

ORICO WS500RC3

ORICO 5 Bay RAID USB-C Hard Drive Docking Station (WS500RC3) User Manual

Model: WS500RC3

1. INTRODUCTION

The ORICO 5 Bay RAID USB-C Hard Drive Docking Station (WS500RC3) is an external enclosure designed for 2.5-inch or 3.5-inch SATA HDDs and SSDs. It supports up to 16TB per drive, offering a total capacity of 80TB. This device features multiple RAID modes (0/1/3/5/10/JBOD/Clear) for diversified backup and data management. With USB 3.1 Type-C connectivity, it provides data transfer speeds up to 5 Gbps. The aluminum alloy casing and built-in cooling fan ensure efficient heat dissipation, while an automatic sleep function conserves energy and extends drive lifespan.

2. PACKAGE CONTENTS

Before proceeding with installation, please verify that all items are present in the package:

- ORICO WS500RC3 Hard Drive Docking Station
- USB 3.2 Gen 2 Cable (USB-C to USB-A, or USB-C to USB-C depending on model variant)
- Power Adapter
- User Manual
- Screwdriver
- Mounting Screws

3. SETUP AND INSTALLATION

Follow these steps to install your hard drives into the ORICO WS500RC3 enclosure:

1. **Prepare the Enclosure:** Loosen the screws on the front panel of the enclosure using the provided screwdriver.
2. **Remove Drive Trays:** Gently pull out the hard drive trays from the enclosure.
3. **Install Hard Drives:** Place your 2.5-inch or 3.5-inch SATA HDD/SSD onto a drive tray. Secure the drive to the tray using the provided screws. Ensure the drive's connectors align correctly with the tray's interface.

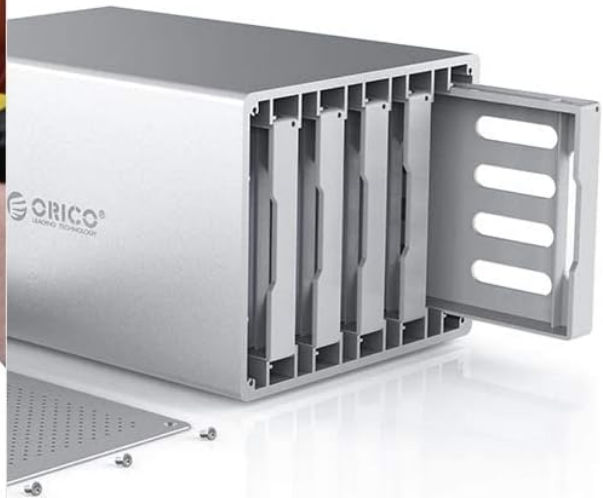
4. **Insert Drive Trays:** Slide the loaded drive trays back into the enclosure until they are fully seated.
5. **Secure Front Panel:** Re-attach the front panel and tighten the screws to secure it.
6. **Connect Power:** Connect the power adapter to the enclosure and then to a power outlet.
7. **Connect to Computer:** Connect the enclosure to your computer using the provided USB 3.2 Gen 2 cable.

Installation Steps

- 1 Loosen the screws on the front panel



- 2 Take out the hard drive tray



- 3 Insert the hard disk and fix it with screws



- 4 Turn the screw to connect with the computer



Image: Step-by-step guide showing how to loosen screws, remove trays, insert a hard drive, and secure it.



Image: The ORICO 5 Bay RAID enclosure with its front panel removed, showing the internal drive bays and a hard drive ready for installation.

4. OPERATING INSTRUCTIONS

4.1 Power On/Off

After connecting the power adapter and USB cable, press the power button on the back of the enclosure to turn it on. The LED indicators on the front panel will illuminate. To power off, press the power button again.

4.2 Drive Recognition

Once connected to your computer, the operating system (Windows, macOS, Linux) should automatically detect the enclosure and its installed drives. New drives may require initialization and formatting before use.

4.3 Data Transfer

The enclosure supports USB 3.1 Gen 1 (also known as USB 3.0) with theoretical transfer speeds up to 5 Gbps. Actual speeds may vary based on your computer's USB port, cable quality, and the performance of the installed hard drives.

High speed transfer

TypeC interface can support speeds up to 5 Gbps (theoretical)



Image: The ORICO enclosure connected to a laptop, demonstrating high-speed data transfer capabilities via its USB-C interface.

4.4 Automatic Sleep Function

To conserve energy and prolong the lifespan of your hard drives, the enclosure will automatically enter sleep mode if there is no data activity for 10 minutes. The drives will spin down, and the enclosure will consume less power. Activity will automatically wake the drives.

Automatic Sleep Function

Automatically enter sleep mode after 10 minutes of no data transfer



Image: The ORICO enclosure illustrating its automatic sleep function, which activates after 10 minutes of inactivity to save power.

5. RAID CONFIGURATION

The ORICO WS500RC3 supports multiple RAID modes to suit various data storage needs. **Important:** Changing RAID modes will erase all data on the installed drives. Back up your data before configuring RAID.

