

## Samsung MZ-V9P2T0B-SSGBOX-IT/EC

# Samsung 990 PRO 2TB NVMe M.2 SSD User Manual

Model: MZ-V9P2T0B-SSGBOX-IT/EC

## 1. INTRODUCTION

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This manual provides essential instructions for the installation, operation, maintenance, and troubleshooting of your Samsung 990 PRO 2TB NVMe M.2 Solid State Drive. Please read this guide thoroughly before using the product to ensure optimal performance and longevity. This special edition includes a Sonic x Shadow Generations collaboration storage box.

## 2. PRODUCT OVERVIEW

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The Samsung 990 PRO 2TB is a high-performance NVMe M.2 SSD designed for demanding applications, including gaming, video editing, and data-intensive tasks. It leverages the PCIe Gen 4.0 x 4 interface for exceptional speed and efficiency.

### Key Features:

- **Interface:** NVMe (PCIe Gen 4.0 x 4)
- **Form Factor:** M.2 (2280)
- **Capacity:** 2TB
- **High-Speed Performance:** Sequential Read up to 7,450 MB/s, Sequential Write up to 6,900 MB/s.
- **Advanced Thermal Control:** Equipped with a nickel-coated controller and heat spreader label for stable performance.
- **Exceptional Power Efficiency:** Improved performance per watt compared to previous generations.
- **Gaming Optimized:** Ideal for PS5 and DirectStorage compatible PC games.
- **Special Edition:** Includes a Sonic x Shadow Generations collaboration storage box (approx. 180 x 180 x 175mm external dimensions).



Figure 1: Samsung 990 PRO 2TB SSD with the Sonic x Shadow Generations collaboration storage box. The box measures approximately 180mm x 180mm x 175mm.



## 大幅なスピードアップ

読み出し速度 最大： **7,450 MB/秒**

書き込み速度 最大： **6,900 MB/秒**

Figure 2: Visual representation of the significant speed increase offered by the 990 PRO, highlighting a maximum sequential read speed of 7,450 MB/s via PCIe 4.0.



Figure 3: Illustration demonstrating the exceptional power efficiency of the 990 PRO, indicating a 50% improvement in performance per watt over the previous 980 PRO model.

