KIOXIA

CM6-R Series

(KCM61RUL/KCM6XRUL/KCM6DRUL/KCM6FRUL)

Enterprise NVMe™ Read-intensive SSD

The CM6-R series is a read-intensive SSD that is optimized to support a broad range of enterprise applications and associated workloads, including business intelligence, online transaction processing, and software defined storage and virtualization. Built on PCIe® 4.0 and NVMe™ 1.4 technology, the CM6 Series SSDs deliver excellent performance up to 1.4M IOPS (random read), with maximum power consumption of 25 W.

Featuring KIOXIA Corporation's 96-layer BiCS FLASH™ 3D TLC memory, the CM6-R Series of enterprise NVMe™ SSDs deliver 1 DWPD (Drive Writes Per Day) of endurance and support storage capacities up to 30.72 TB*, making them ideally suited for read-intensive enterprise applications.

* The model names and details of 15.36 TB and 30.72 TB models will be disclosed after July as available.

Product image may differ from the actual product.

Key Features

- PCIe® 4.0, NVMe™ 1.4 specification compliant
- Form factor: 2.5-inch, 15 mm Z-height
- Proprietary KIOXIA architecture: controller, firmware and BiCS FLASH™ 96-layer 3D TLC memory
- SFF-TA-1001 conformant (U.3), works with Tri-mode controllers and backplanes
- Dual-port design for high availability applications
- 6th generation, two-die failure recovery and double parity protection
- High performance with lower power consumption
- Power loss protection (PLP) and end-to-end data protection
- Suited for 24x7 enterprise workloads
- Data security options: SIE, SED, FIPS 140-2[1, 2, 3, 4, 5]
- Six power mode settings

Key Applications

- Software defined storage and virtualization
- Data warehousing
- Online transaction processing (OLTP) (transactional and relational databases)
- Business intelligence
- Artificial intelligence and machine learning

Specifications

Model Number	KCM61RUL7T68	KCM61RUL3T84	KCM61RUL1T92	KCM61RUL960G
SIE Model Number	KCM6XRUL7T68	KCM6XRUL3T84	KCM6XRUL1T92	KCM6XRUL960G
SED Model Number	KCM6DRUL7T68	KCM6DRUL3T84	KCM6DRUL1T92	KCM6DRUL960G
SED FIPS Model Number	KCM6FRUL7T68	KCM6FRUL3T84	KCM6FRUL1T92	KCM6FRUL960G
Capacity	7,680 GB	3,840 GB	1,920 GB	960 GB
Physical				
Interface Specification	PCIe® 4.0, NVMe™ 1.4			
Interface Speed	64 GT/s (Gen4 1x4, 2x2)			
Memory Type	BiCS FLASH™ TLC			

Specifications (Continued)

Capacity	7,680 GB	3,840 GB	1,920 GB	960 GB
Performance in single port (1x4) mode (Up to)				
Sustained 128 KiB Sequential Read	6,900 MB/s			
Sustained 128 KiB Sequential Write	4,000 MB/s	4,200 MB/s	2,800 MB/s	1,400 MB/s
Sustained 4 KiB Random Read	1,400,000 IOPS		1,300,000 IOPS	880,000 IOPS
Sustained 4 KiB Random Write	170,000 IOPS		100,000 IOPS	50,000 IOPS
Power Requirements				
Supply Voltage	12 V ± 10 %, 3.3 Vaux ± 15 %			
Power Consumption (Active)	20 W Typ.	19 W Typ.	16 W Typ.	14 W Typ.
Power Consumption (Ready)	5.0 W Typ.			
Reliability				
MTTF	2,500,000 hours			
Warranty	5 years			
DWPD	1			
Mechanical				
Height	15.0 mm + 0, - 0.5 mm			
Width	69.85 ± 0.25 mm			
Length	100.45 mm Max			
Weight	130 g Max.			
Environmental				
Temperature (Operating)	0 °C to 70 °C			
Humidity (Operating)	5 % to 95 % R.H.			
Vibration (Operating)	21.27 m/s^2 { 2.17 Grms } (5 to 800 Hz)			
Shock (Operating)	9,800 m/s^2 { 1,000 G } (0.5 ms duration)			

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, or 1,024 bytes.

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 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.

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

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

[1] The Sanitize Instant Erase (SIE), Self-Encrypting Drive (SED), FIPS (Federal Information Processing Standards) optional models are available.

[2] SIE option supports Crypto Erase, which is a standardized feature defined by NVM Express Inc.

[3] SED supports TCG Opal and Ruby SSCs. It has a few unsupported TCG Opal features. For more details, please make inquiries through “Contact us” in each region's website,https://business.kioxia.com/

[4] FIPS drives are designed to comply with FIPS 140-2 Level 2, which define security requirements for cryptographic module by NIST (National Institute of Standards and Technology). For the latest validation status of each model, please contact us in each region's website,https://business.kioxia.com/

[5] Optional security feature compliant drives are not available in all countries due to export and local regulations.

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