Intel® Server Chassis SR1300 Subassembly Product Guide

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

Order Number: A86097-004

Important Safety Instructions

Read all caution and safety statements in this document before performing any of the instructions. See also *Intel Server Boards and Server Chassis Safety Information* on the Resource CD and/or at http:\\support.intel.com.

When translations of this guide are available, you can find them at the following URL: http://support.intel.com/support/motherboards/server/SR1300/

Disclaimer

Information in this document is provided in connection with Intel® products. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Intel's Terms and Conditions of Sale for such products.

INTEL ASSUMES NO LIABILITY WHATSOEVER, AND INTEL DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF INTEL PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

Intel products are not designed, intended or authorized for use in any medical, life saving, or life sustaining applications or for any other application in which the failure of the Intel product could create a situation where personal injury or death may occur. Intel may make changes to specifications and product descriptions at any time, without notice.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries

* Other names and brands may be claimed as the property of others.

Copyright © 2002 - 2003, Intel Corporation. All Rights Reserved.

Contents

1	Chassis Description	7
	What Your Kit Includes	7
	Items You Must Purchase Separately	8
	Feature Summary	9
	System Components	9
	Chassis Front Panel and Peripheral Bays	
	Chassis Back I/O Ports and Features	
	Front Panel Controls and Indicators	
	Peripherals	
	Hard Disk Drives	
	Hot-Swappable SCSI Hard Drives	
	ATA Hard Drives	
	Flex Bay	
	Power Supply	
	System Cooling	
	Chassis Security	
	Locking and Unlocking the Bezel	. 10
2	Assembling the System	17
	Before You Begin	. 17
	Supplies Needed	
	Installation/Assembly Safety Instructions	
	Use Only for Intended Applications	.18
	Checking the Power Cord	
	Warnings and Cautions	. 20
	Installing System Components	
	Removing the Cover	
	Removing the Riser Cards	
	Removing the Fan Module	
	Removing the Power Supply	
	Removing the Drive Carriers	
	Installing the Power Distribution Board on the Server Board	
	Installing the Server Board	
	Adding Components to the Server Board	
	Installing the Processors, Memory, and Processor Retention Mechanisms. Installing the Processor Air Dam	
	Installing the USB Ribbon Cable	
	Installing the Backplane Board	
	Installing the Power Supply	
	Routing the System Cables	
	Installing the Fan Module	
	Installing the Air Baffle	
	Installing the Processor Air Duct	
	Installing Optional Peripherals	
	Installing a PCI Card on a Riser Card	

	Installing a Riser Card on the Server Board	39
	Installing a Hard Drive	
	Installing a DVD Drive/FDD Module or CD-ROM Drive/FDD Module	42
	Installing a Bezel	
	Finishing Up	44
	Installing the Cover	
	Installing the Power Cord and Strain Relief Strap	
3	Installing the System in a Rack	45
	Equipment Rack Precautions	45
4	Working Inside Your Server	47
	Tools and Supplies Needed	47
	Safety: Before You Remove the Cover	
	Warnings and Cautions	
	Replacing the Lithium Battery	
	Replacing a Hard Drive	
	Replacing a DVD Drive/FDD or CD-ROM Drive/ FDD Module	
	Replacing a PCI Add-in Card	
	Replacing the Power Supply	
	Removing and Installing the Air Baffle	
	Removal	
	Installation	56
	Replacing the Fan Module	
	Replacing a Backplane Board	
	Replacing a Power Distribution Board	
	Replacing a Front Panel Board	60
	Replacing a USB Ribbon Cable	61
	Replacing a Server Board	
Δ	Regulatory and Certification Information	65
_		
	Product Regulatory Compliance	
	Product Safety Compliance	
	Product EMC Compliance	
	Product Regulatory Compliance Markings	
	Electromagnetic Compatibility Notices	
	FCC Verification Statement (USA)	
	ICES-003 (Canada)	
	Europe (CE Declaration of Conformity)	
	VCCI (Japan)	
	BSMI (Taiwan)	
	RRL (Korea)	
	Regulated Specified Components	
В	Equipment Log and Worksheets	
	Equipment Log	
	Current Usage	
	Calculating Power Usage	
	Worksheet: Calculating DC Power Usage	
	Worksheet: Total Combined Power Used by the System	7⊿

C	Safety warnings	/5
	WARNING: English (US)	76
	AVERTISSEMENT: Français	78
	WARNUNG: Deutsch	80
	AVVERTENZA: Italiano	82
	ADVERTENCIAS: Español	84
П	Warranty	97
ט		
	Limited Warranty for Intel [®] Chassis Subassembly Products	
	Extent of Limited Warranty	87
	Warranty Limitations and Exclusions	
	Limitations of Liability	
	How to Obtain Warranty Service	
	Telephone Support	
	Returning a Defective Product	90
Fi	gures	
,	Figure 1. System Components	C
	Figure 2. Chassis Front	
	Figure 3. Chassis Back	
	Figure 4. Front Panel Controls and Indicators	
	Figure 5. Optional Peripherals	
	Figure 6. Removing the Cover	
	Figure 7. Removing a Riser Card	
	Figure 8. Removing the Fan Module	
	Figure 9. Removing the Power Supply	
	Figure 10. Removing a Drive Carrier from a Drive Bay	24
	Figure 11. Installing the Power Distribution Board	25
	Figure 12. Mounting the Server Board SE7500WV2/SE7501WV2	27
	Figure 13. Installing the Processor Air Dam	28
	Figure 14. Installing the USB Ribbon Cable	
	Figure 15. Installing the Backplane Board	
	Figure 16. Installing the Power Supply	
	Figure 17. Routing the System Cables—SCSI or ATA	
	Figure 18. Installing the Fan Module	
	Figure 19. Installing the Air Baffle	
	Figure 20. Installing the Processor Air Duct	
	Figure 21. Installing a PCI Card in a Riser Card	
	Figure 22. Installing a Riser Card on the Server Board	
	Figure 23. Removing an Air Baffle from a Drive Carrier	
	Figure 24. Attaching a Drive to a Carrier	
	Figure 25. Installing a DVD/CD-ROM Drive/FDD Module	
	Figure 26. Installing the Bezel	
	Figure 27. Installing the Power Cord and Strain Relief Strap Figure 28. Removing a Carrier and Hard Drive from a Drive Bay	
	Figure 29. Removing a Hard Drive from a Carrier	
	Figure 30. Removing a DVD/CD-ROM Drive/FDD Module	
	Figure 31. Removing a Riser Card	
	Figure 32. Removing the Power Supply	
	g	

Contents

Figure 33.	Removing the Air Baffle	56
•	•	57
•	. •	58
		soard59
Figure 37.	Replacing the Front Panel Board	60
•	. •	61
Figure 39.	Removing the Server Board	62
Tables		
Table 1.	Control Button Functions	12
Table 2.	LED Indicator Status	12
Table 3.	Power Usage Worksheet 1	73
Table 4.	Power Usage Worksheet 2	74

1 Chassis Description

Your Intel[®] Server Chassis SR1300 kit is designed to support the Intel[®] Server Board SE7500WV2 or SE7501WV2 and comes with the front panel board and two drive carriers installed. The fan module, power supply, and air baffle are installed for shipment, but you must remove and reinstall them in the proper sequence during system assembly.

To complete the system, you must purchase some items separately (see below). Before you purchase, decide if you want an ATA-100-based system or a SCSI-based system and select components accordingly.

What Your Kit Includes

Your kit includes the following components:

- 1U rack-mount chassis featuring:
 - Two hard drive bays with carriers and drive blanks (baffles)
 - One flex bay with blank filler panel and plug
- One 350 W SSI PFC nonredundant power supply
- Two PCI riser cards for use with the Intel Server Board SE7500WV2 or SE7501WV2
- One fan module consisting of five 40-mm fans for system cooling
- One power distribution board
- One power cord (U.S. version)
- One internal USB ribbon cable (connecting the server board to the front panel board)
- One internal flex circuit cable, 100 pin (connecting the server board to the backplane board)
- One internal front panel cable, 34 pin (connecting the front panel board to the backplane board)
- One processor air dam
- One processor air duct
- One processor retention mechanism
- One CD-ROM containing documentation for your SR1300 chassis
- Mounting screws (server and backplane boards)
- Bracket mounting kit

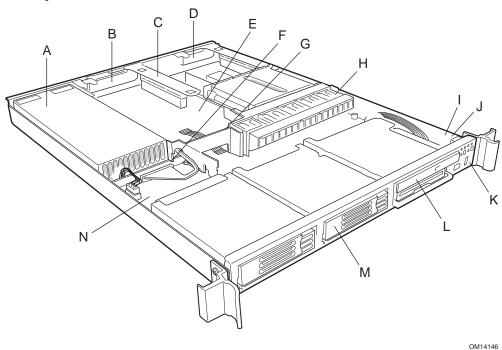
Items You Must Purchase Separately

The following components must be purchased separately:

- Front bezel (optional)
- Intel Server Board SE7500WV2 or SE7501WV2 (SCSI or ATA)
- Minimum of one Intel[®] Xeon[™] processor with 512 KB L2 cache
- DDR memory DIMMs
- Backplane board (SCSI or ATA)
- Hard disk drives (HDDs)
- Flex bay: this item refers to an optional bay that can house a slim-line DVD/floppy disk drive (FDD) module, a CD-ROM drive/FDD module, or an extra HDD carrier that ships with the SCSI backplane; the system ships with two hard drive carriers and a blank filler over the flex bay
- PCI add-in cards
- Other peripheral devices
- Rack mount kit
- Power cord (If not included in the kit. This kit ships with a power cord in North America only.)

Feature Summary

System Components



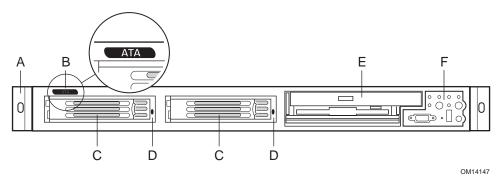
- Power supply
- PCI card bracket (full height) B.
- Riser card assembly C.
- PCI card bracket (low profile)
- Server board (accessory to system)
 Power distribution board E.
- G. Air baffle
- H. Fan module
- Front panel board
- Intrusion switch
- K. Control panel
- Flex bay (optional DVD/CD-ROM drive/FDD module shown)
- M. Hard drive bay (one of two)
- Backplane board

Figure 1. System Components

Chassis Description 9

Chassis Front Panel and Peripheral Bays

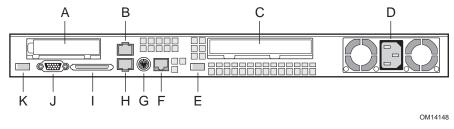
To access the system controls and peripherals when a front bezel is installed, grasp the bezel and gently pull it towards you until it unsnaps from the chassis.



- A. Chassis handles (2)
- B. Drive-type designator (ATA system only)
- C. Drive bay (1-inch)
- D. HDD activity/fault indicator
- E. Flex bay (optional DVD/CD-ROM drive/FDD module shown)
- F. Front panel controls and indicators

Figure 2. Chassis Front

Chassis Back I/O Ports and Features

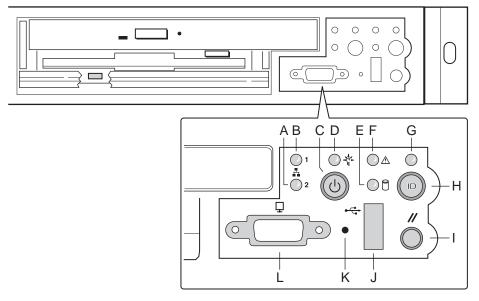


- A. PCI card bracket (low profile)
- B. RJ-45 NIC 2 connector Green Status LED Yellow Status LED
- C. PCI card bracket (full height)
- D. Power supply
- E. USB connector
- F. RJ-45 serial port
- G. PS/2* mouse/keyboard connector
- H. RJ-45 NIC 1 connector Green Status LED Yellow Status LED
- I. SCSI connector (SCSI version only)
- J. Video connector
- K. USB connector

Figure 3. Chassis Back

Front Panel Controls and Indicators

Shown with optional DVD/CD-ROM drive and floppy disk drive installed.



OM14149

- NIC 2 activity LED NIC 1 activity LED A.
- B.
- Power/sleep button C.
- D.
- Power/sleep LED Hard disk drive status LED E.
- System status LED F.
- ID LED G.
- ID button H.
- Reset button ١.
- J. USB connector
- K. Nonmaskable interrupt (NMI) button
- Video connector

Figure 4. Front Panel Controls and Indicators

Chassis Description 11

Table 1. Control Button Functions

Power/Sleep button	Toggles the system power on/off. Sleep button for ACPI-compatible operating systems.
ID button	Toggles the front panel ID LED and the baseboard ID LED on/off. The baseboard ID LED is visible from the rear of the chassis and allows you to locate the server you are working on from behind a rack of servers.
Reset button	Reboots and initializes the system.
NMI button	When pressing the recessed button with a paper clip or pin, issues a nonmaskable interrupt and puts the server into a halt state for diagnostic purposes.

