

Huawei Enterprise-Grade NVMe SSDs Data Sheet (For New-Gen OceanStor Dorado)



Huawei enterprise-grade NVMe SSDs are next-generation solid state disks presented by Huawei. They deliver better performance, higher reliability, and easier management, and are the preferred storage media for eliminating system I/O bottlenecks, enhancing system efficiency, and improving service performance. Designed for enterprise-grade applications that require ultra-high performance and are extremely sensitive to latency, Huawei SSDs are suitable for scenarios like database, virtualization, and VDI.

Features

Energy efficiency

- High space density:** Disk thickness of only 9.5 mm and 36 disk slots in a 2 U space for 30% higher density per U.
- Efficient heat dissipation:** Huawei NVMe disk enclosures with the biplanar orthogonal backplane design for 50% larger airflow spacing and 25% better heat dissipation.

Solid Reliability

- Long service life:** Employs dynamic and static wear-leveling algorithms and bad block management mechanism to greatly prolong the service life, with a mean time between failures (MTBF) of more than than 2.5 million hours.
- RAID protection:** Uses dedicated chips within SSDs for RAID protection, and ensures no data loss in the event of a single flash chip failure.
- Power-off protection:** Designs power-off protection to prevent data loss in the event of power failure.
- SED:** supports encryption of data at rest, uses AES-256 algorithm, and complies with the standard of Trusted Computing Group (TCG).

Excellent Performance

- Short latency:** Achieves an average read and write latency of 95 μ s/45 μ s with NVMe protocol, and quickly responds to user requests to meet requirements for latency-sensitive services.
- High throughput:** Achieves up to 700,000/40,000 random read/write IOPS with NVMe. The NVMe multi-channel technology can meet requirements for high-performance storage systems.
- Fast read/write speed:** Obtains a maximum of 5,000/ 3,000 MB/s of read/write bandwidth while ensuring a stable performance.

Ease of Management

- Health check:** Monitors SSD running status in real time to prevent failures.
- Adjustable power consumption:** Adopts intelli-gent power supply to adjust SSD power consumption for different scenarios.
- Integrated tools:** Uses integrated tools to manage the SSDs intelligently for less customer investment in management.

Technical Specifications

Type	Huawei Enterprise-Grade NVMe SSDs			
Specifications				
Capacity (Also for Users)	3,840 GB	7,680 GB	15,360 GB	30,720 GB
Endurance Rating (Lifetime Writes)	Up to 7.008PB	Up to 14.016 PB	Up to 28.032 PB	Up to 56.064 PB
Interface Protocols	PCIe 4.0			
Command Set	NVMe 1.4			
Port Type	Dual-port			
Flash Chip Type	TLC			
Dimension	9.5 x 79.8 x 160 (mm)			
Weight	<= 350g			
Performance				
Average Read Latency(4 KB, QD1)	95 µs	95 µs	95 µs	95 µs
Average Write Latency(16 KB, QD1)	45 µs	45 µs	45 µs	45 µs
Sequential Read Band-width (128KB, QD64)	5,000 MBps	5,000 MBps	5,000 MBps	5,000 MBps
Sequential Write Band-width (128KB, QD64)	3,000 MBps	3,000 MBps	3,000 MBps	3,000 MBps
Random Read IOPS(4KB, QD64)	700K	700K	700K	700K
Random Write IOPS(16KB, QD32)	40K	40K	40K	40K
Mixed IOPS(16KB, QD32, 7: 3)	50K	50K	50K	50K
Power Supply				
Operating Voltage	12V ± 10%			
Power Consumption (Max)	14 W	14 W	14 W	14 W
Environment				
Temperature	Operating temperature (case temperature): 0°C to 70°C Non-operating temperature: -40°C to +85°C If the altitude is > 1,800 m: The operating temperature decreases by 1°C as the altitude increases by 220 m			
Humidity	Operating humidity: 5% RH to 95% RH (non-condensing) Storage humidity: 5% RH to 95% RH (non-condensing)			
Altitude	Operating altitude: -305 m to + 5,486 m Storage altitude: -305 m to + 12,192 m			
Reliability				
Hot Swapping	Supported			
TRIM	Supported			
MTBF	2.5 million hours			

*test with 16KB IO

For More Information

To learn more about Huawei storage, please contact your local Huawei office or visit the Huawei Enterprise website: <http://e.huawei.com/en/>.



Huawei Enterprise APP



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