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
- Hewlett Packard Enterprise's industry-leading rigorous testing and qualification program, backed by 2.4 million test hours
- 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
- Self-Encrypting Drives (SEDs) provide hardware-based data encryption. All data that is committed to the media is encrypted with either a 128-bit or 256-bit key.

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

HPE HDD portfolio: Proven performance for every workload				
Class	**Mission Critical (Enterprise)**		**Business Critical (Midline)**	**Entry***
Workload	High		Medium	Low
Usage	**Mission-critical, high I/O:** Email, enterprise resource planning (ERP), customer relationship management (CRM)		**Business Critical, 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 20TB	Up to 4TB
Warranty	3 years	3 years	1 year	1 year
Notes: * Supported on select HPE ProLiant servers only.				

Overview

What's New

- Introduced largest capacity 20TB and largest air-filled 10TB HDD in Business Critical 7.2K LFF Smart Carrier and Low-Profile Carrier Portfolio.

P53552-B21 Vendor HDD   HPE 20TB SAS 12G Business Critical 7.2K LFF SC 1-year Warranty Helium 512e ISE Multi

P53553-B21 Vendor HDD   HPE 20TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi

P53554-B21 Vendor HDD   HPE 20TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi

P53555-B21 Vendor HDD   HPE 20TB SATA 6G Business Critical 7.2K LFF SC 1-year Warranty Helium 512e ISE Multi

Notes: A **-**B21 suffix may be replaced with -H21 and -K21 to support across different server family lines. Please refer to the appropriate Server QuickSpecs for full compatibility details

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.

Standard Features

Models

Category	Interface	Form Factor	Format	Capacity	HDD Carrier		
					Smart Carrier SKU	Low Profile SKU	Basic Carrier SKU
Mission Critical (15K rpm)		**SFF**		300GB	870753-B21		P28028-B21
				600GB	870757-B21		P53560-B21
				900GB	870759-B21		P40432-B21
Mission Critical (10K rpm)			512n	300GB	872475-B21		P40430-B21
				600GB	872477-B21		P53561-B21
				1.2TB	872479-B21		P28586-B21
		SFF	512e	1.8TB	872481-B21		P53562-B21
				2.4TB	881457-B21		P28352-B21
Mission Critical (10K rpm) Self-Encrypting Drives (SED)		**SFF**	512n	1.2TB			P28622-B21
		SFF	512e	2.4TB			P28618-B21

Category	Interface	Form Factor	Format	Capacity	HDD Carrier		
					Smart Carrier SKU	Low Profile SKU	Basic Carrier SKU
Business Critical (7.2K rpm)	**SAS 12G**	**LFF**	512n	2TB	872485-B21	833926-B21	
				4TB	872487-B21	833928-B21	
		LFF	512e	6TB	861754-B21	861746-B21	
				8TB	819201-B21	834031-B21	
				12TB	881779-B21 He	881781-B21 He	
				14TB	P09153-B21 He	P09155-B21 He	
				16TB	P23863-B21 He	P23608-B21 He	
				20TB	P53552-B21 He	P53553-B21 He	
	SATA 6G	**LFF**	512n	1TB	861691-B21	861686-B21	
				2TB	872489-B21	861681-B21	
				4TB	872491-B21	861683-B21	
			512e	6TB	861750-B21	861742-B21	
				8TB	819203-B21	834028-B21	

Standard Features

				12TB	881785-B21 He	881787-B21 He	
				16TB	P23857-B21 He	P23449-B21 He	
				20TB	P53555-B21 He	P53554-B21 He	
Category	**Interface**	**Form Factor**	**Format**	**Capacity**	**HDD Carrier**		
Entry (7.2K)	**SATA 6G**				**Non Hot Plug Carrier SKU**		
			512n	1TB	801882-B21		
				4TB	801888-B21		

Notes:

He Helium Drive.

A -B21 suffix may be replaced with -H21 and -K21 to support across different server family lines. Please refer to the appropriate Server QuickSpecs for full compatibility details.

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 HPE 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."

