cenmate 5 Bay

Cenmate 5-Bay Hybrid HDD/SSD and M.2 NVMe Enclosure User Manual

Model: 5 Bay

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your Cenmate 5-Bay Hybrid Hard Drive Enclosure. This enclosure is designed to expand your storage capacity by combining 2.5/3.5 inch SATA HDDs/SSDs and M.2 NVMe SSDs, offering versatile storage solutions with high-speed data transfer.

Image 1.1: Cenmate 5-Bay Hybrid Enclosure

2. PRODUCT FEATURES

- **Hybrid Storage Design:** Supports 2 x 2.5/3.5 inch SATA HDDs/SSDs and 3 x M.2 NVMe SSDs (2230/42/60/80/110).

- **High Capacity:** Maximum total capacity of 68TB (2x22TB HDDs + 3x8TB M.2 SSDs).

- **RAID Modes:** Supports RAID 0, RAID 1, JBOD, and Normal modes for SATA drives.**Note:** RAID configuration may result in data loss. Always back up data before configuring RAID.

- **High-Speed Connectivity:** USB 3.2 Gen 2 interface provides data transfer rates up to 10Gbps.

- **Efficient Cooling:** Built-in aluminum alloy housing and a 2.7-inch silent fan ensure optimal heat dissipation.

- **Tool-Free Installation:** Features a tool-free hard drive tray design for easy installation and removal of 3.5-inch SATA drives.

- **Wide Compatibility:** Compatible with Windows 7 and above, Mac OS 9.1 and above, and Linux. USB Type-C

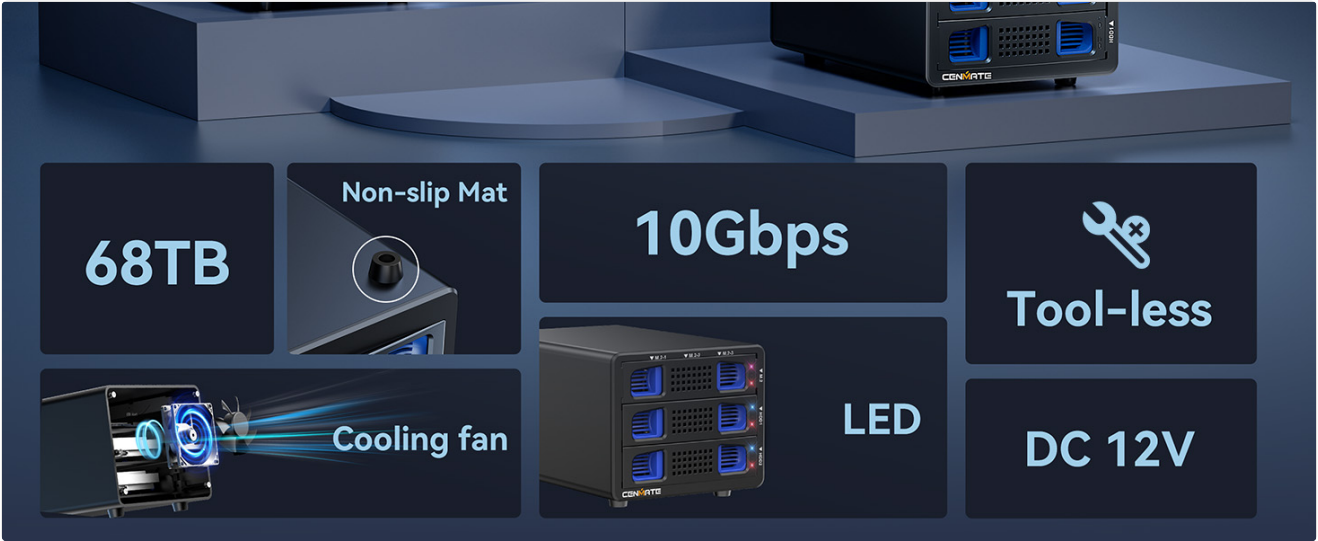interface supports USB 3.0, USB 3.1, USB 3.2, Thunderbolt 3, and Thunderbolt 4.

