# 970 EVO Plus NVMe® M.2 SSD 500GB

**MZ-V75S500B /MZ-V7S500B/AM**

* • Superior NVMe® Read/Write performance with speeds up to 3,500/3,200 MB/s
* • V-NAND reliability backed by up to 5 yr. warranty

**Storage**

**[2TB](https://www.samsung.com/us/computing/memory-storage/solid-state-drives/ssd-970-evo-plus-nvme-m-2-2-tb-mz-v7s2t0b-am/" \t "_self)**

[$139.99](https://www.samsung.com/us/computing/memory-storage/solid-state-drives/ssd-970-evo-plus-nvme-m-2-2-tb-mz-v7s2t0b-am/" \t "_self)~~[$179.99](https://www.samsung.com/us/computing/memory-storage/solid-state-drives/ssd-970-evo-plus-nvme-m-2-2-tb-mz-v7s2t0b-am/" \t "_self)~~

**[1TB](https://www.samsung.com/us/computing/memory-storage/solid-state-drives/ssd-970-evo-plus-nvme-m-2-1-tb-mz-v7s1t0b-am/" \t "_self)**

[$69.99](https://www.samsung.com/us/computing/memory-storage/solid-state-drives/ssd-970-evo-plus-nvme-m-2-1-tb-mz-v7s1t0b-am/" \t "_self)~~[$99.99](https://www.samsung.com/us/computing/memory-storage/solid-state-drives/ssd-970-evo-plus-nvme-m-2-1-tb-mz-v7s1t0b-am/" \t "_self)~~

**[500GB](https://www.samsung.com/us/computing/memory-storage/solid-state-drives/ssd-970-evo-plus-nvme-m-2-500gb-mz-v7s500b-am/" \t "_self)**

[$39.99](https://www.samsung.com/us/computing/memory-storage/solid-state-drives/ssd-970-evo-plus-nvme-m-2-500gb-mz-v7s500b-am/" \t "_self)~~[$59.99](https://www.samsung.com/us/computing/memory-storage/solid-state-drives/ssd-970-evo-plus-nvme-m-2-500gb-mz-v7s500b-am/" \t "_self)~~

**[250GB](https://www.samsung.com/us/computing/memory-storage/solid-state-drives/ssd-970-evo-plus-nvme-m-2-250gb-mz-v7s250b-am/" \t "_self)**

[$49.99](https://www.samsung.com/us/computing/memory-storage/solid-state-drives/ssd-970-evo-plus-nvme-m-2-250gb-mz-v7s250b-am/" \t "_self)

* Type

**Product Type**

NVMe SSD

**Storage Type**

Internal

**Interface**

PCIe Gen 3.0 x 4, NVMe 1.3

**Read/Write Speeds**

3,500/2,300 MB/s

**Usage Application**

Client PCs

**Series**

970 EVO Plus

* Application

**Consumer**

Yes

* Storage

**Capacity**

250GB (1GB=1 Billion byte by IDEMA) \* Actual usable capacity may be less (due to formatting, partitioning, operating system, applications or otherwise)

* Key Features

**Sequential Read Speed**

Up to 3,500 MB/s \* Performance may vary based on system hardware & configuration

**Sequential Write Speed**

Up to 2,300 MB/s \* Performance may vary based on system hardware & configuration

**Random Read Speed**

Random Read (4KB, QD32): Up to 250,000 IOPS; Random Read (4KB, QD1): Up to 17,000 IOPS \* Performance may vary based on system hardware & configuration

**Random Write Speed**

Random Write (4KB, QD32): Up to 550,000 IOPS; Random Write (4KB, QD1): Up to 60,000 IOPS \* Performance may vary based on system hardware & configuration

**Controller**

In-house

**NAND Flash**

Samsung V-NAND 3-bit MLC

**Cache Memory**

Samsung 512MB Low Power DDR4 SDRAM

**Trim Support**

Supported

**AES Encryption**

AES 256-bit Encryption (Class 0)TCG/Opal IEEE1667 (Encrypted drive)

**Security**

AES 256-bit Full Disk Encryption, TCG/Opal V2.0, Encrypted Drive (IEEE1667)

**S.M.A.R.T. Support**

Supported

**GC (Garbage Collection)**

Auto Garbage Collection Algorithm

**WWN Support**

Not supported

**Device Sleep Mode Support**

Yes

**Internal Storage**

Samsung V-NAND 3-bit MLC

**Temperature proof**

Yes

**NVMe**

Yes

**Gaming SSDs**

Yes

**M.2 2280**

Yes

* General

**Average Power Consumption (system level)**

\* Average: 5 W \* Maximum: 8 W (Burst mode) \* Actual power consumption may vary depending on system hardware & configuration

**Power consumption (Idle)**

Max. 30 mW \* Actual power consumption may vary depending on system hardware & configuration

**Voltage**

3.3 V ± 5 % Allowable voltage

**Reliability (MTBF)**

1.5 Million Hours Reliability (MTBF)

* Environmental Specs

**Operating Temperature**

0 - 70 ℃ Operating Temperature

**Shock**

1,500 G & 0.5 ms (Half sine)

* Form Factor

**Product**

M.2 (2280)

* Dimensions (W x H x D)

**Product**

3.16" x 0.87" x 0.09"

* Weight

**Product**

0.3 oz.

* Software

**Management SW**

Magician Software for SSD management

* Warranty

**Product**

5-Year Limited Warranty or: 150 TBW Limited Warranty