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

Notes: 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 Services 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

Standard Features

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

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

HPE Services
No matter where you are in your digital transformation journey, you can count on HPE Services to deliver the expertise you need when, where and how you need it. From planning to deployment, ongoing operations and beyond, our experts can help you realize your digital ambitions.
https://www.hpe.com/services

Consulting Services
No matter where you are in your journey to hybrid cloud, experts can help you map out your next steps. From determining what workloads should live where, to handling governance and compliance, to managing costs, our experts can help you optimize your operations.
https://www.hpe.com/services/consulting

HPE Managed Services
HPE runs your IT operations, providing services that monitor, operate, and optimize your infrastructure and applications, delivered consistently and globally to give you unified control and let you focus on innovation.
HPE Managed Services | HPE

Operational services
Optimize your entire IT environment and drive innovation. Manage day-to-day IT operational tasks while freeing up valuable time and resources. Meet service-level targets and business objectives with features designed to drive better business outcomes.
https://www.hpe.com/services/operational

HPE Complete Care Service
HPE Complete Care Service is a modular, edge-to-cloud IT environment service designed to help optimize your entire IT environment and achieve agreed upon IT outcomes and business goals through a personalized experience. All delivered by an assigned team of HPE Services experts. HPE Complete Care Service provides:

- A complete coverage approach -- edge to cloud
- An assigned HPE team
- Modular and fully personalized engagement
- Enhanced Incident Management experience with priority access
- Digitally enabled and AI driven customer experience

https://www.hpe.com/services/completecare

HPE Tech Care Service
HPE Tech Care Service is the operational support service experience for HPE products. The service goes beyond traditional support by providing access to product specific experts, an AI driven digital experience, and general technical guidance to not only reduce risk but constantly search for ways to do things better. HPE Tech Care Service delivers a customer-centric, AI driven, and digitally enabled customer experience to move your business forward. HPE Tech Care Service is available in three response levels. Basic, which provides 9x5 business hour availability and a 2-hour response time. Essential which provides a 15-minute response time 24x7 for most enterprise level customers, and Critical which includes a 6-hour repair commitment where available and outage management response for severity 1 incidents.
https://www.hpe.com/services/techcare

Service and Support

HPE Lifecycle Services

HPE Lifecycle Services provide a variety of options to help maintain your HPE systems and solutions at all stages of the product lifecycle. A few popular examples include:

- Lifecycle Install and Startup Services: Various levels for physical installation and power on, remote access setup, installation and startup, and enhanced installation services with the operating system.
- HPE Firmware Update Analysis Service: Recommendations for firmware revision levels for selected HPE products, taking into account the relevant revision dependencies within your IT environment.
- HPE Firmware Update Implementation Service: Implementation of firmware updates for selected HPE server, storage, and solution products, taking into account the relevant revision dependencies within your IT environment.
- Implementation assistance services: Highly trained technical service specialists to assist you with a variety of activities, ranging from design, implementation, and platform deployment to consolidation, migration, project management, and onsite technical forums.
- HPE Service Credits: Access to prepaid services for flexibility to choose from a variety of specialized service activities, including assessments, performance maintenance reviews, firmware management, professional services, and operational best practices.

Notes: To review the list of Lifecycle Services available for your product go to:
https://www.hpe.com/services/lifecycle
For a list of the most frequently purchased services using service credits, see the **HPE Service Credits Menu**

Other Related Services from HPE Services:

HPE Education Services
Training and certification designed for IT and business professionals across all industries. Broad catalogue of course offerings to expand skills and proficiencies in topics ranging from cloud and cybersecurity to AI and DevOps. Create learning paths to expand proficiency in a specific subject. Schedule training in a way that works best for your business with flexible continuous learning options.
https://www.hpe.com/services/training

Defective Media Retention
An option available with HPE Complete Care Service and HPE Tech Care Service and applies only to Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

Consult your HPE Sales Representative or Authorized Channel Partner of choice for any additional questions and services options.