Table 2. LED Indicator Status

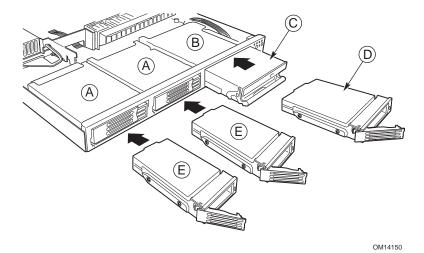
Table 2. LLD indicator status		
NIC 1 activity LED NIC 2 activity LED	Continuous green light indicates a link between the system and the network to which it is connected.	
	Blinking green light indicates network activity.	
Power/Sleep LED	Continuous green light indicates the system has power applied to it.	
	Blinking green light (Note 1) indicates the system is sleeping.	
	No light indicates the system does not have power applied to it (other than 5 V standby power).	
Hard disk drive	Random blinking green light indicates hard disk drive activity (SCSI or IDE).	
status LED	Continuous amber light (Note 2) indicates hard disk drive fault (SCSI or IDE).	
	No light (Note 3) indicates no hard disk drive activity nor fault (SCSI or IDE).	
System status LED	Continuous green light indicates the system is operating normally.	
	Blinking green light indicates the system is operating in a degraded condition.	
	Continuous amber light (Note 4) indicates the system is in a critical or nonrecoverable condition.	
	Blinking amber light (Note 4) indicates the system is in a noncritical condition.	
	No light indicates POST/system stop.	
ID LED	Continuous blue light indicates ID button is depressed or light is turned on by software.	
	No light indicates ID button is not depressed.	

Notes:

- 1 The power LED sleep indication is maintained on standby by the chipset. If the system is powered down without going through BIOS, the LED state in effect at the time of power off will be restored when the system is powered on until the BIOS clears it. If the system is not powered down normally, it is possible that the power LED will be blinking at the same time that the system status LED is off due to a failure or configuration change that prevents the BIOS from running.
- In order for a hard disk fault indication to occur, either an Intelligent Platform Management Interface (IPMI)—based satellite management controller must send a Set Fault Indication command to the Baseboard Management Controller (BMC) or the system board must be used with the 1U SR1300 hot-swappable backplane.
- 3 Also off when the system is powered off or in a sleep state.
- 4 The amber status takes precedence over the green status. When the amber LED is on or blinking, the green LED is off.

Peripherals

The chassis provides for a variety of peripherals that can be purchased separately and added to the system. The following describes the available options.



- A. Hard drive bays
- B. Flex bay
- C. Slim-line DVD/CD-ROM drive/FDD module
- D. HDD
- E. HDD

Figure 5. Optional Peripherals

Hard Disk Drives

The chassis ships with two drive carriers for mounting HDDs in the hard drive bays. These drives can be either SCSI or ATA, depending on what type of system was configured. For information on how to install these drives, see "Installing a Hard Drive" on page 40.

■ NOTE

Drives can consume up to 17 watts of power each. Drives must be specified to run at a maximum ambient temperature of 50 °C.

Hot-Swappable SCSI Hard Drives

In a SCSI system, the SCSI hard drives are hot swappable. When a drive fails, the SCSI backplane detects the failure, reports it, and powers down the failed drive. The drive fault LED shows a continuous amber light. After the failed drive is removed and a new drive is inserted, there is a short wait before power is applied to the drive and the drive fault LED becomes a blinking green light.

Chassis Description 13

ATA Hard Drives

In an ATA system, the hard drives are NOT hot swappable.



⚠ CAUTION

ATA hard drives are NOT hot swappable. Before replacing an ATA hard drive, you must first take the server out of service, turn off all peripheral devices connected to the system, turn off the system by pressing the power button, and unplug the AC power cord from the system or wall outlet.



⚠ CAUTION

The Intel Server Chassis SR1300 does not support all ATA hard drives. Unsupported drives will not mate mechanically with the drive connector in the drive bay. To see a list of validated hard drive manufacturers and hard drive types, go to the following Web site:

http://support.intel.com/support/motherboards/server

Flex Bay

In an ATA-based system, the flex bay can only be used with the optional DVD/FDD or CD-ROM/FDD module. If the DVD/CD-ROM/FDD module is not used, the flex bay is left empty. In a SCSI-based system, the flex bay can be used with either the optional DVD/FDD or CD-ROM/FDD module or a third hot-swappable SCSI HDD.

The DVD/CD-ROM/FDD module may only be inserted or removed from the flex bay when system power is turned off. The DVD/CD-ROM/FDD module is NOT hot swappable. For information on installation, see "Installing a DVD Drive/FDD Module or CD-ROM Drive/FDD Module" on page 42.

Power Supply

The power supply is rated for 350 watts of power at the following voltages:

- 90-132 volts (V) \sim at 50/60 Hertz (Hz); 4.96 amperes (A) maximum (max)
- 180-264 V ~ at 50/60 Hz; 2.48 A maximum

The power subsystem supports implementation of remote management features including remote enable that permits power to be activated from a variety of sources.

System Cooling

The chassis includes a non-hot-swappable fan module with five fans for cooling the processor(s), hard drives, and PCI cards. The fan system is located in the middle of the chassis to pull cooling air through the chassis. The power supply contains two built-in fans for cooling.

Chassis Security

To help prevent unauthorized access to the system's peripherals and control panel, a key locks the optional bezel to the front panel. The chassis also includes a preinstalled intrusion switch for the access cover that can be monitored by server management software. When the cover is opened, the switch, located on the front panel board, transmits a signal to the Baseboard Management Controller (BMC) on the server board, where server management software processes the signal. For example, the system can be programmed to respond to an intrusion by powering down or by locking the keyboard.

Locking and Unlocking the Bezel

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

To lock the bezel, insert the key in the lock. Turn the lock clockwise until it stops (about a quarter turn). The bezel is now locked and cannot be opened.

Chassis Description 15

Assembling the System

Before the server chassis SR1300 can be installed for use, you must assemble the hardware components that make up your particular system. Additionally, you will want to add any peripherals and add-in cards purchased for the system. The following procedures help guide you through this assembly process and create your desired system configuration.

NOTE

To maintain and ensure regulation compliance, the fully integrated system should be tested, certified, and/or documented to illustrate compliance to the regional regulations and laws for where the product will be sold. The peripherals and add-in cards chosen for integration should have individual regulatory approvals.

Before You Begin



A CAUTION

System components must be installed in the order presented in the assembly instructions. If installed in a different order, component damage may occur.

Supplies Needed

Before beginning your work, make sure you have the following supplies available:

- Antistatic wrist strap (recommended)
- Phillips* screwdriver
- SR1300 accessory kit
- Intel® ATA or SCSI server board kit for SE7500WV2 or SE7501WV2
- Backplane board (ATA or SCSI)
- Processors and memory you purchased separately to add to the server board
- Optional peripherals and add-in cards you want to include in the system

Installation/Assembly Safety Instructions

Before you start the assembly process, you will need to make sure you follow certain basic safety precautions.



! CAUTION

Integration/servicing of this chassis subassembly shall be performed only by technically qualified persons.

Follow these guidelines to meet and maintain safety and product regulatory requirements when integrating this chassis subassembly.

Read and adhere to all of these instructions and the instructions supplied with this assembly. If you do not follow these instructions, the UL listing and other regulatory approvals will be void, and the product will most likely be noncompliant with regional product laws and regulations.

Use Only for Intended Applications

This product was evaluated as Information Technology Equipment (ITE) that may be installed in offices, schools, computer rooms, and similar locations. The suitability of this product for other product categories and environments other than ITE applications (such as medical, industrial, alarm systems, and test equipment) may require further evaluation.

When you integrate this subassembly, observe all warnings and cautions in this installation guide.

To avoid injury, be careful of the following:

- Sharp pins on connectors
- Sharp pins on printed circuit assemblies
- Rough edges and sharp corners on the chassis
- Hot components (like processors, voltage regulators, and heat sinks)
- Damage to wires that could cause a short circuit

Checking the Power Cord

A WARNING

Do not attempt to modify or use the supplied AC power cord if it is not the exact type required.

The power supply cord is the main disconnect to AC power. The socket outlet must be installed near the equipment and readily accessible.

Power cords are supplied with chassis only in North America. If a power cord is supplied with the system and it is not compatible with the AC wall outlet in your region, get one that meets the following criteria:

- The cord must be rated for the available AC voltage and have a current rating that is at least 125 percent of the current rating of the server.
- The plug on the power cord that plugs into the wall outlet must be a grounding-type male plug designed for use in your region. It must have certification marks showing certification by an agency acceptable in your region.
- The connector that plugs into the AC receptacle on the power supply must be an IEC 320, sheet C13-type female connector.
- In Europe, the cord must be less than 4.5 meters (14.76 feet) long, and it must be flexible <HAR> (harmonized) or VDE certified cordage to comply with the chassis' safety certifications.

Warnings and Cautions

Read all caution and safety statements in this document before performing any of the instructions. See also Intel Server Boards and Server Chassis Safety Information on the Resource CD and/or at http:\\support.intel.com.

These warnings and cautions apply whenever you remove the chassis cover to access components inside the server. Only a technically qualified person should integrate and configure the server.



▲ WARNING / BEFORE YOU REMOVE THE ACCESS COVER

Before removing the access cover for any reason, observe these safety guidelines:

- 1. Turn off all peripheral devices connected to the server.
- 2. Turn off the server by pressing the power button on the front of the chassis. Then unplug the AC power cord from the chassis or wall outlet.
- 3. Label and disconnect all peripheral cables and all telecommunication lines connected to I/O connectors or ports on the back of the chassis.
- 4. Provide some electrostatic discharge (ESD) protection by wearing an antistatic wrist strap attached to chassis ground—any unpainted metal surface—when handling components.



A WARNING

The power button on the front panel DOES NOT turn off the AC power. To remove power from server, you must unplug the AC power cord from the wall outlet or the chassis.



A WARNING

Hazardous electrical conditions may be present on power, telephone, and communication cables. Turn off the server and disconnect the power cord, telecommunications systems, networks, and modems attached to the server before opening it. Otherwise, personal injury or equipment damage can result.



M WARNING

Do not open the power supply. Hazardous voltage, current, and energy levels are present inside the power supply. Refer servicing of the power supply to qualified technical service personnel.

Installing System Components

All references to left, right, front, and back are based on the reader facing the front of the chassis.

Removing the Cover

1. While pressing the blue latch button (A) with your left thumb, slide the top cover back using the heel of your right hand on the blue pad.

■ NOTE

A nonskid surface or a stop behind the chassis may be needed if you are attempting to remove the top cover on a flat surface.

2. Set the cover aside and away from the immediate work area.

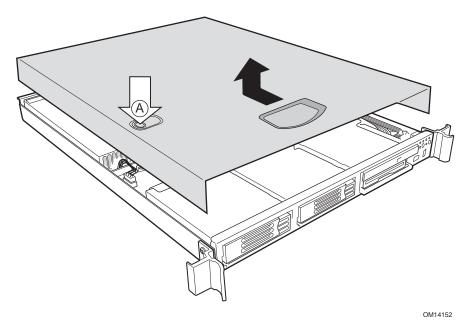


Figure 6. Removing the Cover

Removing the Riser Cards

- 1. Insert your finger in the plastic loop.
- 2. Pull straight up and remove the riser card from the chassis.
- 3. Remove the other riser card in the same manner.
- 4. Discard the protective rubber blocks used during shipping.

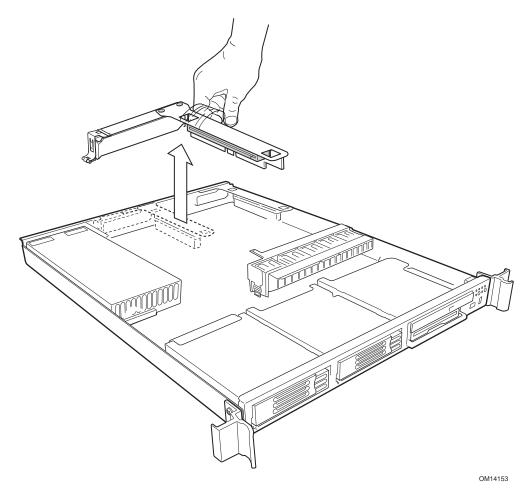


Figure 7. Removing a Riser Card

Removing the Fan Module

At the left end of the module, press at button (A) to release tab (B) from chassis slot (C) and lift up until the module releases from the chassis.

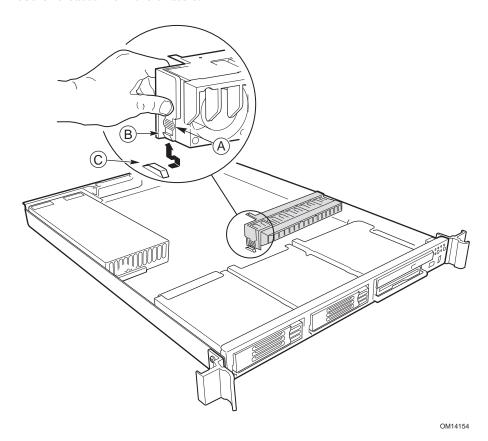


Figure 8. Removing the Fan Module

Removing the Power Supply

Gently lift the rear of the power supply to clear the metal guides on the chassis floor. Then grasp both ends of the power supply and lift it out of the chassis.

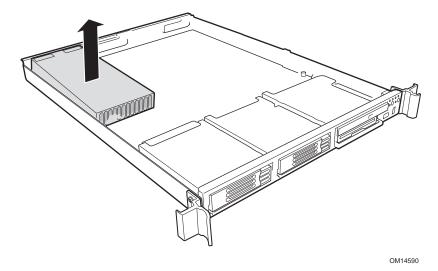


Figure 9. Removing the Power Supply

Removing the Drive Carriers

- 1. Pull the retention lever (A) toward you until the tab end (B) of the lever is free of the housing slot (C).
- 2. Pull the drive carrier forward and out of the drive bay.

