SilverStone SST-RM46-502-I

SilverStone Technology RM46-502-I User Manual

Model: SST-RM46-502-I | Brand: SilverStone

1. INTRODUCTION

The SilverStone Technology RM46-502-I is a versatile 4U rackmount chassis designed for high-performance computing and server applications. Its unique interchangeable design allows for flexible configuration of internal components and front-facing expansion slots, providing unparalleled accessibility and ease of maintenance. This manual will guide you through the installation, operation, and maintenance of your RM46-502-I chassis.

Figure 1.1: RM46-502-I chassis with emphasis on front-facing PCI expansion slots for enhanced accessibility.

2. KEY FEATURES

- **Interchangeable Design:** Front panel I/O, rackmount sliding rails, handlebars, 5.25" device, and PSU mounts can all be swapped between the front and back for optimal configuration.

- **Motherboard Compatibility:** Supports up to SSI-EEB motherboards with 8 standard height expansion slots.

- **Advanced Cooling Support:** Accommodates up to two 160mm fans or one 280mm radiator for efficient thermal management.

- **Front I/O Connectivity:** Equipped with 2 x USB 3.0 and 1 x USB-C ports for convenient peripheral access.

- **GPU Support:** Features an expansion card retainer with versatile arms, identical to the RM52, to securely hold up to four high-end server graphics cards, preventing sagging and ensuring proper seating.

- **Flexible Storage Options:** Supports various drive configurations including 2.5" SSDs, 3.5" HDDs, and 5.25" optical drives.
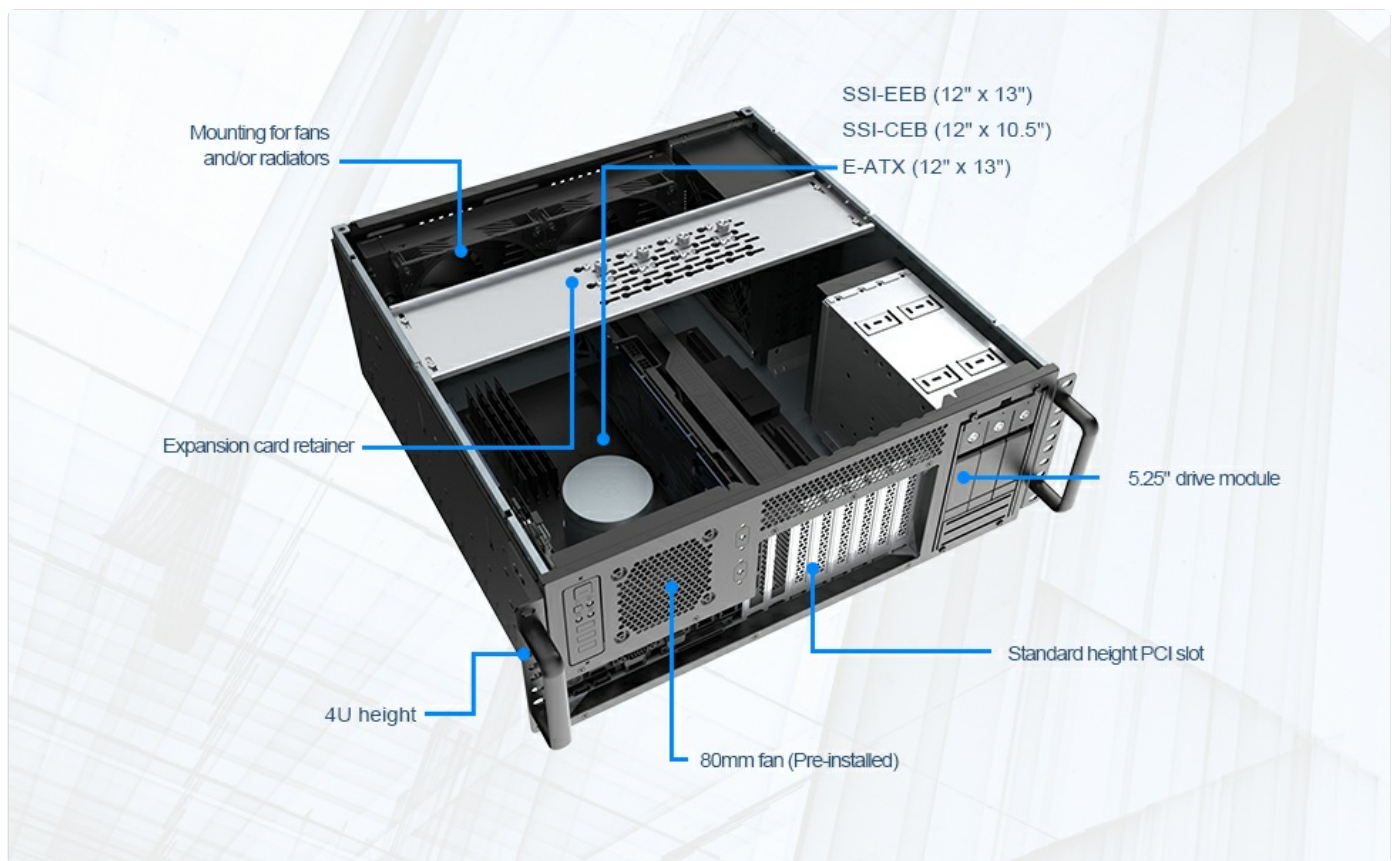
Figure 2.1: Internal layout and key components of the RM46-502-I chassis.

