

SilverStone SST-RM44

SilverStone Technology RM44 4U Rackmount Server Chassis User Manual

Model: SST-RM44

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of the SilverStone Technology RM44 4U Rackmount Server Chassis. The RM44 is designed for versatility, supporting both industrial rackmount and high-end home system configurations. It features enhanced cooling capabilities, extensive storage options, and compatibility with various motherboard form factors and large graphics cards.



Figure 1.1: The SilverStone RM44 chassis demonstrating its dual-purpose design for both horizontal rackmount and vertical tower placements.

2. FEATURES

The SilverStone RM44 chassis incorporates several key features designed for high-performance server and workstation builds:

- **Advanced Cooling Support:** Accommodates liquid cooling radiators up to 360mm for efficient thermal management.
- **Motherboard Compatibility:** Supports SSI-EEB / Extended ATX motherboards, providing flexibility for various system architectures.
- **Expansion Slots:** Features 8 PCIe / PCI expansion slots for multiple add-in cards.
- **Rack Installation:** Includes sliding rail mounting holes for simplified rack integration (rails sold separately).
- **Front Panel Connectivity:** Equipped with a USB Type-C interface for modern peripheral connectivity.
- **Versatile Storage:** Offers mounting options for multiple 2.5" and 3.5" drives.
- **Security:** Front panel features an anti-theft lock.



Figure 2.1: Illustration of the internal cooling capabilities, showing a 360mm liquid cooling radiator and multiple fans for optimal airflow.

3. SETUP AND INSTALLATION

Follow these steps for proper assembly and installation of components within your RM44 chassis.

3.1. Chassis Overview



Figure 3.1: Front view of the RM44 chassis, highlighting the perforated front panel and integrated handles.



Figure 3.2: Rear view of the RM44 chassis, showing the power supply cutout, fan mounts, and PCIe expansion slots.

3.2. Motherboard Installation

1. Remove the top cover of the chassis.
2. Install the I/O shield into the rear panel cutout.
3. Align your SSI-EEB, E-ATX, ATX, Micro-ATX, or Mini-ITX motherboard with the standoffs inside the chassis.
4. Secure the motherboard with the provided screws.

3.3. Drive Installation

The RM44 supports various drive configurations. Refer to the internal layout diagram for specific mounting points.

Highly versatile layout to fuel creativity and inventiveness



Figure 3.3: Internal layout diagram detailing motherboard compatibility, GPU length, and drive bay locations.



Figure 3.4: Internal view illustrating the mounting points for 3.5-inch or 2.5-inch storage drives.

1. Identify the desired drive bays (e.g., 3.5" or 2.5" bays).
2. Mount your hard drives or SSDs using the provided screws and trays.
3. Connect necessary power and data cables.

3.4. Cooling System Installation

The chassis supports various cooling configurations, including large liquid cooling radiators.

1. For front radiator installation, ensure adequate clearance. The chassis supports up to 360mm radiators.
2. Install case fans in designated mounting points (e.g., front, rear).
3. Connect fan power cables to the motherboard or a fan controller.

3.5. Expansion Card Installation

The RM44 provides 8 PCIe expansion slots and an expansion card retainer for secure installation.



Figure 3.5: Close-up of the expansion card retainer, designed to secure graphics cards and other PCIe devices.

1. Remove the necessary slot covers from the rear of the chassis.
2. Insert your expansion card (e.g., graphics card, network card) into the motherboard's PCIe slot.
3. Secure the card using the chassis's screwless retention mechanism or screws.
4. Utilize the expansion card retainer for additional support, especially for heavy graphics cards.

3.6. Power Supply Installation

1. Mount your ATX power supply in the designated rear bottom area.
2. Secure the power supply with screws from the rear of the chassis.
3. Connect all necessary power cables to your motherboard and components.

3.7. Front Panel Connections

The front panel provides convenient access to I/O ports and controls.



Figure 3.6: The front panel door opened, revealing the power button, reset button, and front I/O ports.



Figure 3.7: Detailed view of the front I/O panel, featuring one USB Type-C port and two USB 3.0 ports.

1. Connect the front panel cables (USB, audio, power switch, reset switch, LED indicators) to the corresponding headers on your motherboard.

2. The front panel also features a lock for security.



Figure 3.8: Close-up of the key lock on the front panel, providing security for internal components.

4. OPERATING THE CHASSIS

Once all components are installed and secured, the RM44 chassis functions as a protective enclosure for your server or workstation hardware. Ensure proper airflow by not obstructing the front and rear ventilation areas.

4.1. Rackmount Installation

The chassis is designed for standard 4U rackmount environments. Utilize the integrated sliding rail mounting holes for quick and secure installation into a server rack (sliding rails are sold separately).

4.2. Vertical Placement

For non-rackmount applications, the RM44 can be placed vertically using optional feet (included or sold separately) for a tower-style setup.



Figure 4.1: The RM44 chassis configured for vertical placement, showcasing its adaptability.

5. MAINTENANCE

Regular maintenance helps ensure optimal performance and longevity of your chassis and its components.

