Data sheet

HPE NVMe Mainstream Performance Read Intensive EDSFF E3.S Solid State Drives

HPE 7.68TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 EDSFF SPDM PM9D3a SSD (P78919-K21)

What's new

- Offering 1.92 TB, 3.84 TB, 7.68 TB, 15.36 TB, and 30.72 TB storage capacities for HPE NVMe Mainstream Performance Read Intensive EDSFF E3.S SSDs.

Overview

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

HPE NVMe Mainstream Performance Read Intensive (RI) Enterprise and Datacenter Standard Form Factor (EDSFF) E3.S Solid State Drives (SSDs) are best suited for applications requiring a strong blend of high read IOPS, low latency, and high endurance at a strong price point. NVMe SSDs communicate directly to applications via the PCIe bus to boost I/O bandwidth and reduce latency.

HPE NVMe Mainstream Performance EDSFF E3.S SSD replaces the traditional 2.5 inch small form factor SSD while supporting greater density of NVMe drives. It provides high-performance data transfers at rates faster than SAS or SATA SSDs. Designed to utilize the high bandwidth of PCIe Gen5 on servers with workloads high in reads such as read caching, web servers, and boot/swap.

Features

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

HPE NVMe Mainstream Performance Read Intensive (RI) Enterprise and Datacenter Standard Form Factor (EDSFF) E3.S Solid State Drives (SSDs) are ideal for databases, cloud compute, containers, and hyperscale environments.

Achieve higher IOPS and lower latency to enhance the performance of your enterprise servers while maintaining data accuracy with full data-path error detection.

Improved thermals, power, and scalability provide better system efficiency for high I/O applications.

Faster PCIe Gen 5 technology only available with EDSFF E3.S SSDs.

Improved Design and Efficiency for Increased Performance on Gen 11 Servers

Dramatically increase density with a 1U server that can fit 20 E3.S or 10 E3.S 2T drives, or a 2U server that can fit 36 E3.S or 18 E3.S 2T drives.

Improved power management and density while utilizing less power.

Technical specifications	HPE 7.68TB NVMe Gen5 Mainstream Performance Read Intensive E3S EC1 EDSFF SPDM PM9D3a SSD
Product Number	P78919-K21
Lifetime writes	14,016 TB
Endurance DWPD (Drive Writes Per Day)	1.0 DWPD
Read IOPS	Random Read IOPS (4KiB, Q=16) = 242,689 Max Random Read IOPS (4KiB) = 2,085,304@256
Write IOPS	Random Write IOPS (4KiB, Q=16) = 384,429 Max Random Write IOPS (4KiB) = 400,198@16
Power (Watts)	15.08 W
Plug type	Hot pluggable
Height	7.5 mm
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.
Platform supported	HPE Storage Platforms, see QuickSpecs for more information
Capacity	7.68 TB
Drive form factor	EDSFF E3.S
Interface	NVMe
Workload	Read Intensive
Carrier type	E3.S Thin Carrier

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.

Advisory & Professional 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.

Support 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.

— **HPE Multivendor Services:** Single point of accountability for managing on-site hardware and software support for multivendor products. HPE experts help manage your IT across technologies and platforms for HPE and non-HPE technologies, acting as the single point of contact for your IT operational needs.

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

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

GreenLake

GreenLake is the cloud to run and manage your entire hybrid landscape—private, public, and edge. It helps you to:

— Streamline IT Operations across compute, storage, and networking without the chaos

— Unify and secure data, as you move faster

— Accelerate AI, from pilot to production

The result: greater operational efficiency, lower TCO, and faster AI delivery—all from one unified, intelligent platform built for today's hybrid enterprise.

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

Visit HPE.com

Chat now

© Copyright 2026 Hewlett Packard Enterprise Development LP. The information contained herein is subject to change without notice. The only warranties for Hewlett Packard Enterprise products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. Hewlett Packard Enterprise shall not be liable for technical or editorial errors or omissions contained herein.

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.

PSN1014886010WWEN, October, 2026.

HEWLETT PACKARD ENTERPRISE

hpe.com