

Intel® Entry Server Platform SR1325TP1-E User Guide

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

Order Number: C61602-001

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Preface

About this Manual

Thank you for purchasing and using the Intel® Entry Server Platform SR1325TP1-E.

This manual is written for system technicians who are responsible for troubleshooting, upgrading, and repairing this server platform. This document provides a brief overview of the features of the board/chassis, a list of accessories or other components you may need, troubleshooting information, and instructions on how to add and replace components on the Intel Entry Server Platform SR1325TP1-E. For the latest version of this manual, refer to <http://www.support.intel.com/support/motherboards/server/SR1325TP1-E>.

Manual Organization

Chapter 1 provides a brief overview of the Server Platform SR1325TP1-E. In this chapter, you will find a list of the server board features, chassis features, photos of the product, and product diagrams to help you identify components and their locations.

Chapter 2 provides instructions on adding and replacing components. Use this chapter for step-by-step instructions and diagrams for installing or replacing components such as the memory, processor, front panel board, the battery, and other components.

Chapter 3 provides instructions on using the utilities that are shipped with the board or that may be required to update the system. This includes how to navigate through the BIOS Setup screens, how to perform a BIOS update, and how to reset the password or CMOS. Information about the specific BIOS settings and screens is available in the Intel® Server Board SE7210TP1-E Technical Product Specification. See “[Additional Information and Software](#)” for a link to the Technical Product Specification.

Chapter 4 provides troubleshooting information. In this chapter, you will find BIOS error messages and POST code messages. You will also find suggestions for performing troubleshooting activities to identify the source of a problem.

What Your Platform Includes

Your Server Platform SR1325TP1-E includes the following components:

- One SE7210TP1-E Server Board
- One 1U rack-mount chassis with two hard disk drive brackets
- One bracket for installing slimline floppy and/or CD ROM drives
- One 250 W SSI PFC nonredundant power supply
- One front fan module consisting of five 40-mm fans for system cooling
- Two rear 40-mm fans
- One processor air duct
- Mounting screws, including screws for mounting the system onto a rack

Your Intel® Entry Server Platform SR1325TP1-E comes with the following items pre-installed:

- Intel® Server Board SE7210TP1-E
- Front panel board
- Two drive carriers
- Front fan module
- Power supply with two rear fans
- Processor air duct
- Cables and connectors

The processor heatsink is included and is attached to one of the drive carriers. It must be installed after purchasing and installing a processor. See the Intel Server Platform SR1325TP1-E Quick Start User's Guide for initial installation instructions.

Product Accessories

You may need or want to purchase one or more of the following accessory items for your server:

- One Intel® Pentium® 4 processor with at least 512 KB L2 cache
- DDR memory DIMMs
- Hard disk drives (HDDs)
- Slimline floppy disk drive
- Slimline CD-ROM / DVD-ROM drive
- PCI add-in card
- Other peripheral devices
- Rack mount kit
- Power cord (If not included with the platform. This product ships with a power cord in North America only.)

For information about which accessories, memory, processors, and third-party hardware have been tested and can be used with your board, and for ordering information for Intel products, see

<http://support.intel.com/support/motherboards/server/SR1325TP1-E/compat.htm>.

Additional Information and Software

If you need more information about this product or information about the accessories that can be used with this server platform, go to

<http://www.support.intel.com/support/motherboards/server/SR1325TP1-E/index.htm>

- In-depth technical information about the server board included with this server platform, including BIOS settings and chipset information
- The latest product information
- Accessories or other Intel server products
- Hardware (peripheral boards, adapter cards) and operating systems that have been tested with this product
- Processors that have been tested with this product
- DIMMs that have been tested with this product
- The power budget for this product
- Software to manage your Intel Server Platform
- Diagnostics testing software
- Firmware and BIOS updates
- System drivers

Safety Information

Before working with your server product, whether you are using this guide or any other resource as a reference, pay close attention to the safety instructions.

Emissions Disclaimer

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

See “[Regulatory and Integration Information](#)” for product Safety and EMC regulatory compliance information. This is an FCC Class A device.

Intended Uses

This product was evaluated for use in servers that will be installed in offices, computer rooms, and similar locations. Other uses require further evaluation.

