

KIOXIA PM7-V Series (2.5-inch)

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Enterprise SAS Mixed Use SSD

KIOXIA PM7-V Series 24G SAS Enterprise SSD is optimized for mixed use applications, including relational database, streaming media, data warehousing and web services. The series is designed to deliver balanced levels of performance, reliability, capacity and endurance for mixed use and read intensive environments.

Featuring KIOXIA 112-layer BICS FLASH™ 3D flash memory, this 7th generation enterprise SAS SSD PM7-V offers 3 DWPD (Drive Writes Per Day) with capacities up to 12.8 TB.

Documents

- Product Brief (PDF: 127KB)

Key Features

- 24G SAS interface with single/dual-port support

• Capacities from 1.6 TB to 12.8 TB

• Up to 720K random read IOPS (4 KiB) in dual-port mode

• 2.5-inch form factor, 15 mm thickness

• 3 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

- Web servers
- Data warehousing
- Streaming media

- Application

Specifications

Base Model Number	KPM71VUG12T8	KPM71VUG6T40	KPM71VUG3T20	KPM71VUG1T60
SIE Model Number	KPM7XVUG12T8	KPM7XVUG6T40	KPM7XVUG3T20	KPM7XVUG1T60
SED Model Number	KPM7VVUG12T8	KPM7VVUG6T40	KPM7VVUG3T20	KPM7VVUG1T60
FIPS SED Model Number	KPM7WVUG12T8	KPM7WVUG6T40	KPM7WVUG3T20	KPM7WVUG1T60
Capacity	12,800 GB	6,400 GB	3,200 GB	1,600 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			
Performance (in dual-port mode)				
Sustained 128 KiB Sequential Read	4,200 MB/s			
Sustained 128 KiB Sequential Write	4,100 MB/s		3,650 MB/s	3,400 MB/s
Sustained 4 KiB Random Read	720K IOPS			
Sustained 4 KiB Random Write	330K IOPS	355K IOPS	340K IOPS	320K 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	3			
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 °C to 70 °C			
Temperature (Non-operating)	-40 °C to 80 °C			
Humidity (Operating)	5 % to 95 % R.H.			
Vibration (Operating)	21.27 m/s ² { 2.17 Grms } (5 to 800 Hz)			
Shock (Operating)	9.8 km/s ² { 1,000 G } (0.5 ms)			

- Product image may represent a design model.
- 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 1 GB = 2³⁰ = 1,073,741,824 bytes and 1TB = 2⁴⁰ bytes = 1,099,511,627,776 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 2¹⁰, 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 under the specified workload 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 Cryptographic Erase, which is a standardized feature defined by the technical committees (SCSI) 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".
- [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.

Support



Download SSD Product Documents

You can download past product information, white papers, and data sheets, etc.



Technical Glossary

Introducing technical glossary related to KIOXIA's products and technology including semiconductor memory and SSD.



Inquiries / Support Regarding Business Products

Please contact us if you have any technical questions, requests for materials, are interested in samples or purchases of business products (Memory, SSD), etc.

Related Links



Applications

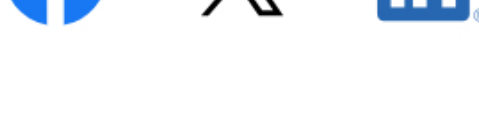
KIOXIA memory and storage solutions enable the success of emerging applications and allow existing technologies to reach their expected potential.



Technology and Innovation at KIOXIA

As a leading company in flash memory and SSD, KIOXIA engages in R&D that supports the information society.

Share



Enterprise SSD

- CM9-V Series (2.5-inch)

CM9-R Series (2.5-inch)

CM9-V Series (E3.S)

CM9-R Series (E3.S)
- CM7-V Series (2.5-inch)

CM7-R Series (2.5-inch)

CM7-V Series (E3.S)

CM7-R Series (E3.S)
- PM7-V Series (2.5-inch)

PM7-R Series (2.5-inch)

RM7-V Series (2.5-inch)

RM7-R Series (2.5-inch)
- FL6 Series (2.5-inch)

Enterprise SSD

Enterprise SSDs are suitable for high-performance Tier 0 computing, server and storage systems that require high levels of performance and reliability. KIOXIA Enterprise SSDs offer high reliability, data protection incorporating power-loss-protection(PLP) and encryption technology to support enterprise environments and applications.

Download SSD Documents

You can download past product information, white papers, and data sheets, etc.

Data Center SSD

KIOXIA data center SSDs are designed for hyperscale and cost optimized servers in cloud data centers that require low power consumption, efficient airflow and managed performance. These SSDs include data protection with power loss protection (PLP) and encryption technology options.

Client SSD

Featuring compactness and low power consumption, the KIOXIA line-up of client SSDs can be applied to ultra-thin and high-end PCs, including security-required applications with SED models.

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