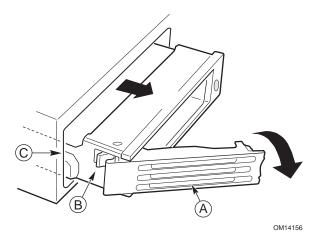


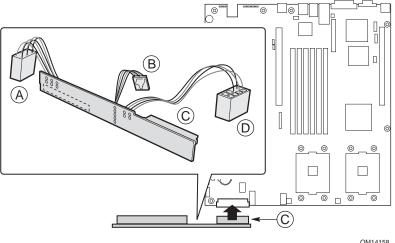
Figure 10. Removing a Drive Carrier from a Drive Bay

Installing the Power Distribution Board on the Server Board

- 1. Remove the server and power distribution boards from their packaging and antistatic bags.
- 2. Orient the server and power distribution boards as shown in Figure 11 so that the white 24-pin power connector (C) on the power distribution board is on the right and facing toward the server board.
- 3. Plug connector (C) into the white power connector on the server board and press the two firmly together until they are fully seated.

NOTE

Do not connect cables (A), (B), and (D) at this time.



- OM14158
- A. Backplane power connector (6 pin)
- B. Auxiliary signal connector (5 pin)
- C. White power connector (24 pin)
- D. Auxiliary power connector (8 pin)

Figure 11. Installing the Power Distribution Board

Installing the Server Board

A CAUTION

Do not install any server board support bumpers in the SR1300 chassis.

System components must be installed in the order presented below. If installed in a different order, component damage may occur.

- 1. Ensure that the Mylar insulator sheet is seated securely over the standoffs, is laying flat on the chassis floor, and that the edge of the sheet is seated below the studs in the rear chassis wall.
- 2. Insert the back edge of the board under the three retention pins located at the rear of the chassis.
- 3. While placing the server board on the chassis standoffs, carefully align the board I/O connectors in the rear chassis I/O openings.
- 4. Adjust the server board's position so that the three mounting holes rest securely on the corresponding shouldered standoffs.

NOTE

The SE7500WV2 and SE7501WV2 use three holes to mount the board to the chassis standoffs.

5. Attach the board to the chassis using the three hex screws shipped in the chassis accessory kit.

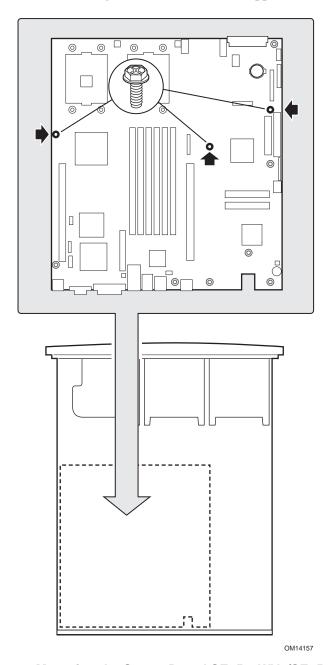


Figure 12. Mounting the Server Board SE7500WV2/SE7501WV2

Adding Components to the Server Board

Installing the Processors, Memory, and Processor Retention Mechanisms

After installing the server board, you must add the processor retention mechanisms and the desired number of processors and memory DIMMs. For instructions, see the *Quick Start User's Guide* that shipped with your SE7500WV2 and SE7501WV2 server board.

Installing the Processor Air Dam

If you only install one processor, you must install the processor air dam in the outer processor location.

- 1. Attach the processor retention piece (B) to the outer processor socket (C) on the server board using the provided screws (A).
- 2. Put the air dam (D) into place.
- 3. Pop the tabs on the sides of the air dam under the slots on the processor retention mechanism.

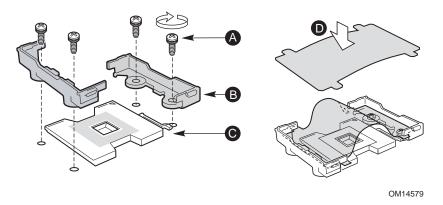


Figure 13. Installing the Processor Air Dam

Installing the USB Ribbon Cable

The USB ribbon cable routes under the backplane board. The chassis is shipped with the USB cable connected to the front panel USB connector (A).

- 1. Route the USB ribbon cable as shown in Figure 14. The cable should route over the power distribution board at the white 24-pin power connector.
- 2. Connect the cable to USB connector (B) on the server board.

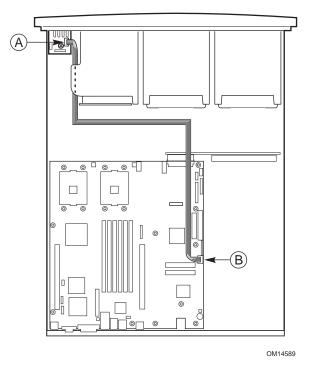


Figure 14. Installing the USB Ribbon Cable

Installing the Backplane Board

- 1. Ensure that the USB ribbon cable (A) is not in the way of the chassis standoffs.
- 2. Tilt the rear edge of the backplane board down so it clears the pins on the power distribution board and place the backplane board over the USB ribbon cable.
- 3. Place the backplane board on the chassis standoffs (B) so that each of the seven mounting holes fits over a standoff.

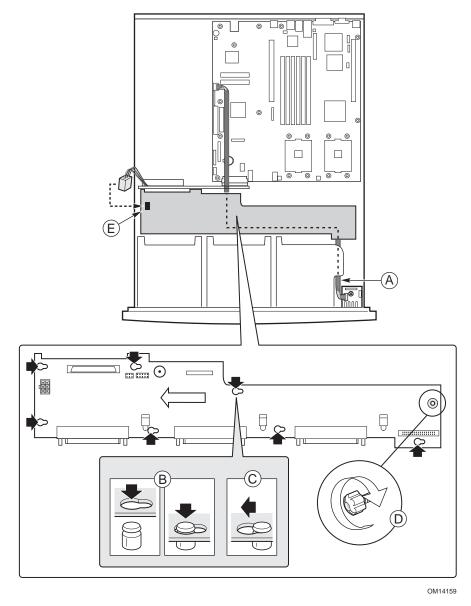


Figure 15. Installing the Backplane Board

- 4. After gently pushing the board down, slide it to the left (C) until it snaps in place.
- 5. Install the thumbscrew (D) that secures the board to the chassis.
- 6. If the backplane board is SCSI, set the SCSI cable aside for installation later.

■ NOTE

Do not connect cable (E) at this time.

Installing the Power Supply

- 1. Place the edge connector end of the power supply on the chassis floor and slide it toward the front of the chassis (A) until the edge connector is fully inserted in the power distribution board connector.
- 2. Lower the rear of the power supply (B) and make sure that it is fully seated on the chassis floor and in front of the raised guides (C).

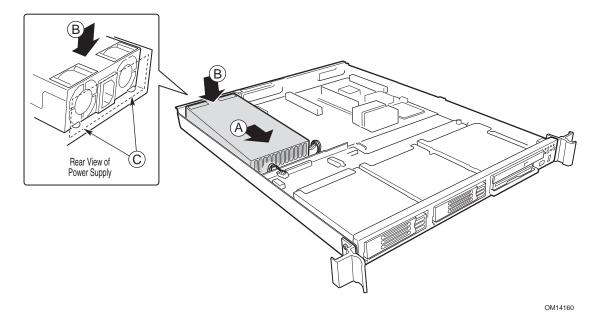
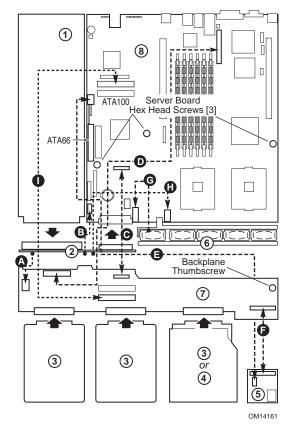


Figure 16. Installing the Power Supply

Routing the System Cables



System Components

- 1. Power supply
- 2. Power distribution board
- 3. Hard disk drive
- 4. Optional DVD/CD-ROM/FDD module
- 5. Front panel board
- 6. Fan module
- 7. Backplane board
- 8. Server board

Connections

- A. To the backplane Power connector
- B. To the server board Auxiliary Signal connector
- C. Flex circuit cable from the server board FDD/FP/IDE connector to the backplane
- D. SCSI-based systems: SCSI ribbon cable from the server board to the backplane
- E. USB ribbon cable from the server board to the front panel board
- F. Front panel ribbon cable from the front panel board to the backplane
- G. From the fan module to the server board fan connector
- H. To the server board Auxiliary Power connector
- ATA-based systems: ATA-100 ribbon cables (primary and secondary) from the server board to the backplane

Figure 17. Routing the System Cables—SCSI or ATA

- 1. Route the front panel cable (F) from the front panel board to the backplane and attach it to the matching connector.
- 2. Attach one end (P1) of the flex circuit cable (C) to the floppy/front panel/IDE connector on the server board. Route the cable to the backplane board and attach the opposite cable end to the matching connector on the backplane.

! CAUTION

After connection of cable (C) in step 2, ensure that each cable connector is properly seated in the board connector. The connector should be parallel to its board connector and not cocked to one side. If in doubt, remove, reinsert, and recheck it.



- 3. Connect the auxiliary signal cable (B) from the power distribution board to the 5-pin auxiliary signal connector on the server board.
- 4. Route the power cable (A) from the power distribution board to the backplane board and insert it in the white 6-pin connector.
- 5. Route the auxiliary power cable (H) from the power distribution board to the server board and insert it in the white 8-pin connector.
- 6. Depending on your system configuration, do one of the following:
 - a. For SCSI-based systems: On the SCSI ribbon cable (D), locate the end that is labeled server board. Connect that end to the SCSI connector on the server board. Route the cable between the PCI connector and memory slots on the server board and then to the backplane board. Attach the cable connector to the connector on the backplane board.
 - b. For ATA-100-based systems: Connect one end of the shorter ATA-100 ribbon cable (I) to the secondary ATA-100 connector on the server board (the one closer to the front of the chassis). Route the cable to the backplane board and connect the other end of the cable to the secondary ATA-100 connector on the backplane. Connect one end of the longer ATA-100 ribbon cable (I) to the primary ATA-100 connector on the server board. Route the primary ATA cable over the top of the secondary ATA cable to the backplane board and connect the other end to the primary ATA-100 connector on the backplane.

Installing the Fan Module

- 1. Position the fan module so that the cable (D) is located closest to the center of the chassis.
- 2. Slide the "L" shaped foot on the chassis sidewall end of the fan module (A) under the chassis tab.
- 3. Lower the module onto the chassis floor. Ensure that it is situated between the raised guides, not on top of them.
- 4. Press down on the left end of the module until tab (B) snaps into chassis slot (C).
- 5. Plug the cable (D) into the system fan connector on the server board (G of Figure 17).

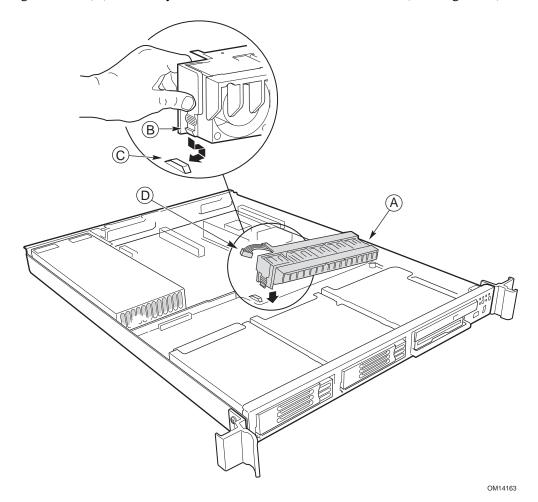


Figure 18. Installing the Fan Module

Installing the Air Baffle

- 1. Ensure the flex cable, auxiliary power cable, USB ribbon cable, and SCSI or ATA (depending on board type) cables are routed under where you will be installing the air baffle.
- 2. Aligning pin (C) with the board's mounting hole, position the air baffle over the white server board power connector.
- 3. Lower the baffle into position and press it down against the backplane board.
- 4. Ensure tab (A) aligns with the edge of the power supply and tab (B) aligns with the edge of the fan module.

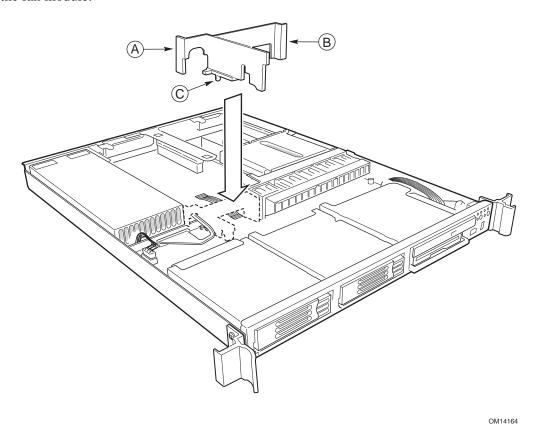


Figure 19. Installing the Air Baffle

Installing the Processor Air Duct

Align the notches on the processor air duct with the tabs on the fan module and press down on the air duct until it is seated against the fan module.

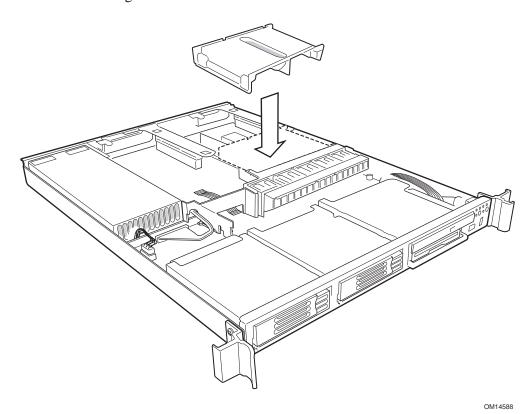


Figure 20. Installing the Processor Air Duct

■ NOTE

Once the server board, its components, the processor air dam (if needed), and the processor air duct are installed, you are done assembling the system unless you have optional peripherals or add-in cards you wish to install. If you need to install these components, continue on to the next section. Otherwise, install the cover, power cord, and strain relief strap and continue on to Chapter 4, which describes how to install the system in a cabinet.