EMC Testing

Before computer integration, make sure that the chassis, power supply, and other modules have passed EMC testing using a server board with a microprocessor from the same family (or higher) and operating at the same (or higher) speed as the microprocessor used on this server board.



Warnings

System power on/off: The power button DOES NOT turn off the system AC power. To remove power from system, you must unplug the AC power cord from the wall outlet. Make sure the AC power cord is unplugged before you open the chassis, add, or remove any components.

Hazardous conditions, devices and cables: 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.

Electrostatic discharge (ESD) and ESD protection: ESD can damage disk drives, boards, and other parts. We recommend that you perform all procedures in this chapter only at an ESD workstation. If one is not available, provide some ESD protection by wearing an antistatic wrist strap attached to chassis ground any unpainted metal surface on your server when handling parts.

ESD and handling boards: Always handle boards carefully. They can be extremely sensitive to ESD. Hold boards only by their edges. After removing a board from its protective wrapper or from the server, place the board component side up on a grounded, static free surface. Use a conductive foam pad if available but not the board wrapper. Do not slide board over any surface.

Installing or removing jumpers: A jumper is a small plastic encased conductor that slips over two jumper pins. Some jumpers have a small tab on top that you can grip with your fingertips or with a pair of fine needle nosed pliers. If your jumpers do not have such a tab, take care when using needle nosed pliers to remove or install a jumper; grip the narrow sides of the jumper with the pliers, never the wide sides. Gripping the wide sides can damage the contacts inside the jumper, causing intermittent problems with the function controlled by that jumper. Take care to grip with, but not squeeze, the pliers or other tool you use to remove a jumper, or you may bend or break the stake pins on the board.

Safety 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://www.support.intel.com/support/motherboards/server>.

Wichtige Sicherheitshinweise

Lesen Sie zunächst sämtliche Warn- und Sicherheitshinweise in diesem Dokument, bevor Sie eine der Anweisungen ausführen. Beachten Sie hierzu auch die Sicherheitshinweise zu Intel-Serverplatinen und -Servergehäusen auf der Ressourcen-CD oder unter <http://www.support.intel.com/support/motherboards/server>.

重要安全指导

在执行任何指令之前，请阅读本文档中的所有注意事项及安全声明。参见 Resource CD（资源光盘）和/或<http://www.support.intel.com/support/motherboards/server> 上的 *Intel Server Boards and Server Chassis Safety Information*（《Intel 服务器主板与服务器机箱安全信息》）。


Consignes de sécurité

Lisez attention toutes les consignes de sécurité et les mises en garde indiquées dans ce document avant de suivre toute instruction. Consultez *Intel Server Boards and Server Chassis Safety Information* sur le CD Resource CD ou bien rendez-vous sur le site <http://www.support.intel.com/support/motherboards/server>.

Instrucciones de seguridad importantes

Lea todas las declaraciones de seguridad y precaución de este documento antes de realizar cualquiera de las instrucciones. Vea *Intel Server Boards and Server Chassis Safety Information* en el CD Resource y/o en <http://www.support.intel.com/support/motherboards/server>.

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1 Server Platform Features

This chapter briefly describes the main features of the Intel® Entry Server Platform SR1325TP1-E. Table 1 summarizes the major features of the Intel® Server Board SE7210TP1-E that is used in this platform.