Parts and Materials
HPE will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.
Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

How to Purchase Services
Services are sold by Hewlett Packard Enterprise and Hewlett Packard Enterprise Authorized Service Partners:

- Services for customers purchasing from HPE or an enterprise reseller are quoted using HPE order configuration tools.
- Customers purchasing from a commercial reseller can find services at **https://ssc.hpe.com/portal/site/ssc/**

Service and Support

AI Powered and Digitally Enabled Support Experience

Achieve faster time to resolution with access to product-specific resources and expertise through a digital and data driven customer experience

Sign into the HPE Support Center experience, featuring streamlined self-serve case creation and management capabilities with inline knowledge recommendations. You will also find personalized task alerts and powerful troubleshooting support through an intelligent virtual agent with seamless transition when needed to a live support agent.

https://support.hpe.com/hpesc/public/home/signin

Consume IT On Your Terms

HPE GreenLake edge-to-cloud platform brings the cloud experience directly to your apps and data wherever they are-the edge, colocations, or your data center. It delivers cloud services for on-premises IT infrastructure specifically tailored to your most demanding workloads. With a pay-per-use, scalable, point-and-click self-service experience that is managed for you, HPE GreenLake edge-to-cloud platform accelerates digital transformation in a distributed, edge-to-cloud world.

- Get faster time to market
- Save on TCO, align costs to business
- Scale quickly, meet unpredictable demand
- Simplify IT operations across your data centers and clouds

To learn more about HPE Services, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Contact information for a representative in your area can be found at "Contact HPE" **https://www.hpe.com/us/en/contact-hpe.html**

For more information

http://www.hpe.com/services

Technical Specifications

HDD Specifications

Mission Critical (15K rpm)

Form Factor	SFF (2.5")	Carrier	Smart (
Rotational Speed	15000 rpm	**Dimensions**	
Interface	SAS	**Height**	0.62 in
Transfer Rate Synchronous (Max)	12Gb/sec	**Width**	2.98 in
Bytes/Sector	512	**Depth**	4.67 in
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 Ti (Watts)
870753-B21	HPE 300GB SAS 12G Mission Critical 15K SFF SC 3-year Warranty Multi Vendor HDD	260	220	220	220	2.6
870757-B21	HPE 600GB SAS 12G Mission Critical 15K SFF SC 3-year Warranty Multi Vendor HDD	260	220	220	220	4.7
870759-B21	HPE 900GB SAS 12G Mission Critical 15K SFF SC 3-year Warranty Multi Vendor HDD	260	220	220	220	4.8

Mission Critical (15K rpm)

Form Factor	SFF (2.5")	**Carrier**	Basic Carrier (BC)
Rotational Speed	15000 rpm	**Dimensions**	
Interface	SAS	**Height**	0.62 in (15.6 mm)
Transfer Rate Synchronous (Max)	12Gb/sec	**Width**	2.98 in (75.7 mm)
Bytes/Sector	512	**Depth**	4.67 in (118.7 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)

Technical Specifications

P28028-B21	HPE 300GB SAS 12G Mission Critical 15K SFF BC 3-year Warranty Multi Vendor HDD	260	220	220	220	2.6	3.6	4.4	3.9
P53560-B21	HPE 600GB SAS 12G Mission Critical 15K SFF BC 3-year Warranty Multi Vendor HDD	260	220	220	220	4.7	6.1	6.3	6.4
P40432-B21	HPE 900GB SAS 12G Mission Critical 15K SFF BC 3-year Warranty Multi Vendor HDD	260	220	220	220	4.7	6.1	6.3	6.3

