Lenovo 4Y37A72482

Lenovo ThinkSystem RAID 5350-8i PCIe 12Gb Adapter User Manual

1. INTRODUCTION

This manual provides detailed instructions for the installation, configuration, operation, and maintenance of the Lenovo ThinkSystem RAID 5350-8i PCIe 12Gb Adapter. Please read this manual thoroughly before using the product to ensure proper setup and functionality. This adapter is designed to enhance storage performance and data protection in server environments.

2. SAFETY INFORMATION

Always observe the following safety precautions when handling and installing the RAID adapter:

- Ensure the server is powered off and disconnected from all power sources before installation.
- Wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage to the adapter and other components.
- Handle the adapter by its edges; avoid touching the components or connectors.
- Refer to your server's documentation for specific safety guidelines and installation procedures.
- Do not attempt to modify or repair the adapter. Contact authorized service personnel for assistance.

3. PACKAGE CONTENTS

Verify that all items are present in the package. If any items are missing or damaged, contact your vendor immediately.

- Lenovo ThinkSystem RAID 5350-8i PCIe 12Gb Adapter
- Documentation (Quick Start Guide, Warranty Information)
- Optional: SAS cables (may be sold separately depending on configuration)

4. PRODUCT OVERVIEW

The Lenovo ThinkSystem RAID 5350-8i PCIe 12Gb Adapter is a high-performance RAID controller designed

for server environments. It supports 12Gb/s SAS connectivity and utilizes a PCI Express 3.0 x8 interface for high data throughput. The adapter features two Mini-SAS HD x4 (SFF-8643) connectors, providing a total of eight internal SAS ports for connecting storage devices.

It supports various RAID levels, including 0, 1, 5, 10, 50, and JBOD, offering flexibility for data protection and performance optimization. This adapter is compatible with Windows, macOS, and Linux operating systems.
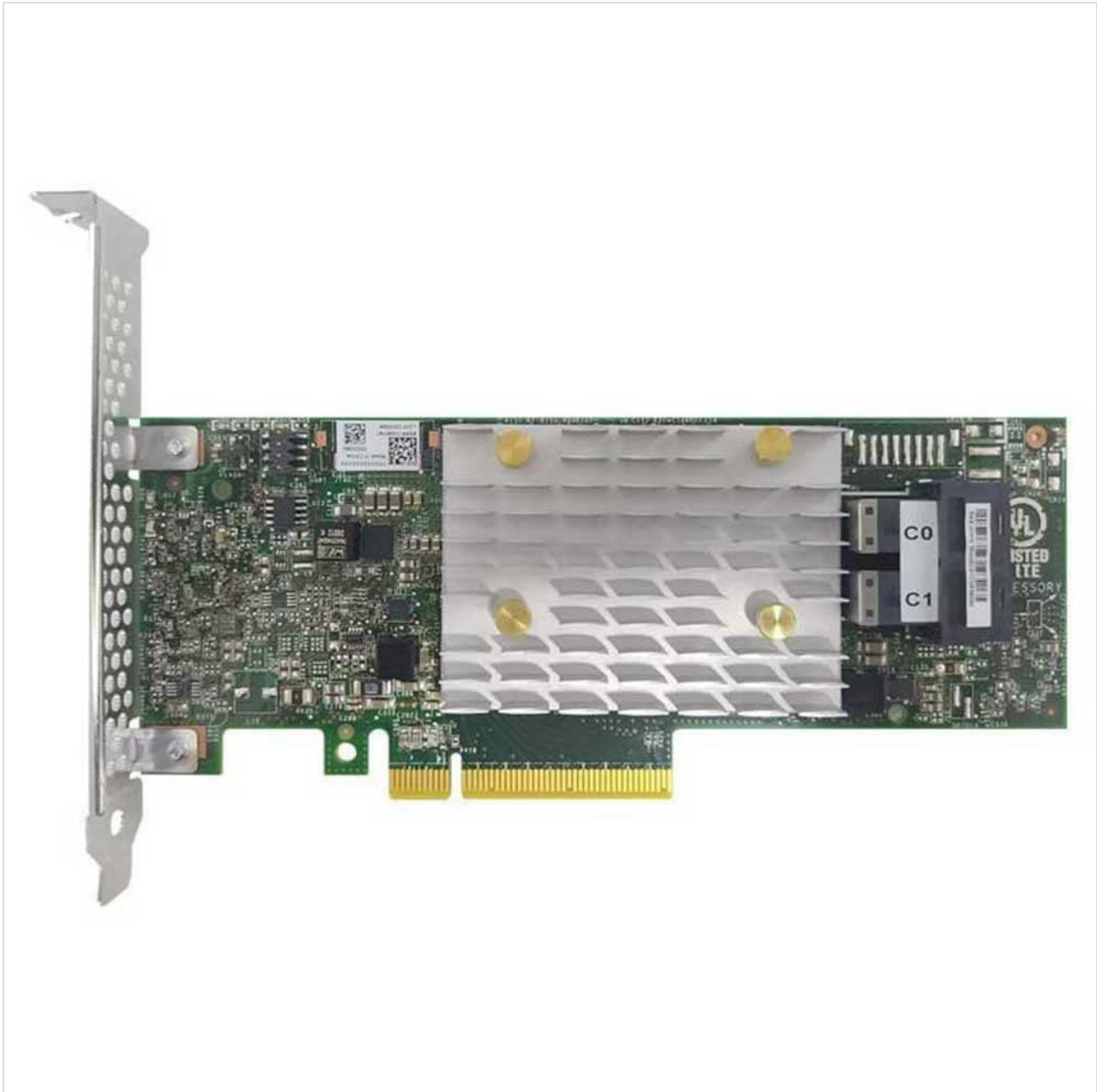

Figure 1: Front view of the Lenovo ThinkSystem RAID 5350-8i PCIe 12Gb Adapter, showing the PCIe connector and Mini-SAS HD ports.

