

250 GB	MZ-V7E250E	1 TB (1,000 GB)	MZ-V7E1T0E
500 GB	MZ-V7E500E	2 TB (2,000 GB)	MZ-V7E2T0E

Unreal performance realized.



Boost everyday computing with speed, endurance and worry-free durability.

Featuring the latest V-NAND technology and a newly enhanced Phoenix controller, the new Samsung 970 EVO NVMe (Non-Volatile Memory Express) SSD delivers unrivaled performance. Your business will benefit from up to 30 percent faster sequential read/write speeds and up to 50 percent higher TBW than the previous generation. Upgrade your PCs and laptops, and upgrade your productivity. With Samsung 970 EVO NVMe SSD.

Key Features



The SSD that Goes Further

Accelerate into next-gen computing. The Samsung 970 EVO delivers breakthrough speeds, best-in-class reliability and a range of capacities up to 2 TB.¹ The latest 64-layer V-NAND memory, Phoenix controller, and Intelligent TurboWrite technology enhance 4K and 3D graphic editing, high-end game development and virtually every other task.



Next-Level SSD Speed

Feel the NVMe difference. Combined with a Phoenix controller and Intelligent TurboWrite technology, the 970 EVO streamlines graphic-intensive workflows. Get stunning sequential read/write speeds of up to 3,500/2,500 MB/s,² up to 32% faster than the previous generation.



Design Flexibility

The next advancement in NVMe SSD. The 970 EVO fits up to 2 TB onto the compact M.2 (2280) form factor,³ greatly expanding storage capacity and saving space for other components. Samsung's innovative technology empowers you with the capacity to do more and accomplish more.



Exceptional Endurance

The new standard in sustainable performance. The 970 EVO is warranted for up to 5 years or up to 1,200 TBW (depending on drive size), which is 50 percent higher than the previous generation. The 970 EVO provides your business exceptional endurance.



Unparalleled Reliability

Achieve a new level of drive confidence. Samsung's advanced nickel-coated controller and heat spreader enable superior heat dissipation. The Dynamic Thermal Guard automatically monitors and maintains optimal operating temperatures to minimize performance drops.



Samsung Magician

Advanced drive management made simple. The Samsung Magician software will help you keep an eye on your drive. A suite of user-friendly tools helps keep your drive up to date, monitors drive health and speed, and even boosts performance.

