackandpower

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

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

https://www.hpe.com/us/en/storage/entry-level.html

Technical Specifications

Portfolio

Enterprise (15K rpm)			
Form Factor	SFF (2.5"?)	**Carrier**	
Rotational Speed	15000 rpm		
Interface	SAS	**Height**	
Transfer Rate Synchronous (Max)	12Gb/sec	**Width**	
Bytes/Sector	512	**Depth**	
Operating Temperature	50° to 95° F (10° to 35°C)		

SKU	SKU Description	OD Media Rate, Max Sequential Throughput (MiB/s)	128Kib Random Rd (IOPs)	128Kib Random 70% RD/ 30% WT (IOPs)	12 Ra 50° 50 (I
870753-B21	HPE 300GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	260	220	220	
870757-B21	HPE 600GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	260	220	220	
870759-B21	HPE 900GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	260	220	220	

Technical Specifications

Portfolio

Enterprise (15K rpm)			
Form Factor	LFF (3.5"?)	**Carrier**	Smart Carrier Converter (SCC)
Rotational Speed	15000 rpm	**Dimensions**	
Interface	SAS	**Height**	1.06 in (26.8 mm)
Transfer Rate Synchronous (Max)	12Gb/sec	**Width**	4.16 in (105.8 mm)
Bytes/Sector	512	**Depth**	6.69 in (170.0 mm)
Operating Temperature	50° to 95° F (10° to 35°C)		

SKU	SKU Description	OD Media Rate, Max Sequential Throughput (MiB/s)	128Kib Random Rd (IOPs)	128Kib Random 70% RD/ 30% WT (IOPs)	128Kib Random 50% RD/ 50% WT (IOPs)	Power Idle Time (Watts)	Power Random R/W (Watts)	Power Sequential Read (Watts)
P04695-B21	HPE 600GB SAS 12G Enterprise 15K LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware HDD	260	220	220	220	5.6	7.2	7.7
P04693-B21	HPE 300GB SAS 12G Enterprise 15K LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware HDD	260	220	220	220	4.3	6.9	7.0

Portfolio

Technical Specifications

Enterprise (10K rpm)

Form Factor	SFF (2.5"?)	Carrier	S
Rotational Speed	10000 rpm		
Interface	SAS	Height	(
Transfer Rate Synchronous (Max)	12Gb/sec	Width	2
Bytes/Sector	512	Depth	4
Operating Temperature	50° to 95° F (10° to 35°C)		

SKU	SKU Description	OD Media Rate, Max Sequential Throughput (MiB/s)	128Kib Random Rd (IOPs)	128Kib Random 70% RD/ 30% WT (IOPs)	128Kib Random 50% RD 50% WT (IOPs)
872475-B21	HPE 300GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	195	180	180	180
872477-B21	HPE 600GB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	195	165	165	165
872479-B21	HPE 1.2TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty Digitally Signed Firmware HDD	195	165	165	165
872481-B21	HPE 1.8TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	230	165	170	185
881457-B21	HPE 2.4TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	255	160	180	195

Technical Specifications

Midline (7.2K rpm)

Form Factor	LFF (3.5"?)	Carrier
Rotational Speed	7200 rpm	
Interface	SAS	Height
Transfer Rate Synchronous (Max)	12Gb/sec	Width
Bytes/Sector	512	Depth
Operating Temperature	50° to 95° F (10° to 35°C)	

SKU	SKU Description	OD Media Rate, Max Sequential Throughput (MiB/s)	128Kib Random Rd (IOPs)	128Kib Random 70% RD 30% WT (IOPs)
872485-B21	HPE 2TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	190	100	100
872487-B21	HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	190	105	105
819201-B21	HPE 8TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	230	105	115

Midline (7.2K rpm)		
Form Factor	LFF (3.5"?)	Carrier
Rotational Speed	7200 rpm	
Interface	SAS	Height
Transfer Rate Synchronous (Max)	12Gb/sec	Width
Bytes/Sector	512	Depth
Operating Temperature	50° to 95° F (10° to 35°C)	

SKU	SKU Description	OD Media Rate, Max Sequential Throughput (MiB/s)	128Kib Random Rd (IOPs)	128Kib Random 70% RD/ 30% WT (IOPs)	128 Ran 50% 50% (IO

Technical Specifications

SKU	SKU Description	OD Media Rate	128Kib Random Rd	128Kib Random 70% RD/30% WT	
833926-B21	HPE 2TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	200	110	110	1
833928-B21	HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	200	110	110	1
834031-B21	HPE 8TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e Digitally Signed Firmware HDD	230	105	115	1
857646-B21	HPE 10TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty Helium 512e Digitally Signed Firmware HDD	235	105	110	1
881781-B21	HPE 12TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty Helium 512e Digitally Signed Firmware HDD	235	105	115	1