Installing Optional Peripherals

Peripherals and add-in cards are not included in your system and must be purchased separately. The following sections describe how to install various peripherals.

Installing a PCI Card on a Riser Card

The riser card nearest the right sidewall of the chassis supports a single Low Profile (LP) PCI add-in card. The riser card at the center line of the chassis supports a single full-height add-in card or an LP card. If an LP card is installed in the standard full-height riser card, it must be equipped with a standard full-height PCI mounting bracket.

■ NOTES

Add-in cards must be installed to a riser card while the riser card is removed from the chassis.

- 1. Open the retainer clip (A) and remove the filler panel (B) from the rear retention bracket of the riser card.
- 2. Insert the PCI card edge connector in the riser PCI slot (C) while aligning the end of the PCI card bracket in opening (D).
- 3. Firmly push the PCI card connector (E) into the riser card slot until it is fully seated.
- 4. Close the retainer clip (A). Ensure the clip is latched.

Assembling the System 37

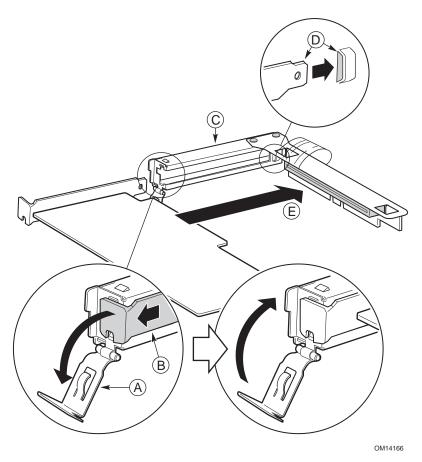


Figure 21. Installing a PCI Card in a Riser Card

Installing a Riser Card on the Server Board

1. Insert the riser card connector into the server board slot while aligning the tabs on the rear retention bracket with the holes in the chassis.

<u>^</u>

CAUTION

Press the riser card straight down into the slot. Tipping it in the slot while installing it may damage the riser card or slot.

2. Firmly press the riser card straight down until it is fully seated in the server board slot.

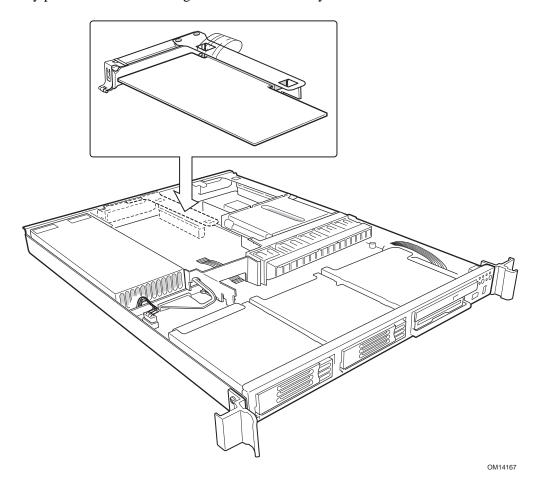


Figure 22. Installing a Riser Card on the Server Board

Assembling the System 39

Installing a Hard Drive

A SCSI system can support two hot-swappable hard drives in the drive bays, plus one in the flex bay. An ATA system can support two non-hot-swappable hard drives in the drive bays.



/ CAUTION

The Intel Server Chassis SR1300 does not support all ATA hard drives. Unsupported drives will not mate mechanically with the connector in the drive bay. To see a list of validated manufacturers and hard drive types, go to:

http://support.intel.com/support/motherboards/server



⚠ CAUTION

To allow proper airflow and server cooling, all drive bays must contain either a carrier with a hard drive installed or a carrier with an air baffle installed.

- 1. If the drive carrier is installed in the drive bay, remove it.
- 2. Remove the air baffle (Figure 23, A) from the drive carrier by removing the four screws (B) from the slide track (C) and lifting the baffle out of the carrier.
- 3. Store the air baffle for future reinstallation if you must operate your server without a drive in one of the bays.

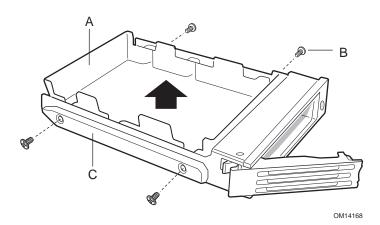


Figure 23. Removing an Air Baffle from a Drive Carrier

- 4. Remove the hard drive from its wrapper and place it on an antistatic surface.
- 5. Set any jumpers and/or switches on the drive according to the drive manufacturer's instructions.
- 6. With the drive circuit-side down (Figure 24, A), position the connector end (E) so that it is facing the back of the carrier (B).
- 7. Align the holes in the drive to the holes in the drive carrier slide track (C), insert the screws (D) that you previously removed, and attach the carrier to the drive.

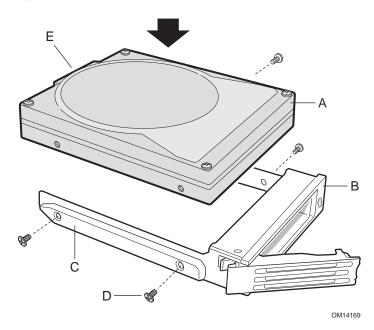


Figure 24. Attaching a Drive to a Carrier

- 8. Slide the carrier/drive all the way into the drive bay with the retention lever in the fully open position.
- 9. Push the retention lever closed to secure the carrier/drive in the bay.
- 10. Reinstall a carrier/air baffle in any bays where you are not installing a carrier/drive.

Assembling the System 41

Installing a DVD Drive/FDD Module or CD-ROM Drive/FDD Module

Your server does not come with a DVD drive, CD-ROM drive, or a FDD. As an accessory, Intel offers a slim-line DVD drive/FDD module or a CD-ROM drive/FDD module that you may purchase and install in the flex bay.

- 1. Remove the filler panel (A) from the front of the chassis by depressing the latch on the right side and rotating outward.
- 2. Remove the square plastic plug (B).
- 3. Push the handle bar (D) on the DVD/CD-ROM/FDD module down.
- 4. Insert the module into the flex bay and press at locations (C) until you feel the connectors touch.
- 5. Push the module in about 3/16 of an inch (5 mm) more to fully engage the connectors.
- 6. If you have finished your work in the peripheral bays, install the bezel.

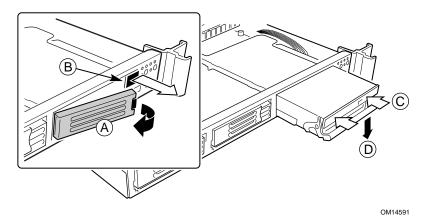


Figure 25. Installing a DVD/CD-ROM Drive/FDD Module

Installing a Bezel

Place the bezel between the chassis handles and push it toward the front of the chassis until it snaps into place.

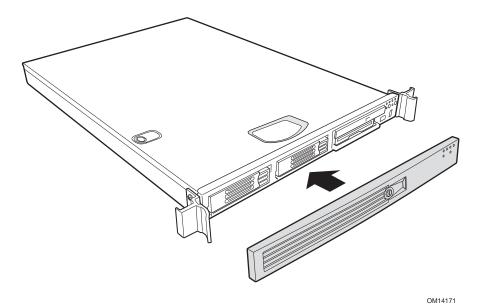


Figure 26. Installing the Bezel

Assembling the System 43

Finishing Up

Installing the Cover

Place the cover over the chassis so that the side edges of the cover sit just inside the chassis sidewalls. Slide the cover toward the front of the chassis until it locks in place.

Installing the Power Cord¹ and Strain Relief Strap

■ NOTE

If you will be placing your server in a rack, wait to install the power cord until after the server is in the rack.

- 1. Insert the expansion nipple (A) of the strain relief strap into the chassis hole.
- 2. Plug the power cord into the power supply but not into the power source.
- 3. Insert the power cord into the plastic loop (B) of the strain relief.
- 4. Pull the plastic band (C) until it tightens around the power cord.

To release the plastic loop and free the cord, squeeze the release lever (D).

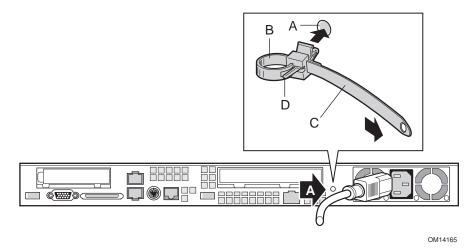


Figure 27. Installing the Power Cord and Strain Relief Strap

¹ A power cord is included in your server chassis kit only in North America.

Installing the System in a Rack

Installation instructions for the standard bracket kit and the optional rail kit are included with each kit. If you need additional copies, the order numbers are as follows:

- SR1200, SR1300, SR2200, and SR2300 Rail Kit Installation Guide—A61347-003
- SR1200, SR1300, SR2200, and SR2300 Bracket Kit Installation Guide—A61346-004

Equipment Rack Precautions



/ CAUTION

ANCHOR THE EQUIPMENT RACK: The equipment rack must be anchored to an unmovable support to prevent it from falling over when one or more servers are extended in front of it on slide assemblies. The equipment rack must be installed according to the manufacturer's instructions. You must also consider the weight of any other device installed in the rack.

MAIN AC POWER DISCONNECT: You are responsible for installing an AC power disconnect for the entire rack unit. This main disconnect must be readily accessible and it must be labeled as controlling power to the entire unit, not just to the server(s).

GROUNDING THE RACK INSTALLATION: To avoid the potential for an electrical shock hazard, you must include a third wire safety grounding conductor with the rack installation. If server power cords are plugged into AC outlets that are part of the rack, then you must provide proper grounding for the rack itself. If server power cords are plugged into wall AC outlets, the safety grounding conductor in each power cord provides proper grounding only for the server. You must provide additional, proper grounding for the rack and other devices installed in it.

OVERCURRENT PROTECTION: The server is designed for an AC line voltage source with up to 20 amperes of overcurrent protection. If the power system for the equipment rack is installed on a branch circuit with more than 20 amperes of protection, you must provide supplemental protection for the server. If more than one server is installed in the rack, the power source for each server must be from a separate branch circuit.

A CAUTION

Temperature: The operating temperature of the server, when installed in an equipment rack, must not go below 5 °C (41 °F) or rise above 35 °C (95 °F). Extreme fluctuations in temperature can cause a variety of problems in your server.

Ventilation: The equipment rack must provide sufficient airflow to the front of the server to maintain proper cooling. It must also include ventilation sufficient to exhaust a maximum of 1200 Btu per hour for a fully loaded SR1300 server.

It is important to note that this measurement is the maximum, and a minimum or typical system could be much less. You may want to calculate the Btu/hr measurement more accurately for your configuration. An extra 500 Btu/hr over many systems would translate into a large error calculating air conditioning capacity.

Working Inside Your Server

This chapter describes how to replace components in your server after it has been set up. All references to left, right, front, and rear are based on the reader facing the front of the chassis.

Tools and Supplies Needed

- Antistatic wrist strap (recommended)
- Phillips screwdriver

Safety: Before You Remove the Cover

Before removing the system cover to work inside the system, observe these safety guidelines:

- 1. Turn off all peripheral devices connected to the system.
- 2. Turn off the system by pressing the power button on the front of the system. Then unplug the AC power cord from the system or wall outlet.
- 3. Label and disconnect all peripheral cables and all telecommunication lines connected to I/O connectors or ports on the back of the system.
- 4. Attach a wrist strap to a chassis ground of the system—any unpainted metal surface—before handling components.

Warnings and Cautions

Read all caution and safety statements in this document before performing any of the instructions. See also Intel Server Boards and Server Chassis Safety Information on the Resource CD and/or at http:\\support.intel.com.

These warnings and cautions apply whenever you remove the chassis cover to access components inside the server. Only a technically qualified person should integrate and configure the server.

Replacing the Lithium Battery



⚠ CAUTION

Refer to technically qualified persons only for replacing the battery.

The following warning is provided on the server board configuration label, which is provided with the Intel server board boxed product. There is insufficient space on the server board to place this label. Therefore, the label must be placed permanently on the inside of the chassis, as close to the battery as possible.

A WARNING

Danger of explosion if battery is incorrectly replaced. Replace with only the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.



ADVARSEL!

Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri af samme fabrikat og type. Levér det brugte batteri tilbage til leverandøren.



ADVARSEL!

Lithiumbatteri - Eksplosjonsfare. Ved utskifting benyttes kun batteri som anbefalt av apparatfabrikanten. Brukt batteri returneres apparatleverandøren.



VARNING

Explosionsfara vid felaktigt batteribyte. Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren. Kassera använt batteri enligt fabrikantens instruktion.



A VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu. Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

Replacing a Hard Drive



A CAUTION

The Intel server chassis SR1300 does not support all ATA hard drives. Unsupported drives will not mate mechanically with the connector on the inside of the drive bay. To see a list of validated manufacturers and hard drive types, go to the following Web site:

http://support.intel.com/support/motherboards/server



CAUTION

ATA hard drives are NOT hot swappable. SCSI hard drives are hot swappable. The two types are not interchangeable. In a SCSI system, the hard drive in the flex bay can be hot swapped. The badge on the front of your server's chassis identifies the type of system you have.



A CAUTION

To allow proper airflow and cooling during operation, all drive bays must contain either a carrier/drive or a carrier with air baffle installed.

- 1. Before removing the cover to work inside the system, observe the safety guidelines on page 47.
- 2. Remove the bezel from the front of the chassis and the top cover.
- 3. Pull the retention lever (A) toward you until the tab end (B) of the lever is free of the housing slot (C).
- 4. Pull the carrier/drive forward and out of the drive bay.

