XD5 Series
Data Center NVMe™ SSD

The XD5 Series is a Data Center NVMe™ SSD that utilizes KIOXIA 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 2,700 MB/s sequential read) with low power consumption (typically less than 7 W).

Key Features
• Up to 3.84 TB capacity with a PCIe® Gen3 x4 Interface
• Up to 250K IOPS random read (4 KiB) 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

Specifications

<table>
<thead>
<tr>
<th>Model Number</th>
<th>KXD51RUE960G</th>
<th>KXD51RUE1T92</th>
<th>KXD51RUE3T84</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity</td>
<td>960 GB</td>
<td>1,920 GB</td>
<td>3,840 GB</td>
</tr>
<tr>
<td>Interface</td>
<td>PCIe® Gen3, NVMe 1.2.1</td>
<td></td>
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<tr>
<td>Interface Speed</td>
<td>PCIe® Gen3 (8.0 GT/s), x4</td>
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</tr>
<tr>
<td>Memory Type</td>
<td>BiCS FLASH™ TLC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance (by Gen3 x4)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Sustained 128 KiB Sequential Read</td>
<td>2,700 MB/s</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sustained 128 KiB Sequential Write</td>
<td>895 MB/s</td>
<td>815 MB/s</td>
<td></td>
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<tr>
<td>Sustained 4 KiB Random Read</td>
<td>250K IOPS</td>
<td></td>
<td>240K IOPS</td>
</tr>
<tr>
<td>Sustained 4 KiB Random Write</td>
<td>21K IOPS</td>
<td></td>
<td></td>
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</tbody>
</table>
## Specifications (Continued)

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### Power Requirements
- **Supply Voltage**: 12 V ± 5 %
- **Power Consumption (Active)**: 7.0 W Typ.

### Reliability
- **MTTF**: 2,000,000 hours
- **DWPD**: 1

### Mechanical
- **Height**: 7.0 (+ 0.2 / - 0.5) mm
- **Width**: 69.85 ± 0.25 mm
- **Length**: 100.75 mm Max
- **Weight**: 54 g Max.

### Environmental
- **Temperature (Operating)**: 0 °C to 70 °C
- **Humidity (Operating)**: 5 % to 95 % R.H. (No condensation)
- **Vibration (Operating)**: 21 m/s² (2.17 Grms) (7 to 800 Hz)
- **Shock (Operating)**: 9,800 m/s² (1,000 G) (0.5 ms duration)

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Product image may represent a design model.

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 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 KIOXIA Corporation SSD Products which deliver various security functions as optional feature. For more information of security options, please contact your KIOXIA Corporation sales representative.

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