

# HPE 960GB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD (P40506-B21)



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## What's new

- HPE 960 GB, 1.92 TB, 3.84 TB, 7.68 TB SAS 12G Read Intensive SFF, BC, Value SAS, Multi Vendor SSDs
- Move data at speeds up to 12 Gb, twice as fast as 6 Gb SATA SSDs
- Lower cost than enterprise 12 Gb SAS SSDs
- Enterprise alternative to NVMe Mainstream SSDs
- Single-ported version of enterprise 12 Gb SAS SSDs
- Presented as an HPE Multi Vendor SKU offering

## Overview

Do you need to accelerate the performance of your read intensive applications?

HPE 12 Gb Value SAS Read Intensive (RI) SSDs optimize your enterprise with faster data transfer rates and near price parity compared to enterprise 6 Gb SATA SSDs. HPE Value SAS RI SSDs deliver enterprise features at an affordable price for applications requiring high random read IOPS performance, and are ideal for read caching, social media and web servers workloads.

HPE 12 Gb Value SAS RI SSDs transfer data at full duplex (bidirectional) allowing greater I/O bandwidth to alleviate bottlenecks at twice the 6 Gb interface of SATA SSDs. A

single-ported version of enterprise 12 Gb SAS, HPE Value SAS RI SSDs provide slightly reduced performance in exchange for being price competitive to 6 Gb SATA SSDs.

HPE 12 Gb Value SAS RI SSDs are presented as an HPE Multi Vendor SKU offering which provides customers with the shortest lead time to available supply on preferably priced HPE Value SAS RI SSDs.

## Features

### **Value SAS SSDs Deliver Twice the Interface Speed of SATA SSDs at a Lower Cost than SAS SSDs**

HPE Value SAS Solid State Drives support full-duplex 12 Gb, versus SATA SSDs that are bottlenecked by the simplex 6 Gb SATA interface specification.

Featuring similar price points to 6 Gb SATA SSDs and capacities ranging from 960 GB to 7.68 TB, HPE 12 Gb Value SAS RI SSDs deliver significantly more performance per dollar and are designed to easily replace enterprise SATA SSDs in server applications.

HPE Value SAS SSDs offer a significant random IOPS performance boost over 6 Gb SATA SSDs with 1.94x [1] more random read IOPS and 1.75x [1] more random mixed IOPS performance.

HPE Value SAS SSDs also deliver sequential bandwidth performance gains of 1.5x [1] more read bandwidth and 1.27x [1] more write bandwidth than SATA SSDs.

### **Value SAS SSDs Run More Data Analytic Workloads in Less Time and with Lower Latency than SATA SSDs**

HPE Value SAS Solid State Drives offer faster connection rates that can improve the performance of decision support system applications than SATA SSDs.

Value SAS SSDs deliver faster, lower latency storage performance than 6 Gb SATA SSDs which enables data retrieval sooner with up to 25% [2] less time needed to complete query sets than SATA SSDs.

Value SAS SSDs save time executing data analytic workloads with up to 30% [2] lower read latency needed to access and pull data compared to 6 Gb SATA SSDs.

By improving performance at similar price points, Value SAS SSD delivers up to 22% [2] better data analytics performance per dollar than 6Gb SATA SSDs.

### **HPE Multi Vendor Offering for Value SAS SSDs Help Simplify Purchasing Decisions While Improving TCO**

HPE Multi Vendor offering provides shorter lead times to best available HPE 12 Gb Value SAS SSD supply.

Preferable pricing on HPE qualified Value SAS SSDs and extended SKU lifecycles simplifies the procurement process.

Assurance that the HPE Value SAS Solid State Drives selected delivers the minimum performance published or better.



## Technical specifications

## HPE 960GB SAS 12G Read Intensive SFF BC Value SAS Multi Vendor SSD

<b>Product Number</b>	P40506-B21
<b>Lifetime writes</b>	1,750
<b>Endurance DWPD (Drive Writes Per Day)</b>	1
<b>Read IOPS</b>	Random Read IOPS (4KiB, Q=16)=105,000 Max Random Read IOPS (4KiB)=155,000@Q32
<b>Write IOPS</b>	Random Write IOPS (4KiB, Q=16)=32,000 Max Random Write IOPS (4KiB)=32,000@Q4
<b>Power (Watts)</b>	9.65
<b>Plug type</b>	Hot Pluggable
<b>Height</b>	15 mm
<b>Platform supported</b>	HPE ProLiant Rack/Tower/BladeSystem Servers/Synergy
<b>Product dimensions</b>	21.92 x 22.86 x 14.61 cm
<b>Weight</b>	0.5 kg
<b>Warranty</b>	HPE Solid State Drives and Add-In Cards have a standard 3/0/0 warranty Customer Self Repair (CSR) subject to maximum usage limitations. Maximum usage limit is the maximum amount of data that can be written to the drive. Drives that have reached this limit will not be eligible for warranty coverage.

[1] The specified performance capabilities of enterprise SATA and Value SAS SSDs per HPE published SSD QuickSpecs October 2020 comparing the single highest performance specification of any capacity or SKU offering (random mixed performance = 4K Random 70% Read / 30% Write Queue 32 IOPS performance).  
<https://h20195.www2.hpe.com/v2/getdocument.aspx?docname=a00001288enw>

[2] From the Principled Technologies® Report entitled, "Make business decisions faster with value SAS and data center NVMe™ SSDs from Toshiba Memory," and available at: [principledtechnologies.com/KIOXIA/RM5-Series-value-SAS-and-CD5-NVMe-mainstream-vs-SATA-decision-support-1019-v2.pdf](https://principledtechnologies.com/KIOXIA/RM5-Series-value-SAS-and-CD5-NVMe-mainstream-vs-SATA-decision-support-1019-v2.pdf)



[For additional technical information, available models and options, please reference the QuickSpecs](#)

## HPE Services

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

### Consulting services

Experts can help you map out your path to hybrid cloud and optimize your operations.

### Managed services

HPE runs your IT operations, giving you unified control, so can focus on innovation.

### Operational services

Optimize your entire IT environment and drive innovation. Manage day-to-day IT operational tasks while freeing up valuable time and resources.

- HPE Complete Care Service: a modular service designed to help optimize your entire IT environment and achieve agreed upon IT outcomes and business goals. All delivered by an assigned team of HPE experts.
- HPE Tech Care Service: the operational service experience for HPE products. The service provides access to product specific experts, an AI driven digital experience, and general technical guidance to help reduce risk and search for ways to do things better.

### Lifecycle Services

Address your specific IT deployment project needs with tailored project management and deployment services.

### HPE Education Services

Training and certification designed for IT and business professionals across all industries. 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.

The [Defective Media Retention \(DMR\)](#) service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction. [Comprehensive Defective Material Retention \(CDMR\)](#) allows you to keep all data retentive components.

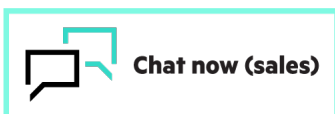
## HPE GreenLake

[HPE GreenLake edge-to-cloud platform](#) is HPE's market-leading as-a-Service offering that brings the cloud experience to apps and data everywhere – data centers, multi-clouds, and edges – with one unified operating model, on premises, fully managed in a pay per use model.

If you are looking for more services, like **IT financing solutions**, please explore them [here](#).

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**Contact our presales specialists.**

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Parts and Materials: HPE will provide HPE-supported replacement parts and materials required to maintain the covered hardware.

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.

Image may differ from the actual product  
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