Midline (7.2K rpm)			
Form Factor	LFF (3.5"?)	**Carrier**	
Rotational Speed	7200 rpm		
Interface	SAS	**Height**	
Transfer Rate Synchronous (Max)	12Gb/sec	**Width**	
Bytes/Sector	512	**Depth**	
Operating Temperature	50° to 95° F (10° to 35°C)		

SKU	SKU Description	OD Media Rate, Max Sequential Throughput (MiB/s)	128Kib Random Rd (IOPs)	128Kib Random 70% RD/ 30% WT (IOPs)	128 Rand 50% 50% (IO
858384-B21	HPE 8TB SAS 12G Midline 7.2K LFF (3.5in) ST 1yr Wty 512e Digitally Signed Firmware HDD	230	105	115	11

Midline (7.2K rpm)			
Form Factor	LFF (3.5"?)	**Carrier**	Smart Carrier (SC)
Rotational Speed	7200 rpm	**Dimensions**	
Interface	SATA	**Height**	1.06 in (26.8 mm)
Transfer Rate Synchronous (Max)	6Gb/sec	**Width**	4.16 in (105.8 mm)
Bytes/Sector	512	**Depth**	6.69 in (170.0 mm)
Operating Temperature	50° to 95° F (10° to 35°C)		

Technical Specifications

SKU	SKU Description	OD Media Rate, Max Sequential Throughput (MiB/s)	128Kib Random Rd (IOPs)	128Kib Random 70% RD/ 30% WT (IOPs)	128Kib Random 50% RD/ 50% WT (IOPs)	Power Idle Time (Watts)	Power Random R/W (Watts)	Power Sequential Read (Watts)	Se
861691-B21	HPE 1TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty HDD	185	90	90	90	8.8	12.1	10.8	
872491-B21	HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	190	105	105	105	8.8	12.1	10.8	
861750-B21	HPE 6TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	215	105	105	110	8.8	12.1	10.8	
819203-B21	HPE 8TB SATA 6G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	230	105	115	115	4.7	6.1	6.3	

Technical Specifications

Midline (7.2K rpm)

Form Factor	LFF (3.5"?)	Carrier	
Rotational Speed	7200 rpm		
Interface	SATA	Height	
Transfer Rate Synchronous (Max)	6Gb/sec	Width	
Bytes/Sector	512	Depth	
Operating Temperature	50° to 95° F (10° to 35°C)		

SKU	SKU Description	OD Media Rate, Max Sequential Throughput (MiB/s)	128Kib Random Rd (IOPs)	128Kib Random 70% RD/ 30% WT (IOPs)	128Kib Random 50% 50% (IOPs)
861686-B21	HPE 1TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	195	90	90	90
861683-B21	HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	200	110	110	11
861742-B21	HPE 6TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e HDD	215	110	115	11
834028-B21	HPE 8TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e Digitally Signed Firmware HDD	230	105	110	11
881787-B21	HPE 12TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Helium 512e Digitally Signed Firmware HDD	235	105	115	12

Portfolio

Midline (7.2K rpm)

Form Factor	SFF (2.5"?)	Carrier	
Rotational Speed	7200 rpm		
Interface	SAS	Height	
Transfer Rate Synchronous (Max)	12Gb/sec	Width	
Bytes/Sector	512	Depth	
Operating Temperature	50° to 95° F (10° to 35°C)		

Technical Specifications

SKU	SKU Description	OD Media Rate, Max Sequential Throughput (MiB/s)	128Kib Random Rd (IOPs)	128Kib Random 70% RD/ 30% WT (IOPs)	128Kib Random 50% RD/ 50% (IO
832514-B21	HPE 1TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty Digitally Signed Firmware HDD	130	105	105	10
765466-B21	HPE 2TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e HDD	130	105	105	10

Midline (7.2K rpm)		
Form Factor	SFF (2.5"?)	**Carrier**
Rotational Speed	7200 rpm	
Interface	SATA	**Height**
Transfer Rate Synchronous (Max)	6Gb/sec	**Width**
Bytes/Sector	512	**Depth**
Operating Temperature	50° to 95° F (10° to 35°C)	

SKU	SKU Description	OD Media Rate, Max Sequential Throughput (MiB/s)	128Kib Random Rd (IOPs)	128Kib Random 70% RD/ 30% WT (IOPs)	1 Ra 50 50 (
655710-B21	HPE 1TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty Digitally Signed Firmware HDD	130	105	105	
765455-B21	HPE 2TB SATA 6G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	130	105	105	