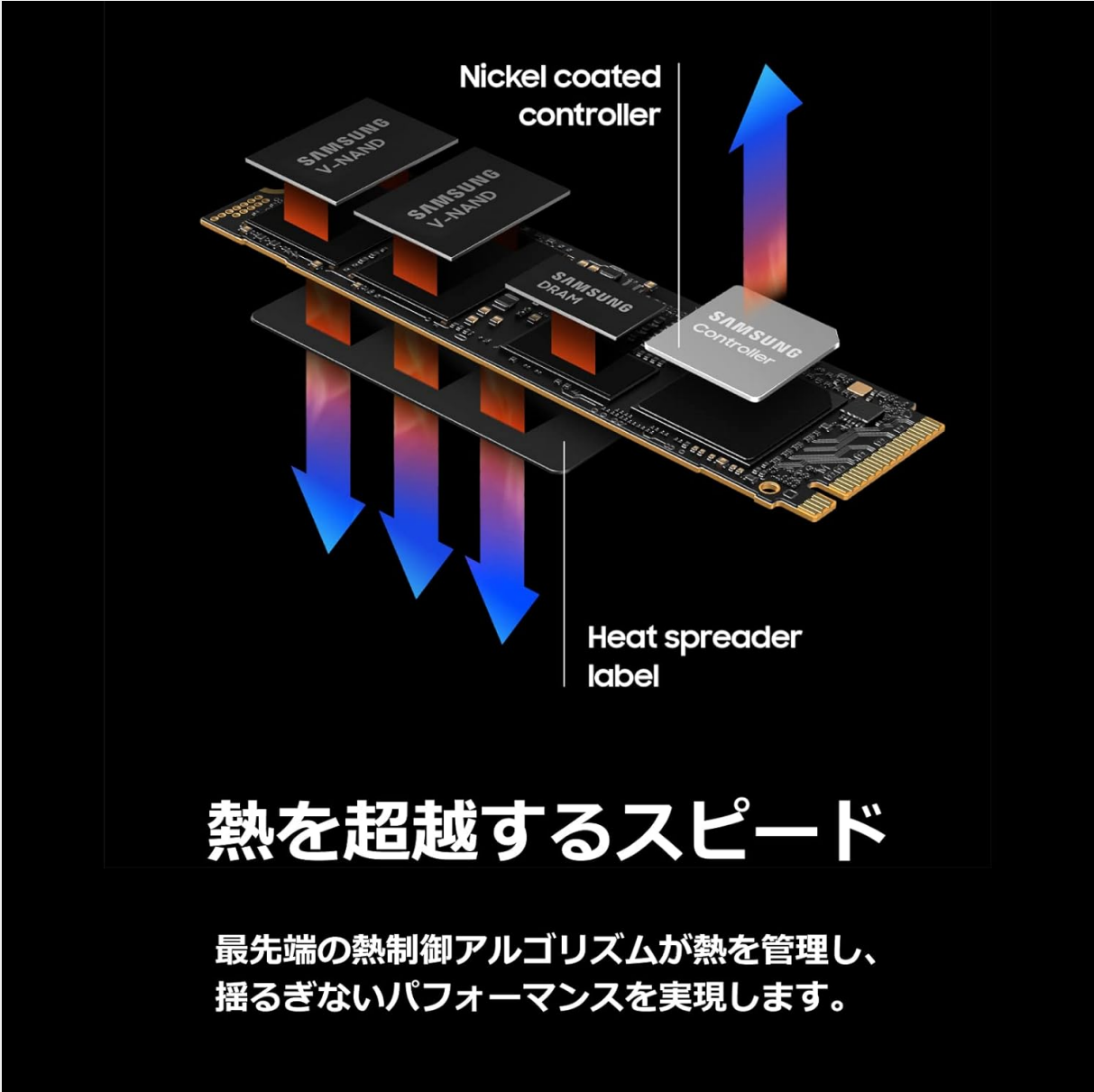


Figure 4: Detailed view of the 990 PRO's thermal control mechanisms, featuring a nickel-coated controller and a heat spreader label designed to manage heat and maintain consistent performance.



## 最高のゲーム体験

PS5™ / DirectStorage 対応の PC ゲームでの  
高速ロードが可能です。

Figure 5: The 990 PRO SSD integrated into a gaming setup, illustrating its capability to deliver a superior gaming experience with fast load times for PS5 and DirectStorage compatible PC games.

### 3. SETUP AND INSTALLATION

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Before installation, ensure your system is compatible with NVMe PCIe Gen 4.0 M.2 2280 SSDs. Refer to your motherboard or system manufacturer's documentation for specific M.2 slot requirements.

#### Safety Precautions:

- Always power off your computer and disconnect the power cable before opening the case.
- Discharge any static electricity by touching a grounded metal object before handling the SSD.
- Handle the SSD by its edges to avoid touching the gold connectors or components.

#### Installation Steps:

1. **Locate the M.2 Slot:** Identify an available M.2 slot on your motherboard. It typically has a small screw stand-off nearby.
2. **Insert the SSD:** Gently insert the Samsung 990 PRO SSD into the M.2 slot at a 30-degree angle. The gold connectors should slide in smoothly.
3. **Secure the SSD:** Push the SSD down until it is parallel with the motherboard. Secure it with the M.2 screw

provided with your motherboard or system.

4. **Close the Case:** Reassemble your computer case and reconnect the power cable.
5. **Initialize the Drive:** Power on your computer. For new installations, you will need to initialize the SSD through your operating system's Disk Management utility (Windows) or Disk Utility (macOS). Format the drive to make it usable.
6. **Install Samsung Magician Software:** Download and install the [Samsung Magician software](#) from the official Samsung website. This software helps manage the SSD, monitor its health, and optimize performance.

## 4. OPERATING INSTRUCTIONS

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Once installed and initialized, your Samsung 990 PRO SSD is ready for use. It can serve as your primary boot drive, a dedicated game drive, or high-speed storage for applications and large files.