Mission Critical (10K rpm)				
Form Factor	SFF (2.5")	**Carrier**	Smart C
Rotational Speed	10000 rpm	**Dimensions**	
Interface	SAS	**Height**	0.62 in (
Transfer Rate Synchronous (Max)	12Gb/sec	**Width**	2.98 in (
Bytes/Sector	512	**Depth**	4.67 in (
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)	Pow Idle Time (Wat
872475-B21	HPE 300GB SAS 12G Mission Critical 10K SFF SC 3-year Warranty Multi Vendor HDD	195	180	180	180	3.8
872477-B21	HPE 600GB SAS 12G Mission Critical 10K SFF SC 3-year Warranty Multi Vendor HDD	195	165	165	165	4.7
872479-B21	HPE 1.2TB SAS 12G Mission Critical 10K SFF SC 3-year Warranty Multi Vendor HDD	195	165	165	165	4.0
872481-B21	HPE 1.8TB SAS 12G Mission Critical 10K SFF SC 3-year Warranty 512e Multi Vendor HDD	230	165	170	185	4.6
881457-B21	HPE 2.4TB SAS 12G Mission Critical 10K SFF SC 3-year Warranty 512e Multi Vendor HDD	255	160	180	195	4.8

Technical Specifications

Mission Critical (10K rpm)				
Form Factor	SFF (2.5")	**Carrier**	Basic Carrier (BC)	
Rotational Speed	10000 rpm	**Dimensions**		
Interface	SAS	**Height**	0.62 in (15.6 mm)	
Transfer Rate Synchronous (Max)	12Gb/sec	**Width**	2.98 in (75.7 mm)	
Bytes/Sector	512	**Depth**	4.67 in (118.7 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)	128 Kib Random 50% RD/ 50% WT (IOPs)	Power Idle Time (Watts)	Power Random R/W (Watts)	Power Sequential Read (Watts)	Power Sequential Write (Watts)
P40430-B21	HPE 300GB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD	195	180	180	180	3.8	6.9	6.1	5.3
P53561-B21	HPE 600GB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD	200	165	165	165	4.7	6.1	6.3	6.4
P28586-B21	HPE 1.2TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD	195	165	165	165	4.1	7.5	6.5	6.1
P53562-B21	HPE 1.8TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Multi Vendor HDD	260	165	180	190	2.6	3.6	4.4	3.9
P28352-B21	HPE 2.4TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Multi Vendor HDD	255	160	180	190	4.8	6	7.8	6.6

Technical Specifications

Mission Critical (10K rpm) Self-Encrypting Drives (SED)

Form Factor	SFF (2.5")	Carrier	Basic C
Rotational Speed	10000 rpm	Dimensions	
Interface	SAS	Height	0.62 in (
Transfer Rate Synchronous (Max)	12Gb/sec	Width	2.98 in (
Bytes/Sector	512	Depth	4.67 in (
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)	Pow Idle Time (Wat
P28622-B21	HPE 1.2TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Self-encrypting HDD	250	170	170	170	2.6
P28618-B21	HPE 2.4TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Self-encrypting HDD	255	160	180	195	4.8

Business Critical (7.2K rpm)

Form Factor	LFF (3.5")	Carrier	Smart C
Rotational Speed	7200 rpm	Dimensions	
Interface	SAS	Height	1.06 in
Transfer Rate Synchronous (Max)	12Gb/sec	Width	4.16 in
Bytes/Sector	512	Depth	6.69 in
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 Tir (Watts)
872485-B21	HPE 2TB SAS 12G Business Critical 7.2K LFF SC 1-year Warranty Multi Vendor HDD	190	100	100	100	8.8
872487-B21	HPE 4TB SAS 12G Business Critical 7.2K LFF SC 1-year Warranty Multi Vendor HDD	190	100	100	100	8.8
861754-B21	HPE 6TB SAS 12G Business Critical 7.2K LFF SC 1-year Warranty 512e Multi Vendor HDD	200	100	105	110	8.8
819201-B21	HPE 8TB SAS 12G Business Critical 7.2K LFF SC 1-year Warranty 512e Multi Vendor HDD	230	100	110	110	8.3

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)	Pow Idle (Wa
881779-B21	HPE 12TB SAS 12G Business Critical 7.2K LFF SC 1-year Warranty Helium 512e Multi Vendor HDD	235	105	115	125	6.3
P09153-B21	HPE 14TB SAS 12G Business Critical 7.2K LFF SC 1-year Warranty Helium 512e Multi Vendor HDD	250	105	115	120	6.1
P23863-B21	HPE 16TB SAS 12G Business Critical 7.2K LFF SC 1-year Warranty Helium 512e ISE Multi Vendor HDD	250	105	115	125	5.7
P53552-B21	HPE 20TB SAS 12G Business Critical 7.2K LFF SC 1-year Warranty Helium 512e ISE Multi Vendor HDD	260	110	118	130	6.1

