

SSD

> PX05SMB/PX05SMQ SERIES ENTERPRISE WRITE INTENSIVE SSD

The PX05S Series is our 4th generation enterprise SAS SSD leveraging the highly successful PX04S Series. The PX05SM Series is optimized for mission-critical hyperscale and virtualized environments. With 270k IOPS random read performance, the 12.0 Gbit/s SAS SSD delivers a unique customer-tunable power and performance feature allowing optimization for power efficiency or maximum performance.

Further features of the impressive series include power-loss protection and data path protection. Each model is available as a self-encrypting drive with instant secure erase and supports pin-3 power disable for improved enclosure services control over storage media.

The Enterprise Write Intensive SSDs offer 10 DWPD (Drive Writes Per Day) with capacities of up to 3.2TB and is designed to deliver high-levels of performance, quality and reliability for high writes applications such as online transaction processing (OLTP) and e-commerce.



> KEY FEATURES

- Up to 3.2TB 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
- 10 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

- Mission-Critical Enterprise Workloads
- Hyperscale and Virtualized Environments
- General online transaction processing (OLTP)
- E-commerce

> MAIN SPECIFICATIONS

Model Number		PX05SMB320	PX05SMB160	PX05SMB080	PX05SMB040
SIE Model Number		PX05SMB320Y	PX05SMB160Y	PX05SMB080Y	PX05SMB040Y
SED Model Number		PX05SMQ320	PX05SMQ160	PX05SMQ080	PX05SMQ040
SED FIPS Model Number		PX05SMQ320B	PX05SMQ160B	PX05SMQ080B	PX05SMQ040B
Interface		SAS-3.0			
Formatted Capacity		3,200 GB	1,600 GB	800 GB	400 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	1,500 MiB/s	1,900 MiB/s		
	Sustained 64KiB Sequential Write	750 MiB/s	850 MiB/s		
	Sustained 4KiB Random Read	270,000 IOPS			
	Sustained 4KiB Random Write	80,000 IOPS	100,000 IOPS	93,000 IOPS	90,000 IOPS
Supply Voltage	Allowable Voltage	5 V ± 7% 12 V ± 7%			
Power Consumption		3.2 W Typ.			

> RELIABILITY

Model Number	PX05SMBxxx PX05SMBxxxY PX05SMQxxx PX05SMQxxxB
MTTF	2,000,000 hours
DWPD	10
Warranty	5 years

> MECHANICAL SPECIFICATIONS

Model Number	PX05SMBxxx PX05SMBxxxY PX05SMQxxx PX05SMQxxxB
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	PX05SMBxxx PX05SMBxxxY PX05SMQxxx PX05SMQxxxB
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: Toshiba 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 = 2³⁰ = 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 2¹⁰, or 1,024 bytes, a mebibyte (MiB) means 2²⁰, or 1,048,576 bytes, and a gibibyte (GiB) means 2³⁰, 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 Toshiba Storage Products which deliver various security functions as optional feature. For more information of security options, please contact your TOSHIBA sales representative