Image 2.1: Product Features Overview

3. PACKAGE CONTENTS

Please verify that all items are present in the package:

- Cenmate Hybrid Hard Drive RAID Enclosure
- USB A/C 3.2 Cable
- Power Adapter
- User Manual (this document)

4. SETUP AND INSTALLATION

4.1 M.2 SSD Installation

1. Insert the M.2 SSD into the slot until it clicks into place.
2. Snap the rubber plug into the metal half-circle of the M.2 SSD.
3. Press the rubber plug with the M.2 SSD down into the bayonet until it is secure.
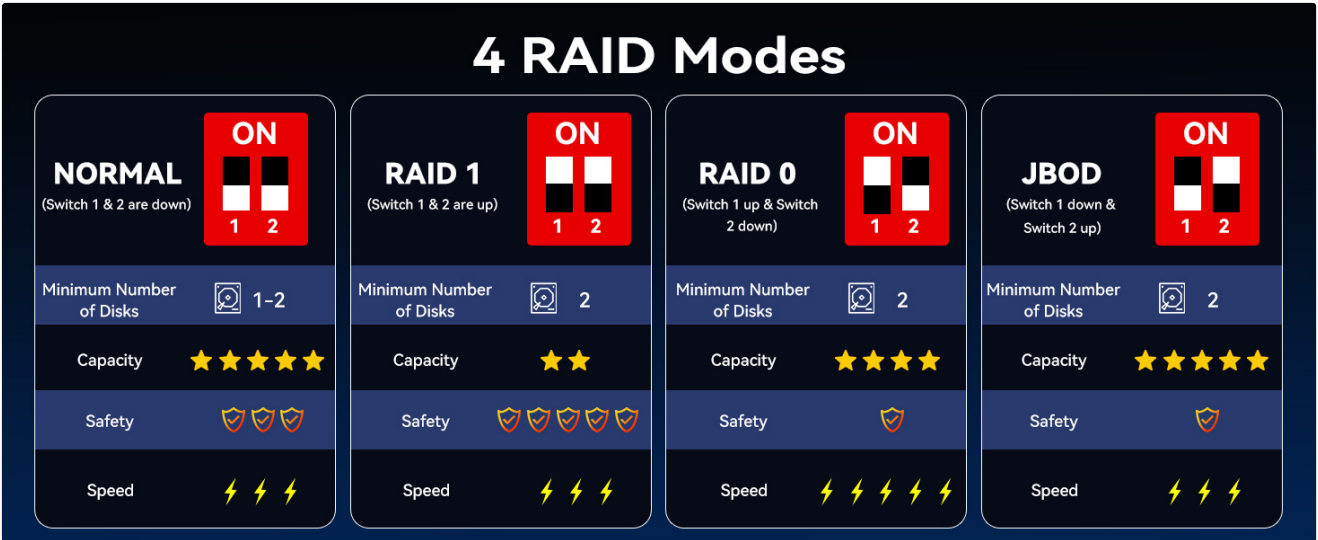

Image 4.1: M.2 SSD Installation Steps

4.2 3.5 inch HDD Installation

1. Pull up the blue clasps on both sides of the bracket.

2. Put the hard drive gently into the tray, then snap the carabiner pins into the 3.5 inch HDD side screw holes.

Q1

After connecting new hard drive to the computer,
why can't I find the hard drive and display the disc letter?

After the new hard drive is connected to the computer, it must be formatted before the system can be recognised and used. Method of operation: First, right-click 'Computer', then click 'Management', open into the 'Disk Management', find the new hard drive, right-click 'Initialisation 'Select 'MBR (hard drive capacity less than or equal to 2TB)' or 'GPT (greater than 2TB)', then 'New Simple Volume', the default next step to format the partition. Formatting is completed after the hard drive can be used normally, showing the new disc symbols.

Q2

The hard drive appears in RAW format in Disk Management due to improper extraction or power failure. What should I do?

Recovery through the chkdsk command; operation method: administrator identity run cmd input CHKDSKi:/f enter (here the i is the disc letter of the disk), scanning and repair is complete reboot can be displayed.

Image 4.2: 3.5 inch HDD Installation Steps

4.3 2.5 inch HDD/SSD Installation

1. Remove the blue clasp on the side using a screwdriver.

2. Use screws to secure the 2.5 inch HDD/SSD in the corresponding holes on the tray.

Q3

The hard drive is dynamically invalid in Disk Management since it was previously removed from an old computer?

This is due to your system. Reinstall the hard drive into the original computer motherboard, and then backed up the data format; If your old computer has been scrapped or can't get into the system, you can download a dynamic disk conversion software to convert directly to a basic disk.

Q4

Hard drive just shows up but no disc letter?

