ORICO 9828R

ORICO 9828RU3 2-Bay RAID Hard Drive Enclosure User Manual

Model: 9828R

1. Introduction and Overview

The ORICO 9828RU3 is a high-performance 2-bay RAID hard drive enclosure designed to provide flexible and secure data storage solutions. It supports both 2.5-inch and 3.5-inch SATA SSDs and HDDs, offering various RAID modes for enhanced data management and protection. With its USB 3.0 interface, it ensures high-speed data transfer, making it suitable for professionals and users with extensive data storage needs.

Image 1.1: Front view of the ORICO 9828RU3 2-Bay RAID Hard Drive Enclosure. This image shows the sleek grey aluminum casing and the two front-loading drive bays.

2. Product Features

- **Flexible RAID Modes:** Supports RAID 0, RAID 1, JBOD, and CLEAR modes for diverse data management and backup strategies.

- **Tray-Less Design:** Facilitates quick and easy installation and removal of 3.5-inch hard drives without tools.
- **Massive Storage Capacity:** Accommodates up to two 3.5-inch SATA hard drives, with individual drive capacities up to 22TB, totaling 44TB.
- **Efficient Heat Dissipation:** Features an aluminum alloy shell, front and rear ventilation slots, and a built-in 50mm silent cooling fan to maintain optimal operating temperatures.
- **High-Speed Data Transfer:** Equipped with a USB 3.0 interface, providing real transfer rates up to 230 MB/s.
- **Wide Compatibility:** Compatible with Windows, Mac OS, and Linux operating systems.
- **Security Lock:** Independent security lock mechanism for each bay prevents accidental drive ejection.

Image 2.1: Illustration highlighting the 44TB massive storage capacity of the ORICO 9828RU3, with individual disks supporting up to 22TB. The image also shows various data types that can be stored, such as HD photos, HD videos, HIFI music, and

general files.

