

SAMSUNG

# SAMSUNG

Solid State Drive

The SSD that makes the difference.  
Performance that endures.



## V-NAND SSD 860 PRO | EVO

### Reliable endurance. Advanced Engineering.

Experience accelerated speed, enhanced endurance and reliability, with expanded compatibility. The newest drives of the world's best-selling SSD series, engineered with the latest V-NAND technology.

[samsung.com/ssd](https://samsung.com/ssd) | [samsungssd.com](https://samsungssd.com)





# Ultimate evolution from within

## Enjoy the new performance of 860 PRO & EVO

The newest drives of the world's best-selling SSD series \*, the 860 PRO and 860 EVO are the perfect combination of speed, endurance, and compatibility. Specifically engineered for long-lasting endurance with the latest V-NAND technology, best in class TBW levels, and a reinforced controller, these SSDs make all the difference.

\* NPD (US data from Jan. 2015 to Oct. 2017) and GfK (EU5 data from Jan. 2015 to Sep. 2017, China data from Jan. 2016 to Sep. 2017)

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V-NAND



### 860 PRO

Get fast, enduring performance designed for creators, IT professionals, and gamers using workstations, NAS, or high-end computing.

- Built for workstations, NAS, and high-end computing
- Less-lag gaming and rendering
- Smooth multitasking performance
- Best in class endurance (up to 4,800 TBW)

### 860 EVO

Boost your everyday computing. Gain speed, endurance, and worry-free reliability ideal for mainstream PCs and laptops.

- Designed for mainstream PCs and laptops
- Super-fast large file transfers
- Refined everyday computing
- Wide compatibility with 2.5-inch, mSATA, and M.2
- Best in class endurance (up to 2,400 TBW)



# Experience speed excellence

The 860 PRO and 860 EVO boast best in class performance. The PRO delivers sequential read (up to 560 MB/s) and write (up to 530 MB/s) speeds to tackle professional workloads. The EVO is powered by Intelligent TurboWrite technology, perfect for speeding up your overall computing experience.



Sequential Reads  
up to **560 MB/s**

Sequential Writes  
up to **530 MB/s**



Random Reads  
up to **100K IOPS**

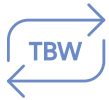
Random Writes  
up to **90K IOPS**

· 860 PRO's performance.



## Built to endure

Lean on the industry's highest-rated max 4,800 TBW. The 860 PRO and 860 EVO are backed by a 5-year limited warranty and powered with the latest V-NAND technology to give you absolute confidence.



**4,800 TBW**



**5-year  
Warranty**

· TBW for 860 PRO 4TB model.

· TBW (Total Byte Written): The total amount of data that can be written on an SSD before it is likely to fail.

## Expanded compatibility

The 860 PRO and 860 EVO deliver faster and more fluid system compatibility than the previous 850 series. The refined ECC algorithm and revamped controller generate higher speeds, and the improved queued trim enhances Linux compatibility. The 860 PRO comes in the widely compatible 2.5-inch form factor, and the 860 EVO is available in 2.5-inch, mSATA, and M.2 for a broad range of computing devices.

M.2



mSATA



2.5-inch



## Magician software

The simple, intuitive way to monitor, manage, and maintain your SSD. Get notifications for new firmware with easy update installs, performance benchmark tests to help keep your system at its fastest, and security options that support AES 256-bit hardware-based encryption with TCG Opal and IEEE1667 compliancy.