3. SETUP AND INSTALLATION

Follow these steps for proper installation of components into your RM46-502-I chassis.

3.1. Preparing the Chassis

1. Unpack the chassis and inspect for any shipping damage.
2. Remove the top cover by unscrewing the retaining screws.
3. Determine the desired configuration for the front panel I/O, PSU mount, and 5.25" drive cage. These components can be interchanged between front and rear positions based on your specific hardware requirements.

3.2. Motherboard Installation

1. Install the necessary motherboard standoffs for your SSI-EEB, SSI-CEB, or E-ATX motherboard.
2. Carefully place the motherboard into the chassis, aligning it with the standoffs and the I/O shield opening.
3. Secure the motherboard with screws.

3.3. Power Supply Unit (PSU) Installation

1. Mount the PSU bracket in the desired position (front or rear).
2. Install your PS2 (ATX), Mini Redundant, or 2U Redundant PSU into the bracket and secure it with screws.

3.4. Drive Installation

1. For 2.5" SSDs, use the dedicated 2.5" SSD trays.
2. For 3.5" HDDs, utilize the 5.25" storage cage which can accommodate 3.5" drives with adapters (not included).
3. Install 5.25" ODDs (Optical Disc Drives) into the 5.25" storage cage.

4. Secure all drives with appropriate screws.

Figure 3.1: PSU and storage drive mounting locations.

3.5. Expansion Card Installation

The RM46-502-I features front-facing expansion slots for easy access.

1. Remove the necessary slot covers from the front-facing expansion slots.

2. Insert your PCI/PCIe expansion cards (e.g., graphics cards, network cards) into the motherboard slots.

3. Utilize the adjustable expansion card retainer to secure heavy graphics cards and prevent sagging.

4. Secure the expansion cards with screws.

Figure 3.2: Detailed view of the front-facing expansion slots.

3.6. Fan and Radiator Installation

Ensure optimal airflow by installing cooling components.

