## ORICO ORICO M200-256GB-BP-SA

# ORICO M200 mSATA SSD User Manual

Model: ORICO M200-256GB-BP-SA

## 1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your ORICO M200 256GB mSATA SSD. Please read this manual thoroughly before using the product to ensure proper functionality and longevity.

## 2. Product Overview

The ORICO M200 mSATA SSD is a high-performance internal solid-state drive designed for desktop and laptop computers. Utilizing 3D NAND TLC technology, it offers enhanced reliability and speed for everyday computing tasks.

Figure 2.1: Front view of the ORICO M200 mSATA SSD, showing the ORICO logo and "TROODON SERIES" branding. A QR code linking to www.orico.cc is visible.

Figure 2.2: Back view of the ORICO M200 mSATA SSD, displaying model information (M200, Troodon), capacity (128GB shown in image, but product is 256GB), serial number, and regulatory marks (CE, FC, RoHS). An anti-counterfeiting QR code is also present.

## 3. Key Features

- **High-Speed Performance:** mSATA III (6.0 Gbps) interface with a maximum read speed of 560 MB/s and write speed of 556 MB/s. Performance may vary based on system hardware and configuration.
- **Compact Design:** Mini size of 30mm x 51mm x 3.3mm, ideal for space-saving installations in various laptops and desktops.
- **Advanced 3D NAND Technology:** Utilizes 64-layer 3D NAND flash for high reliability, enhanced endurance, and optimized performance.
- **Enhanced Stability:** Supports optimization instructions such as LDPC (Low-Density Parity Check), TRIM, NCQ (Native Command Queuing), and DEVSLEEP for intelligent error correction, improved efficiency, reduced power consumption, and extended hard disk lifespan.
- **Reliability:** Designed for 1 million hours Mean Time To Failure (MTTF) and up to 500 Terabytes Written (TBW), ensuring long-term durability.

