

**Acme Packet 4500**  
SSM2 Installation Guide

*Formerly Net-Net 4500*

October 2013

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# About This Guide

## Overview

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The Acme Packet 3820 and Net-Net™ 4500 System are high performance, high capacity session border controllers 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 Acme Packet 3820 and Acme Packet 4500 provide exceptional functionality in a tightly integrated system.

The Acme Packet 3820 or Acme Packet 4500 SSM2 Installation Guide describes how to install an SSM2 in your Acme Packet 3820 or Acme Packet 4500.

## 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 Acme Packet 3820 or Acme Packet 4500 training, contact your Acme Packet sales representative directly or email [support@acmepacket.com](mailto:support@acmepacket.com)



# SSM2 Installation

## Introduction

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This document provides information about how to install the Signaling Security Module 2 (SSM2) card in your Acme Packet 3820 or Acme Packet 4500.

**Note:** The Net-Net 3800 and Net-Net 3820 comprise the two platforms in the Acme Packet 3820.

Check with your Acme Packet account representative to make sure that your Acme Packet 3820 or Acme Packet 4500 motherboard is the correct revision level to accept the SSM2.

**Note:** The SSM2 card must be configured correctly before installation. See the "[SSM2 Preparation](#)" (9) section for details on how to configure the card.

## Shipped Parts

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The following lists the contents of one SSM2 upgrade order.

- SSM2 module
- (4) M2.5 x 4mm Phillips screws

## Installation Tools and Parts

The following tools and parts are required to install an SSM2 in your Acme Packet 3820 or Acme Packet 4500.

- #1 Phillips-head screwdriver
- #2 Phillips-head screwdriver
- ESD wrist strap
- Cable labels

## Preinstallation

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Perform the following logical and physical preparations before you install the SSM2 in your Acme Packet 3820 or Acme Packet 4500.

## Logical System Removal

Be mindful of all systems and network entities that may be affected by removing a Acme Packet 3820 or Acme Packet 4500 from your network. In addition to routing calls around the Acme Packet 3820 or Acme Packet 4500, you must also prepare network monitoring and health systems to accommodate the loss of a network element.

Specific procedures for removing the Acme Packet 3820 or Acme Packet 4500 from your network are beyond the scope of this document.

## Physical System Removal

After logically removing the Acme Packet 3820 or Acme Packet 4500 from your network, the following procedures must be completed before you can install the SSM2. These are:

- Disconnection of all media network, management network, alarm and console cabling from the Acme Packet 3820 or Acme Packet 4500
- Disconnection of all power and ground system cabling
- Removal of the Acme Packet 3820 or Acme Packet 4500 from the equipment rack

## Data Cabling Removal

Labeling all existing data cables will ease reconnecting the Acme Packet 3820 or Acme Packet 4500 to the network.

1. Label each cable noting which port on the Acme Packet 3820 or Acme Packet 4500 it connects to.
2. Attach the appropriate label to each cable.  
Remember to label all media network cables, maintenance cabling, and console and alarm cables.
3. Disconnect all data cables from the Acme Packet 3820 or Acme Packet 4500.

## Power and Ground Cabling Removal

Take care in removing power from the Acme Packet 3820 or Acme Packet 4500. Refer to the Safety chapter in the Acme Packet 3820 or Acme Packet 4500 Hardware Installation Guide for complete safety guidelines.

The following is an overview of the power and ground cabling removal process. Please refer to the Acme Packet 3820 or Acme Packet 4500 Hardware Installation Guide for detailed instructions.

1. Shut off power to the Acme Packet 3820 or Acme Packet 4500 at the circuit breaker or power source.
2. Remove the power cables from the Acme Packet 3820 or Acme Packet 4500's power supplies.
3. Unscrew the two kep nuts that secure the grounding cable lug to the Acme Packet 3820 or Acme Packet 4500.
4. Remove the ground cable. Put the kep nuts in a safe place.

## Chassis Removal

A Acme Packet 3820 or Acme Packet 4500 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 Acme Packet 3820 or Acme Packet 4500 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.