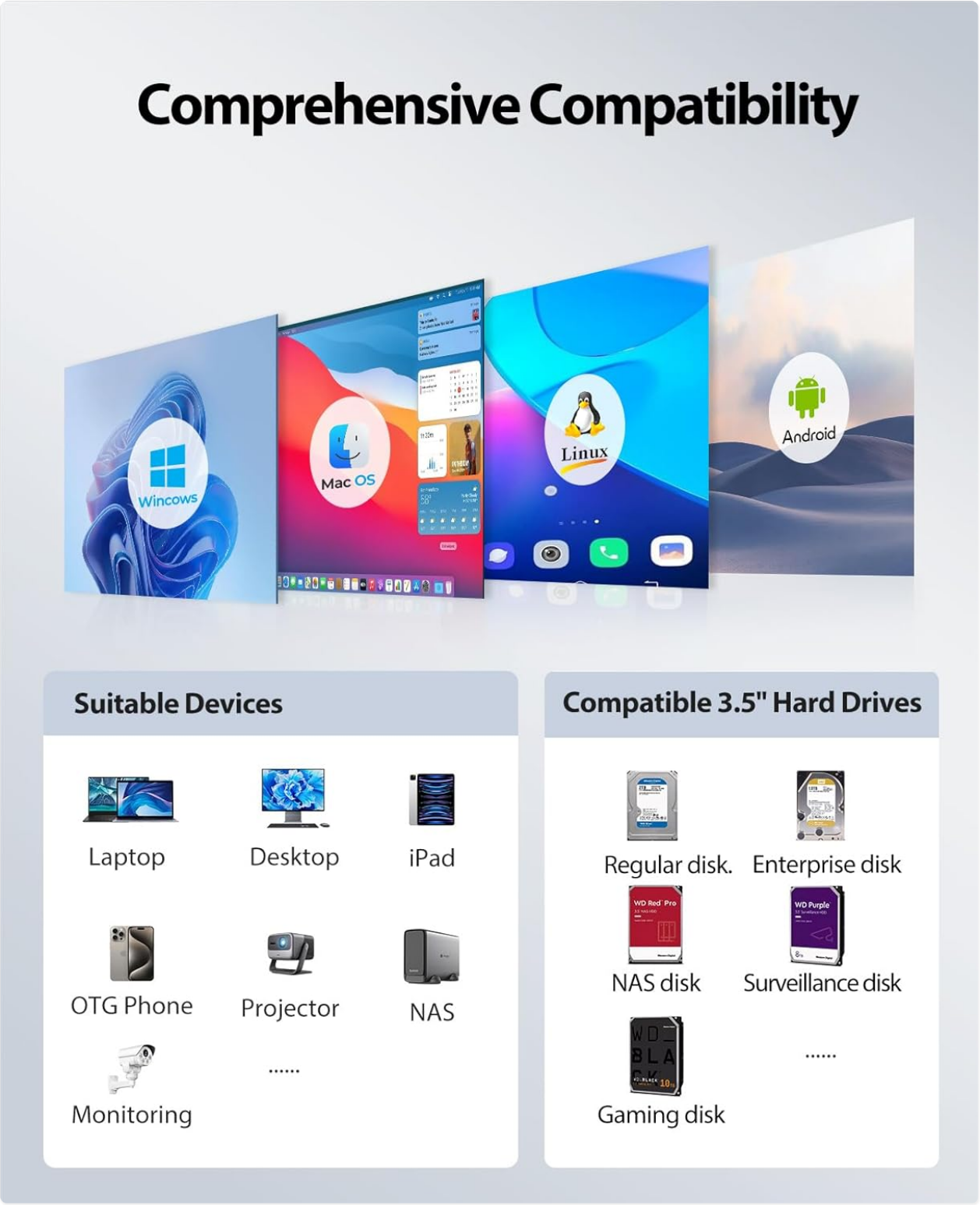

Image 2.2: A visual representation of the ORICO 9828RU3's broad compatibility. It shows the enclosure working with Windows, Mac OS, and Linux, and lists suitable devices like laptops, desktops, iPads, and NAS, as well as compatible 3.5-inch hard drive types including regular, enterprise, NAS, surveillance, and gaming disks.

3. Setup

3.1 Hardware Installation

1. **Open Drive Bay:** Gently press the release button or lever on the front of the enclosure to unlock and open a drive bay.
2. **Insert Hard Drive:** Slide your 3.5-inch SATA HDD or SSD into the open bay until it is securely seated.

The tray-less design allows direct insertion.

3. **Close and Lock Bay:** Close the drive bay door and ensure it clicks into place. Use the independent security lock to prevent accidental ejection.
4. **Repeat for Second Drive:** If installing a second drive, repeat steps 1-3 for the other bay.
5. **Connect Power:** Connect the provided 12V4A power adapter to the enclosure's DC input port and then to a power outlet.
6. **Connect to Computer:** Use the supplied USB 3.0 cable to connect the enclosure to an available USB port on your computer.

Image 3.1: The ORICO 9828RU3 enclosure connected to its 12V4A power supply, illustrating the 48W power delivery to ensure stable operation.

3.2 RAID Mode Configuration

The ORICO 9828RU3 supports four RAID modes: RAID 0, RAID 1, JBOD, and CLEAR. It is crucial to configure the RAID mode **before** initial use, as changing modes will erase all data on the drives. Always back up your data before making any changes to the RAID configuration.

