neube®

BEyond NEUral

Unrivaled Performance & Low Power Consumption Gen4 SSD

ENTERPRISE X-SERIES

NEUBE X100

Sequential Read

Up to 7,400 MB/s

Sequential Write

Up to 7,000 MB/s

Random Read

Up to 1,750K IOPS

Random Write

Up to 490K IOPS

Interface

PCIe 4.0 1x4 (Single port), 2x2 (Dual port)

Capacity

Up to 30.72TB

Form Factor

U.2/U.3 (2)

DWPD

1, 3

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

Powered by

PHISON

Solutions - X100E

Form Factor U.2/U.3 [2]					
Capacity [1]	1.6TB	3.2TB	6.4TB	12.8TB	25.6TB
Interface	PCIe 4.0 1x4, 2x2	PCIe 4.0 1x4, 2x2	PCIe 4.0 1x4, 2x2	PCIe 4.0 1x4, 2x2	PCIe 4.0 1x4, 2x2
NVMe	1.4	1.4	1.4	1.4	1.4
NAND Flash	3D TLC	3D TLC	3D TLC	3D TLC	3D TLC
Performance [3,4,5]					
Sequential Read (MB/s)	7,400	7,400	7,400	7,400	7,400
Sequential Write(MB/s)	3,600	6,900	7,000	7,000	6,000
4K Random Read (IOPS)	1,750K	1,750K	1,750K	1,750K	1,750K
4K Random Write (IOPS)	300K	460K	460K	490K	470K
Read Latency (Typ,. µs)	70	70	70	70	70
Write Latency (Typ,. µs)	7	7	7	7	7
Power Consumption [6]					
Active (W)	13	18	19	21	20
Idle (W)	5.5	5.8	5.9	7.4	8.0
Endurance/ Reliability					
DWPD [7]	3	3	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	<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	2.5
Limited Warranty (years)	5	5	5	5	5
Temperature					
Operating Temp. (C)	0 - 70	0 - 70	0 - 70	0 - 70	0 - 70
Non-operating Temp. (C)	-40 - 85	-40 - 85	-40 - 85	-40 - 85	-40 - 85
Physical Dimension					
Length (mm)	100.10	100.10	100.10	100.10	100.10
Width (mm)	69.85	69.85	69.85	69.85	69.85
Height (mm)	15.00	15.00	15.00	15.00	15.00
Weight (g)	198	200	203	205	208

(1) 1 TB = $10^{(12)}$ bytes.
(2) U.3 form factor support is available through custom configurations for qualified OEM customers upon request.
(3) Sequential Performance is based on FIO on Linux, 512KB data size, with QD=32, 1 job.
(4) Random Performance is based on FIO on Linux, 4KB data size, QD=128, 8 jobs.
(5) Latency is measured with random workloads based on FIO on Linux, 4KB data size, QD=1, 1 job.
(6) 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)and(3).
(7) The results of DWPD are obtained in compliance with JESD219A standards.

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Solutions - X100P

Form Factor U.2/U.3 [2]					
Capacity [1]	1.92TB	3.84TB	7.68TB	15.36TB	30.72TB
Interface	PCIe 4.0 1x4, 2x2	PCIe 4.0 1x4, 2x2	PCIe 4.0 1x4, 2x2	PCIe 4.0 1x4, 2x2	PCIe 4.0 1x4, 2x2
NVMe	1.4	1.4	1.4	1.4	1.4
NAND Flash	3D TLC	3D TLC	3D TLC	3D TLC	3D TLC
Performance [3,4,5]					
Sequential Read (MB/s)	7,400	7,400	7,400	7,400	7,400
Sequential Write(MB/s)	3,600	6,900	7,000	7,000	6,000
4K Random Read (IOPS)	1,750K	1,750K	1,750K	1,750K	1,750K
4K Random Write (IOPS)	126K	195K	190K	210K	210K
Read Latency (Typ,. µs)	70	70	70	70	70
Write Latency (Typ,. µs)	7	7	7	7	7
Power Consumption [6]					
Active (W)	13	18	19	20	21
Idle (W)	5.4	5.6	5.8	7.3	8.6
Endurance/ Reliability					
DWPD [7]	1	1	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	<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	2.5
Limited Warranty (years)	5	5	5	5	5
Temperature					
Operating Temp. (C)	0 - 70	0 - 70	0 - 70	0 - 70	0 - 70
Non-operating Temp. (C)	-40 - 85	-40 - 85	-40 - 85	-40 - 85	-40 - 85
Physical Dimension					
Length (mm)	100.10	100.10	100.10	100.10	100.10
Width (mm)	69.85	69.85	69.85	69.85	69.85
Height (mm)	15.00	15.00	15.00	15.00	15.00
Weight (g)	198	200	203	205	208

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