



SSD 2.5" Solid State Drive

Serial ATA 6Gb/s

PX-512M3

512GB SSD

The M3 SATA 6 Gb/s SSD is Plextor's most advanced SSD, maintaining exceptionally high performance even after long periods of intensive use with exclusive True Speed technology. Users can expect to experience real-world speeds of up to 525 MB/s and 445 MB/s in sequential read/write, and 70,000 and 65,000 IOPS in random read/write. Supporting this sustained True Speed performance is a generous five-year warranty.

The True Speed technology used in the Plextor M3 ensures that the drive continuously delivers high performance in actual use. Long-term write speeds remain high and the severe slowdown found with some other SSDs is prevented. Powering True Speed is the unique fusion of a server-grade controller chip, high-quality Toggle NAND flash from industry leader Toshiba, and exclusive firmware – including the Plextor Instant Restore system, advanced global wear leveling, and bad block management.

Plextor takes an uncompromising approach to quality and every SSD is backed by an extensive five-year warranty. Purchasers have the reassurance of a comprehensive support system including technical support, forums staffed by technicians, and a global network of dealers and repair centers. Allowing us to offer this ironclad warranty is a combination of high-quality components, excellent quality control, and an insistence on fully testing all SSDs before they leave the factory. Every drive is subjected to a rigorous 20-hour high-temperature burn-in test and accelerated tests to simulate real-world use. The results of our approach to testing and quality are reflected in a mere 0.5% average annual failure rate (AFR), the lowest across the industry.

The Plextor M3 series redefines quality and real-world performance; not only giving users the experience of sustained long-term speed, but the reassurance of a five-year warranty. It is available in 128 GB, 256 GB, and 512 GB capacities.

Innovative True Speed Technology

- True Speed means consistent high performance, in every real-life situation and for the entire lifetime of the product. Leveraging the power of advanced firmware and best in class hardware, True Speed ensures that the SSD works at its full potential even after prolonged usage when data is heavily fragmented.
- True Speed's sustained performance sets Plextor's SSDs apart from other products, many of which see a sharp drop in read/write speeds after just a few days of intensive utilization.

High Quality Components for Maximum Performance

- Server-grade Marvell 88SS9174 controller for read/write speeds of up to 525MB/s and 445MB/s in sequential mode, and 70,000 and 65,000 IOPS for random read/write operations at 4K file size.
- Fully supports SATA 6Gb/s and is compatible with SATA 3Gb/s and SATA 1.5Gb/s. Data is transferred faster and product lifetime is extended with the 512MB DDR3 DRAM cache.
- The latest synchronous MLC NAND flash modules from industry-leader Toshiba provides reliability and extended product life. You can be sure that the SSD will work flawlessly, even after years of usage.

Consistent Speed Levels Even After Intensive Usage

- Smart firmware combines three advanced technologies to keep performance at sustained levels. Bad Block Management and Global Wear Leveling optimize the way data is written on the drive, while the unique Instant Restore technique overcomes the problem of declining speed after a period of usage.

- Supports advanced functions, such as S.M.A.R.T. failure prediction, the TRIM command, NCQ optimization, and superior Garbage Collection, further increasing performance and reliability.

Rigorous quality control for maximum user satisfaction

- The lowest failure rate in the industry; made possible by the strictest quality control. Every Plextor drive is tested before it leaves the factory against precise standards. The tests include an enterprise-grade over twenty hours high temperature burn-in test and intense accelerated simulation of real working conditions.

Backed by Plextor's legendary service

- Full technical support and information, from local helplines, websites, and forums staffed by trained Plextor technicians. With regular software and firmware updates providing constant improvement.

Continuous Plextor backing—Five-year ironclad warranty

- Five-year ironclad warranty giving complete reassurance, backed by an extensive network of dealers and repair centers for quick turnaround times.

PX-512M3

512GB SSD

Performance

Capacity	512GB
Buffer	512MB DDR3
Read/Write Speed (Under Windows NTFS)	
Sequential Read Speed (SATA 6Gb/s)	Up to 525 MB/s
Sequential Write Speed (SATA 6Gb/s)	Up to 445 MB/s
Random Read Speed (IOPS 4KB)	Up to 56,000
Random Write Speed (IOPS 4KB)	Up to 30,000
Power Consumption	2.5W (Active); 0.7W (Idle) typical
Environment and Reliability	
Temperature	0°C ~ 70°C (Operating)
Shock	1500G, 0.5 ms
Vibration	7 ~ 800Hz, 2.17G (RMS, Operation)
MTBF	1,500,000 hours
Warranty	5 years Plextor's Warranty Service

Compatibility

Operating System Supported	Microsoft Windows Family / Linux / Mac OS
Agency Approval	UL, CE, BSMI, WHQL, RoHS
Command Set Support	TRIM, S.M.A.R.T., NCQ, ATA/ATAPI-8
DATA Encryption	Supported
Firmware Upgrade	Supported

Form Factor and Connectors

Form Factor	2.5 inch form factor
Power Connector	15-pin SATA connector for DC 5V input
Data Connector	7-pin SATA connector

Dimension and Weight

Dimension (W/H/D)	2.75 x 0.3 x 4.0 inch / 69.85mm x 9.5mm x 100mm
Weight	2.54 oz / 75g

Package Contents

Drive	128GB/256GB/512GB SSD
Software	Image software included
Accessory	3.5" Bracket
Document	Quick installation guide Users manual and warranty statement"

System Requirements (For Bundled Software)

CPU	Pentium 4 1.3GHz and higher
Memory (RAM)	512 MB RAM or higher
Interface	SATA (Serial ATA)
Operating System	Microsoft Windows 7 Microsoft Windows Vista SP1 Microsoft Windows XP SP3 / XP-Pro (x64) SP2
Other	CD-RW/DVD-RW drive for bootable media creation Internet connection recommended for updates