

ISP2150 2U Rack Server Platform

Quick Start Guide

A Guide for Technically Qualified Assemblers of Intel® Identified Subassemblies/Products

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ISP2150

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Getting Help

The *ISP2150 2U Rack Server Platform Product Guide* can be found at <http://channel.intel.com/isp/>

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Order Number: A09583-001

Before You Begin

FCC/ Emissions Disclaimer

This equipment has been tested and verified to comply with Class B limits when configured into a compatible host computer, pursuant to Part 15 of the FCC Rules, CISPR 22, and EN55022. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

To ensure EMC compliance with your local regional rules and regulations, the final configuration of your end system product may require additional EMC compliance testing. For more information please contact your local Intel Representative.

Cautions and Warnings



WARNINGS

Pressing the power button does not turn off power to this server. Disconnect the server from its power source and from any telecommunications links, networks, or modems before doing any of the procedures described in this guide. Failure to do this can result in personal injury or equipment damage. Some circuitry in the server may continue to operate even though front panel power button is off.

This guide is for qualified technical personnel with experience installing and configuring servers.

Read and adhere to all warnings, cautions, and notices in this guide and the documentation supplied with the chassis, power supply, and accessory modules. If the instructions for the chassis and power supply are inconsistent with these instructions or the instructions for accessory modules, contact the supplier to find out how you can ensure that your computer meets safety and regulatory requirements.



CAUTION

Electrostatic discharge (ESD) can damage server components. Do the described procedures only at an ESD workstation. If no such station is available, you can provide some ESD protection by wearing an antistatic wrist strap and attaching it to a metal part of the computer chassis.

Safety and Regulatory Requirements

See the *ISP2150 2U Rack Server Platform Product Guide* for all applicable safety standards, electromagnetic compatibility (EMC) regulations, and product certification markings.

Intended uses: This product was evaluated for use in computer rack cabinets within computer rooms and similar locations. Other uses require further evaluation.

Safety Compliance

USA:	UL 1950 – CSA 950-95, 3 rd Edition
Canada:	UL certified to CSA 950-95 for Canada (product bears the single UL mark for U.S. and Canada)
Europe:	German GS Mark – ERG to EN60950 2nd Edition, with amendments
International:	NEMKO to IEC950 2 nd Edition + Amd 1-4 NEMKO – EN60 950 2 nd Edition + Amd 1-4 NEMKO – EMKO-TSE (74-SEC) 207/94
Australian / New Zealand:	AS/NZ 3548, Class B limits (CISPR 22) AS/NZ 3260 (IEC 950 including national AU deviations)

Electromagnetic Compatibility (EMC)

USA:	FCC CFR 47 Part 15, Class B
Canada:	IC ICES-003 Class B
Europe:	EN55022, Class B EN50082-1 IEC 801-2 ESD Susceptibility IEC 801-3 Radiated Immunity IEC 801-4 Electrical Fast Transient EN61000-3-2 Limit for Harmonic Current Emissions
International:	CISPR 22, Class B
Japan:	VCCI Class B (CISPR 22 B limit)

ISP2150

Congratulations on the purchase of your new Intel® ISP2150 system. This Quick Start introduces you to your new system, guides you through rack kit installation, and helps you get the system started.



The following procedures describe how operate the system's front bezel, which covers the front panel controls and indicators. For a description of the front panel features, refer to Front Panel Controls and Indicators.

Opening and Closing the Front Bezel



With the bezel open you have access to all of your system's front panel functions and indicators. With the bezel closed you can protect critical functions and still view the system's indicators.

To open the bezel, do the following:

1. Stand in front of the chassis and grasp the edges of the bezel from each side.
2. Gently pull the bezel towards you until it begins to separate from the chassis.
3. As the bezel separates from the chassis, allow it to swing to its open position situated below the chassis.

To close the bezel, gently raise it upwards. The hinging mechanism will guide the bezel into the correct position where it will snap shut.

Locking and Unlocking the Front Bezel

The bezel can be locked and unlocked to prevent unwanted access to the system.

To lock the bezel:

1. Remove the keys from inside the bezel (they should be taped to the inside).
2. Close the bezel and insert the key into the lock. Turn the lock counterclockwise until it stops (about a quarter turn). The bezel is now locked and cannot be opened.

To unlock the bezel, insert the key into the lock and turn the lock clockwise until it stops (about a quarter turn). The bezel is now unlocked and can be opened again.

Attaching and Removing the Front Bezel

The front bezel can be installed or removed from the system.

To attach the bezel:

1. With the LED light tunnels located at the top of the bezel, push in the arms on either side of the bezel far enough so that the tabs on the ends of the arms can be inserted into the holes in the chassis.
2. Insert the tabs into the holes in the handles on the chassis. Make sure the tabs on each side of the bezel are completely in the holes in the handles.

To remove the bezel:

1. With the bezel opened, gently push the metal hinge arms located on each side of the bezel in towards the middle of the unit.
2. Push the arms far enough in so that the tabs on the end of the arms are completely out of the holes in the handles on the chassis. The bezel should now be able to be removed.
3. The bezel should now be able to open and close easily and completely.

Installation

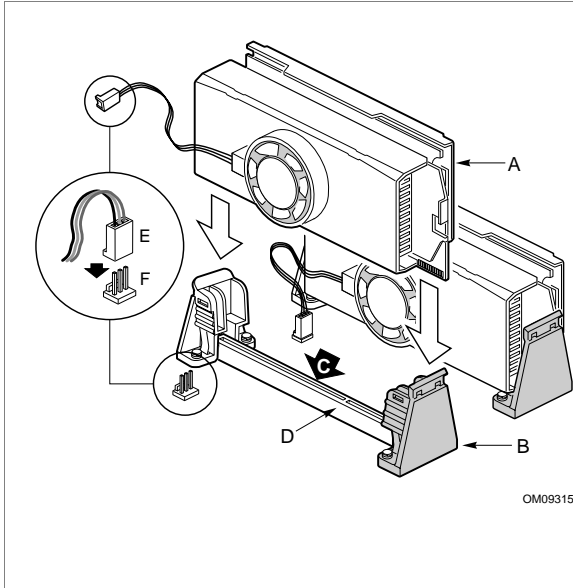
Follow these instructions to get your server to the point where you can load an operating system on it.

