

Addition of BG5 Series for Gamers and PC users

KIOXIA

[KIOXIA America, Inc.](#) announced the addition of the [BG5 Series](#) that is intended to bolster its lineup of PCIe® 4.0 solid state drives (SSDs). It is designed to balance performance, cost and power for gamers and PC users. The KIOXIA BG5 Series is built with a PCIe® 64 GT/s interface (Gen4 x4 lanes) and accelerated by the company's fifth-generation BiCS FLASH™ 3D flash memory technology and is available in capacities of 256, 512 and 1024 gigabytes (GB).

"Market adoption of DRAM-less SSDs is increasing steadily, thanks to HMB's ability to reduce the overall bill of materials without degrading the data read/write performance of the SSD," according to [Neville Ichhaporia](#), Vice President, SSD marketing and product management for KIOXIA. "The fact that KIOXIA realized PCIe 4.0 performance with a DRAM-less architecture is a win for mainstream client applications."

Key features include: 1) Up to 3,500 MB/s sequential read and 2,900 MB/s sequential write; 2) Up to 500,000 IOPS random read and 450,000 IOPS random write; 3) Support for the latest TCG Pyrite and Opal standards, as well as End-to-End Data Protection ensures data is secure whether at home or in the office; 4) Forward-looking support for the NVMe 1.4 feature set and basic management command over System Management Bus (SMBus); and 5) Power Loss Notification signal support to protect data against forced shut downs.



BG5 Series

In a compact form factor and based on 112-layer BiCS FLASH™ 3D flash memory, the BG5 Series is designed for thin and light performance-oriented use cases, such as ultra-mobile PCs, IoT devices and data center server boot. Available in capacities up to 1,024 GB, this series features Host Memory Buffer (HMB), PCIe® Gen4 x4 interface and supports the NVMe™ command set. The BG5 Series offers a Self-encrypting Drive (SED) option that supports TCG Opal version 2.01, under a different model number.

Model Number	Security Feature	Interface	Form Factor	User Capacity (GB) ^{*1}	Performance (up to) ^{*2}		Typical Power Consumption (W)	Operating Temperature (°C)	Dimensions H / W / L (mm) ^{*3}	Maximum Weight (g)	Power Supply Voltage (V)
					Sequential Read (MB/s)	Sequential Write (MB/s)					
KBG50ZNS256G	-	PCIe® Gen4 x4	M.2 2230	256	3,400	1,900	4.0	0 to 85	2.23max / 22 / 30	2.8	3.3
KBG50ZNS512G				512	3,500	2,700	4.1			2.9	
KBG50ZNS1T02				1,024		2,900	4.3			3.0	
KBG50ZNV256G	-	PCIe® Gen4 x4	M.2 2280	256	3,400	1,900	4.0	0 to 85	2.23max / 22 / 80	5.8	3.3
KBG50ZNV512G				512	3,500	2,700	4.1			5.9	
KBG50ZNV1T02				1,024		2,900	4.3			6.0	

^{*1} : Definition of capacity: KIOXIA 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.

^{*2} : Read and write speed may vary depending on various factors such as host devices, software (drivers, OS etc.), and read/write conditions.

^{*3} : Dimensions represent the nominal values.

- Optional security feature compliant drives are not available in all countries due to export control and local regulations.

All information provided in this catalog is subject to change without any prior notice. For the latest and detail specification, please send an inquiry through the "Contact us" form in each region's website, <https://business.kioxia.com/>

- 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 may be trademarks of their respective companies.

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