High Speed Transfer

Equipped with RAID function, Type C compatible, speed reach to 5 GBPS



RAID 0

RAID 1

RAID 1 0

RAID 3

RAID 5

Combine

Clear

Image: Front panel of the ORICO enclosure, highlighting the RAID mode selection buttons and indicators.

Supported RAID Modes:

- **RAID 0 (Striping):** Combines drives into a single large volume for maximum performance. No data redundancy.
- **RAID 1 (Mirroring):** Duplicates data across two drives for redundancy. Provides data protection but reduces usable capacity by half. Requires at least two drives.
- **RAID 3 (Striping with dedicated parity):** Uses one drive for parity and stripes data across the remaining drives. Offers good performance and data redundancy.
- **RAID 5 (Striping with distributed parity):** Stripes data and parity information across all drives. Provides good performance and data redundancy with efficient storage utilization. Requires at least three drives.
- **RAID 10 (Striping and Mirroring):** Combines RAID 0 and RAID 1. Data is striped across mirrored pairs. Offers both performance and redundancy. Requires at least four drives.
- **JBOD (Just a Bunch Of Disks):** Treats each drive as an independent volume. No striping or redundancy.

- **Clear:** Resets all drives to independent, non-RAID volumes.

Configuration Steps:

Refer to the specific instructions in the included printed manual for detailed steps on how to select and apply RAID modes using the physical buttons on the device. Typically, this involves setting DIP switches or pressing a combination of buttons, followed by a confirmation press (e.g., 'SET' button) and a reboot.

6. MAINTENANCE

6.1 Heat Dissipation

The ORICO WS500RC3 features an aluminum alloy casing and a built-in cooling fan to ensure optimal heat dissipation. To maintain effective cooling:

- Ensure the enclosure is placed in a well-ventilated area.
- Do not block the ventilation holes on the back and sides of the unit.
- Periodically clean any dust accumulation from the fan and ventilation grilles using compressed air.

Excellent heat dissipation

Reduced the temperature by the all-aluminum shell and the honeycomb heat dissipation structure



Silent Fan



Honeycomb
Heat Dissipation



Image: Diagram illustrating the internal cooling fan and honeycomb heat dissipation design of the ORICO enclosure.

6.2 Cleaning

Wipe the exterior of the enclosure with a soft, dry cloth. Avoid using liquid cleaners or abrasive materials.

7. TROUBLESHOOTING

- **Drives Not Detected:**

- Ensure all drives are properly seated in their trays and the trays are fully inserted into the enclosure.
- Verify the power adapter is securely connected and the enclosure is powered on.
- Check the USB cable connection between the enclosure and your computer. Try a different USB port or cable.
- For new drives, ensure they are initialized and formatted in your operating system's Disk Management (Windows) or Disk Utility (macOS).
- If using RAID, ensure the RAID mode is correctly configured and the drives are compatible.

- **Slow Data Transfer Speeds:**

- Ensure you are using a USB 3.0/3.1/3.2 port on your computer. Connecting to a USB 2.0 port will result in slower speeds.
- Verify the USB cable is rated for USB 3.0/3.1/3.2 speeds. A faulty or low-quality cable can significantly impact performance.
- The performance of the installed hard drives (especially older HDDs) can limit overall transfer speed.
- Ensure your computer's drivers for USB 3.0/3.1/3.2 are up to date.

- **Enclosure Disconnects Randomly:**

- Check power connections.
- Ensure the USB cable is not loose. Try a different USB port or cable.
- Disable USB selective suspend settings in your computer's power options (Windows) or energy saver settings (macOS).
- Ensure the enclosure is not overheating. Refer to the Maintenance section.

- **Fan Noise:**

- A certain level of fan noise is normal for cooling.
- If the noise is excessive or unusual, ensure the fan is not obstructed by dust.

8. SPECIFICATIONS

Feature	Specification
Model Number	WS500RC3 (5 Bay USB C + RAID)
Brand	ORICO
Compatible Drives	2.5-inch and 3.5-inch SATA HDD/SSD
Number of Bays	5
Max Capacity per Drive	16 TB
Total Max Capacity	80 TB (5 x 16 TB)
RAID Modes	RAID 0, RAID 1, RAID 3, RAID 5, RAID 10, JBOD, Clear
Hardware Interface	USB 3.0, USB Type-C
Data Transfer Speed	Up to 5 Gigabits per second (USB 3.1 Gen 1)
Material	Aluminum Alloy

Feature	Specification
Color	Silver
Product Dimensions	24.2 x 16.5 x 13.9 cm
Weight	3.54 kg
Operating System Compatibility	Linux, macOS, Windows XP / 7 / 8 / 10 / 11 or higher

243mm
Length

185mm
Wide

136mm
High



Image: Visual representation of the ORICO enclosure's dimensions.

9. WARRANTY AND SUPPORT

ORICO products typically come with a standard manufacturer's warranty. Please refer to the warranty card included in your package or visit the official ORICO website for detailed warranty terms and conditions specific to your region. For technical support, troubleshooting assistance, or inquiries regarding your ORICO WS500RC3, please contact ORICO

customer service through their official website or the contact information provided in your product documentation. When contacting support, please have your product model number (WS500RC3) and purchase details ready.