Open the Cover

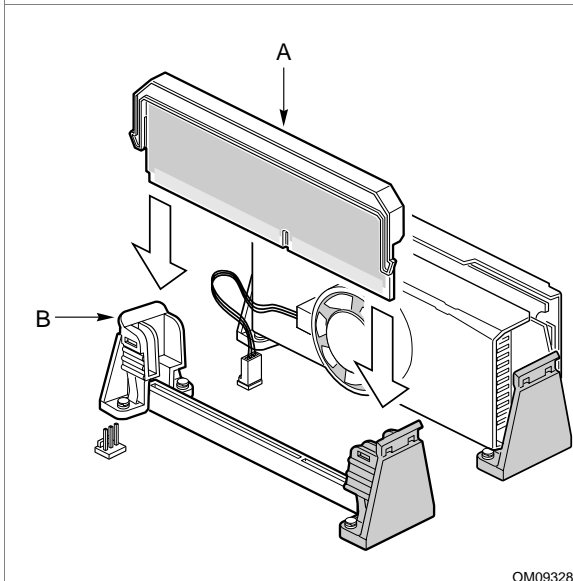
1. Loosen the three screws on the rear of the system.
2. Pull the cover back and remove it from the chassis.

Install a Microprocessor

The server supports up to two Intel® Pentium® II or Pentium III processors (with 100 MHz system bus). If you are installing two processors, make sure they are the same speed, voltage, and stepping.



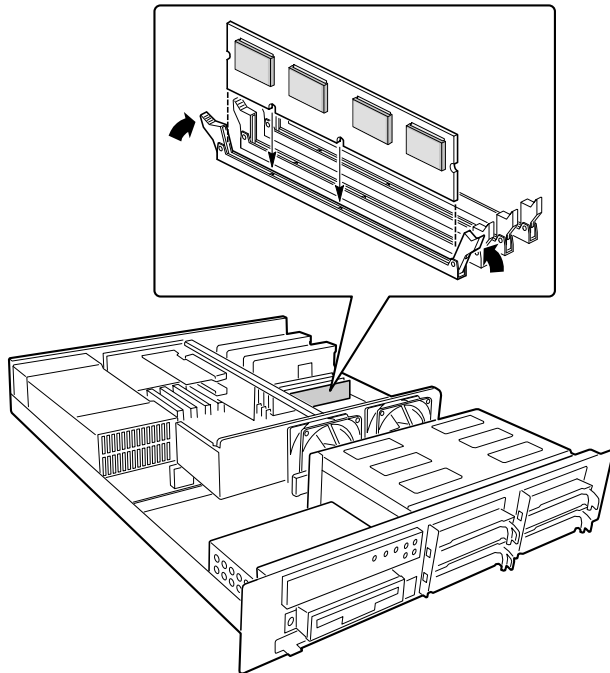
1. Remove the new processor from its anti-static package and place it on a grounded, static free surface or conductive foam pad.
2. Attach the small end of the power cable to the fan connector on the S.E.C. cartridge, then attach the large end (B) to the 3-pin connector on the server board.
3. Orient the processor so that the heat sink faces the I/O connectors. Slide the processor into the retention module. Push down firmly, with even pressure on both sides of the top, until the processor is seated.
4. To lock in the processor, push the latches inward on the retention module until they click into place. The latches must be secured for proper electrical connection of the processor.
5. After you have installed the processor, you must configure its speed in BIOS set-up.



CAUTION, Single-Processor Configurations

If you install only one processor in a system, it must go in the primary connector (closest to the DIMM sockets). With a single-processor configuration, you must install a termination board and termination latch assembly (A) in the empty secondary connector (B) to ensure proper operation of your system. A termination board is provided with your system.

Install Memory



OM09318

The server only supports 100 MHz PC/100-compliant SDRAM.

- Install from 32 MB to 2 GB of unbuffered memory, using up to four single or double-banked DIMMs
- Or
- Install from 32 MB to 2 GB of registered memory, using up to four single or double-banked DIMMs

Installed DIMMs must be the same speed and either all registered or all unbuffered. For a list of supported memory, call your service representative or visit the Intel Support website:

[Http://support.intel.com/support/motherboards/server/1440gx/compat.htm](http://support.intel.com/support/motherboards/server/1440gx/compat.htm)



CAUTION

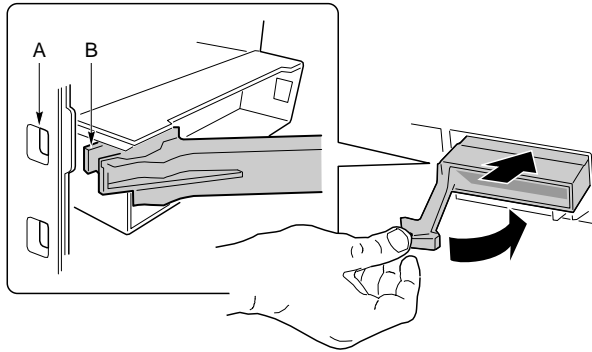
Use extreme care when installing a DIMM. Applying too much pressure can damage the socket. DIMMs are keyed and can be inserted in only one way.

Mixing dissimilar metals may cause later memory failures resulting in data corruption. Only install DIMMs with gold-plated edge connectors in gold-plated sockets.