Technical Specifications

Entry			
Form Factor	LFF (3.5"?)	**Carrier**	Non Hot Plug Carrier (RW)
Rotational Speed	7200 rpm		**Dimensions**
Interface	SATA	**Height**	1.028 in (26.1 mm)
Transfer Rate Synchronous (Max)	6Gb/sec	**Width**	4.00 in (101.6 mm)
Bytes/Sector	512	**Depth**	5.75 in (146.0 mm)
Operating Temperature	50° to 95° F (10° to 35°C)		

SKU	SKU Description	OD Media Rate, Max Sequential Throughput (MiB/s)	128Kib Random Rd (IOPs)	128Kib Random 70% RD/ 30% WT (IOPs)	128Kib Random 50% RD/ 50% WT (IOPs)	Power Idle Time (Watts)	Power Random R/W (Watts)	Power Sequent Read (Watts)
801882-B21	HPE 1TB SATA 6G Midline 7.2K LFF (3.5in) RW 1yr Wty HDD	160	95	95	95	8.8	12.2	10.8
843266-B21	HPE 1TB SATA 6G Entry 7.2K LFF (3.5in) RW 1yr Wty HDD					2.6	3.6	4.4

Carrier Decoder

HPE Hard Disk Drives (HDDs) utilize a wide variety of carriers, which houses the HDD and also enables a specific chassis fit to support a broad range of HPE server and storage products. The table below summarizes the various form factors, plug types, and carrier attributes.

Technical Specifications

Form Factor	HP/NHP	Carriers		
		Smart/Non-Smart	Carrier Name (Abbreviation)	SFF/LFF
SFF Carrier	Hot Plug	Smart	Smart Carrier **(SC)**	SFF
		Non-Smart	Standard **(ST)**	SFF
LFF Carrier	Hot Plug	Smart	Smart Carrier **(SC)**	LFF
			Smart Carrier Converter **(SCC)**	LFF
		Non-Smart	Low Profile **(LP)**	LFF
			Low Profile Converter **(LPC)**	LFF
			Standard **(ST)**	LFF
No Carrier	Non-Hot Plug	Non-Smart	Raw LFF HDD **(RW)**	LFF

HDD SKU Description Decoder

Long Name

Short Name

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

Technical Specifications

Hewlett Packard Enterprise offers end-of-life **U**, in many geographic areas, for our products. Products returned to Hewlett Packard Enterprise will be recycled, recovered or disposed of in a responsible manner. The EU WEEE Directive (2012/19/EU) 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.

Category	Interface	Form Factor	Format	Capacity	HDD Carrier		
					Smart Carrier SKU	**Low Profile SKU**	
Enterprise (15K rpm)	**SAS 12G**	**SFF**	512e	900GB	870765-B21	-	
		LFF	512n	300GB		870755-B21	
				300GB	737261-B21		
				600GB	765424-B21		
				900GB	-	870761-B21	
					HDD Carrier		
					Smart Carrier SKU	**Low Profile SKU**	**Standard Carrier SKU**
Midline 7.2K rpm	**SAS 12G**	**LFF**	512n	1TB	846524-B21	846526-B21	-
				6TB	846514-B21	-	-
			512e	4TB	HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e HDD	861748-B21	-
				6TB	861754-B21	861746-B21	-
				8TB	861590-B21^{He}		
				10TB	857644-B21^{He}		869347-B21^{He}
				12TB	881779-B21		881783-B21
		SFF		1TB	765464-B21	-	-
Midline 7.2K rpm	**SATA 6G**	**LFF**	512n	2TB	872489-B21	861681-B21	-
			512e	4TB		861744-B21	
				8TB	861594-B21^{He}	861596-B21^{He}	
				10TB	857648-B21^{He}		-
				12TB	881785-B21		-
					HDD Carrier		
					No Carrier SKU (Raw/Non-Hot Plug)		
Entry	**SATA (7.2K)**	**LFF**	512n	4TB	801888-B21		

NOTE: *Also known as "Desktop Drive"?, this drive has Generic Firmware (Non-HPE)

Technical Specifications

Enterprise (15K rpm)			
Form Factor	SFF (2.5"?)	**Carrier**	
Rotational Speed	15000 rpm		
Interface	SAS	**Height**	
Transfer Rate Synchronous (Max)	12Gb/sec	**Width**	
Bytes/Sector	512	**Depth**	
Operating Temperature	50° to 95° F (10° to 35°C)		

