

PCIe Gen4 Data Center High-Speed SSD



ENTERPRISE D-SERIES

NEUBE D100P

Sequential Read

Up to 6,800 MB/s

Sequential Write

Up to 2,000 MB/s

Random Read

Up to 900K IOPS

Random Write

Up to 70K IOPS

Interface

PCIe 4.0 x4

Capacity

Up to 3.84TB

Form Factor

M.2 2280, M.2 22110, E1.S, U.2

DWPD

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Product Features

- NVMe 1.4
- 64 Namespaces
- Power Loss Protection (PLP)
- 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

Solutions - D100P

Form Factor E1.S				
Capacity ⁽¹⁾	480GB	960GB	1920GB	3840GB
Interface	PCIe 4.0 1x4,	PCIe 4.0 1x4	PCIe 4.0 1x4	PCIe 4.0 1x4
NVMe	1.4	1.4	1.4	1.4
NAND Flash	3D TLC	3D TLC	3D TLC	3D TLC
Performance ^(2,3,4)				
Sequential Read (MB/s)	6,500	6,800	6,800	6,800
Sequential Write(MB/s)	700	1,400	2,000	1,700
4K Random Read (IOPS)	450K	800K	900K	650K
4K Random Write (IOPS)	25K	50K	60K	70K
Read Latency (Typ., μs)	75	75	75	80
Write Latency (Typ., μs)	40	30	25	25
Power Consumption ⁽⁵⁾				
Active (W)	8.4	10.1	11.9	11.8
Idle (W)	4	4	4.2	4.2
Endurance/ Reliability				
DWPD ⁽⁶⁾	1	1	1	1
UBER	<1 sector per 10 ¹⁷ bits read	<1 sector per 10 ¹⁷ bits read	<1 sector per 10 ¹⁷ bits read	<1 sector per 10 ¹⁷ bits read
MTBF (million hours)	2.0	2.0	2.0	2.0
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)	118.75	118.75	118.75	118.75
Width (mm)	33.75	33.75	33.75	33.75
Height (mm)	9.50	9.50	9.50	9.50
Weight (g)	63	63	68	68

(1) 1 TB = 10⁽⁹⁾ bytes.

(2) Sequential Performance is based on FIO on Linux, 128K, with QD=32, 1 job.

(3) Random Performance is based on FIO on Linux, 4K data size, QD=32, 8 jobs.

(4) Latency is measured with random workloads based on FIO on Linux, 4KB data size, QD=1, 1 job.

(5) 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).

(6) The results of DWPD are obtained in compliance with JESD219A Standards.

Solutions - D100P

Form Factor U.2				
	Capacity ⁽¹⁾	480GB	960GB	1920GB
Performance ^(2,3)	Sequential Read	6,500 MB/s	6,800 MB/s	6,800 MB/s
	Sequential Write	700 MB/s	1,400 MB/s	2,000 MB/s
	4K Random Read	450K IOPS	800K IOPS	900K IOPS
	4K Random Write	25K IOPS	50K IOPS	60K IOPS
Power ⁽⁵⁾ Consumption	Active	8.4 W	9.0 W	11.7 W
	Idle	4.0 W	4.0 W	4.2 W
Latency ⁽⁴⁾	4K Random Read	75 us	75 us	75 us
	4K Random Write	35 us	20 us	20 us
Endurance/ Reliability				
	DWPD ⁽⁶⁾	1	1	1
	UBER	1 sector per 10 ⁽¹⁷⁾ bits read	1 sector per 10 ⁽¹⁷⁾ bits read	1 sector per 10 ⁽¹⁷⁾ bits read
	MTBF (milliom hours)	2.0	2.0	2.0
	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
	Weight (g)	197	197	198

(1) 1 TB = 10⁽⁹⁾ bytes.

(2) Sequential Performance is based on FIO on Linux, 128K, with QD=32, 1 job.

(3) Random Performance is based on FIO on Linux, 4K data size, QD=32, 8 jobs.

