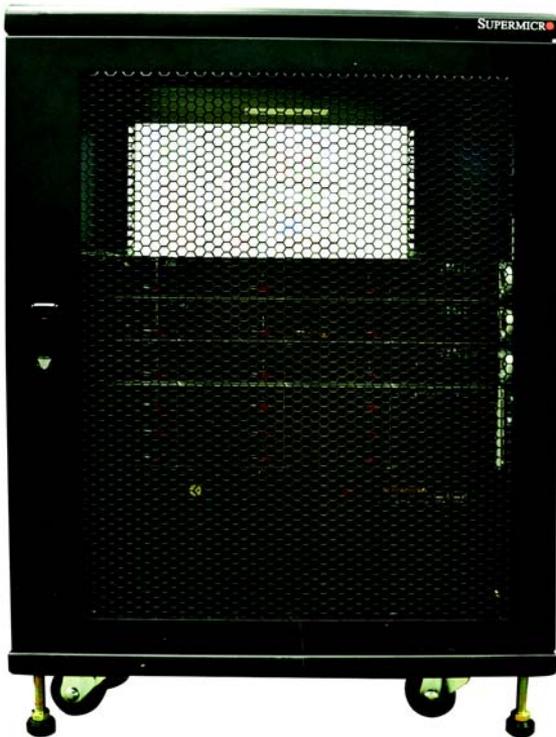


# SUPERMICR<sup>®</sup>

## **CSE-RACK14U Mini-Rack Cabinet**



## **User's Guide**

Revision 1.0a

# CSE-RACK14U Mini-Rack Cabinet User's Guide

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Manual Revision 1.0a

Release Date: August 25, 2010

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# Preface

## About this Manual

This manual is written for professional system integrators, Information Technology professionals, service personnel and technicians. It provides information for the installation and use of Supermicro's CSE-RACK14U mini-rack cabinet. Installation and maintenance should be performed by experienced professionals only.

## Manual Organization

### Chapter 1: Introduction

The first chapter provides a checklist of the main components included with the mini-rack cabinet and describes its main features.

### Chapter 2: System Safety

You should familiarize yourself with this chapter for a general overview of safety precautions that should be followed when installing and servicing the mini-rack cabinet.

### Chapter 3: Setup and Installation

Refer here for details on setup and installation of the mini-rack cabinet and the installation of components into it.

### Chapter 4: Features

This chapter covers the mini-rack cabinet's features and their use.

## Notes

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# Chapter 1

## Introduction

### 1-1 Overview

The CSE-RACK14U mini-rack cabinet is optimized for office, small/medium businesses (SMB), research and academic institutions and professional studio environments (movie animation, music production, and so on). The 14U space of the mini-rack cabinet supports any combination of standard EIA 19" rackmount servers or equipment in a compact form factor offering ease of maintenance and flexibility for different IT applications.

The CSE-RACK14U mini-rack cabinet's desk-side design features security, mobility and options for sound dampening to reduce overall system noise levels. Its sleek and compact ID design makes it suitable for customers looking for a variety of IT solutions in an office environment.

### 1-2 Specifications

**Table 1-1. CSE-RACK14U Mini-Rack Cabinet Specifications**

Specification	Description
Dimensions	21.65 x 37.4 x 30.64 inches / 55 x 95 x 77.92 cm (WxDxH)
Package Dimensions	24 x 39.9 x 36.6 inches / 61 x 101.4 x 92.9 cm (WxHxD)
Gross Weight	162.2 lbs / 73 kg (with package)
Net Weight	136.5 lbs / 62 kg
Capacity	14U rack units
Available Colors	Black only

### 1-3 Product Checklist of Typical Components

The mini-rack cabinet comes assembled in its own shipping box with all components installed.

An optional part that can be ordered for the mini-rack cabinet includes a mesh filter for the mini-rack cabinet front door (P/N: MCP-670-00001-0N).

## 1-4 Features

The mini-rack cabinet offers the following features:

- Supports EIA 19" rackmount servers with regular square mounting holes
- Ideal for office environments - 30.64 inches high, same height as regular office furniture
- Detachable and lockable front door, which provides extra security for IT facilities and ease of maintenance
- Mobility - casters with brakes, easy to move
- Stability - supporting posts on the four corners
- Reusable and environmentally friendly shipping box
- Hexagonal metal mesh air intake design on the front door to maximize airflow
- Rack grounding wire included
- Gauge label indicator on the posts
- Cable egress at bottom of rack for easy cable management

## 1-5 Returning Merchandise for Service

A receipt or copy of your invoice marked with the date of purchase is required before any warranty service will be rendered. You can obtain service by calling your vendor for a Returned Merchandise Authorization (RMA) number. When returning to the manufacturer, the RMA number should be prominently displayed on the outside of the shipping carton, and mailed prepaid or hand-carried. Shipping and handling charges will be applied for all orders that must be mailed when service is complete.