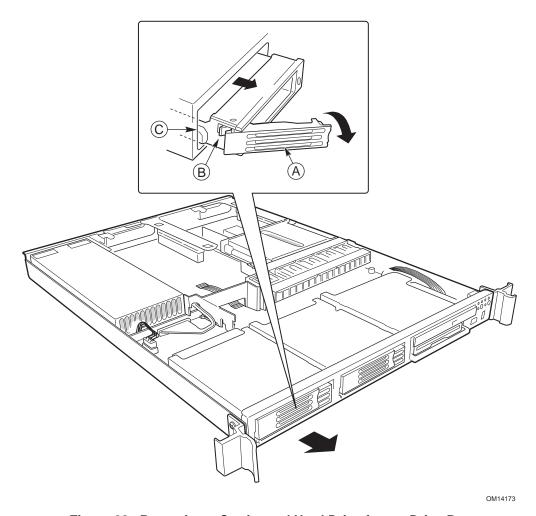


Figure 28. Removing a Carrier and Hard Drive from a Drive Bay

- 5. Remove the hard drive from the carrier (A) by removing the four screws (D) from the slide track (C). Lift the drive out of the carrier (B).
- 6. Remove the new hard drive from its wrapper and place it on an antistatic surface.
- 7. Set any jumpers and/or switches on the drive according to the drive manufacturer's instructions.

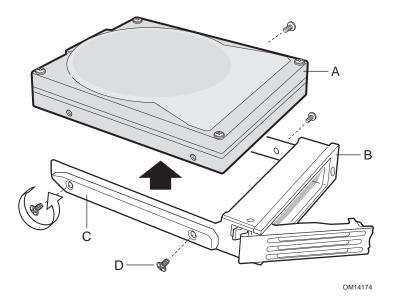


Figure 29. Removing a Hard Drive from a Carrier

- 8. Install the new drive in the carrier and the carrier/drive into the drive bay (see steps 6 through 9 of "Installing a Hard Drive" on page 40).
- 9. Reinstall a carrier/air baffle in any bays where you are not reinstalling a carrier/drive.
- 10. Reinstall the bezel and top cover if you have no additional work to do inside the chassis.

Replacing a DVD Drive/FDD or CD-ROM Drive/ **FDD Module**

A CAUTION

A DVD/CD-ROM drive/FDD module is NOT hot swappable. Before replacing it, you must first take the server out of service, turn off all peripheral devices connected to the system, turn off the system by pressing the power button, and unplug the AC power cord from the system or wall outlet.

- 1. Before removing the cover to work inside the system, observe the safety guidelines on page 47.
- 2. Remove the bezel from the front of the chassis and the top cover.
- 3. Rotate the module's handle bar up (A) and pull the module out of the flex bay.
- 4. Rotate the handle bar on the new module down.
- 5. Slide the new module into the flex bay until you feel the connectors touch.
- 6. Push the module in about 3/16 of an inch (5 mm) more to fully engage the connectors.
- 7. Reinstall the bezel and top cover if you have no additional work to do inside the chassis.

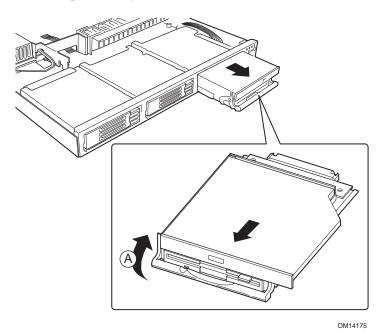


Figure 30. Removing a DVD/CD-ROM Drive/FDD Module

Replacing a PCI Add-in Card

NOTE

Add-in cards must be replaced while the riser card is removed from the chassis.

- 1. Before removing the cover to work inside the system, observe the safety guidelines on page 47.
- 2. Remove the chassis cover.
- 3. Insert your finger in the plastic loop (A).
- 4. Pull straight up and remove the riser card assembly from the chassis.
- 5. Open the retainer clip (B) on the riser card retention bracket.
- 6. Pull the PCI card out of the riser card slot (C).
- 7. Install the new PCI add-in card on the riser.
- 8. Close the retaining clip (B).
- 9. Insert the riser card connector in the server board slot while aligning the tabs on the rear retention bracket with the holes in the chassis.



A CAUTION

Press the riser card straight down into the slot. Tipping it in the slot while installing it may damage the riser card or board slot.

- 10. Firmly press the riser card straight down until it is seated in the server board slot.
- 11. Replace the chassis cover if you have no additional work to do inside the chassis.

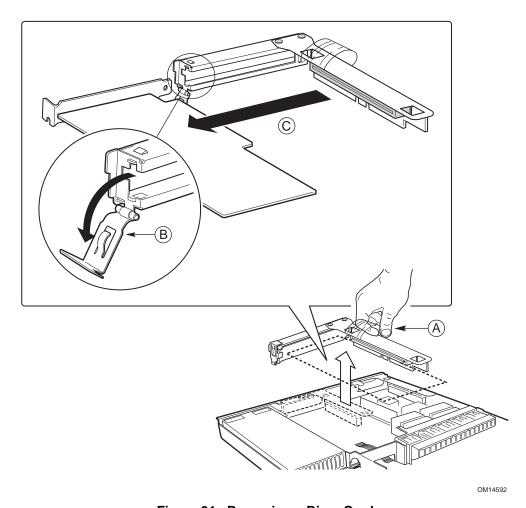


Figure 31. Removing a Riser Card

Replacing the Power Supply



CAUTION

Your server does not have a redundant power supply. Before replacing the power supply, you must take the server out of service.

- 1. Before removing the cover to work inside the system, observe the safety guidelines on page 47.
- 2. Unplug the power cord from the power source and the power supply.
- 3. Remove the chassis cover.
- 4. Lift up the rear of the power supply (A) only enough to clear the raised guides (C) on the chassis floor.



CAUTION

Lifting the rear of the power supply higher than the raised guides may damage the edge connector and power distribution board.

- 5. Push the power supply to the rear of the chassis (B) until it disengages from the power distribution board.
- 6. Lift the power supply out of the chassis.
- 7. Place the edge connector end of the replacement power supply onto the chassis floor and slide it toward the front of the chassis until the edge connector is fully inserted in the power distribution board connector.
- 8. Lower the rear of the power supply (B) and make sure that it is fully seated on the chassis floor and in front of the raised guides (C).
- 9. Replace the chassis cover.
- 10. Plug the power cord back into the power supply and the power source.

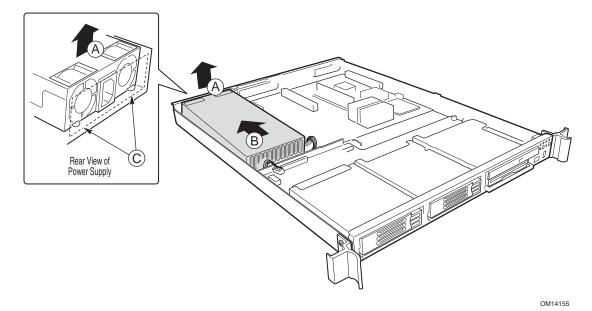


Figure 32. Removing the Power Supply

Working Inside Your Server

Removing and Installing the Air Baffle

The air baffle must be removed before you can replace any of the following components: fan module, power distribution board, backplane board, USB ribbon cable, SCSI or ATA cables, or server board.

Removal

- 1. Before removing the cover to work inside the system, observe the safety guidelines on page 47.
- 2. Remove the chassis cover.
- 3. Gently lift the air baffle until pin (C) is free of the board mounting hole. Lift the baffle from the chassis.

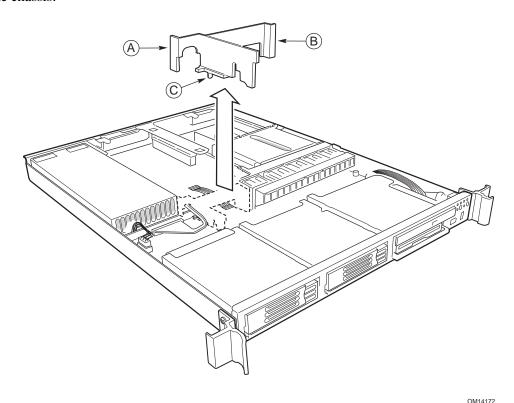


Figure 33. Removing the Air Baffle

Installation

- 1. Ensure the flex cable, auxiliary power cable, USB ribbon cable, and SCSI or ATA (depending on board type) cables are routed under where you will be installing the air baffle.
- 2. Aligning pin (C) with the board's mounting hole, position the air baffle over the white server board power connector.
- 3. Lower the baffle into position and press it down against the backplane board.
- 4. Ensure tab (A) aligns with the edge of the power supply and tab (B) aligns with the edge of the fan module.

Replacing the Fan Module

- 1. Before removing the cover to work inside the system, observe the safety guidelines on page 47.
- 2. Remove the cover from the chassis.
- 3. Remove the air baffle.
- 4. Remove the processor air duct.
- 5. Unplug the fan cable from the server board.
- 6. At the left end of the module, press on button (A) to release tab (B) from the chassis slot (C).
- 7. Lift the module from the chassis.
- 8. Slide the "L" shaped foot on the right end of the module under the chassis tab near the chassis sidewall.
- 9. Lower the new module to the chassis floor. Ensure it is situated between the raised guides, not on top of them.
- 10. Press down on the left end of the module until tab (B) fits into chassis slot (C).
- 11. Plug the fan cable into the system fan connector on the server board.
- 12. Install the air baffle.
- 13. Replace the processor air duct.
- 14. Replace the chassis cover.

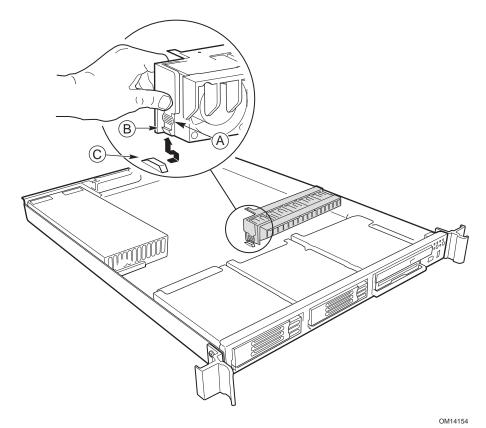


Figure 34. Replacing the Fan Module

Working Inside Your Server

Replacing a Backplane Board

- 1. Before removing the cover to work inside the system, observe the safety guidelines on page 47.
- 2. Remove the cover and bezel from the chassis.
- 3. Remove all drives from the drive bays and flex bay.
- 4. Remove the air baffle.
- 5. Unplug all cables connected to the backplane board.
- 6. Remove and save the thumbscrew (A) that secures the board to the chassis.
- 7. Slide the board to the right (B) until it disengages from the standoffs (C) and lift it out of the chassis.

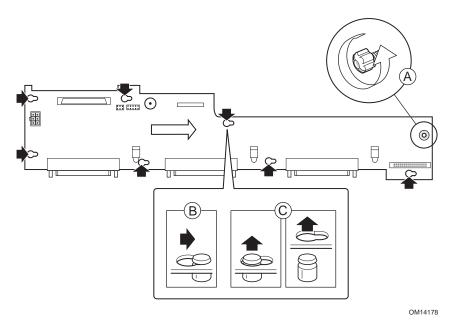


Figure 35. Replacing the Backplane Board

- 8. Before placing the new backplane board, ensure the USB ribbon cable is lying in the proper position (see Figure 15 on page 29).
- 9. Tilt the rear edge of the backplane board down so it clears the pins on the power distribution board and place the backplane board over the USB ribbon cable. Place the backplane board on the chassis standoffs so that each mounting hole fits over a standoff.
- 10. After gently pushing the board down, slide the board to the left until it snaps into place.
- 11. Install the thumbscrew that secures the board to the chassis.
- 12. Plug in all cables removed from the backplane board.
- 13. Install the air baffle.
- 14. Install all drives removed earlier.
- 15. Replace the chassis cover and bezel.

Replacing a Power Distribution Board

- 1. Before removing the cover to work inside the system, observe the safety guidelines on page 47.
- 2. Remove the cover and bezel from the chassis.
- 3. Remove all drives from the drive bays and flex bay.
- 4. Remove the power supply.
- 5. Remove the air baffle.
- 6. Disconnect the fan cable from the server board and remove the fan module.
- 7. Unplug the auxiliary signal connector (B) from the server board.
- 8. Unplug the auxiliary power connector (D) from the server board.
- 9. Remove the SCSI cable on a SCSI system or the two ATA-100 cables on an ATA system.
- 10. Unplug power connector (A) from the backplane board.
- 11. Remove the backplane board.
- 12. Unplug the USB ribbon cable from the USB connector on the server board and lay the free end of the cable back over the drive bays.
- 13. Unplug the power distribution board (C) from the server board and remove it from the chassis.

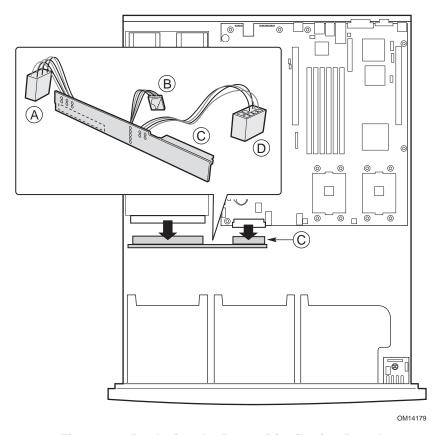


Figure 36. Replacing the Power Distribution Board

- 14. Install the replacement board by plugging its white 24-pin power connector (C) into the server board power connector. Press the two firmly together until they are fully seated.
- 15. Lay the USB ribbon cable back over the power distribution board and plug it into the USB connector on the server board.

