Hewlett Packard Enterprise

HPE 7.68TB SATA 6G VERY READ OPTIMIZED SFF SC 5210 SSD (P23493-B21)

Server Solid State Drives



WHAT'S NEW

- HPE 1.92 TB, 3.84 TB, 7.68 TB SATA 6G Very Read Optimized SFF (2.5-inch), SC, 3-year Warranty SSDs
- HPE 3.84 TB, 7.68 TB SATA 6G Very Read Optimized LFF (3.5-inch), LPC, 3-year Warranty SSDs

OVERVIEW

Do you need to increase performance at 10K HDD price points for performance-sensitive and very read optimized workloads?

HPE SATA Very Read Optimized Solid State Drives deliver up to 175x faster performance, 4x lower latencies, and 3x better energy efficiency than 10K HDDs at a comparable price [1]. Designed for very read optimized workloads – vSAN capacity tiers, NoSQL databases, business intelligence, Hadoop,

analytics, object stores, content delivery, and AI and machine learning data lakes.

Hewlett Packard Enterprise SSDs are backed by over 3.35 million hours of testing and qualification [2], certifying reliability and high performance. HPE Digitally Signed Firmware prevents unauthorized access to your data by providing the verification that drive firmware comes from a trusted source. You can also monitor the lifespan of your SSD with HPE Smart WearGauge compatibility in management tools.

FEATURES

The Speed of SSDs Fused with the Affordability of HDDs

HPE SATA Very Read Optimized Solid State Drives feature better value than 10K HDDs – thanks to QLC NAND technology targeting very read optimized (VRO) workloads.

Experience up to 175x faster performance and 4x better latencies than 10K HDDs [1].

3x more energy efficient than 10K HDDs, providing annual savings on power and cooling [1].

HPE SATA VRO SSDs are the Reliable Replacement for 2 - 8 TB HDDs in Targeted Workloads

HPE SATA Very Read Optimized Solid State Drives can help future-proof your storage by transitioning from lower capacity HDDs.

Feature hardware that is 10x more reliable than 10K HDDs and 100x more reliable than 7.2K HDDs [3].

Optimized for Hewlett Packard Enterprise servers that have used 10K and 7.2K HDDs for years.

Includes full enterprise Hewlett Packard Enterprise SSD feature set for improved data security, end-to-end data path protection, and power loss protection.

HPE VRO SATA SSDs are Optimized for Performance-Sensitive and Very Read Optimized Workloads

HPE SATA Very Read Optimized Solid State Drives fuse HDD-optimized sequential performance with SSD-optimized random performance.

The VRO targeted workloads revolve around a typical mix of >80% random reads and <20% sequential writes (large block size), for which HPE SATA VRO SSDs are designed.

Endurance ratings are engineered to exceed the need of HPE VRO SSD targeted workloads [4].

Target HPE SATA VRO SSD workloads: vSAN capacity tiers, SQL databases (business intelligence), NoSQL databases, Hadoop, analytics, object stores, CDN, and AI and machine learning data lakes.

High Performance, Exceptional Reliability, and Efficiency for Faster Business Results

HPE SATA Very Read Optimized Solid State Drives are ideal for big data analytics, cloud computing, active archiving, database applications, and data warehousing.

Achieve higher IOPs to enhance the performance of your data center.

Maintain data accuracy with full data-path error detection.

Choose from a broad portfolio of enhanced SSD solutions in a wide variety of capacities.

Features 12 Gb/s SAS, 6 Gb/s SATA, NVMe, M.2, and M.2 Enablement Kits.

Technical specifications

HPE 7.68TB SATA 6G Very Read Optimized SFF SC 5210 SSD

Product Number (SKU)	P23493-B21
Lifetime Writes	700
Endurance DWPD (Drive Writes Per Day)	0.09
Read IOPS	Random Read IOPS (4KiB, Q=16)=54,000 MAX Random Read IOPS (4KiB)=62,000@Q64
Write IOPS	Random Write IOPS (4KiB, Q=16)=4,500 MAX Random Write IOPS (4KiB)=4,500@Q128
Power (Watts)	5.52
Plug Type	Hot Pluggable
Height	7mm
Minimum dimensions (H x W x D)	12.7 x 22.86 x 17.78 cm
Weight	0.5 kg
Warranty	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.

For additional technical information, available models and options, please reference the QuickSpecs

HPE POINTNEXT

Access expertise at every step of your IT journey with HPE Pointnext Services. Advisory Services focuses on your business outcomes and goals, to design your transformation and build a roadmap tuned to your unique challenges. Our Professional and Operational Services help speed up time-to-production and keep your IT stable and reliable.

Operational Services from HPE Pointnext Services

- **HPE Datacenter Care** helps modernize and simplify IT operations. Partner with an assigned account team, access technical expertise, an enhanced call experience gives you priority access, choose hardware and software support, implement proactive monitoring to help stay ahead of issues, and access HPE IT best practices and IP.
- **HPE Proactive Care** offers an enhanced call experience and helps reduce problems with personalized proactive reports and advice. This also includes collaborative software support for Independent Software Vendors (ISVs), (Red Hat, VMWare, Microsoft, etc.). Read more
- **HPE Foundation Care** helps when there is a problem and has a choice of response levels. Collaborative software support is included and provides troubleshooting help for ISVs running on your server. Read more.

Other related services

Defective Media Retention is optional and applies only to Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

HPE Service Credits offers a menu of technical services, access additional resources, and specialist skills.

HPE Education Services provides comprehensive training designed to expand the skills of your IT staff and keep them up to speed with the latest technologies.

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

HPE GREENLAKE

HPE Greenlake is HPE's market-leading IT 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. HPE GreenLake delivers public cloud services and infrastructure for workloads 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.

[1] Based on datasheet comparisons of the HPE SATA VRO SSD (1.92 TB) and HPE 10K HDDs (2.4 TB). Actual performance varies by capacity and may vary slightly in your configuration.

[2] HPE internal lab testing. 3.35 million hour test quant is derived from a combination of drive qualification test plans, specifically HDDQ spec-supplier responsibility to perform, HDDQ spec-HPE responsibility to perform, Reliability Demonstration Test (RDT) spec, CSI integration test spec and pilot test requirements. Test conducted in May 2017.

[3] Based on HPE SATA VRO SSDs and HPE 10K and HPE 7.2K HDD datasheet comparisons of unrecoverable bit error rates (UBER values). UBER values quantify the rate at which data stored on a device is lost, making UBER values one of the most important reliability metrics.

[4] Endurance for QLC NAND based VRO SSDs will vary depending on the write block size and write usage of the drive resulting in a maximum usage limitation. All SSDs are consumable and have a maximum amount of writes that can be done - once a drive has written to its maximum usage limitation it is no longer covered under any Hewlett Packard Enterprise warranty coverage.

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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.

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