KIOXIA

PM6-R Series

(KPM61RUG/KPM6XRUG/KPM6VRUG/KPM6WRUG)

Enterprise Read Intensive SSD

PM6-R Series 24G SAS Enterprise SSD is optimized for read intensive applications, including web services, data warehousing, streaming media and video on demand. The series provides high levels of performance, reliability and endurance, and is designed to minimize total cost of ownership.

Featuring KIOXIA Corporation's 96-layer BiCS FLASH™ 3D flash memory, this 6th generation enterprise SAS SSD PM6-R Series offers 1 DWPD (Drive Writes Per Day) with capacities up to 30.72 TB.

Product image may differ from the actual product.

Key Features

- 24G SAS interface with single/dual-port support
- Capacities from 960 GB to 30.72 TB
- T10 Multi-Stream Write support
- Up to 595K random read IOPS (4 KiB) in dual-port mode
- 2.5-inch form factor, 15 mm Z-height
- 1 DWPD with 100 % Random Write Workload
- Power-Loss-Protection and End-to-End Data Protection, including T10 DIF
- Pin-3 Power Disable Support
- Sanitize Instant Erase (SIE) option[1, 2, 5]
- Self-Encrypting (SED) option[1, 3, 5]
- Self-Encrypting (SED), FIPS 140-2 option[1, 3, 4, 5]
- 5-year limited warranty

Key Applications

- Data warehousing
- Streaming media
- Video on demand (VOD)
- Web servers

Specifications

Model Number	KPM61RUG30T7	KPM61RUG15T3	KPM61RUG7T68	KPM61RUG3T84	KPM61RUG1T92	KPM61RUG960G
SIE Model Number	KPM6XRUG30T7	KPM6XRUG15T3	KPM6XRUG7T68	KPM6XRUG3T84	KPM6XRUG1T92	KPM6XRUG960G
SED Model Number	KPM6VRUG30T7	KPM6VRUG15T3	KPM6VRUG7T68	KPM6VRUG3T84	KPM6VRUG1T92	KPM6VRUG960G
SED FIPS Model Number	KPM6WRUG30T7	KPM6WRUG15T3	KPM6WRUG7T68	KPM6WRUG3T84	KPM6WRUG1T92	KPM6WRUG960G
Physical						
Capacity	30,720 GB	15,360 GB	7,680 GB	3,840 GB	1,920 GB	960 GB
Interface	24G SAS					
Interface Speed	22.5 Gbit/s, 12.0 Gbit/s, 6.0 Gbit/s, 3.0 Gbit/s, 1.5 Gbit/s					
Memory Type	BiCS FLASH™ TLC					

Specifications (Continued)

Capacity	30,720 GB	15,360 GB	7,680 GB	3,840 GB	1,920 GB	960 GB
Performance (in dual-port mode)						
Sustained 128 KiB Sequential Read	4,150 MB/s					
Sustained 128 KiB Sequential Write	3,200 MB/s	3,700 MB/s		2,450 MB/s	2,700 MB/s	1,450 MB/s
Sustained 4 KiB Random Read	595K IOPS					
Sustained 4 KiB Random Write	80K IOPS	160K IOPS	155K IOPS	115K IOPS	125K IOPS	75K IOPS
Power Requirements						
Supply Voltage	5 V + 10% / -7% | 12 V ± 10%					
Power Consumption (Ready)	5.0 W Typ.					
Reliability						
MTTF	2,500,000 hours					
DWPD	1					
Warranty	5 years					
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						
Case Surface Temperature (Operating)	0 °C to 70 °C					
Humidity (Operating)	5 % to 95 % R.H. (No condensation)					
Vibration (Operating)	21.27 m/s² { 2.17 Grms } (5 to 800 Hz)					
Shock (Operating)	9,800 m/s² { 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.

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 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.

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 the technical committees (T10) of INCITS (the InterNational Committee for Information Technology Standards).

[3] SED option supports TCG Enterprise SSC.

[4] KIOXIA FIPS drives utilize a security module 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). For the latest validation status, please make inquiries through “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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*Information in this product brief, including product specifications, tested content, and assessments are current and believed to be accurate as of the date that the document was first published (March 2021, Rev. 1.0), but is subject to change without prior notice. Technical and application information contained here is subject to the most recent applicable KIOXIA product specifications.