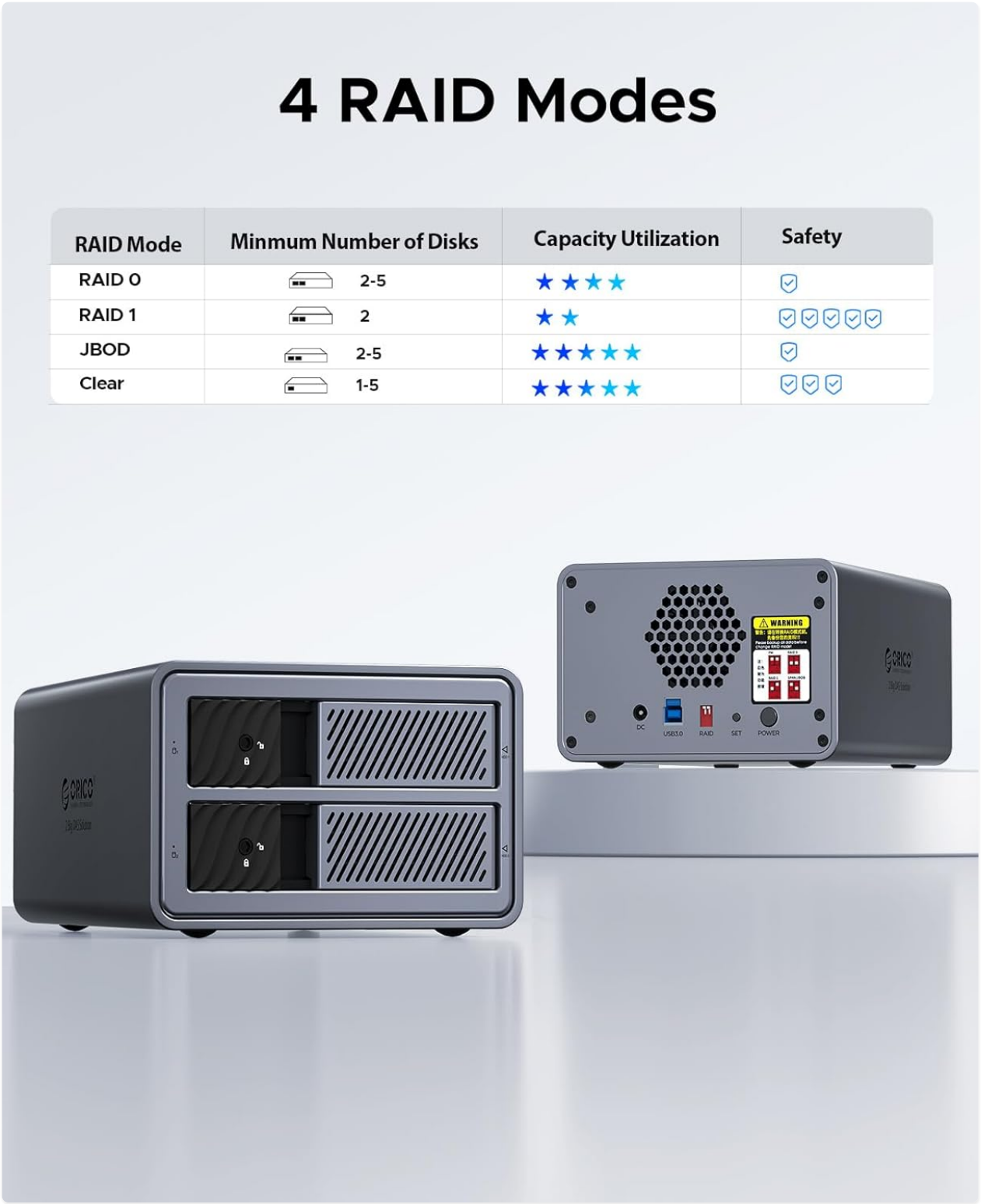

Image 3.2: This image displays the rear panel of the ORICO 9828RU3 enclosure, highlighting the RAID mode selection switches and the 'SET' button. Users can configure RAID 0, RAID 1, JBOD, or CLEAR modes using these controls.

Image 3.3: This table provides a detailed comparison of the four RAID modes supported by the ORICO 9828RU3: RAID 0, RAID 1, JBOD, and CLEAR. It outlines the minimum number of disks required, capacity utilization, and data safety levels for each mode.

