

XD5 Series

Data Center NVMe™ SSD

The XD5 Series is a Data Center NVMe™ SSD that utilizes KIOXIA Corporation's 64-layer BiCS FLASH™ 3D memory with a PCIe® Gen3 x4 interface. The XD5 Series is optimized for low latency and performance consistency under read-intensive workloads.

It includes power-loss protection and data path protection to safeguard data, in 2.5 inch form factor, 7.0 mm Z-Height.

The XD5 Series offers 1 DWPDP (Drive Writes Per Day) and is designed to deliver high performance (up to 2,700 MB/s sequential read) with low power consumption (typically less than 7 W).



Product image may differ from the actual product.

Key Features

- Up to 3.84 TB capacity with a PCIe® Gen3 x4 Interface
- Up to 250K IOPS random read (4 KiB) performance
- Low operating power
- Optimized for low latency
- 2.5 inch form factor, 7.0 mm Z-Height
- 1 DWPDP under 100% random write workload
- Power-loss-protection and end-to-end data protection

Key Applications

- Cloud-based applications
- NoSQL databases
- Big data analytics
- Streaming media

Specifications

Model Number	KXD51RUE960G	KXD51RUE1T92	KXD51RUE3T84
Physical			
Capacity	960 GB	1,920 GB	3,840 GB
Interface	PCIe® Gen3, NVMe 1.2.1		
Interface Speed	PCIe® Gen3 (8.0 GT/s), x4		
Memory Type	BiCS FLASH™ TLC		
Performance (by Gen3 x4)			
Sustained 128 KiB Sequential Read	2,700 MB/s		
Sustained 128 KiB Sequential Write	895 MB/s		815 MB/s
Sustained 4 KiB Random Read	250K IOPS		240K IOPS
Sustained 4 KiB Random Write	21K IOPS		

Specifications (Continued)

Model Number	KXD51RUE960G	KXD51RUE1T92	KXD51RUE3T84
Capacity	960 GB	1,920 GB	3,840 GB
Power Requirements			
Supply Voltage	12 V ± 5 %		
Power Consumption (Active)	7.0 W Typ.		
Reliability			
MTTF	2,000,000 hours		
DWPD	1		
Mechanical			
Height	7.0 (+ 0.2 / - 0.5) mm		
Width	69.85 ± 0.25 mm		
Length	100.75 mm Max		
Weight	54 g Max.		
Environmental			
Temperature (Operating)	0 °C to 70 °C		
Humidity (Operating)	5 % to 95 % R.H. (No condensation)		
Vibration (Operating)	21 m/s ² { 2.17 Grms } (7 to 800 Hz)		
Shock (Operating)	9,800 m/s ² { 1,000 G } (0.5 ms duration)		

Product image may represent a design model.

Definition of capacity: KIOXIA Corporation defines a megabyte (MB) as 1,000,000 bytes, a gigabyte (GB) as 1,000,000,000 bytes and a terabyte (TB) as 1,000,000,000,000 bytes. A computer operating system, however, reports storage capacity using powers of 2 for the definition of 1GB = 2³⁰ = 1,073,741,824 bytes and therefore shows less storage capacity. Available storage capacity (including examples of various media files) will vary based on file size, formatting, settings, software and operating system, such as Microsoft Operating System and/or pre-installed software applications, or media content. Actual formatted capacity may vary.

GT/s: Giga Transfers per second.

A kibibyte (KiB) means 2¹⁰.

MTTF (Mean Time to Failure) is not a guarantee or estimate of product life; it is a statistical value related to mean failure rates for a large number of products which may not accurately reflect actual operation. Actual operating life of the product may be different from the MTTF.

DWPD: Drive Write Per Day. One drive write per day means the drive can be written and re-written to full capacity once a day every day for five years, over the stated product warranty period. Actual results may vary due to system configuration, usage and other factors.

Read and write performances may vary depending on the host device, read and write conditions, and file size.

IOPS: Input Output Per Second (or the number of I/O operations per second).

There are some models of KIOXIA Corporation SSD Products which deliver various security functions as optional feature. For more information of security options, please contact your KIOXIA Corporation sales representative.

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