Business Critical (7.2K rpm)

Form Factor	LFF (3.5")		Carrier	Low Pro
Rotational Speed	7200 rpm		Dimensions	
Interface	SAS		Height	1.028 in
Transfer Rate Synchronous (Max)	12Gb/sec		Width	4.15 in
Bytes/Sector	512		Depth	6.16 in
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)	Pow Idle (Wat
833926-B21	HPE 2TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	195	100	100	100	8.8
833928-B21	HPE 4TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	195	100	100	100	8.8
861746-B21	HPE 6TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD	215	100	110	110	8.8
834031-B21	HPE 8TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD	230	100	110	110	8.3
881781-B21	HPE 12TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e Multi Vendor HDD	235	105	115	125	6.3
P09155-B21	HPE 14TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e Multi Vendor HDD	250	105	115	120	6.1

Technical Specifications

SKU	SKU Description					
P23608-B21	HPE 16TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	250	105	115	125	5.7
P53553-B21	HPE 20TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	260	110	118	130	6.1

Business Critical (7.2K rpm)				
Form Factor		LFF (3.5")	Carrier	Smart C
Rotational Speed		7200 rpm	Dimensions	
Interface		SATA	Height	1.06 in
Transfer Rate Synchronous (Max)		6Gb/sec	Width	4.16 in
Bytes/Sector		512	Depth	6.69 in
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 (Watts
861691-B21	HPE 1TB SATA 6G Business Critical 7.2K LFF SC 1-year Warranty Multi Vendor HDD	185	90	90	90	8.8
872489-B21	HPE 2TB SATA 6G Business Critical 7.2K LFF SC 1-year Warranty Multi Vendor HDD	185	90	90	90	8.8
872491-B21	HPE 4TB SATA 6G Business Critical 7.2K LFF SC 1-year Warranty Multi Vendor HDD	190	100	100	100	8.8
861750-B21	HPE 6TB SATA 6G Business Critical 7.2K LFF SC 1-year Warranty 512e Multi Vendor HDD	215	100	100	105	8.8
819203-B21	HPE 8TB SATA 6G Business Critical 7.2K LFF SC 1-year Warranty 512e Multi Vendor HDD	230	100	110	110	7.2
881785-B21	HPE 12TB SATA 6G Business Critical 7.2K LFF SC 1-year Warranty Helium 512e Multi Vendor HDD	235	105	115	125	6.3
P23857-B21	HPE 16TB SATA 6G Business Critical 7.2K LFF SC 1-year Warranty Helium 512e ISE Multi Vendor HDD	260	105	115	125	5.5
P53555-B21	HPE 20TB SATA 6G Business Critical 7.2K LFF SC 1-year Warranty Helium 512e ISE Multi Vendor HDD	260	110	118	130	5.8

Technical Specifications

Business Critical (7.2K rpm)						
Form Factor		LFF (3.5")	**Carrier**			Low P
Rotational Speed		7200 rpm	**Dimensions**			
Interface		SATA	**Height**			1.028
Transfer Rate Synchronous (Max)		6Gb/sec	**Width**			4.15 i
Bytes/Sector		512	**Depth**			6.16 i
Operating Temperature		50° to 95° F (10° to 35°C)				
SKU	**SKU Description**	**OD Media Rate, Max Sequential Through put (MiB/s)**	**128 Kib Ran dom Rd (IOP s)**	**128Kib Rando m 70% RD/ 30% WT (IOPs)**	**128Kib Random 50% RD/ 50% WT (IOPs)**	**Power Idle Ti (Watts)**
861686-B21	HPE 1TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	185	90	90	90	8.8
861681-B21	HPE 2TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	185	90	90	90	8.8
861683-B21	HPE 4TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	195	100	100	100	8.8
861742-B21	HPE 6TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD	215	100	100	105	8.8
834028-B21	HPE 8TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD	230	100	110	110	7.2
881787-B21	HPE 12TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e Multi Vendor HDD	235	105	115	125	6.3
P23449-B21	HPE 16TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	260	105	115	125	5.5
P53554-B21	HPE 20TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	260	110	118	130	5.8