For faster service, RMA authorizations may be requested online at:

<http://www.supermicro.com/support/rma/>

Whenever possible, repack the chassis in the original Supermicro carton, using the original packaging material. If these are no longer available, be sure to pack the chassis securely, using packaging material to surround the chassis so that it does not shift within the carton and become damaged during shipping.

This warranty only covers normal consumer use and does not cover damages incurred in shipping or from failure due to the alteration, misuse, abuse or improper maintenance of products.

During the warranty period, contact your distributor first for any product problems.

## 1-6 Contacting Supermicro

### Headquarters

Address: Super Micro Computer, Inc.  
980 Rock Ave.  
San Jose, CA 95131 U.S.A.

Tel: +1 (408) 503-8000

Fax: +1 (408) 503-8008

Email: marketing@supermicro.com (General Information)  
support@supermicro.com (Technical Support)

Web Site: [www.supermicro.com](http://www.supermicro.com)

### Europe

Address: Super Micro Computer B.V.  
Het Sterrenbeeld 28, 5215 ML  
's-Hertogenbosch, The Netherlands

Tel: +31 (0) 73-6400390

Fax: +31 (0) 73-6416525

Email: sales@supermicro.nl (General Information)  
support@supermicro.nl (Technical Support)  
rma@supermicro.nl (Customer Support)

### Asia-Pacific

Address: Super Micro Computer, Inc.  
4F, No. 232-1, Liancheng Rd.  
Chung-Ho 235, Taipei County  
Taiwan, R.O.C.

Tel: +886-(2) 8226-3990

Fax: +886-(2) 8226-3991

Web Site: [www.supermicro.com.tw](http://www.supermicro.com.tw)

Technical Support:

Email: support@supermicro.com.tw

Tel: +886-2-8228-1366, ext. 132 or 139

## Notes

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# Chapter 2

## System Safety

### 2-1 Electrical Safety Precautions

Basic electrical safety precautions should be followed to protect yourself and the equipment from harm and damage:

- Be aware of the locations of the power on/off switch on the chassis as well as the room's emergency power-off switch, disconnection switch or electrical outlet. If an electrical accident occurs, you can then quickly remove power from the system.
- Do not work alone when working with high voltage components.
- Power should always be disconnected from the system when removing or installing main system components, such as the serverboard, memory modules and floppy drive. When disconnecting power, you should first power down the system with the operating system first and then unplug the power cords of all the power supply units in the system.
- When working around exposed electrical circuits, another person who is familiar with the power-off controls should be nearby to switch off the power if necessary.
- Use only one hand when working with powered-on electrical equipment. This is to avoid making a complete circuit, which will cause electrical shock. Use extreme caution when using metal tools, which can easily damage any electrical components or circuit boards with which they come into contact.
- Do not use mats designed to decrease static electrical discharge as protection from electrical shock. Instead, use rubber mats that have been specifically designed as electrical insulators.
- The power supply power cords must include a grounding plug and must be plugged into grounded electrical outlets.

### 2-2 General Safety Precautions

Follow these rules to ensure general safety:

- Keep the area around the rack clean and free of clutter.
- Place the door or any other rack components that have been removed away from the system or on a table so that they won't accidentally be stepped on.
- While working on the system, do not wear loose clothing such as neckties and unbuttoned shirt sleeves, which can come into contact with electrical circuits or be pulled into a cooling fan.
- Remove any jewelry or metal objects from your body, which are excellent metal conductors that can create short circuits and harm you if they come into contact with printed circuit boards or areas where power is present.
- After accessing the inside of the rack, close the rack door back up and secure the rack after ensuring that all connections have been made.

## 2-3 ESD Peculations

Electrostatic discharge (ESD) is generated by two objects with different electrical charges coming into contact with each other. An electrical discharge is created to neutralize this difference, which can damage electronic components and printed circuit boards. The following measures are generally sufficient to neutralize this difference before contact is made to protect your equipment from ESD:

- Use a grounded wrist strap designed to prevent static discharge.
- Keep all components and printed circuit boards (PCBs) in their antistatic bags until ready for use.
- Touch a grounded metal object before removing the board from the antistatic bag.
- Do not let components or PCBs come into contact with your clothing, which may retain a charge even if you are wearing a wrist strap.
- Handle a board by its edges only; do not touch its components, peripheral chips, memory modules or contacts.
- When handling chips or modules, avoid touching their pins.
- Put the serverboard and peripherals back into their antistatic bags when not in use.
- For grounding purposes, make sure your computer chassis provides excellent conductivity between the power supply, the case, the mounting fasteners and the serverboard.