Inside Disc Management, right-click on the Disc Partition section and select Change Disc Path and Name to add a disc name for use.

Q5

It automatically disconnects during transmission and then connects itself after a while?

It may be problems of usb interface on computer, usb cable, computer usb driver, hard drive, or hard drive cabinet. You need to contact our technicians to check the problems one by one.

Image 4.3: 2.5 inch HDD/SSD Installation Steps

5. RAID Configuration

The Cenmate enclosure supports four RAID modes for SATA drives: Normal, RAID 1, RAID 0, and JBOD. M.2 NVMe SSDs are always treated as independent drives.
Important Note: Press and hold the "Reset" button for 5 seconds after resetting the RAID array. Designing or changing RAID modes may result in data loss. Always back up your data before performing RAID configuration.
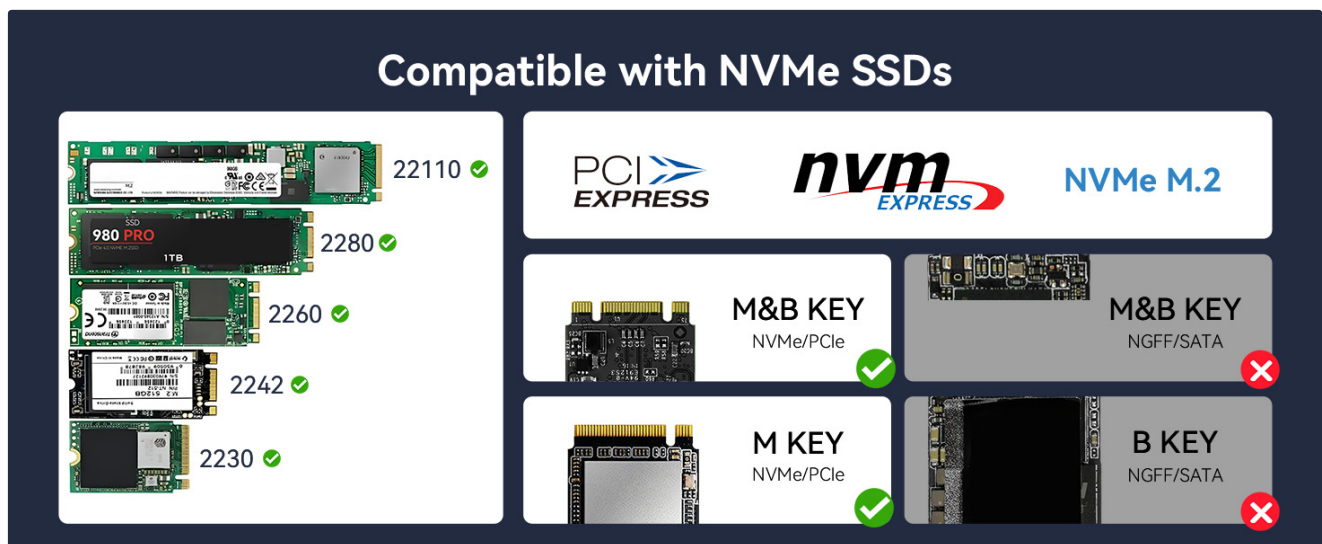
Image 5.1: RAID Mode Configuration

- **Normal:** Each drive operates independently. (Switch 1 & 2 are down)
- **RAID 1 (Mirroring):** Data is duplicated across two drives for redundancy. Requires two drives. Capacity equals the smallest drive. (Switch 1 & 2 are up)
- **RAID 0 (Striping):** Data is split across two drives for increased speed. Requires two drives. Total capacity is the sum of both drives. (Switch 1 up & Switch 2 down)
- **JBOD (Just a Bunch Of Disks):** Drives are concatenated to form a single large volume. Requires two drives. Total capacity is the sum of both drives. (Switch 1 down & Switch 2 up)

6. OPERATING INSTRUCTIONS

After installing your drives and configuring RAID (if desired), connect the enclosure to your computer using the provided USB A/C 3.2 Gen 2 cable and power adapter. Power on the device using the switch on the rear panel. Your operating system should detect the drives. For new drives, you may need to initialize and format them through Disk Management (Windows) or Disk Utility (macOS) before use.

6.1 Data Transfer

The enclosure supports up to 10Gbps data transfer speeds. Actual speeds may vary based on your drives, computer's USB port, and operating system.

