

# PM7-V Series

(KPM71VUG/KPM7XVUG/KPM7VVUG/KPM7WVUG)

## Enterprise SAS SSD

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.



Product image may differ from the actual product.

## Key Features

- 24G SAS interface with single/dual-port support
- Capacities from 1.6 TB to 12.8 TB
- T10 Multi-Stream Write support
- Up to 720K random read IOPS (4 KiB) in dual-port mode
- 2.5-inch form factor, 15 mm Z-height
- 3 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<sup>[1, 2, 5]</sup>
- Self-Encrypting (SED) option<sup>[1, 3, 5]</sup>
- Self-Encrypting (SED), FIPS 140-2 option<sup>[1, 3, 4, 5]</sup>
- 5-year limited warranty

## Key Applications

- Web servers
- Data warehousing
- Streaming media

## Specifications

|                             |                                                              |              |              |              |
|-----------------------------|--------------------------------------------------------------|--------------|--------------|--------------|
| Model Number                | KPM71VUG12T8                                                 | KPM71VUG6T40 | KPM71VUG3T20 | KPM71VUG1T60 |
| SIE Model Number            | KPM7XVUG12T8                                                 | KPM7XVUG6T40 | KPM7XVUG3T20 | KPM7XVUG1T60 |
| SED Model Number            | KPM7VVUG12T8                                                 | KPM7VVUG6T40 | KPM7VVUG3T20 | KPM7VVUG1T60 |
| SED FIPS Model Number       | KPM7WVUG12T8                                                 | KPM7WVUG6T40 | KPM7WVUG3T20 | KPM7WVUG1T60 |
| Capacity                    | 12,800 GB                                                    | 6,400 GB     | 3,200 GB     | 1,600 GB     |
| <b>Basic Specifications</b> |                                                              |              |              |              |
| Interface                   | SAS-4                                                        |              |              |              |
| Maximum 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                           | 12,800 GB                                   | 6,400 GB  | 3,200 GB   | 1,600 GB   |
| 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                     | 5 V + 10 % / -7 %, 12 V ± 10 %              |           |            |            |
| Power Consumption (Ready)          | 5 W typ.                                    |           |            |            |
| Reliability                        |                                             |           |            |            |
| MTTF                               | 2,500,000 hours                             |           |            |            |
| Warranty                           | 5 years                                     |           |            |            |
| DWPD                               | 3 DWPD                                      |           |            |            |
| Dimensions                         |                                             |           |            |            |
| Height                             | 15.0 mm + 0, -0.5 mm                        |           |            |            |
| Width                              | 69.85 mm ± 0.25 mm                          |           |            |            |
| Length                             | 100.45 mm Max                               |           |            |            |
| Weight                             | 150 g Max                                   |           |            |            |
| Environmental                      |                                             |           |            |            |
| Temperature (Operating)            | 0 °C to 70 °C                               |           |            |            |
| Humidity (Operating)               | 5 % R.H. to 95 % R.H.                       |           |            |            |
| Vibration (Operating)              | 21.27 m/s² { 2.17 G } ( Peak, 5 to 800 Hz ) |           |            |            |
| Shock (Operating)                  | 9.8 km/s² { 1,000 G } ( Peak, 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<sup>30</sup> = 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<sup>10</sup>, 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] 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] 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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