

Informacije o proizvodu (EN)

HPE hard disk 2TB SATA 6G Business Critical 7.2K LFF Low profile (861681-B21)



Tehnoteka je online destinacija za upoređivanje cena i karakteristika bele tehnike, potrošačke elektronike i IT uređaja kod trgovinskih lanaca i internet prodavnica u Srbiji. Naša stranica vam omogućava da istražite najnovije informacije, detaljne karakteristike i konkurentne cene proizvoda.

Posetite nas i uživajte u ekskluzivnom iskustvu pametne kupovine klikom na link:

<https://tehnoteka.rs/p/hpe-hard-disk-2tb-sata-6g-business-critical-72k-lff-low-profile-861681-b21-akcija-cena/>

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

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 18TB	Up to 4TB
Warranty	3 years	3 years	1 year	1 year
Notes: * Supported on select HPE ProLiant servers only.				

Overview

What's New

- Offering drives with new small form factor (SFF) basic carrier (BC) that help on simplifying servers and aligning with HPE's strategy of becoming an as a service provider
- Offering Self-encrypting (SED) drives for Data-at-Rest Encryption to encrypt data without consuming server resources at the expense of performance with TCG Enterprise feature that help on protect data if the storage device is Physically stolen or subject to inappropriate chain of custody.
 - P28028-B21 HPE 300GB SAS 12G Mission Critical 15K SFF BC 3-year Warranty Multi Vendor HDD
 - P40431-B21 HPE 600GB SAS 12G Mission Critical 15K LFF LPC 3-year Warranty Multi Vendor HDD
 - P40432-B21 HPE 900GB SAS 12G Mission Critical 15K SFF BC 3-year Warranty Multi Vendor HDD
 - P40430-B21 HPE 300GB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD
 - P28586-B21 HPE 1.2TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Multi Vendor HDD
 - P28352-B21 HPE 2.4TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Multi Vendor HDD
 - P28610-B21 HPE 1TB SATA 6G Business Critical 7.2K SFF BC 1-year Warranty HDD
 - P28505-B21 HPE 2TB SAS 12G Business Critical 7.2K SFF BC 1-year Warranty 512e HDD
 - P28500-B21 HPE 2TB SATA 6G Business Critical 7.2K SFF BC 1-year Warranty 512e HDD
 - P28622-B21 HPE 1.2TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Self-encrypting FIPS HDD
 - P28618-B21 HPE 2.4TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Self-encrypting FIPS HDD
- Adding Multi Vendor in the description to identify Multi Vendor SKU along with some minor naming changes.

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)	SAS 12G	LFF	512n	300GB	P04693-B21 (SCC)		
				600GB	P04695-B21 (SCC)	P40431-B21 (LPCC)	
				900GB	-		
		SFF	512n	300GB	870753-B21		P28028-B21
				600GB	870757-B21		
				900GB	870759-B21		P40432-B21
Mission Critical (10K rpm)	SAS 12G	SFF	512n	300GB	872475-B21		P40430-B21
				600GB	872477-B21		
				1.2TB	872479-B21		P28586-B21
		SFF	512e	1.8TB	872481-B21		
				2.4TB	881457-B21		P28352-B21
Mission Critical (10K rpm) Self-Encrypting Drives (SED)	SAS 12G	SFF	512n	1.2TB			P28622-B21
		SFF	512e	2.4TB			P28618-B21



Standard Features

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		
				10TB	857644-B21 ^{He}	P09149-B21 ^{He}		
				12TB	881779-B21 ^{He}	881781-B21 ^{He}		
				14TB	P09153-B21 ^{He}	P09155-B21 ^{He}		
				16TB	P23863-B21 ^{He}	P23608-B21 ^{He}		
				18TB	P37664-B21 ^{He}	P37669-B21 ^{He}		
		SFF	512n	1TB	832514-B21			P28505-B21
	512e		2TB	765466-B21				
	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		
				10TB	857648-B21	P09161-B21		
				12TB	881785-B21 ^{He}	881787-B21 ^{He}		
			LFF	14TB	P09163-B21 ^{He}	P09165-B21 ^{He}		
				16TB	P23857-B21 ^{He}	P23449-B21 ^{He}		
18TB				P37673-B21 ^{He}	P37678-B21 ^{He}			
SFF		512n		2TB	765455-B21		P28500-B21	
		512n	1TB	655710-B21		P28610-B21		
Category		Interface	Form Factor	Format	Capacity	HDD Carrier		
Entry (7.2K)		SATA 6G	LFF			Non Hot Plug Carrier SKU		
	512e			1TB	843266-B21*			
	512n			1TB	801882-B21			
4TB		801888-B21						

Notes:

- ^{He} Helium Drive.
- *Also known as "Desktop Drive", this drive has Generic Firmware (Non-HPE)
- 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.