1. Install up to two 160mm fans or one 280mm radiator in the designated mounting areas.
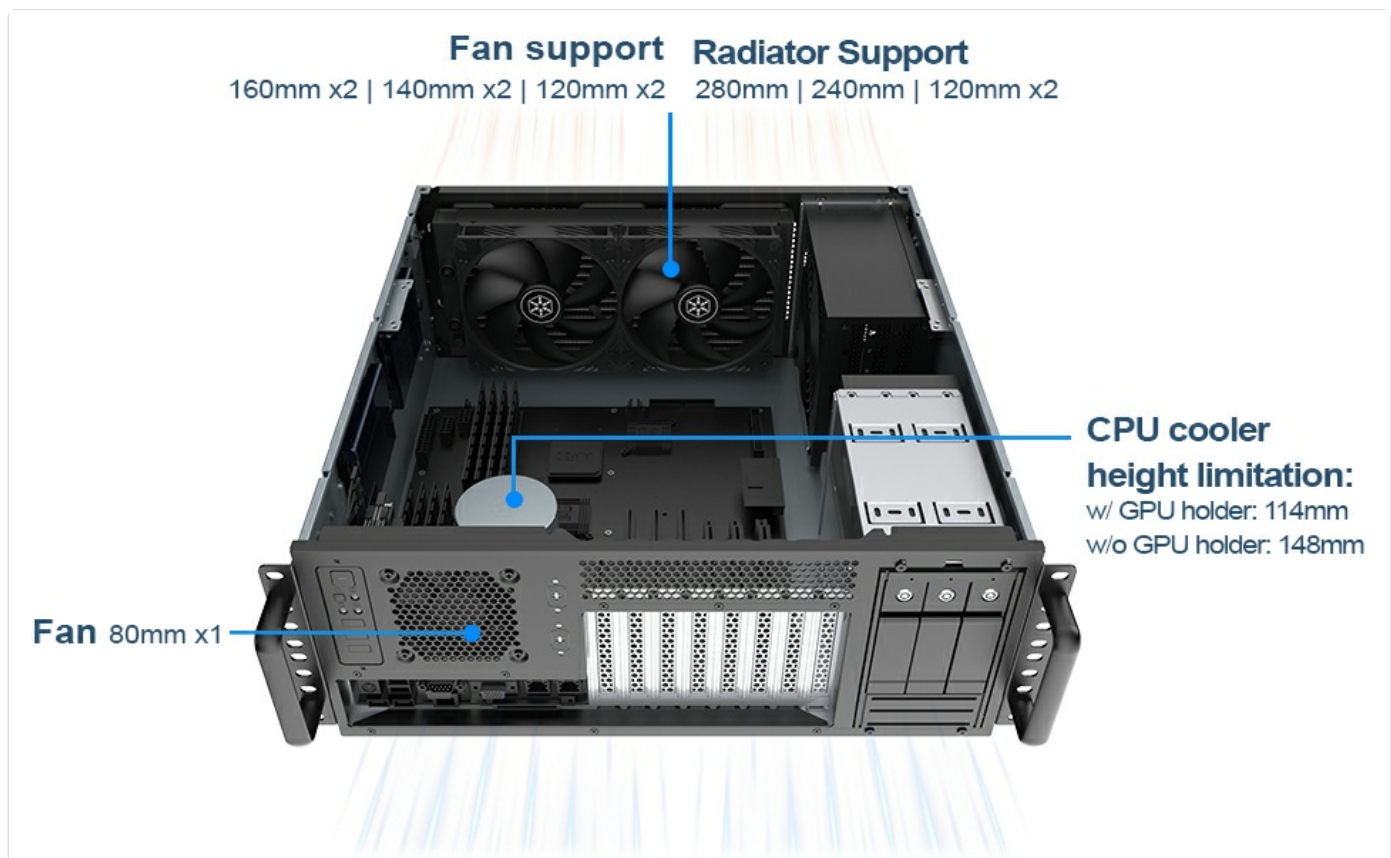2. Connect fan cables to the motherboard headers or a fan controller.

Figure 3.3: Fan and radiator mounting options and CPU cooler clearance.

4. OPERATING INSTRUCTIONS

Once all components are installed and secured, you can begin operating your RM46-502-I system.

4.1. Powering On

1. Connect the power cable to the PSU and a power outlet.

2. Press the power button located on the front panel of the chassis.

3. Observe the LED status indicators for system activity.

Figure 4.1: Front I/O panel with power button and USB ports.

4.2. Airflow and Cooling

The RM46-502-I is designed for optimal front-to-back airflow. Ensure that the chassis is placed in an environment with adequate ventilation to prevent overheating. Regularly monitor system temperatures, especially under heavy loads.

5. MAINTENANCE

Regular maintenance helps ensure the longevity and stable operation of your RM46-502-I chassis and its components.

5.1. Dust Removal

1. Periodically power down and unplug the system.

2. Use compressed air to clean dust from fans, radiators, and internal components. Pay special attention to air intake and exhaust vents.

5.2. Component Inspection

1. Check all cable connections (power, data, internal) to ensure they are secure.

2. Inspect fan blades for any obstructions or signs of wear.

3. Verify that all expansion cards and drives are firmly seated.

6. TROUBLESHOOTING

This section addresses common issues you might encounter with your RM46-502-I chassis.

6.1. System Not Powering On

- Ensure the power cable is securely connected to both the PSU and the wall outlet.
- Verify that the PSU switch is in the 'ON' position.
- Check the front panel power button connection to the motherboard.

6.2. Overheating Issues

- Confirm that all installed fans are spinning correctly and are not obstructed.
- Clean any dust buildup from fans, heatsinks, and vents.
- Ensure proper airflow within the rack and the chassis.