5. INSTALLATION (SETUP)

Follow these steps to install the RAID adapter into your server:

1. **Prepare the Server:** Power off the server and disconnect all power cords. Open the server chassis according to the manufacturer's instructions.
2. **Locate a PCIe Slot:** Identify an available PCI Express 3.0 x8 or larger slot on the server's motherboard.
3. **Install the Adapter:** Carefully align the adapter with the PCIe slot and press down firmly until it is securely seated. Ensure the retention clip or screw is fastened.
4. **Connect SAS Drives:** Connect your SAS hard drives or SSDs to the Mini-SAS HD x4 ports on the adapter using appropriate SAS cables. Ensure secure connections.

5. **Close the Server:** Replace the server chassis cover and reconnect all power cords.
6. **Power On:** Power on the server. The system should detect the new RAID adapter.
7. **Driver Installation:** Install the necessary drivers for your operating system (Windows, macOS, or Linux). Drivers can typically be downloaded from the Lenovo support website.

6. CONFIGURATION (OPERATING)

After physical installation and driver setup, configure the RAID adapter and create storage arrays:

1. **Access RAID BIOS/UEFI Utility:** During server boot-up, press the designated key (e.g., Ctrl+R, F2, F8, or F10, consult your server's manual) to enter the RAID controller's BIOS/UEFI configuration utility.
2. **Create RAID Arrays:** Within the utility, select the physical drives you wish to include in an array. Choose the desired RAID level (0, 1, 5, 10, 50, or JBOD) and configure array parameters such as stripe size and cache policy.
3. **Initialize Array:** After creating the array, it may need to be initialized. Follow the on-screen prompts.
4. **Install Operating System:** Once the RAID array is configured, you can install your operating system onto the logical drive.
5. **OS-based Management:** For ongoing management, use the RAID management software provided by Lenovo or the operating system's built-in storage management tools.

7. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your RAID system:

- **Firmware Updates:** Periodically check the Lenovo support website for updated firmware for your RAID adapter. Firmware updates can improve performance, add features, and fix bugs.
- **Driver Updates:** Keep your RAID adapter drivers updated to ensure compatibility and optimal performance with your operating system.
- **Monitor Drive Health:** Use RAID management software to regularly monitor the health status of your connected drives. Replace failing drives proactively.
- **Data Backups:** Implement a robust data backup strategy. RAID provides data redundancy but is not a substitute for backups.
- **Environmental Control:** Ensure the server environment maintains appropriate temperature and humidity levels to prevent hardware degradation.

8. TROUBLESHOOTING

This section addresses common issues you might encounter:

- **Adapter Not Detected:**

    - Ensure the adapter is fully seated in the PCIe slot.
    - Try a different PCIe slot.
    - Verify that the server's BIOS/UEFI settings are configured to detect PCIe devices.

- **Drives Not Recognized:**

    - Check all SAS cable connections between the adapter and the drives.
    - Ensure drives are properly powered.
    - Verify that the drives are compatible with the RAID adapter.

- **RAID Array Failure:**

  - If a drive fails in a redundant array (RAID 1, 5, 10, 50), replace the failed drive immediately. The array should rebuild automatically.
  - Consult the RAID management software for detailed error messages and recovery options.

- **Performance Issues:**

  - Ensure the latest drivers and firmware are installed.
  - Check for other system bottlenecks (CPU, RAM, network).
  - Verify that the drives are operating optimally.

For persistent issues, consult the Lenovo support website or contact technical support.

9. SPECIFICATIONS

Feature	Specification
Brand	Lenovo
Model Number	4Y37A72482
Interface	PCI Express 3.0 x8
Data Transfer Rate	12Gb/s SAS
RAID Levels Supported	0, 1, 5, 10, 50, JBOD
Internal Ports	2x Mini-SAS HD x4 (SFF-8643), 8 Total SAS Ports
Dimensions (LxWxH)	5.25 x 1.25 x 0.02 inches
Item Weight	9.6 ounces
Compatible Operating Systems	Windows, macOS, Linux
Compatible Devices	Personal Computer (Servers)

10. WARRANTY AND SUPPORT

The Lenovo ThinkSystem RAID 5350-8i PCIe 12Gb Adapter is covered by Lenovo's standard product warranty. For specific warranty terms and conditions, please refer to the warranty documentation included with your product or visit the official Lenovo support website.
For technical support, driver downloads, firmware updates, and additional documentation, please visit the official Lenovo support portal:
https://support.lenovo.com
When contacting support, please have your product model number (4Y37A72482) and serial number ready.