



Net-Net® 4250 SD
256K CAM Installation Guide

Release Version 1.0

Acme Packet, Inc.
71 Third Avenue
Burlington, MA 01803 USA
t 781-328-4400
f 781-425-5077
<http://www.acmepacket.com>

Last Updated: August 28, 2007
Document number: 400-0090-10 Rev: 1.00

Notices

©2002—2007 Acme Packet, Inc., Burlington, Massachusetts. All rights reserved. Acme Packet[®], Session Aware Networking[®], Net-Net[®], and related marks are registered trademarks of Acme Packet, Inc. All other brand names are trademarks, registered trademarks, or service marks of their respective companies or organizations.

Patents Pending, Acme Packet, Inc.

The Acme Packet Documentation Set and the Net-Net systems described therein are the property of Acme Packet, Inc. This documentation is provided for informational use only, and the information contained within the documentation is subject to change without notice.

Acme Packet, Inc. shall not be liable for any loss of profits, loss of use, loss of data, interruption of business, nor for indirect, special, incidental, consequential, or exemplary damages of any kind, arising in any way in connection with the Acme Packet software or hardware, third party software or hardware, or the documentation. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusions may not apply. These limitations are independent from all other provisions and shall apply notwithstanding the failure of any remedy provided herein.

Copying or reproducing the information contained within this documentation without the express written permission of Acme Packet, Inc., 71 Third Avenue, Burlington, MA 01803, USA is prohibited. No part may be reproduced or retransmitted.

About This Guide

Overview

The Net-Net™ system is a high performance, high capacity session border controller that optimally delivers interactive communications—voice, video, and multimedia sessions—across wireline, wireless, and cable IP network borders. With its compact, single unit, 1U, design, the Net-Net system provides exceptional functionality in a tightly integrated system.

The Net-Net 4250 SD 256K CAM Installation Guide describes how to install a Content Addressable Memory (CAM) card capable of storing 256000 entries in your Net-Net 4250 SD.

Audience

This guide is written for network administrators, and telecommunications equipment installers and technicians. It provides information related to hardware component installation. Only experienced and authorized personnel should perform installation, configuration, and maintenance tasks.

For information about Net-Net system training, contact your Acme Packet sales representative directly or email support@acmepacket.com

Who is Acme Packet?

Acme Packet enables service providers to deliver trusted, first class interactive communications-voice, video and multimedia sessions-across IP network borders. Our Net-Net family of session border controllers satisfy critical security, service assurance and regulatory requirements in wireline, cable and wireless networks. Our deployments support multiple applications-from VoIP trunking to hosted enterprise and residential services; multiple protocols-SIP, H.323, MGCP/NCS and H.248; and multiple border points-interconnect, access network and data center.

Established in August, 2000 by networking industry veterans, Acme Packet is a public company traded on the NASDAQ and headquartered in Burlington, MA.

Customer Questions, Comments, or Suggestions

Acme Packet is committed to providing our customers with reliable documentation. If you have any questions, comments, or suggestions regarding our documentation, please contact your Acme Packet customer support representative directly or email support@acmepacket.com.

Contact Us

Acme Packet
71 Third Avenue
Burlington, MA 01803 USA
t 781 328 4400
f 781 425 5077
<http://www.acmepacket.com>

256K CAM Installation

Introduction

This chapter provides information about how to install the 256K CAM Card in your Net-Net 4250 SD.

Check with your Acme Packet Account Representative to make sure that your Net-Net 4250 SD motherboard is the correct revision level to accept the CAM upgrade.

Shipped Parts

The following table lists the contents of one CAM upgrade order.

- 256K CAM
- 4 x screws
- 4 x nylon washers

Installation Tools and Parts

The following tools and parts are required to install an 256K CAM in your Net-Net 4250 SD.

- #1 Phillips-head screwdriver
- ESD wrist strap
- Cable labels
- Anti-static bag

Preinstallation

Perform the following logical and physical preparations before you install the CAM in your Net-Net 4250 SD.

