

Samsung SSD 750 EVO

Data Sheet, Rev.1.0 (Sep. 2015)



Summary

- SATA 6Gb/s SSD for Client PCs
- 2.5 inch form factor
- Samsung Nand Flash Memory
- Samsung Magician Software for SSD management
- Samsung Data Migration Software

The smart solution for your PC

Combining the best SSD technology from Samsung, the 750 EVO delivers a superior computing experience.

Faster performance for everyday use with TurboWrite Technology

With TurboWrite, write speeds for the 750 EVO are significantly accelerated during data transfers by creating a high-performance write buffer in the SSD. If a consecutive write operation (i.e. no idle time) exceeds the size of

1

the buffer, the transfer will exit TurboWrite and be processed at "After TurboWrite" speeds. Once the buffer is cleared, TurboWrite performance will resume. However, the buffer size for TurboWrite is more than sufficient for everyday PC use, and you should experience accelerated speeds for most workloads.

Advanced data encryption

The 750 EVO provides the same data encryption feature as the 850 EVO does. Self-Encrypting Drive (SED) security technology will help keep data safe at all times. It includes an AES 256-bit hardware-based encryption engine to ensure that your personal files remain secure. Being hardware-based, the encryption engine secures your data without performance degradation that you may experience with a software-based encryption.

Also, the 750 EVO is compliant with advanced security management solutions (TCG Opal and IEEE 1667). The Magician software will guide you on "How to use security features". Furthermore, you can erase or initialize data with the crypto erase service with PSID.

Proven quality and trusted reliability

Samsung's unparalleled end-to-end integration allows you to enjoy a reliable, high performance SSD. Samsung SSD 750 EVO is backed by the 3-year limited warranty.

Convenient Samsung Software

The Samsung Data Migration software is simple to use – yet provides a very powerful "Custom Cloning" feature that makes migration work even when source data is greater than the SSD's capacity.

The magician software eliminates the confusion and uncertainties of SSD management, making it simple for users to maximize the performance and lifetime of their Samsung SSD. In addition to its performance optimization features, Magician also provides 750 EVO users the option to enable RAPID mode (Real time Accelerated Processing of Input-output Data) – an innovative performance enhancement that processes data on a system level by using free DRAM memory as a cache. Once enabled in Magician, RAPID mode provides an overall PC performance boost.

Technical Specifications

Samsung SSD 750 EVO	
Usage Application	Client PCs
Capacity	120GB, 250GB
Dimensions (LxWxH)	100 x 69.85 x 6.8 (mm)
Interface	SATA 6Gb/s (compatible with SATA 3Gb/s and SATA 1.5Gb/s)
Form Factor	2.5 inch
Controller	Samsung MGX controller
NAND Flash Memory	Samsung Nand Flash Memory
DRAM Cache Memory	256MB DDR3
Performance*	Sequential Read: Max. 540 MB/s
	Sequential Write**: Max. 520 MB/s
	4KB Random Read (QD1): Max. 10,000 IOPS
	4KB Random Write(QD1): Max. 35,000 IOPS
	4KB Random Read(QD32): Max. 94,000 IOPS(120GB) Max. 97,000 IOPS(250GB)
	4KB Random Write(QD32): Max. 88,000 IOPS
Data Security	AES 256-bit Full Disk Encryption (FDE) TCG/Opal v2.0, Encrypted Drive (IEEE1667)
Weight	Max. 45g
Power Consumption***	Active Read/Write (Average): 2.4W / 2.8W Idle: 50mW Device Sleep: 6mW
Supporting features	TRIM (Required OS support), Garbage Collection, S.M.A.R.T
Temperature	Operating: 0°C to 70°C Non-Operating: -40°C to 85°C
Humidity	5% to 95%, non-condensing
Vibration	Non-Operating: 20~2000Hz, 20G
Shock	Non-Operating: 1500G , duration 0.5m sec, 3 axis
Reliability	MTBF: 1.5 million hours
TBW	120GB: 35TBW 250GB: 70TBW
Warranty	3 years limited

* Sequential performance measurements based on CrystalDiskMark v.3.0.3. Random performance measurements based on Iometer 1.1.0
Performance may vary based on SSD's firmware version, system hardware & configuration.

Test system configuration : Intel Core i7-4790K @ 4.0GHz, DDR3 1600MHz 8GB, OS – Windows7 Ultimate x64 SP1, IRST 13.0.3.1001,
Chipset : Intel® Z97PRO

** Sequential Write performance measurements based on TurboWrite technology

*** Power consumption measured with Iometer 1.1.0 with Intel i7-4770K, DDR3 8GB, Intel®DH87RL OS- Windows7 Ultimate x64 SP1

Product Lineup

Density	Model Name	Model Code	MOQ
120 GB	MZ-750120	MZ-750120BW MZ-750120B/CN	60
250 GB	MZ-750250	MZ-750250BW MZ-750250B/CN	60

For more information, please visit www.samsung.com/ssd and www.samsungssd.com.
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