

## HPE MR408i-o

# HPE MR408i-o Gen11 Storage Controller User Manual

Model: MR408i-o | Brand: HPE

## 1. INTRODUCTION

The HPE MR408i-o Gen11 Storage Controller is a high-performance, versatile PCIe Gen4.0 storage controller designed for data centers. Based on Broadcom MegaRAID technology, it provides robust data management, performance, and security for mission-critical applications. This controller supports various RAID levels and HBA/pass-through modes, offering flexibility for diverse server environments.

## 2. SAFETY INFORMATION

Observe the following safety precautions during installation and operation:

- Always disconnect power from the server before installing or removing any components.
- Wear an anti-static wrist strap to prevent electrostatic discharge (ESD) damage to the controller and other server components.
- Handle the controller by its edges; avoid touching the components or connectors directly.
- Ensure proper ventilation within the server chassis to prevent overheating.
- Refer to your server's documentation for specific installation guidelines and safety warnings.

## 3. PACKAGE CONTENTS

Verify that all items are present in the package:

- HPE MR408i-o Gen11 Storage Controller
- Documentation (Quick Start Guide, Warranty Information)
- Any included cables (e.g., SlimSAS cables, if applicable to your specific SKU)

If any items are missing or damaged, contact your vendor or HPE support immediately.

## 4. PRODUCT OVERVIEW

The HPE MR408i-o Gen11 Storage Controller features a PCI Express 4.0 x8 host interface, supporting Serial ATA/600 and 12Gb/s SAS drives. It includes 4GB of Flash Backed Cache for data protection and enhanced performance. The controller is equipped with one 1x8 LP SlimSAS connector for internal drive connectivity.



Figure 4.1: HPE MR408i-o Gen11 Storage Controller (Main View). This image displays the primary components and connectors of the controller card.



Figure 4.2: HPE MR408i-o Gen11 Storage Controller (Angled View). This image provides an alternative perspective of the controller, highlighting its form factor and additional details.

## 5. SETUP

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### 5.1. Hardware Installation

1. Power down the server and disconnect all power cables.
2. Open the server chassis according to the manufacturer's instructions.
3. Locate an available PCI Express 4.0 x8 slot on the server motherboard.
4. Carefully insert the HPE MR408i-o controller into the PCIe slot, ensuring it is fully seated. Secure the controller with the retention mechanism or screw.
5. Connect the internal drives (SAS or SATA) to the 1x8 LP SlimSAS port on the controller using appropriate cables. Refer to your server's documentation for internal cabling routes.
6. Close the server chassis and reconnect power cables.

### 5.2. Driver Installation

After hardware installation, power on the server. The operating system may automatically detect the new hardware. If not, or for optimal performance, install the latest drivers from the HPE support website. Drivers are available for:

- Windows Server
- Red Hat Enterprise Linux
- SuSE Linux Enterprise Server
- Ubuntu Linux
- VMware ESXi
- CentOS

## 6. OPERATING

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### 6.1. RAID Configuration

The HPE MR408i-o controller supports various RAID levels to optimize data redundancy and performance:

- **RAID 0:** Striping (performance, no redundancy)
- **RAID 1:** Mirroring (redundancy, no striping)
- **RAID 5:** Striping with distributed parity (performance and redundancy)
- **RAID 6:** Striping with dual distributed parity (enhanced redundancy)
- **RAID 10:** Mirrored stripes (performance and redundancy)
- **RAID 50:** Striped RAID 5 sets (higher performance and capacity than RAID 5)
- **RAID 60:** Striped RAID 6 sets (higher performance and capacity than RAID 6)

Configuration is typically performed through the controller's BIOS utility during server boot-up or via a software management utility provided by HPE or Broadcom (MegaRAID Storage Manager). Consult the software documentation for detailed instructions on creating and managing RAID volumes.

### 6.2. HBA / Pass-Through Mode

The controller can also operate in HBA (Host Bus Adapter) or pass-through mode, allowing the operating system to directly manage individual drives. This mode is often preferred in virtualized environments or

software-defined storage solutions. Refer to the controller's configuration utility to enable or disable HBA mode.