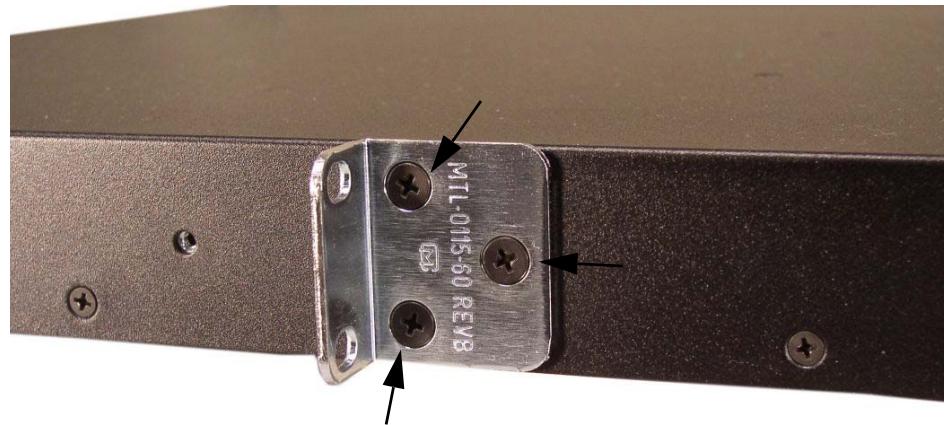
1. Use a workbench or other supportive surface, and place it nearby to set the Acme Packet 3820 or Acme Packet 4500 on after it is removed from the equipment rack.
- Support the chassis before and while removing it from the equipment rack.
2. Remove the Acme Packet 3820 or Acme Packet 4500 from the rack. 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 for Center-Mount Configurations**

The rack ears must be removed before you can open the chassis.

**To remove center-mount equipment rack hardware:**

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.

#### **Hardware Removal for Front-Mount Configurations**

The chassis slides and rack ears must be removed before you can open the chassis.

**To remove front-mount equipment rack hardware:**

1. Remove the left chassis slide by unscrewing the three screws.



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



3. Repeat steps 1 and 2 on the right side of the Acme Packet 3820 or Acme Packet 4500.
4. Set the rack ears and screws aside

### Opening the Chassis

The chassis lid is secured to the chassis by 15 screws. Remove the screws and lift the chassis lid off the chassis.

#### Caution

**Before opening the Acme Packet 3820 or Acme Packet 4500, ground yourself using an ESD wrist strap or other comparable grounding system. Failure to do so could damage the SSM2, Acme Packet 3820, or Acme Packet 4500.**

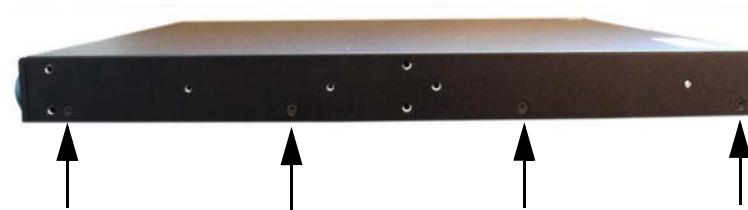
**Note:** Use a #2 Phillips-head screwdriver for all chassis cover and side screws.

1. Unscrew the four countersunk screws on each side of the Acme Packet 3820 or Acme Packet 4500 that secure the chassis cover to the chassis.