Samsung 970 EVO NVMe M.2 Solid State Drives



		MZ-V7E250E	MZ-V7E500E	MZ-V7E1T0E	MZ-V7E2T0E
Usage Application		Client PC	Client PC	Client PC	Client PC
Capacity ¹		250 GB	500 GB	1 TB (1,000 GB)	2 TB (2,000 GB)
Dimensions (WxHxD)		3.16" x 0.87" x 0.09"	3.94" x 2.76" x 0.27"	3.94" x 2.76" x 0.27"	3.94" x 2.76" x 0.27"
Interface		PCIe Gen3 X4, NVMe 1.3	PCIe Gen3 X4, NVMe 1.3	PCIe Gen3 X4, NVMe 1.3	PCIe Gen3 X4, NVMe 1.3
Form Factor ³		M.2 (2280)	M.2 (2280)	M.2 (2280)	M.2 (2280)
Controller		Phoenix	Phoenix	Phoenix	Phoenix
NAND Flash Memory		Samsung 64L V-NAND TLC	Samsung 64L V-NAND TLC	Samsung 64L V-NAND TLC	Samsung 64L V-NAND TLC
DRAM Cache Memory		512 MB LPDDR4	512 MB LPDDR4	1 GB LPDDR4	2 GB LPDDR4
Performance ²	Sequential Read (Max.)	3,400 MB/s	3,400 MB/s	3,400 MB/s	3,500 MB/s
	Sequential Write (Max.)	1,500 MB/s	2,300 MB/s	2,500 MB/s	2,500 MB/s
	4KB Random Read (QD1) (Max.)	15,000 IOPS	15,000 IOPS	15,000 IOPS	15,000 IOPS
	4KB Random Write (QD1) (Max.)	50,000 IOPS	50,000 IOPS	50,000 IOPS	50,000 IOPS
	4KB Random Read (QD32) (Max.)	200,000 IOPS	370,000 IOPS	500,000 IOPS	500,000 IOPS
	4KB Random Write (QD32) (Max.)	350,000 IOPS	450,000 IOPS	450,000 IOPS	480,000 IOPS
Data Security		AES 256-bit Encryption (Class 0), TCG Opal v2.0, IEEE 1667 (Encrypted Drive)	AES 256-bit Encryption (Class 0), TCG Opal v2.0, IEEE 1667 (Encrypted Drive)	AES 256-bit Encryption (Class 0), TCG Opal v2.0, IEEE 1667 (Encrypted Drive)	AES 256-bit Encryption (Class 0), TCG Opal v2.0, IEEE 1667 (Encrypted Drive)
Weight (Max.)		8 g.	8 g.	8 g.	8 g.
TBW (Terabytes Written)		150 TBW	300 TBW	600 TBW	1,200 TBW
Temperature	Operating	32° ~ 158° F (0° C ~ 70° C)	32° ~ 158° F (0° C ~ 70° C)	32° ~ 158° F (0° C ~ 70° C)	32° ~ 158° F (0° C ~ 70° C)
	Non-Operating	-49° ~ 185° F (-45° C to 85° C)	-49° ~ 185° F (-45° C to 85° C)	-49° ~ 185° F (-45° C to 85° C)	-49° ~ 185° F (-45° C to 85° C)
Humidity		5% to 95%, Non-Condensing	5% to 95%, Non-Condensing	5% to 95%, Non-Condensing	5% to 95%, Non-Condensing
Vibration (Non-Operating)		20~2000Hz, 20G	20~2000Hz, 20G	20~2000Hz, 20G	20~2000Hz, 20G
Shock (Non-Operating) ⁴		1500G, Duration 0.5 m/sec, Half-Sine	1500G, Duration 0.5 m/sec, Half-Sine	1500G, Duration 0.5 m/sec, Half-Sine	1500G, Duration 0.5 m/sec, Half-Sine
Management SW		Magician Software	Magician Software	Magician Software	Magician Software
Limited Warranty ⁵		5 Years or 150 TBW	5 Years or 300 TBW	5 Years or 600 TBW	5 Years or 1,200 TBW



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¹1 GB=1,000,000,000 bytes by IDEMA. A certain portion of capacity may be used for system file and maintenance, so the actual capacity may differ from what is indicated on the product label. ²Sequential and random performance measurements based on Iometer 1.1.0. Performance may vary based on SSD's firmware version, system hardware and configuration. Test system configuration: Intel® Core i7-7700K @ 4.2 GHz, Samsung DDR4 32 GB (16 GB x 2), OS – Windows® 10 Pro x64, ASUS PRIME™ Z270-A. For 970 EVO, sequential write performance measurements based on TurboWrite technology. The sequential write performances after TurboWrite region are 300 MB/s (250 GB), 600 MB/s (500 GB), 1,200 MB/s (1 TB) and 1,250 MB/s (2 TB). Random Write performance measurements are based on TurboWrite technology. The random write performances after TurboWrite region are 80,000 IOPS (250 GB), 160,000 IOPS (500 GB) and 300,000 IOPS (1 TB/2 TB). ³M.2 is a specification of form factor for ultra-thin PCs. The M.2 standard allows widths of 12, 16, 22 and 30 mm and lengths of 16, 26, 30, 38, 42, 69, 80 and 110 mm. Commercially, M.2 is popular with a width of 22 mm and lengths of 30, 42, 60, 80 and 110 mm. Samsung provides the most popular form factor with a 22 mm x 80 mm model (i.e., 2280) for user convenience. ⁴Internal free fall shock test conducted under controlled conditions. ⁵Warranty 5 years or TBW, whichever comes first. For more information on the warranty, please find the warranty statement enclosed in the package.