Logical System Removal

Be mindful of all systems and network entities that may be affected by removing a Net-Net 4250 SD from your network. In addition to routing calls around the Net-Net system, you must also prepare network monitoring and health systems to accommodate the loss of a network element.

Specific procedures for removing the Net-Net 4250 SD from your network are beyond the scope of this document.

Physical System Removal

After logically removing the Net-Net system from your network, three procedures must first be completed before you can install the CAM upgrade in your Net-Net 4250 SD. These are:

- Disconnection of all media network, management network, alarm and console cabling from the Net-Net 4250 SD chassis
- Disconnection of all power and ground system cabling

- Removal of the Net-Net 4250 SD chassis from the equipment rack

Data Cabling Removal

Labeling all existing data cables will ease reconnecting the Net-Net 4250 SD to the network.

1. Label each cable noting which port on the Net-Net 4250 SD it connects to.
2. Attach the appropriate label to each cable.

Remember to label all media network cables (front panel cables), rear panel maintenance cabling (wancom ports), and console and alarm cables.

3. Disconnect all data cables from the Net-Net 4250 SD.

Power and Ground Cabling Removal

Take care in removing power from the Net-Net 4250 SD. Refer to the Safety chapter in the Net-Net System Hardware Installation Guide for complete safety guidelines.

The following is an overview of the power and ground cabling removal process. Please refer to the Net-Net System Hardware Installation Guide for detailed instructions.

1. Shut off power to the Net-Net 4250 SD at the circuit breaker or power source.
2. Remove the power cables from the Net-Net 4250 SD's power supplies.
3. Unscrew the thumb nut that secures the grounding cable to the Net-Net 4250 SD Chassis.
4. Remove the ground cable. Put the thumb nut and washer back on the stud.

Chassis Removal

The Net-Net 4250 SD chassis is heavy, and personal injury can result while removing and installing the chassis in an equipment rack. To prevent injury or damage to the Net-Net system, follow these guidelines:

Caution

To prevent personal injury, we recommend that two people lift and install the chassis into the equipment rack.

- Follow your organization's best practices for lifting and installing heavy components into an equipment rack.
- Ensure that the Net-Net 4250 SD chassis remains supported as you remove it from the equipment rack.

The following is an overview of the chassis removal process. Please refer to the Net-Net System Hardware Installation Guide for detailed instructions.

1. Use a workbench or other supportive surface, and place it nearby to set the Net-Net 4250 SD on after it is removed from the equipment rack.
Support the chassis before and while removing it from the equipment rack.
2. Unscrew the Net-Net Chassis from the rack. The number of points to unscrew depends upon whether the Net-Net system is installed in a front- or center-mount configuration.
3. Place the chassis on a workbench.

Hardware Removal

The rack ears which are used to secure the Net-Net 4250 SD to the equipment rack must be removed before you can open the chassis.

For center-mount configurations:

1. Remove the left rack ear by unscrewing the three screws.



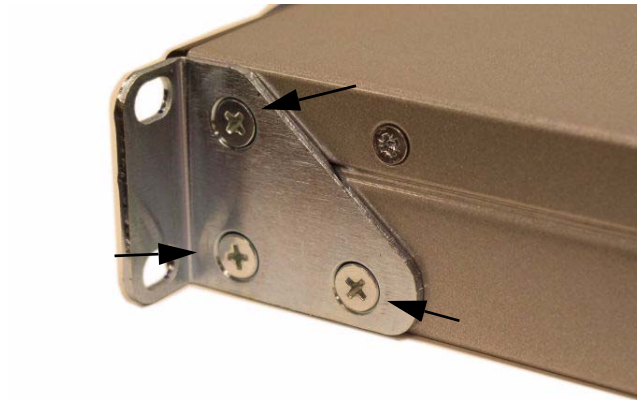
2. Remove the right rack ear by unscrewing the three screws.



3. Set the rack ears and screws aside.

For front-mount configurations:

1. Remove the left rack ear by unscrewing the three screws.



2. Remove the right rack ear by unscrewing the three screws.



Note: You do NOT need to remove the rack slide rails.

