KIOXIA

End of Sales

PX05SHB SERIES

ENTERPRISE WRITE INTENSIVE SSD

The PX05S Series is our 4th generation enterprise SAS SSD leveraging the highly successful PX04S Series. The PX05SH Series optimized for write-intensive virtualized data centers, big data analytics and high performance computing (HPC) workloads. With 120k - 125k IOPS random write and 270k IOPS random read, 12.0 Gbit/s SAS SSD delivers a unique customer-tunable power and performance feature allowing optimization for power efficiency or maximum performance.

Product image may represent a design model.

Additional features include power-loss protection and data path protection. Each model is available as a self-encrypting drive (SED) with instant secure erase and supports pin-3 power disable for improved enclosure services control over storage media.

Aimed at applications requiring the highest levels of eSSD performance, reliability and quality, this Enterprise Write Intensive SSDs supports excellent 25 DWPD (Drive Writes Per Day). The PX05SH is available in capacities from 200GB to 1.6TB.

KEY FEATURES

- Up to 1.6TB Storage Capacity with Dual-Port 12.0 Gbit/s SAS Interface
- 270K IOPS random read (4K) performance
- 2.5-type Form-Factor, 15mm Z-Height
- 25 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
- Self-Encrypting (SED) Option
- Self-Encrypting (SED), FIPS Certified Option
- 5-year limited warranty

APPLICATIONS

- Write-Intensive Virtualized Data Centers
- Big Data Analytics
- High Performance Computing (HPC)

MAIN SPECIFICATIONS

Model Number SIE Model Number SED Model Number SED FIPS Model Number		PX05SHB160 PX05SHB160Y PX05SHQ160 PX05SHQ160B	PX05SHB080 PX05SHB080Y PX05SHQ080 PX05SHQ080B	PX05SHB040 PX05SHB040Y PX05SHQ040 PX05SHQ040B	PX05SHB020 PX05SHB020Y PX05SHQ020 PX05SHQ020B
Interface		SAS-3.0			
Formatted Capacity		1,600 GB	800 GB	400 GB	200 GB
Performance	Interface Speed	12.0 Gbit/s , 6.0 Gbit/s , 3.0 Gbit/s , 1.5 Gbit/s			
	Memory Type	MLC			
	Sustained 64KiB Sequential Read	1,400 MiB/s	1,800 MiB/s		
	Sustained 64KiB Sequential Write	750 MiB/s	850 MiB/s		
	Sustained 4KiB Random Read	270,000 IOPS			
	Sustained 4KiB Random Write	120,000 IOPS	125,000 IOPS		
Supply Voltage	Allowable Voltage	5 V ± 7% 12 V ± 7 %			
Power Consumption		3.2 W Typ.			

RELIABILITY

Model Number	PX05SHBxxx PX05SHBxxxY PX05SHQxxx PX05SHQxxxB
MTTF	2,000,000 hours
DWPD	25
Warranty	5 years

MECHANICAL SPECIFICATIONS

Model Number	PX05SHBxxx PX05SHBxxxY PX05SHQxxx PX05SHQxxxB
Height	15.0 mm + 0, - 0.5 mm
Width	69.85 ± 0.25 mm
Length	100.45 mm Max.
Weight	150 g Max.

ENVIRONMENTAL LIMITS

Item		PX05SHBxxx PX05SHBxxxY PX05SHQxxx PX05SHQxxxB
Temperature	Operating	0 °C to 55 °C
Humidity	Operating	5 % to 95 % R.H. (No condensation)
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)

Product image may represent a design model.

Definition of capacity: KIOXIA 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, a mebibyte (MiB) means 2^{20}, or 1,048,576 bytes, and a gibibyte (GiB) means 2^{30}, or 1,073,741,824 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 five years, the stated product warranty period. Actual results may vary due to system configuration, usage and other factors.

Read and write speed may vary depending on the host device, read and write conditions, and file size.

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

There are some models of KIOXIA Storage Products which deliver various security functions as optional feature. For more information of security options, please contact your KIOXIA sales representative

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