

## SABRENT SB-RKT4P-4TB

# SABRENT 4TB Rocket 4 Plus NVMe 4.0 Gen4 PCIe M.2 Internal SSD User Manual

MODEL: SB-RKT4P-4TB

## 1. Introduction

The SABRENT 4TB Rocket 4 Plus NVMe 4.0 Gen4 PCIe M.2 Internal SSD (SB-RKT4P-4TB) utilizes flash disk technology with a PCIe Gen4.0 x4 interface, compliant with NVMe 1.3. This high-performance solid-state drive is designed for demanding applications, offering significant speed improvements over previous generations. It incorporates advanced features for data integrity and longevity.

Key features include:

- NVMe M.2 PCIe Gen4 x4 Interface
- PCIe 4.0 Compliant / NVMe 1.3 Compliant
- Power Management Support for APST / ASPM / L1.2
- Supports SMART and TRIM commands
- Supports ONFi 2.3, ONFi 3.0, ONFi 3.2 and ONFi 4.0 interface
- Advanced Wear Leveling, Bad Block Management, Error Correction Code, and Over-Provisioning
- Upgradeable Firmware

All Sabrent SSDs include free Sabrent Acronis True Image software for easy cloning. A dedicated Sabrent utility is also available for users who need to re-format the drive and choose between 512-byte or 4K-byte sector sizes.

# Includes Free Acronis® True Image Cloning Software



[sabrent.com/acronis](https://sabrent.com/acronis)

The SABRENT Rocket 4 Plus SSD, highlighting its compatibility with Acronis True Image cloning software.

## 2. Setup and Installation

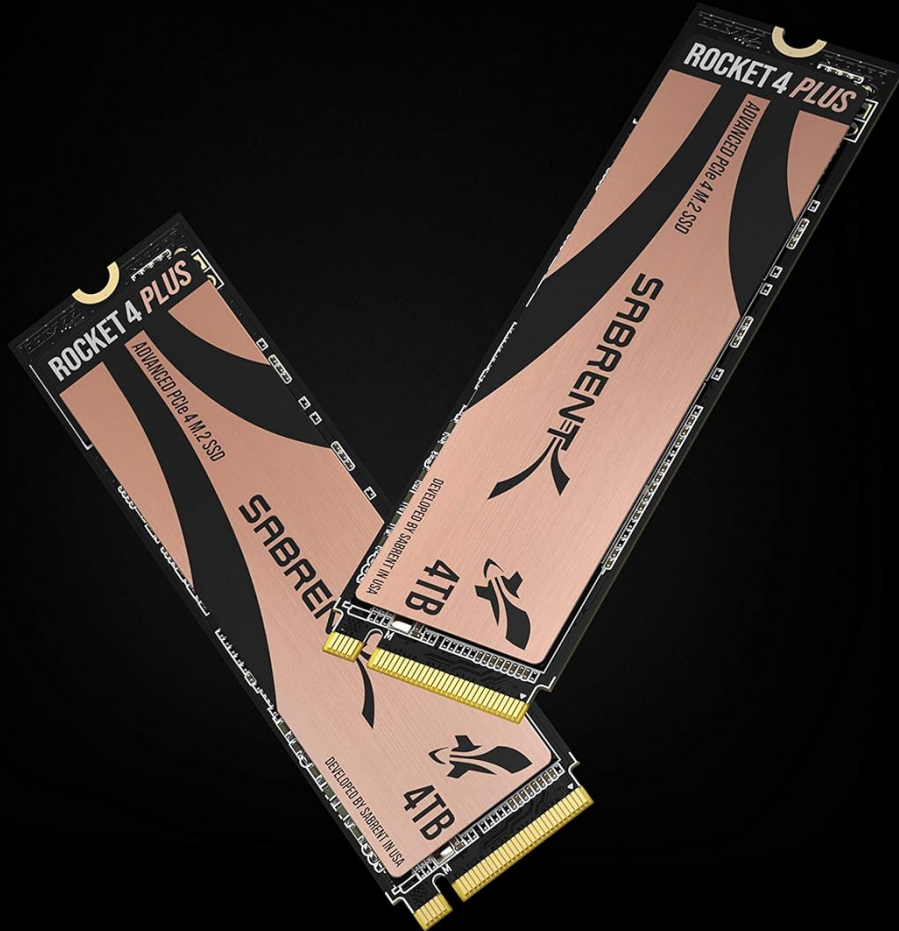
Installing the SABRENT Rocket 4 Plus SSD requires careful handling. Ensure your system is powered off and disconnected from any power source before beginning. Refer to your computer's or motherboard's manual for specific instructions on accessing the M.2 slot.