- 16. Install the backplane board and plug in all cabling.
- 17. Install the power supply.
- 18. Route and connect all other cabling removed earlier.
- 19. Install the fan module and connect the fan cable to the server board.
- 20. Install the air baffle.
- 21. Install any drives removed earlier.
- 22. Replace the chassis cover and bezel.

Replacing a Front Panel Board

- 1. Before removing the cover to work inside the system, observe the safety guidelines on page 47.
- 2. Remove the cover from the chassis.
- 3. Unplug the USB and backplane cables from the front panel board (A).

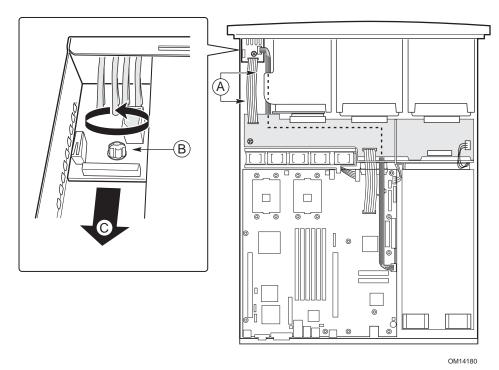


Figure 37. Replacing the Front Panel Board

- 4. Remove the thumbscrew (B) from the board.
- 5. Remove the front panel board from the chassis (C).
- 6. Install the new board in the chassis, being careful to insert the LED light pipes into the holes in the front panel.
- 7. Secure the board to the chassis with the thumbscrew.
- 8. Plug the USB and backplane cables back into the front panel board.
- 9. Replace the chassis cover.

Replacing a USB Ribbon Cable

- 1. Before removing the cover to work inside the system, observe the safety guidelines on page 47.
- 2. Remove the cover and bezel from the chassis.
- 3. Remove all drives from the drive bays and flex bay.
- 4. Remove the air baffle.
- 5. Unplug all cables connected to the backplane board (A).

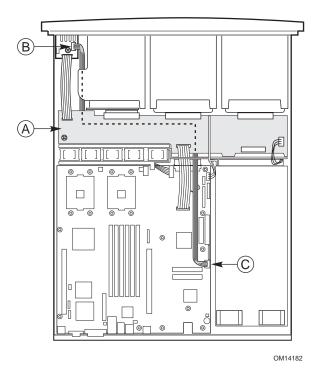


Figure 38. Replacing the USB Ribbon Cable

- 6. Remove the backplane board (see steps 6 and 7 in "Replacing a Backplane Board" on page 58).
- 7. Disconnect the USB ribbon cable from USB connector (B) on the front panel board and from USB connector (C) on the server board.
- 8. Connect the new USB ribbon cable to USB connectors (B) and (C) on the front panel and server boards, respectively.
- 9. Replace the backplane board (see steps 9 through 11 in "Replacing a Backplane Board" on page 58).
- 10. Plug in all cables connected to the backplane board.
- 11. Install the air baffle.
- 12. Replace all drives in the drive bays and flex bay.
- 13. Replace the chassis cover and bezel.

Replacing a Server Board

- 1. Before removing the cover to work inside the system, observe the safety guidelines on page 47.
- 2. Remove the cover and bezel from the chassis.
- 3. Remove all drives from the drive bays and flex bay.
- 4. Remove both riser card/PCI card assemblies.
- 5. Remove the power supply.
- 6. Remove the air baffle.
- 7. At the backplane board, disconnect the ribbon cable that comes from the front panel board.
- 8. Remove the processor air duct.
- 9. Disconnect the fan cable from the server board and remove the fan module.
- 10. Disconnect both ends of all remaining cables.
- 11. Remove the backplane board.
- 12. Disconnect the USB ribbon cable from the server board and lay the free end back over the drive bays.
- 13. Remove the heat sink, processor air dam, and any processors and memory cards that you wish to use with the new board. (See the Quick Start User's Guide that shipped with your server board SE7500WV2 or SE7501WV2.)
- 14. Remove the eight screws that secure the processor retention mechanisms and the three mounting screws that secure the server board to the chassis (see Figure 39).

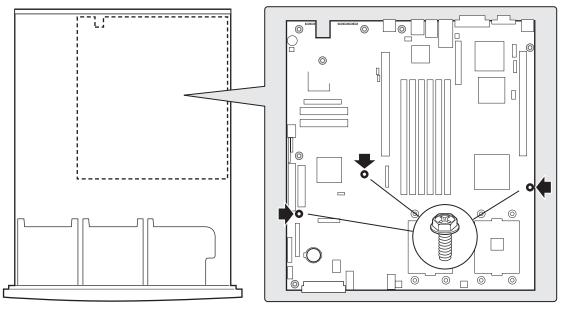


Figure 39. Removing the Server Board

OM14181

- 15. Slide the board toward the front of the chassis until the I/O connectors are clear of the chassis I/O openings and lift the server board from the chassis.
- 16. Remove the power distribution board from the white 24-pin power connector. Place the server board in an antistatic bag.
- 17. Remove the replacement server board from its packaging and antistatic bag.
- 18. Connect the power distribution board to the 24-pin power connector on the new server board.
- 19. Ensure that the Mylar insulator sheet is seated securely over the standoffs, is laying flat on the chassis floor, and that the edge of the sheet is seated below the studs in the rear chassis wall.
- 20. Insert the back edge of the board under the three retention pins located at the rear of the chassis.
- 21. While placing the board on the chassis standoffs, carefully align the board I/O connectors with the rear chassis I/O openings.
- 22. Adjust the board's position so that the three mounting holes rest securely on the shouldered standoffs. Reattach the board to the chassis using the three mounting screws.

■ NOTE

The Intel SE7500WV2 and SE7501WV2 server boards use three holes to mount the board to the chassis standoffs.

- 23. Install the processor retention mechanisms, processor(s), and memory cards that you wish to use with the new board (*See the Quick Start User's Guide that shipped with your server board SE7500WV2 or SE7501WV2*.) If you only have one processor, install the processor air dam in the outer processor location.
- 24. Lay the USB ribbon cable in the proper position on the chassis floor, under where the backplane board will be installed, and connect it to the USB connector on the server board.
- 25. Install the backplane board.
- 26. Install the power supply.
- 27. Cable the new server board to the other system components.
- 28. Install the fan module and connect the fan cable to the server board.
- 29. Install the air baffle.
- 30. Install the processor air duct.
- 31. Install both riser card/PCI card assemblies.
- 32. Replace all drives in the drive bays and flex bay.
- 33. Replace the chassis cover if you have no additional work to do inside the chassis.

A Regulatory and Certification Information

WARNING

You must adhere to the assembly instructions in this guide to ensure and maintain compliance with existing product certifications and approvals. Use only the described, regulated components specified in this guide. Use of other products / components will void the UL listing and other regulatory approvals of the product and will most likely result in noncompliance with product regulations in the region(s) in which the product is sold.

Product Regulatory Compliance

The server chassis SR1300 subassembly, when correctly integrated per this guide, complies with the following safety and electromagnetic compatibility (EMC) regulations.

Product Safety Compliance

- UL 1950 CSA 950 (US/Canada)
- EN 60 950 (European Union)
- IEC60 950 (International)
- CE Low Voltage Directive (73/23/EEC) (European Union)
- EMKO-TSE (74-SEC) 207/94 (Nordics)
- GOST R 50377-92 (Russia)
- IRAM Type Certification (Argentina)

Product EMC Compliance

- FCC /ICES-003, Class A Emissions (USA/Canada) Verification
- CISPR 22, 3rd Edition, Class A Emissions (International)
- EN55022, Class A Emissions (CENELEC Europe)
- EN55024: 1998, Immunity (CENELEC Europe)
- EN61000-3-2, Harmonics (CENELEC Europe)
- EN61000-3-3, Voltage Flicker (CENELEC Europe)
- CE EMC Directive 89/336/EEC (CENELEC Europe)
- VCCI, Class A Emissions (Japan)
- AS/NZS 3548 Class A Emissions (Australia / New Zealand)
- BSMI CNS13438 Class A Emissions (Taiwan)
- GOST R 29216-91, Class A Emissions (Russia)
- GOST R 50628-95, Immunity (Russia)
- RRL, MIC Notice No. 1997-41 (EMC) & 1997-42 (EMI) (Korea)

Product Regulatory Compliance Markings

The server chassis SR1300 will be marked with the following regulatory compliance markings.

Regulatory Compliance	Country	Marking
cULus Listing Marks	USA/Canada	LISTED ITE E139761 US
GS Mark	Germany	Sinche de la constante de la c
CE Mark	Europe	CE
FCC Marking (Class A)	USA	This device complies with Part 15 of the FCC Rules. Operation of this device is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation. Manufactured by Intel Corporation
EMC Marking (Class A)	Canada	CANADA ICES-003 CLASS A CANADA NMB-003 CLASSE A
VCCI Marking (Class A)	Japan	この装置は、クラス A 情報技術 装置です。この装置を家庭環境で 使用すると電波妨害を引き起こす ことがあります。この場合には使 用者が適切な対策を講ずるよう要 求されることがあります。VCCI-A
BSMI Certification Number & Class A Warning	Taiwan	警告使用者: 檢磁 3912I900 這是甲類的資訊產品,在居住的環境中使用時,可能會造成射頻干擾,在這種情況下,使用者會被要求採取某些適當的對策
GOST R Marking	Russia	ME06
RRL MIC Mark	Korea	MIC
China Compulsary Certification Mark	China	(Care

Electromagnetic Compatibility Notices

FCC Verification Statement (USA)

Product Type: SR1300

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Intel Corporation 5200 N.E. Elam Young Parkway Hillsboro, OR 97124-6497 Phone: 1-800-628-8686

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. 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 the 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.

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment. The customer is responsible for ensuring compliance of the modified product.

Only peripherals (computer input/output devices, terminals, printers, etc.) that comply with FCC Class A or B limits may be attached to this computer product. Operation with noncompliant peripherals is likely to result in interference to radio and TV reception.

All cables used to connect to peripherals must be shielded and grounded. Operation with cables, connected to peripherals that are not shielded and grounded may result in interference to radio and TV reception.

ICES-003 (Canada)

Cet appareil numérique respecte les limites bruits radioélectriques applicables aux appareils numériques de Classe Aprescrites dans la norme sur le matériel brouilleur: "Appareils Numériques", NMB-003 édictée par le Ministre Canadian des Communications.

English translation of the notice above:

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of the Canadian Department of Communications.

Europe (CE Declaration of Conformity)

This product has been tested in accordance too, and complies with the Low Voltage Directive (73/23/EEC) and EMC Directive (89/336/EEC). The product has been marked with the CE Mark to illustrate its compliance.

VCCI (Japan)

この装置は、情報処理装置等電波障害白主規制協議会(VCCI)の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

English translation of the notice above:

This is a Class A product based on the standard of the Voluntary Control Council for Interference (VCCI) from Information Technology Equipment. If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

BSMI (Taiwan)

The BSMI ID certification number and EMC warning is located on the outside rear area of the product.

警告使用者: 檢磁 39121900

這是甲類的資訊產品,在居住的環境中使用時,可能會造成射頻干擾,在這種情況下,使用者會被要求採取某些適當的對策

RRL (Korea)

Following is the RRL certification information for Korea.



English translation of the notice above:

- 1. Type of Equipment (Model Name): SR1300
- 2. Certification No.: On RRL certificate. Obtain certificate from local Intel representative
- 3. Name of Certification Recipient: Intel Corporation
- 4. Date of Manufacturer: Refer to date code on product
- 5. Manufacturer/Nation: Intel Corporation/Refer to country of origin marked on product

Regulated Specified Components

To maintain the UL listing and compliance to other regulatory certifications and/or declarations, the following regulated components must be used and conditions adhered to. Interchanging or use of other component will void the UL listing and other product certifications and approvals.

Updated product information for configurations can be found on the Intel Server Builder Web site at the following URL:

http://channel.intel.com/go/serverbuilder

If you do not have access to Intel's Web address, please contact your local Intel representative.

- **SR1300 chassis** (base chassis is provided with power supply and fans)—UL listed.
- **Server board**—you must use an Intel server board—UL recognized.
- Add-in boards—must have a printed wiring board flammability rating of minimum UL94V-1. Add-in boards containing external power connectors and/or lithium batteries must be UL recognized or UL listed. Any add-in board containing modem telecommunication circuitry must be UL listed. In addition, the modem must have the appropriate telecommunications, safety, and EMC approvals for the region in which it is sold.
- Peripheral storage devices—must be UL recognized or UL listed accessory and TUV or VDE licensed. Maximum power rating of any one device is 19 watts. Total server configuration is not to exceed the maximum loading conditions of the power supply.
 - When using a UL-recognized peripheral storage device, the plastic bezel must be made of a UL-recognized plastic with flammability rating of UL94V-1.

B Equipment Log and Worksheets

Equipment Log

Use the blank equipment log provided here to record information about your system. You will need some of this information when you run the Server Setup Utility (SSU).

	Manufacturer Name and		
Item	Model Number	Serial Number	Date Installed
Chassis			
Server Board			
Processor Speed and Cache			
Video Display			
Video Controller			
Keyboard			
Mouse			
3.5" Drive			
DVD or CD-ROM Drive			
Hard Disk Drive 1			
Hard Disk Drive 2			
Hard Disk Drive 3			

continued

Equipment Log (continued)

Item	Manufacturer Name and Model Number	Serial Number	Date Installed

Current Usage

Calculating Power Usage

The total combined power consumption for your configuration **must be less than 350 watts**, with any combination of loads not to exceed the maximum current on any one channel as defined in Table 3. Use the two worksheets in this section to calculate the total used by your configuration. For current and voltage requirements of add-in boards and peripherals, see your vendor documents.

