

Seagate ST4000DM000

Seagate ST4000DM000 4TB Desktop Hard Drive User Manual

Model: ST4000DM000

Brand: Seagate

1. PRODUCT OVERVIEW

The Seagate ST4000DM000 is a 4TB (terabyte) internal desktop hard drive designed for high-capacity storage. It features a SATA 6Gb/s interface, a 64MB cache, and operates at 5900 RPM, providing a balance of performance and energy efficiency for various computing needs.

Key Features:

- **4TB Storage Capacity:** Ample space for documents, media, and applications.
- **SATA III 6.0Gb/s Interface:** Ensures high-speed data transfer rates with compatible systems.
- **64MB Cache:** Enhances performance by storing frequently accessed data.
- **5900 RPM Rotational Speed:** Optimized for efficient operation and lower power consumption.
- **3.5-inch Form Factor:** Standard size for desktop computers, NAS, and server systems.
- **Seagate SmartAlign Technology:** Simplifies transition to Advanced Format (4K sector) standards.



Figure 1: Top view of the Seagate ST4000DM000 4TB Desktop Hard Drive, displaying the product label with model information and technical details.

2. PACKAGE CONTENTS

The retail package for the Seagate ST4000DM000 typically includes:

- One (1) Seagate ST4000DM000 4TB Desktop Hard Drive

Note: This is a bare drive. Installation screws, SATA data cables, and power cables are not included and must be acquired separately.

3. INSTALLATION AND SETUP

3.1. Physical Installation

1. **Prepare Your System:** Power off your computer and disconnect all power cables from the wall outlet. Open the computer case to access the internal components.
2. **Mount the Hard Drive:** Locate an available 3.5-inch drive bay within your computer case. Carefully slide the Seagate ST4000DM000 into the bay. Secure the drive using appropriate screws (not included) to prevent vibration and ensure stability.
3. **Connect Cables:** Connect one end of a SATA data cable to the smaller port on the hard drive and the other end to an available SATA port on your motherboard. Connect a SATA power cable from your power supply unit (PSU) to the larger port on the hard drive.



Figure 2: Bottom view of the hard drive, illustrating the SATA data and power connector ports.

3.2. Initial System Recognition

4. **Power On:** Close your computer case, reconnect all power cables, and power on your system.
5. **BIOS/UEFI Check:** Access your system's BIOS or UEFI settings during startup (typically by pressing Del, F2, F10, or F12). Verify that the newly installed hard drive is detected. The drive should appear as "Seagate ST4000DM000" or similar in the storage device list.

3.3. Drive Initialization and Formatting

For the operating system to recognize and use the new hard drive, it must be initialized and formatted. This process will erase any existing data on the drive, which is expected for a new or renewed drive.

6. Access Disk Management:

- **Windows:** Right-click on the Start button, then select "Disk Management".
 - **macOS:** Go to Applications > Utilities > Disk Utility.
 - **Linux:** Use a utility like GParted or thefdisk/parted command-line tools.
7. **Initialize the Disk:** If prompted, initialize the disk. For drives 2TB or larger, select **GPT (GUID Partition Table)** for optimal performance and compatibility with modern operating systems.
 8. **Create a New Volume/Partition:** Create a new simple volume or partition. Follow the on-screen prompts to assign a drive letter (Windows) or mount point (Linux) and choose a file system (e.g., NTFS for Windows, HFS+

or APFS for macOS, Ext4 for Linux).

9. **Format the Drive:** Perform a quick format. Once complete, the drive will be ready for use.

Important: Ensure you select the correct disk to initialize and format to avoid data loss on other drives.

4. OPERATING THE HARD DRIVE

4.1. Data Storage and Transfer

Once formatted, your Seagate ST4000DM000 drive functions like any other internal storage device. You can save files, install applications, and use it for general data storage.