- **Dust Removal:** Periodically clean dust filters (if present) and internal components using compressed air.
- **Cable Management:** Ensure internal cables are neatly routed to prevent obstruction of airflow.
- **Fan Inspection:** Check fans for dust buildup and ensure they are operating correctly.
- **Physical Inspection:** Regularly inspect the chassis for any loose screws or physical damage.

6. TROUBLESHOOTING

This section addresses common issues that may arise with a server chassis.

6.1. Overheating Issues

- **Check Airflow:** Ensure front and rear panels are unobstructed. Verify that fans are installed correctly and spinning.
- **Dust Buildup:** Clean dust from fans, radiators, and internal components.
- **Fan Configuration:** Confirm fans are configured for optimal front-to-back airflow.

6.2. Component Fit Issues

- **Motherboard:** Ensure the correct motherboard form factor is used and properly aligned with standoffs.
- **Expansion Cards:** Verify cards are fully seated in PCIe slots and secured with the retainer.
- **Power Supply:** Confirm power supply dimensions are compatible with the chassis.

6.3. Front Panel Connectivity Problems

- **Cable Connections:** Double-check that all front panel cables (USB, power, reset, audio) are securely connected to the correct headers on the motherboard.
- **Driver Installation:** Ensure necessary drivers for USB ports are installed on your operating system.

7. SPECIFICATIONS

Detailed technical specifications for the SilverStone RM44 4U Rackmount Server Chassis.

Feature	Specification
Brand	SilverStone
Series	SST-RM44
Item Model Number	SST-RM44
Item Weight	29.9 pounds
Product Dimensions (LxWxH)	0.73 x 0.27 x 0.68 inches (Note: These dimensions appear to be incorrect and likely refer to packaging or a component. Refer to manufacturer's official product page for chassis dimensions.)
Color	Black
Material	Metal
Motherboard Compatibility	Extended ATX (SSI-EEB, E-ATX, ATX, Micro-ATX, Mini-ITX)
Case Type	Integrated (Rackmount / Tower)
Recommended Uses	Server
Power Supply Mounting Type	Bottom Mount (Standard ATX)

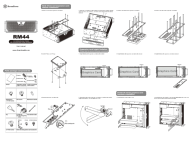



Feature	Specification
Cooling Method	Fan
Fan Size Support	Up to 360mm Radiators
USB 2.0 Ports	1
USB 3.0 Ports	1 (USB Type-C)
PCIe Expansion Slots	8


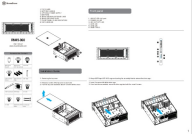
8. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official SilverStone Technology website or contact their customer service directly. Warranty terms and conditions may vary by region and retailer.

SilverStone Technology Official Website: www.silverstonetek.com

Related Documents - SST-RM44

	<p>SilverStone RM44 4U Rackmount Server Chassis User Manual</p> <p>Comprehensive user manual for the SilverStone RM44 4U rackmount server chassis, detailing installation procedures, component compatibility, height and depth restrictions, and warranty information.</p>
	<p>SilverStone RM52 5U Rackmount Server Chassis User Manual and Installation Guide</p> <p>Comprehensive user manual for the SilverStone RM52 5U rackmount server chassis, detailing installation steps, parts list, compatibility information, and warranty details.</p>
	<p>SilverStone Gemini Series Redundant Power Supplies: Specifications and Features</p> <p>Explore the SilverStone Gemini Series 2U redundant power supplies (SST-GM600-2UG to SST-GM1000-2UG), featuring 80 PLUS Gold certification, hot-swappable design, active PFC, and industry-leading reliability for critical server and workstation applications.</p>
	<p>SilverStone Mammoth MM01: Professional PC Chassis with HEPA Filter</p> <p>Explore the SilverStone Mammoth MM01, a professional PC chassis designed for harsh environments, featuring an integrated HEPA filter for superior dust protection and advanced cooling. This manual provides detailed installation, specifications, and maintenance information.</p>

 The image shows the SilverStone EBA02 Premium Wall-Mounted Headphone Holder. It is a black, curved, wall-mounted device designed to hold headphones. The product is shown in its packaging, which includes a user manual and installation instructions. The packaging also features the SilverStone logo and the model number EBA02.	<p>SilverStone EBA02 Premium Wall-Mounted Headphone Holder</p> <p>The SilverStone EBA02 is a premium, wall-mounted headphone holder crafted from aluminum. It features a broad, curved hanger to distribute headphone weight evenly and preserve headband shape. The two-part design hides mounting screws and offers installation options via screws or double-sided tape. This guide provides warranty information and installation instructions.</p>
 The image shows the SilverStone RM45-360 User Manual and Installation Guide. It is a comprehensive document that provides detailed information about the SilverStone RM45-360 rackmount computer chassis. The manual includes sections on component installation, limitations, and warranty information. The cover of the manual features the SilverStone logo and the model number RM45-360.	<p>SilverStone RM45-360 User Manual and Installation Guide</p> <p>Comprehensive user manual and installation guide for the SilverStone RM45-360 rackmount computer chassis, detailing component installation, limitations, and warranty information.</p>