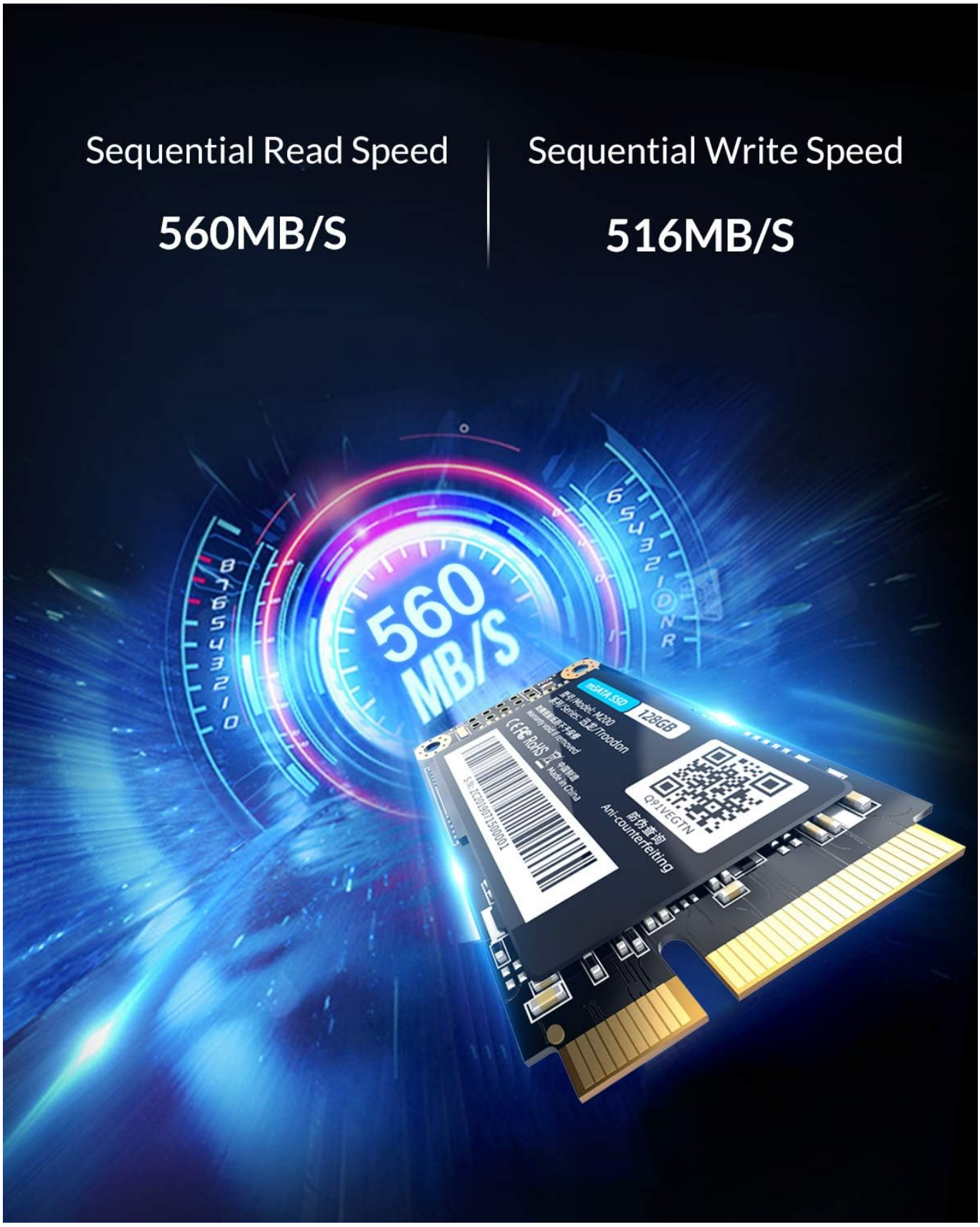


Figure 3.1: Illustration of the sequential read speed (560MB/s) and sequential write speed (516MB/s) of the ORICO M200 mSATA SSD. Note: Product specifications state 556MB/s write speed.

Figure 3.2: Visual comparison demonstrating the instant response of an SSD versus a traditional HDD, highlighting faster startup and reduced load times.

