

250 GB	MZ-V7S250B/AM	1 TB (1,000 GB)	MZ-V7S1T0B/AM
500 GB	MZ-V7S500B/AM	2 TB (2,000 GB)	MZ-V7S2T0B/AM

# Performance plus reliability plus productivity.

## Upgrade everyday computing with greater speed, endurance and worry-free durability.

Featuring the latest Samsung V-NAND technology and the proven Samsung Phoenix controller, the Samsung 970 EVO Plus NVMe SSD delivers unrivaled performance. Your business will benefit from sequential read/write speeds of up to 3,500/3,300 MB/s. And the faster your computers, the faster your work gets done. Upgrade your PCs and laptops, and upgrade your productivity with the Samsung 970 EVO Plus NVMe SSD.

### Key Features



#### SSD Designed for Performance

The Samsung 970 EVO Plus delivers breakthrough speeds, best-in-class reliability and capacities of up to 2 TB.<sup>1</sup> The latest 92-layer V-NAND memory, Phoenix controller, and Intelligent TurboWrite technology enhance 4K and 3D graphic editing, high-end game play and virtually every other task.



#### NVMe Next-Level SSD Speed

The Non-Volatile Memory express (NVMe) interface is specifically engineered to increase NAND flash storage transfer speeds. Combined with a Phoenix controller and Intelligent TurboWrite technology, the 970 EVO Plus streamlines graphic-intensive workflows. The 970 EVO Plus also features firmware optimization to reach sequential read/write speeds up to 3,500/3,300 MB/s<sup>2</sup>.



#### Design Flexibility

The next advancement in NVMe SSD. The 970 EVO Plus fits 250 GB, 500 GB, 1 TB or 2 TB onto the compact M.2 (2280) form factor,<sup>3</sup> 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 Plus is warranted for up to 5 years or up to 1200 TBW (depending on drive size).<sup>4</sup> The 970 EVO Plus 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 Software

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 boosts performance through RAPID mode.



# Samsung 970 EVO Plus NVMe M.2 Solid State Drives



	MZ-V7S250B/AM	MZ-V7S500B/AM	MZ-V7S1T0B/AM	MZ-V7S2T0B/AM
Usage Application	Client PC	Client PC	Client PC	Client PC
Capacity <sup>1</sup>	250 GB	500 GB	1 TB (1,000 GB)	2 TB (2,000 GB)
Dimensions (WxHxD)	3.16" x 0.87" x 0.09" / 80.15 x 22.15 x 2.38 mm	3.16" x 0.87" x 0.09" / 80.15 x 22.15 x 2.38 mm	3.16" x 0.87" x 0.09" / 80.15 x 22.15 x 2.38 mm	3.16" x 0.87" x 0.09" / 80.15 x 22.15 x 2.38 mm
Interface	PCIe Gen3.0 x4, NVMe 1.3			
Form Factor <sup>3</sup>	M.2 (2280)	M.2 (2280)	M.2 (2280)	M.2 (2280)
Controller	Samsung Phoenix	Samsung Phoenix	Samsung Phoenix	Samsung Phoenix
NAND Flash Memory	Samsung 92-Layer V-NAND 3-Bit MLC			
Cache Memory	512 MB LPDDR4	512 MB LPDDR4	1 GB LPDDR4	2 GB LPDDR4
Performance <sup>2</sup>	Sequential Read (Max.)	3,500 MB/s	3,500 MB/s	3,500 MB/s
	Sequential Write (Max.)	2,300 MB/s	3,200 MB/s	3,300 MB/s
	4KB Random Read (QD1) (Max.)	17,000 IOPS	19,000 IOPS	19,000 IOPS
	4KB Random Write (QD1) (Max.)	60,000 IOPS	60,000 IOPS	60,000 IOPS
	4KB Random Read (QD32) (Max.)	250,000 IOPS	480,000 IOPS	600,000 IOPS
	4KB Random Write (QD32) (Max.)	550,000 IOPS	550,000 IOPS	550,000 IOPS
Data Security	AES 256-bit Full Disk Encryption (Class 0), TCG Opal V2.0, IEEE 1667 (Encrypted Drive)	AES 256-bit Full Disk Encryption (Class 0), TCG Opal V2.0, IEEE 1667 (Encrypted Drive)	AES 256-bit Full Disk Encryption (Class 0), TCG Opal V2.0, IEEE 1667 (Encrypted Drive)	AES 256-bit Full Disk Encryption (Class 0), TCG Opal V2.0, IEEE 1667 (Encrypted Drive)
Weight (Max.)	0.3 oz. / 8 g.			
TBW (Terabytes Written)	150 TBW	300 TBW	600 TBW	1200 TBW
Reliability (MTBF)	1.5 Million Hours	1.5 Million Hours	1.5 Million Hours	1.5 Million Hours
Power Consumption <sup>5</sup>	System Level (Avg.)	5 W	5.8 W	6 W
	Idle (Max.)	30 mW	30 mW	30 mW
Allowable Voltage	3.3 V +/- 5%			
Supporting Features	TRIM (Required OS Support), Garbage Collection, S.M.A.R.T.			
Operating Temperature	32° to 158° F (0° C to 70° C)	32° to 158° F (0° C to 70° C)	32° to 158° F (0° C to 70° C)	32° to 158° F (0° C to 70° C)
Humidity	5% to 95%, Non-Condensing			
Vibration (Non-Operating)	20-2000Hz, 20G	20-2000Hz, 20G	20-2000Hz, 20G	20-2000Hz, 20G
Shock (Non-Operating) <sup>6</sup>	1500G, Duration 0.5 m/sec, 3 Axis			
Management SW	Magician Software	Magician Software	Magician Software	Magician Software
Limited Warranty <sup>4</sup>	5 Years or 150 TBW	5 Years or 300 TBW	5 Years or 600 TBW	5 Years or 1200 TBW



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<sup>1</sup> 1 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. <sup>2</sup> Sequential 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), Windows® 10 Built 10240, ASUS PRIME™ Z270-A. Sequential and random write performance was measured with Intelligent TurboWrite technology activated. The sequential write performances for the portion of data exceeding Intelligent TurboWrite buffer size are: 400 MB/s for 250GB, 900 MB/s for 500GB, 1700 MB/s for 1TB and 1750 MB/s for 2TB. The random write performances for the portion of data exceeding Intelligent TurboWrite buffer size (tested with QD 32 Thread 4) are: 100,000 IOPS for 250GB, 200,000 IOPS for 500GB, 400,000 IOPS for 1TB and 420,000 IOPS for 2TB. Performance may vary depending on SSD's firmware, system hardware and configuration, and other factors. <sup>3</sup> M.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. <sup>4</sup> Warranty 5 years or TBW, whichever comes first. For more information on the warranty, please find the warranty statement enclosed in the package. <sup>5</sup> Actual power consumption may vary depending on system hardware and configuration. <sup>6</sup> Internal free fall shock test conducted under controlled conditions.