#### LEFT SIDE

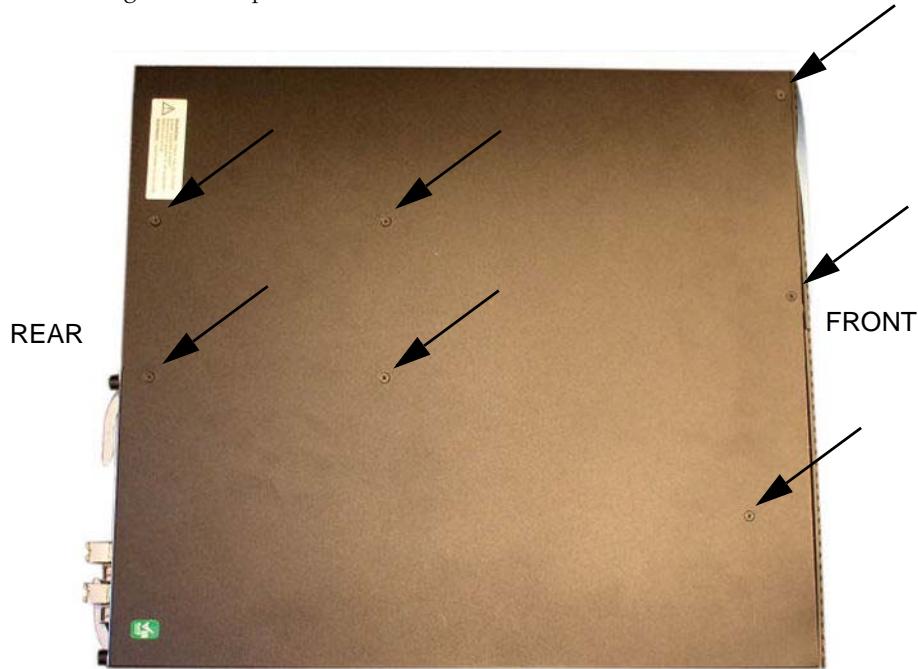


#### RIGHT SIDE



2. Set these screws aside.

3. Unscrew the seven countersunk screws on the top of the Acme Packet 3820 or Acme Packet 4500 that secure the chassis cover to the chassis. The following is an image of the top of the chassis.



4. Set the lid and screws aside.
5. Lift the chassis lid off of the chassis and set aside.

## SSM2 Installation

Once the Acme Packet 3820 or Acme Packet 4500 is open, SSM2 installation is straightforward. The SSM2 attaches electrically to the Acme Packet 3820 or Acme Packet 4500 motherboard by three board-to-board connectors. In addition, it is secured to the motherboard by four screws.

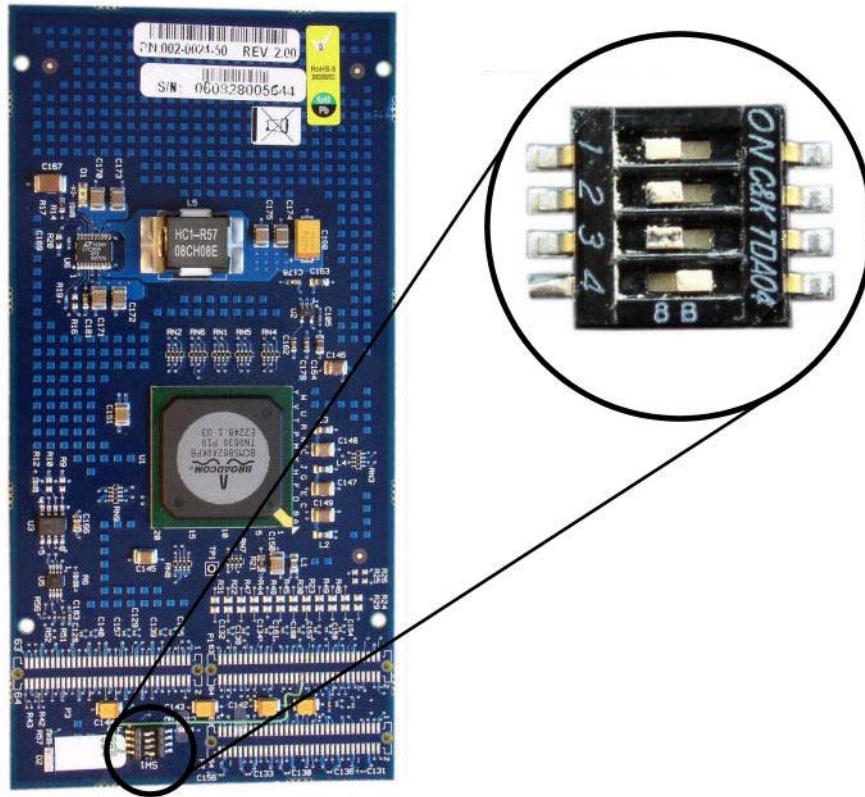
### Caution

**Before handling the SSM2, ground yourself using an ESD wrist strap or other comparable grounding system. Failure to do so could damage the SSM2, Acme Packet 3820 or Acme Packet 4500.**

