PASCARI

ENTERPRISE D-SERIES

Ultra High Capacity PCIe Gen5 Storage That Lowers Costs at Scale

PASCARI D206V

Sequential Read

Up to 14,000 MB/s

Sequential Write

Up to 3,400 MB/s

Random Read

Up to 2,700K IOPS (4K)

Random Write

Up to 40K IOPS (16K)

Interface

PCIe 5.0 1x4 (Single port), 2x2 (Dual port)

Capacity

Up to 245.76TB

Form Factor

U.2, E3.S, E3.L, E1.L

DWPD

0.3

Product Features

- NVMe 2.0
- OCP Datacenter NVMe® SSD Specification V2.0
- 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
- Metadata Protection
- SECDED
- Sanitize
- NVMe-MI (Management Interface)
- SMBus

ES France - Mobilité & Systèmes Embarqués
127 rue de Buzenval BP 26 - 92380 Garches
Tél. 01 47 95 99 80
e-mail : mse@es-france.com
Site Web : www.es-france.com

Solutions - D206V

Form Factor U.2				
Capacity[2]	30.72TB	61.44TB	122.88TB	245.76TB
Interface	PCIe 5.0 1x4, 2x2	PCIe 5.0 1x4, 2x2	PCIe 5.0 1x4, 2x2	PCIe 5.0 1x4, 2x2
NVMe	2.0	2.0	2.0	2.0
NAND Flash	3D QLC	3D QLC	3D QLC	3D QLC
Performance[3,4,5]				
Sequential Read (MB/s)	14,000	14,000	14,000	13,700
Sequential Write (MB/s)	3,300	3,300	3,300	3,100
4K Random Read (IOPS)	2,200K	2,200K	2,200K	2,200K
16K/32K Random Write (IOPS)	34K	34K	34K	21K
Read Latency (Typ., µs)	110	110	110	110
Write Latency (Typ., µs)	40	40	40	40
Power Consumption [6]				
Active (W)	≤25	≤25	≤25	≤30
Idle (W)	≤5	≤5	≤5	≤5
Endurance/Reliability				
DWPD[7]	0.3	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	< 1 sector per 10^{18} bits read
MTBF (million hours)	2.5	2.5	2.5	2.5
Limited Warranty (years)	5	5	5	5
Temperature				
Operating Temp. (°C)	0 - 70	0 - 70	0 - 70	0 - 70
Non-Operating Temp. (°C)	-40 - 85	-40 - 85	-40 - 85	-40 - 85
Physical Dimension				
Length (mm)	100.10	100.10	100.10	100.10
Width (mm)	69.85	69.85	69.85	69.85
Height (mm)	14.65	14.65	14.65	14.65
Weight (g)	194	201	161	161
Part Number				
Single Port ISE FW	DP20JM0130T7V3232T710	DP20JM0161T4V3265T510	DP20JM01122TV32131T10	DP20NM01245TV32262T10
Single Port SED FW	DP20JM0130T7V2232T710	DP20JM0161T4V2265T510	DP20JM01122TV22131T10	DP20NM01245TV22262T10
Dual Port ISE FW	DX20JM0130T7V3232T710	DX20JM0161T4V3265T510	DX20JM01122TV32131T10	DX20NM01245TV32262T10
Dual Port SED FW	DX20JM0130T7V2232T710	DX20JM0161T4V2265T510	DX20JM01122TV22131T10	DX20NM01245TV22262T10

(1) The product is still in 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 data size, with QD=32, 1 job.
(4) Random Performance is based on FIO on Linux, random read 4KB data size, 30.72TB to 122.88TB random write 16KB data size, 245.76TB random write 32KB data size, QD=128, 8 jobs.
(5) Latency is measured with random workloads based on FIO on Linux, random read 4KB data size, random write 16KB data size, QD=1, 1 job.
(6) Power consumption (average RMS) may differ according to flash configuration and platform.
(7) The results of DWPD are obtained in compliance with JESD219A standards and IU size aligned.

