PASCARI

ENTERPRISE D-SERIES

Ultra High Capacity PCIe Gen5 Enterprise Storage Solutions

Phison's newest large capacity enterprise SSD D200V is a read-intensive data center SSD which achieves an impressive 122TB per drive, making it the best alternative to traditional cold storage solutions HDDs. It only takes one D200V SSD to store the data that would require ten HDDs. Built with PCIe Gen5 interface and paired with the industry's latest 3D NAND technology, the D200V delivers performance up to 14,000 MB/s (sequential read) and 3,000K IOPS (random read).

In an era of exponential data growth, the D200V will help drive the trend of efficient data storage with improved space utilization and reduced power consumption.

Product Features

- **PCIe 5.0 1x4 / PCIe 5.0 2x2 (Dual port)**
- **NVMe 2.0**
- **Capacity up to 122TB**
- **Form Factor: U.2 / E3.S / E3.L**
- **128 Namespaces**
- **Power Loss Protection (PLP)**
- **ISE, TCG Opal 2.0 Support**
- **AES-XTS 256-bit Encryption**
- **End-to-End Data Path Protection**
- **Metadata Protection**
- **SECDED**
- **Sanitize**
- **NVMe-MI (Management Interface)**
- **SMBus**

Sequential Performance
Read 14,000 MB/s

Random Performance
Read 3,000K IOPS

PHISON

Solutions - D200V

Form Factor	U.2		
Capacity[2]	30.72TB	61.44TB	122.88TB
Interface	PCIe 5.0 1x4, 2x2	PCIe 5.0 1x4, 2x2	PCIe 5.0 1x4, 2x2
NVMe	2.0	2.0	2.0
NAND Flash	3D QLC	3D QLC	3D QLC
Performance[3,4,5]			
Sequential Read(MB/s)	14,000	14,000	14,000
Sequential Write(MB/s)	2,100	2,100	2,100
4K Random Read(IOPS)	3,000K	3,000K	3,000K
16K Random Write(IOPS)	15.6K	15.6K	15.6K
Read Latency (Typ., µs)	110	110	110
Write Latency (Typ., µs)	12	12	12
Power Consumption[6]			
Active (W)	25	25	25
Endurance/Reliability			
DWPD[7]	0.3	0.3	0.3
UBER	< 1 sector per 10^{18} bits read	< 1 sector per 10^{18} bits read	< 1 sector per 10^{18} bits read
MTBF (million hours)	2.5	2.5	2.5
Limited Warranty (years)	5	5	5
Temperature			
Operating Temp. (°C)	0 - 70	0 - 70	0 - 70
Non-Operating Temp. (°C)	-40 - 85	-40 - 85	-40 - 85
Physical Dimension			
Length (mm)	100.10	100.10	100.10
Width (mm)	69.85	69.85	69.85
Height (mm)	15.00	15.00	15.00

(1) The product is still in the early development stage, all values provided are based on estimation.
(2) 1 TB = 10^{12} bytes.
(3) Sequential Performance is based on FIO on Linux, 128KB, with QD=32, 1 worker , and test drive set as secondary.
(4) Random Performance is based on FIO on Linux, 4KB data size, QD=32, 16 workers.
(5) Latency is measured with random workloads based on FIO on Linux, 4KB data size, QD=1, 1 worker.
(6) Power consumption (Maximum RMS) is measured during the sequential read/write and random read/write operations performed by iometer with the conditions described in (2)(3).
(7) The results of DWPD are obtained in compliance with JESD219A Standards.

Solutions - D200V

Form Factor	E3 (EDSFF)		
Capacity[2]	30.72TB	61.44TB	122.88TB
Interface	PCIe 5.0 1x4, 2x2	PCIe 5.0 1x4, 2x2	PCIe 5.0 1x4, 2x2
NVMe	2.0	2.0	2.0
NAND Flash	3D QLC	3D QLC	3D QLC
Performance[3,4,5]			
Sequential Read(MB/s)	14,000	14,000	14,000
Sequential Write(MB/s)	2,100	2,100	2,100
4K Random Read(IOPS)	3,000K	3,000K	3,000K
16K Random Write(IOPS)	15.6K	15.6K	15.6K
Read Latency (Typ., μs)	110	110	110
Write Latency (Typ., μs)	12	12	12
Power Consumption[6]			
Active (W)	25	25	25
Endurance/Reliability			
DWPD[7]	0.3	0.3	0.3
UBER	< 1 sector per 10^{18} bits read	< 1 sector per 10^{18} bits read	< 1 sector per 10^{18} bits read
MTBF (million hours)	2.5	2.5	2.5
Limited Warranty (years)	5	5	5
Temperature			
Operating Temp. (°C)	0 - 70	0 - 70	0 - 70
Non-Operating Temp. (°C)	-40 - 85	-40 - 85	-40 - 85
Physical Dimension			
Length (mm)	112.75	TBD	TBD
Width (mm)	76.00	TBD	TBD
Height (mm)	7.50	TBD	TBD

(1) The product is still in the early development stage, all values provided are based on estimation.
(2) 1 TB = 10^{12} bytes.
(3) Sequential Performance is based on FIO on Linux, 128KB, with QD=32, 1 worker , and test drive set as secondary.
(4) Random Performance is based on FIO on Linux, 4KB data size, QD=32, 16 workers.
(5) Latency is measured with random workloads based on FIO on Linux, 4KB data size, QD=1, 1 worker.
(6) Power consumption (Maximum RMS) is measured during the sequential read/write and random read/write operations performed by iometer with the conditions described in (2)(3).
(7) The results of DWPD are obtained in compliance with JESD219A Standards.

Find more information and resources at: phisonenterprise.com