PASCARI

ENTERPRISE D-SERIES

PCIe Gen5 Data Center Storage Solution in E1.S Form Factor

PASCARI D200

Sequential Read

Up to 14,000 MB/s

Sequential Write

Up to 8,500 MB/s

Random Read

Up to 3,300K IOPS

Random Write

Up to 880K IOPS

Interface

PCIe 5.0 x4

Capacity

Up to 7.68TB

Form Factor

E1.S

DWPD

1, 3

Product Features

- NVMe 2.0
- 128 Namespaces
- Power Loss Protection (PLP)
- ISE, TCG Opal 2.0 support
- AES-XTS 256-bit Encryption
- Data Integrity and Protection
- End-to-End Data Path Protection
- SECDED
- Sanitize
- NVMe-MI (Management Interface)
- SMBus

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Solution - D200E

Form Factor E1.S			
Capacity[1]	1.6TB	3.2TB	6.4TB
Interface	PCIe 5.0 x4	PCIe 5.0 x4	PCIe 5.0 x4
NVMe	2.0	2.0	2.0
NAND Flash	3D TLC	3D TLC	3D TLC
Performance[2,3,4]			
Sequential Read (MB/s)	14,000	14,000	14,000
Sequential Write (MB/s)	4,200	8,400	8,500
4K Random Read (IOPS)	2,350K	3,300K	3,200K
4K Random Write (IOPS)	390K	670K	880K
Read Latency (Typ., µs)	60	60	60
Write Latency (Typ., µs)	9	9	9
Power Consumption [5]			
Active (W)	17	20	22
Idle (W)	4.9	4.9	4.9
Endurance/Reliability			
DWPD[6]	3	3	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)	118.75	118.75	118.75
Width (mm)	33.75	33.75	33.75
Height (mm)	9.5	9.5	15
Weight (g)	<80	<80	<100
Part Number			
ISE FW	DP20AH021T60E312 T0410	DP20AH023T20E314 T0910	DP20BH026T40E318 T1910
SED FW	DP20AH021T60E212 T0410	DP20AH023T20E214 T0910	DP20BH026T40E218 T1910

(1) 1 TB = 10^{12} bytes.
(2) Sequential Performance is based on FIO on Linux, 512KB data size, with QD=32, 1 job.
(3) Random Performance is based on FIO on Linux, 4KB data size, QD=128, 8 jobs.
(4) Latency is measured with random workloads based on FIO on Linux, 4KB data size, QD=1, 1 job.
(5) Power consumption (average RMS) is measured during the sequential read/write and random read/write operations performed by iometer with the conditions described in (2)(3).
(6) The results of DWPD are obtained in compliance with JESD219A standards.

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Solution - D200P

Form Factor E1.S			
Capacity[1]	1.92TB	3.84TB	7.68TB
Interface	PCIe 5.0 x4	PCIe 5.0 x4	PCIe 5.0 x4
NVMe	2.0	2.0	2.0
NAND Flash	3D TLC	3D TLC	3D TLC
Performance[2,3,4]			
Sequential Read (MB/s)	14,000	14,000	14,000
Sequential Write (MB/s)	4,200	8,400	8,500
4K Random Read (IOPS)	2,350K	3,300K	3,200K
4K Random Write (IOPS)	140K	220K	420K
Read Latency (Typ., µs)	60	60	60
Write Latency (Typ., µs)	9	9	9
Power Consumption [5]			
Active (W)	16	19	23
Idle (W)	4.9	4.9	4.9
Endurance/Reliability			
DWPD[6]	1	1	1
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)	118.75	118.75	118.75
Width (mm)	33.75	33.75	33.75
Height (mm)	9.5	9.5	15
Weight (g)	<80	<80	<100
Part Number			
ISE FW	DP20AH021T92P312 T0410	DP20AH023T84P314 T0910	DP20BH027T68P318 T1910
SED FW	DP20AH021T92P212 T0410	DP20AH023T84P214 T0910	DP20BH027T68P218 T1910

(1) 1 TB = 10^{12} bytes.
(2) Sequential Performance is based on FIO on Linux, 512KB data size, with QD=32, 1 job.
(3) Random Performance is based on FIO on Linux, 4KB data size, QD=128, 8 jobs.
(4) Latency is measured with random workloads based on FIO on Linux, 4KB data size, QD=1, 1 job.
(5) Power consumption (average RMS) is measured during the sequential read/write and random read/write operations performed by iometer with the conditions described in (2)(3).
(6) The results of DWPD are obtained in compliance with JESD219A standards.

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