Data sheet

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

## HPE 7.68TB NVMe Gen5 High Performance Read Intensive E3S EC1 EDSFF SPDM 9550 SSD (P77059-K21)

### What's new

- Offering 3.84 TB, 7.68 TB, 15.36 TB, and 30.72 TB storage capacities for our next-gen HPE NVMe High Performance Read Intensive EDSFF E3.S SSDs.

## Overview

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

HPE NVMe High 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 High Performance RI EDSFF E3.S SSDs replace 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 or Gen6 on servers with workloads high in reads such as read caching, web servers, and boot/swap.

## Features

### High performance and exceptional reliability for faster business results

HPE NVMe High Performance Read Intensive Enterprise and Datacenter Standard Form Factor (EDSFF) E3.S Solid State Drives (SSDs) are ideal for databases, artificial intelligence, machine learning, and high performance servers application.

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.

Latest PCIe Gen5 and Gen6 technology only available with EDSFF E3.S SSDs.

### Improved design and efficiency for increased performance on Gen11, Gen12, and Gen13 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 High Performance Read Intensive E3S EC1 EDSFF SPDM 9550 SSD |
|---|---|
| **Product Number** | P77059-K21 |
| **Lifetime writes** | 14,016 TB |
| **Endurance DWPD (Drive Writes Per Day)** | 1.0 DWPD |
| **Read IOPS** | Random Read IOPS (4KiB, Q=16) = 258,693<br>Max Random Read IOPS (4KiB) = 3,327,068@256 |
| **Write IOPS** | Random Write IOPS (4KiB, Q=16) = 452,753<br>Max Random Write IOPS (4KiB) = 458,627@16 |
| **Power (Watts)** | 20.5 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<br>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.

PSN1014890571WWEN, November, 2026.

HEWLETT PACKARD ENTERPRISE

hpe.com