

AS/400e 170 or 250



286x Memory for the Integrated NetFinity Server Instruction

Version 4

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Note

Before using this information and the product it supports, be sure to read the "Safety and Environmental Notices" on page iii and the "Notices" on page 15.

Fifth Edition (July 2000)

This edition applies only to reduced instructions set computer (RISC) systems.

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Safety and Environmental Notices

Danger Notices

A danger notice calls attention to a situation that is potentially lethal or extremely hazardous to people.

DANGER

An electrical outlet that is not correctly wired could place hazardous voltage on metal parts of the system or the products that attach to the system. It is the customer's responsibility to ensure that the outlet is correctly wired and grounded to prevent an electrical shock. (RSFTD201)

DANGER

To prevent a possible electrical shock when installing the system, ensure that the power cords for all devices are unplugged before installing signal cables. (RSFTD202)

DANGER

To prevent a possible electrical shock when adding or removing any devices to or from the system, ensure that the power cords for those devices are unplugged before the signal cables are connected or disconnected. If possible, disconnect all power cords from the existing system before you add or remove a device. (RSFTD203)

DANGER

To prevent a possible electrical shock during an electrical storm, do not connect or disconnect cables or station protectors for communications lines, display stations, printers, or telephones. (RSFTD003)

DANGER

To prevent a possible electrical shock from touching two surfaces with different electrical grounds, use one hand, when possible, to connect or disconnect signal cables. (RSFTD004)

Caution Notices

A caution notice calls attention to a situation that is potentially hazardous to people because of some existing condition.

CAUTION:

Telecommunications Statement: This unit contains over-voltage circuits between the ac power outlet and the unit. These circuits meet the standard limits described in International Electrical Commission (IEC) 664, installation category II. It is the customer's responsibility to ensure that the power outlet meets the standards of IEC 664, installation category II. (RSFTC214)

Laser Safety Information

CAUTION:

This product may contain a CD-ROM which is a class 1 laser product.
(RSFTC240)

Product Recycling and Disposal

Components of the system, such as structural parts and circuit cards, can be recycled where recycling facilities exist. IBM does not currently collect and recycle used IBM products from customers in the United States other than those products that are involved in trade-in programs. Companies are available to disassemble, reutilize, recycle, or dispose of electronic products. Contact an IBM account representative for more information.

The system unit contains batteries and circuit boards with lead solder. Before you dispose of this unit, these batteries and circuit boards must be removed and discarded according to local regulations or recycled where facilities exist. This book contains specific information on each battery type where applicable.

Battery Return Program

In the United States, IBM has established a collection process for reuse, recycling, or proper disposal of used IBM batteries and battery packs. For information on proper disposal of the batteries in this unit, please contact IBM at 1-800-426-4333. Please have the IBM part number that is listed on the battery available when you make your call. For information on battery disposal outside the United States, contact your local waste disposal facility.

Environmental Design

The environmental efforts that have gone into the design of the system signify IBM's commitment to improve the quality of its products and processes. Some of these accomplishments include the elimination of the use of Class I ozone-depleting chemicals in the manufacturing process, reductions in manufacturing wastes, and increased product energy efficiency. For more information, contact an IBM account representative.

Installation Instructions

These instructions will help you install a 2861, 2862, or 2867 memory card on your 285x or 2866 Integrated NetFinity Server card.

Note: When you install a new Server card, the steps for installing the memory cards are included in the 285x or 2866 Integrated NetFinity Server card instruction.

This feature is customer installed. It will take approximately 1 hour to install the hardware. However, you may elect not to perform this feature installation yourself. You may contact IBM or an Authorized Dealer to make arrangements for them to perform the feature installation for a fee.

You need to allow additional time to complete your jobs, back up your system, IPL your system, and verify your hardware configuration.

When you use these instructions, you will do the following:

- Remove the system unit covers.
- Install your new hardware.
- Install covers.
- IPL your operating system.
- Verify your new hardware configuration.

Some of the steps in these instructions may require a tool to remove the screws. It is recommended that you use:

- A medium-sized standard screwdriver or a 5.0 mm socket wrench.
- A medium-sized standard screwdriver or a 5.5 mm socket wrench.