## 7. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your storage controller:

- **Firmware Updates:** Periodically check the HPE support website for the latest firmware updates for your controller. Firmware updates can provide performance enhancements, bug fixes, and compatibility improvements.
- **Driver Updates:** Ensure your operating system drivers for the controller are up-to-date.
- **System Monitoring:** Utilize server management tools to monitor the health and status of your RAID arrays and individual drives.
- **Environmental Control:** Maintain a stable operating environment with appropriate temperature and humidity levels to prevent hardware degradation.

## 8. TROUBLESHOOTING

If you encounter issues with your HPE MR408i-o controller, consider the following steps:

- **No Detection:** Ensure the controller is properly seated in the PCIe slot and that the server's BIOS/UEFI settings are configured to detect PCIe devices. Verify power connections.
- **Drive Issues:** Check drive cables and power connections. Verify that drives are compatible with the controller. Use the controller's management utility to check drive status.
- **RAID Array Failure:** If a drive in a redundant array fails, replace it promptly. The controller should automatically begin rebuilding the array. Monitor the rebuild process through the management utility.
- **Performance Problems:** Ensure drivers and firmware are up-to-date. Check for any background processes consuming resources. Verify drive health.
- **Operating System Errors:** Consult the operating system's event logs for error messages related to the storage controller.

For persistent issues, gather system logs and contact HPE technical support.

## 9. SPECIFICATIONS

Feature	Description
Model	MR408i-o
Host Interface	PCI Express 4.0 x8
Controller Type	Serial ATA/600, 12Gb/s SAS
RAID Supported	Yes
RAID Levels	0, 1, 5, 6, 10, 50, 60

Feature	Description
Data Backup Type	Flash Backed Cache
Cache Memory	4 GB
Total SAS Ports	1
SAS Connector Details	1x8 LP SlimSAS
Device Supported	Server
Operating System Support	Windows Server, Red Hat Enterprise Linux, SuSE Linux Enterprise Server, Ubuntu Linux, VMware ESXi, CentOS
Product Dimensions	9.9 x 8.8 x 2.5 inches
Item Weight	4.4 pounds
Manufacturer Part Number	P58335B21
Item Model Number	0190017623740


## 10. WARRANTY AND SUPPORT




This HPE product is covered by a limited warranty. For detailed warranty terms and conditions, please refer to the documentation included with your product or visit the official HPE website. For technical assistance, driver downloads, firmware updates, and additional support resources, please visit the HPE support portal:

[HPE Support Website](#)

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### Related Documents - MR408i-o

	<p><a href="#">HPE ProLiant DL20 Gen11 System Configuration Guide</a></p> <p>This document provides a detailed system configuration overview for the HPE ProLiant DL20 Gen11 server, including specifications, component options, and model variations. It covers processors, memory, storage, networking, and other essential hardware components to help users understand and configure their server.</p>
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	<p><a href="#">HPE ProLiant DL20 Gen11 System Configuration Diagram</a></p> <p>This document provides a detailed system configuration diagram for the HPE ProLiant DL20 Gen11 server, outlining various component options and specifications.</p>
	<p><a href="#">HPE ProLiant DL320 Gen11 System Configuration Diagram</a></p> <p>This document provides a detailed system configuration diagram for the HPE ProLiant DL320 Gen11 server, outlining various component options and specifications. It covers processor types, memory configurations, storage options (LFF and SFF), network adapters, expansion slots, and power supplies, along with specific details for Smart Choice models.</p>
	<p><a href="#">HPE ProLiant ML30 Gen11 System Configuration Diagram</a></p> <p>Detailed system configuration diagram for the HPE ProLiant ML30 Gen11 server, including various models, processors, memory, storage options, and connectivity.</p>
	<p><a href="#">HPE ProLiant DL360 Gen11 System Configuration Diagram</a></p> <p>This document provides a detailed system configuration diagram for the HPE ProLiant DL360 Gen11 server, outlining various models, processor options, memory configurations, storage bays, network adapters, and expansion slots. It serves as a comprehensive guide for understanding the server's architecture and available options.</p>
	<p><a href="#">HPE ProLiant ML110 Gen11 System Configuration Diagram</a></p> <p>Detailed system configuration diagram for the HPE ProLiant ML110 Gen11 server, including processor options, memory configurations, storage bays, and network adapters.</p>