

## Western Digital SN850X

# Western Digital WD BLACK SN850X 1TB NVMe PCIe Gen4 x4 M.2 SSD Instruction Manual

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## 1. PRODUCT OVERVIEW

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The Western Digital WD BLACK SN850X NVMe SSD is a high-performance internal solid-state drive designed for gaming and demanding applications. It utilizes PCIe Gen4 x4 technology to deliver exceptional read and write speeds, significantly reducing load times and improving overall system responsiveness. This SSD features a compact M.2 2280 form factor, making it suitable for a wide range of desktop and compatible laptop systems.

### Key Features:

- **PCIe Gen4 x4 Interface:** Offers high bandwidth for rapid data transfer.
- **Blazing Fast Speeds:** Up to 7300 MB/s sequential read and 6300 MB/s sequential write speeds (for 1TB model).
- **M.2 2280 Form Factor:** Compact design for easy integration into compatible systems.
- **WD\_BLACK Dashboard:** Software for monitoring drive health and optimizing performance.
- **5-Year Limited Warranty:** Provides long-term reliability and peace of mind.

### What's Included:

- WD BLACK SN850X NVMe SSD (Main Unit)
- Instruction Manual

# 次世代 PCIe® Gen 4テクノロジー搭載 ロード時間を大幅に短縮

読み出し

**7300** MB/秒 (1/2/4TB)

最大

**7200** MB/秒 (8TB)

書き込み

**6600** MB/秒 (2/4/8TB)

最大

**6300** MB/秒 (1TB)



Image 1.1: The WD BLACK SN850X SSD highlighting its maximum read and write speeds for various capacities.

# ウェスタンデジタルは、 SSD内蔵部門 BCNシェア

# No.1

メーカー※



※ 全国主要家電量販店・パソコン専門ネットショップ 2,643 店の POS 実売統計  
集計対象期間：2021年 1月～ 12月

Image 1.2: The compact M.2 2280 form factor of the WD BLACK SN850X SSD installed in a compatible motherboard slot.

## 2. SETUP AND INSTALLATION

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Installing the WD BLACK SN850X NVMe SSD requires opening your computer case and working with internal components. If you are not comfortable performing this procedure, it is recommended to seek assistance from a qualified technician.

### Before You Begin:

- **Compatibility Check:** Ensure your motherboard has an available M.2 slot that supports NVMe PCIe Gen4 x4 SSDs. Refer to your motherboard's manual for details.
- **Backup Data:** If you are replacing an existing drive, back up all important data.
- **Power Off:** Completely shut down your computer and disconnect it from the power source.
- **Static Discharge:** Ground yourself to prevent electrostatic discharge (ESD) which can damage components.

### Installation Steps:

1. **Open Computer Case:** Remove the side panel of your computer case to access the motherboard.

2. **Locate M.2 Slot:** Identify an available M.2 slot on your motherboard. It typically has a small screw stand-off nearby.
3. **Insert SSD:** Gently insert the WD BLACK SN850X SSD into the M.2 slot at a slight angle. The gold contacts should align with the slot. Push it in until it is fully seated.
4. **Secure SSD:** Push the SSD down towards the motherboard and secure it with the small screw provided with your motherboard or the SSD.
5. **Close Case:** Reattach the side panel of your computer case.
6. **Reconnect Power:** Plug your computer back into the power source and turn it on.

### Initial Setup (Operating System):

1. **Access Disk Management:** Once your computer boots, open Disk Management (Windows) or Disk Utility (macOS).
2. **Initialize Disk:** The new SSD may appear as 'Unallocated Space'. Right-click on the disk and select 'Initialize Disk'. Choose GPT (GUID Partition Table) for modern systems.
3. **Create New Simple Volume:** Right-click on the unallocated space and select 'New Simple Volume'. Follow the wizard to assign a drive letter and format the drive (NTFS for Windows).
4. **Install Operating System (Optional):** If you intend to use this SSD as your primary boot drive, you will need to install your operating system onto it. Refer to your OS installation guide for specific steps.

## 3. OPERATING THE SSD

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Once installed and formatted, your WD BLACK SN850X SSD functions like any other storage drive. For optimal performance and monitoring, Western Digital provides the WD\_BLACK Dashboard software.

### Using the WD\_BLACK Dashboard:

The WD\_BLACK Dashboard is a free software utility that allows you to monitor the health, temperature, and performance of your WD BLACK SSD. It also provides tools for firmware updates and game mode optimization.