## 2-4 Rack Precautions

Make sure to follow the below rack precautions:

- Ensure that the leveling jacks on the bottom of the rack are fully extended to the floor with the full weight of the rack resting on them.
- In single rack installation, stabilizers should be attached to the rack. In multiple rack installations, the racks should be coupled together.
- Always make sure the rack is stable before extending a component from the rack.
- You should extend only one component at a time - extending two or more simultaneously may cause the rack to become unstable.

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# Chapter 3

## Setup and Installation

This section covers setup and installation of the CSE-RACK14U mini-rack cabinet.

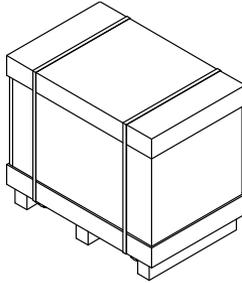
### 3-1 Unpacking the System

Follow the steps below to unpack the rack from its shipping container.



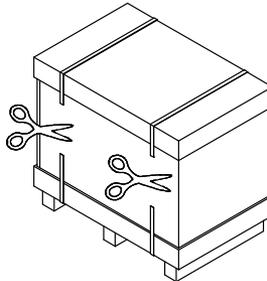
**NOTE:** The shipping container for the CSE-RACK14U mini-rack cabinet is recyclable and reusable.

#### ***Step 1: Inspect the Shipping Container***



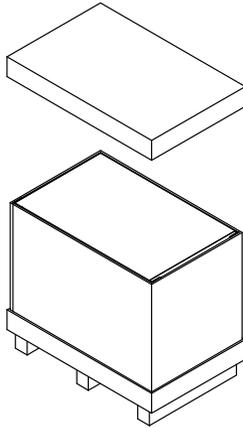
You should inspect the box the rack was shipped in and note if it was damaged in any way.

#### ***Step 2: Remove Securing Straps***



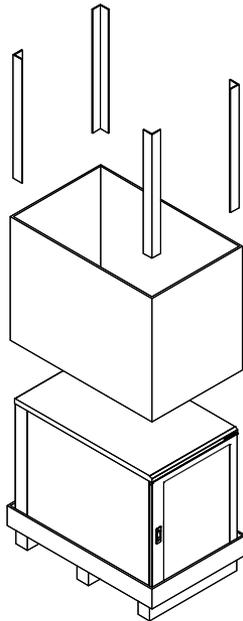
Cut away and remove the securing straps on the outside of the shipping container.

**Step 3: Remove Top of Shipping Container**



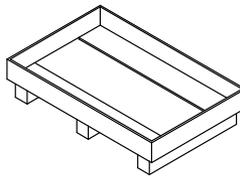
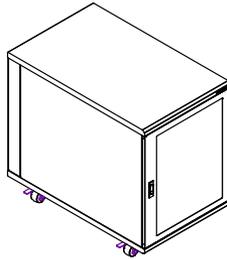
Remove the top of the shipping container to expose the rack unit.

**Step 4: Remove Shipping Container**



Remove the shipping container from around the rack unit by removing the corner supports and lifting the shipping container sides from around the rack unit.

**Step 5: Lift Out Rack Unit**

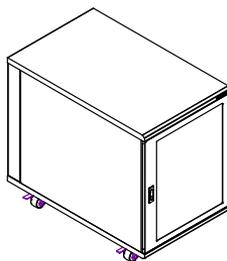


Lift out the rack unit from the shipping container base. Take care not to damage the rack unit when removing it from the base.



**WARNING:** You need to use two people to lift the rack unit out of the shipping container base since its weight (136.5 lbs/62 kg) is greater than one person can lift.

**Step 6: Inspect Rack Unit**



Inspect the rack unit to make sure it is free of defects. If the rack itself shows damage you should file a damage claim with the carrier who delivered it.

## 3-2 Choosing a Setup Location

Decide on a suitable location for the rack unit. It should be situated in a clean, dust-free area that is well ventilated. Avoid areas where heat, electrical noise and electromagnetic fields are generated. You will also need it placed near a grounded power outlet. See "Rack Precautions" in Chapter 2: "System Safety" on page 2-1 for other safety precautions you should follow.

Leave enough clearance in front of the rack to enable you to open the front door completely (~22-inches) and approximately 30 inches of clearance in the back of the rack to allow for sufficient airflow and ease in servicing. This product is for installation only in a **Restricted Access Location** (dedicated equipment rooms, service closets and the like).

## 3-3 Component Mounting Considerations

Consider the following before mounting components into your CSE-RACK14U mini-rack cabinet. Your mini-rack cabinet supports industry standard EIA 19" rackmount servers and equipment with regular square mounting holes.

Please follow the user guides and manuals for your rack components in order to install them safely into the mini-rack cabinet.