3. Set the rack ears and screws aside

Opening the Chassis

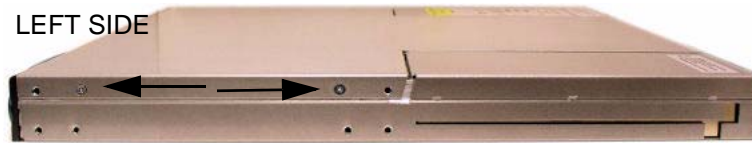
Because the chassis lid is tightly secured to the chassis, a moderate amount of force is needed to disengage the lid.

Caution

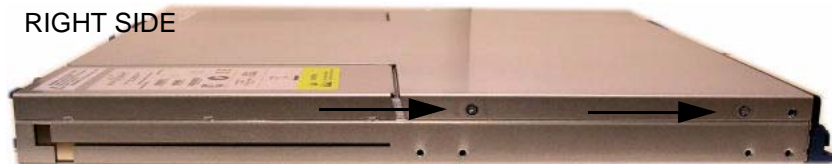
Before opening the Net-Net 4250 SD chassis, ground yourself using an ESD wrist strap or other comparable grounding system. Failure to do so could damage the CAM, the Net-Net 4250 SD chassis, or other components.

1. Unscrew the two countersunk screws on each side of the Net-Net 4250 SD that hold the chassis cover to the chassis.

LEFT SIDE



RIGHT SIDE



2. Set these screws aside.

3. Place both palms on the rear of the chassis lid as noted in the photograph. Press down to compress the EMI gasket.



4. Force a down and rearward pressure to move the chassis lid backward by about 1/4". The lid will make a snapping sound after it travels fully toward the chassis rear. This requires moderate force.

With your palms on the chassis lid, curl your fingers around the chassis edge and place them against the fan module. In this position you can press downward on the chassis lid and pull the lid toward the rear in one motion.

5. Set the lid aside.

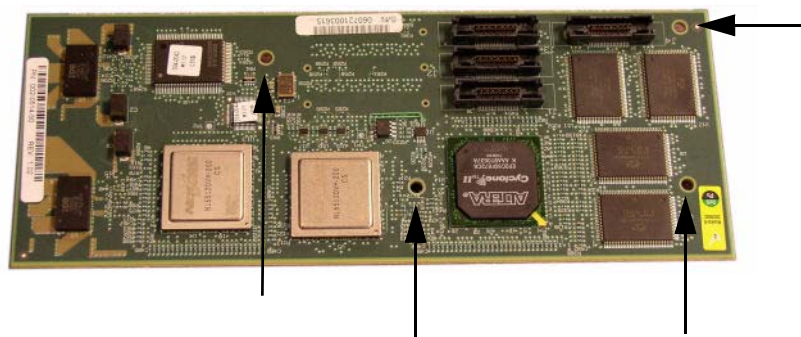
256K CAM Installation

Once the Net-Net 4250 SD chassis is open, CAM installation is straightforward. You must first remove the old CAM before you can install the upgrade card. The CAM attaches electrically to the Net-Net 4250 SD motherboard by three board-to-board connectors. In addition, it is secured to the motherboard by four screws.