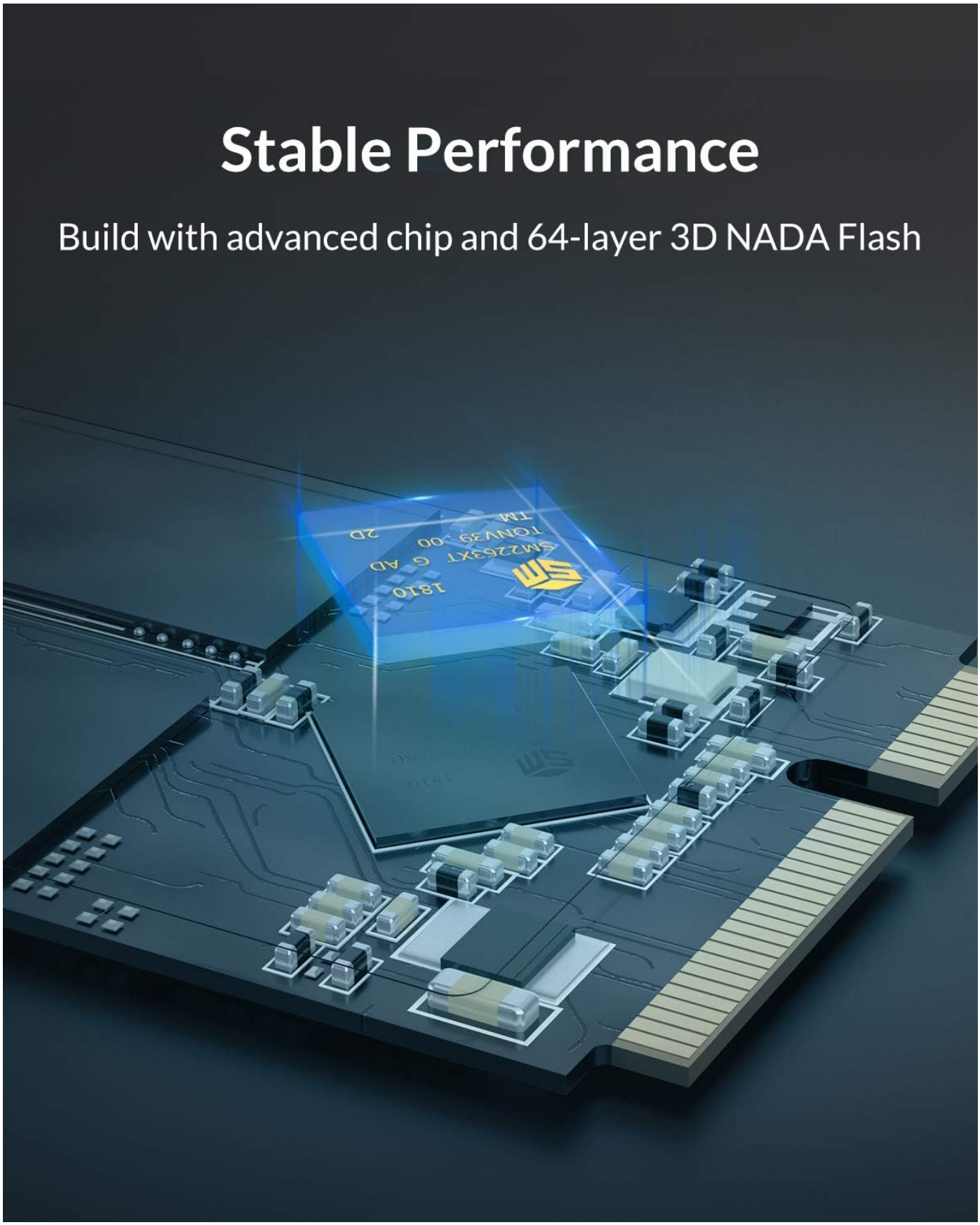


Figure 3.3: Depiction of the stable performance achieved through the advanced chip and 64-layer 3D NAND Flash technology integrated into the SSD.

Figure 3.4: Visual representation of the energy-efficient design of the ORICO M200 mSATA SSD, contributing to lower power consumption.

Figure 3.5: Overview of the wide compatibility of the ORICO M200 mSATA SSD, suitable for various devices including PCs, All-in-One PCs, notebooks, servers, and POS machines, and compatible with Windows, macOS, and Linux operating systems.

## 4. Specifications

| Attribute | Detail |
|---|---|
| Brand | ORICO |

| Attribute | Detail |
|---|---|
| Model | ORICO M200-256GB-BP-SA |
| Capacity | 256 GB |
| Interface | mSATA III (SATA 6Gbps) |
| Max Read Speed | 560 MB/s |
| Max Write Speed | 556 MB/s |
| NAND Flash Type | 3D NAND TLC (64-layer) |
| Form Factor | mSATA |
| Dimensions (L x W x H) | 51mm x 30mm x 3.3mm (approx. 2 x 1.2 x 0.13 inches) |
| Weight | Approx. 1.5 ounces (42.5g) |
| MTTF (Mean Time To Failure) | 1 Million Hours |
| TBW (Terabytes Written) | Up to 500 TBW |
| Compatible Platforms | PC, Laptop, Mac |
| Operating Systems | Windows, macOS, Linux |

Note: 1GB = 1 billion bytes, 1TB = 1 trillion bytes. Actual user capacity may be less depending on the operating environment.

## 5. Package Contents

The ORICO M200 mSATA SSD package includes:

- 1 x ORICO M200 256GB mSATA SSD

## 6. Installation Guide

Before installation, ensure your device supports an mSATA interface. It is recommended to back up any important data before proceeding.

### 6.1. Preparation

1. Power off your computer and disconnect all power cables.
2. Open the computer casing or laptop access panel to expose the motherboard. Refer to your computer's specific manual for instructions on accessing internal components.
3. Discharge any static electricity by touching a grounded metal object before handling the SSD.

### 6.2. Installing the mSATA SSD

1. Locate the mSATA slot on your motherboard. It typically resembles a mini-PCIe slot but is specifically designed for mSATA SSDs.
2. Gently insert the ORICO M200 mSATA SSD into the slot at a 45-degree angle, ensuring the gold contacts are fully seated.
3. Press the SSD down until it lies flat against the motherboard. Secure it with the small screw provided with your computer or motherboard (not included with the SSD).

4. Close the computer casing or access panel.
5. Reconnect all power cables and power on your computer.

### 6.3. Initializing and Formatting the SSD

After physical installation, the SSD needs to be initialized and formatted before it can be used. The steps vary slightly depending on your operating system.

**For Windows:**

1. Right-click on the Start button and select "Disk Management".
2. A pop-up window will appear prompting you to initialize the new disk. Select MBR (Master Boot Record) or GPT (GUID Partition Table) based on your system's requirements (GPT is recommended for modern systems and drives larger than 2TB). Click "OK".
3. Locate the unallocated space on the new SSD. Right-click on it and select "New Simple Volume".
4. Follow the New Simple Volume Wizard to assign a drive letter and format the drive (NTFS is recommended).