## SSM2 Preparation

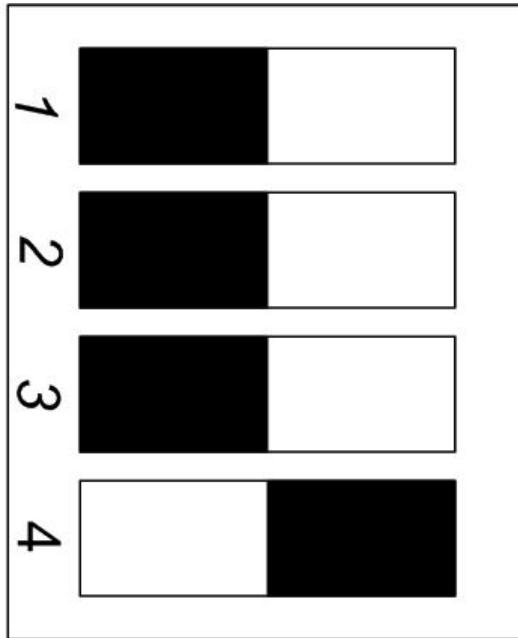
Before you can install the SSM2, you must configure the card specifically for the Acme Packet 3820 or Acme Packet 4500 by setting the DIP switches accordingly. The

DIP switch is circled in the following image of the SSM2. This configuration is used for both Acme Packet 3820s and Acme Packet 4500.



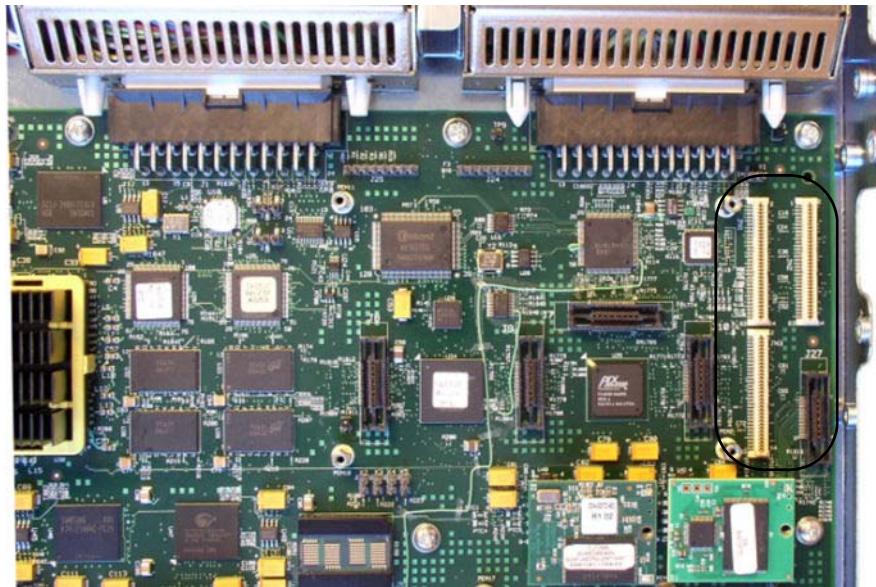
**Note:** If your SSM2 does not have a DIP switch, please continue to the ["SSM2 Installation - Acme Packet 4500 & Net-Net 3820" \(11\)](#) or ["SSM2 Installation - Net-Net 3800" \(13\)](#) section on the following page.

The number 4 switch should be pushed to the right. The numbers 1, 2, and 3 switches should be pushed to the left, as in the following illustration.



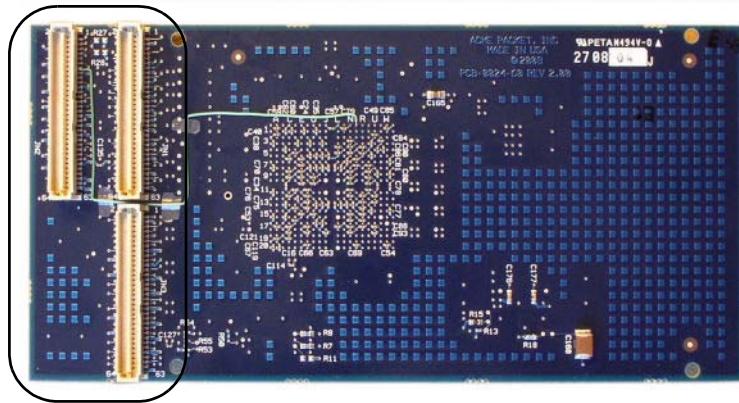
### SSM2 Installation - Acme Packet 4500 & Net-Net 3820

1. Note the region on the Acme Packet 4500 or Net-Net 3820 motherboard where the SSM2 attaches. In the photograph below, the three SSM2 connectors are circled. The SSM2 plugs into place here.