SKU	**SKU Description**	**OD Media Rate, Max Sequential Throughput (MiB/s)**	**128Kib Random Rd (IOPs)**	**128Kib Random 70% RD/ 30% WT (IOPs)**	**128Kib Random 50% RD/ 50% (IOP**
870765-B21	HPE 900GB SAS 12G Enterprise 15K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD	285	225	245	26

Enterprise (15K rpm)			
Form Factor	LFF (3.5"?)	**Carrier**	
Rotational Speed	15000 rpm		
Interface	SAS	**Height**	
Transfer Rate Synchronous (Max)	12Gb/sec	**Width**	
Bytes/Sector	512	**Depth**	
Operating Temperature	50° to 95° F (10° to 35°C)		

SKU	**SKU Description**	**OD Media Rate, Max Sequential Throughput (MiB/s)**	**128Kib Random Rd (IOPs)**	**128Kib Random 70% RD/ 30% WT (IOPs)**	**128 Ran 50% 50% (IO**
870755-B21	HPE 300GB SAS 12G Enterprise 15K LFF (3.5in) LPC 3yr Wty Digitally Signed Firmware HDD	295	235	235	23
870761-B21	HPE 900GB SAS 12G Enterprise 15K LFF (3.5in) LPC 3yr Wty Digitally Signed Firmware HDD	295	235	235	23

Technical Specifications

Midline (7.2K rpm)		LFF (3.5"?)	Carrier	
Form Factor		LFF (3.5"?)	**Carrier**	
Rotational Speed		7200 rpm		
Interface		SAS	**Height**	
Transfer Rate Synchronous (Max)		12Gb/sec	**Width**	
Bytes/Sector		512	**Depth**	
Operating Temperature		50° to 95° F (10° to 35°C)		

SKU	SKU Description	OD Media Rate, Max Sequential Throughput (MiB/s)	128Kib Random Rd (IOPs)	128Kib Random 70% RD/ 30% WT (IOPs)	128 Rand 50% 50% (IO
869347-B21	HPE 10TB SAS 12G Midline 7.2K LFF (3.5in) ST 1yr Wty Helium 512e Digitally Signed Firmware HDD	235	105	110	11
881783-B21	HPE 12TB SAS 12G Midline 7.2K LFF (3.5in) ST 1yr Wty Helium 512e Digitally Signed Firmware HDD	235	105	115	12

Midline (7.2K rpm)				
Form Factor		LFF (3.5"?)	**Carrier**	Smart Carrier (S
Rotational Speed		7200 rpm	**Dimensions**	
Interface		SAS	**Height**	1.06 in (26.8 mr
Transfer Rate Synchronous (Max)		12Gb/sec	**Width**	4.16 in (105.8 m
Bytes/Sector		512	**Depth**	6.69 in (170.0 m
Operating Temperature	50° to 95° F (10° to 35°C)			

SKU	SKU Description	OD Media Rate, Max Sequential Throughput (MiB/s)	128Kib Random Rd (IOPs)	128Kib Random 70% RD/ 30% WT (IOPs)	128Kib Random 50% RD/ 50% WT (IOPs)	Powe Idle Time (Watt

Technical Specifications

SKU	SKU Description					
846524-B21	HPE 1TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	200	110	110	110	2.6
846514-B21	HPE 6TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Digitally Signed Firmware HDD	190	105	105	105	4.7
861754-B21	HPE 6TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty 512e HDD	200	100	105	110	8.8
857644-B21	HPE 10TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	235	105	110	115	3.8
881779-B21	HPE 12TB SAS 12G Midline 7.2K LFF (3.5in) SC 1yr Wty Helium 512e Digitally Signed Firmware HDD	235	105	115	125	5.5

Midline (7.2K rpm)			
Form Factor	LFF (3.5"?)	**Carrier**	Low Profile (LP)
Rotational Speed	7200 rpm	**Dimensions**	
Interface	SAS	**Height**	1.028 in (26.1 mm)
Transfer Rate Synchronous (Max)	12Gb/sec	**Width**	4.15 in (105.5 mm)
Bytes/Sector	512	**Depth**	6.16 in (156.58 mm)
Operating Temperature	50° to 95° F (10° to 35°C)		

SKU	SKU Description	OD Media Rate, Max Sequential Throughput (MiB/s)	128Kib Random Rd (IOPs)	128Kib Random 70% RD/ 30% WT (IOPs)	128Kib Random 50% RD/ 50% WT (IOPs)	Power Idle Time (Watts)	Power Random R/W (Watts)	Power Sequential Read (Watts)	Power Sequential Write (Watts)
846526-B21	HPE 1TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	200	110	110	110	2.6	3.6	4.4	3.9
861748-B21	HPE 4TB SAS 12G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e HDD	215	110	115	120	4.7	6.1	6.3	6.4
861746-	HPE 6TB SAS 12G Midline 7.2K								