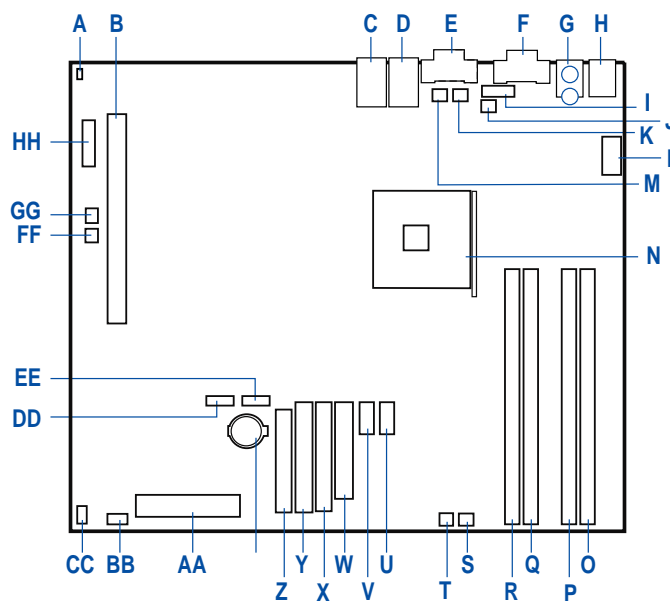
Table 1. Server Board Features

Feature	Description
Processors	Support for an Intel® Pentium® 4 processor in an mPGA478 package with an 800/533/400 MHz system bus
Memory	<ul style="list-style-type: none"> ▪ Four 184-pin DDR SDRAM Dual Inline Memory Module (DIMM) sockets ▪ Support for up to 4 GB Unbuffered ECC system memory ▪ Support for single-sided or double-sided DIMMs (DDR266/333/400) <ul style="list-style-type: none"> - To run DDR400 memory at full speed requires an Intel Pentium 4 processor with 800 MHz system bus frequency. - To run DDR333 memory at full speed requires an Intel Pentium 4 processor with 533 MHz system bus frequency. DDR333 memory will run at 320 MHz frequency when using an Intel Pentium 4 processor with system bus frequency of 800 MHz. - DDR266 memory may only be used with an Intel Pentium 4 processor with 400 MHz or 533 MHz system bus frequency.
Chipset	Intel® 827210 Chipset, consisting of: <ul style="list-style-type: none"> ▪ Intel® 827210 Memory Controller Hub (MCH) ▪ Intel® 6300ESB I/O Controller Hub (ICH) ▪ Intel® 82802AC 8 Megabit Firmware Hub (FWH)
I/O Control	Winbond* W83627HF-AW LPC Bus I/O controller chip
Peripheral Interfaces	<ul style="list-style-type: none"> ▪ Three external USB 2.0 ports on the back panel with an additional internal header, which provides support for one additional USB port for front panel support (four total possible USB 2.0 ports) ▪ One serial port and one serial header ▪ Two IDE interfaces with Ultra 33, 66 and 100 DMA mode ▪ Two Serial ATA connectors with support for RAID 0 and 1 ▪ One floppy drive interface with support for one drive ▪ PS/2* keyboard and mouse ports
LAN	<ul style="list-style-type: none"> ▪ One Intel® 82547EI Platform LAN Connect (PLC) device for 10/100/1000 Mbits/sec Ethernet LAN connectivity ▪ One Intel® 82551QM device for 10/100 Mbits/sec Ethernet LAN connectivity
Expansion Capabilities	One low profile PCI-X 64-bit PCI slot
Integrated Capabilities	Integrated 2D/3D graphics controller: ATI Rage* XL Video Controller with 8MB of SDRAM
Fans	<ul style="list-style-type: none"> ▪ Support for six system fans ▪ Support for one processor fan

Table 1. Server Board Features (continued)

Feature	Description
BIOS	Intel/AMI BIOS with support for: <ul style="list-style-type: none"> Advanced Configuration and Power Interface (ACPI) 8 megabit symmetrical flash memory Support for SMBIOS
Power Management	Support for ACPI: <ul style="list-style-type: none"> Suspend to RAM (STR) Wake on USB, PCI, RS-232, PS/2, LAN, and front panel
Server Management	Intel® Server Management 5.8 support via mini Baseboard Management Controller (mBMC)

Server Board Connector and Component Locations



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- | | | | |
|----------------------------------|----------------------------|------------------------------|----------------------------------|
| A. Chassis Intrusion Header | J. Processor Fan Header | R. DIMM Socket 1A | AA. Front Panel Connector |
| B. PCI Slot | K. System Fan 3 Header | S. System Fan 2 Header | BB. Hot Swap Backplane Connector |
| C. NIC 2 (10/100Mb) | L. 12V CPU Power Connector | T. System Fan 1 Header | CC. SCSI LED Header |
| D. NIC 1 (1Gb) | M. System Fan 4 Header | U. Front Panel USB Header | DD. SATA 1 Connector |
| E. VGA Connector | N. Processor Socket | V. Auxiliary Power Connector | EE. SATA 2 Connector |
| F. Serial Port A Connector | O. DIMM Socket 2B | W. Main Power Connector | FF. System Fan 6 Header |
| G. PS/2 Keyboard/Mouse Connector | P. DIMM Socket 2A | X. Secondary IDE Connector | GG. System Fan 5 Header |
| H. USB Back Panel Connector | Q. DIMM Socket 1B | Y. Primary IDE Connector | HH. Jumper Block |
| I. Serial Port B Connector | | | |