### Ambient Operating Temperature

If installed in a closed or multi-unit rack assembly, the ambient operating temperature of the rack environment may be greater than the ambient temperature of the room. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer's maximum rated ambient temperature ( $T_{mra}$ ).

### Reduced Airflow

Equipment should be mounted into a rack so that the amount of airflow required for safe operation is not compromised.

### Mechanical Loading

Equipment should be mounted into a rack so that a hazardous condition does not arise due to uneven mechanical loading.

### Circuit Overloading

Consideration should be given to the connection of the equipment to the power supply circuitry and the effect that any possible overloading of circuits might have on over-current protection and power supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

## **Reliable Ground**

A reliable ground must be maintained at all times. To ensure this, the rack itself should be grounded. Particular attention should be given to power supply connections other than the direct connections to the branch circuit (i.e. the use of power strips, etc.).

## Notes

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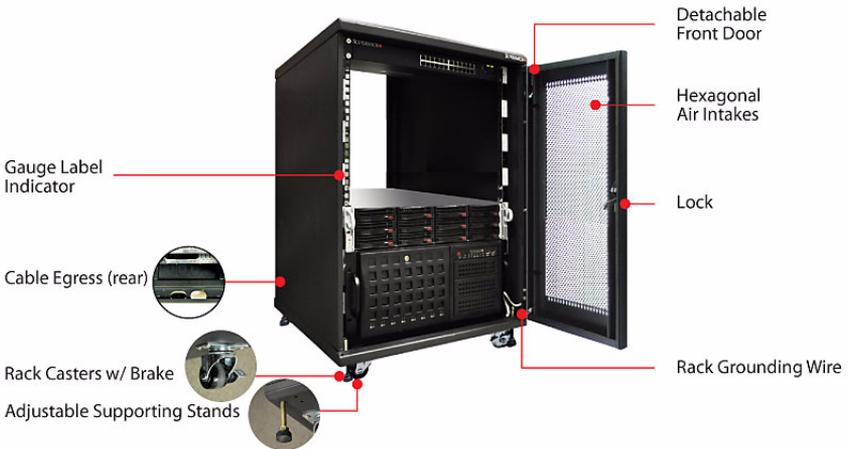
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# Chapter 4

## Features

This chapter covers features and their uses in the CSE-RACK14U mini-rack cabinet. These features are shown below in [Figure 4-1](#).

**Figure 4-1. CSE-RACK14U Mini-Rack Cabinet Features**



### 4-1 Mobility and Stability

The CSE-RACK14U mini-rack cabinet is fully mobile with four casters and can be stabilized with four support stands.

#### Casters and Brakes

The CSE-RACK14U mini-rack cabinet is fully mobile with four casters. The front two casters have brakes, which should be locked down before setting the mini-rack cabinet's support stands or when it is not being moved.



**NOTE:** It is recommended that you use two people when moving the cabinet for safety considerations.

## Supporting Stands

The mini-rack cabinet has support stands at each corner that can be screwed down to support and stabilize the cabinet. Before installing equipment in the mini-rack cabinet, be sure to secure it with the support stands first. When moving the cabinet, screw up the support stands to free the casters for movement.

## 4-2 Cabinet Door

The CSE-RACK14U mini-rack cabinet comes with removable front and rear doors. The door contains a hexagonal screen for air cooling purposes and is secured by a locking latch. A rack grounding wire is attached to the door to prevent static discharge when touched.

When equipment is installed and in use in the mini-rack cabinet, make sure this door is closed for cooling, safety and security purposes.

### Removing the Door

The door of the CSE-RACK14U mini-rack cabinet can be removed using the following procedure.

#### *Removing the Cabinet Door*

1. Push the lever in the door hinge to release the door.
2. Detach the ground wire from the door.
3. Lift off the door and put it in a secure and safe place while it is disconnected from the cabinet.

### Door Lock

The door of your CSE-RACK14U mini-rack cabinet contains a secure lock for securing the cabinet from intrusion.

### Door Filter (Optional)

An optional door filter is available for the CSE-RACK14U mini-rack cabinet.

## 4-3 Gauge Label Indicators

Gauge label indicators are placed on both internal sides of the cabinet, front and back, for measurement and installation of equipment into the cabinet. These assist in proper sizing and fitting of industry standard equipment into the rack.

## 4-4 Cable Egress Holes

Eight detachable floor holes are placed in the rear of the CSE-RACK14U mini-rack cabinet for use in threading cabling or wiring safely through the cabinet to power outlets or network ports at the bottom or rear of the cabinet.

The CSE-RACK14U mini-rack cabinet also comes with four rubber plugs that can be used for better cable routing through the cable egress holes.

An optional cable management kit is also available for the mini-rack cabinet that can be mounted on the side panels in its rear side.

## Notes

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