ENTERPRISE X-SERIES

FEATURE-RICH PCIE GEN 5 ENTERPRISE STORAGE SOLUTIONS

The MiPhi X200 exists to support your diverse requirements in a single series. MP-X200 delivers both single-port and dual-port modes while shipping in U.2 2.5" and E3.S form factors to give your data center reliable, and predictable performance that exceeds industry standards

KEY FEATURES	
Interface	PCIe 5.0 1x4 (single port x 2 lanes/dual port x2 lanes)
NAND Flash	3D TLC
DWPD	13
UBER	<1 sector per 10 bits
Operating Temperature	0°C - 70°C
Non-Operating Temperature	-40°C - 85°C
MTBF (million years)	2.5

- PCIe 5.0 1x4 / 2x2 (Dual port)
- NVMe 2.0
- Capacity up to 30.72TB
- Form Factor: U.2 / E3.S
- DWPD: 1 / 3
- 128 Namespaces
- Power Loss Protection (PLP)
- ISE, 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 14,800 MB/s

Read 8,700K MB/s

Random Performance

Read 3,300K IOPS

Write 900K IOPS

MP-X200E Specifications

U.2						
	Capacity	1600GB	3200GB	6400GB	12800GB	25600GB
Performance	Seq Read	14800 MB/s	14800 MB/s	14800 MB/s	14800 MB/s	14800 MB/s
	Seq Write	4300 MB/s	8600 MB/s	8700 MB/s	8500 MB/s	7400 MB/s
	Random Read	2400K IOPS	3300K IOPS	3200K IOPS	2800K IOPS	2300K IOPS
	Random Write	390K IOPS	790K IOPS	880K IOPS	900K IOPS	615K IOPS
Power Consumption	Max	16 W	22 W	23 W	24 W	25 W
	Idle	5 W	5 W	5 W	5 W	5 W
Latency	Read Latency	60 us	60 us	60 us	60 us	60 us
	Write Latency	10 us	10 us	10 us	10 us	10 us

KEY FEATURES

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

Compliance Support List
- PCIe 5.0
- NVMe 2.0
- Management Interface
- Rev 1.1 TCG Opal 2.0(6)
- Sanitize(6)

(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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MP-X200E Specifications

E3.S				
Capacity	1600GB	3200GB	6400GB	12800GB
Performance Seq Read	14800 MB/s	14800 MB/s	14800 MB/s	14800 MB/s
Seq Write	4300 MB/s	8600 MB/s	8700 MB/s	8500 MB/s
Random Read	2400K IOPS	3300K IOPS	3200K IOPS	2600K IOPS
Random Write	390K IOPS	790K IOPS	900K IOPS	900K IOPS
Power Consumption Max	17 W	22 W	23 W	24 W
Idle	5 W	5 W	5 W	5 W
Latency Read Latency	60 us	60 us	60 us	60 us
Write Latency	10 us	10 us	10 us	10 us

KEY FEATURES

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

Compliance Support List
- PCle 5.0
- NVMe 2.0
- Management Interface
- Rev 1.1 TCG Opal 2.0(6)
- Sanitize(6)

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MP-X200P Specifications

U.2					
Capacity	1920GB	3840GB	7680GB	15360GB	30720GB
Performance Seq Read	14800 MB/s	14800 MB/s	14800 MB/s	14800 MB/s	14800 MB/s
Seq Write	4300 MB/s	8600 MB/s	8700 MB/s	8500 MB/s	7400 MB/s
Random Read	2400K IOPS	3300K IOPS	3200K IOPS	2800K IOPS	2300K IOPS
Random Write	140K IOPS	320K IOPS	390K IOPS	420K IOPS	265K IOPS
Power Consumption Max	16 W	22 W	23 W	24 W	25 W
Idle	5 W	5 W	5 W	5 W	5 W
Latency Read Latency	60 us	60 us	60 us	60 us	60 us
Write Latency	10 us	10 us	10 us	10 us	10 us

KEY FEATURES

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

Compliance Support List
- PCIe 5.0
- NVMe 2.0
- Management Interface
- Rev 1.1 TCG Opal 2.0(6)
- Sanitize(6)

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(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.
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MP-X200P Specifications

E3.S					
	Capacity	1920GB	3840GB	7680GB	15360GB
Performance	Seq Read	14800 MB/s	14800 MB/s	14800 MB/s	14800 MB/s
	Seq Write	4300 MB/s	8600 MB/s	8700 MB/s	8500 MB/s
	Random Read	2400K IOPS	3300K IOPS	3200K IOPS	2600K IOPS
	Random Write	140K IOPS	320K IOPS	460K IOPS	420K IOPS
Power Consumption	Max	16 W	22 W	25 W	25 W
	Idle	5 W	5 W	5 W	5 W
Latency	Read Latency	60 us	60 us	60 us	60 us
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