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 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 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>

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 Pointnext - Service and Support

Get the most from your HPE Products. Get the expertise you need at every step of your IT journey with **HPE Pointnext Services**. We help you lower your risks and overall costs using automation and methodologies that have been tested and refined by HPE experts through thousands of deployments globally. HPE Pointnext **Advisory Services** focus on your business outcomes and goals, partnering with you to design your transformation and build a roadmap tuned to your unique challenges. Our **Professional** and **Operational Services** can be leveraged to speed up time-to-production, boost performance and accelerate your business. HPE Pointnext specializes in flawless and on-time implementation, on-budget execution, and creative configurations that get the most out of software and hardware alike.

Consume IT on your terms

HPE GreenLake 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 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

Managed services to run your IT operations

HPE GreenLake Management Services provides 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.

Recommended Services

HPE Pointnext Tech Care.

HPE Pointnext Tech Care is the new operational service experience for HPE products. Tech Care 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 Pointnext Tech Care has been reimagined from the ground up to support a customer-centric, AI driven, and digitally enabled customer experience to move your business forward. HPE Pointnext Tech Care 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>

HPE Pointnext Complete Care

HPE Pointnext Complete Care is a modular, edge-to-cloud IT environment service that provides a holistic approach to optimizing your entire IT environment and achieving agreed upon IT outcomes and business goals through a personalized and customer-centric experience. All delivered by an assigned team of HPE Pointnext Services experts. HPE Pointnext Complete Care 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/complecare>



Service and Support

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 24x7 monitoring, pre-failure alerts, automatic call logging, and automatic parts dispatch. HPE Tech Care Service and HPE Complete 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.

Notes:

- ¹IDC Whitepaper
- ²HPE 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.

Notes: 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 QuickSpecs, 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 to 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>

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



Technical Specifications

HDD Specifications

Mission Critical (15K rpm)									
Form Factor		SFF (2.5")		Carrier		Smart Carrier (SC)			
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)
870753-B21	HPE 300GB SAS 12G Mission Critical 15K SFF SC 3-year Warranty Multi Vendor HDD	260	220	220	220	2.6	3.6	4.4	3.9
870757-B21	HPE 600GB SAS 12G Mission Critical 15K SFF SC 3-year Warranty Multi Vendor HDD	260	220	220	220	4.7	6.1	6.3	6.3
870759-B21	HPE 900GB SAS 12G Mission Critical 15K SFF SC 3-year Warranty Multi Vendor HDD	260	220	220	220	4.7	6.1	6.3	6.3

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)
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
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



Technical Specifications

Mission Critical (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)	Power Sequential Write (Watts)
P04695-B21	HPE 600GB SAS 12G Mission Critical 15K LFF SCC 3-year Warranty Multi Vendor HDD	260	220	220	220	5.6	7.2	7.7	6.2
P04693-B21	HPE 300GB SAS 12G Mission Critical 15K LFF SCC 3-year Warranty Multi Vendor HDD	260	220	220	220	2.6	3.6	4.4	3.9

Mission Critical (15K rpm)									
Form Factor		LFF (3.5")		Carrier		Low Profile Carrier Converter (LPCC)			
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)	Power Sequential Write (Watts)
P40431- B21	HPE 600GB SAS 12G Mission Critical 15K LFF LPC 3-year Warranty Multi Vendor HDD	260	220	220	220	5.6	7.2	7.7	6.2



Technical Specifications

Mission Critical (10K rpm)										
Form Factor		SFF (2.5")			Carrier		Smart Carrier (SC)			
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)	128Kib Random 50% RD/ 50% WT (IOPs)	Power Idle Time (Watts)	Power Random R/W (Watts)	Power Sequential Read (Watts)	Power Sequential Write (Watts)	
872475-B21	HPE 300GB SAS 12G Mission Critical 10K SFF SC 3-year Warranty Multi Vendor HDD	195	180	180	180	3.8	6.9	6.1	5.3	
872477-B21	HPE 600GB SAS 12G Mission Critical 10K SFF SC 3-year Warranty Multi Vendor HDD	195	165	165	165	4.7	6.9	6.3	6.3	
872479-B21	HPE 1.2TB SAS 12G Mission Critical 10K SFF SC 3-year Warranty Multi Vendor HDD	195	165	165	165	4.1	7.5	6.5	6.1	
872481-B21	HPE 1.8TB SAS 12G Mission Critical 10K SFF SC 3-year Warranty 512e Multi Vendor HDD	230	165	170	185	2.6	3.6	4.4	3.9	
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	6.0	7.8	6.6	