**For macOS:**

1. Open "Disk Utility" (Applications > Utilities > Disk Utility).
2. Select the new ORICO SSD from the sidebar.
3. Click "Erase" from the top menu.
4. Choose a name for the drive, select a format (e.g., APFS or Mac OS Extended (Journaled)), and a scheme (GUID Partition Map). Click "Erase".

**For Linux:**

1. Open a terminal.
2. Use lsblk or fdisk -l to identify the new SSD (e.g.,/dev/sdb).
3. Use fdisk or gparted to partition the drive.
4. Format the partition with a desired filesystem (e.g.,mkfs.ext4 /dev/sdb1).
5. Mount the drive to a directory (e.g.,sudo mount /dev/sdb1 /mnt/data).

## 7. Operating Instructions

Once installed and formatted, your ORICO M200 mSATA SSD operates like any other storage drive. You can use it for:

- **Operating System Installation:** Install your operating system on the SSD for faster boot times and overall system responsiveness.
- **Application Storage:** Install frequently used applications and games on the SSD to reduce loading times.
- **Data Storage:** Store important files, documents, photos, and videos.

To maximize performance and lifespan:

- Ensure your operating system's TRIM command is enabled. TRIM helps maintain SSD performance over time by allowing the OS to inform the SSD which data blocks are no longer in use and can be wiped.
- Avoid filling the SSD to its maximum capacity. Leaving some free space (e.g., 10-15%) allows the SSD's wear-leveling algorithms to function optimally.
- Regularly update your operating system and drivers to ensure compatibility and performance optimizations.

## 8. Maintenance

SSDs generally require less maintenance than traditional HDDs. However, consider the following for optimal performance and longevity:

- **Firmware Updates:** Periodically check the ORICO official website (www.orico.cc) for any available firmware updates for your M200 SSD. Firmware updates can improve performance, stability, and compatibility.
- **Avoid Defragmentation:** Do not defragment an SSD. Defragmentation is designed for HDDs and can reduce the lifespan of an SSD by causing unnecessary write cycles.
- **Monitor Health:** Use S.M.A.R.T. (Self-Monitoring, Analysis and Reporting Technology) tools available in your operating system or third-party software to monitor the health and lifespan of your SSD.
- **Temperature Management:** Ensure adequate airflow within your computer case to prevent excessive heat buildup, which can affect SSD performance and lifespan.

## 9. Troubleshooting

| Problem | Possible Cause | Solution |
|---|---|---|
| SSD not detected by the system. | Incorrect installation, faulty mSATA slot, or driver issue. | ◦ Ensure the SSD is correctly seated in the mSATA slot.<br>◦ Check BIOS/UEFI settings to confirm the mSATA slot is enabled.<br>◦ Try the SSD in another compatible mSATA slot or device if available.<br>◦ Update motherboard chipset drivers. |
| SSD detected but not showing in "My Computer" / "Finder". | Not initialized or formatted. | ◦ Follow the "Initializing and Formatting the SSD" steps in Section 6.3. |
| Slow performance. | TRIM not enabled, SSD nearly full, or outdated drivers. | ◦ Verify TRIM is enabled in your operating system.<br>◦ Ensure there is sufficient free space on the SSD (10-15% recommended).<br>◦ Update motherboard drivers and SSD firmware.<br>◦ Check for background processes consuming resources. |
| System crashes or freezes. | Incompatible drivers, hardware conflict, or faulty SSD. | ◦ Ensure all drivers are up to date.<br>◦ Run system diagnostics to check for hardware conflicts.<br>◦ If issues persist, contact ORICO customer support. |

## 10. Official Product Video

Watch the official ORICO Troodon Series SSD video for a visual overview of its features and capabilities.

Video 10.1: Official ORICO Troodon Series SSD promotional video. This video highlights the SSD's high-speed data transfer, 3D NAND technology, and overall performance, showcasing its role in modern computing environments.

## 11. Warranty and Support

ORICO provides a worry-free 60-month warranty for the M200 mSATA SSD. For technical support, warranty claims, or further assistance, please contact ORICO customer service or visit the official website.

- **Official Website:** www.orico.cc
- **Customer Service:** Refer to the contact information provided on the ORICO official website or product packaging.

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### Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

**Name**

Anonymous

**Email**

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

**Question**

Example: How do I reset this device or fix this error?

**Details**

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question