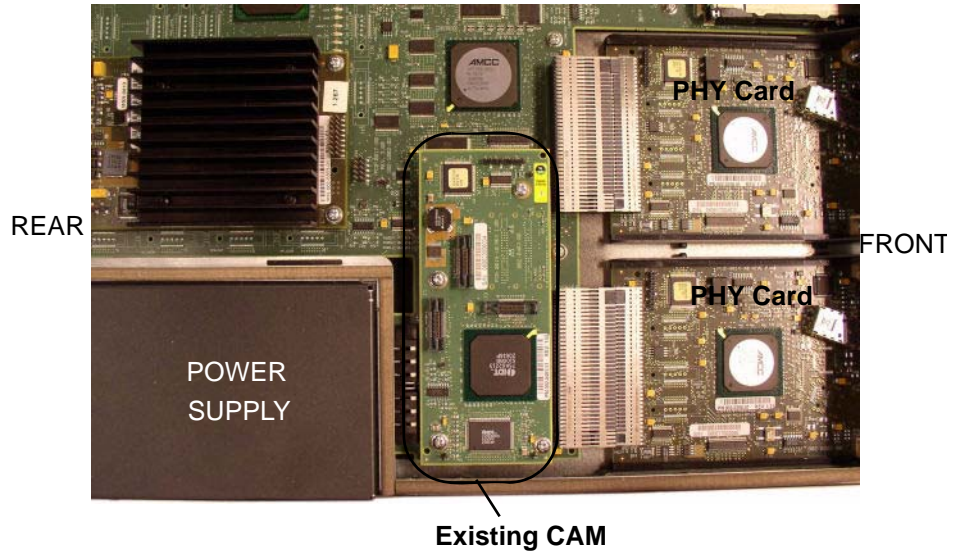
Caution

Before handling a CAM card, ground yourself using an ESD wrist strap or other comparable grounding system. Failure to do so could damage the CAM or the Net-Net 4250 SD system.

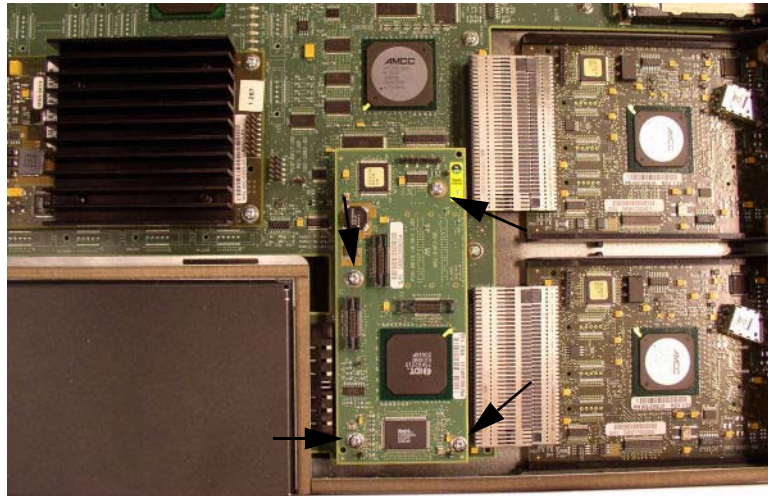
The following image shows the 256K CAM. Note that the new CAM is 2" (~5cm) longer than the old CAM. The four mounting points are identified below.



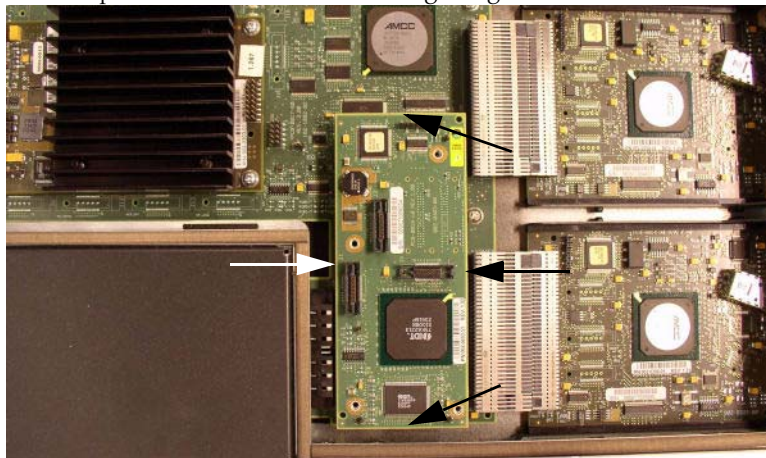
1. Note the region on the Net-Net 4250 SD motherboard where the existing CAM attaches.