Before you begin:

- Ensure that you have a current backup of your operating system and licensed programs. If you have backed up the operating system and licensed programs since the last time you applied PTFs, that backup is acceptable.
- Ensure that you take a few minutes to become familiar with these instructions.
- If there are incorrect, missing or visibly damaged parts, contact one of the following:
 - Your authorized dealer
 - Point of purchase (For example, IBM Direct)
 - IBM Rochester Manufacturing Automated Information Line (R-MAIL)
 - 1-800-300-8751 (United States)
 - 1-507-253-5242 (worldwide)
- Determine if there are any existing prerequisites before you install your new feature. Go to this Web site and locate your feature number and OS/400 release and check the prerequisites.

http://as400service.ibm.com/s_dir/slkbases.NSF/

Then do the following to get to the Customer Install Features Prerequisites:

1. Select **All Documents**

2. Select **Collapse**
3. Select **General Information**
4. Select **Offerings**
5. Select **Feature Prerequisites**
6. Select **Customer Install Features Prerequisites**

The pictures in these instructions may not look exactly like the system unit that you have. However, the steps to perform the task are the same.

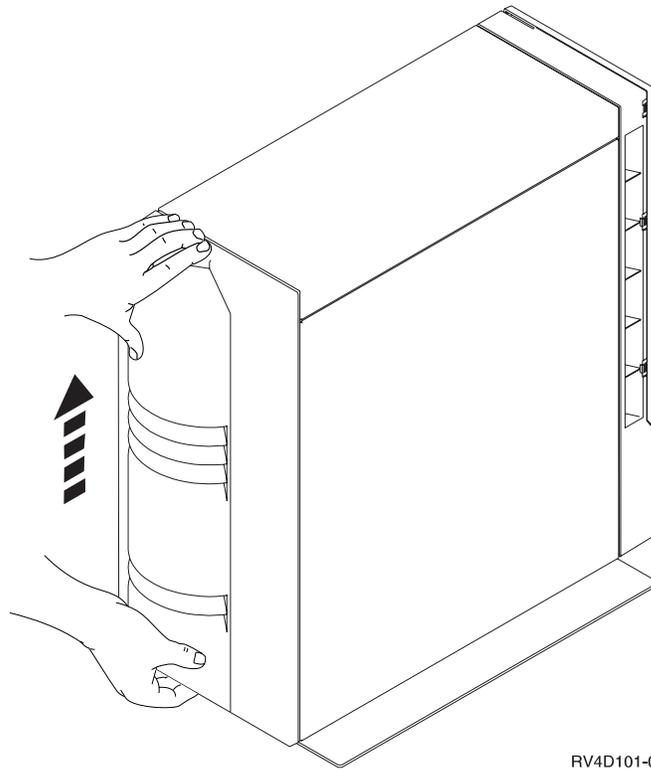
Getting Ready

- ___ 1. Ensure that all jobs are complete.
- ___ 2. When all jobs are complete, type
`pwrdownsys *immed`

on an AS/400 command line and press the Enter key.

Note: Should you encounter difficulties during the installation, contact your authorized dealer or service provider.

- ___ 3. When the AS/400 is completely powered down, power off all PCs and devices, such as printers and displays, that are connected to the system unit.
- ___ 4. Unplug any power cords, such as printers and displays, from electrical outlets.
- ___ 5. Unplug the system unit power cord from the electrical outlet.
- ___ 6. Remove the system unit back cover by placing your hand near the bottom of the cover and lifting up and out (Figure 1 on page 3).



RV4D101-0

Figure 1. Remove System Unit Back Cover

- ___ 7. Remove the system unit front cover by gripping the sides of the cover **A** and pulling the cover toward you (Figure 2 on page 4).