Image 3.4: A visual guide illustrating the steps to set RAID modes on the ORICO 9828RU3. It shows the positions of the RAID switches and the action of pressing the 'SET' button to apply the configuration.

RAID Mode Descriptions:

- **RAID 0 (Striping):** Combines two or more drives into a single logical unit, increasing performance and capacity. Data is written across all drives. *No data redundancy.*
- **RAID 1 (Mirroring):** Duplicates data across two drives, providing data redundancy. If one drive fails, data is still accessible from the other. *Capacity is limited to the size of the smallest drive.*
- **JBOD (Just a Bunch Of Disks):** Presents each drive as a separate, independent volume. No RAID functionality is applied.
- **CLEAR:** Resets the enclosure to a non-RAID state, typically presenting each drive individually. This mode is often used to clear previous RAID configurations.

Steps to Configure RAID Mode:

1. Ensure the enclosure is powered off and disconnected from your computer.
2. Install your hard drives into the bays.
3. Locate the RAID mode switches on the rear panel of the enclosure.
4. Adjust the switches to the desired RAID mode according to the provided diagram (refer to Image 3.4).
5. Press and hold the 'SET' button.
6. While holding the 'SET' button, power on the enclosure.
7. Continue holding the 'SET' button for approximately 5-10 seconds until the LED indicators confirm the new RAID mode has been set.
8. Release the 'SET' button. The enclosure is now configured for the selected RAID mode.
9. Connect the enclosure to your computer via USB. You may need to initialize and format the drives through your operating system's disk management utility before use.

4. Operating

4.1 Data Transfer

Once connected to your computer and the drives are initialized and formatted, the ORICO 9828RU3 will appear as an external storage device. You can drag and drop files, copy, paste, and manage data as you would with any other drive. The USB 3.0 interface ensures rapid data transfer for large files and backups.

Image 4.1: The ORICO 9828RU3 enclosure connected via USB 3.0 to a laptop, demonstrating its 5Gbps high-speed data transfer capability, with an arrow indicating data flow and a speed of 230MB/s.

4.2 LED Indicators

Each drive bay on the ORICO 9828RU3 is equipped with an LED indicator light. These lights provide visual feedback on the operational status of the installed hard drives:

- **Solid Blue:** Drive is powered on and idle.
- **Flashing Blue:** Drive is actively reading or writing data.
- **Red (if applicable):** Indicates a drive error or failure (consult troubleshooting section).

Image 4.2: A close-up view of the ORICO 9828RU3's front panel, highlighting the LED indicator lights located on each drive bay, which show the operational status of the installed hard drives.

4.3 Intelligent Sleep Mode

To conserve energy and extend the lifespan of your hard drives, the ORICO 9828RU3 features an intelligent sleep mode. If there is no data activity for approximately 10 minutes, the enclosure will automatically enter sleep mode. The drives will spin down, and the LED indicators may change. Activity will resume automatically upon data access.

Image 4.3: An illustration showing the ORICO 9828RU3 enclosure connected to a laptop, with a graphic indicating it enters intelligent sleep mode after 10 minutes of inactivity to conserve power and extend drive lifespan.

5. Maintenance

5.1 Heat Dissipation

The ORICO 9828RU3 is engineered with multiple features to ensure efficient heat dissipation, crucial for the longevity and stable performance of your hard drives. The aluminum alloy casing acts as a large heatsink, complemented by mesh airflow design and a powerful, silent 50mm cooling fan. Ensure the ventilation slots are not obstructed to allow proper airflow.

