



CHAPTER 4

Installing Hardware Options for the WAVE-294

This chapter provides basic instructions for installing hardware options in your WAVE-294. These instructions are intended for technicians who are experienced with setting up Cisco WAVE-294 hardware.

This chapter contains the following sections:

- [Installing a Cisco WAVE Interface Module, page 4-1](#)
- [Installing Memory, page 4-2](#)

Installing a Cisco WAVE Interface Module

In addition to the two onboard Gigabit Ethernet ports, the WAVE-294 can accommodate one optional Cisco Interface Module.

For information on the features of the Cisco WAVE Interface Modules and cabling requirements, see [Chapter 5, “WAVE Interface Modules.”](#)



Note

Cisco Interface Modules are not hot-swappable therefore it is necessary to power the system down before installing or replacing.



Caution

To maintain proper system cooling, do not operate the appliance for more than 1 minute without either a Cisco Interface Module or a filler panel installed in the bay.

To install a Cisco Interface Module in the Interface Module slot, follow these steps:

Step 1 Review the information in the [“Safety Warnings and Cautions”](#) section on page 2-1 and the [“Safety Guidelines”](#) section on page 2-2.

Step 2 Power down the appliance.



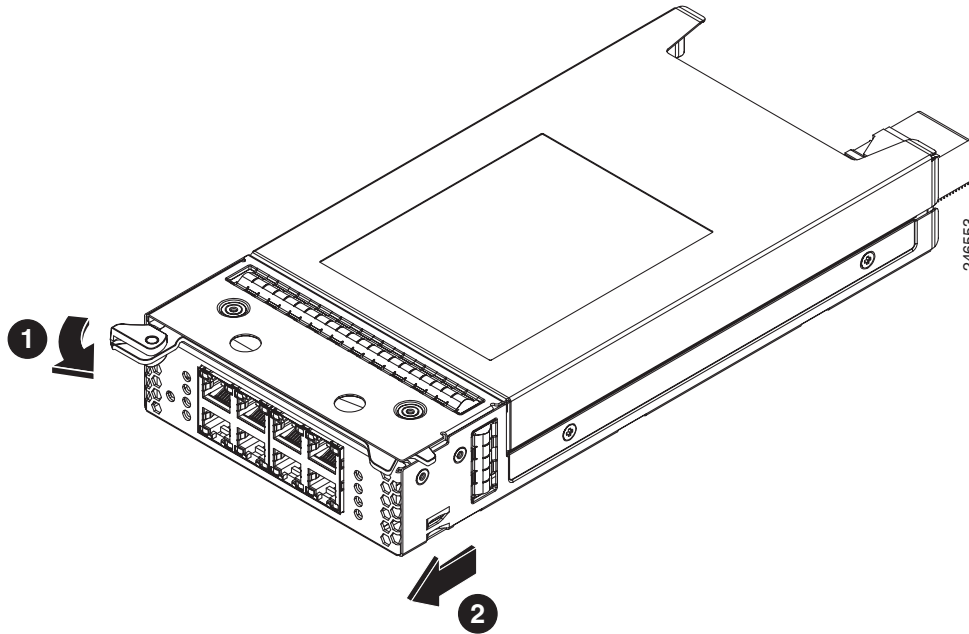
Note

You must power down the appliance before installing or removing a Cisco Interface Module. Interface Modules are not hot-swappable.

Step 3 Locate the Interface Module slot in the appliance chassis and slide the Cisco Interface Module into the slot until the ejector lever is seated.

To remove a Cisco Interface Module, first use the ejector lever to unlatch and then pull out the Interface Module. (See [Figure 4-1](#).)

Figure 4-1 Cisco Interface Module—Removal



Step 4 Power on the appliance.

For information about connecting cables to the Cisco WAVE Interface Module ports, see [Chapter 5](#), “WAVE Interface Modules.”