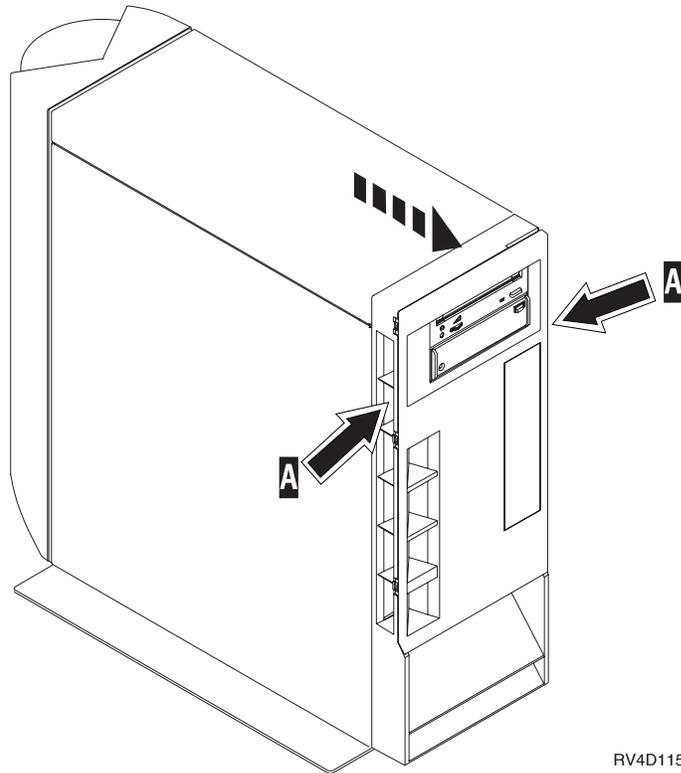


Figure 2. Remove System Unit Front Cover

Installing Memory on the Integrated NetFinity Server

1. 286x memory is installed on the 285x or 2866 Integrated NetFinity Server card. Your system unit can have one or two Server cards. Position **C02** is the location of the Server card in the base unit. Position **E04** is the location of the Server card in the expansion unit (Figure 3 on page 5).

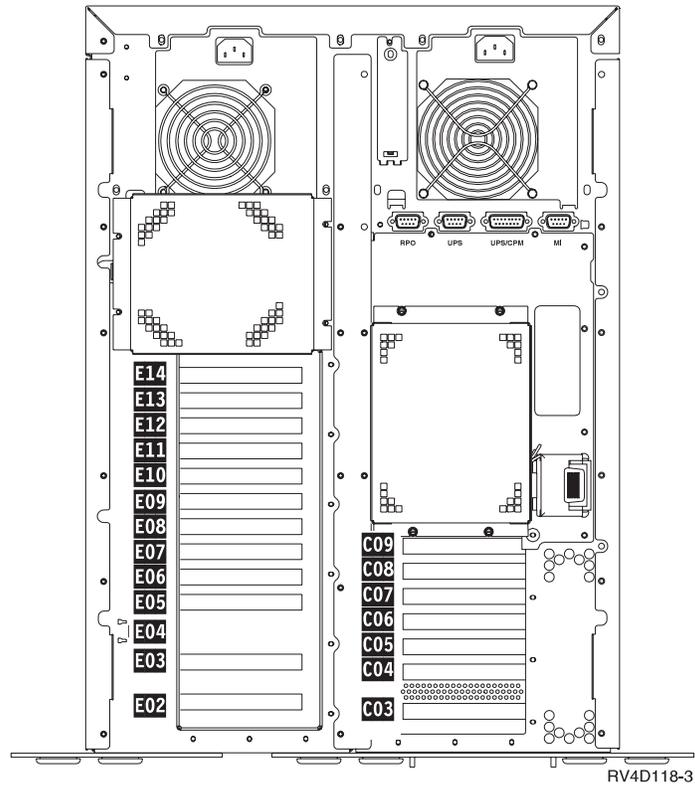


Figure 3. Card Locations

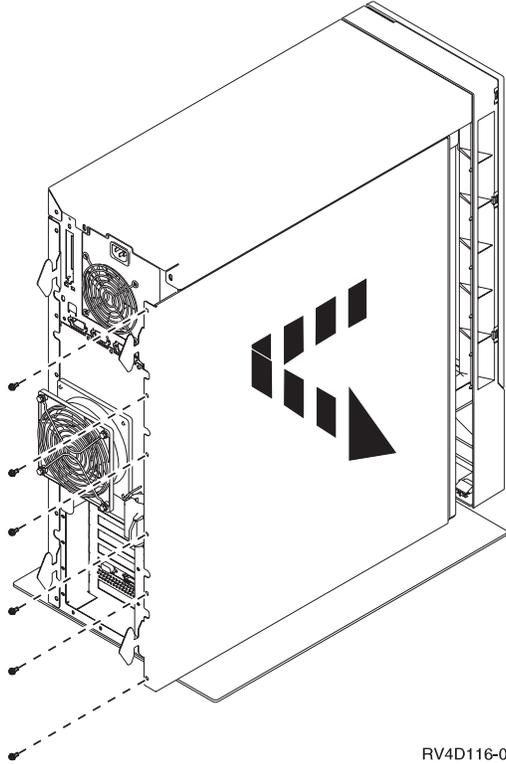
- 2. Look at the back of your system unit and locate your Server card. If you only have a base unit, the memory will be installed on the card in position **C02**. You cannot see if a card is installed in **C02**; however, if you have a card installed in **C04**, you also have a card in **C02**.

If you have an expansion unit, the memory will be installed on the card in position **E04**.