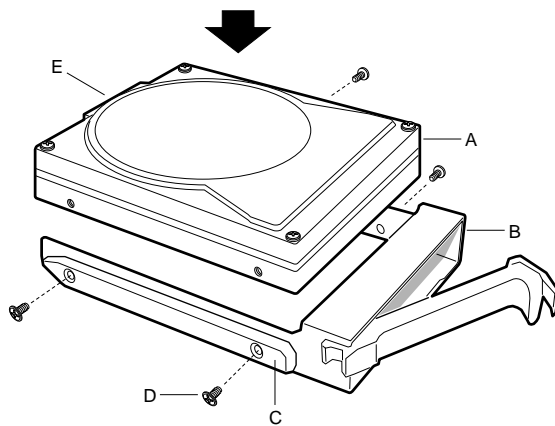
To install your memory:

1. Open your server.
2. Holding the DIMM only by its edges, remove it from its anti-static package.
3. Orient the DIMM so that the two notches in the bottom edge of the DIMM align with the keyed socket.
4. Insert the bottom edge of the DIMM into the socket, and press down firmly on the DIMM until it seats correctly.
5. Gently push the plastic ejector levers on the socket ends to the upright position.
6. Repeat the steps to install each DIMM.
7. Ensure that no cables are protruding from the server chassis and then close the server.
8. Connect all external cables and the power cord to the server.
9. Turn on the monitor and then the server.

Install a Hard Drive



OM09317

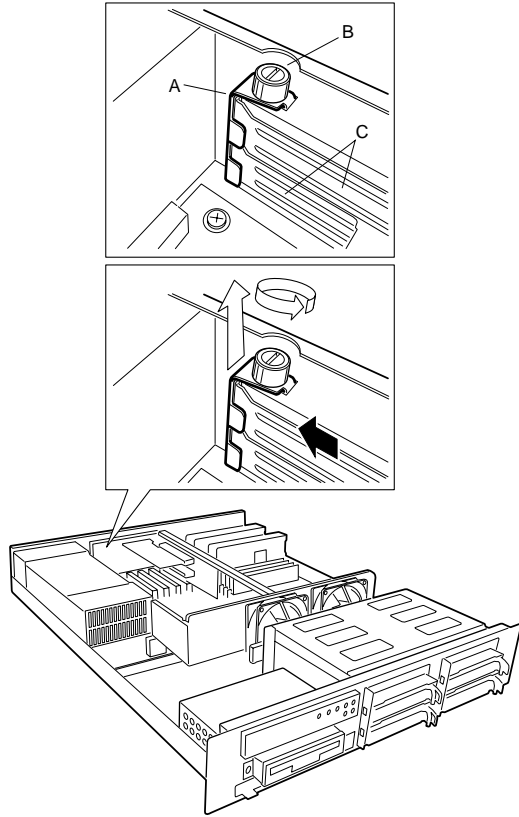


OM09323

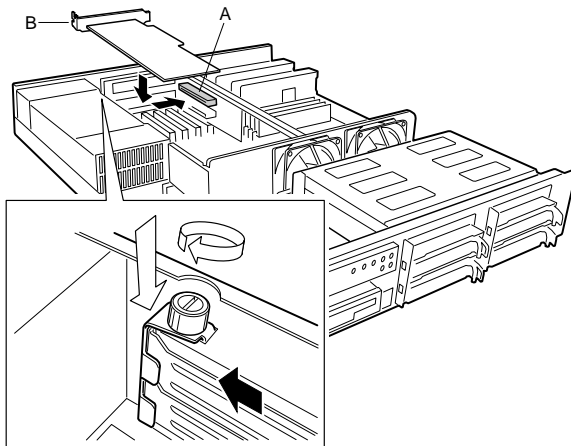
Your server does not include a hard drive. You must purchase them separately and install them. The server has four hot-swappable SCSI hard drive bays.

1. Remove the drive carrier(s) from the drive bays by unclipping the retention lever on the right side of the handle. Pull the retention lever toward you until the tab end (B) of the lever is free of the housing slot (A). Pull the drive forward and out of the housing.
2. Remove the hard drive from its wrapper and place it on an anti-static surface.
3. Remove and save the four screws (D) from the drive carrier/drive slide track.
4. Align the drive holes to the holes in the drive carrier slide track (C), insert the screws that you previously removed, and attach the carrier (B) to the drive (A). Make sure that the connector end of the drive (E) is facing the back of the carrier and the drive top is facing upward before inserting the screws.
5. Slide the carrier/drive into the chassis with the retention mechanism extended in the open position, then push the arm towards the front of the chassis until the lever tab clicks into the chassis slot indicating that it is closed.

Installing Add-in Cards



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OM09326

You can only add two PCI cards to this server. You must use the PCI slots on the riser card. Do not use any expansion slots on the server board.

1. Remove the expansion slot cover for the slot you wish to use. Remove the thumbscrew (B) holding the cover retention bracket (A) to the chassis. Remove the bracket from the chassis.
2. Remove the expansion slot cover (C) for the slot you wish to use.

3. Remove add-in board from its protective wrapper. Set jumpers or switches according to the manufacturer's instructions.
4. Hold board by its top edge or upper corners. Firmly press it into an open expansion slot on the riser card. The tapered foot of the board-retaining bracket must fit into the mating slot in the expansion slot frame. Install the board component side DOWN.

NOTE

If you are installing a full-length PCI card, slide the card guide in front of the fans before installing the card.

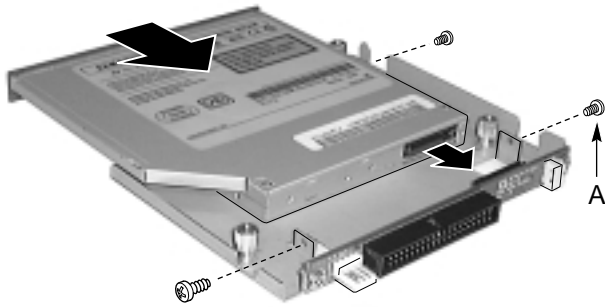
5. Align the rounded notch in the retaining bracket (B) with the threaded hole in the frame. The bracket fits the space that was occupied by the slot cover.