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)	128Kib 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	
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	
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	6.0	7.8	6.6	

Mission Critical (10K rpm) Self-Encrypting Drives (SED)										
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)	128Kib Random 50% RD/ 50% WT (IOPs)	Power Idle Time (Watts)	Power Random R/W (Watts)	Power Sequential Read (Watts)	Power Sequential Write (Watts)	
P28622-B21	HPE 1.2TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty Self-encrypting FIPS HDD	250	170	170	170	2.6	3.6	4.4	3.9	
P28618-B21	HPE 2.4TB SAS 12G Mission Critical 10K SFF BC 3-year Warranty 512e Self-encrypting FIPS HDD	255	160	180	195	4.8	6.0	7.8	6.6	



Technical Specifications

Business Critical (7.2K rpm)										
Form Factor		LFF (3.5")			Carrier		Smart Carrier (SC)			
Rotational Speed		7200 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	128Kib Random Rd (IOPs)	128Kib Random 70% RD/ 30% WT	128Kib Random 50% RD/ 50% WT	Power Idle Time (Watts)	Power Random R/W (Watts)	Power Sequential Read (Watts)	Power Sequential Write (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	12.2	10.8	10.5	
872487-B21	HPE 4TB SAS 12G Business Critical 7.2K LFF SC 1-year Warranty Multi Vendor HDD	190	100	100	100	8.8	12.2	10.8	10.5	
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	12.2	10.8	10.5	
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	9.7	10.4	9.2	
857644-B21	HPE 10TB SAS 12G Business Critical 7.2K LFF SC 1-year Warranty Helium 512e Multi Vendor HDD	225	105	110	115	5.2	9.2	8.3	7.6	
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	8.7	7.6	7.3	
P09153-B21	HPE 14TB SAS 12G Business Critical 7.2K LFF SC 1-year Warranty Helium 512e Multi Vendor HDD	250	105	115	120	5.7	9.2	8.2	7.8	
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	9.6	8.2	8.2	
P37664-B21	HPE 18TB SAS 12G Business Critical 7.2K LFF SC 1-year Warranty Helium 512e ISE Multi Vendor HDD	260	115	115	127	5.7	9.7	8.3	8.3	



Technical Specifications

Business Critical (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)	
833926-B21	HPE 2TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	195	100	100	100	8.8	12.2	10.8	10.5	
833928-B21	HPE 4TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	195	100	100	100	8.8	12.2	10.8	10.5	
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	12.2	10.8	10.5	
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	9.7	10.4	9.2	
P09149-B21	HPE 10TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e HDD	225	110	115	125	5.2	9.2	8.3	7.6	
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	8.7	7.5	7.3	
P09155-B21	HPE 14TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e Multi Vendor HDD	250	105	115	120	5.7	9.2	8.2	7.8	
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	9.6	8.2	8.2	
P37669-B21	HPE 18TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	260	115	115	127	5.7	9.7	8.3	8.3	



Technical Specifications

Business Critical (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)								
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)	
861691-B21	HPE 1TB SATA 6G Business Critical 7.2K LFF SC 1-year Warranty Multi Vendor HDD	185	90	90	90	8.8	12.2	10.8	10.5	
872489-B21	HPE 2TB SATA 6G Business Critical 7.2K LFF SC 1-year Warranty Multi Vendor HDD	185	90	90	90	8.8	12.2	10.8	10.5	
872491-B21	HPE 4TB SATA 6G Business Critical 7.2K LFF SC 1-year Warranty Multi Vendor HDD	190	100	100	100	8.8	12.2	10.8	10.5	
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	12.2	10.8	10.5	
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	8.5	10.1	9.1	
857648-B21	HPE 10TB SATA 6G Business Critical 7.2K LFF SC 1-year Warranty Helium 512e Multi Vendor HDD	235	105	110	115	4.8	6	7.7	7	
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	8.5	8.2	7.7	
P09163-B21	HPE 14TB SATA 6G Business Critical 7.2K LFF SC 1-year Warranty Helium 512e Multi Vendor HDD	250	105	115	120	5.6	9.3	7.9	8.4	
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	9.1	7.7	8.2	
P37673-B21	HPE 18TB SATA 6G Business Critical 7.2K LFF SC 1-year Warranty Helium 512e ISE Multi Vendor HDD	265	115	115	127	5.4	9.3	7.9	8.4	