Technical Specifications

SKU	Description								
B21	LFF (3.5in) LP 1yr Wty 512e HDD	215	110	115	120	4.7	6.1	6.3	6.4
861681-B21	HPE 2TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty Digitally Signed Firmware HDD	195	90	90	90	2.6	3.6	4.4	3.9
861744-B21	HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) LP 1yr Wty 512e HDD	215	110	115	115	4.7	6.1	6.3	6.4

Portfolio				
Midline (7.2K rpm)				
Form Factor		SFF (2.5"?)	**Carrier**	Sma
Rotational Speed		7200 rpm		
Interface		SAS	**Height**	0.62
Transfer Rate Synchronous (Max)		12Gb/sec	**Width**	2.98
Bytes/Sector		512	**Depth**	4.67
Operating Temperature	50° to 95° F (10° to 35°C)			

SKU	SKU Description	OD Media Rate, Max Sequential Throughput (MiB/s)	128Kib Random Rd (IOPs)	128Kib Random 70% RD/ 30% WT (IOPs)	128 Rand 50% 50% (IO
765464-B21	HPE 1TB SAS 12G Midline 7.2K SFF (2.5in) SC 1yr Wty 512e Digitally Signed Firmware HDD	130	105	105	10

Technical Specifications

Entry				
Form Factor	LFF (3.5"?)	**Carrier**	Non Hot	
Rotational Speed	7200 rpm			
Interface	SATA	**Height**	1.028 in	
Transfer Rate Synchronous (Max)	6Gb/sec	**Width**	4.00 in (1	
Bytes/Sector	512	**Depth**	5.75 in (1	
Operating Temperature	50° to 95° F (10° to 35°C)			

SKU	SKU Description	OD Media Rate, Max Sequential Throughput (MiB/s)	128Kib Random Rd (IOPs)	128Kib Random 70% RD/ 30% WT (IOPs)	128 Rand 50% 50% (IO
801888-B21	HPE 4TB SATA 6G Midline 7.2K LFF (3.5in) RW 1yr Wty HDD	160	95	95	9

Summary of Changes

Date	Version History	Action	Description of Change
15-Oct-2018	Version 12	Changed	Technical Specifications was revised.
01-Oct-2018	Version 11	Changed	Overview, Standard Features, Service and Support, and Technical Specifications were revised.
04-Sep-2018	Version 10	Changed	Technical Specifications Section was updated
04-Jun-2018	Version 9	Added	P04695-B21 HPE 600GB Enterprise 15K SAS 12G LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware HDD P04693-B21 HPE 300GB Enterprise 15K SAS 12G LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware HDD Power specs for all drives
		Changed	Seek time specs to IOPs From Recommended to Extended: 861590-B21, 861594-B21, 861596-B21 From Extended to Recommended: 801882-B21, 881787-B21
05-Mar-2018	Version 8	Changed	Overview, Service and Support, and Technical Specifications were revised.
05-Feb-2018	Version 7	Added	Added new HPE 12TB Midline 7.2K SAS LFF (3.5in) Helium 512e Digitally Signed Firmware HDD models: 881779-B21, 881781-B21, 881783-B21
		Changed	Change format to breakout recommended and extended portfolios.
		Removed	Obsolete SKUs
04-Dec-2017	Version 6	Added	Added new HPE 12TB Midline 7.2K LFF (3.5in) Helium 512e Digitally Signed Firmware HDD models.
		Changed	Overview, Service and Support, and Technical Specifications were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
23-Oct-2017	Version 5	Changed	Part number 881458-B21 was changed to 881457-B21. Care Pack references changed to HPE Pointnext operational services.
25-Sep-2017	Version 4	Added	Added 881458-B21 HPE 2.4TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD
		Changed	Overview, Standard Features, Service and Support, and Technical Specifications were revised.
12-Jun-2017	Version 3	Changed	Overview and Technical Specifications were revised.
27-Mar-2017	Version 2	Added	Added new HDD offering.
		Changed	Overview and Technical Specifications were revised.
13-Feb-2017	Version 1	Added	Combined SAS and SATA into one single QuickSpecs. Overview, Models, Compatibility, Standard Features, Service and Support, and Technical Specifications sections were updated. New part number descriptions have been added.

Summary of Changes

Hewlett Packard Enterprise

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