Your browser does not support the video tag.

Video 6.1: Overview of the Cenmate Hybrid Storage Enclosure and its features.

7. LED INDICATORS

The enclosure features LED indicators for each drive bay to provide status information:

M.2 SSD Installation

1. Insert the ssd into the slot.

2. Snap the rubber plug into the metal half-circle of the M.2 SSD.

3. Press the rubber plug with the M.2 SSD down into the bayonet.

Image 7.1: LED Indicator Guide

- **M.2-1 (Purple LED):** Always blue when connected, flashes when reading/writing.

- **M.2-2 (Red LED):** Always red when connected, flashes when reading/writing.

- **M.2-3 (Red LED):** Always red when connected, flashes when reading/writing.

- **HDD1 (Blue LED):** Always blue when connected. If incompatibility or damage occurs, the blue light will show red. Flashes red when reading/writing.

- **HDD2 (Blue LED):** Always blue when connected. If incompatibility or damage occurs, the blue light will show red. Flashes red when reading/writing.
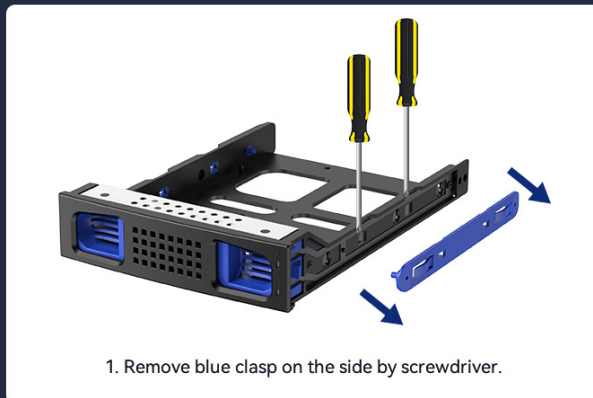
8. COMPATIBILITY

The Cenmate 5-Bay Hybrid Enclosure offers broad compatibility with various operating systems and devices.

8.1 Supported M.2 NVMe SSDs
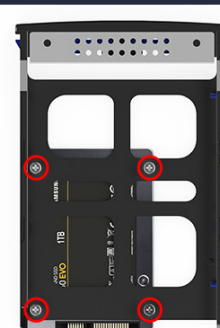
The enclosure supports M.2 NVMe SSDs with M Key and M&B Key (NVMe/PCIe) in sizes 2230, 2242, 2260, 2280, and 22110.

2.5' HDD Installation

1. Remove blue clasp on the side by screwdriver.

2. Use screws to secure the 2.5' HDD/SSD in the corresponding holes.

Image 8.1: M.2 NVMe SSD Compatibility

8.2 Supported Operating Systems and Devices

The enclosure is compatible with:

- **Operating Systems:** Windows 7 and above, macOS 9.1 and above, Linux, Chrome OS.
- **Devices:** Desktops, Laptops.
- **USB Interface:** USB 3.0, USB 3.1, USB 3.2, Thunderbolt 3, Thunderbolt 4.

LED Indicators

① Purple { M.2-1 blue: always blue when connected, flashes when read/write.
           M.2-2 red: always red when connected, flashes when read/write.

② Red M.2-3: always red when connected, flashes when read/write.

③ Blue 3.5/2.5 HDD/SSD: always blue when connected.
(When there is incompatibility or damage on your hard drive, the blue light will show red)

④ Red 3.5/2.5 HDD/SSD: flashes red when reading/writing.

⑤ Blue 3.5/2.5 HDD/SSD: always blue when connected.
(When there is incompatibility or damage on your hard drive, the blue light will show red)

