DapuStor

PCIe 4.0

J5000 Series ⊙

DapuStor Enterprise QLC NVMe SSD

The DapuStor J5000 Series SSD, compliant with NVMe 1.4a and PCIe 4.0 x4 standards, integrates a cutting-edge controller with 3D QLC NAND Flash to deliver high-capacity and power-efficient storage solutions. Engineered for exceptional random read/write performance and Quality of Service (QoS), it features Flash RAID 2.0, dual port functionality, optimized data path, and advanced power loss protection.

Advanced Features

- Advanced power loss protection that protects user data against power failure in various scenarios

- The 4K mapping feature automatically adjusts to the application's needs

- Superior read power consumption

- Supports dual port functionality for core storage business scenarios

- Optimizes the write buffer algorithm with QLC direct write implementation

- Enhances QLC read/write Quality of Service (QoS).

- Optimizes Flash voltage management strategies, effectively reducing NAND retries

Industry Mainstream NAND Flash

The DapuStor J5000 Series is equipped with 3D Enterprise QLC NAND Flash, realising an extremely high-power efficiency. It reduces NAND Retry at the system level through innovative machine learning technologies that predict the NAND workload in complex scenarios to prevent systemic failures.

Application

The J5000 Series, engineered for read-intensive applications, meets the growing storage demands across diverse sectors including AI, cloud storage, IT, internet services, finance, telecom operators, big data storage, and intelligent manufacturing. This cost-effective solution provides reliable and scalable storage options, making it an ideal choice for enterprises seeking efficient data management within budget constraints.

Read Scenario Optimization

The DapuStor J5000 Series combines the high capacity of HDDs with read performance akin to TLC SSDs, bridging the cost and performance gap between them. The new DP600 controller, through extensive optimizations in the IO path, has significantly reduced latency and improved Quality of Service (QoS) for mixed read-write scenarios in the J5000 Series.

7450/3200 MB/s
Sequential Read/Write(MB/s)

1500K/120K
Random Read/Write(IOPS)

105/9 μs
Read/Write Latency(μs)

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| Product Specifications

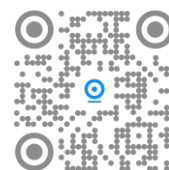| PCN (Product Code Name)	J5000	
Capacity(TB)	15.36	30.72
Form Factor	U.2 15mm	
Interface	PCIe 4.0 x4, NVMe 1.4a, support dual port	
Read Bandwidth (128KB) MB/s	7450	7450
Write Bandwidth (128KB) MB/s	3200	3200
Random Read (4KB)K IOPS	1500	1500
Random Write (4KB) K IOPS	120	120
4K Random Latency (Typ.) R/W μs	105/9	
4K Sequential Latency (Typ.) R/W μs	7/9	
Typical Power R/W(W)	12/21	
Idel Power(W)	5	
Flash Type	3D Enterprise QLC NAND Flash	
Endurance	0.5 DWPD	
MTBF	2 million hours	
UBER	1 sector per 10^17 bits read	
Warranty	5 yrs	

*Differences in hardware, software, or configuration will affect actual test results.

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