DapuStor | MARVELL

Haishen5 Series

DapuStor Enterprise NVMe SSDs

The DapuStor Haishen5 Series adopts the latest Marvell™ PCIe Gen5 enterprise controller named Bravera ™ and 3D eTLC NAND Flash with DapuStor in-house firmware. It offers double throughput compared with the PCIe Gen4 enterprise SSD. The DapuStor PCIe Gen5 eSSD is designed for data centers, catering to the increasing storage demands of different industries, like IT, Internet, Finance, Operators, Smart manufacturing, AI, as well as Oil, Electricity and Energy industries.

Enhanced Reliability By Multiple Security Protection

The Haishen5 Series supports multiple enterprise-level security features such as end-to-end data protection, DST, Sanitize, Secure Boot and TCG OPAL 2.0 to ensure system and data security.

Stronger Performance

The Haishen5 Series offers more excellent performance for the overall storage system with sequential read/write speeds up to **14000/5500 MB/s,** random read/write IOPS up to **2800K/490K,** and 4K random read/write latency less than **54/8 µs.**

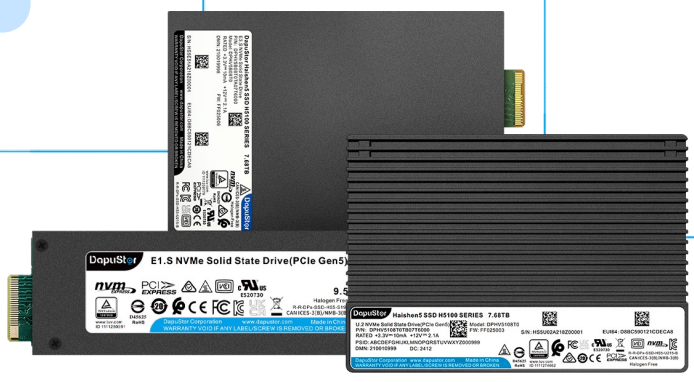
14000/5500 MB/s	2800K/490K	54/8 µs
Sequential Read/Write(MB/s)	Random Read/Write(IOPS)	Read/Write Latency(µs)

Support Advanced Features Customization

The Haishen5 series eSSDs support various VSS sector formats, NVMe 2.0 and NVMe MI 1.1 protocols, and Multi-Stream. They are also compatible with Flexible Data Placement (FDP). In specific scenarios, the Write Amplification Factor (WAF) can be reduced to 1. Features can be customized based on customer requirements.

The Latest Form Factor
- Support the latest EDSFF
- **E1.S, E3.S, and U.2**
- Support OCP 2.5

Rich Capacity
- Capacities range from **3.2 TB to 30.72 TB**



PCIe 5.0
- Built on **Marvell™ PCIe 5.0**
- Enterprise controller

Low Latency
- 4K Read/Write Latency: **54/8 µs**

Marvell® Bravera™ SC5 SSD Controllers

PCIe 5.0 SSD Controller supporting up to 16 NAND Channels for enabling next generation cloud storage solutions. Featuring ultra low latency (< 6µs) can enable SSD storage solutions that offer levers to control and meter performance at the drive level being able to offload hypervisors and free up host system resources.

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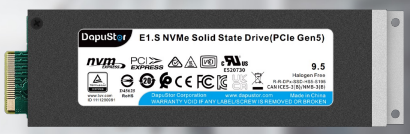

Product Specifications

PCN (Product Code Name)	H5100		H5300	
Capacity (TB)	3.84	7.68	3.2	6.4
Form Factor	E1.S 9.5mm			
Interface	PCIe 5.0 × 4, NVMe 2.0			
Read Bandwidth (128KB) MB/s	14000	14000	14000	14000
Write Bandwidth (128KB) MB/s	5000	5500	5000	5500
Random Read (4KB) KIOPS	2800	2800	2800	2800
Random Write (4KB) KIOPS	230	280	410	490
4K Random Latency (Typ.) R/W μs	56/8	54/8	56/8	54/8
4K Sequential Latency (Typ.) R/W μs	7/8			
Power	Typical: ≤ 16W, Idle: ≤ 5.5 W			
Flash Type	3D eTLC NAND Flash			
Product PN	DPHV550 4T0TA 03T8000	DPHV550 8T0TJ 07T6000	DPHV550 4T0TA 03T2000	DPHV550 8T0TJ 06T4000
Endurance	1 DWPD		3 DWPD	
MTBF	2.5 million hours			
UBER	1 sector per 10^17 bits read			
Warranty	5 years			
Key Features	NVMe 2.0, NVMe MI 1.1, OCP 2.5, TCG OPAL 2.0 security standards, NVMe Sanitize, Secure Boot, Hot Plug, Online Upgrade, Out-of-Band Upgrade, Multi-Namespace Support, End-to-End Data Protection, Power Loss Protection, Full-Path Data Protection, T10 DIF/DIX, WRR, Flash RAID 2.0, Latency Monitor, DSM, SMART, Telemetry, Device Power Management, Atomic Write, Over-Temperature Protection, Universal Clock (RefClk), Multiple Sector Formats (VSS), Multi-Stream, FDP, SGL, CMB, MDTS, and more.			

* Differences in hardware, software, or configuration will affect actual test results.
* 128KB sequential bandwidth performance measured with 1 sector = 4096 Bytes.

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