- **File Management:** Use your operating system's file explorer (e.g., File Explorer in Windows, Finder in macOS) to drag and drop files, create folders, and manage your data.
- **Application Installation:** Install software and applications directly onto the drive.
- **Backup Destination:** Utilize the drive as a destination for system backups or personal file archives.

4.2. Performance Considerations

The drive features a 5900 RPM spin speed and a SATA 6Gb/s interface, offering a balance of performance and energy efficiency. Actual data transfer speeds may vary based on your system's hardware, operating system, and the type of data being transferred.

5. MAINTENANCE AND CARE

5.1. Data Integrity

- **Regular Backups:** Regularly back up important data to another storage device or cloud service. No storage device is immune to failure.
- **Disk Health Checks:** Periodically run disk health checks using your operating system's built-in tools (e.g., CHKDSK in Windows, Disk Utility's First Aid in macOS) to identify and repair minor errors.

5.2. Physical Handling

- **Avoid Shocks:** Hard drives are sensitive to physical shocks. Handle your computer case with care when the drive is installed.
- **Temperature Management:** Ensure adequate airflow within your computer case to maintain optimal operating temperatures for the drive. The drive is designed for cool operation.
- **Static Electricity:** Always take precautions against static electricity when handling the bare drive. Use an anti-static wrist strap.

5.3. Firmware Updates

Occasionally, Seagate may release firmware updates for improved performance or stability. Check the official Seagate support website for your specific model (ST4000DM000) to see if any updates are available and follow their instructions carefully.

6. TROUBLESHOOTING

6.1. Drive Not Detected

- **Check Cables:** Ensure both the SATA data cable and power cable are securely connected to the drive and the motherboard/PSU.
- **BIOS/UEFI Settings:** Verify that the drive is enabled and detected in your system's BIOS/UEFI settings.
- **Disk Management:** Confirm the drive appears in Disk Management (Windows) or Disk Utility (macOS/Linux) and has been initialized and formatted correctly.

- **Try Different Ports/Cables:** Test with different SATA data and power cables, and try connecting to a different SATA port on the motherboard.

6.2. Slow Performance

- **Cable Check:** Ensure you are using a SATA 6Gb/s compatible cable and port.
- **Disk Fragmentation:** For traditional hard drives, fragmentation can reduce performance. Run a disk defragmenter (Windows) or ensure your operating system is managing files efficiently.
- **System Resources:** Check if other applications or processes are heavily utilizing system resources (CPU, RAM), which can impact drive performance.

6.3. Data Loss Prevention

If you experience unusual noises, frequent errors, or suspect drive failure, immediately back up any critical data if possible. Discontinue use and consult professional data recovery services if data is highly valuable.

6.4. Advanced Format (4K Sector) Compatibility

The Seagate ST4000DM000 utilizes Advanced Format (4K sector) technology. Seagate SmartAlign technology is designed to simplify the transition to this standard, eliminating the need for complex utilities. Modern operating systems typically handle 4K sector drives without issue.

7. TECHNICAL SPECIFICATIONS

Feature	Specification
Model Number	ST4000DM000
Digital Storage Capacity	4 TB
Hard Disk Interface	Serial ATA-600 (SATA 6Gb/s)
Cache Memory Installed Size	64 MB
Hard Disk Rotational Speed	5900 RPM
Hard Disk Form Factor	3.5 Inches
Compatible Devices	Desktop
Data Transfer Rate	6 Gigabits Per Second
Manufacturer	Seagate
Item Dimensions (L x W x Th)	5.8"L x 4"W x 1"Th
Enclosure Material	Aluminum

8. WARRANTY AND SUPPORT

8.1. Warranty Information

This Seagate ST4000DM000 drive comes with a **90-day limited warranty**. Please retain your proof of purchase for warranty claims. The warranty covers defects in materials and workmanship under normal use.

8.2. Customer Support

For technical assistance, troubleshooting beyond this manual, or warranty inquiries, please visit the official Seagate support website or contact their customer service department.