Installing Memory

This section provides basic instructions for installing memory in your WAVE-294. It contains the following topics:

- [Removing the Cover](#), page 4-2
- [Installing Memory Modules](#), page 4-3

Removing the Cover



Warning

Before working on a system that has an on/off switch, turn OFF the power and unplug the power cord.
Statement 1



Caution

To reduce the risk of personal injury from hot surfaces, allow the drives and the internal system components to cool before touching them.

**Caution**

Do not operate the WAVE appliance with the access panel open or removed. Operating the WAVE appliance in this manner results in improper airflow and improper cooling that can lead to thermal damage.

To remove the appliance cover, follow these steps:

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- Step 1** Review the information in the [“Safety Warnings and Cautions”](#) section on page 2-1 and the [“Safety Guidelines”](#) section on page 2-2.
 - Step 2** Power off the appliance and all attached devices and disconnect all external cables and power cords.
 - Step 3** Remove the WAVE appliance from the rack.
 - Step 4** Loosen the screw in the back that secures the access panel to the WAVE appliance.
 - Step 5** Slide the access panel toward the rear of the WAVE appliance, then lift it from the WAVE appliance.
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Installing Memory Modules

The WAVE-294 appliance supports either 4 GB or 8 GB of memory using UDIMM memory modules.

Observe the following guidelines when installing additional memory:

- Use only Cisco memory upgrades in your appliance.
- BIOS detects the DIMM population and sets the system to dual-bank interleaved mode (DIMMs installed in both banks with equal bank capacities).

[Figure 4-2](#) shows the memory slot mapping on the system board.

Figure 4-2 Memory Slot Mapping

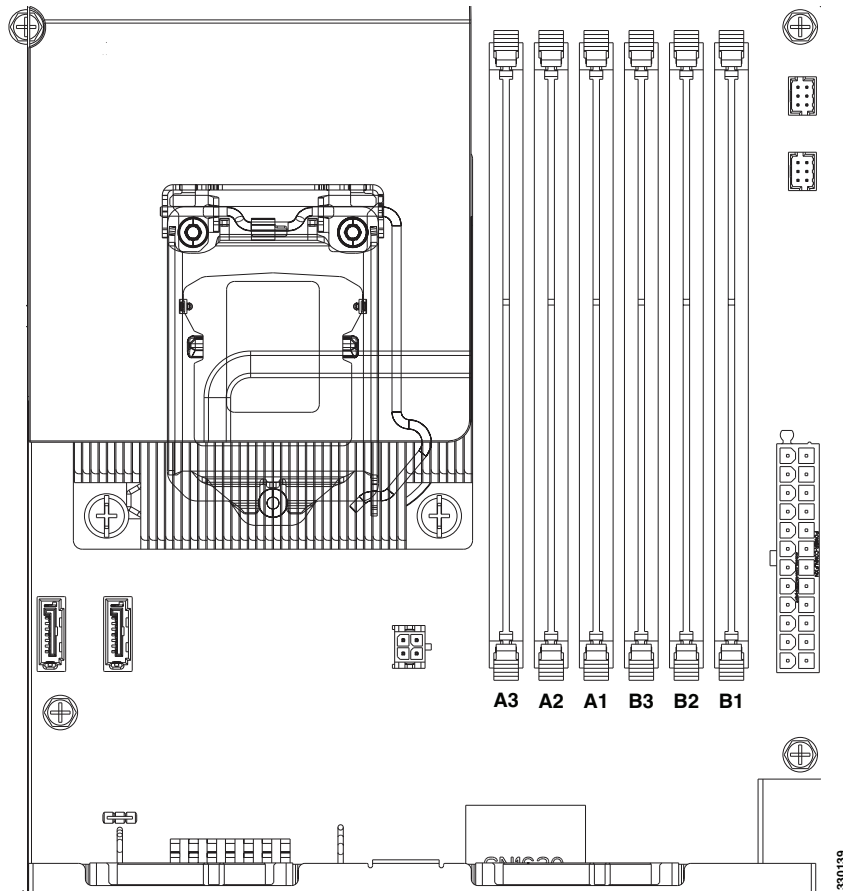


Table 4-1 lists the UDIMM configurations available for the WAVE-294 appliance.

