

Performance ready for a new era

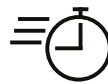
Blazing speed. Massive capacity. Built for AI and beyond. With up to twice the speed of the 990 PRO SSD¹ and up to an 8TB storage option,² the Samsung 9100 PRO SSD supercharges AI workloads, 4K video rendering, and gaming.



1TB	MZ-VAP1T0BW UPC 887276904917
2TB	MZ-VAP2T0BW UPC 887276904900
4TB	MZ-VAP4T0BW UPC 887276904894
8TB	MZ-VAP8T0BW UPC 887276904887

Key Features

Breakthrough PCIe® 5.0 performance



Supercharge your workflow and gaming with PCIe® 5.0, boasting up to 14,800/13,400 MB/s¹ sequential read/write speeds. Tackle massive files and power up your gaming with Gen5—twice as fast as the 990 PRO SSD.

Every task, turbocharged



Speed past productivity limits. With random read/write speeds up to 2,200K/2,600K IOPS³, enjoy seamless AI apps, fast game loads, and efficient multitasking. Virtually no lag, no limits—just nonstop performance.

Boost AI Applications



With random read/write speeds of up to 2,200K/2,600K IOPS³, the 9100 PRO SSD fuels seamless AI content creation, swift loads, and smooth gameplay. Work, play, and create at lightning speed.

Designed for compatibility



From laptops to desktop PCs, experience blazing PCIe® 5.0 speeds and up to 8TB of storage. Perfect for video editing, gaming, and creative tasks, with the compatibility to match your device.

Stay cool, run fast



Push limits, not temperatures. A 5nm controller boosts power efficiency up to 49% over the 990 PRO SSD⁴, while advanced thermal control keeps performance smooth and reliable.

¹Sequential and random write performance was measured with Intelligent Turbo Write technology being activated. Intelligent Turbo Write operates only within a specific data transfer size. Performance may vary depending on the SSD's firmware, storage capacity, system hardware & configuration, and other factors. For detailed information, please contact your local service center. The 4TB 9100 PRO SSD reaches 14,800 MB/s based on test system configuration: AMD Ryzen 9 7950X 16-Core Processor CPU@4.50GHz, DDR5 4800MHz 16GBx2, OS-Ubuntu 22.04.2, Chipset-ASRock-X670E-Taichi. To maximize the performance of the 9100 PRO SSD, please check whether your system supports PCIe® 5.0 at the Intel or AMD website. ²8TB capacity will be available later in 2025. ³Sequential and random write performance was measured with Intelligent Turbo Write technology being activated. Intelligent Turbo Write operates only within a specific data transfer size. Performance may vary depending on the SSD's firmware, system hardware & configuration, and other factors. For detailed information, please contact your local service center. The 4TB 9100 PRO SSD reaches 2,200K/2,600K IOPS based on test system configuration: AMD Ryzen 9 7950X 16-Core Processor CPU@4.50GHz, DDR5 4800MHz 16GBx2, OS-Ubuntu 22.04.2, Chipset-ASRock-X670E-Taichi. To maximize the performance of the 9100 PRO SSD, please check whether your system supports PCIe® 5.0 at the Intel or AMD website. ⁴990 PRO SSD Sequential Read/Write - 1,221/1,255 MB/Watt, 9100 PRO SSD Sequential Read/Write - 1,822/1,703 MB/Watt based on test result of 2TB capacity model. Results vary by storage size.



Specifications

Source: 2003-2023 OMDIA data: NAND suppliers' revenue market share.

Interface	PCIe® 5.0 x4, NVMe™ 2.0			
Form Factor	M.2 (2280)			
Hardware	V NAND TLC (V8) Controller In-House			
	Cache Memory			
	1 GB LPDDR4X	2GB LPDDR4X	3GB LPDDR4X	4GB LPDDR4X
Capacity	1TB	2TB	4TB	8TB
Idle (PS3 –APST on / PS4 –L1.2, Typical)	4.0mW / 3.3mW	4.8mW / 4.0mW	6.5mW / 5.7mW	TBD
Sequential Read/Write (MB/s)	Up to 14,800/13,400			
Random Read/Write (IOPS, QD32)	Up to 2,200K / 2,600K			
Data Encryption	Class 0 (AES256), TCG/Opal v2.0, MS eDrive (IEEE1667)			
Total Bytes Written	600 TBW	1,200 TBW	2,400 TBW	4,800 TBW
Warranty	Limited 5-year			

1TB

2TB

4TB

8TB

9100 PRO: Gen5 PCIe® NVMe™ SSD