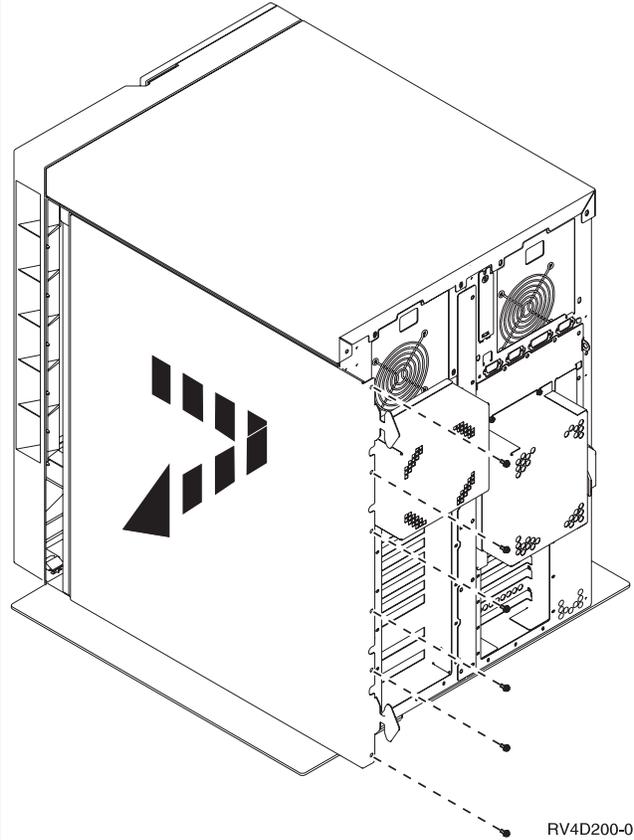
- 3.
- 4. Remove the side cover by removing the screws and sliding the cover from front to back until it stops. Pull the cover out (Table 1 on page 6).
- Remove only the right side cover (looking at the back of the system unit), when installing a device in the base unit.
 - Remove the left side cover, when you have an expansion unit, and when you have a device to install in the expansion unit.
 - Remove both side covers, when you have an expansion unit, and when you have devices to install in both the base and expansion units.

Table 1. Remove Side Cover

Right Side Cover



Left Side Cover



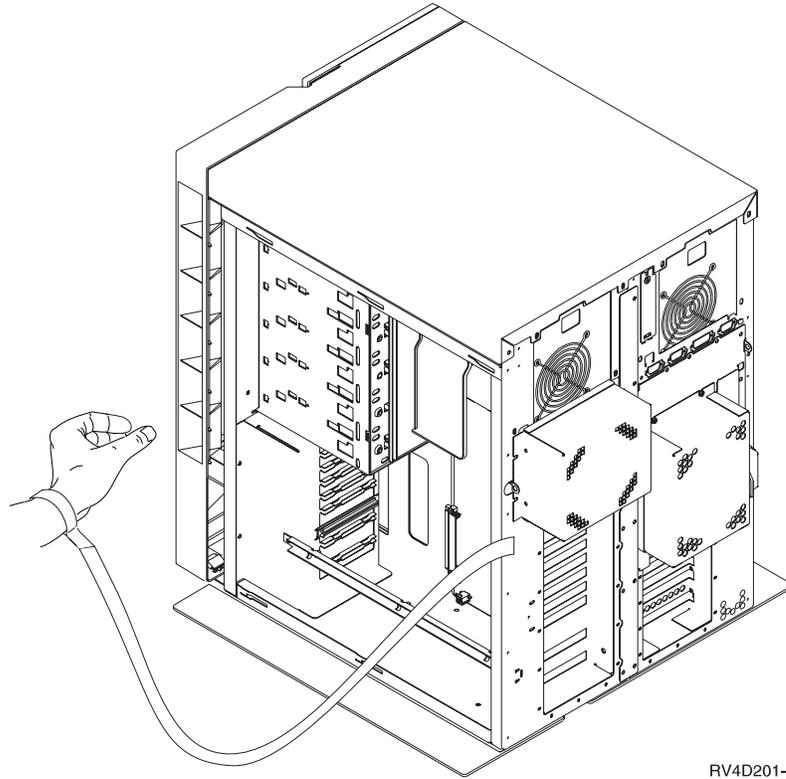
Your system unit contains a battery that only trained personnel can replace.

- 5. **CAUTION:**
The battery is a lithium battery. Only trained service personnel may replace this battery using the instructions in the Problem Analysis, Repair, and Parts service manual. To avoid possible explosion, do not burn or charge the battery. Exchange only with the IBM-approved part. Discard the battery as instructed by local regulations. (RSFTC241)
- 6. Attach the disposable wrist strap to prevent electrostatic discharge from damaging a device. Figure 4 on page 7 shows an example of where to attach the adhesive part of the foil to an unpainted surface.