Table 4-1 WAVE-294 UDIMM Configurations

	Slot A3	Slot A2	Slot A1	Slot B3	Slot B2	Slot B1
4 GB Memory	—	—	2-GB	—	—	2-GB
8 GB Memory	—	2-GB	2-GB	—	2-GB	2-GB

To install a Cisco memory upgrade from 4 GB to 8 GB, follow these steps:

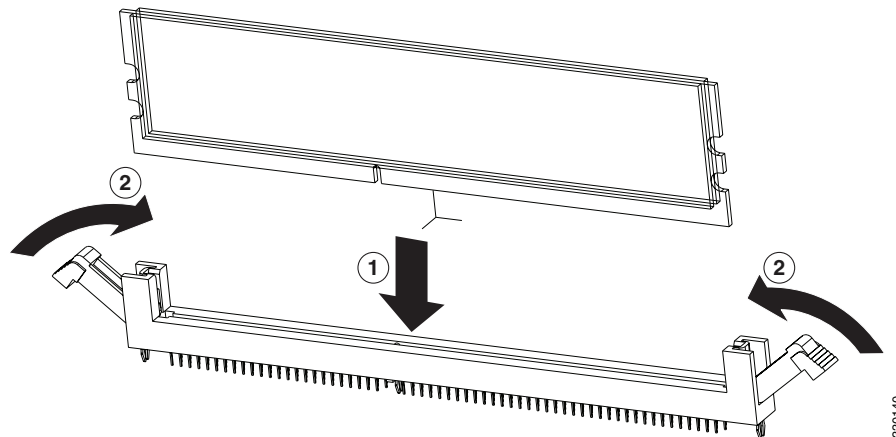
- Step 1** Power down the WAVE appliance.
- Step 2** Remove the WAVE appliance from the rack.
- Step 3** Remove the primary access panel (See the “Removing the Cover” section on page 4-2).
- Step 4** Open the DIMM slot latches for slots A1 and B1 and remove the existing memory modules.



Note All existing memory must be removed and replaced by the UDIMM memory modules contained in the Cisco upgrade kit.

- Step 5** Install one 2-GB UDIMM memory module into slot A1. Install another 2-GB UDIMM memory module into slot B1. (See [Figure 4-3](#).)
- Step 6** Open the DIMM slot latches for slots A2 and B2.
- Step 7** Install one 2-GB UDIMM memory module into slot A2. Install the last 2-GB UDIMM memory module into slot B2.

Figure 4-3 Installing a UDIMM



- Step 8** Check to make sure that the DIMM latches are fully engaged in the notches.
- Step 9** Install the access panel.
- Lower the access panel onto the WAVE appliance and then slide the access panel toward the front of the WAVE appliance.
 - Tighten the screw on the back that secures the access panel to the WAVE appliance.
- Step 10** Install the WAVE appliance into the rack.
- For complete rack installation and removal instructions, see [Chapter 3, “Installing the WAVE-294.”](#)



Caution Install the appliance only in a rack cabinet with perforated doors.



Caution Do not leave open spaces above or below an installed appliance in the rack cabinet. To help prevent damage to appliance components, always install a filler panel to cover the open space and to help ensure proper air circulation. See the documentation that comes with your rack cabinet for more information.

- Step 11** Connect the cables and power cords. For information on connecting cables and power cords, see the [“Rack Mounting and Cabling the WAVE-294”](#) section on page 3-2.
- Step 12** Reboot the WAVE appliance.
- Step 13** Use the **show memory EXEC** mode command to verify that the memory you installed is recognized by the WAVE appliance.
- Step 14** Repartition the disks, using the **disk delete-data-partitions** command, and reload.



Note Repartitioning the disks deletes all data, including all virtual blades on the hardware.



Note Repartitioning the disks is required after adding memory to reset the DRE space allocation.