**Firmware  
Update**



**Performance  
Benchmark**



**Data  
Security**

# Technical Specifications

	860 PRO	860 EVO
Form Factor	2.5-inch	2.5-inch, M.2, mSATA
Application	Client PCs	Client PCs
Capacity	4TB, 2TB, 1TB, 512GB, 256GB	[2.5-inch] 4TB, 2TB, 1TB, 500GB, 250GB [M.2] 2TB, 1TB, 500GB, 250GB [mSATA] 1TB, 500GB, 250GB
Interface	SATA 6 Gb/s Interface, compatible with SATA 3 Gb/s & SATA 1.5 Gb/s interface	SATA 6 Gb/s Interface, compatible with SATA 3 Gb/s & SATA 1.5 Gb/s interface
Dimension (WxHxD)	100 X 69.85 X 6.8 (mm)	[2.5-inch] 100 x 69.85 x 6.8 (mm) [M.2] 80.15 x 22.15 x 2.38 (mm) [mSATA] 30 x 50.9 x 3.85 (mm)
Weight	Max 62.0g Weight	[2.5-inch] Max. 62.0g Weight [M.2] Max. 8.0g Weight [mSATA] Max. 8.5g Weight
Storage Memory	Samsung V-NAND 2-bit MLC	Samsung V-NAND 3-bit MLC
Controller	Samsung MJX Controller	Samsung MJX Controller
Cache Memory	4GB LPDDR4 (4TB) / 2GB LPDDR4 (2TB) 1GB LPDDR4 (1TB) / 512MB LPDDR4 (256/512GB)	4GB LPDDR4 (4TB) / 2GB LPDDR4 (2TB) 1GB LPDDR4 (1TB) / 512MB LPDDR4 (250/500GB)
Sequential Read / Write	Max. 560 MB/s / 530 MB/s	Max. 550 MB/s / 520 MB/s
Random Read/Write (4KB, QD32)	Max. 100K IOPS / 90K IOPS	Max. 98K IOPS / 90K IOPS
Random Read/Write (4KB, QD1)	Max. 11K IOPS / 43K IOPS	Max. 10K IOPS / 42K IOPS
Special Features	TRIM & S.M.A.R.T & World Wide Name & Device Sleep Mode Support	TRIM & S.M.A.R.T & World Wide Name & Device Sleep Mode & TurboWrite Support
GC (Garbage Collection)	Auto Carbage Collection Algorithm	Auto Carbage Collection Algorithm
Data Encryption	Class 0 (AES 256) TCG/Opal v2.0, MS eDrive (IEEE1667)	Class 0 (AES 256) TCG/Opal v2.0, MS eDrive (IEEE1667)
Average Power Consumption	Active Read/Write: Max. 4.5 W / Avg. 2.2 W (4TB) Idle: Max. 0.5 W (4TB) Device Sleep: 7 mW (4TB)	Active Read/Write: Max. 4.0 W (4TB) / Avg. 3.0 W (4TB) Idle: Max. 0.5 W (4TB) Device Sleep: 8 mW (4TB)
Allowable Voltage	5V ± 5% Allowable voltage	5V ± 5% Allowable voltage
Reliability (MTBF)	1.5 Million Hours Reliability (MTBF)	1.5 Million Hours Reliability (MTBF)
Operating Temperature	0 - 70 °C Operating Temperature	0 - 70 °C Operating Temperature
Shock	1,500 G & 0.5 ms (Half sine)	1,500 G & 0.5 ms (Half sine)
Management SW	Magician Software for SSD management	Magician Software for SSD management
Warranty (TBW)	5 Years Limited Warranty or TBW Limited Warranty	5 Years Limited Warranty or TBW Limited Warranty
	4,800 TBW (4TB) / 2,400 TBW (2TB) / 1,200 TBW (1TB) 600 TBW (512GB) / 300 TBW (256GB)	2,400 TBW (4TB) / 1,200 TBW (2TB) / 600 TBW (1TB) 300 TBW (500GB) / 150 TBW (250GB)

· Performance may vary based on SSD's firmware version and system hardware & configuration. Sequential performance measurements based on CrystalDiskMark v.5.0.2 and Iometer1.1.0.

· Test system configuration: Intel Core i5-3550 CPU @ 3.3 GHz, DDR3 1333 MHz 4GB, OS – Windows 7 Ultimate x64, Chipset: ASUS P8H77-V

· 5-years or TBW, whichever comes first. For more information on the warranty, please find the enclosed warranty statement in the package.

· The TurboWrite buffer size varies based on the capacity of the SSD; 12GB for 250GB model, 22GB for 500GB model, 42GB for 1TB model and 78GB for 2/4TB model. For more information on the TurboWrite, please visit [www.samsungssd.com](http://www.samsungssd.com).

· [860 EVO] Performance may vary based on SSD's firmware version and system hardware & configuration. Sequential write performance measurements are based on Intelligent TurboWrite technology. Sequential performance measurements based on CrystalDiskMark v.5.0.2 and Iometer1.1.0. The sequential write performances after Intelligent TurboWrite region are 300 MB/s for 250/500GB and 500 MB/s for 1TB.

For more information about the Samsung SSD, visit [samsung.com/ssd](http://samsung.com/ssd) or [samsungssd.com](http://samsungssd.com).

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