Notes:

- a. Follow the same precautions you would use without the wrist strap. The 2209 Disposable Wrist Strap is for static control. It will not increase nor decrease your risk of receiving electric shock when using or working on electrical equipment.
- b. Discard the wrist strap immediately and contact your dealer for a replacement, if the disposable wrist strap appears damaged or cut off. Do not continue until a new wrist strap is available.
- c. Remove the liner from the copper foil at the end, when you unroll the wrist strap.

- d. Attach the copper foil to an **exposed, unpainted** metal surface on the frame of the system unit (electrical ground).



RV4D201-0

Figure 4. Attach Wrist Strap

- ___ 7. Are you installing the memory card on the Integrated NetFinity Server located in position C02?

Yes No

- ↓ Go to "Installing Memory on a 285x or 2866 Server Card in Position E04" on page 9.

Installing Memory on a 285x or 2866 Server Card in Position C02

- ___ 1. Install memory on the Server card that is located in position C02. Do not remove the Server card from the system unit.
For easier access to the Server card in position C02, remove the adapter card from position C04 by doing the following:
 - a. Disconnect the cables that are connected to the card. **Be sure to note where each cable is connected.**
 - b. Remove the screw **A** (Figure 5 on page 8).

- c. **Attention:** Adapter cards are fragile:
- Handle only by the edges
 - Keep fingers off printed circuit area
 - Use static strap when handling
 - Leave in protective packaging until ready to install
- Remove the card from the system unit.

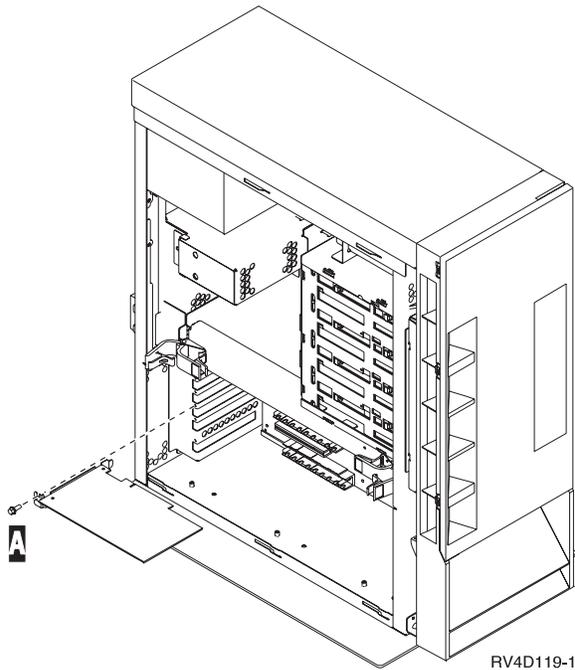
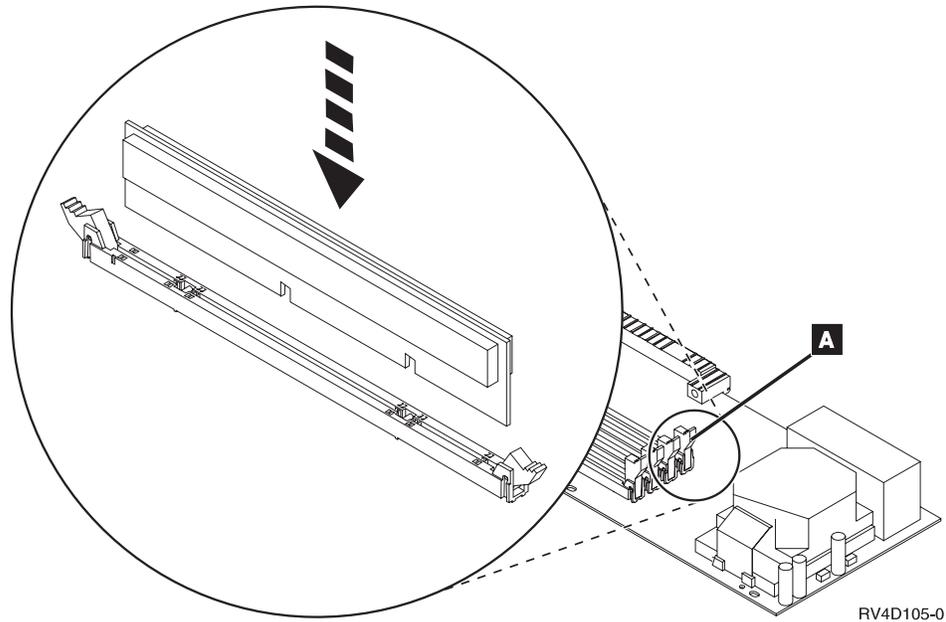


Figure 5. Removing Adapter Card

- d. Lay the card on a static protective bag that is provided.
- ___ 2. Find the package that contains a 286x memory card. Carefully remove the memory card from the static-protective package.
- ___ 3. Install the 286x memory card by doing the following:
- a. Locate the Server card in position C02 inside the system unit (Figure 6 on page 9).
 - b. Align the memory card with the next available connector on the Server card.

