KIOXIA

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.

E3.S

CD7 Series
PCIe® / NVMe™ SSD

2.5-inch

CD6 Series
PCIe® / NVMe™ SSD

E1.S

XD6 Series
PCIe® / NVMe™ SSD

Product image may differ from the actual product.

BiCS FLASH™

CD7 Series

Based on 96-layer BiCS FLASH™ 3D flash memory, the CD7 Series designed with PCIe® 5.0 (Gen5 x4) technology / 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 options[*2].

Model Number	DWPD [*3]	Interface	Form Factor	User Capacity (GB) [*4]	Performance (up to)				Typical Power Consumption (W)	Operating Temperature (°C) [*8]	Dimensions H / W / L (mm) [*9]
					Sequential (128 KiB) (MB/s) [*5 *6]		Random (4 KiB) (KIOPS) [*5 *6 *7]				
					Read	Write	Read	Write			
KCD71RJE7T68	1	PCIe® Gen5 x4	E3.S (7.5 mm Z-height)	7,680	6,250	5,600	1,030	175	13	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	19		

CD6 Series

Based on 96-layer BiCS FLASH™ 3D flash memory, the CD6 Series of PCIe® 4.0 (Gen4 x4) / NVMe™ SSDs is available in a 2.5-inch (15 mm Z-height) form factor with capacities up to 15.36 TB, 13-19 W of active power consumption and security options*2.

Model Number	DWPD *3	Interface	Form Factor	User Capacity (GB) *4	Performance (up to)				Typical Power Consumption (W)	Operating Temperature (°C) *8	Dimensions H / W / L (mm) *9
					Sequential (128 KiB) (MB/s) *5 *6		Random (4 KiB) (KIOPS) *5 *6 *7				
					Read	Write	Read	Write			
KCD61VUL12T8	3	PCIe® Gen4 x4	2.5-inch (15 mm Z-height)	12,800	5,500	4,000	750	110	19	0 to 70	15.0 / 69.85 / 100.45max
KCD61VUL6T40				6,400	6,200		1,000	250			
KCD61VUL3T20				3,200		2,350		160	15		
KCD61VUL1T60				1,600	5,800	1,150	700	85	13		
KCD61VUL800G				800		1,300		90			
KCD61LUL15T3	1	PCIe® Gen4 x4	2.5-inch (15 mm Z-height)	15,360	5,500	4,000	750	30	19	0 to 70	15.0 / 69.85 / 100.45max
KCD61LUL7T68				7,680	6,200		1,000	85			
KCD61LUL3T84				3,840		2,350		60	15		
KCD61LUL1T92				1,920	5,800	1,150	700	30	13		
KCD61LUL960G				960		1,300					

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 Platform (OCP) NVMe Cloud SSD Specification.

Model Number	DWPD *3	Interface	Form Factor	User Capacity (GB) *4	Performance (up to)				Typical Power Consumption (W)	Operating Temperature (°C) *8	Dimensions H / W / L (mm) *9
					Sequential (128 KiB) (MB/s) *5 *6		Random (4 KiB) (KIOPS) *5 *6 *7				
					Read	Write	Read	Write			
KXD6CRJJ3T84	1	PCIe® Gen4 x4	E1.S (9.5 mm Z-height)	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): PLP allows to record data in buffer memory to flash memory, utilizing back up power of solid capacitor in case of sudden supply shut down.
*2 : Optional security features
- Drive models with different security options have different model numbers.
- CD7 1-DWPD Series security options: The Sanitize Instant Erase (SIE), Self-Encrypting Drive (SED) optional models are available.
- CD7 3-DWPD Series does not support security function.
- CD6 Series security options: The Sanitize Instant Erase (SIE), Self-Encrypting Drive (SED), FIPS (Federal Information Processing Standards) optional models are available.
- XD6 Series is Self-Encrypting Drive(SED).
- SIE option supports Crypto Erase, which is a standardized feature defined by NVM Express Inc.
- CD7 1-DWPD Series: SED supports TCG Opal and Ruby SSCs. It has a few unsupported TCG Opal features.
- CD6 Series: SED supports TCG Opal and Ruby SSCs. It has a few unsupported TCG Opal features.
- XD6 Series: SED supports TCG Opal SSCs. It has a few unsupported TCG Opal features.
- FIPS drives are designed to comply with FIPS 140-2 Level 2 and FIPS 140-3 Level 2, which define security requirements for cryptographic module by NIST (National Institute of Standards and Technology). CD6 series has been validated for FIPS 140-2 Level 2.
- For more details and the latest validation status of each drive, please make inquiries through "Contact us" in each region's website, https://business.kioxia.com/
- Optional security feature compliant drives are not available in all countries due to export control and local regulations.

*3 : DWPD: Drive Write 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 (10^9) bytes
*5 : A kibibyte (KiB) means 2^10, 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 : Case surface temperature
*9 : 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 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://business.kioxia.com/

The following trademarks, service and/or company names – PCIe, PCI-SIG, NVMe, NVM Express, Inc. – are not applied, registered, created and/or owned by KIOXIA Europe GmbH or by affiliated KIOXIA group companies. However, they may be applied, registered, created and/or owned by third parties in various jurisdictions and therefore protected against unauthorized use.