Worksheet: Calculating DC Power Usage

- 1. List the current for each board and device in the appropriate voltage level column.
- 2. Add the current in each column and then go to the next worksheet.

Table 3. Power Usage Worksheet 1

	Current (maximum) at voltage level:					
Device	+5 Vsb	+3.3 V	+5 V	+12 V	–12 V	
Boards, processors, and memory (get totals from your board manual)						
SCSI backplane and front panel			0.40			
3.5" drive			0.30			
CD-ROM drive			0.60			
1st hot swap hard drive						
2nd hot swap hard drive						
3rd hot swap hard drive						
Cooling fan 5 x, 40 mm				1.75		
Total Current						
Maximum Ratings	2.0 A	16.0 A	12.0 A	28.0 A	0.5 A	
(for comparison)						

Worksheet: Total Combined Power Used by the System

- 1. From the previous worksheet, enter the total current for each column.
- 2. Multiply the voltage by the total current to get the total wattage for each voltage level.
- 3. Add the total wattage for each voltage level to arrive at a total combined power usage on the power supply.

Table 4. **Power Usage Worksheet 2**

Voltage level and total current (V X A = W)	Total Watts for each voltage level		
(+5 Vsb) X (A)	W		
(+3.3 V) X (A)	W		
(+5 V) X (A)	W		
(+12 V) X (A)	W		
(–12 V) X (A)	W		
Total Combined Wattage	W		



A CAUTION

Do not overload: as an overall current usage limitation on the power supply, do not exceed a combined power output of 350 watts for all DC outputs.

C Safety Warnings

Read all caution and safety statements in this document before performing any of the instructions. See also *Intel Server Boards and Server Chassis Safety Information* on the Resource CD and/or at http:\\support.intel.com.

WARNING: English (US)

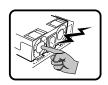
AVERTISSEMENT: Français

WARNUNG: Deutsch

AVVERTENZA: Italiano

ADVERTENCIAS: Español

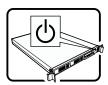
WARNING: English (US)



The power supply in this product contains no user-serviceable parts. There may be more than one supply in this product. Refer servicing only to qualified personnel.



Do not attempt to modify or use the supplied AC power cord if it is not the exact type required. A product with more than one power supply will have a separate AC power cord for each supply.



The power button on the system does not turn off system AC power. To remove AC power from the system, you must unplug each AC power cord from the wall outlet or power supply.

The power cord(s) is considered the disconnect device to the main (AC) power. The socket outlet that the system plugs into shall be installed near the equipment and shall be easily accessible.



SAFETY STEPS: Whenever you remove the chassis covers to access the inside of the system, follow these steps:

- 1. Turn off all peripheral devices connected to the system.
- 2. Turn off the system by pressing the power button.
- 3. Unplug all AC power cords from the system or from wall outlets.
- Label and disconnect all cables connected to I/O connectors or ports on the back of the system.
- 5. Provide some electrostatic discharge (ESD) protection by wearing an antistatic wrist strap attached to chassis ground of the system—any unpainted metal surface—when handling components.
- 6. Do not operate the system with the chassis covers removed.

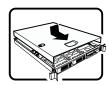


After you have completed the six SAFETY steps above, you can remove the system covers. To do this:

- Unlock and remove the padlock from the back of the system if a padlock has been installed.
- 2. Remove and save all screws from the covers.
- 3. Remove the covers.

continued

WARNING: English (continued)



For proper cooling and airflow, always reinstall the chassis covers before turning on the system. Operating the system without the covers in place can damage system parts. To install the covers:

- 1. Check first to make sure you have not left loose tools or parts inside the system.
- 2. Check that cables, add-in boards, and other components are properly installed.
- 3. Attach the covers to the chassis with the screws removed earlier, and tighten them firmly.
- 4. Insert and lock the padlock to the system to prevent unauthorized access inside the system.
- 5. Connect all external cables and the AC power cord(s) to the system.



A microprocessor and heat sink may be hot if the system has been running. Also, there may be sharp pins and edges on some board and chassis parts. Contact should be made with care. Consider wearing protective gloves.



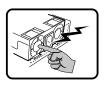
Danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Dispose of used batteries according to manufacturer's instructions.



The system is designed to operate in a typical office environment. Choose a site that is:

- Clean and free of airborne particles (other than normal room dust).
- Well ventilated and away from sources of heat including direct sunlight.
- Away from sources of vibration or physical shock.
- Isolated from strong electromagnetic fields produced by electrical devices.
- In regions that are susceptible to electrical storms, we recommend you plug your system
 into a surge suppresser and disconnect telecommunication lines to your modem during an
 electrical storm.
- · Provided with a properly grounded wall outlet.
- Provided with sufficient space to access the power supply cord(s), because they serve as the product's main power disconnect.

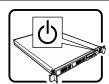
AVERTISSEMENT: Français



Le bloc d'alimentation de ce produit ne contient aucune pièce pouvant être réparée par l'utilisateur. Ce produit peut contenir plus d'un bloc d'alimentation. Veuillez contacter un technicien qualifié en cas de problème.



Ne pas essayer d'utiliser ni modifier le câble d'alimentation CA fourni, s'il ne correspond pas exactement au type requis. Le nombre de câbles d'alimentation CA fournis correspond au nombre de blocs d'alimentation du produit.

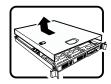


Notez que le commutateur CC de mise sous tension /hors tension du panneau avant n'éteint pas l'alimentation CA du système. Pour mettre le système hors tension, vous devez débrancher chaque câble d'alimentation de sa prise.



CONSIGNES DE SÉCURITÉ -Lorsque vous ouvrez le boîtier pour accéder à l'intérieur du système, suivez les consignes suivantes:

- 1. Mettez hors tension tous les périphériques connectés au système.
- Mettez le système hors tension en mettant l'interrupteur général en position OFF (bouton-poussoir).
- 3. Débranchez tous les cordons d'alimentation c.a. du système et des prises murales.
- 4. Identifiez et débranchez tous les câbles reliés aux connecteurs d'E-S ou aux accès derrière le système.
- Pour prévenir les décharges électrostatiques lorsque vous touchez aux composants, portez une bande antistatique pour poignet et reliez-la à la masse du système (toute surface métallique non peinte du boîtier).
- 6. Ne faites pas fonctionner le système tandis que le boîtier est ouvert.

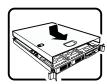


Une fois TOUTES les étapes précédentes accomplies, vous pouvez retirer les panneaux du système. Procédez comme suit:

- 1. Si un cadenas a été installé sur à l'arrière du système, déverrouillez-le et retirez-le.
- 2. Retirez toutes les vis des panneaux et mettez-les dans un endroit sûr.
- 3. Retirez les panneaux.

suite

AVERTISSEMENT: Français (suite)



Afin de permettre le refroidissement et l'aération du système, réinstallez toujours les panneaux du boîtier avant de mettre le système sous tension. Le fonctionnement du système en l'absence des panneaux risque d'endommager ses pièces. Pour installer les panneaux, procédez comme suit:

- 1. Assurez-vous de ne pas avoir oublié d'outils ou de pièces démontées dans le système.
- Assurez-vous que les câbles, les cartes d'extension et les autres composants sont bien installés.
- 3. Revissez solidement les panneaux du boîtier avec les vis retirées plus tôt.
- 4. Remettez le cadenas en place et verrouillez-le afin de prévenir tout accès non autorisé à l'intérieur du système.
- 5. Rebranchez tous les cordons d'alimentation c. a. et câbles externes au système.



Le microprocesseur et le dissipateur de chaleur peuvent être chauds si le système a été sous tension. Faites également attention aux broches aiguës des cartes et aux bords tranchants du capot. Nous vous recommandons l'usage de gants de protection.



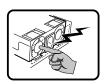
Danger d'explosion si la batterie n'est pas remontée correctement. Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le fabricant. Disposez des piles usées selon les instructions du fabricant.



Le système a été conçu pour fonctionner dans un cadre de travail normal. L'emplacement choisi doit être:

- Propre et dépourvu de poussière en suspension (sauf la poussière normale).
- Bien aéré et loin des sources de chaleur, y compris du soleil direct.
- A l'abri des chocs et des sources de vibrations.
- Isolé de forts champs électromagnétiques géenérés par des appareils électriques.
- Dans les régions sujettes aux orages magnétiques il est recomandé de brancher votre système à un supresseur de surtension, et de débrancher toutes les lignes de télécommunications de votre modem durant un orage.
- Muni d'une prise murale correctement mise à la terre.
- Suffisamment spacieux pour vous permettre d'accéder aux câbles d'alimentation (ceux-ci étant le seul moyen de mettre le système hors tension).

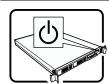
WARNUNG: Deutsch



Benutzer können am Netzgerät dieses Produkts keine Reparaturen vornehmen. Das Produkt enthält möglicherweise mehrere Netzgeräte. Wartungsarbeiten müssen von qualifizierten Technikern ausgeführt werden.



Versuchen Sie nicht, das mitgelieferte Netzkabel zu ändern oder zu verwenden, wenn es sich nicht genau um den erforderlichen Typ handelt. Ein Produkt mit mehreren Netzgeräten hat für jedes Netzgerät ein eigenes Netzkabel.

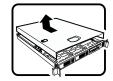


Der Wechselstrom des Systems wird durch den Ein-/Aus-Schalter für Gleichstrom nicht ausgeschaltet. Ziehen Sie jedes Wechselstrom-Netzkabel aus der Steckdose bzw. dem Netzgerät, um den Stromanschluß des Systems zu unterbrechen.



SICHERHEISMASSNAHMEN: Immer wenn Sie die Gehäuseabdeckung abnehmen um an das Systeminnere zu gelangen, sollten Sie folgende Schritte beachten:

- 1. Schalten Sie alle an Ihr System angeschlossenen Peripheriegeräte aus.
- 2. Schalten Sie das System mit dem Hauptschalter aus.
- 3. Ziehen Sie den Stromanschlußstecker Ihres Systems aus der Steckdose.
- Auf der Rückseite des Systems beschriften und ziehen Sie alle Anschlußkabel von den I/O Anschlüssen oder Ports ab.
- 5. Tragen Sie ein geerdetes Antistatik Gelenkband, um elektrostatische Ladungen (ESD) über blanke Metallstellen bei der Handhabung der Komponenten zu vermeiden.
- 6. Schalten Sie das System niemals ohne ordnungsgemäß montiertes Gehäuse ein.

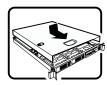


Nachdem Sie die oben erwähnten ersten sechs SICHERHEITSSCHRITTE durchgeführt haben, können Sie die Abdeckung abnehmen, indem Sie:

- 1. Öffnen und entfernen Sie die Verschlußeinrichtung (Padlock) auf der Rückseite des Systems, falls eine Verschlußeinrichtung installiert ist.
- 2. Entfernen Sie alle Schrauben der Gehäuseabdeckung.
- 3. Nehmen Sie die Abdeckung ab.

Fortsetzung

WARNUNG: Deutsch (Fortsetzung)



Zur ordnungsgemäßen Kühlung und Lüftung muß die Gehäuseabdeckung immer wieder vor dem Einschalten installiert werden. Ein Betrieb des Systems ohne angebrachte Abdeckung kann Ihrem System oder Teile darin beschädigen. Um die Abdeckung wieder anzubringen:

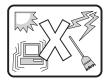
- Vergewissern Sie sich, daß Sie keine Werkzeuge oder Teile im Innern des Systems zurückgelassen haben.
- 2. Überprüfen Sie alle Kabel, Zusatzkarten und andere Komponenten auf ordnungsgemäßen Sitz und Installation.
- 3. Bringen Sie die Abdeckungen wieder am Gehäuse an, indem Sie die zuvor gelösten Schrauben wieder anbringen. Ziehen Sie diese gut an.
- 4. Bringen Sie die Verschlußeinrichtung (Padlock) wieder an und schließen Sie diese, um ein unerlaubtes Öffnen des Systems zu verhindern.
- Schließen Sie alle externen Kabel und den AC Stromanschlußstecker Ihres Systems wieder an.



Der Mikroprozessor und der Kühler sind möglicherweise erhitzt, wenn das System in Betrieb ist. Außerdem können einige Platinen und Gehäuseteile scharfe Spitzen und Kanten aufweisen. Arbeiten an Platinen und Gehäuse sollten vorsichtig ausgeführt werden. Sie sollten Schutzhandschuhe tragen.



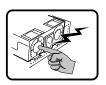
Bei falschem Einsetzen einer neuen Batterie besteht Explosionsgefahr. Die Batterie darf nur durch denselben oder einen entsprechenden, vom Hersteller empfohlenen Batterietyp ersetzt werden. Entsorgen Sie verbrauchte Batterien den Anweisungen des Herstellers entsprechend.



Das System wurde für den Betrieb in einer normalen Büroumgebung entwickelt. Der Standort sollte:

- sauber und staubfrei sein (Hausstaub ausgenommen);
- gut gelüftet und keinen Heizquellen ausgesetzt sein (einschließlich direkter Sonneneinstrahlung);
- keinen Erschütterungen ausgesetzt sein;
- keine starken, von elektrischen Geräten erzeugten elektromagnetischen Felder aufweisen;
- in Regionen, in denen elektrische Stürme auftreten, mit einem Überspannungsschutzgerät verbunden sein; während eines elektrischen Sturms sollte keine Verbindung der Telekommunikationsleitungen mit dem Modem bestehen;
- mit einer geerdeten Wechselstromsteckdose ausgerüstet sein;
- über ausreichend Platz verfügen, um Zugang zu den Netzkabeln zu gewährleisten, da der Stromanschluß des Produkts hauptsächlich über die Kabel unterbrochen wird.

