TOSHIBA
Leading Innovation

SSD

PX05SVB/PX05SVQ SERIES

ENTERPRISE MIXED USE SSD

Product image may represent a design model.

The PX05S Series is our 4th generation enterprise SAS SSD leveraging the highly successful PX04S Series. The PX05SV Series is optimized for web server, SQL server and read- intensive storage applications, requiring a balance of reliability, capacity and endurance. With 270k IOPS random read performance, these SSD models deliver sustained, low latency performance to maximize performance.

Further features include power-loss protection and full 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 Mixed Use PX05SV supports 3 DWPD (Drive Writes Per Day) and is designed to deliver high-levels of performance, quality and reliability for read-intensive and mixed-use applications such as media streaming, data warehousing and web servers.

KEY FEATURES

- Up to 3.84TB 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
- 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
- Self-Encrypting (SED) Option
- Self-Encrypting (SED), FIPS Certified Option
- 5-year limited warranty

APPLICATIONS

- Media Streaming
- Data Warehousing
- Web Servers

MAIN SPECIFICATIONS

Model Number SIE Model Number SED Model Number SED FIPS Model Number		PX05SVB384 PX05SVB384Y PX05SVQ384 PX05SVQ384B	PX05SVB192 PX05SVB192Y PX05SVQ192 PX05SVQ192B	PX05SVB096 PX05SVB096Y PX05SVQ096 PX05SVQ096B	PX05SVB048 PX05SVB048Y PX05SVQ048 PX05SVQ048B
Interface		SAS-3.0			
Formatted Capacity		3,840 GB	1,920 GB	960 GB	480 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	59,000 IOPS	60,000 IOPS		48,000 IOPS
Supply Voltage	Allowable Voltage	5 V ± 7% 12 V ± 7 %			
Power Consumption		3.2 W Typ.			

Model Number SIE Model Number SED Model Number SED FIPS Model Number		PX05SVB320 PX05SVB320Y PX05SVQ320 PX05SVQ320B	PX05SVB160 PX05SVB160Y PX05SVQ160 PX05SVQ160B	PX05SVB080 PX05SVB080Y PX05SVQ080 PX05SVQ080B	PX05SVB040 PX05SVB040Y PX05SVQ040 PX05SVQ040B
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	1,400 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	80,000 IOPS			73,000 IOPS
Supply Voltage	Allowable Voltage	5 V ± 7% 12 V ± 7 %			
Power Consumption		3.2 W Typ.			

RELIABILITY

Model Number	PX05SVBxxx PX05SVBxxxY PX05SVQxxx PX05SVQxxxB
MTTF	2,000,000 hours
DWPD	3
Warranty	5 years

MECHANICAL SPECIFICATIONS

Model Number	PX05SVBxxx PX05SVBxxxY PX05SVQxxx PX05SVQxxxB
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		PX05SVBxxx PX05SVBxxxY PX05SVQxxx PX05SVQxxxB
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)

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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 = 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 Toshiba Storage Products which deliver various security functions as optional feature. For more information of security options, please contact your TOSHIBA sales representative

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