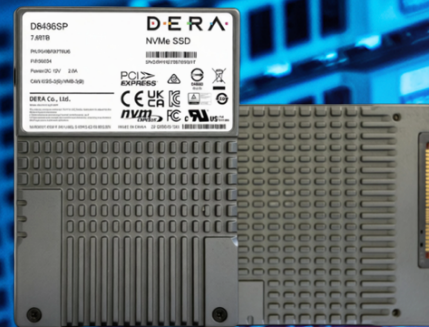


PCIe 5.0 NVMe SSD

D8436SP Series



Highlights

- Data integrity of enterprise class
- Up to 14.2/ 10 GB/s Seq.R/ W Bandwidth
- Up to 3,400K/ 520K Rand.R/ W IOPS
- Supports multiple models of 3D eTLC NAND
- Supports hot-plug
- Supports PLP
- Supports NVMe-MI management interface
- Telemetry log collection
- Supports CMB
- Supports Multi-stream
- Supports secure erase
- Supports advanced device self-test

Applications & Workloads

- Database
- Cloud Computing
- Stream
- Big Data Analytics
- AI
- Software Defined Storage

Brand-new PCIe 5.0 architecture

DERA D8436SP NVMe SSD features a domestically produced PCIe 5.0 processor with a brand-new architecture, supporting a variety of enterprise-grade functions including hardware security, data path management, secure erase, advanced device self-test, and firmware online upgrades. It is also compatible with mainstream 3D NAND models from multiple vendors, enabling flexible storage solution configurations and ensuring supply chain security to meet the diverse needs of different business scenarios.

Deeply optimized for AI and cloud computing scenarios

DERA D8436SP NVMe SSD supports advanced features such as CMB and Multi-stream, and is deeply optimized for core scenarios requiring high throughput and low latency, including AI training and inference, cloud computing, elastic computing, cloud databases, and containerized clouds. With a sequential read bandwidth of 14.2 GB/s, 3,400K random read IOPS, and an ultra-low write latency of just 5 μ s, it delivers exceptional performance for AI model loading, feature extraction, and concurrent access to massive datasets. Its steady-state performance consistency exceeds 98%, ensuring long-term stable output from multi-GPU AI clusters and high-density cloud nodes.

High reliability safeguards user data

DERA D8436SP provides secure and reliable data protection for mission-critical applications. From hardware protection to firmware algorithms, from power-loss protection to data verification, it builds an end-to-end reliable system: supporting abnormal power-loss data protection, end-to-end data integrity verification, adaptive dynamic RAID, advanced device self-checking and fault prediction, effectively mitigating the risks of data loss and business interruption. The product boasts an uncorrectable bit error rate below 10^{-18} and an average mean time between failures (MTBF) of 2.5 million hours, ensuring data reliability and availability.



Product Series		D8436SP		
MN		P54IBR03T8US	P54IBR07T6US	P54YGR07T6US
Capacity (TB)		3.84	7.68	7.68
Form Factor		U.2		
PCIe Interface		PCIe 5.0 x4		
NVMe Standard		NVMe 1.4b		
NAND		3D TLC NAND		
Sequential Read/Write ^[1]		Up to 14.2/10 GB/s		
Random Read/Write ^[2]		Up to 3400K/520K IOPS		
Random Read/Write Latency(μ s) ^[3]		55/5		
Power ^[4]	Active	20W		
	Idle	6W		
DWPD (5years)		1 DWPD		
UBER		< 10 ⁻¹⁸		
MTBF		2.5 million hours		
Operating Temperature		0-77°C		
Feature		Hot-plug, Firmware online upgrades, NVMe-MI over MCTP, End-to-end data protection, Variable Sector Size, Advanced device self-test, Secure erase, EUI64/NGUID		

[1] Measurement range: 100% LBA, sequential read/write with 128 KB block size.

[2] Measurement range: 100% LBA, random read/write with 4KB block size.

[3] Measurement range: 100% LBA; random read/write with 4KB block size, TC=1 and QD=1, TC represents the number of threads, and QD represents the queue depth.

[4] Measurement range: 100% LBA. Sequential read/write with 128KB block sizes, random read/write with 4KB block sizes. The sampling interval is 100ms.

*Performance testing is based on the FIO tool under the Linux system; results obtained from different test platforms may vary. 1MB/s = 1,000,000 bytes/second.

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