Technical Specifications

Business Critical (7.2K rpm)									
Form Factor		LFF (3.5")		Carrier		Low Profile (LP)			
Rotational Speed		7200 rpm		Dimensions					
Interface		SATA		Height		1.028 in (26.1 mm)			
Transfer Rate Synchronous (Max)		6Gb/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)
861686-B21	HPE 1TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	185	90	90	90	8.8	12.2	10.8	10.5
861681-B21	HPE 2TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	185	90	90	90	8.8	12.2	10.8	10.5
861683-B21	HPE 4TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Multi Vendor HDD	195	100	100	100	8.8	12.2	10.8	10.5
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	12.2	10.8	10.5
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	8.5	10.1	9.1
P09161-B21	HPE 10TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e HDD	240	110	115	125	4.8	8.6	7.7	7.9
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	8.5	7.4	7.7
P09165-B21	HPE 14TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e Multi Vendor HDD	250	105	115	120	5.6	9.3	7.9	8.4
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	9.1	7.7	8.2
P37678-B21	HPE 18TB SATA 6G Business Critical 7.2K LFF LP 1-year Warranty Helium 512e ISE Multi Vendor HDD	265	115	115	127	5.4	9.3	7.9	8.4



Technical Specifications

Business Critical (7.2K rpm)									
Form Factor		SFF (2.5")		Carrier		Smart Carrier (SC)			
Rotational Speed		7200 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)
832514-B21	HPE 1TB SAS 12G Business Critical 7.2K SFF SC 1-year Warranty HDD	130	105	105	105	2.6	3.6	4.4	3.9
765466-B21	HPE 2TB SAS 12G Business Critical 7.2K SFF SC 1-year Warranty 512e HDD	130	105	105	105	2.6	3.6	4.4	3.9

Business Critical (7.2K rpm)									
Form Factor		SFF (2.5")		Carrier		Basic Carrier (BC)			
Rotational Speed		7200 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)
P28505-B21	HPE 2TB SAS 12G Business Critical 7.2K SFF BC 1-year Warranty 512e HDD	130	105	105	105	2.6	3.6	4.4	3.9



Technical Specifications

Business Critical (7.2K rpm)									
Form Factor		SFF (2.5")		Carrier		Smart Carrier (SC)			
Rotational Speed		7200 rpm		Dimensions					
Interface		SATA		Height		0.62 in (15.6 mm)			
Transfer Rate Synchronous (Max)		6Gb/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)
655710-B21	HPE 1TB SATA 6G Business Critical 7.2K SFF SC 1-year Warranty HDD	130	105	105	105	2.6	3.6	4.4	3.9
765455-B21	HPE 2TB SATA 6G Business Critical 7.2K SFF SC 1-year Warranty 512e HDD	130	105	105	105	2.6	3.6	4.4	3.9

Business Critical (7.2K rpm)									
Form Factor		SFF (2.5")		Carrier		Basic Carrier (SC)			
Rotational Speed		7200 rpm		Dimensions					
Interface		SATA		Height		0.62 in (15.6 mm)			
Transfer Rate Synchronous (Max)		6Gb/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)
P28610-B21	HPE 1TB SATA 6G Business Critical 7.2K SFF BC 1-year Warranty HDD	130	105	105	105	2.6	3.6	4.4	3.9
P28500- B21	HPE 2TB SATA 6G Business Critical 7.2K SFF BC 1-year Warranty 512e HDD	130	105	105	105	2.6	3.6	4.4	3.9



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 Sequential Read (Watts)	Power Sequential Write (Watts)
843266-B21	HPE 1TB SATA 6G Entry 7.2K LFF RW 1-year Warranty HDD	N/A	N/A	N/A	N/A	2.6	3.6	4.4	3.9
801882-B21	HPE 1TB SATA 6G Business Critical 7.2K LFF RW 1-year Warranty Multi Vendor HDD	160	95	95	95	8.8	12.1	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	12.1	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.