NOTE

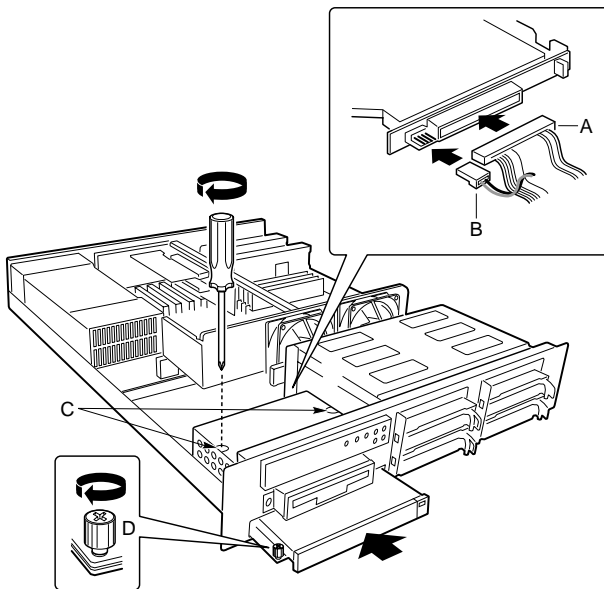
If you are installing a full-length PCI card, slide the card guide back into place. The back edge of the card should be held in place by the rail of the card guide.

6. Install the cover retention bracket and thumbscrew.

Install a Slim-Line CD-ROM Drive



OM09348

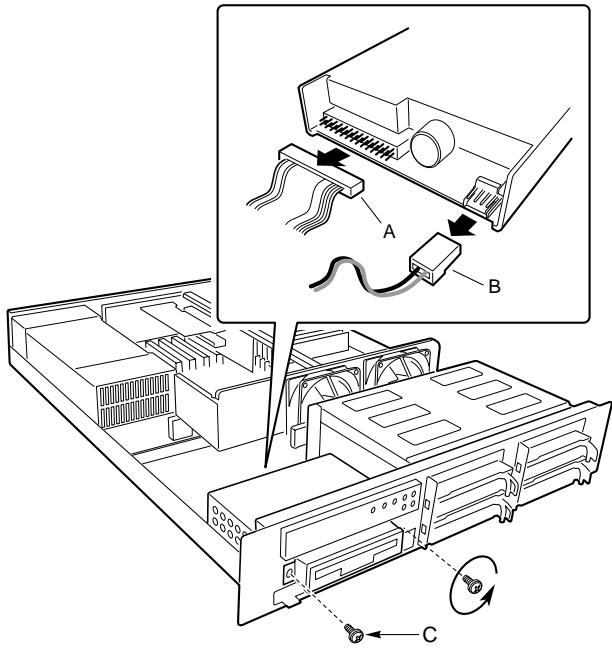


OM09319

Your server does not come with an integrated slim-line CD-ROM drive. You must purchase one separately and install it.

1. Remove the drive from its protective wrapper, and place it on an anti-static surface.
2. Set any jumpers and/or switches on the drive according to the drive manufacturer's instructions.
3. Attach the CD-ROM drive to the CD tray using the mounting screws (A) supplied with the system.
4. Remove the screws that hold the filler panel to the front of the chassis and slide out the panel.
5. Slide the slim-line CD tray into the CD-ROM bay. It is recommended that you first remove the diskette drive in the section "Removing the Diskette Drive".
6. Connect the CD-ROM IDE cable (A) and power (B) cables to the connector at the back of the CD tray.
7. Reinstall the diskette drive in the section "Re-Installing the Diskette Drive".
8. Insert the recessed retention screws (C) through the access holes in the top of the drive bay housing.
9. Insert the retention screw (D) on the front of the chassis.

Removing a Diskette Drive



OM09316

1. Disconnect the power (B) and signal (A) cables from the diskette drive. The connectors are keyed for ease in reconnecting them to the drive.
2. Remove and save the screws (C) that secure the diskette drive carrier to the front of the chassis.
3. Slide the drive carrier out the front of the chassis.
4. Remove and save the screws from the sides of the drive carrier.
5. Pull the drive out of the carrier and place the drive in an anti-static protective wrapper if you are not reinstalling it.

Re-Installing a Diskette Drive

1. Remove the 3.5-inch diskette drive from its protective wrapper, and place it component-side up on an anti-static surface.
2. Install the drive into the drive carrier and secure it with the screws that you removed.
3. Slide the drive carrier through the front of the chassis.
4. Secure the drive carrier to the front of the chassis with the screws you removed earlier.
5. Connect the signal and power cables to the drive according to the manufacturer's specifications.

Close the Cover

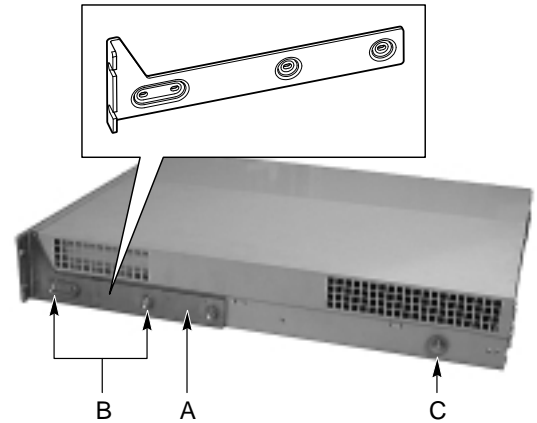
1. Place the cover on the chassis and slide it forwards as far as possible. The sides and front of the cover fit inside the chassis.
2. Tighten the three screws on the rear of the chassis.