- **Download:** Download the latest version of the WD\_BLACK Dashboard from the official Western Digital website.
- **Installation:** Follow the on-screen instructions to install the software.
- **Monitoring:** Launch the Dashboard to view real-time information about your SSD, including capacity usage, temperature, and interface speed.
- **Game Mode:** Enable 'Game Mode' for optimized gaming performance, which can disable low-power states during gameplay.
- **Firmware Updates:** Check for and install available firmware updates to ensure your SSD operates with the latest enhancements and bug fixes.

# Western Digital 3D NAND搭載 耐久性と確かな信頼性



Image 3.1: Screenshot of the WD\_BLACK Dashboard interface, showing drive status, performance, and settings.

## 4. MAINTENANCE

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Proper maintenance helps ensure the longevity and optimal performance of your WD BLACK SN850X SSD.

### Regular Maintenance Tips:

- **Firmware Updates:** Regularly check for and install firmware updates using the WD\_BLACK Dashboard. Firmware updates can improve performance, stability, and compatibility.
- **TRIM Command:** Ensure that the TRIM command is enabled in your operating system. TRIM helps the SSD manage its storage efficiently, preventing performance degradation over time. Most modern operating systems enable TRIM by default for SSDs.
- **Avoid Full Capacity:** While SSDs perform well even when nearly full, maintaining some free space (e.g., 10-15%) can help sustain optimal performance and extend lifespan.
- **Temperature Monitoring:** Use the WD\_BLACK Dashboard to monitor the SSD's temperature, especially during heavy workloads. Ensure adequate airflow within your computer case to prevent overheating.
- **Data Backup:** Regularly back up your important data to another storage device. While SSDs are reliable, no

storage device is immune to failure.

## 5. TROUBLESHOOTING

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If you encounter issues with your WD BLACK SN850X SSD, refer to the following common troubleshooting steps.

### Common Issues and Solutions:

- **SSD Not Detected:**
  - **Check Physical Connection:** Ensure the SSD is properly seated in the M.2 slot and secured.
  - **BIOS/UEFI Settings:** Verify that the M.2 slot is enabled in your motherboard's BIOS/UEFI settings. Some motherboards may require specific settings for NVMe drives.
  - **Driver Installation:** Ensure you have the latest chipset drivers for your motherboard.
  - **Disk Management:** Check Disk Management (Windows) or Disk Utility (macOS) to see if the drive is detected but uninitialized or unformatted.
- **Slow Performance:**
  - **PCIe Gen4 Compatibility:** Ensure your motherboard and CPU fully support PCIe Gen4. If not, the SSD will operate at Gen3 speeds.
  - **TRIM Enabled:** Verify that TRIM is enabled in your operating system.
  - **Firmware Update:** Update the SSD firmware using the WD\_BLACK Dashboard.
  - **Overheating:** Monitor the SSD temperature with the WD\_BLACK Dashboard. High temperatures can lead to thermal throttling and reduced performance. Ensure proper cooling.
  - **Drive Fullness:** Ensure there is sufficient free space on the drive (ideally 10-15% or more).
- **Operating System Freezes/Crashes:**
  - **Driver Issues:** Ensure all system drivers, especially chipset and storage drivers, are up to date.
  - **Firmware:** Update SSD firmware.
  - **System Stability:** Rule out other system components (RAM, CPU, GPU) as potential causes.

If these steps do not resolve your issue, please contact Western Digital customer support for further assistance.

## 6. TECHNICAL SPECIFICATIONS

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Feature	Specification
Model Name	SN850X
Manufacturer Model Number	WDS100T2X0E-EC
Digital Storage Capacity	1 TB
Hard Disk Interface	PCIe Gen4 x4
Connectivity Technology	NVMe
Form Factor	M.2 2280
Read Speed (Max)	7300 MB/s
Write Speed (Max)	6300 MB/s

Feature	Specification
Compatible Devices	Desktop
Installation Type	Internal Hard Drive
Color	Black
Product Use	Gaming
Item Weight	0.04 Kilograms
Included Items	Main unit, Instruction Manual

## 7. WARRANTY AND SUPPORT

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Western Digital stands behind the quality and reliability of the WD BLACK SN850X NVMe SSD.

### Warranty Information:

This product comes with a **5-year limited manufacturer's warranty**. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims.



Image 7.1: A shield graphic symbolizing the 5-year manufacturer's warranty provided with the product.

### Customer Support:

For technical assistance, warranty claims, or additional product information, please visit the official Western Digital support website or contact their customer service department.

- **Western Digital Support Website:** <https://support.wdc.com> (Please check for your regional support page)
- **Product Registration:** Register your product online to receive updates and streamline support.