Note: The following picture shows the location of the first memory card **A**.

- c. Snap the card in place by moving it downward in the connector. The memory card has a distinct click as it snaps into the connector.



RV4D105-0

Figure 6. Location of Memory on Server

- d. Repeat this step if you have another 286x memory card to install.
- ___ 4. Install all cards that you removed.

Note: Connect any cables you might have disconnected from a card.

- ___ 5. Go to “Completing the Installation” on page 11.

Installing Memory on a 285x or 2866 Server Card in Position E04

- ___ 1. Remove the Integrated NetFinity Server card from position E04 by doing the following:
Cards are fragile. Handle with care.
 - a. Remove the screw **B** (Figure 7 on page 10) from the card bracket in position E04.

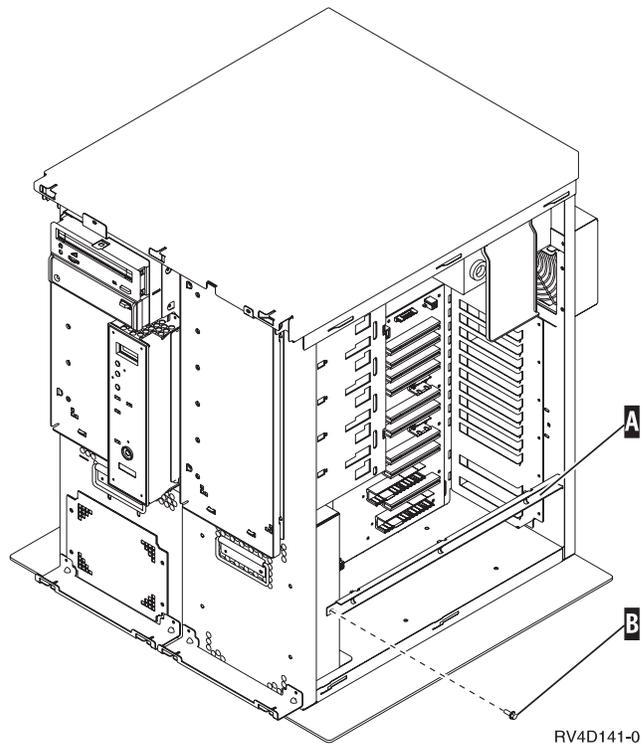


Figure 7. Remove Server Bracket

- b. Remove the card bracket **A** from the expansion unit.
- c. Remove the Server card from the expansion unit.
- d. Turn the card over and carefully lay it on the static protective bag provided.
- e. Find the package that contains the 286x memory card. Carefully remove the memory card from the static-protective package.
- f. Install the 286x memory card by doing the following:
 - 1) Align the memory card with the next available connector on the Server card.

Note: Figure 8 on page 11 shows the location of the first memory card **A**.

- 2) Snap the card in place by moving it downward in the connector. The memory card as a distinct click as it snaps into the connector.

