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Bestoss GM328 NVMe M.2 2280 SSD Instruction Manual

Model: GM328 | Brand: Bestoss

INTRODUCTION

This instruction manual provides essential information for the proper installation, operation, and maintenance of your Bestoss GM328 NVMe M.2 2280 Solid State Drive. Please read this manual thoroughly before using the product to ensure optimal performance and longevity.

The Bestoss GM328 SSD is designed to enhance the performance of compatible desktops and laptops, offering high-speed data transfer and improved system responsiveness.

Bestoss GM328

Speed is like a unicorn crushing SATA / HDD through nebulae, speeding up software, game loading and video editing like a phantom.



The Bestoss GM328 NVMe M.2 SSD, highlighting its compact form factor and superior speed over older hard disk drives.

PRODUCT FEATURES

- **Enhanced Performance:** Designed for upgrading older systems, providing significantly faster speeds compared to SATA SSDs and HDDs. Improves efficiency for large files and demanding applications.
- **Advanced Caching Technology:** Features Host Memory Buffer (HMB) and Dynamic SLC Cache for optimized software-hardware synergy, ensuring stable and responsive operation with read/write speeds up to 3500/3000 MB/s.
- **Diverse Storage Options:** Available in capacities ranging from 256GB to 2TB, accommodating various data storage requirements for files, documents, photos, videos, and applications.
- **Reliability and Durability:** Undergoes rigorous endurance testing, utilizing TLC NAND flash for extended write endurance. Offers shock resistance, high data security, and reduced failure rates for continuous operation.
- **Wide Compatibility:** Supports PCIe 3.0 interface and is compatible with Windows and Linux operating

systems. Suitable for laptops, desktops, and all-in-one PCs.

- **Data Protection Features:** Includes E2E Protection, TRIM, RAID, NCQ, AHCI, 256-bit Encryption, SMART, LDPC, and Wear Leveling for comprehensive data integrity and drive longevity.



Advanced technologies integrated into the Bestoss GM328 SSD for enhanced performance and data protection.

PACKAGE CONTENTS

The Bestoss GM328 NVMe M.2 2280 SSD package includes:

- Bestoss GM328 NVMe M.2 2280 SSD (1TB capacity)
- Installation screwdriver
- M.2 SSD mounting screws

SPECIFICATIONS

Feature	Detail
Digital Storage Capacity	1 TB
Hard Disk Interface	Solid State
Connectivity Technology	NVMe
Brand	Bestoss
Hard Disk Form Factor	M.2 2280
Compatible Devices	Desktop, Laptop
Installation Type	Internal Hard Drive
Read Speed	Up to 3500 MB/s
Write Speed	Up to 3000 MB/s
Hardware Connectivity	PCI Express 3.0
Enclosure Material	3D NAND
Model Number	GM328
Special Features	AHCI optimization mode, Backward Compatible, Earthquake resistance, NCQ/SMART instructions, TRIM Support

Smooth Loading Efficient Stability

Dynamic SLC caching technology effectively maintains SSD stability, allowing file processing like a shooting star through the night sky.



***Note device - PC interface:**
Max speed only via PCIe3.0,
For external hard drive enclosures,
USB often limits speed.

Capacity	Read speed	Write speed
256GB	3500MB/s	1500MB/s
512GB	3500MB/s	2300MB/s
1TB	3500MB/s	3000MB/s
2TB	3500MB/s	3000MB/s

A table illustrating the sequential read and write speeds for various capacities of the Bestoss GM328 SSD.

SETUP AND INSTALLATION

Installing the Bestoss GM328 NVMe M.2 SSD requires opening your computer case. If you are unfamiliar with internal computer components, it is recommended to seek professional assistance.

Before Installation:

1. **Backup Data:** Always back up important data from your existing drive before performing any hardware changes.
2. **Power Off:** Completely shut down your computer and disconnect it from the power source.
3. **Ground Yourself:** Discharge any static electricity by touching a grounded metal object (e.g., the metal frame of your computer case) before handling components.
4. **Locate M.2 Slot:** Identify the M.2 slot on your motherboard. It is typically labeled "M.2" or "NVMe" and may be covered by a heatsink.

