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> [SK hynix BC501 256GB M.2 2280 PCIe NVMe SSD User Manual](#)

SK hynix BC501 HFM256GDJTNG

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Model: BC501 HFM256GDJTNG

1. INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your SK hynix BC501 256GB M.2 2280 PCIe NVMe Solid State Drive. Please read this manual thoroughly before proceeding with installation to ensure proper setup and optimal performance.

2. PRODUCT OVERVIEW

The SK hynix BC501 is a high-performance M.2 2280 PCIe NVMe SSD designed for internal storage in compatible desktop and laptop systems. It offers fast data transfer speeds and reliable storage for your operating system, applications, and files.

- **High Capacity:** 256GB storage for demanding applications and data.
- **Fast Speed:** PCIe NVMe interface for rapid data transfer.
- **Compact Size:** M.2 2280 form factor (22mm wide) for space-saving installation.
- **Reliable Storage:** Provides fast and dependable storage for your computer's operating system and programs.

3. PACKAGE CONTENTS

Verify that your package contains the following item:

- 1 x SK hynix BC501 256GB M.2 2280 PCIe NVMe SSD

Note: Mounting screws or other installation tools are typically not included with OEM bulk drives and may need to be sourced separately or are provided with your motherboard/system.

4. SETUP AND INSTALLATION

4.1 Pre-installation Checklist

- Ensure your motherboard or system has an available M.2 slot that supports PCIe NVMe SSDs. Refer to your system's documentation for compatibility.
- Gather necessary tools: a Phillips head screwdriver and potentially a small screw for securing the M.2 drive.
- Back up any important data from your existing drive before proceeding.
- Power down your computer completely and disconnect it from the power source.
- Discharge static electricity by touching a grounded metal object before handling components.

4.2 Physical Installation

1. Open your computer case or access the M.2 slot on your laptop.
2. Locate an available M.2 slot. It typically looks like a small horizontal slot with a screw hole at the end.
3. Carefully insert the SK hynix BC501 SSD into the M.2 slot at a slight angle (approximately 30 degrees). The gold contacts on the SSD should align with the pins in the slot.
4. Gently push the SSD down until it is parallel with the motherboard.
5. Secure the SSD with the small screw into the standoff at the end of the M.2 slot. Do not overtighten.



Figure 1: The SK hynix BC501 M.2 2280 NVMe SSD. This image shows the physical appearance of the SSD, highlighting its compact M.2 form factor, the NVMe interface connector, and the label displaying model information (HFM256GDJTNG), capacity (256GB), and brand (SK hynix).

4.3 Software Setup (For New Installations)

1. Reconnect power and boot your computer.
2. **Initialize the SSD:**
 - In Windows, open Disk Management (right-click Start, select "Disk Management").
 - You should see the new SSD listed as "Unallocated Space". Right-click on it and select "Initialize Disk".
 - Choose GPT (GUID Partition Table) for modern systems.
3. **Create a New Simple Volume:**
 - Right-click the "Unallocated Space" on the new SSD and select "New Simple Volume".
 - Follow the wizard to assign a drive letter and format the drive (NTFS is recommended for Windows).
4. **Operating System Installation/Migration:** If you intend to install an operating system on this SSD or migrate an existing OS, refer to your operating system's installation guide or migration software instructions.

5. OPERATING INSTRUCTIONS

Once installed and formatted, your SK hynix BC501 SSD functions like any other storage drive. You can save files, install programs, and use it as your primary boot drive.

- **Data Storage:** Store documents, media, and other files directly onto the drive.

- **Application Installation:** Install software and games for faster loading times.
- **Boot Drive:** Configure your system's BIOS/UEFI to boot from the SSD for quicker startup times.

6. MAINTENANCE

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

- **Enable TRIM:** Ensure TRIM is enabled in your operating system. TRIM helps the SSD manage data more efficiently and maintain performance over time. Most modern operating systems enable TRIM by default for SSDs.
- **Avoid Defragmentation:** Do not defragment your SSD. Defragmentation is designed for traditional hard drives and can reduce the lifespan of an SSD without providing any performance benefit.
- **Keep Firmware Updated:** Periodically check the SK hynix website for firmware updates for your SSD model. Firmware updates can improve performance, stability, and compatibility.
- **Monitor Health:** Use SSD monitoring tools (e.g., CrystalDiskInfo) to check the health and temperature of your drive.
- **Maintain Free Space:** Avoid filling your SSD to its maximum capacity. Keeping some free space (e.g., 10-15%) allows the SSD's wear-leveling algorithms to function effectively.

7. TROUBLESHOOTING

7.1 SSD Not Detected

- **Check Physical Connection:** Ensure the SSD is fully seated in the M.2 slot and securely fastened.
- **BIOS/UEFI Settings:** Enter your system's BIOS/UEFI settings. Verify that the M.2 slot is enabled and configured for NVMe (if applicable). Some motherboards require specific settings for M.2 NVMe drives.
- **Driver Installation:** For some older operating systems or specific chipsets, NVMe drivers might be required. Check your motherboard manufacturer's website.
- **Compatibility:** Confirm your motherboard's M.2 slot supports PCIe NVMe SSDs. Some M.2 slots only support SATA SSDs.

7.2 Slow Performance

- **TRIM Status:** Verify that TRIM is enabled in your operating system.
- **Firmware:** Ensure your SSD has the latest firmware.
- **Overheating:** High temperatures can cause performance throttling. Ensure adequate airflow in your system or consider an M.2 heatsink if temperatures are consistently high.
- **Driver Issues:** Ensure you are using the correct NVMe drivers.
- **Full Drive:** Performance can degrade if the drive is nearly full. Try to maintain at least 10-15% free space.

7.3 Data Loss Prevention

- Regularly back up your important data to another storage device or cloud service.
- Avoid sudden power loss, which can corrupt data. Use a UPS (Uninterruptible Power Supply) for critical systems.

8. SPECIFICATIONS

Brand	SK hynix
Model Number	HFM256GDJTNG (BC501)

Digital Storage Capacity	256 GB
Hard Disk Interface	NVMe (PCIe NVMe)
Form Factor	M.2 2280
Product Dimensions (LxWxH)	3.16 x 0.86 x 0.09 inches (80.26 x 21.84 x 2.29 mm)
Item Weight	2.39 ounces (67.75 grams)
Rated Voltage/Current	DC + 3.3V 2A

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official SK hynix website or contact your point of purchase. Warranty terms and conditions may vary by region and retailer.

SK hynix Official Website: www.skhynix.com