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> SABRENT 500GB Rocket NVMe PCIe 4.0 M.2 2280 Internal SSD Instruction Manual (SB-ROCKET-NVMe4-500)

## SABRENT SB-ROCKET-NVMe4-500

# SABRENT 500GB Rocket NVMe PCIe 4.0 M.2 2280 Internal SSD Instruction Manual

Model: SB-ROCKET-NVMe4-500

## INTRODUCTION

The SABRENT 500GB Rocket NVMe PCIe 4.0 M.2 2280 Internal SSD (SB-ROCKET-NVMe4-500) offers high-performance data storage utilizing the PCIe Gen4.0 x4 interface. Designed for speed and efficiency, this solid-state drive is compliant with NVMe 1.3 specifications and is suitable for various computing needs, from business to gaming. This manual provides essential information for the proper installation, operation, and maintenance of your SSD.



## FEATURES

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- **NVMe M.2 PCIe Gen4 x4 Interface:** Built to the PCIe 4.0 specification / NVMe 1.3 Compliant, offering superior data transfer speeds.
- **Power Management Support:** Includes APST / ASPM / L1.2 for efficient power consumption.
- **Data Integrity:** Supports SMART and TRIM commands for drive health monitoring and performance optimization.
- **Flash Interface Compatibility:** Supports ONFi 2.3, ONFi 3.0, ONFi 3.2, and ONFi 4.0 interfaces.
- **Advanced Technologies:** Features Advanced Wear Leveling, Bad Block Management, Error Correction Code, and Over-Provisioning for enhanced reliability and longevity.
- **Cloning Software:** Comes with FREE Sabrent Acronis True Image for Sabrent Software for easy data migration.



Figure 2: Overview of the SSD's superior performance, power efficiency, and reliability features.

## PACKAGE CONTENTS

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The product package includes the following items:

- 1 x SABRENT 500GB Rocket NVMe PCIe 4.0 M.2 2280 SSD
- 1 x User Manual (this document)

## SETUP AND INSTALLATION

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Installing your SABRENT Rocket NVMe SSD requires careful handling and compatibility checks. Ensure your motherboard supports M.2 2280 PCIe Gen4 x4 NVMe SSDs. For optimal performance, a PCIe Gen4 motherboard is required. If using a PCIe Gen3 motherboard, speeds will be limited to Gen3 specifications.

### Important Considerations:

- **Heatsink Requirement:** When installing any NVMe PCIe 4.0 SSD directly onto a PCIe Gen4 Motherboard, a heatsink is highly recommended to dissipate heat generated by the drive's extreme speed levels. This prevents thermal throttling and maximizes performance.
- **Compatibility:** This drive is backward compatible with PCIe 3.0.

## Installation Steps:

1. **Prepare your System:** Power off your computer and disconnect all power cables. Open your computer case to access the motherboard.
2. **Locate M.2 Slot:** Identify an available M.2 slot on your motherboard. Refer to your motherboard's manual for exact locations.
3. **Insert SSD:** Gently insert the SABRENT Rocket NVMe SSD into the M.2 slot at a slight angle. Push it down until it clicks into place.
4. **Secure SSD:** Secure the SSD with the provided screw (usually included with your motherboard or M.2 slot).
5. **Install Heatsink (Recommended):** If using a heatsink, follow its specific installation instructions to attach it to the SSD.
6. **Close Case & Power On:** Close your computer case, reconnect power cables, and power on your system.



Figure 3: The SABRENT Rocket NVMe 4.0 SSD installed in an M.2 slot on a motherboard, ready for use.

## OPERATING THE SSD (CLONING)

SABRENT SSDs come with free Acronis True Image for Sabrent software, which simplifies the cloning process. This allows you to migrate your existing operating system and data to your new SSD without reinstalling everything.

### Cloning Process Overview:

1. **Download Software:** Visit [sabrent.com/acronis](https://sabrent.com/acronis) to download Acronis True Image for Sabrent.
2. **Install Software:** Install the downloaded software on your computer.
3. **Connect SSD:** Connect your new SABRENT SSD to your computer, either internally or via an external enclosure/adaptor.
4. **Run Acronis:** Launch Acronis True Image for Sabrent.