1. **Prepare Your System:** Power down your computer and unplug all cables. Open the computer case or laptop chassis to access the motherboard.
2. **Locate M.2 Slot:** Identify an available M.2 slot on your motherboard. For optimal performance, ensure it supports PCIe Gen4.0 x4.
3. **Insert SSD:** Gently insert the SABRENT Rocket 4 Plus SSD into the M.2 slot at an angle. Push it down until it is flush with the motherboard.
4. **Secure SSD:** Use the provided screw (often included with your motherboard or laptop) to secure the SSD in place. Avoid overtightening.
5. **Install Heatsink (Recommended):** For sustained high performance and to prevent thermal throttling, a heatsink is highly recommended, especially for PCIe Gen4 motherboards.

6. **Close System:** Reassemble your computer case or laptop chassis.
7. **Initialize Drive:** After booting your system, you may need to initialize and format the new SSD through your operating system's disk management utility before it can be used.

# Introducing The Rocket 4 Plus

The World's Fastest NVMe SSD



The SABRENT Rocket 4 Plus NVMe M.2 SSD, ready for installation.

# Unleash Your Creativity

Whatever your passion is, accelerate your system with the Rocket 4 Plus.



The SSD correctly seated in an M.2 slot on a laptop motherboard.

Your browser does not support the video tag.

Official video demonstrating the unboxing and installation of the SABRENT Rocket 4 Plus NVMe M.2 SSD into a laptop.

## 3. Operating Principles

The SABRENT Rocket 4 Plus SSD leverages the PCIe Gen4 x4 interface to achieve its high performance. This interface allows for significantly faster data transfer rates compared to previous PCIe generations.

- **PCIe Gen4 Performance:** When installed in a compatible PCIe Gen4 motherboard, the drive can reach sequential read speeds of up to 7100 MB/s and sequential write speeds of up to 6600 MB/s.
- **PCIe Gen3 Compatibility:** The drive is backward compatible with PCIe Gen3 motherboards. In this configuration, speeds will be limited to approximately 3400 MB/s for reads and 3000 MB/s for writes.
- **Power Management:** The SSD supports advanced power management features such as APST (Autonomous Power State Transition), ASPM (Active State Power Management), and L1.2 (Low Power Substate) to optimize energy consumption.

