

Rugged Open VPX NVMe SSD Module



The VP1-250-eSSDA is 3U VPX SSD storage module that delivers extremely high performance via a single Fat Pipe (PCIe x4 Gen2/Gen3). Designed from the ground up to remove legacy layers of hard drive interfaces such as SATA and SAS, it takes full advantage of the speed and parallelism of solid state nonvolatile memory. Streamlined efficient queuing protocol combined with an optimized command set register interface enables low latency and high performance. Data is delivered fast and efficiently with minimal burden on the host CPU.

NVM Express (NVMe) is an industry-standard registered interface designed to accelerate the performance of nonvolatile PCI Express (PCIe) SSDs. The NVMe protocol was established in collaboration by server industry leaders to standardize a scalable PCIe interface, making it easier for designers to unlock the full potential of PCIe. NVMe provides opportunities for increased data throughput and reduced latency all while reducing the number of drives needed — both now and in the future. Adoption of this industry standard is driven by a strong consortium of storage technology providers and a robust ecosystem of drivers across multiple operating systems.

Features

Out-of-the-box software, drivers and manageability enable easy adoption and storage interoperability

Capacities from 1.6TB to 15TB

Optimized register interface and command set lowers latency

Performance:

Seq. 128KB read: 3.5 GB/s

Seq. 128KB write: 3.5 GB/s

Rnd 4KB read: 850,000 IOPS

Rnd 4KB write: 310,000 IOPS

Operating shock: 1500G @ 0.5ms half-sine

Operating vibration: 3.1G_{RMS} 5–800Hz @ 30 min/axis

Advanced flash management for enhanced reliability and durability

Streamlined protocol with efficient queuing mechanism to scale for multi-core CPUs

TCG Compliant AES-256 Encryption

2,000,000 hours MTBF

Made in USA



We Put the State of the Art to WorkSM



Rugged VPX Disk Module

TECHNICAL SPECIFICATIONS

Environmental

Form Factor:

3U VPX bus 6.299" (160mm) x 3.937" (100mm)

Module Interface:

PCIe x4 (Gen 2/3)

Temperature, operational:

Temperature: 0° to 70°C (Case Temp.)

Temperature, storage:

-40° to 85°C

Vibration:

3.1G_{RMS}, 5Hz-800Hz @ 30 min/axis

Shock:

1500G @ 0.5ms half-sine

Altitude:

80,000 feet

Relative Humidity:

5 to 95%, non-condensing

MTBF:

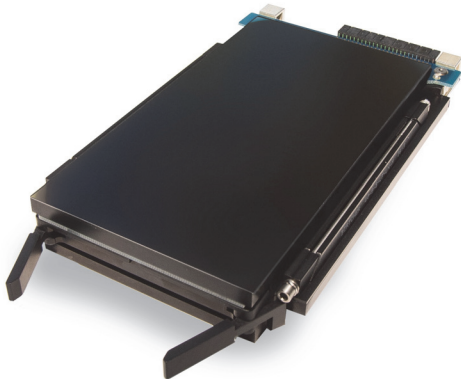
2,000,000 device hours

Compliance Specifications

The VP1-250-eSSD NVMe Drive Module is designed to meet CE Emissions specification EN 55022, CE Immunity specification EN 50082-2 and FCC 47 CFR, Part 15, Class A when tested in a shielded enclosure. Meets VITA 46, 48 and 65: VPX System Specifications and Practices.

Phoenix International

Phoenix International is an AS9100 Rev D/ISO 9001:2015 certified small business manufacturer of Rugged COTS data storage products. Phoenix developed state of the art enabling technology provides users with mass storage products that ensure the highest performance data storage and network attached systems. These systems range in size and application from multi-terabyte Fibre Channel RAID, NAS and Storage Area Network (SAN) configurations to conduction cooled plug-in VME/VPX solid state (flash) storage modules.



3U Open VPX Conduction Cooled Module



Phoenix International is AS 9100 Rev D/ISO 9001:2015
Certified

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