6.3. Expansion Card Not Detected / Misalignment

- Ensure the expansion card is fully seated in its PCIe slot on the motherboard.
- Verify that the card is properly secured with screws and, if applicable, the expansion card retainer.
- Check for any physical obstructions or chassis deformities that might prevent proper alignment.

7. SPECIFICATIONS

Feature	Specification
Model Name	SST-RM46-502-I
Brand	SilverStone
Form Factor	4U Rackmount
Motherboard Compatibility	SSI-EEB (12" x 13"), SSI-CEB (12" x 10.5"), E-ATX (12" x 13")
Expansion Slots	8 (Standard Height, Front Accessible)
Drive Bays	2 x 5.25" (interchangeable), 2 x 3.5" HDD (via 5.25" cage), 4 x 2.5" SSD (via 5.25" cage), 2 x 2.5" SSD tray
Front I/O Ports	2 x USB 3.0, 1 x USB Type-C, Power On/Off, System Reset, LED Status Indicators
Cooling Method	Air

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Fan Support	Front: 2 x 160mm or 2 x 140mm or 2 x 120mm; Rear: 1 x 80mm (Pre-installed)
Radiator Support	Front: 1 x 280mm or 1 x 240mm or 1 x 120mm
CPU Cooler Height Limitation	114mm (with GPU holder), 148mm (without GPU holder)
PSU Mounting Type	Front Mount (interchangeable)
Material	Metal
Color	Black
Product Dimensions (LxWxH)	17.95" x 17.32" x 6.93" (456mm x 440mm x 176mm)
Item Weight	28.8 pounds (13.06 kg)
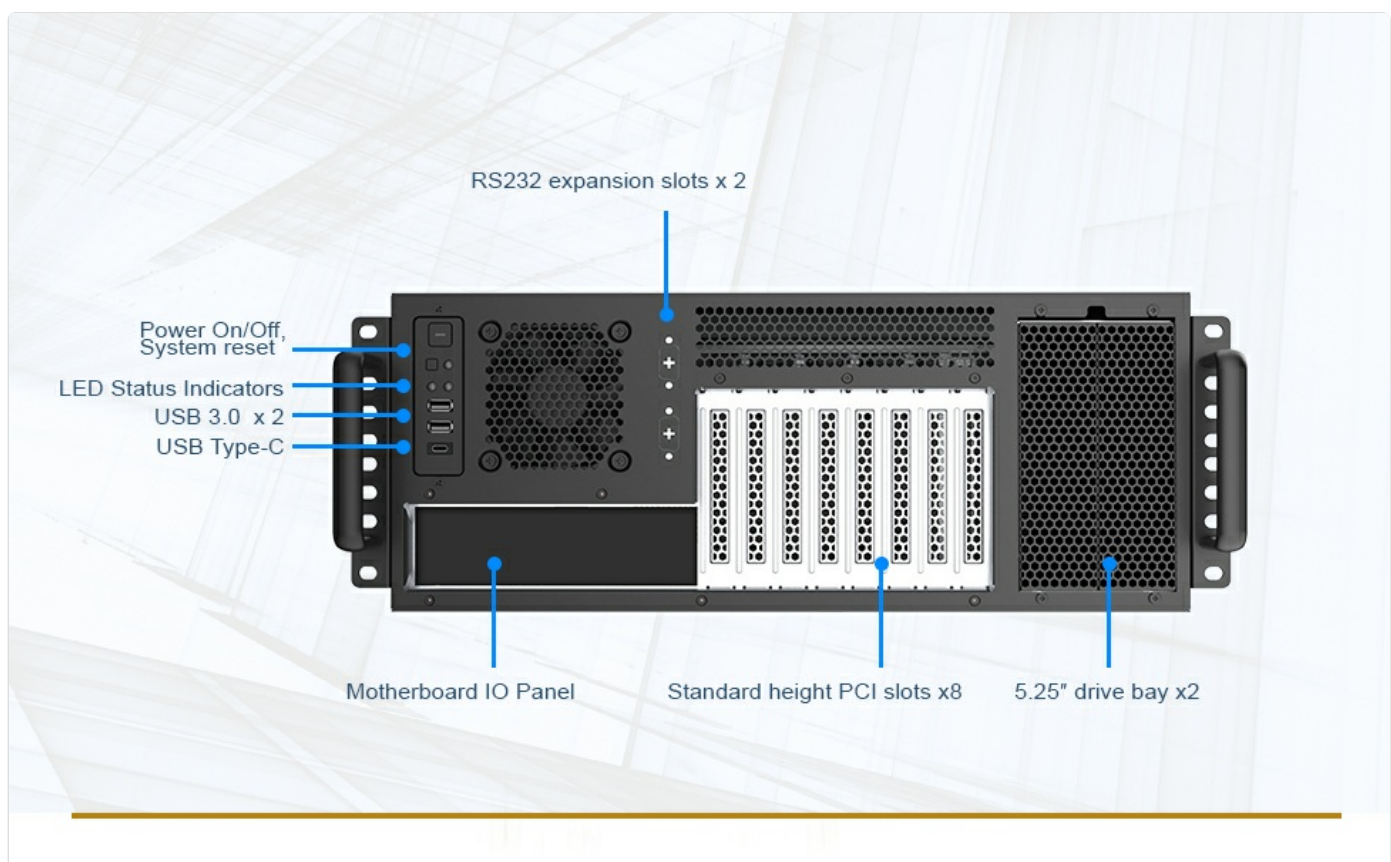
Figure 7.1: Front panel layout and I/O details.
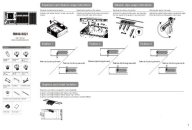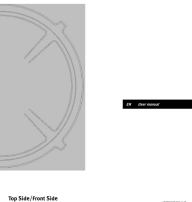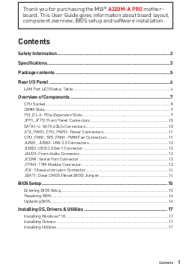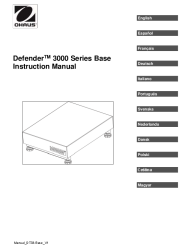
8. WARRANTY AND SUPPORT