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)	128 Kib Random Rd (IOPs)	128 Kib Random 70% RD/ 30% WT (IOPs)	128 Kib Random 50% RD/ 50% WT (IOPs)	Power Idle Time (Watts)	Power Random R/W (Watts)	Power Sequential Read (Watts)	Power Sequential Write (Watts)
801882-B21	HPE 1TB SATA 6G Business Critical 7.2K LFF RW 1-year Warranty Multi Vendor HDD	160	95	95	95	8.8	12.2	10.8	10.5
801888-B21	HPE 4TB SATA 6G Business Critical 7.2K LFF RW 1-year Warranty Multi Vendor HDD	160	95	95	95	8.8	12.2	10.8	10.5

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.

				SFF Carriers		LFF Carriers		
	Server Model		**Generation**	Smart Carrier (SC)	Basic Carrier (BC)	Smart Carrier (SC)l	Low Profile (LP)	Raw Carrier(RW)/(AKA N PH)
Server Family								
	HPE ProLiant DL							
	HPE ProLiant DL20 Gen10 Plus Server		Gen10 Plus		Yes		Yes	Yes

Technical Specifications

HPE ProLiant	Server	Generation					
HPE ProLiant	HPE ProLiant DL160 Gen10 Server	Gen10	Yes			Yes	
	HPE ProLiant DL180 Gen10 Server	Gen10	Yes			Yes	
	HPE ProLiant DL320 Gen11	Gen11		Yes		Yes	
	HPE ProLiant DL325 Gen10 Plus Server	Gen10 Plus	Yes			Yes	
	HPE ProLiant DL325 Gen10 Plus V2 Server	Gen10 Plus V2		Yes		Yes	
	HPE ProLiant DL325 Gen11 Server	Gen11		Yes		Yes	
	HPE ProLiant DL345 Gen10 Plus Server	Gen10 Plus		Yes		Yes	
	HPE ProLiant DL345 Gen11 Server	Gen11		Yes		Yes	
	HPE ProLiant DL360 Gen10 Server	Gen10	Yes		Yes		
	HPE ProLiant DL360 Gen10 Plus Server	Gen10 Plus		Yes		Yes	
	HPE ProLiant DL360 Gen11	Gen11		Yes		Yes	
	HPE ProLiant DL365 Gen10 Plus Server	Gen10 Plus		Yes		Yes	
	HPE ProLiant DL365 Gen11 Server	Gen11		Yes		Yes	
	HPE ProLiant DL380 Gen10 Server	Gen10	Yes		Yes		
	HPE ProLiant DL380 Gen10 Plus Server	Gen10 Plus		Yes		Yes	
	HPE ProLiant DL380 Gen11	Gen11		Yes		Yes	
	HPE ProLiant DL385 Gen10 Plus Server	Gen10 Plus	Yes			Yes	
	HPE ProLiant DL385 Gen10 Plus V2 Server	Gen10 Plus V2		Yes		Yes	
	HPE ProLiant DL385 Gen11 Server	Gen11		Yes		Yes	
	HPE ProLiant DL 560 Gen10 Server	Gen10	Yes				
	HPE ProLiant DL 580 Gen10 Server	Gen10	Yes				
HPE ProLiant ML							
	HPE ProLiant MicroServer Gen10 Plus	Gen10 Plus					Yes
	HPE ProLiant ML30 Gen10 Plus Server	Gen10 Plus		Yes		Yes	Yes
	HPE ProLiant ML110 Gen10 Server	Gen10	Yes			Yes	Yes
	HPE ProLiant ML350 Gen10 Server	Gen10	Yes			Yes	Yes
	HPE ProLiant ML350 Gen11 Server	Gen11	Yes			Yes	

Technical Specifications

	HPE Synergy						
HPE Synergy	HPE Synergy 480 Gen10 Compute Module	Gen10	Yes				
	HPE Synergy 480 Gen10 Compute Module	Gen10 Plus	Yes				
	HPE Synergy 660 Gen10 Compute Module	Gen10	Yes				
	HPE Synergy D3940 Storage Module		Yes				

HDD SKU Description Decoder

Long Name

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

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.