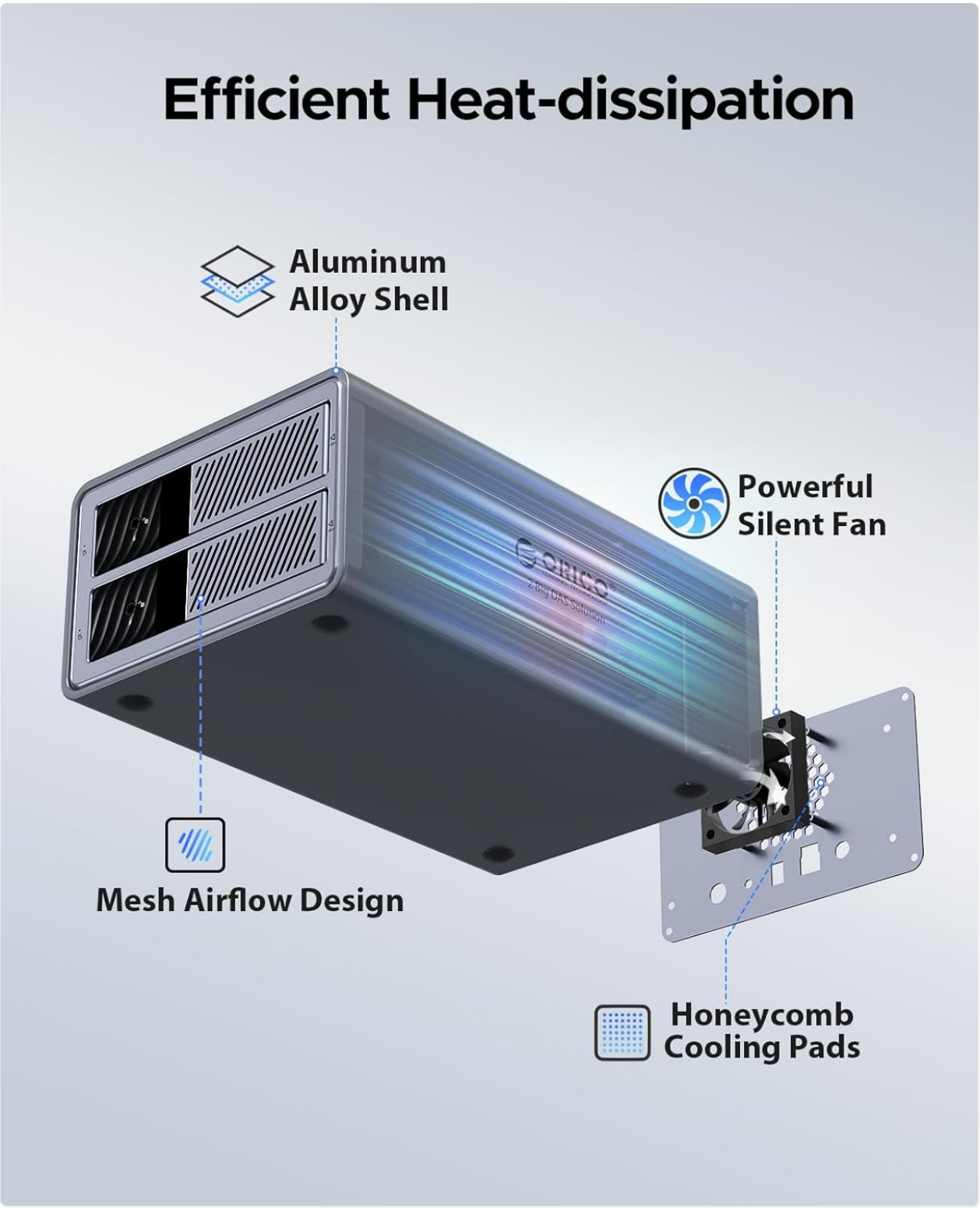

Image 5.1: An exploded view diagram of the ORICO 9828RU3, showcasing its efficient heat dissipation design, including the aluminum alloy shell, mesh airflow, powerful silent fan, and honeycomb cooling pads.