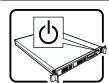
AVVERTENZA: Italiano



Rivolgersi ad un tecnico specializzato per la riparazione dei componenti dell'alimentazione di questo prodotto. È possibile che il prodotto disponga di più fonti di alimentazione.



Non modificare o utilizzare il cavo di alimentazione in c.a. fornito dal produttore, se non corrisponde esattamente al tipo richiesto. Ad ogni fonte di alimentazione corrisponde un cavo di alimentazione in c.a. separato.



L'interruttore attivato/disattivato nel pannello anteriore non interrompe l'alimentazione in c.a. del sistema. Per interromperla, è necessario scollegare tutti i cavi di alimentazione in c.a. dalle prese a muro o dall'alimentazione di corrente.



PASSI DI SICUREZZA: Qualora si rimuovano le coperture del telaio per accedere all'interno del sistema, seguire i seguenti passi:

- 1. Spegnere tutti i dispositivi periferici collegati al sistema.
- 2. Spegnere il sistema, usando il pulsante spento/acceso dell'interruttore del sistema.
- 3. Togliere tutte le spine dei cavi del sistema dalle prese elettriche.
- Identificare e sconnettere tutti i cavi attaccati ai collegamenti I/O od alle prese installate sul retro del sistema.
- Qualora si tocchino i componenti, proteggersi dallo scarico elettrostatico (SES), portando un cinghia anti-statica da polso che è attaccata alla presa a terra del telaio del sistema – qualsiasi superficie non dipinta – .
- 6. Non far operare il sistema quando il telaio è senza le coperture.

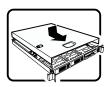


Dopo aver seguito i sei passi di SICUREZZA sopracitati, togliere le coperture del telaio del sistema come seque:

- 1. Aprire e rimuovere il lucchetto dal retro del sistema qualora ve ne fosse uno installato.
- 2. Togliere e mettere in un posto sicuro tutte le viti delle coperture.
- 3. Togliere le coperture.

continua

AVVERTENZA: Italiano (continua)



Per il giusto flusso dell'aria e raffreddamento del sistema, rimettere sempre le coperture del telaio prima di riaccendere il sistema. Operare il sistema senza le coperture al loro proprio posto potrebbe danneggiare i componenti del sistema. Per rimettere le coperture del telaio:

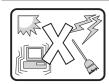
- Controllare prima che non si siano lasciati degli attrezzi o dei componenti dentro il sistema.
- Controllare che i cavi, dei supporti aggiuntivi ed altri componenti siano stati installati appropriatamente.
- 3. Attaccare le coperture al telaio con le viti tolte in precedenza e avvitarle strettamente.
- Inserire e chiudere a chiave il lucchetto sul retro del sistema per impedire l'accesso non autorizzato al sistema.
- 5. Ricollegare tutti i cavi esterni e le prolunghe AC del sistema.



Se il sistema è stato a lungo in funzione, il microprocessore e il dissipatore di calore potrebbero essere surriscaldati. Fare attenzione alla presenza di piedini appuntiti e parti taglienti sulle schede e sul telaio. È consigliabile l'uso di quanti di protezione.



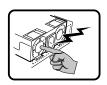
Esiste il pericolo di un esplosione se la pila non viene sostituita in modo corretto. Utilizzare solo pile uguali o di tipo equivalente a quelle consigliate dal produttore. Per disfarsi delle pile usate, seguire le istruzioni del produttore.



Il sistema è progettato per funzionare in un ambiente di lavoro tipo. Scegliere una postazione che sia:

- Pulita e libera da particelle in sospensione (a parte la normale polvere presente nell'ambiente).
- Ben ventilata e lontana da fonti di calore, compresa la luce solare diretta.
- Al riparo da urti e lontana da fonti di vibrazione.
- Isolata dai forti campi magnetici prodotti da dispositivi elettrici.
- In aree soggette a temporali, è consigliabile collegare il sistema ad un limitatore di corrente. In caso di temporali, scollegare le linee di comunicazione dal modem.
- Dotata di una presa a muro correttamente installata.
- Dotata di spazio sufficiente ad accedere ai cavi di alimentazione, i quali rappresentano il mezzo principale di scollegamento del sistema.

ADVERTENCIAS: Español

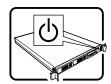


El usuario debe abstenerse de manipular los componentes de la fuente de alimentación de este producto, cuya reparación debe dejarse exclusivamente en manos de personal técnico especializado. Puede que este producto disponga de más de una fuente de alimentación.



No intente modificar ni usar el cable de alimentación de corriente alterna, si no corresponde exactamente con el tipo requerido.

El número de cables suministrados se corresponden con el número de fuentes de alimentación de corriente alterna que tenga el producto.

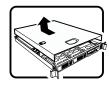


Nótese que el interruptor activado/desactivado en el panel frontal no desconecta la corriente alterna del sistema. Para desconectarla, deberá desenchufar todos los cables de corriente alterna de la pared o desconectar la fuente de alimentación.



INSTRUCCIONES DE SEGURIDAD: Cuando extraiga la tapa del chasis para acceder al interior del sistema, siga las siguientes instrucciones:

- 1. Apague todos los dispositivos periféricos conectados al sistema.
- 2. Apague el sistema presionando el interruptor encendido/apagado.
- Desconecte todos los cables de alimentación CA del sistema o de las tomas de corriente alterna.
- Identifique y desconecte todos los cables enchufados a los conectores E/S o a los puertos situados en la parte posterior del sistema.
- Cuando manipule los componentes, es importante protegerse contra la descarga electrostática (ESD). Puede hacerlo si utiliza una muñequera antiestática sujetada a la toma de tierra del chasis — o a cualquier tipo de superficie de metal sin pintar.
- 6. No ponga en marcha el sistema si se han extraído las tapas del chasis.

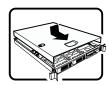


Después de completar las seis instrucciones de SEGURIDAD mencionadas, ya puede extraer las tapas del sistema. Para ello:

- Desbloquee y extraiga el bloqueo de seguridad de la parte posterior del sistema, si se ha instalado uno.
- 2. Extraiga y guarde todos los tornillos de las tapas.
- 3. Extraiga las tapas.

continúa

ADVERTENCIAS: Español (continúa)



Para obtener un enfriamiento y un flujo de aire adecuados, reinstale siempre las tapas del chasis antes de poner en marcha el sistema. Si pone en funcionamiento el sistema sin las tapas bien colocadas puede dañar los componentes del sistema. Para instalar las tapas:

- Asegúrese primero de no haber dejado herramientas o componentes sueltos dentro del sistema.
- 2. Compruebe que los cables, las placas adicionales y otros componentes se hayan instalado correctamente.
- 3. Incorpore las tapas al chasis mediante los tornillos extraídos anteriormente, tensándolos firmemente.
- 4. Inserte el bloqueo de seguridad en el sistema y bloquéelo para impedir que pueda accederse al mismo sin autorización.
- 5. Conecte todos los cables externos y los cables de alimentación CA al sistema.



Si el sistema ha estado en funcionamiento, el microprocesador y el disipador de calor pueden estar aún calientes. También conviene tener en cuenta que en el chasis o en el tablero puede haber piezas cortantes o punzantes. Por ello, se recomienda precaución y el uso de guantes protectores.



Existe peligro de explosión si la pila no se cambia de forma adecuada. Utilice solamente pilas iguales o del mismo tipo que las recomendadas por el fabricante del equipo. Para deshacerse de las pilas usadas, siga igualmente las instrucciones del fabricante.



El sistema está diseñado para funcionar en un entorno de trabajo normal. Escoja un lugar:

- Limpio y libre de partículas en suspensión (salvo el polvo normal).
- Bien ventilado y alejado de fuentes de calor, incluida la luz solar directa.
- Alejado de fuentes de vibración.
- Aislado de campos electromagnéticos fuertes producidos por dispositivos eléctricos.
- En regiones con frecuentes tormentas eléctricas, se recomienda conectar su sistema a un eliminador de sobrevoltage y desconectar el módem de las líneas de telecomunicación durante las tormentas.
- Provisto de una toma de tierra correctamente instalada.
- Provisto de espacio suficiente como para acceder a los cables de alimentación, ya que éstos hacen de medio principal de desconexión del sistema.

D Warranty

Limited Warranty for Intel[®] Chassis Subassembly Products

Intel warrants that the Products (defined herein as the Intel® chassis subassembly and all of its various components and software delivered with or as part of the Products) to be delivered hereunder, if properly used and installed, will be free from defects in material and workmanship and will substantially conform to Intel's publicly available specifications for a period of three (3) years after the date the Product was purchased from an Intel authorized distributor. Software of any kind delivered with or as part of products is expressly provided "as is" unless specifically provided for otherwise in any software license accompanying the software.

If any Product furnished by Intel which is the subject of this Limited Warranty fails during the warranty period for reasons covered by this Limited Warranty, Intel, at its option, will:

- **REPAIR** the Product by means of hardware and/or software; OR
- **REPLACE** the Product with another Product: OR
- **REFUND** the then-current value of the Product if Intel is unable to repair or replace the Product.

If such Product is defective, transportation charges for the return of Product to buyer within the USA will be paid by Intel. For all other locations, the warranty excludes all costs of shipping, customs clearance, and other related charges. Intel will have a reasonable time to make repairs or to replace Product or to refund the then-current value of the Product.

In no event will Intel be liable for any other costs associated with the replacement or repair of Product, including labor, installation or other costs incurred by buyer and in particular, any costs relating to the removal or replacement of any product soldered or otherwise permanently affixed to any printed circuit board.

This Limited Warranty, and any implied warranties that may exist under state law, apply only to the original purchaser of the Product.

Extent of Limited Warranty

Intel does not warrant that Products to be delivered hereunder, whether delivered stand-alone or integrated with other Products, including without limitation semiconductor components, will be free from design defects or errors known as "errata." Current characterized errata are available upon request.

This Limited Warranty does not cover damages due to external causes, including accident, problems with electrical power, usage not in accordance with product instructions, misuse, neglect, alteration, repair, improper installation, or improper testing.

Warranty Limitations and Exclusions

These warranties replace all other warranties, expressed or implied including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Intel makes no expressed warranties beyond those stated here. Intel disclaims all other warranties, expressed or implied including, without limitation, implied warranties of merchantability and fitness for a particular purpose. Some jurisdictions do not allow the exclusion of implied warranties, so this limitation may not apply.

All expressed and implied warranties are limited in duration to the limited warranty period. No warranties apply after that period. Some jurisdictions do not allow limitations on how long an implied warranty lasts, so this limitation may not apply to you.

Limitations of Liability

Intel's responsibility under this, or any other warranty, implied or expressed, is limited to repair, replacement, or refund, as set forth above. These remedies are the sole and exclusive remedies for any breach of warranty. Intel is not responsible for direct, special, incidental, or consequential damages resulting from any breach of warranty under another legal theory including, but not limited to, lost profits, downtime, goodwill, damage to or replacement of equipment and property, and any costs of recovering, reprogramming, or reproducing any program or data stored in or used with a system containing this product. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

This limited warranty gives you specific legal rights, and you may also have other rights that vary from jurisdiction to jurisdiction.

Any and all disputes arising under or related to this Limited Warranty shall be adjudicated in the following forums and governed by the following laws: for the United States of America, Canada, North America, and South America, the forum shall be Santa Clara, California, USA, and the applicable law shall be that of the State of California, USA; for the Asia Pacific region, the forum shall be Singapore and the applicable law shall be that of Singapore; for Europe and the rest of the world, the forum shall be London and the applicable law shall be that of the United Kingdom.

In the event of any conflict between the English language version and any other translated version(s) of this Limited Warranty, the English language version shall control.

How to Obtain Warranty Service

To obtain warranty service for this Product, you may contact Intel or your authorized distributor.

North America and Latin America—To obtain warranty repair for the product, please go to the following Web site to obtain instructions:

http://support.intel.com/support/motherboards/draform.htm

In Europe and in Asia—Contact your original authorized distributor for warranty service.

Any replacement Product is warranted under this written warranty and is subject to the same limitations and exclusions for the remainder of the original warranty period.

Telephone Support

If you cannot find the information you need on Intel's World Wide Web site (http://www.intel.com), call your local distributor or an Intel Customer Support representative.

Country	Customer Support Telephone Number	Hours (Monday-Friday)	Billing
	-		
United States & Canada	1-800-404-2284	7:00–17:00 PST	Credit card calls \$25.00/incident
UK France Germany Italy Spain Finland Denmark Norway Sweden Holland	0870 6072439 01 41 918529 069 9509 6099 02 696 33276 91 377 8166 9 693 79297 38 487077 23 1620 50 08 445 1251 020 487 4562	UK time 8:00–17:00 (M, Th, F) 8:00–16:00 (Tu–W)	Credit Card Calls \$25.00/incident Levied in local currency at the applicable credit card exchange rate plus applicable VAT
Asia-Pacific		Singapore local time	
Australia Hong Kong Korea Philippines PRC Singapore Taiwan Malaysia New Zealand Indonesia Thailand Vietnam India	+1-800-649-931 +852-2-844-4456 +822-767-2595 1800-1-651-0117 (800)8201100 (65)2131311 2 27189915 1800-801390 0800-444365 803-65-7249 800-6310003 IDD call +63(2)6368416 (0006517) 830-3634 Manual toll free. From India, you need an	Oct-April: 6:00–16:00 April-Oct: 5:00–16:00	
Pakistan	IDD-equipped phone. IDD call +63(2)6368415		

Warranty 89

Returning a Defective Product

Before returning any product, call your authorized dealer/distribution authority.