Installing the Front Bracket and Racking Your System

The ISP2150 system comes with mounting bracket hardware that allows you to install it into cabinets and relay racks. The following procedures describe how to mount the ISP2150 system in each type of chassis.

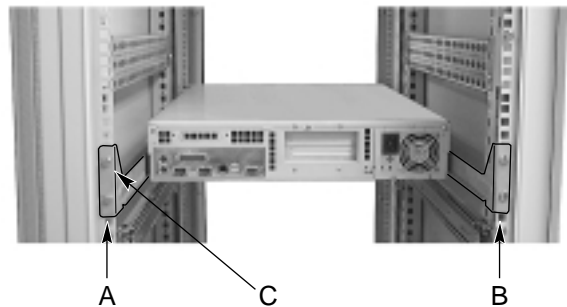
Installing the Front Bracket in a Cabinet

1. *Attach the left and right front brackets to the system.*
Your system comes with left and right front brackets (A) and mounting bolts (B) to attach them to the system. Mount the brackets to the sides of the system with the bracket flange flush with the front panel.
2. *Attach the rear support washer to the system.*
The system also comes with two support washers (C). Mount one on each side towards the rear panel of the system.



OM09334

3. *Mount the back support bracket to the cabinet.*
Left (A) and right and left rear mounting brackets also come with the system. Mount the rear brackets in the desired position in the cabinet using the supplied mounting bolts (C) supplied by the cabinet manufacturer.
4. *Slide the system into the back support bracket.*
After attaching the rear brackets, slide the system into the rack using the support washers as rollers.



OM09336

5. *Mount the front bracket to the cabinet.*
To complete the installation, bolt the system's front brackets to the cabinet using the mounting bolts (A) supplied by the cabinet manufacturer.



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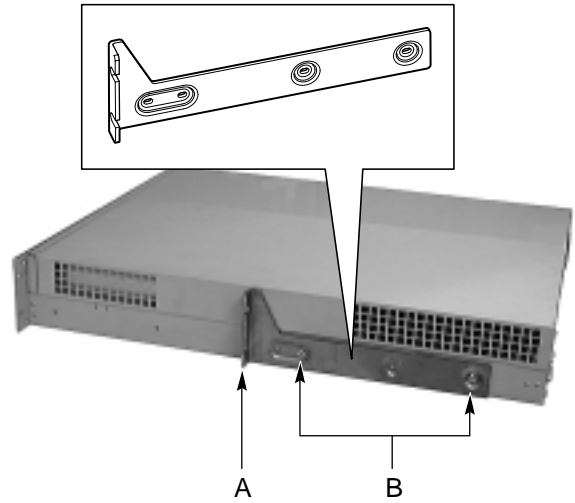
Installing the Front Bracket in a Center-Mount, Relay Rack

1. *Attach the left and right front brackets to the system.*
Your system comes with left and right front brackets (A) and mounting bolts (B) to attach them to the system. Mount the brackets mid-way down the sides of the system as shown in the figure.



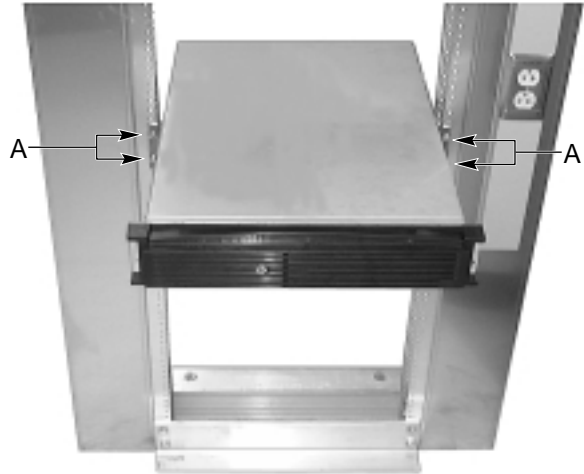
NOTE

You can also mount the bracket so that the flange is flush with the front panel.



OM09335

2. *Mount the bracket to the center channel of the relay rack.* To complete the installation, bolt the system's front brackets to the cabinet using the mounting bolts (A) supplied by the cabinet manufacturer.



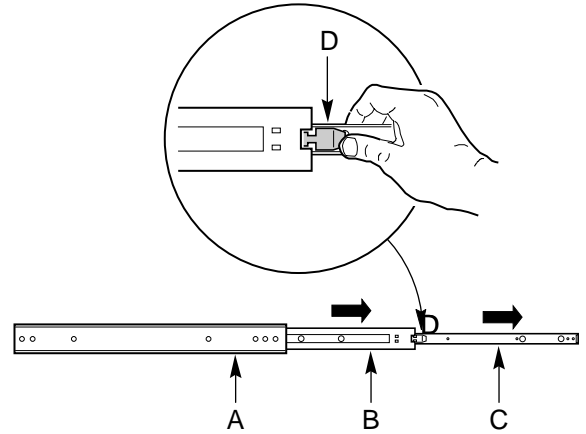
OM09347

Installing the Rail Kit and Racking Your System (Optional Accessory)

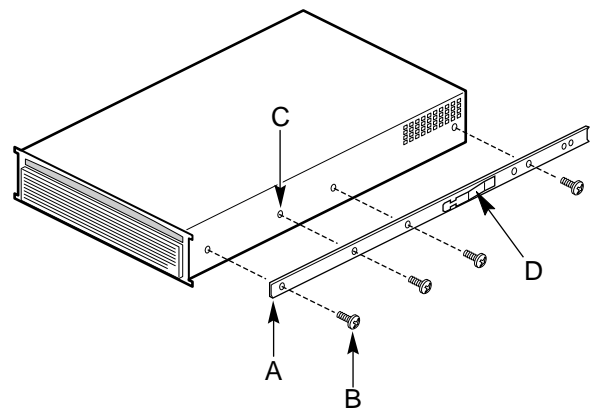
The rail kit that comes with your system allows you to install it into a four-post, network server cabinet (e.g. APC Netshelter). If the cabinet is not of this general type, you will have to purchase a separate rail kit that is specific to your cabinet.