Summary of Changes

Date	Version History	Action	Description of Change
22-Jan-2024	Version 34	Changed	Models Section was updated
04-Dec-2023	Version 33	Changed	Service and Support Section was updated
15-May-2023	Version 32	Changed	Technical Specifications Sections was updated
07-Nov-2022	Version 31	Changed	SKUs Names were updated
01-Aug-2022	Version 30	Changed	Tables were fixed, Overview and Technical Specifications Sections were updated
06-Jun-2022	Version 29	Changed	Technical Specifications Section was updated
17-Jan-2022	Version 28	Changed	Technical Specifications Section was updated
06-Dec-2021	Version 27	Changed	Technical Specifications Section was updated
15-Nov-2021	Version 26	Changed	Service and Support Section was updated
04-Oct-2021	Version 25	Changed	SKUs Names were updated
12-Jul-2021	Version 23	Changed	Technical Specifications Section was updated
06-Jul-2021	Version 22	Changed	Overview and Technical Specifications Sections were updated
06-Apr-2021	Version 21	Changed	Tables were fixed, Overview and Technical Specifications Sections were updated
01-Feb-2021	Version 20	Changed	Overview and Technical Specifications Sections were updated
20-Jul-2020	Version 19	Changed	Overview and Technical Specifications Sections were updated
01-Jun-2020	Version 18	Changed	SKUs were Added in Overview Section
03-Feb-2020	Version 17	Changed	Overview Section was updated
09-Dec-2020	Version 16	Changed	Added new HPE 16TB Midline 7.2K LFF (3.5in) Helium 512e Digitally Signed Firmware HDD models.
02-Dec-2019	Version 15	Changed	Technical Specifications and Overview Sections were updated
03-Jun-2019	Version 14	Changed	Technical Specifications and Overview Sections were updated
04-Feb-2019	Version 13	Changed	Technical Specifications and Overview Sections were updated
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	Changed	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
			Seek time specs to IOPs From Recommended to Extended: 861590-B21, 861594-B21, 861596-B21 From Extended to Recommended: 801882-B21, 881787-X21
05-Mar-2018	Version 8	Changed	Overview, Service and Support, and Technical Specifications were revised.
05-Feb-2018	Version 7	Changed	Added new HPE 12TB Midline 7.2K SAS LFF (3.5in) Helium 512e Digitally Signed Firmware HDD models: 881779-B21, 881781-X21, 881783-B21
			Change format to breakout recommended and extended portfolios.
			Obsolete SKUs

Summary of Changes
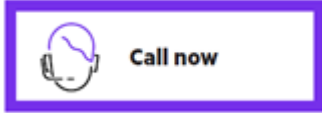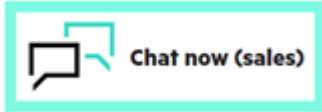
04-Dec-2017	Version 6	Changed	Added new HPE 12TB Midline 7.2K LFF (3.5in) Helium 512e Digitally Signed Firmware HDD models.
			Overview, Service and Support, and Technical Specifications were revised.
			Obsolete SKUs were removed from the QuickSpecs.
23-Oct-2017	Version 5	Changed	Part number 881458-B21 was changed to 881457-X21. Care Pack references changed to HPE Services operational services.

Date	Version History	Action	Description of Change
25-Sep-2017	Version 4	Changed	Added 881458-B21 HPE 2.4TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD
			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	Changed	Added new HDD offering.
13-Feb-2017	Version 1	New	New QuickSpecs

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