ENTERPRISE X-SERIES

MP-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 Miphi'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

U.3 Compatibility
The MP-X100 SSD supports the industry's new U.3 interface and is fully backward compatible with U.2 slots, while also supporting the new U.3 slots for maximum pluggability with rack storage manufacturers.

Artificial Intelligence
Transformation of raw data into actionable intelligence requires enormous CPU and GPU resources fed by the fastest storage devices available. With random read IOPs up to 30% faster than our competitors, the X100 SSD solution is the optimal storage device for use in artificial intelligence applications.

Customizable
Miphi's business model is to customize the X100 SSD platform for our customers' unique applications and brand requirements making the X100 SSD truly unique to our partners.

Applications Servers
In computing environments with tens to thousands of employees running similar programs from centralized servers, lag time while customers or employees are waiting is unacceptable. The new X100 SSD solution is the industry's best answer to provide the fastest application speeds to help accomplish more in the day.

Solutions - X100E

U.3/U.2						
	Capacity[1]	1600GB	3200GB	6400GB	12800GB	25600GB
Performance[2,3]	Sequential Read	7400 MB/s	7400 MB/s	7400 MB/s	7000 MB/s	7000 MB/s
	Sequential Write	4200 MB/s	6900 MB/s	6900 MB/s	7000 MB/s	6000 MB/s
	4K Random Read	1750K IOPS	1750K IOPS	1750K IOPS	1600K IOPS	1600K IOPS
	4K Random Write	300K IOPS	460K IOPS	470K IOPS	480K IOPS	450K IOPS
Power Consumption[4]	Max	13.3 W	18.3 W	19.9 W	20.8 W	20.4 W
	Idle	5.5 W	5.8 W	5.9 W	7.4 W	8.5 W
Latency	Read Latency	110 us	100 us	100 us	100 us	90 us
	Write Latency	15 us	15 us	15 us	15 us	15 us

Features	
Interface	PCIe 4.0 x4 (single port x4 lanes/dual port x2 lanes)
NAND Flash	3D TLC
DWPD[5]	3
UBER	<1 sector per 10^{18} bits
Operating Temperature	0°C - 70°C
Non-Operating Temperature	-40°C - 85°C
MTBF(million years)	2.5

Key Features

Enterprise features support list:

- Namespace
- Dual port
- Reservation
- Metadata protection
- Power loss protection
- Hardware AES-XTS 256-bit encryption
- Support SMBus

Compliance

- PCIe 4.0
- NVMe 1.4
- NVMe Management Interface Rev 1.1
- TCG Opal 2.0(6)
- Sanitize(6)

Part Number

Single Port Non SED	MPX100E1600G-PN	MPX100E3200G-PN	MPX100E6400G-PN	MPX100E12800G-PN	MPX100E25600G-PN
Single Port SED	MPX100E1600G-PS	MPX100E3200G-PS	MPX100E6400G-PS	MPX100E12800G-PS	MPX100E25600G-PS
Dual Port Non SED	MPX100E1600G-PN	MPX100E3200G-PN	MPX100E6400G-PN	MPX100E12800G-PN	MPX100E25600G-PN
Dual Port SED	MPX100E1600G-XS	MPX100E3200G-XS	MPX100E6400G-XS	MPX100E12800G-XS	MPX100E25600G-XS

(1) 1 GB = 1,000,000,000 bytes.
(2) Sequential Performance is based on FIO on Linux, 128K, with QD=32, 1 worker, and test drive set as secondary.
(3) Random Performance is based on FIO on Linux, 4K data size, QD=32, 1 worker, 4K aligned.
(4) Power consumption is measured during the sequential read/write and random read/write operations performed by iometer with the conditions described in (2)(3).
(5) The results of DWPD are obtained in compliance with JESD219A Standards.

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Solutions - X100P

U.3/U.2						
	Capacity[1]	1920GB	3840GB	7680GB	15360GB	30720GB
Performance[2,3]	Sequential Read	7400 MB/s	7400 MB/s	7400 MB/s	7000 MB/s	7000 MB/s
	Sequential Write	4200 MB/s	6900 MB/s	6900 MB/s	7000 MB/s	6000 MB/s
	4K Random Read	1750K IOPS	1750K IOPS	1750K IOPS	1600K IOPS	1600K IOPS
	4K Random Write	126K IOPS	188K IOPS	190K IOPS	180K IOPS	180K IOPS
Power Consumption[4]	Max	12.8 W	17.9 W	19.1 W	20.1 W	20.6 W
	Idle	5.5 W	5.8 W	5.8 W	7.3 W	8.2 W
Latency	Read Latency	110 us	100 us	100 us	100 us	90 us
	Write Latency	15 us	15 us	15 us	15 us	15 us

Features	
Interface	PCIe 4.0 x4 (single port x4 lanes/dual port x2 lanes)
NAND Flash	3D TLC
DWPD[5]	1
UBER	<1 sector per 10^{18} bits
Operating Temperature	0°C - 70°C
Non-Operating Temperature	-40°C - 85°C
MTBF(million years)	2.5

Key Features

Enterprise features support list:

- Namespace
- Dual port
- Reservation
- Metadata protection
- Powerloss protection
- Hardware AES-XTS 256-bit encryption
- Support SMBbus

Compliance

- PCIe 4.0
- NVMe 1.4
- NVMe Management Interface Rev 1.1
- TCG Opal 2.0(6)
- Sanitize(6)

Part Number

Single Port Non SED	MPX100P1920G-PN	MPX100P3840G-PN	MPX100P7680G-PN	MPX100P15360G-PN	MPX100P30720G-PN
Single Port SED	MPX100P1920G-XN	MPX100P3840G-PS	MPX100P7680G-PS	MPX100P15360G-PS	MPX100P30720G-PS
Dual Port Non SED	MPX100P1920G-PS	MPX100P3840G-XN	MPX100P7680G-XN	MPX100P15360G-XN	MPX100P30720G-XN
Dual Port SED	MPX100P1920G-XS	MPX100P3840G-XS	MPX100P7680G-XS	MPX100P15360G-XS	MPX100P30720G-XS

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