# Advanced Manufacturing

Enjoy a superior build quality

## Flash Controller

Phison PS5018-E18

## Cache

External DDR4 Cache

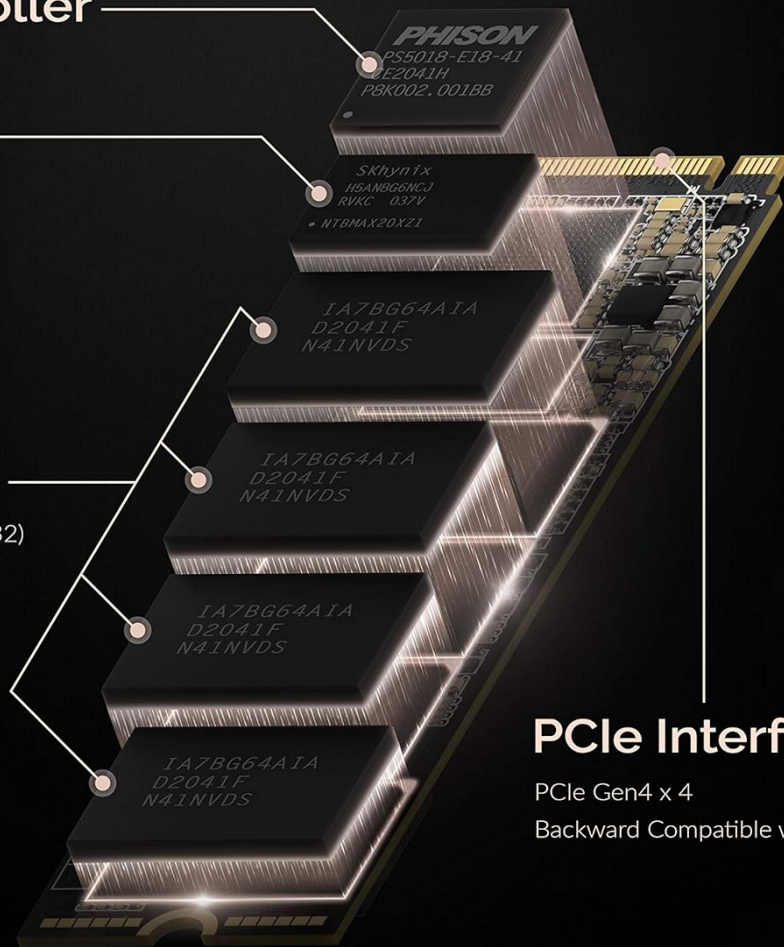
## NAND Flash

Micron B27B TLC (BGA 132)

## PCIe Interface

PCIe Gen4 x 4

Backward Compatible with PCIe 3.0



Visual representation of the SABRENT Rocket 4 Plus SSD's sequential read and write speeds compared to PCIe 3.0 and SATA SSDs.

## 4. Maintenance

To ensure the longevity and optimal performance of your SABRENT Rocket 4 Plus SSD, consider the following maintenance practices:

- **Heat Management:** High-speed NVMe SSDs generate heat. Installing a heatsink is crucial to dissipate this heat and prevent thermal throttling, which can reduce performance.
- **Firmware Updates:** Periodically check the official Sabrent website for firmware updates. Keeping your SSD's firmware up-to-date can improve performance, stability, and compatibility.
- **TRIM Command:** Ensure your operating system has the TRIM command enabled. TRIM helps maintain the performance of SSDs over time by allowing the operating system to inform the SSD which data blocks are no longer in use and can be wiped.
- **Acronis True Image:** Utilize the included Sabrent Acronis True Image software for regular backups or cloning your system.
- **Sabrent Utility:** For advanced users, the Sabrent utility allows re-formatting the drive to choose between 512-

byte or 4K-byte sector sizes, which can be beneficial for specific cloning scenarios.

## 5. Troubleshooting

If you encounter issues with your SABRENT Rocket 4 Plus SSD, consider the following:

- **Lower Than Expected Speeds:**
  - Verify your motherboard's M.2 slot supports PCIe Gen4.0 x4. If it only supports PCIe Gen3, speeds will be limited to Gen3 performance.
  - Ensure a heatsink is properly installed. Overheating can cause thermal throttling, reducing performance.
  - Check that your system's BIOS/UEFI settings are configured to utilize PCIe Gen4 if available.
- **Drive Not Detected:**
  - Ensure the SSD is fully seated in the M.2 slot.
  - Check your motherboard's manual for M.2 slot compatibility and any shared bandwidth limitations with other PCIe devices or SATA ports.
  - Access your operating system's Disk Management (Windows) or Disk Utility (macOS) to see if the drive needs to be initialized and formatted.
- **System Instability:**
  - Ensure your system's drivers and BIOS/UEFI are up-to-date.
  - Monitor drive temperature. Excessive heat can lead to instability.

## 6. Specifications

| Feature                  | Detail                      |
|--------------------------|-----------------------------|
| Digital Storage Capacity | 4 TB                        |
| Hard Disk Interface      | NVMe                        |
| Connectivity Technology  | PCIe NVMe                   |
| Brand                    | SABRENT                     |
| Special Feature          | PCIe 4.0, R/W 7100/6600MB/s |
| Hard Disk Form Factor    | 2280 Centimeters            |
| Hard Disk Description    | Solid State Drive           |
| Compatible Devices       | Laptop, Desktop             |
| Installation Type        | Internal Hard Drive         |
| Read Speed               | 7100 Megabytes Per Second   |
| Media Speed (Write)      | 6600 Megabytes Per Second   |
| Form Factor              | M.2                         |

| Feature                           | Detail                    |
|-----------------------------------|---------------------------|
| Item Weight                       | 0.2 Ounces                |
| Item Dimensions L x W x Thickness | 3.15"L x 0.86"W x 0.11"Th |
| Model Number                      | SB-RKT4P-4TB              |

## 7. Warranty and Support

The SABRENT 4TB Rocket 4 Plus NVMe 4.0 Gen4 PCIe M.2 Internal SSD comes with a **5-year limited warranty with registration**. Please register your product on the official Sabrent website to ensure full warranty coverage. For technical support, driver downloads, firmware updates, or additional information, please visit the official Sabrent support website or contact their customer service.



The SABRENT Rocket 4 Plus SSD emphasizing its extreme speed and performance.