Follow these steps to install the rail kit and place your system into the cabinet.

- 1. Assemble tools and miscellaneous parts.**
You will need a Phillips screwdriver and assorted lock washers and nuts.
- 2. Remove the inside piece (C) from both sides of the rail system.** To remove an inside piece of the rail system, slide the part as far out as you can. This action reveals a brass colored finger tab (D) that when depressed allows you to completely separate the inside rail piece from the outer (A) and middle (B) rail pieces.
- 3. Align each inside rail (A) to a side of the chassis.** Be sure that the flat end of the inside rail is toward the front of the chassis and that the brass colored finger tab (D) is facing outward. With the holes in the chassis (C) aligned with the holes in the rail, fasten the rail using the largest screws (B) supplied with the rail kit.



OM09132

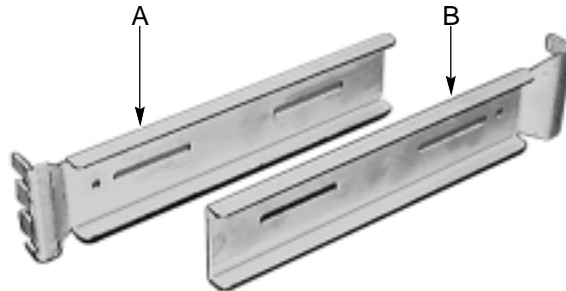


OM09133

4. Here is a combination side and rear view of the chassis after the right inside rail has been attached.

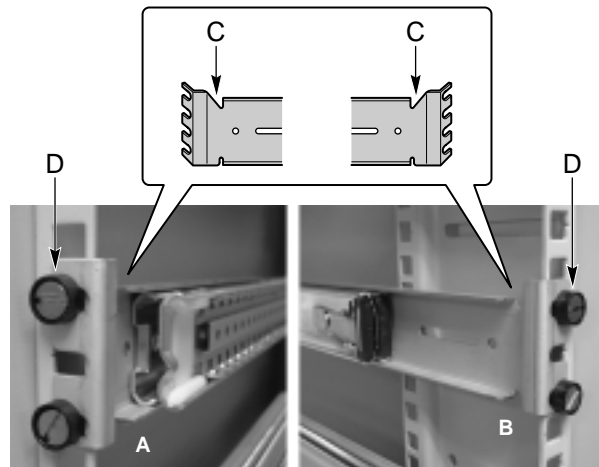


5. Locate the front and rear rail brackets for one side of the rail kit. One pair (A and B) exists for each side of the cabinet rack.



OM09145

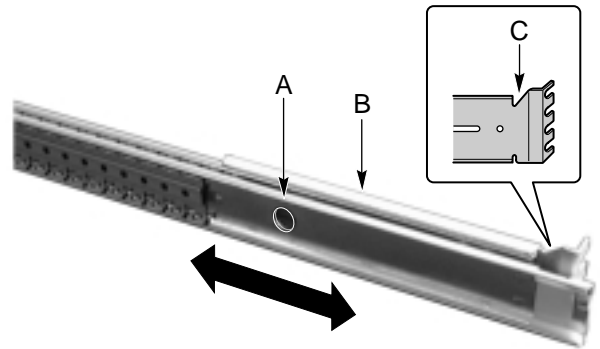
6. Attach all four rail brackets to the cabinet rack. Be sure that the sharper angled side of each bracket is facing up (C). Use eight mounting screws (D) provided by the manufacturer of the cabinet rack. In the illustration to the right, the left photo (A) shows the left-front bracket attached to the cabinet, while the right photo (B) shows the left-rear bracket. (The photo shows the rails inside the brackets. You should not have the rails attached inside the brackets yet.)



OM09142

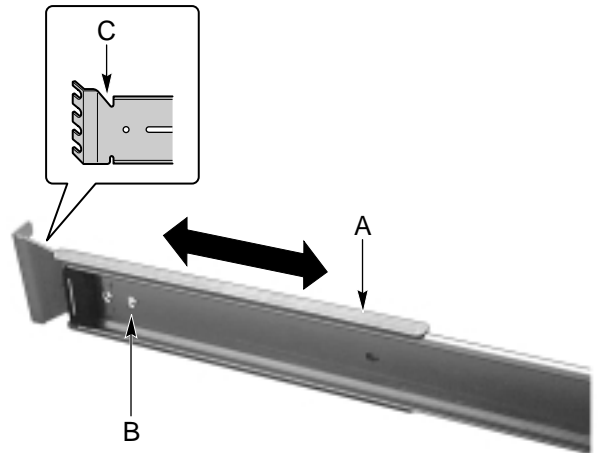
- 7.** Attach the side rail system's outer pieces (total of two) to the rail brackets you installed in step six.

To attach the front part of an outer piece to a rail bracket, you must reveal the access hole (A) by sliding the innermost piece toward the back. Once you see the access hole, align it with the slot in the rail bracket such that you can secure the bolt. Do not tighten the nut and bolt until you have aligned the rear portion of the rail system (see the next step).



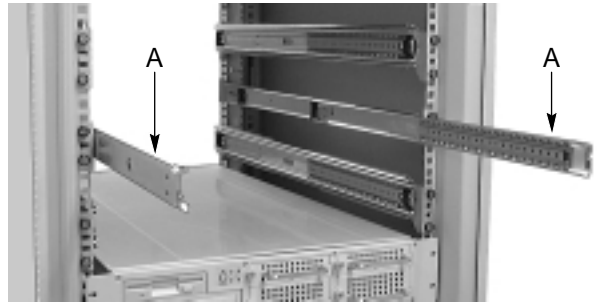
OM09138

- 8.** To attach the rear part of the rail system to the rear rail bracket (A), slide the rail system within the rail brackets such that you can place a bolt through the rail's hole (B) and into the rail bracket's slot. Loosely tighten the bolt and nut. You should be able to slide the entire rail system back and forth in the rail brackets. When you have centered the rails in the bracket, tighten the fastening bolts and nuts.