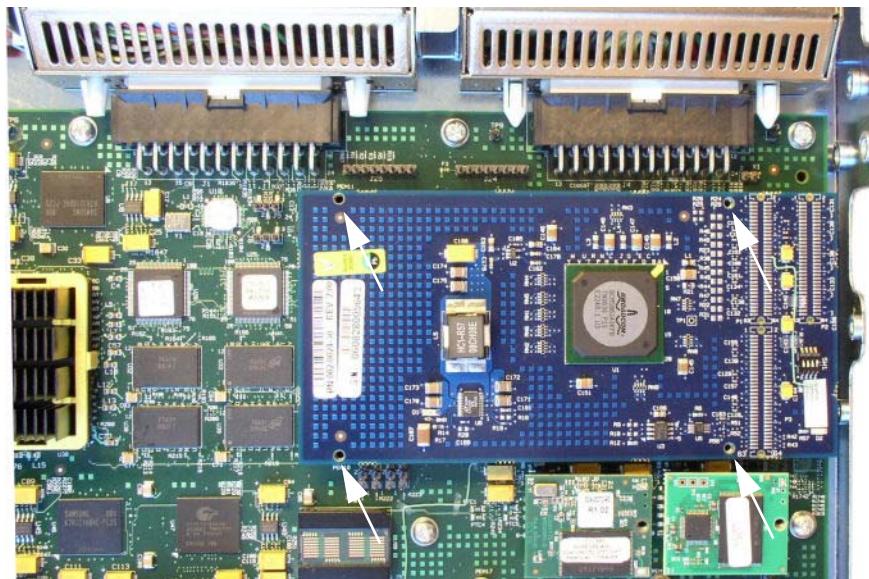


If the three board-to-board connectors on the motherboard are covered with protector caps, remove them before installing the SSM2.

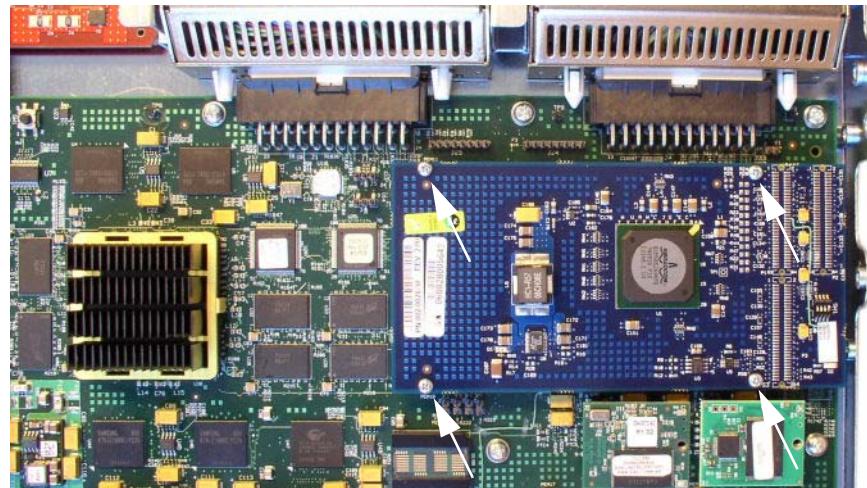
2. Note the three board-to-board connectors in the following photograph of the bottom of the SSM2.



3. Place the SSM2 on the Acme Packet 4500 or Net-Net 3820 motherboard by mating the board-to-board connectors. The SSM2 lines up directly with four threaded stand-offs so you can screw it to the chassis in the next step.

