KIOXIA PM7-R Series (2.5-inch)

(KPM71RUG/KPM7XRUG/KPM7VRUG/KPM7WRUG)

Enterprise SAS Read Intensive SSD

KIOXIA PM7-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 112-layer BiCS FLASH™ 3D flash memory, this 7th generation enterprise SAS SSD PM7-R Series offers 1 DWPD (Drive Writes Per Day) with capacities up to 30.72 TB.

Product image may represent a design model.

Key Features

- 24G SAS interface with single/dual-port support
- Capacities from 1.92 TB to 30.72 TB
- Up to 720K random read IOPS (4 KiB) in dual-port mode
- 2.5-inch form factor, 15 mm thickness
- 1 DWPD with 100 % Random Write Workload
- Power Loss Protection and End-to-End Data Protection, including T10 DIF
- Security options: SIE, SED, FIPS SED[1][2][3][4][5]
- 5-year limited warranty

Key Applications

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

Specifications

Base Model Number	KPM71RUG30T7	KPM71RUG15T3	KPM71RUG7T68	KPM71RUG3T84	KPM71RUG1T92
SIE Model Number	KPM7XRUG30T7	KPM7XRUG15T3	KPM7XRUG7T68	KPM7XRUG3T84	KPM7XRUG1T92
SED Model Number	KPM7VRUG30T7	KPM7VRUG15T3	KPM7VRUG7T68	KPM7VRUG3T84	KPM7VRUG1T92
FIPS SED Model Number	KPM7WRUG30T7	KPM7WRUG15T3	KPM7WRUG7T68	KPM7WRUG3T84	KPM7WRUG1T92
Capacity	30,720 GB	15,360 GB	7,680 GB	3,840 GB	1,920 GB
Basic Specifications					
Form Factor	2.5-inch, 15mm thickness				
Interface	SAS-4				
Interface Speed	22.5 Gbit/s, 12.0 Gbit/s, 6.0 Gbit/s, 3.0 Gbit/s, 1.5 Gbit/s				
Flash Memory Type	BiCS FLASH™ TLC				

Specifications (Continued)

Capacity	30,720 GB	15,360 GB	7,680 GB	3,840 GB	1,920 GB
Performance (in dual-port mode)					
Sustained 128 KiB Sequential Read	4,150 MB/s	4,200 MB/s			
Sustained 128 KiB Sequential Write	3,200 MB/s	4,100 MB/s		3,650 MB/s	3,400 MB/s
Sustained 4 KiB Random Read	720K IOPS				
Sustained 4 KiB Random Write	80K IOPS	160K IOPS	175K IOPS	155K IOPS	
Power Requirements					
Supply Voltage	12 V ± 10 %, 5 V +10 % / -7 %				
Power Consumption (Ready)	5 W typ.				
Reliability					
MTTF	2,500,000 hours				
Warranty	5 years				
DWPD	1				
Dimensions					
Thickness	15.0 mm +0, -0.5 mm				
Width	69.85 mm ± 0.25 mm				
Length	100.45 mm Max				
Weight	130 g Max				
Environmental					
Temperature (Operating)	0 ℃ to 70 ℃				
Temperature (Non-operating)	-40 ℃ to 80 ℃				
Humidity (Operating)	5 % to 95 % R.H.				
Vibration (Operating)	21.27 m/s² { 2.17 Grms } (5 to 800 Hz)				
Shock (Operating)	9.8 km/s² { 1,000 G } (0.5 ms)				

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, 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 speed 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] Sanitize Instant Erase (SIE), Self-Encrypting Drive (SED) and FIPS (Federal Information Processing Standards) SED security optional models are available.

[2] SIE optional model 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 optional model supports TCG Enterprise SSC.

[4] FIPS SED optional model utilizes a security module designed to comply with FIPS 140-2 and FIPS 140-3, 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://www.kioxia.com/.

[5] Security optional models are not available in all countries due to export and local regulations.

Other company names, product names, and service names may be trademarks of third-party companies.