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Form Factor E3.S		
Capacity[2]	30.72TB	61.44TB
Interface	PCIe 5.0 1x4, 2x2	PCIe 5.0 1x4, 2x2
NVMe	2.0	2.0
NAND Flash	3D QLC	3D QLC
Performance[3,4,5]		
Sequential Read (MB/s)	14,000	14,000
Sequential Write (MB/s)	3,300	3,300
4K Random Read (IOPS)	2,200K	2,200K
16K Random Write (IOPS)	34K	34K
Read Latency (Typ., µs)	110	110
Write Latency (Typ., µs)	40	40
Power Consumption [6]		
Active (W)	≤25	≤25
Idle (W)	≤5	≤5
Endurance/Reliability		
DWPD[7]	0.3	0.3
UBER	< 1 sector per 10^{18} bits read	< 1 sector per 10^{18} bits read
MTBF (million hours)	2.5	2.5
Limited Warranty (years)	5	5
Temperature		
Operating Temp. (°C)	0 - 70	0 - 70
Non-Operating Temp. (°C)	-40 - 85	-40 - 85
Physical Dimension		
Length (mm)	112.75	112.75
Width (mm)	76.00	76.00
Height (mm)	7.45	7.45
Weight (g)	113	121
Part Number		
Single Port ISE FW	DP20KM0130T7V3132T710	DP20KM0161T4V3165T510
Single Port SED FW	DP20KM0130T7V2132T710	DP20KM0161T4V2165T510
Dual Port ISE FW	DX20KM0130T7V3132T710	DX20KM0161T4V3165T510
Dual Port SED FW	DX20KM0130T7V2132T710	DX20KM0161T4V2165T510

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(2) 1 TB = 10^{12} bytes.
(3) Sequential Performance is based on FIO on Linux, 128KB data size, with QD=32, 1 job.
(4) Random Performance is based on FIO on Linux, random read 4KB data size, random write 16KB data size, QD=128, 8 jobs.
(5) Latency is measured with random workloads based on FIO on Linux, random read 4KB data size, random write 16KB data size, QD=1, 1 job.
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Solutions - D206V

Form Factor E3.L	
Capacity[2]	122.88TB
Interface	PCIe 5.0 1x4, 2x2
NVMe	2.0
NAND Flash	3D QLC
Performance[3,4,5]	
Sequential Read (MB/s)	14,000
Sequential Write (MB/s)	3,400
4K Random Read (IOPS)	2,700K
16K Random Write (IOPS)	40K
Read Latency (Typ., µs)	110
Write Latency (Typ., µs)	40
Power Consumption [6]	
Active (W)	≤30
Idle (W)	≤5
Endurance/Reliability	
DWPD[7]	0.3
UBER	< 1 sector per 10^{18} bits read
MTBF (million hours)	2.5
Limited Warranty (years)	5
Temperature	
Operating Temp. (°C)	0 - 70
Non-Operating Temp. (°C)	-40 - 85
Physical Dimension	
Length (mm)	142.20
Width (mm)	76.00
Height (mm)	7.45
Weight (g)	157
Part Number	
Single Port ISE FW	DP20LM01122TV31131T10
Single Port SED FW	DP20LM01122TV21131T10
Dual Port ISE FW	DX20LM01122TV31131T10
Dual Port SED FW	DX20LM01122TV21131T10

(1) The product is still in 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 data size, with QD=32, 1 job.
(4) Random Performance is based on FIO on Linux, random read 4KB data size, random write 16KB data size, QD=128, 8 jobs.
(5) Latency is measured with random workloads based on FIO on Linux, random read 4KB data size, random write 16KB data size, QD=1, 1 job.
(6) Power consumption (average RMS) may differ according to flash configuration and platform.
(7) The results of DWPD are obtained in compliance with JESD219A standards and IU size aligned.

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Solutions - D206V

Form Factor E1.L	
Capacity[2]	122.88TB
Interface	PCIe 5.0 1x4, 2x2
NVMe	2.0
NAND Flash	3D QLC
Performance[3,4,5]	
Sequential Read (MB/s)	14,000
Sequential Write (MB/s)	3,300
4K Random Read (IOPS)	2,000K
16K Random Write (IOPS)	34K
Read Latency (Typ., µs)	110
Write Latency (Typ., µs)	40
Power Consumption [6]	
Active (W)	≤25
Idle (W)	≤5
Endurance/Reliability	
DWPD[7]	0.3
UBER	< 1 sector per 10^{18} bits read
MTBF (million hours)	2.5
Limited Warranty (years)	5
Temperature	
Operating Temp. (°C)	0 - 70
Non-Operating Temp. (°C)	-40 - 85
Physical Dimension	
Length (mm)	318.75
Width (mm)	38.40
Height (mm)	9.50
Weight (g)	222
Part Number	
Single Port ISE FW	DP20MM01122TV32131T10
Single Port SED FW	DP20MM01122TV22131T10
Dual Port ISE FW	DX20MM01122TV32131T10
Dual Port SED FW	DX20MM01122TV22131T10

(1) The product is still in 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 data size, with QD=32, 1 job.
(4) Random Performance is based on FIO on Linux, random read 4KB data size, random write 16KB data size, QD=128, 8 jobs.
(5) Latency is measured with random workloads based on FIO on Linux, random read 4KB data size, random write 16KB data size, QD=1, 1 job.
(6) Power consumption (average RMS) may differ according to flash configuration and platform.
(7) The results of DWPD are obtained in compliance with JESD219A standards and IU size aligned.

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