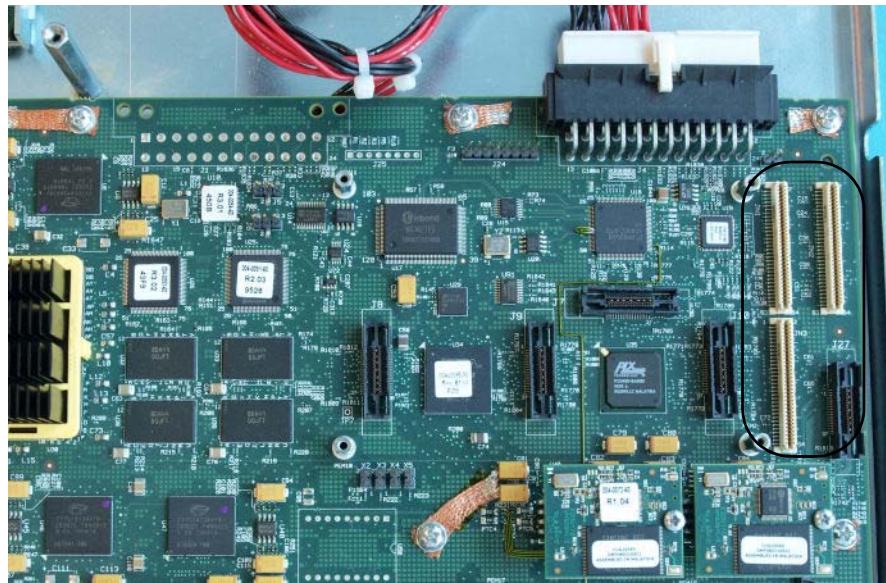


4. Screw the SSM2 to the chassis at four points with the supplied screws as shown in the following image using a #1 Phillips screwdriver.



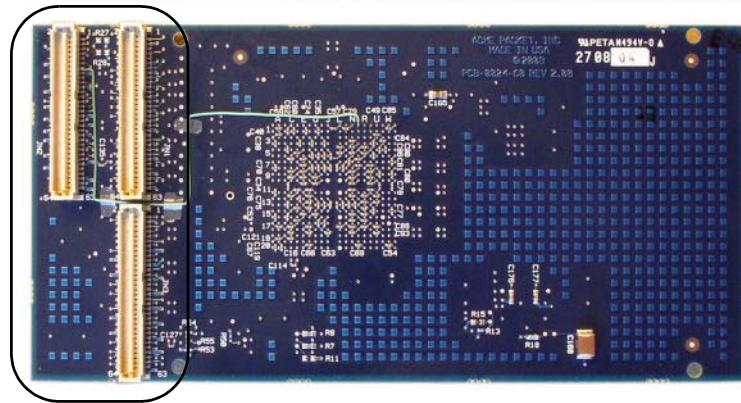
### SSM2 Installation - Net-Net 3800

1. Note the region on the Net-Net 3800 motherboard where the SSM2 attaches. In the photograph below, the three SSM2 connectors are circled. The SSM2 plugs into place here.

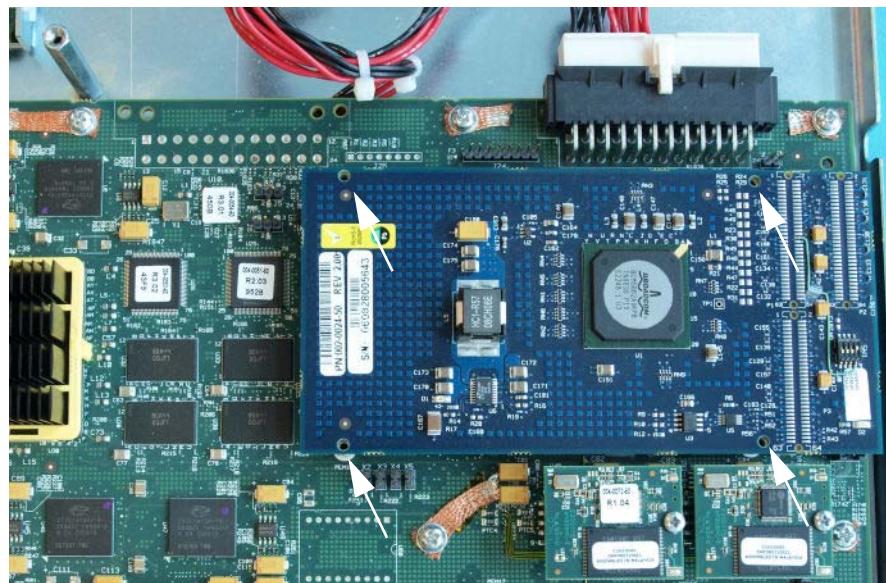


If the three board-to-board connectors on the motherboard are covered with protector caps, remove them before installing the SSM2.

2. Note the three board-to-board connectors in the following photograph of the bottom of the SSM2.



3. Place the SSM2 on the Net-Net 3800 motherboard by mating the board-to-board connectors. The SSM2 lines up directly with four threaded stand-offs so you can screw it to the chassis in the next step.



4. Screw the SSM2 to the chassis at four points with the supplied screws as shown in the following image using a #1 Phillips screwdriver.