2. Unscrew the four screws that secure the existing CAM card in place.

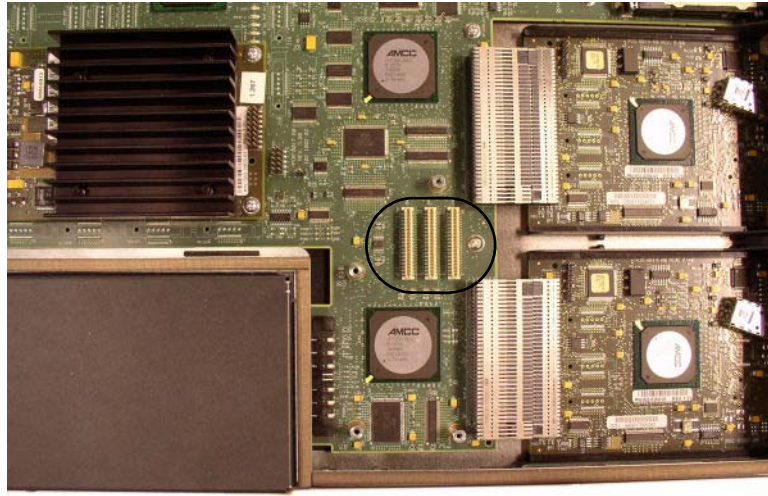


3. Pull the CAM card straight off of the Net-Net 4250 system board by holding it at the four points shown in the following image.

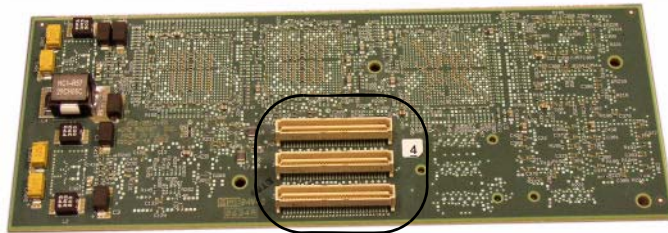


Place the card in an antistatic bag.

4. In the image below, the three CAM connectors on the Net-Net 4250 system board are circled. The CAM upgrade card plugs into place here.

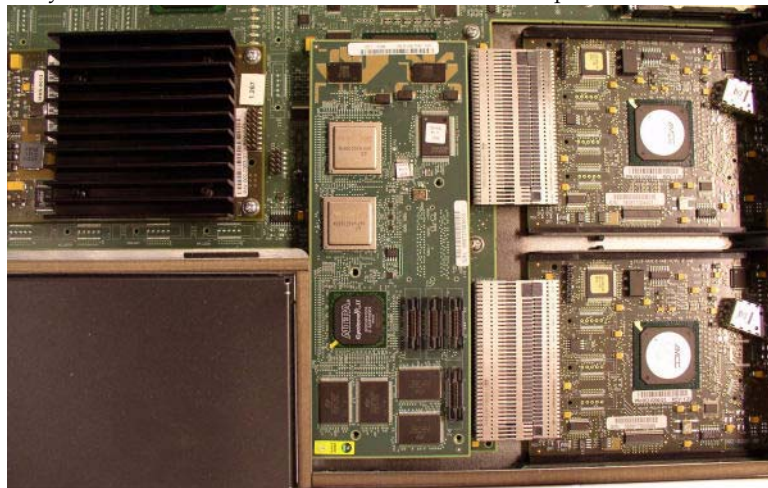


5. Note the three board-to-board connectors on the bottom of the 256K CAM card in the following image. When attaching the CAM card to the motherboard, these board-to-board connectors set closer to the Net-Net 4250 SD's PHY cards, NOT the power supply.



CAM CONNECTORS

6. Place the CAM card on the Net-Net 4250 SD motherboard by mating the board-to-board connectors. The CAM card lines up directly with four threaded stand-offs so you can screw it to the chassis in the next step.