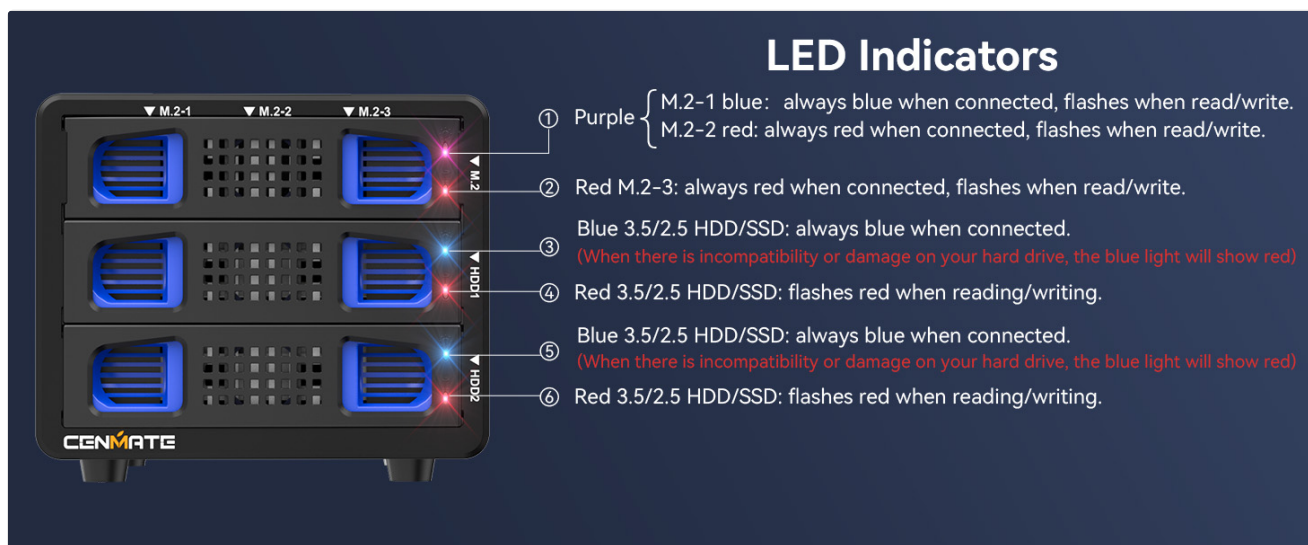⑥ Red 3.5/2.5 HDD/SSD: flashes red when reading/writing.

Image 8.2: System and Device Compatibility

9. TROUBLESHOOTING

Refer to the following common issues and their solutions:

9.1 Hard Drive Not Found / RAW Format

Image 9.1: Troubleshooting Q1 & Q2

- **Q1: After connecting a new hard drive, why can't I find it or see its disc letter?**
  A1: New hard drives must be formatted before use. Right-click 'Computer' (or 'This PC'), then 'Manage', open 'Disk Management'. Find the new hard drive, right-click 'Initialize Disk' (select 'MBR' for drives ≤ 2TB, 'GPT' for drives > 2TB). Then, 'New Simple Volume' and follow the prompts to format the partition.

- **Q2: The hard drive appears in RAW format in Disk Management due to improper extraction or power failure. What should I do?**
  A2: You can attempt recovery using thechkdsk command. Run Command Prompt as administrator, then input chkdsk D:/f (replace 'D' with the actual drive letter). Scanning and repair will complete, and a reboot may be required.

9.2 Other Common Issues

Image 9.2: Troubleshooting Q3-Q5

- **Q3: The hard drive is dynamically invalid in Disk Management because it was previously removed from an old computer.**
  A3: This is a system-related issue. Reinstall the hard drive into the original computer motherboard and back up the data. If the old computer is unavailable, you can use dynamic disk conversion software to convert it to a basic disk.

- **Q4: Hard drive shows up but has no disc letter.**
  A4: In Disk Management, right-click on the Disk Partition section and select 'Change Drive Letter and Paths' to add a drive letter for use.

- **Q5: The enclosure automatically disconnects during transmission and then reconnects after a while.**
  A5: This could indicate issues with the computer's USB interface, the USB cable, computer USB drivers, the hard drive itself, or the hard drive enclosure. Contact technical support for assistance in diagnosing the problem.

10. SPECIFICATIONS

Specification	Detail
Brand	cenmate
Model Number	5 Bay
Item Weight	2.49 pounds (1.13 Kilograms)
Product Dimensions	7.95 x 5.2 x 4.41 inches
Memory Storage Capacity	68 TB (Maximum)
Compatible Devices	Desktop, Laptop
Hard Disk Form Factor	2.5 Inches, 3.5 Inches
Max Number of Supported Devices	5 (2 SATA, 3 M.2 NVMe)
Data Transfer Rate	10 Gigabits Per Second (USB 3.2 Gen 2)
Hardware Interface	USB 3.2 Gen 2

Hardware Platform	Windows, MAC, Linux
Material	Aluminum

11. WARRANTY AND SUPPORT

Cenmate provides lifetime technical support for this product. If you have any questions or encounter issues, please do not hesitate to contact us. We aim to reply and resolve your problem within 24 hours.