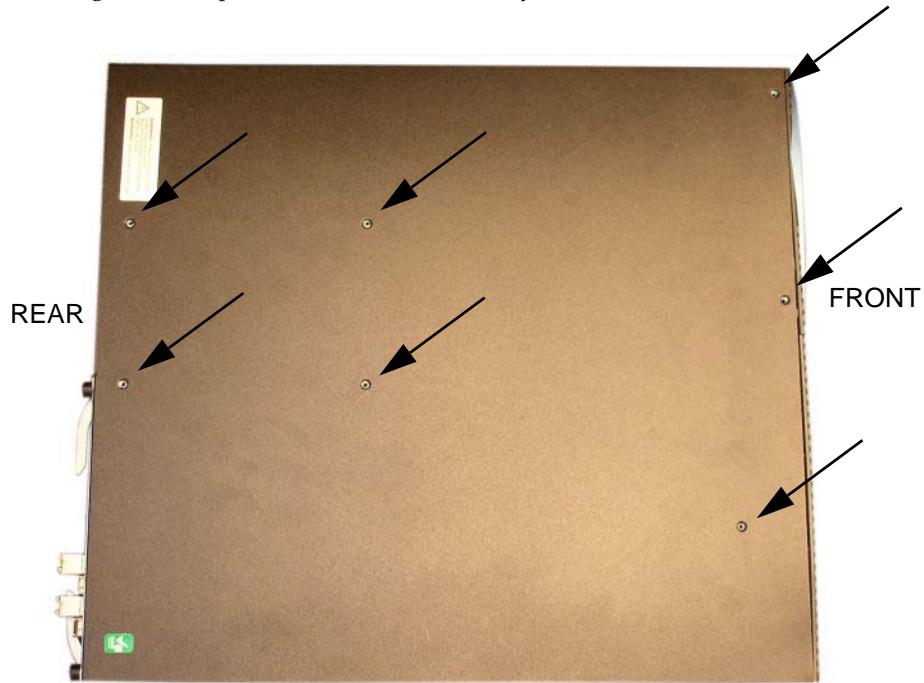
## Postinstallation

After the SSM2 has been installed in the Acme Packet 3820 chassis or Acme Packet 4500, you can close the chassis and reinstall it in the equipment rack.

### Attaching the Lid

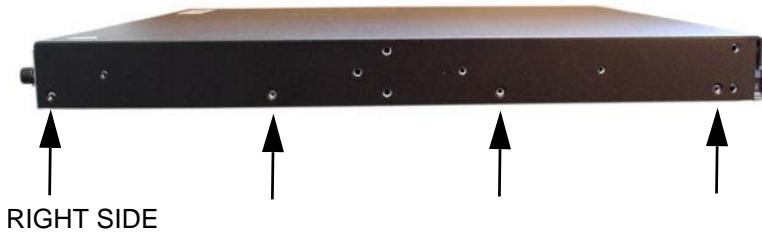
Use a #2 Phillips-head screwdriver for all chassis cover and side screws.

1. Set the lid on top of the Acme Packet 3820 chassis or Acme Packet 4500 chassis. The stickers are positioned at the chassis rear.
2. Screw the eight flathead screws into the top of the Acme Packet 3820 chassis or Acme Packet 4500 to secure the chassis cover to the chassis. The following is an image of the top of the chassis without any screws.

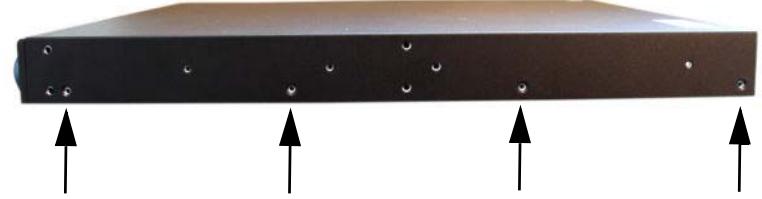


3. Continue securing the chassis lid with four screws on each side.

LEFT SIDE



RIGHT SIDE



## Installing the Chassis in the Rack

Perform the reverse of the operations in the Physical System Removal section of this document:

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

## SSM2 Validation

We recommend that you validate the SSM2 installation by running Acme Packet 3820 chassis or Acme Packet 4500 diagnostics. All versions from nnCX\_diags104.gz and higher include the appropriate tests for validating your SSM2 on the Acme Packet 4500. All versions from nnCX\_diags110.gz and higher include the appropriate tests for validating your SSM2 on the Acme Packet 3820 chassis. Please refer to the diagnostic's documentation for more information.