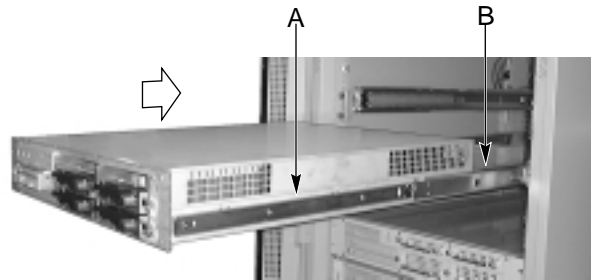
OM09144

- 9.** Extend the right and left rails (A) so they fully extend in front of the cabinet rack. The rail system is now ready to receive the chassis.



OM09141

- 10.** Lift the chassis with its front facing you and carefully guide the inner rail (A), which is mounted to the chassis system, into the outer pieces (B) you attached in previous steps. Gently move the system evenly towards the rear of the cabinet. Be sure to depress the brass colored finger tabs located in the center of each inner side rail piece as you slide the chassis back.



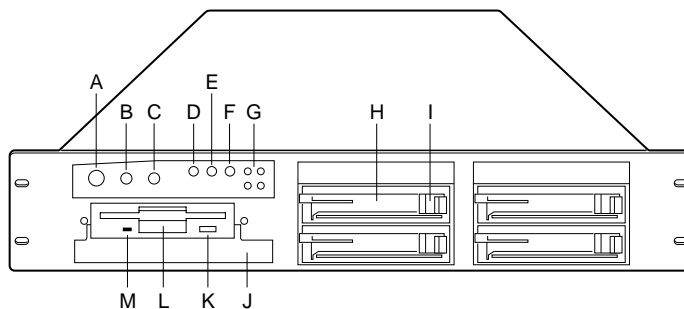
OM09143

- 11.** With the chassis fully inserted into the cabinet rack, you can easily access both the front and rear of the system. The photo to the right shows the system from the rear fully inserted into the cabinet.



Technical Reference

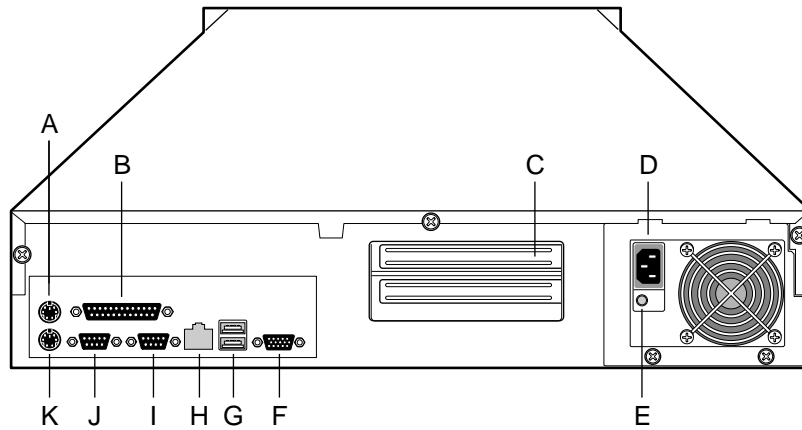
Front Panel Controls and Indicators



OM09320

- A. Power button
- B. Sleep button
- C. Reset button
- D. Power LED
- E. NIC activity LED
- F. Fail LED
- G. Disk activity/fail LEDs
- H. Hard drive bay
- I. Hard drive eject lever
- J. CDROM drive bay
- K. Diskette eject button
- L. Diskette drive
- M. Diskette activity LED

Back Panel Connectors



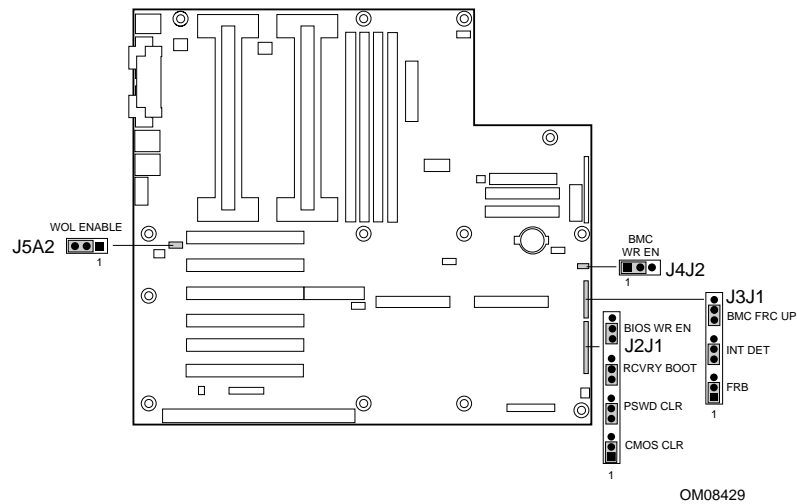
OM09321

- A. Mouse connector
- B. Parallel port connector
- C. PCI expansion slots
- D. AC input power connector
- E. Power supply fault indicator
- F. Video connector
- G. USB connectors
- H. RJ45 network connector
- I. Serial port connector (Com 1)
- J. Serial port connector (Com 2)
- K. Keyboard connector

NIC LED Color	If it's on	If it's blinking	If it's off
Orange	100 Mbps network connection.	NA	10 Mbps network connection.
Green	Linked to network, no network traffic.	Linked to network, sending or receiving data.	Not linked to network.

Jumpers

Nine 3-pin jumper blocks that control various configuration options, as shown in the figure below. Refer to the *ISP2150 2U Rack Server Platform Product Guide ISP2150 Product Guide* for more information.



