

# KIOXIA XG8 Series (M.2)

## Client NVMe™ SSD

KIOXIA XG8 Series utilizes KIOXIA latest 112-layer, 3D TLC (3-bit-per-cell) flash memory. With 5th generation BiCS FLASH™ and SLC cache features, the XG8 Series SSDs reach up to sequential read/write speeds of 7,000 MB/s and 5,800 MB/s respectively and deliver up to 900K random read and 620K random write IOPS. The power consumption of the XG8 Series is 8.1 W or less in active mode and less than 3 mW in stand-by mode.

The new XG8 Series is optimized for power-sensitive mobile PCs, performance-oriented gaming PCs.

Available in a compact M.2 Type 2280 form factor, the XG8 Series comes in four capacity models of 512 GB, 1,024 GB, 2,048 GB and 4,096 GB, each with the option of a Self-Encrypting Drive (SED) model supporting TCG Opal Version 2.01.



Product image may represent a design model.

## Key Features

- KIOXIA 112-Layer BiCS FLASH™
- PCIe® 4.0, NVMe™ 1.4
- Capacities up to 4,096 GB
- M.2 Type 2280 Single-sided (512 GB, 1,024 GB, 2,048 GB) / Double-sided(4,096 GB)
- TCG Opal 2.01 Optional for SED

## Key Applications

- Thin performance notebook PCs
- High-performance desktop PCs
- Gaming PCs

## Specifications

Base Model Number	<b>KXG80ZN84T09</b>	<b>KXG80ZNV2T04</b>	<b>KXG80ZNV1T02</b>	<b>KXG80ZNV512G</b>
SED Model Number	<b>KXG8AZN84T09</b>	<b>KXG8AZNV2T04</b>	<b>KXG8AZNV1T02</b>	<b>KXG8AZNV512G</b>
Capacity	4,096 GB	2,048 GB	1,024 GB	512 GB
<b>Basic Specifications</b>				
Form Factor	M.2 2280-D2 Double-sided	M.2 2280-S2 Single-sided		
Interface	PCIe® 4.0, NVMe™ 1.4			
Maximum Interface Speed	64 GT/s (PCIe® Gen4 x4)			
Flash Memory Type	BiCS FLASH™ TLC			

## Specifications (Continued)

Capacity	4,096 GB	2,048 GB	1,024 GB	512 GB
<b>Performance (Up to)</b>				
Sequential Read	7,000 MB/s			
Sequential Write	5,800 MB/s		5,600 MB/s	5,000 MB/s
Random Read	900K IOPS			750K IOPS
Random Write	620K IOPS			600K IOPS
<b>Power Requirements</b>				
Supply Voltage	3.3 V ± 5 %			
Power Consumption (Active)	8.1 W typ.	7.7 W typ.		
Power Consumption (L1.2 mode)	3.0 mW typ.			
<b>Reliability</b>				
MTTF	1,500,000 hours			
TBW	2,400	1,200	600	300
<b>Dimensions</b>				
Thickness	3.58 mm Max	2.23 mm Max		
Width	22.0 mm ± 0.15 mm			
Length	80.0 mm ± 0.15 mm			
Weight	8.3 g Max	7.1 g Max	6.8 g Max	6.6 g Max
<b>Environmental</b>				
Temperature (Operating)	0 °C to 95 °C (Controller Temperature)			
Temperature (Operating)	0 °C to 85 °C (Other Components Temperature)			
Temperature (Non-operating)	-40 °C to 85 °C			
Humidity (Operating)	0 % to 90 % R.H.			
Vibration (Operating)	196 m/s <sup>2</sup> { 20 Grms } ( 20 Hz to 2,000 Hz )			
Shock (Operating)	14.7 km/s <sup>2</sup> { 1,500 G } ( 0.5 ms )			

Availability of the SED model line-up may vary by region.

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 1 GB = 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, and/or pre-installed software applications, or media content. Actual formatted capacity may vary.

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.

TBW: Terabytes Written. The number of terabytes that may be written to the SSD for the specified lifetime.

Read and write speed, tested on the state of "SLC cache=ON", may vary depending on the host device, read and write conditions, and file size.

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