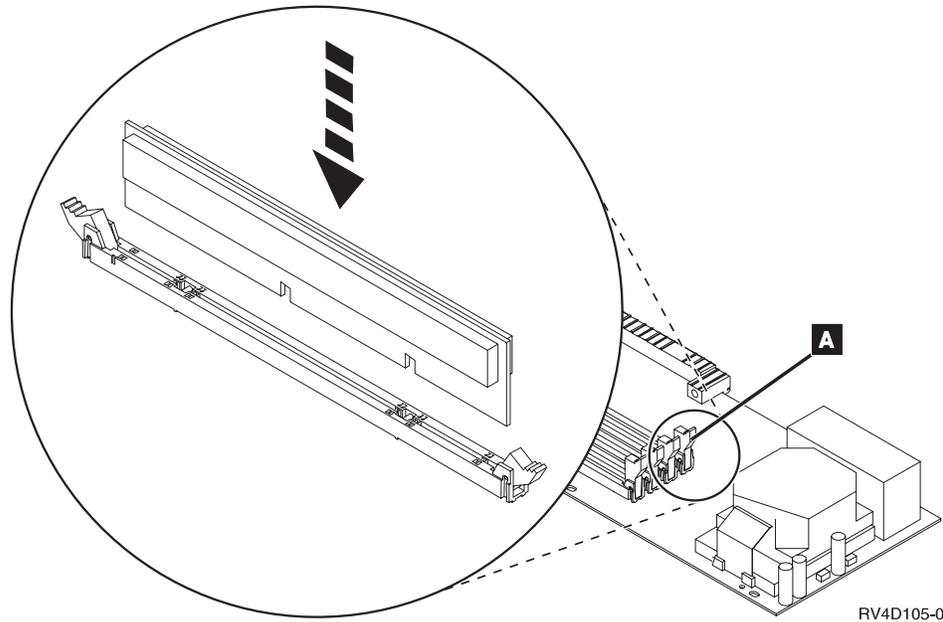


Figure 8. Location of Memory on the Server Card

- 3) Repeat this step if you have another 286x memory card to install.
- g. Install the Server card in position **E04**. Firmly push on the card.
- h. Install the card bracket and screw.

___ 2. Do you have any other adapter cards or devices to install?

No **Yes**

↓ If you know where to install the adapter card, follow the steps you just performed to install the card.

If you do not know where to install the adapter card, go to the placement tables in these instructions or go to the instructions that came with the adapter card. Look for the step that tells you where to install the adapter card and complete the installation.

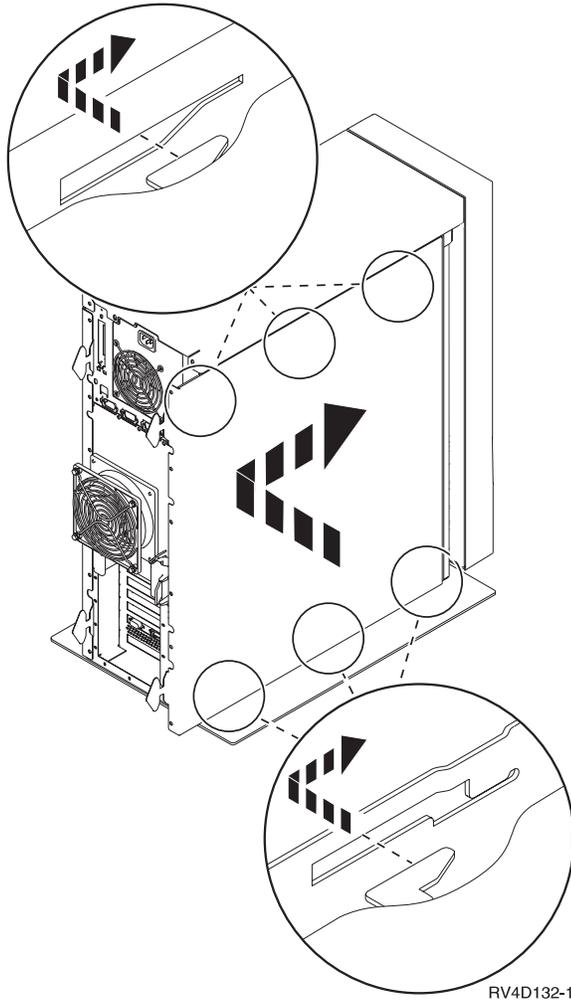
If you have another device such as an adapter card, a disk unit, or a tape unit to install, go to the instructions that came with that device.

Completing the Installation

- ___ 1. Install the system unit or expansion unit side cover, or both, by aligning the tabs on the top and bottom edge and press forward to make sure all tabs enter the slots. Slide the cover toward the front of the system unit until it stops and install the screws (Table 2 on page 12).