5. **Select Clone Disk:** Choose the "Clone Disk" option from the tools menu.
6. **Follow Wizard:** Follow the on-screen wizard to select your source disk (your old drive) and destination disk (your new SABRENT SSD).
7. **Start Cloning:** Initiate the cloning process. The software will copy all data from the source to the destination drive.
8. **Boot from New SSD:** Once cloning is complete, shut down your computer, remove the old drive, and ensure your system boots from the new SABRENT SSD.

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Video 1: Official guide on how to clone your disk using Sabrent Rocket Drive and Acronis True Image software. This video demonstrates the step-by-step process for data migration.

## MAINTENANCE

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To ensure the longevity and optimal performance of your SABRENT Rocket NVMe SSD, consider the following maintenance tips:

- **Keep Firmware Updated:** Regularly check for and install firmware updates from the SABRENT website. Firmware updates can improve performance, stability, and compatibility.
- **Enable TRIM:** Ensure TRIM is enabled in your operating system. TRIM helps the SSD manage its storage space efficiently, preventing performance degradation over time. Most modern operating systems enable this by default for SSDs.
- **Avoid Full Capacity:** Try to avoid filling the SSD to its absolute maximum capacity. Leaving some free space (e.g., 10-15%) allows the drive's wear-leveling algorithms to function optimally.
- **Monitor Drive Health:** Use the Sabrent Acronis True Image software or other SSD utility tools to monitor the drive's health, temperature, and remaining lifespan.
- **Proper Shutdown:** Always shut down your computer properly. Avoid sudden power loss, which can potentially corrupt data or damage the drive.

## TROUBLESHOOTING

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If you encounter issues with your SABRENT Rocket NVMe SSD, refer to the following common troubleshooting steps:

- **SSD Not Detected:**
  - Check physical connection: Ensure the SSD is correctly 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 and configured for NVMe.
  - Driver installation: Ensure NVMe drivers are installed (usually handled by the OS, but manual installation might be needed for older systems or specific motherboards).
- **Slow Performance:**
  - PCIe Generation: Confirm your motherboard and M.2 slot support PCIe Gen4.0. If not, performance will be limited to Gen3 speeds.
  - Heatsink: Check if the SSD is overheating. High temperatures can cause thermal throttling, reducing performance. Ensure a heatsink is properly installed.
  - TRIM: Verify TRIM is enabled in your operating system.
  - Drive Capacity: Ensure the drive is not excessively full.
- **Operating System Installation Issues:**
  - Boot Mode: Ensure your BIOS/UEFI is set to UEFI mode and not Legacy/CSM for NVMe SSDs.
  - Partitioning: The SSD may need to be initialized and partitioned before the operating system can be installed. Use Disk Management in Windows or a similar tool.

• **Cloning Problems:**

- Source/Destination Selection: Double-check that you have selected the correct source and destination drives in the cloning software.
- Destination Drive Size: Ensure the destination SSD is equal to or larger than the used space on the source drive.

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

## SPECIFICATIONS

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Feature	Detail
Model Number	SB-ROCKET-NVMe4-500
Digital Storage Capacity	500 GB
Hard Disk Interface	PCIe x 4
Connectivity Technology	NVMe M.2
Special Feature	PCIe 4.0
Hard Disk Form Factor	2280 Inches
Hard Disk Description	Solid State Drive
Compatible Devices	Servers and arrays that accept M.2 2280 PCIe drives
Installation Type	Internal Hard Drive
Read Speed	Up to 5000 Megabytes Per Second
Write Speed	Up to 2500 Megabytes Per Second
Item Weight	0.2 Ounces
Item Dimensions (L x W x Thickness)	3.15"L x 0.86"W x 0.11"Th
Material	3D NAND

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Video 2: A benchmark and review of the Sabrent Rocket Gen 4 NVMe M.2 SSD, demonstrating its impressive speed and performance.

## WARRANTY AND SUPPORT

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Your SABRENT 500GB Rocket NVMe PCIe 4.0 M.2 2280 Internal SSD comes with a **1 Year Limited Warranty**. You can extend this to a **5 Year Limited Warranty** by registering your product at [Sabrent.com](https://www.sabrent.com).

For technical support, troubleshooting, or any inquiries, please visit the official [SABRENT Store on Amazon](#) or their official website.