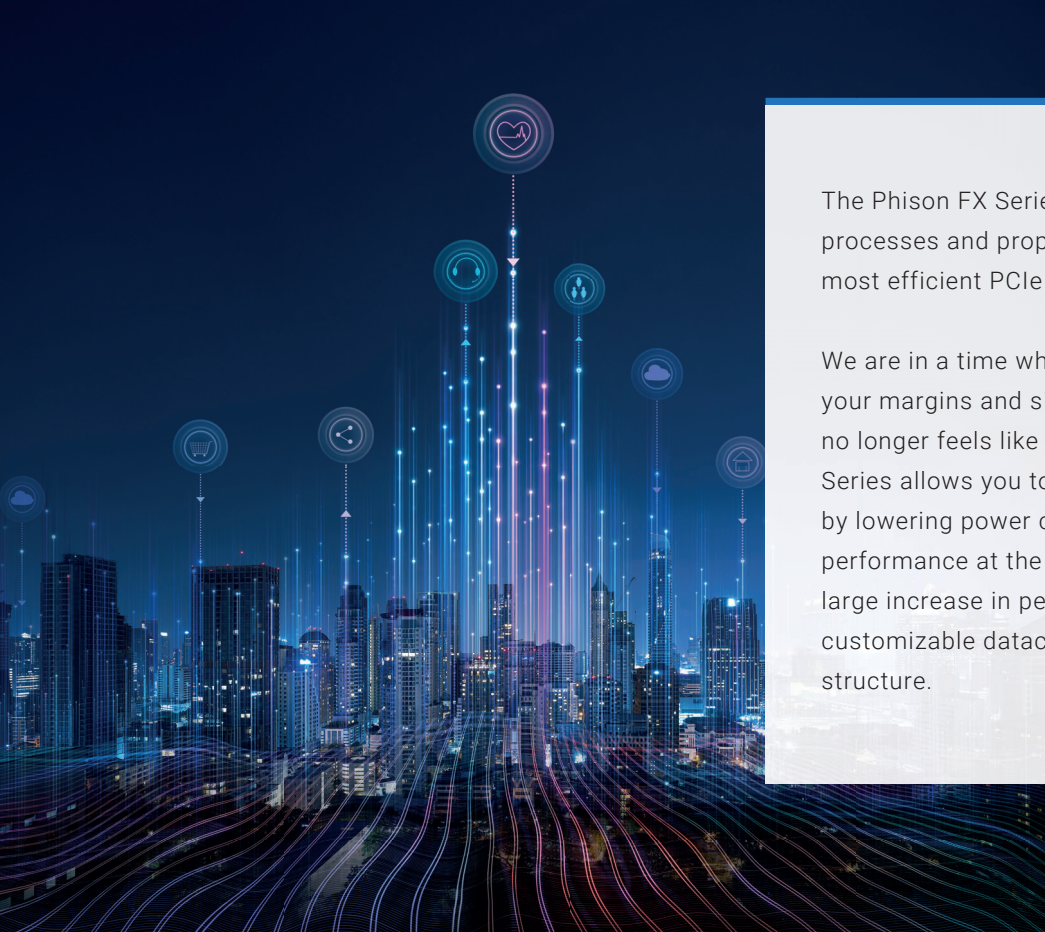


FX SSD Series: U.2 Enterprise PCIe Gen 3x4 TLC SSD

Customizable Platform



The Phison FX Series leverages modern manufacturing processes and proprietary components to deliver the most efficient PCIe Gen 3x4 SSD to your datacenter.

We are in a time when the OPEX of power cuts deep into your margins and simply adding more of the status quo no longer feels like the right direction. The Phison FX Series allows you to reduce your environmental footprint by lowering power consumption while also increasing performance at the drive scale. The key takeaway is a large increase in performance-per-watt from the only customizable datacenter SSD tailored for your infrastructure.

Advanced Features

Reliability

The FX Series SSD leverages Phison's 4th generation LDPC ECC Engine which can correct bits in a two stage process using a hard decoder and soft decoder. This ensures the customer's data is protected throughout the life of the SSD.

PCIe Gen 3x4 Compatibility

The FX Series SSD is designed with the PCIe Gen 3x4 interface and the NVMe 1.3 command specification, making it easy to install in existing backplanes.

Power Loss Protection

The FX SSD Series printed circuit board has extra capacitors (pFail) installed to continue to provide power to the SSD in the event of a sudden power loss. The pFail capacitors provide the SSD with the remaining power to write any cached data to the NAND storage to prevent data loss.

End-to-End Data Path Protection

From the moment data enters the FX SSD Series, a parity bit is generated that follows each byte from the interface to the NAND storage area ensuring user data has the maximum protection in integrity.

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

One-Of-A-Kind Products Tailored for Your Applications

The Phison FX Series is our first custom enterprise SSD that starts with a base design featuring highly efficient Phison CoXProcessors™. Phison's proprietary IP paired with ARM Cortex R5 provides an efficient, yet powerful combination to drive success. You choose the features and requirements to your specific needs and Phison utilizes their 20 years of experience to deliver the product you previously could only wish for.

FX Series: U.2 Enterprise PCIe Gen 3x4 TLC SSD

Capacities	1DWPD: 960GB, 1.92TB, 3.84TB 3DWPD: 1600GB, 3200GB
Interface	PCIe Gen 3x4, NVMe 1.3
Form Factor	U.2, 15mm thickness
NAND Flash	96L 3D TLC
Sustained Performance (Up to)^{1,2}	
Sequential Read	3400 MB/s
Sequential Write	2500 MB/s
4K Random Read	560,000 IOPs
4K Random Write	90,000 IOPs
Quality of Service (99.9%)	
4K Random Read QD1 Latency	220 µs
4K Random Write QD1 Latency	8 µs
Reliability	
UBER	1 in 10 ¹⁷
Power	
Max	Active Write <12W Active Read <9W
Idle	<5W
Temperature	
Operating	0°C ~ 70°C
Non-Operating	-40°C ~ 85°C
Advanced Features	<ul style="list-style-type: none"> <li style="width: 50%;">• LDPC 4th Generation ECC <li style="width: 50%;">• SECCDED <li style="width: 50%;">• Power Loss Protection capacitors (pFail) <li style="width: 50%;">• PRP <li style="width: 50%;">• End-to-End Data Path Protection <li style="width: 50%;">• DIF/DIX <li style="width: 50%;">• TCG Opal 2.0, Sanitize, Crypto Erase <li style="width: 50%;">• NVMSets/IOD <li style="width: 50%;">• Multistreams <li style="width: 50%;">• Memory Scrubbing <li style="width: 50%;">• SR-IOV <li style="width: 50%;">• PI <li style="width: 50%;">• SMBus

1) 1MB/s = 1,000,000 bytes / second

2) Performance measured using FIO under Linux on the full LBA span of the test drive.

- Sequential 128K queue depth 32.
- Random queue depth 32 with 4 workers.
- 4K = 4096 bytes.

3) PWF100 3 DWPD, 3200GB product tested for this specification.



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