Jumper Block	Jumper Name	Pins (default in bold)	What it does at system reset
J5A2	WOL ENABLE	1-2, Disabled	Disables Wake On LAN [†] . If your power supply does not provide 0.8 A of +5 V Standby current, you must move the WOL Enable jumper to this position.
		2-3, Enabled	Enables Wake On LAN.
J4J2	BMC WR EN	1-2, Protect	BMC boot block is write protected.
		2-3, Erase/Program	BMC boot block is erasable and programmable.
J3J1	FRB	1-2, Enable	FRB operation is enabled (system boots from processor 1 if processor 0 does not respond).
		2-3, Disable	FRB is disabled.
J3J1	INT DET	5-6, Enable	Switch installed on chassis indicates when cover has been removed.
		6-7, Disable	Chassis intrusion switch is bypassed.
J3J1	BMC FRC UP	9-10, Normal	System boots normally.
		10-11, Program	System attempts to update BMC firmware.
J2J1	CMOS CLR	1-2, Protect	Preserves the contents of NVRAM.
		2-3, Erase	Replaces the contents of NVRAM with the manufacturing default settings.
J2J1	PSWD CLR	5-6, Protect	Maintains the current system password.
		6-7, Erase	Clears the password.

continued

Jumpers (continued)

Jumper Block	Jumper Name	Pins (default in bold)	What it does at system reset
J2J1	RCVRY BOOT	9-10, Normal	System attempts to boot using the BIOS stored in flash memory.
		10-11, Recovery	BIOS attempts a recovery boot, loading BIOS code from a floppy diskette into the flash device. This is typically used when the BIOS code has been corrupted.
J2J1	BIOS WR EN	13-14, Protect	BIOS boot block is write-protected.
		14-15, Erase/Program	BIOS boot block is erasable and programmable.



CAUTION

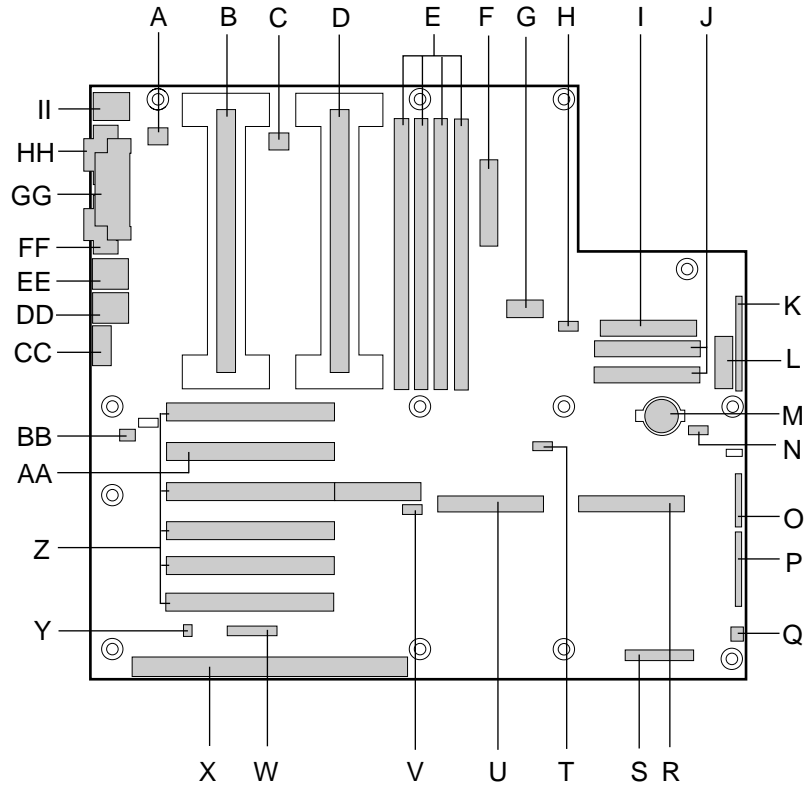
Moving either of the boot block write protect jumpers (J4J2-BMC WR EN or J2J1- BIOS WR EN) may cause irrevocable damage to the server board. Only move these jumpers when directed to by your customer service representative.



NOTE

If you wish to use the WOL feature, your power supply must provide 0.8 A of +5 V Standby current. If it does not, your server board may not boot. Move the WOL Enable jumper to the Disabled position if your power supply does not provide the required current.

Server Board Components



OM08561

- | | |
|--|--|
| A. Fansink connector 2 | T. External Wake on LAN connector |
| B. Secondary processor | U. Ultra2/LVD SCSI connector |
| C. Fansink connector 1 | V. Hard drive LED connector |
| D. Primary processor | W. Intelligent Chassis Management Bus (ICMB) header |
| E. DIMM slots | X. ISA connector (do not install a card in this connector) |
| F. Main power connector | Y. Chassis intrusion connector |
| G. ATX aux power connector | Z. PCI connectors (do not install cards in these connectors) |
| H. Fan connector FAN2A | AA. Riser card connector |
| I. Floppy connector | BB. Fan connector FAN2B |
| J. IDE connectors | CC. Video connector |
| K. ATX front panel connector | DD. USB connectors |
| L. Front panel connector, 16 pin | EE. NIC connector |
| M. Battery | FF. Serial port connector |
| N. Isolated Server Management (ISOL) IMB connector | GG. Parallel port connector |
| O. Jumper block | HH. Serial port connector |
| P. Jumper block | II. Mouse/keyboard connectors |
| Q. Fan connector 1 | |
| R. Ultra wide SCSI connector | |
| S. Server Monitor Module (SMM) connector | |

Getting Help

World Wide Web

Support for this product may be found at the following URL:

可以在下面的 **URL** 中找到本产品的支持信息:

可在下列的網址中找到與本產品相關的支援訊息：

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