(4) Latency is measured with random workloads based on FIO on Linux, 4KB data size, QD=1, 1 job.

(5) 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).

(6) The results of DWPD are obtained in compliance with JESD219A Standards.

Solutions - D100P

Form Factor M.2 2280			
Capacity ⁽¹⁾	480GB	960GB	1920GB
Interface	PCIe 4.0 1x4,	PCIe 4.0 1x4	PCIe 4.0 1x4
NVMe	1.4	1.4	1.4
NAND Flash	3D TLC	3D TLC	3D TLC
Performance ^(2,3,4)			
Sequential Read (MB/s)	6,000	6,000	6,000
Sequential Write(MB/s)	700	1,400	1,800
4K Random Read (IOPS)	450K	750K	800K
4K Random Write (IOPS)	25K	50K	60K
Read Latency (Typ., μs)	75	75	75
Write Latency (Typ., μs)	40	35	35
Power Consumption ⁽⁵⁾			
Active (W)	8	9.3	11
Idle (W)	3.5	3.5	3.5
Endurance/ Reliability			
DWPD ⁽⁶⁾	1	1	1
UBER	<1 sector per 10 ¹⁷ bits read	<1 sector per 10 ¹⁷ bits read	<1 sector per 10 ¹⁷ bits read
MTBF (million hours)	2.0	2.0	2.0
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)	80.00	80.00	80.00
Width (mm)	22.00	22.00	22.00
Height (mm)	4.08	4.08	4.08
Weight (g)	11	12	12

(1) 1 TB = 10⁽⁹⁾ bytes.

(2) Sequential Performance is based on FIO on Linux, 128K, with QD=32, 1 job.

(3) Random Performance is based on FIO on Linux, 4K data size, QD=32, 8 jobs.

(4) Latency is measured with random workloads based on FIO on Linux, 4KB data size, QD=1, 1 job.

(5) 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).

(6) The results of DWPD are obtained in compliance with JESD219A Standards.



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Solutions - D100P

Form Factor M.2 22110				
Capacity ⁽¹⁾	480GB	960GB	1920GB	3840GB
Interface	PCIe 4.0 1x4,	PCIe 4.0 1x4	PCIe 4.0 1x4	PCIe 4.0 1x4
NVMe	1.4	1.4	1.4	1.4
NAND Flash	3D TLC	3D TLC	3D TLC	3D TLC
Performance ^(2,3,4)				
Sequential Read (MB/s)	6,000	6,000	6,000	3,700
Sequential Write(MB/s)	700	1,400	1,800	1,700
4K Random Read (IOPS)	450K	750K	800K	400K
4K Random Write (IOPS)	25K	50K	60K	40K
Read Latency (Typ., μs)	75	75	75	80
Write Latency (Typ., μs)	40	35	35	25
Power Consumption ⁽⁵⁾				
Active (W)	8.1	8.9	10.3	8.7
Idle (W)	4	4	4.2	4.2
Endurance/ Reliability				
DWPD ⁽⁶⁾	1	1	1	1
UBER	<1 sector per 10 ¹⁷ bits read	<1 sector per 10 ¹⁷ bits read	<1 sector per 10 ¹⁷ bits read	<1 sector per 10 ¹⁷ bits read
MTBF (million hours)	2.0	2.0	2.0	2.0
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)	110.00	110.00	110.00	110.00
Width (mm)	22.00	22.00	22.00	22.00
Height (mm)	4.08	4.08	4.08	4.08
Weight (g)	12.3	12.4	12.4	15

(1) 1 TB = 10⁽⁹⁾ bytes.

(2) Sequential Performance is based on FIO on Linux, 128K, with QD=32, 1 job.

(3) Random Performance is based on FIO on Linux, 4K data size, QD=32, 8 jobs.

(4) Latency is measured with random workloads based on FIO on Linux, 4KB data size, QD=1, 1 job.

(5) 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).

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