SilverStone Technology provides a limited warranty for its products. For detailed warranty terms, conditions, and duration, please refer to the official SilverStone Technology website or the warranty card included with your product. For technical support, product inquiries, or service requests, please visit the SilverStone Technology support page or contact their customer service department directly.

Online Resources:

- SilverStone Official Website: www.silverstonetek.com

- Product Support Page: Refer to the specific product page for SST-RM46-502-I on the SilverStone website for drivers, FAQs, and further assistance.

Related Documents - SST-RM46-502-I

	[SilverStone RM46-5021 User Manual and Installation Guide](#) Comprehensive user manual for the SilverStone RM46-5021, detailing installation instructions for expansion card retainers, retainer clips, PSU, drive cages, and component restrictions. Includes warranty information and technical specifications.
	[SilverStone SUGO SG09 Manual](#) Comprehensive installation and system optimization guide for the SilverStone SUGO SG09 computer case. Learn about specifications, disassembly, installation steps, and maintenance.
	[PITT Cooking Induction Hob User Manual](#) Comprehensive user manual for PITT Cooking induction hobs, covering installation, general instructions, connection, operation, maintenance, and troubleshooting.
	[MSI A320M-A PRO Motherboard User Guide](#) Comprehensive user guide for the MSI A320M-A PRO motherboard, detailing board layout, component overview, BIOS setup, and software installation.
	[SilverStone RM52 5U Rackmount Server Chassis User Manual and Installation Guide](#) Comprehensive user manual for the SilverStone RM52 5U rackmount server chassis, detailing installation steps, parts list, compatibility information, and warranty details.
	[OHAUS Defender 3000 Series Base: Installation and Maintenance Manual](#) This comprehensive manual provides detailed instructions for the installation, operation, maintenance, and troubleshooting of the OHAUS Defender™ 3000 Series Base. It includes technical specifications, safety precautions, and compliance information for various models.

Documents - SilverStone – SST-RM46-502-I

[pdf]

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www.silverstonetek.com RM46-502-I Untereinander austauschbares 4HEEinschubgehuse mit vorderseitig z ... oder 2 x 160-mm-Lfter 1 x USB-Schnittstelle Typ C Senkrecht oder horizontal flexibel aufstellbar **SST-RM46-502-I** Stahl 4HE SSI-EEB, SSI-CEB, Extended ATX, XL-ATX , ATX, Micro-ATX, Mini-ITX 5.25 x 2...

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