- **System Drive:** Install your operating system on the 990 PRO for significantly faster boot times and overall system responsiveness.
- **Application and Game Storage:** Install frequently used applications and games on the SSD to reduce loading times and improve performance.
- **Data Storage:** Utilize the 2TB capacity for high-speed storage of large media files, project files, and other data that benefits from quick access.
- **Samsung Magician:** Use the Samsung Magician software to monitor drive health, perform performance benchmarks, update firmware, and enable features like RAPID Mode (if supported by your system) for further optimization.

## 5. MAINTENANCE

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Proper maintenance ensures the longevity and optimal performance of your SSD.

- **Firmware Updates:** Regularly check for and install firmware updates using the Samsung Magician software. Firmware updates can improve performance, stability, and compatibility.
- **TRIM Command:** Ensure the TRIM command is enabled in your operating system. TRIM helps the SSD manage data more efficiently, preventing performance degradation over time. Modern operating systems usually enable this by default.
- **Monitor Drive Health:** Use Samsung Magician to monitor the SSD's health status, temperature, and TBW (Total Bytes Written). This helps anticipate potential issues.
- **Keep System Drivers Updated:** Ensure your motherboard chipset drivers and operating system are up to date to maintain optimal compatibility and performance with your NVMe SSD.
- **Avoid Full Capacity:** While SSDs perform well even when nearly full, leaving some free space (e.g., 10-15%) can help maintain performance and extend lifespan.

## 6. TROUBLESHOOTING

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If you encounter issues with your Samsung 990 PRO SSD, refer to the following common troubleshooting steps:

### Common Issues and Solutions:

- **SSD Not Detected:**
  - Verify the SSD is correctly seated in the M.2 slot.
  - Check your system's BIOS/UEFI settings to ensure the M.2 slot is enabled and configured correctly (e.g., NVMe mode).

- Ensure your motherboard has the latest BIOS/UEFI firmware.
  - If it's a new drive, ensure it has been initialized and formatted in Disk Management (Windows) or Disk Utility (macOS).
- **Slow Performance:**
    - Confirm the SSD is installed in a PCIe Gen 4.0 x 4 compatible M.2 slot. Some motherboards have multiple M.2 slots with different PCIe generations.
    - Ensure Samsung Magician software is installed and the drive is optimized.
    - Check the SSD's temperature using Samsung Magician; excessive heat can lead to thermal throttling. Ensure adequate airflow in your system.
    - Verify that your operating system is configured for optimal SSD performance (e.g., power settings).
- **Data Loss:**
    - Regularly back up important data to another storage device. SSDs, like all storage devices, can fail.
    - If data loss occurs, immediately stop using the drive and consult data recovery specialists if the data is critical.

For further assistance, refer to the included 'Warranty Regulations & Installation Guide' or contact Samsung Support.

## 7. SPECIFICATIONS

Feature	Detail
Brand	Samsung
Model Number	MZ-V9P2T0B-SSGBOX-IT/EC
Capacity	2TB
Interface	NVMe (PCIe Gen 4.0 x 4)
Form Factor	M.2 (2280)
Sequential Read Speed	Up to 7,450 MB/s
Sequential Write Speed	Up to 6,900 MB/s
TBW (Total Bytes Written)	1200TB
Warranty	5-year limited warranty
Included Components	Sonic x Shadow Generations Collaboration Commemorative Storage BOX, Warranty Regulations & Installation Guide

## 8. WARRANTY AND SUPPORT

Your Samsung 990 PRO 2TB SSD is covered by a **5-year limited warranty** or up to **1200TB Total Bytes Written (TBW)**, whichever comes first. This warranty covers defects in materials and workmanship under normal use. For detailed warranty terms and conditions, please refer to the 'Warranty Regulations & Installation Guide'

included with your product. Keep your proof of purchase for warranty claims.

## **Customer Support:**

If you require technical assistance or have questions regarding your product, please visit the official Samsung website for support resources, FAQs, and contact information. You can also find the latest drivers and software updates there.

**Samsung Support Website:** <https://www.samsung.com/us/support/> (Please select your region for localized support)