PASCARI

ENTERPRISE X-SERIES

X100 SSD Platform - Outstanding Overachiever Enterprise Class PCIe Gen4x4 SSD

The X100 SSD platform has unrivaled performance while also consuming the least amount of power for its class. This is accomplished utilizing Phison's unique and patented CPU architecture. X100 is available up to 30.72TB at only 21W.

Full SED or FIPS is also supported through our IMAGIN+ customization service that allows you to pick the perfect solution for your requirements.

Product Features

- PCIe 4.0 1x4 / 2x2 (Dual port)
- NVMe 1.4
- Capacity up to 30.72TB
- Form Factor: U.2 / U.3
- DWPD: 1 / 3
- 64 Namespaces
- Power Loss Protection (PLP)
- 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 7,400 MB/s

Write 6,900K MB/s

Random Performance

Read 1,750K IOPS

Write 470K IOPS

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Solution - X100E

Form Factor	U.3/U.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[2,3,4]					
Sequential Read(MB/s)	7,400	7,400	7,000	7,000	7,000
Sequential Write(MB/s)	4,200	6,900	6,900	7,000	6,000
4K Random Read(IOPS)	1,750K	1,750K	1,750K	1,600K	1,600K
4K Random Write(IOPS)	300K	460K	470K	480K	450K
Read Latency (Typ., µs)	110	100	100	100	90
Write Latency (Typ., µs)	15	15	15	15	15
Power Consumption[5]					
Active (W)	14	19	20	21	21
Idle (W)	6	6	6	8	9
Endurance/Reliability					
DWPD[6]	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
Part Number					
Single Port Non-SED FW	XP106H011T60E0 22T0400	XP106H013T20E0 24T0900	XP106H016T40E0 28T1900	XP106H0112T8E0 116T300	XP106H0125T6E0 132T700
Single Port SED FW	XP106H011T60E2 22T0400	XP106H013T20E2 24T0900	XP106H016T40E2 28T1900	XP106H0112T8E2 116T300	XP106H0125T6E2 132T700
Dual Port Non-SED FW	XX106H011T60E0 22T0400	XX106H013T20E0 24T0900	XX106H016T40E0 28T1900	XX106H0112T8E0 116T300	XX106H0125T6E0 132T700
Dual Port SED FW	XX106H011T60E2 22T0400	XX106H013T20E2 24T0900	XX106H016T40E2 28T1900	XX106H0112T8E2 116T300	XX106H0125T6E2 132T700

(1) 1 TB = 10^{12} bytes.
(2) Sequential Performance is based on FIO on Linux, 128K, with QD=32, 1 worker.
(3) Random Performance is based on FIO on Linux, 4K data size, QD=64, 8 worker.
(4) Latency is measured with random workloads based on FIO on Linux, 4KB data size, QD=1, 1 worker.
(5) Power consumption 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 - X100P

Form Factor	U.3/U.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[2,3,4]					
Sequential Read(MB/s)	7,400	7,400	7,400	7,000	7,000
Sequential Write(MB/s)	4,200	6,900	6,900	7,000	6,000
4K Random Read(IOPS)	1,750K	1,750K	1,750K	1,600K	1,600K
4K Random Write(IOPS)	126K	188K	190K	180K	180K
Read Latency (Typ., µs)	110	100	100	100	90
Write Latency (Typ., µs)	15	15	15	15	15
Power Consumption[5]					
Active (W)	14	19	20	21	21
Idle (W)	6	6	6	8	9
Endurance/Reliability					
DWPD[6]	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
Part Number					
Single Port Non-SED FW	XP106H011T92P0 22T0400	XP106H013T84P0 24T0900	XP106H017T68P0 28T1900	XP106H0115T3P0 116T300	XP106H0130T7P0 132T700
Single Port SED FW	XP106H011T92P2 22T0400	XP106H013T84P2 24T0900	XP106H017T68P2 28T1900	XP106H0115T3P2 116T300	XP106H0130T7P2 132T700
Dual Port Non-SED FW	XX106H011T92P0 22T0400	XX106H013T84P0 24T0900	XX106H017T68P0 28T1900	XX106H0115T3P0 116T300	XX106H0130T7P0 132T700
Dual Port SED FW	XX106H011T92P2 22T0400	XX106H013T84P2 24T0900	XX106H017T68P2 28T1900	XX106H0115T3P2 116T300	XX106H0130T7P2 132T700

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(5) Power consumption 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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The data within this specification is subject to change by Phison without notice.
Performance numbers may vary based on system configuration and testing conditions.