Installation Steps:

1. Carefully align the notches on the Bestoss GM328 SSD with the M.2 slot on your motherboard.
2. Gently insert the SSD into the slot at a slight angle (approximately 30 degrees) until it is firmly seated.
3. Push the SSD down towards the motherboard. It should lay flat.
4. Secure the SSD with the provided M.2 mounting screw. Use the included screwdriver for this step.
5. Close your computer case and reconnect all cables.



Visual guide for installing an M.2 NVMe SSD into a compatible motherboard slot.

Note: For external hard drive enclosures, USB interfaces may limit the maximum speed of the SSD. Maximum speeds are achieved via PCIe 3.0 interface.

OPERATING INSTRUCTIONS

First Use and Formatting:

1. After physical installation, power on your computer.
2. The new SSD may not appear immediately in "My Computer" or "File Explorer" until it is initialized and formatted.
3. **For Windows:**
 - Right-click on the Start button and select "Disk Management."
 - Locate the new SSD (it will likely show as "Unallocated Space").
 - Right-click on the unallocated space and select "New Simple Volume."
 - Follow the on-screen wizard to assign a drive letter and format the drive (NTFS is recommended for Windows).
4. **For Linux:**
 - Use disk utility tools like GParted or command-line tools (e.g., `fdisk`, `mkfs`) to partition and format the drive.

Performance Optimization:

The Bestoss GM328 SSD leverages Dynamic SLC Cache and Host Memory Buffer (HMB) to maintain high performance. Ensure your operating system is up-to-date to benefit from the latest drivers and optimizations for

NVMe drives.

Your browser does not support the video tag.

Official product video demonstrating the features and performance of the Bestoss GM328 NVMe M.2 SSD.

MAINTENANCE

To ensure the longevity and optimal performance of your Bestoss GM328 SSD, consider the following maintenance practices:

- **TRIM Support:** Ensure TRIM is enabled on your operating system. TRIM helps the SSD manage data blocks more efficiently, preventing performance degradation over time. Modern operating systems typically enable TRIM by default for SSDs.
- **Firmware Updates:** Periodically check the Bestoss official website for any available firmware updates for your GM328 SSD. Firmware updates can improve performance, stability, and compatibility.
- **Avoid Full Capacity:** While SSDs perform well even when nearly full, maintaining some free space (e.g., 10-15%) can help sustain optimal write performance and wear leveling.
- **Data Security:** The GM328 supports 256-bit Encryption and E2E Protection. Utilize these features through your operating system or third-party software for enhanced data security.
- **SMART Monitoring:** Use S.M.A.R.T. (Self-Monitoring, Analysis and Reporting Technology) tools to monitor the health and status of your SSD. This can help predict potential issues before they lead to data loss.

TROUBLESHOOTING

If you encounter issues with your Bestoss GM328 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 the mounting screw is secure.
- **BIOS/UEFI Settings:** Enter your computer's BIOS/UEFI settings. Verify that the M.2 slot is enabled and configured correctly (e.g., NVMe mode). Some motherboards may disable certain SATA ports when an M.2 drive is used.
- **Disk Management (Windows):** As mentioned in "Operating Instructions," ensure the drive is initialized and formatted in Disk Management.
- **Driver Installation:** Ensure your operating system has the necessary NVMe drivers. Windows 10/11 typically includes them, but older versions or specific motherboards might require manual installation.

Slow Performance:

- **PCIe Lane Configuration:** Confirm your M.2 slot is operating at PCIe Gen3 x4 speed. Check your motherboard manual for details.
- **TRIM Status:** Verify that TRIM is enabled.
- **Drive Usage:** Performance can slightly decrease if the drive is nearly full. Free up some space if possible.
- **Temperature:** Excessive heat can cause thermal throttling. Ensure adequate airflow in your computer case.

- **External Enclosures:** If using an external enclosure, the USB interface speed will be the limiting factor, not the SSD's internal speed.

Other Issues:

For persistent issues or specific error messages, consult your computer's manufacturer support or the Bestoss technical support team.

WARRANTY AND SUPPORT

The Bestoss GM328 NVMe M.2 2280 SSD is covered by a **3-year limited manufacturer's warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use.

Bestoss also provides **lifetime technical support** for its products. If you have any questions, require assistance with installation, or encounter any issues not covered in this manual, please contact Bestoss customer service.

For warranty claims or technical support, please visit the official Bestoss website or refer to the contact information provided with your product packaging.

Our products undergo rigorous quality control standards, with each drive tested extensively before shipment to ensure zero quality issues.