5.2 Safety Lock Design

Each drive bay is equipped with an independent safety lock. This mechanism prevents accidental ejection of the hard drives, ensuring data integrity and physical security. Always engage the lock after installing or removing a drive.

Image 5.2: A close-up image demonstrating the safety lock mechanism on a drive bay of the ORICO 9828RU3, showing how it secures the hard drive in place to prevent accidental removal.

6. Troubleshooting

- **Enclosure not recognized by computer:**
  - Ensure the power adapter is securely connected and the enclosure is powered on.
  - Verify the USB cable is properly connected to both the enclosure and the computer.
  - Try a different USB port on your computer.
  - Test with a different USB cable.
  - Check your computer's Disk Management (Windows) or Disk Utility (Mac) to see if the drives are detected but uninitialized/unformatted.

- **Drives not appearing after RAID configuration:**
  - After setting a RAID mode, you must initialize and format the new logical volume through your operating system's disk management tools.
  - Ensure the RAID mode was set correctly by following the steps in Section 3.2.
- **Slow data transfer speeds:**
  - Ensure you are connected to a USB 3.0 port on your computer. USB 2.0 ports will result in significantly lower speeds.
  - Check the health of your hard drives.
  - Verify the USB cable is not faulty.
- **Enclosure is hot:**
  - Ensure the ventilation slots are clear and not obstructed.
  - The aluminum casing is designed to dissipate heat; some warmth is normal during operation.
- **Drive LED is red or flashing abnormally:**
  - This may indicate a drive error or failure, especially in RAID 1 mode. Check the drive's health.
  - If in RAID 1, replace the faulty drive and rebuild the array according to advanced RAID management instructions (refer to ORICO support for detailed steps).

7. Specifications

Feature	Specification
Brand	ORICO
Model Number	9828R
Hardware Interface	USB 3.0
Data Transfer Rate	5 Gigabits per second (USB 3.0)
Color	Grey
Product Dimensions	11L x 7W x 5H centimeters
Material	Aluminum
Memory Storage Capacity	Up to 44 TB (2 x 22TB)
Compatible Devices	Linux, Mac, Windows
Hard Drive Form Factor	3.5 Inches
Maximum Supported Devices	2

8. Warranty and Support

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

Related Documents - 9828R

	ORICO RAID Enclosure User Guide: Software and Manual Operation A guide to operating the ORICO 4 Bay RAID Hard Drive Enclosure, covering software management via USB 3.2 Gen 1 and manual operation through the device's array switch. Includes information on RAID modes and system compatibility.
	ORICO 3529RU3/3549RU3/3559RU3 RAID Hard Drive Enclosure User Manual Comprehensive user manual for ORICO 3529RU3, 3549RU3, and 3559RU3 external RAID hard drive enclosures. Covers features, specifications, installation, RAID configurations (RAID 0, 1, 3, 5, 10, SPAN, Clone, PM/Normal), software management with ORICO HW RAID Manager, and troubleshooting.
	ORICO RAID Enclosure Setup and Management Guide Learn how to set up, change, and manage RAID modes on ORICO hard drive enclosures. This guide covers drive replacement, adding new drives, and using the ORICO RAID Manager software for optimal data storage and protection.
	ORICO 35RU3 Series External Hard Drive RAID Enclosure User Manual User manual for the ORICO 35RU3 Series 2.5 & 3.5 Inch External Hard Drive RAID Enclosure, detailing product features, specifications, installation, RAID configuration using hardware switches and software, formatting, and troubleshooting.
	ORICO 95U3 Series 3.5 Inch External HDD Enclosure User Manual User manual for the ORICO 95U3 Series 3.5 Inch External HDD Enclosure, covering product introduction, specifications, features, installation, and troubleshooting.

	[How to Operate Offline Clone - ORICO Hard Drive Docking Station] Guide on how to operate the offline clone function of the ORICO Dual Bay Hard Drive Docking Station. Includes step-by-step instructions and troubleshooting for drive letter assignment.