KIOXIA

EXCERIA G3 NVMe™ SSD

Next-Gen Speed

Capacity
1TB, 2TB

Max Sequential Read/Write Speed[1]
2TB: 10,000/9,600 MB/s
1TB: 10,000/8,900 MB/s

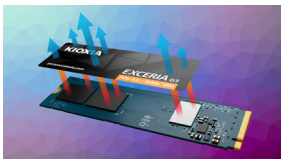
Max Random Read/Write Speed[2]
2TB: 1,600,000/1,450,000 IOPS
1TB: 1,300,000/1,450,000 IOPS

Features
BiCS FLASH™
NVMe™ 2.0c Technology
M.2 2280 Form Factor
PCIe® Gen5 x4
SSD Utility Management Software

Take your first step into PCIe® 5.0 Performance. The KIOXIA EXCERIA G3 SSD Series, an entry-level model supporting PCIe® 5.0, takes performance to the next level with up to 10,000 MB/s of sequential read speed[1], not only accelerating everyday PC tasks, but also supporting AI applications and helping build a comfortable gaming environment. Leveraging BiCS FLASH™ 3D flash memory, this updated SSD series now offers up to 2TB of capacity in a M.2 2280 form factor suitable for both desktops and notebooks.

First Step into PCIe® 5.0 Performance

Featuring the latest and greatest PCIe® 5.0 interface, the EXCERIA G3 SSD series delivers excellent transfer speeds of up to 10,000 MB/s[1] for sequential reads and 9,600 MB/s[1] for sequential writes. Whether you are loading the latest game or editing the video, this new series is the ideal choice for anyone looking to experience PCIe® 5.0 performance.



Advanced Heat Dissipation
EXCERIA G3 SSDs feature innovative product labels to enhance heat dissipation for advanced performance stability.

NVMe™ Technology
Utilizing the NVMe™ 2.0c technology, EXCERIA G3 SSDs reduce latency in your system's I/O path between your SSD and your CPU, resulting in smooth and responsive performance.

BiCS FLASH™

Cutting-Edge 3D Flash Memory
Each EXCERIA SSD is built with BiCS FLASH™ and a vertically stacked cell structure, delivering a cutting-edge storage experience.

SSD Utility Management Software
The SSD Utility management software was designed to help your KIOXIA drive thrive and lets you be in control of maintenance, monitoring and more!

We highly recommend you install and update to the latest version to maximize your drive's performance and check its Percentage Life Left using the health gauge.

Specifications

Physical

Capacity
1TB, 2TB

Form Factor
M.2 Type 2280-S3-M

Interface
PCI Express® Base Specification Revision 5.0 (PCIe®)

Flash Memory Type
BiCS FLASH™ QLC

Interface Maximum Speed
128 GT/s (PCIe® Gen5 x4)

Dimension (Max: LxWxH)
80.15 mm x 22.15 mm x 2.38 mm

Interface Protocol
NVM Express™ Base Specification 2.0c

Drive Weight
2TB : 5.8g (typ.)
1TB : 5.7g (typ.)

Performance

Max Sequential Read Speed[1]
10,000 MB/s

Max Sequential Write Speed[1]
2TB: 9,600 MB/s
1TB: 8,900 MB/s

Max Random Read Speed[2]
2TB: 1,600,000 IOPS
1TB: 1,300,000 IOPS

Max Random Write Speed[2]
1,450,000 IOPS

Endurance: TBW (Total Bytes Written)[3]
2TB: 1,200 TB
1TB: 600 TB

MTTF
1.5 million hours

Environmental

Operating Temperature
0 °C (Ta) to 85 °C (Tc)

Storage Temperature
-40 °C to 85 °C

Certification
RoHS compliant[4]

Shock Resistance
9.806 km/s^2 {1,000 G} 0.5 ms half sine wave

Vibration
25.4mm peak-to-peak (10Hz to 20Hz), 20G peak (20Hz to 2000Hz), (20min /Axis) x 3 Axis

Supply Voltage
3.3 V ±5 %

Power Consumption (Active)
2TB: 6.4W
1TB: 5.5W

Power Consumption
PS3: 50 mW (typ.)
PS4: 5 mW (typ.)

Compatibility

Connector Type
M.2 M key Socket

Target Applications
Client desktops and laptops

Additional Features

Services and Support
Up to 5-year manufacturer's warranty

MANUFACTURER'S WARRANTY IS EFFECTIVE EITHER (I) WARRANTY PERIOD FROM THE DATE OF PURCHASE IN ITS ORIGINAL SEALED PACKAGING OR (II) FOR THE TIME PERIOD UNTIL THE "PERCENTAGE LIFE LEFT" WILL BE ZERO, WHICHEVER IS SHORTER. The "Percentage Life Left" can be found using "Health" gauge of the SSD Utility for KIOXIA products, which is available at "personal.kioxia.com/support/".

Performance Optimization
TRIM, Idle Time Garbage Collection, Host Memory Buffer

SSD Management Software
Please visit our website for information on the required OS version at "personal.kioxia.com".

[1] EXCERIA G3 SSD: Sequential speeds are measured with CrystalDiskMark 8.0.4 x64, Q=32, T=1. These values are the best values obtained in a specific test environment at KIOXIA Corporation and KIOXIA Corporation warrant neither read nor write speeds in individual devices. Read and write speed may vary depending on a device used and file size read or written.

[2] EXCERIA G3 SSD: 4KiB random performance is measured with CrystalDiskMark 8.0.4 x64, Q=32,T=16. These values are the best values obtained in a specific test environment at KIOXIA Corporation and KIOXIA Corporation warrant neither read nor write speeds in individual devices. Read and write speed may vary depending on a device used and file size read or written.

[3] EXCERIA G3 SSD: Definition and conditions of TBW (Terabytes Written) are based on JEDEC standard; JESD219A Solid-State Drive (SSD) Endurance Workloads, July 2012, and defined for the service life.

[4] KIOXIA defines "RoHS Compatible" products as products that either (i) contain no more than a maximum concentration value of 0.1% by weight in Homogeneous Materials for lead, mercury, hexavalent chromium, polybrominated biphenyls (PBBs), polybrominated diphenyl ethers (PBDEs), bis(2-ethylhexyl) phthalate (DEHP), dibutyl phthalate (DBP), benzyl butyl phthalate (BBP) and diisobutyl phthalate (DIBP) and of 0.01% by weight in Homogeneous Materials for cadmium; or (ii) fall within any of the application exemptions set forth in the Annex to the RoHS Directive(*). This does not mean that KIOXIA products labeled "RoHS COMPATIBLE" are entirely free of substances controlled by the RoHS Directive and does not constitute a warranty or guarantee that such products will comply with the specific laws and/or regulations adopted in any particular jurisdiction.

*RoHS Directive: KIOXIA defines "RoHS Directive" as the DIRECTIVE 2011/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

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 = 2^{30} bytes = 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.

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

Product specifications and design are subject to change without prior notice.

Product images may represent design model. Actual product may vary.

A kibibyte (KiB) means 2^{10} bytes, or 1,024 bytes, a mebibyte (MiB) means 2^{20} bytes, or 1,048,576 bytes, and a gibibyte (GiB) means 2^{30} bytes, or 1,073,741,824 bytes.

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

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.

PCIe VDM (Vendor Defined Messages) is NOT supported.

To protect against accidental data loss, back up your data frequently on other storage media. KIOXIA does not warrant any data stored on the product.

For safety instructions, please visit: personal.kioxia.com/support/

Product availability may vary by country. Please contact your local KIOXIA support for further information.