



Data Center SSDs

Leveraging state-of-the-art BiCS FLASH™ 3D flash memory with in-house designed controllers and firmware, KIOXIA data center SSDs are designed for cloud-based applications running on scale-out cloud and traditional server deployments. These data center SSDs are optimized for a balance of performance, low latency and data protection, and provide power loss protection (PLP)^{*1} to safeguard data in case of unexpected power loss.



2.5-inch
CD8 Series
PCIe® / NVMe™ SSD



E3.S
CD7 Series
PCIe® / NVMe™ SSD



E1.S
XD6 Series
PCIe® / NVMe™ SSD

Product image may differ from the actual product.



BiCS FLASH™

KIOXIA CD8 Series

Based on 112-layer BiCS FLASH™ 3D flash memory, the CD8 Series of PCIe® 4.0 (Gen4 x4) / NVMe™ SSDs is available in a 2.5-inch (15 mm height) form factor with capacities up to 15.36 TB and security options^{*2}.

Model Number	*3 DWPD	Interface	Form Factor	*4 User Capacity (GB)	Performance (up to)				Typical Power Consumption (W)	*8 Operating Temperature (°C)	*10 Dimensions H / W / L (mm)		
					*5 *6 Sequential (128 KiB) (MB/s)		*5 *6 *7 Random (4 KiB) (KIOPS)						
					Read	Write	Read	Write					
KCD81VUG12T8	3	PCIe® Gen4 x4	2.5-inch (15 mm height)	12,800	6,600	6,000	1,050	380	20	0 to 74	15.0 / 69.85 / 100.45Max		
KCD81VUG6T40				6,400								7,100	1,150
KCD81VUG3T20				3,200	7,200	3,800	1,250	340					
KCD81VUG1T60				1,600								3,500	310
KCD81VUG800G				800								1,800	160
KCD81RUG15T3	1	PCIe® Gen4 x4	2.5-inch (15 mm height)	15,360	6,600	6,000	1,050	195	20	0 to 74			
KCD81RUG7T68				7,680								7,100	1,150
KCD81RUG3T84				3,840	7,200	3,800	1,250	195					
KCD81RUG1T92				1,920								3,500	150
KCD81RUG960G				960								1,800	80

KIOXIA CD7 Series

Based on 96-layer BiCS FLASH™ 3D flash memory, the CD7 Series designed to PCIe® 5.0 (Gen5 x4) Specification / NVMe™ SSDs is available in a E3.S form factor with capacities up to 7.68 TB, 13-19 W of active power consumption and security option*2.

Model Number	DWPD	Interface	Form Factor	User Capacity (GB)	Performance (up to)				Typical Power Consumption (W)	Operating Temperature (°C)	Dimensions T / W / L (mm)
					Sequential (128 KiB) *5 *6		Random (4 KiB) *5 *6 *7				
					Read	Write	Read	Write			
KCD71RJE7T68	1	PCIe® Gen5 x4	E3.S (7.5 mm thickness)	7,680	6,250	5,600	1,030	175	19	0 to 70	7.5 / 76 / 112.75
KCD71RJE3T84				3,840	6,450	3,200	1,050	178	13		
KCD71RJE1T92				1,920	3,600	180	13				

KIOXIA XD6 Series

KIOXIA XD6 Series E1.S SSDs are designed to the Enterprise and Datacenter Standard Form Factor (EDSFF) E1.S specification to address the specific requirements of hyperscale applications, including the performance, power and thermal requirements of the Open Compute Project (OCP) Datacenter NVMe™ SSD Specification.

Model Number	DWPD	Interface	Form Factor	User Capacity (GB)	Performance (up to)				Typical Power Consumption (W)	Operating Temperature (°C)	Dimensions T / W / L (mm)
					Sequential (128 KiB) *5 *6		Random (4 KiB) *5 *6 *7				
					Read	Write	Read	Write			
KXD6CRJJ3T84	1	PCIe® Gen4 x4	E1.S (9.5 mm thickness)	3,840	6,500	2,350	880	90	14	0 to 70	9.5 / 33.75 / 118.75
KXD6CRJJ1T92				1,920		1,200	660	50	12		

All models are Self-Encrypting Drives (SED). Regarding SED feature, please refer to *2 note.

*1 : PLP (Power Loss Protection): In case of an unexpected shutdown, PLP allows data recorded in buffer memory to be written to flash memory, utilizing back up power from solid capacitors.

*2 : Optional security features

- Drive models with different security options have different model numbers.
- CD8 Series security options: The Sanitize Instant Erase (SIE), Self-Encrypting Drive (SED) optional models are available.
- CD8 Series: SED supports TCG Opal and Ruby SSCs. It has a few unsupported TCG Opal features.
- CD7 Series security option: The Sanitize Instant Erase (SIE) optional model is available.
- XD6 Series is Self-Encrypting Drive (SED).
- XD6 Series: SED supports TCG Opal SSCs. It has a few unsupported TCG Opal features.
- SIE option supports Crypto Erase, which is a standardized feature defined by NVM Express Inc.
- For more details and the latest validation status of each drive, please make inquiries through "Contact us" in each region's website, <https://www.kioxia.com/>.
- Optional security feature compliant drives are not available in all countries due to export control and local regulations.

*3 : DWPD: Drive Writes Per Day. One full drive write per day means the drive can be written and re-written to full capacity once a day every day for the specified lifetime. Actual results may vary due to system configuration, usage and other factors.

*4 : Definition of capacity: 1 terabyte (1 TB) = 1,000 gigabytes (GB), 1 GB = 1,000,000,000 (10⁹) bytes

*5 : A kibibyte (KiB) means 2¹⁰, or 1,024 bytes.

*6 : Read and write speeds may vary depending on various factors such as host devices, software (drivers, OS etc.), and read/write conditions.

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

*8 : Composite temperature reported by SMART.

*9 : Case surface temperature

*10 : Dimensions represent the nominal values.

Customers must refer to and comply with the latest versions of all relevant KIOXIA information, including without limitation, this document, the specifications, the data sheets and application notes for Product and the precautions and conditions set forth in the KIOXIA Corporation Reliability Handbook and the instructions for the application with which the Product will be used with or for.

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 "Contact us" in each region's website, <https://www.kioxia.com/>.

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