Carriers				
Form Factor	HPE/NHP	Smart/Non-Smart	Carrier Name (Abbreviation)	SFF/LFF
SFF Carrier	Hot Plug	Smart	Smart Carrier (SC)	SFF
		Non-Smart	Standard (ST)	SFF
			Basic Carrier (BC)	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



Technical Specifications

Server Family	Server Model	Generation	SFF Carriers				LFF Carriers				
			Smart Carrier (SCL)/(SCC)	Basic Carrier (BC)	Standard Carrier (ST)	Raw Carrier(RW)/(AKA NPH)	Smart Carrier (SCL)/(SCC)	Low Profile (LP)/(LPC)	Standard Carrier (ST)	Raw Carrier(RW)/(AKA NPH)	
HPE Apollo	HPE Apollo Gen10 Series										
	HPE Apollo pc40	Gen10				Yes				Yes	
	HPE Apollo sx40 Server	Gen10				Yes				Yes	
	HPE Apollo 70 System	Gen10					Yes				
	HPE Apollo 2000 Series										
	HPE Apollo XL170r Gen9 Server	Gen9	Yes					Yes			
	HPE Apollo XL170r Gen10 Server	Gen10	Yes					Yes			
	HPE Apollo XL190r Gen9 Server	Gen9	Yes					Yes			
	HPE Apollo XL190r Gen10 Server	Gen10	Yes					Yes			
	HPE Apollo XL220n Gen10 Plus Server	Gen10 Plus	Yes								
	HPE Apollo XL290n Gen10 Plus Server	Gen10 Plus	Yes								
	HPE Apollo 4000 Series										
	HPE Apollo 4200 Gen9 Server	Gen9	Yes					Yes			
	HPE Apollo 4200 Gen10 Server	Gen10	Yes					Yes			
	HPE Apollo 4200 Gen10 Plus Server	Gen10 Plus		Yes				Yes			
	HPE Apollo 4500 System	Gen9	Yes					Yes			
	HPE Apollo 4510 Gen10	Gen10	Yes					Yes			
	HPE Apollo 6000 Series										
	HPE ProLiant XL230k Gen10 Server	Gen10	Yes								
	HPE Blades										
	HPE ProLiant BL460c Gen9 Server Blade	Gen9	Yes								
	HPE ProLiant BL460c Gen10 Server Blade	Gen10	Yes								
	HPE ProLiant BL660c Gen9 Server Blade	Gen9	Yes								
HPE ProLiant WS460c Gen9 Graphics Server Blade	Gen9	Yes									



Technical Specifications

Server Family	Server Model	Generation	SFF Carrier				LFF Carriers				
			Smart Carrier (SCI)/(SCC)	Basic Carrier (BC)	Standard Carrier (ST)	Raw Carrier(RW)/(AKA NPH)	Smart Carrier (SCI)/(SCC)	Low Profile (LP)/(LPC)	Standard Carrier (ST)	Raw Carrier(RW)/(AKA NPH)	
HPE ProLiant	HPE ProLiant DL										
	HPE ProLiant DL20 Gen9 Server	Gen9	Yes			Yes	Yes				
	HPE ProLiant DL20 Gen10 Server	Gen10	Yes			Yes		Yes			
	HPE ProLiant DL120 Gen9 Server	Gen9	Yes				Yes				
	HPE ProLiant DL120 Gen10 Server	Gen10	Yes			Yes		Yes			
	HPE ProLiant DL160 Gen9 Server	Gen9	Yes				Yes				
	HPE ProLiant DL160 Gen10 Server	Gen10	Yes			Yes		Yes			
	HPE ProLiant DL180 Gen9 Server	Gen9	Yes				Yes				
	HPE ProLiant DL180 Gen10 Server	Gen10	Yes					Yes			
	HPE ProLiant DL325 Gen10 Server	Gen10	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 DL345 Gen10 Plus Server	Gen10 Plus		Yes				Yes			
	HPE ProLiant DL360 Gen9 Server	Gen9	Yes				Yes				
	HPE ProLiant DL360 Gen10 Server	Gen10	Yes				Yes				
	HPE ProLiant DL360 Gen10 Plus Server	Gen10 Plus		Yes				Yes			
	HPE ProLiant DL365 Gen10 Plus Server	Gen10 Plus		Yes				Yes			
	HPE ProLiant DL380 Gen9 Server	Gen9	Yes				Yes				
	HPE ProLiant DL380 Gen10 Server	Gen10	Yes				Yes				
	HPE ProLiant DL380 Gen10 Plus Server	Gen10 Plus		Yes				Yes			
	HPE ProLiant DL385 Gen10 Server	Gen10	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 DL 560 Gen9 Server	Gen9	Yes								
	HPE ProLiant DL 560 Gen10 Server	Gen10	Yes								
	HPE ProLiant DL 580 Gen9 Server	Gen9	Yes								
	HPE ProLiant DL 580 Gen10 Server	Gen10	Yes								



