

## XD5 SERIES Data Center NVMe™ SSD

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 a small M.2 22110 form factor. The 3.84TB capacity supports the sanitize instant erase (SIE) function to securely erase data when decommissioning the SSD.

The XD5 Series offers <1 DDPD (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)

### SSD



#### > 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
- M.2 22110 D5 form factor
- <1 DDPD under 100% random write workload
- Power-loss-protection and end-to-end data protection
- Sanitize Instant Erase (SIE) for the 3.84TB model only \*
- 5-year limited warranty

#### > KEY APPLICATIONS

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

\*The Sanitize Instant Erase (SIE) supports Crypto Erase, which is a standardized feature defined by NVM Express, Inc.

\*Security feature compliant drives are not available in all countries due to export and local regulations.

#### > MAIN SPECIFICATIONS

Model Number		KXD51LN11T92	KXD5YLN13T84
Interface		PCIe® 3.1, NVMe 1.2.1	
Formatted Capacity		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	815 MB/s
	Sustained 4KiB Random Read	250 KIOPS	240 KIOPS
	Sustained 4KiB Random Write	21 KIOPS	
Supply Voltage	Allowable Voltage	3.3V ± 5 %	
Power Consumption		7.0 W Typ.	
Security Feature		-	SIE

## > RELIABILITY

Model Number	KXD51LN11T92 / KXD5YLN13T84
MTTF	2,000,000 hours
DWPD	<1 / 5 years
Warranty	5 years

## > MECHANICAL SPECIFICATIONS

Model Number	KXD51LN11T92 / KXD5YLN13T84
Height	Overall: 3.88 mm Max
Width	22.0 ± 0.15 mm
Length	110.0 ± 0.15 mm
Weight	14 g Max

## > ENVIRONMENTAL LIMITS

Item	KXD51LN11T92 / KXD5YLN13T84	
Temperature	Operating	0 °C to 70 °C
Humidity	Operating	5 % to 95 % R.H. (No condensation)
Vibration	Operating	21 m/s <sup>2</sup> { 2.17 Grms } ( 7 to 800 Hz )
Shock	Operating	9,800 m/s <sup>2</sup> { 1,000 G } ( 0.5 ms duration )

- 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<sup>30</sup> = 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<sup>10</sup>.
  - 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.
- PCIe® is a registered trademark of PCI-SIG.
- NVMe™ is a trademark of NVM Express, Inc.
- All other company names, product names, and service names mentioned herein may be trademarks of their respective companies.