TOSHIBA

XD5 SERIES

Data Center NVMe™ SSD

SSD

Product image may differ from the actual model.

The XD5 Series is a Data Center NVMe SSD that utilizes Toshiba Memory 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 DWPD (Drive Writes Per Day) and is designed to deliver high performance (up to 2,700MB/s sequential read) with low power consumption (typically less than 7W)

KEY FEATURES

- Up to 3.84TB capacity with a PCIe® Gen3 x4 lane Interface
- Up to 250K IOPS random read (4KiB) performance
- Low operating power
- Optimized for low latency
- 2.5 inch form factor , 7.0 mm Z-Height.
- 1 DWPD 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

MAIN SPECIFICATIONS

Model Number		KXD51RUE960G	KXD51RUE1T92	KXD51RUE3T84
Interface		PCIe® 3.1, NVMe 1.2.1		
Formatted Capacity		960GB	1,920 GB	3,840 GB
Performance (by Gen3 x 4)	Interface Speed	PCIe® Gen3 (8.0 GT/s), x4 lane		
	Memory Type	BiCS FLASH™ TLC		
	Sustained 128KiB Sequential Read	2,700 MB/s		
	Sustained 128KiB Sequential Write	895 MB/s	895 MB/s	815 MB/s
	Sustained 4KiB Random Read	250 KIOPS	250 KIOPS	240 KIOPS
	Sustained 4KiB Random Write	21 KIOPS		
Supply Voltage	Allowable Voltage	12V ± 10 %		
Power Consumption (Active)		7.0 W Typ.		
Security Feature		-		

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RELIABILITY

Model Number	KXD51RUE960G / KXD51RUE1T92 / KXD51RUE3T84
MTTF	2,000,000 hours
DWPD	1

MECHANICAL SPECIFICATIONS

Model Number	KXD51RUE960G / KXD51RUE1T92 / KXD51RUE3T84
Height	7.0 (+ 0.2/ - 0.5) mm.
Width	69.85 ± 0.25 mm
Length	Up to 100.75 mm
Weight	54 g Max.

ENVIRONMENTAL LIMITS

Item		KXD51RUE960G / KXD51RUE1T92 / KXD51RUE3T84
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: Toshiba Memory 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 = 2^{30} = 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 2^{10}.
- 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 Toshiba Memory Corporation SSD Products which deliver various security functions as optional feature. For more information of security options, please contact your Toshiba Memory Corporation sales representative.

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