Technical Specifications

Server Family	Server Model	Generation	SFF Carrier				LFF Carriers			
			Smart Carrier (SCI)/(SCC)	Basic Carrier (BC)	Standard Carrier (ST)	Raw Carrier(RW)/(AKA NPH)	Smart Carrier (SCI)/(SCC)	Low Profile (LP)/(LPC)	Standard Carrier (ST)	Raw Carrier(RW)/(AKA NPH)
HPE ProLiant ML										
	HPE ProLiant MicroServer Gen10	Gen10				Yes				Yes
	HPE ProLiant ML30 Gen10 Server	Gen10	Yes					Yes		Yes
	HPE ProLiant ML110 Gen10 Server	Gen10	Yes					Yes		Yes
	HPE ProLiant ML350 Gen10 Server	Gen10	Yes					Yes		Yes
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 680 Gen9 Compute Module	Gen9	Yes							
	HPE Synergy D3940 Storage Module	N/A	Yes							

HDD SKU Description Decoder

Long Name

HPE 18TB SAS 12G Business Critical 7.2K LFF SC 1-year Warranty Helium 512e ISE Multi Vendor HDD

Brand	Storage Capacity	Interface Type/ Interface Speed	Workload	Form Factor Type /Size	Carriers	Warranty	Special Features	Drive Type
HPE	300 -900GB 1-18TB	SATA/SAS 6G/12G	Mission Critical/15/10K MC 15/10K) Business Critical 7.2K BC 7.2K)	SFF LFF	BC LP LPC QR RW SC SCC ST STC	1yr Wty 1-year Warranty 3yr Wty 3-year Warranty	MV SPL SED FIPS ISE 512e (no descriptor) He <i>In priority order</i>	HDD



Technical Specifications

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
17-Jan-2021	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	<p>P04695-B21 HPE 600GB Enterprise 15K SAS 12G LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware HDD</p> <p>P04693-B21 HPE 300GB Enterprise 15K SAS 12G LFF (3.5in) SCC 3yr Wty Digitally Signed Firmware HDD</p> <p>Power specs for all drives</p> <p>Seek time specs to IOPs</p> <p>From Recommended to Extended: 861590-B21, 861594-B21, 861596-B21</p> <p>From Extended to Recommended: 801882-B21, 881787-X21</p>
05-Mar-2018	Version 8	Changed	Overview, Service and Support, and Technical Specifications were revised.
05-Feb-2018	Version 7	Changed	<p>Added new HPE 12TB Midline 7.2K SAS LFF (3.5in) Helium 512e Digitally Signed Firmware HDD models: 881779-B21, 881781-X21, 881783-B21</p> <p>Change format to breakout recommended and extended portfolios.</p> <p>Obsolete SKUs</p>
04-Dec-2017	Version 6	Changed	<p>Added new HPE 12TB Midline 7.2K LFF (3.5in) Helium 512e Digitally Signed Firmware HDD models.</p> <p>Overview, Service and Support, and Technical Specifications were revised.</p> <p>Obsolete SKUs were removed from the QuickSpecs.</p>
23-Oct-2017	Version 5	Changed	<p>Part number 881458-B21 was changed to 881457-X21.</p> <p>Care Pack references changed to HPE Pointnext operational services.</p>
25-Sep-2017	Version 4	Changed	<p>Added 881458-B21 HPE 2.4TB SAS 12G Enterprise 10K SFF (2.5in) SC 3yr Wty 512e Digitally Signed Firmware HDD</p> <p>Overview, Standard Features, Service and Support, and Technical Specifications were revised.</p>
12-Jun-2017	Version 3	Changed	Overview and Technical Specifications were revised.
27-Mar-2017	Version 2	Changed	<p>Added new HDD offering.</p> <p>Overview and Technical Specifications were revised.</p>
13-Feb-2017	Version 1	New	New QuickSpecs

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

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