7. Place a nylon washer on each screw, and fasten the CAM card to the chassis at four points.



Postinstallation

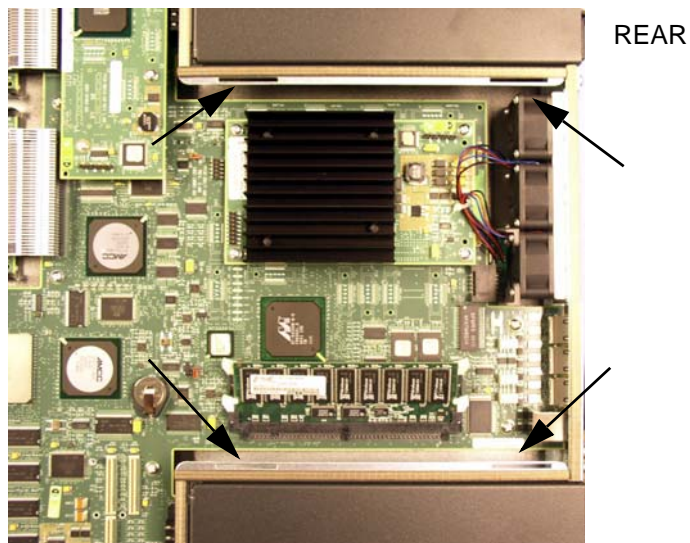
After the new CAM card has been installed in the Net-Net 4250 SD, you can close the chassis and reinstall it in the equipment rack.

Attaching the Lid

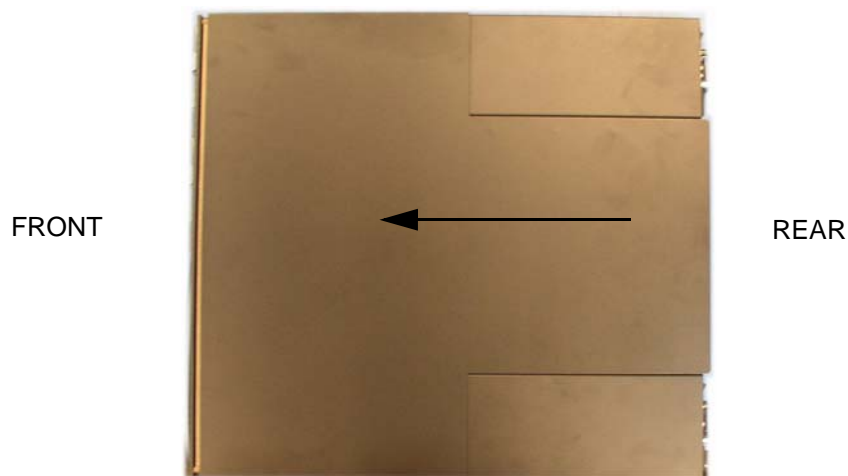
1. Note the position of the four tabs on the chassis lid.



2. Insert the tabs into the four slots as shown in the photograph below. This aligns the lid with the chassis.

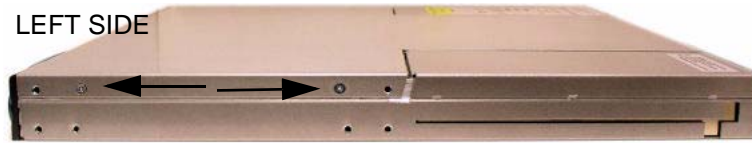


3. Secure the lid in place by repeating the opposite motion used for removing it. Push the lid downward and toward the front of the chassis in one sweeping motion.

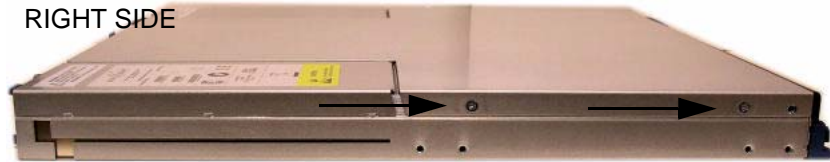


4. Re-screw the two countersunk screws on each side of the Net-Net 4250 SD to secure the chassis cover to the chassis.

LEFT SIDE



RIGHT SIDE



Installing the Chassis in the Rack

Perform the reverse of the operations in the following sections of this document:

- Hardware Removal
- Chassis Removal
- Power and Ground Cabling Removal

Please refer to the Net-Net System Hardware Installation Guide for full rack installation procedures.

256K CAM Validation

We recommend that you validate the CAM installation by running Net-Net 4250 SD diagnostics. All versions from diags_122.gz and higher include the appropriate tests for validating your CAM. Please refer to the diagnostic's documentation for more information.