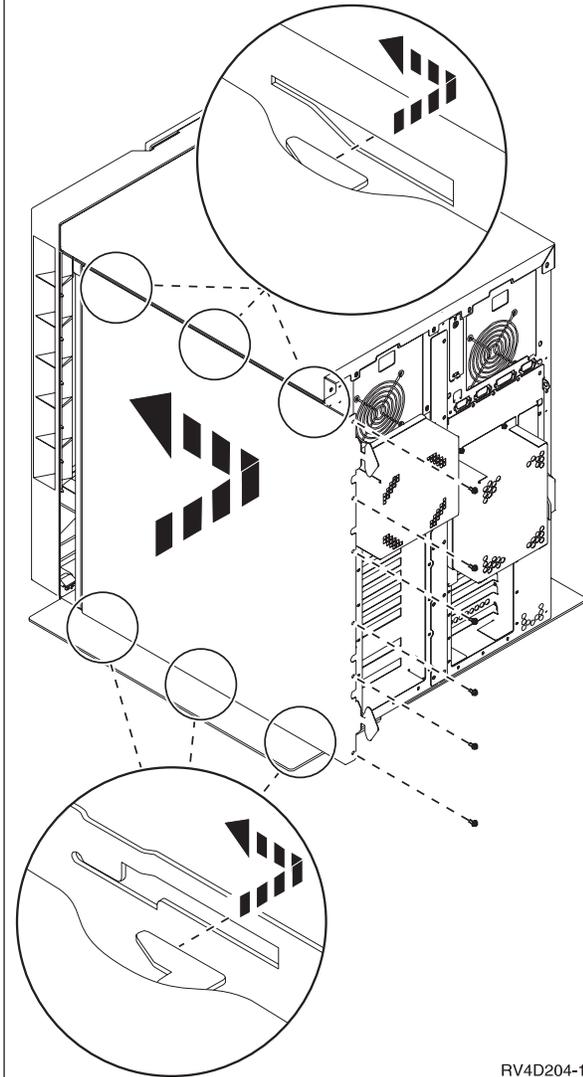
Table 2. Install Side Cover

Base Side



RV4D132-1

Expansion Side



RV4D204-1

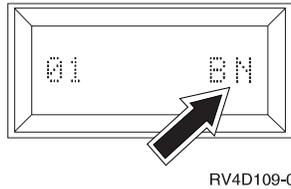
- 2. Install the system unit front cover, if removed.
- 3. Install the system unit back cover.
- 4. **DANGER**

An electrical outlet that is not correctly wired could place hazardous voltage on metal parts of the system or the products that attach to the system. It is the customer's responsibility to ensure that the outlet is correctly wired and grounded to prevent an electrical shock. (RSFTD201)

Plug the following power cords into an electrical outlet.

- System unit
- System unit console
- 5. Plug in and power on all attached devices, such as printers and displays.

- ___ 6. Look at the Function/Data display on the control panel. Does a **B N** appear in the Function/Data display?



Yes **No**

↓ Do the following:

- a. Press the Up or Down select push button until **02** appears in the Function/Data display.
- b. Press the Enter push button on the control panel.
- c. Press the Up or Down select push button until **B N** appears in the Function/Data display.
- d. Press the Enter push button on the control panel.
- e. Press the Up or Down select push button until **01** appears in the Function/Data display.
- f. Press the Enter push button on the control panel.
- g. Go to step 7.

___ 7. Power on the workstation or PC that is your console.

___ 8. Press the system unit power-on button. The power-on light will appear.

Note: The system takes approximately 8 to 10 minutes to power on and complete an IPL.

___ 9. Sign on the system unit. Ensure that you have service tools authority.

___ 10. Do the following to verify your memory card configuration:

- a. On an AS/400 command line, type:

STRSST

Press the Enter key.

- b. When the Start a Service Tools menu appears, select the *Start a service tool* option.

Press the Enter key.

- c. When the Start a Service Tool menu appears, select the *Hardware service manager* option.

Press the Enter key.

- d. When the Hardware Service Manger menu appears, select the *Packaging hardware resources (system, frames, cards...)* option.

Press the Enter key.

- e. When the Packaging Hardware Resources menu appears, type a **9** in front of the *System Unit*.

Press the Enter key.

If the 2850, 286x, or 285A cards are not listed, ensure that the cards and memory are properly installed.

- f. On the Packaging Hardware Resources menu, type an **8** in the Opt column next to Communications IOA 2857-001.

Press the Enter key.

- g. When the Logical Resources Associated with a Packaging Resource menu appears, type a 5 in the Opt column next to the Communications IOA.

Press the Enter key.

- h. When the Communications Hardware Resource Detail menu appears, look at the line "Memory installed on IOP (MB)". The number should reflect the amount of memory you just installed on your 285x or 2866 Integrated NetFinity Server. If it does not, ensure that the memory cards are properly installed.
- i. Return to the Packaging Hardware Resources menu by pressing **F12** twice. If you have a printer, print the configuration list.

Note: To print the configuration list, press **F6** on the Packaging Hardware Resources menu.

Place the configuration list in the *Basic System Operation, Administration, and Problem Handling*, SC41-5206-04 book.

Note: To print the hardware resources list, press **F12** one time. When the logical Hardware Resources System Bus menu appears, press **F6**.

- j. To return to the AS/400 Main menu, press **F3** three times and then press the Enter key.
- ___ 11. For information on how to make your system operational, go to the *AS/400 Information Center*. You can access the Information Center from the *AS/400 Information Center*, SK3T-2027-03 or from the following Web site:
<http://www.as400.ibm.com/infocenter>
 - ___ 12. Your feature upgrade is complete. Keep all miscellaneous parts, such as wrap connectors, with the Service Materials box or in a safe place.

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