Figure 1. Intel Server Board SE7210TP1-E Diagram

Configuration Jumpers

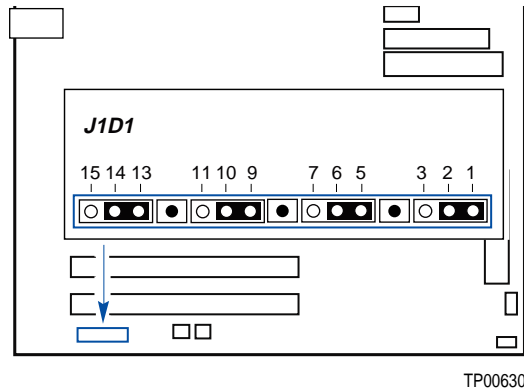
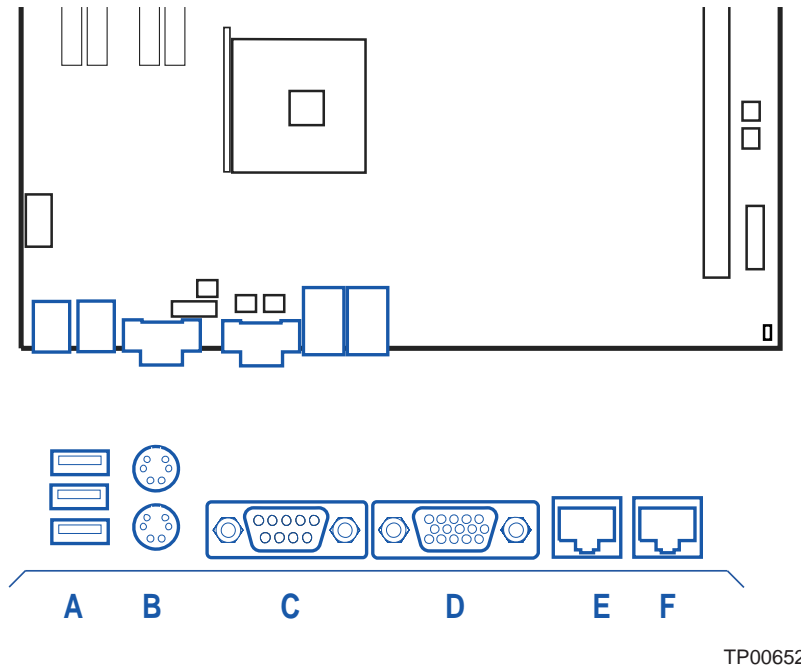


Figure 2. Configuration Jumper Location

Table 2. Configuration Jumper [J1D1]

Jumper Name	Pins	What happens at system reset...
CMOS clear	2-3	If these pins are jumpered, the CMOS settings will be cleared on the next reset. These pins should be jumpered on 1-2 for normal operation.
Password Clear	6-7	If these pins are jumpered, administrator and user passwords will be cleared on the next reset. These pins should be jumpered on 5-6 for normal operation.
BIOS Flash Write Protect	11-12	If these pins are jumpered, it is possible to update the BIOS Boot Block code. These pins should be jumpered on 10-11 for normal operation and for normal BIOS operational updates.
BIOS Recovery	14-15	If these pins are jumpered, the system will attempt to recover the BIOS by loading the BIOS code into the flash device from a floppy disk. This jumper is typically only used when the BIOS has become corrupted. These pins should be jumpered on 13-14 for normal operation.

Server Board Back Panel Connectors



- | | |
|-------------------|-----------------------|
| A. USB 1, 2, 3 | D. Video |
| B. Keyboard/Mouse | E. NIC1 (1Gbit) |
| C. Serial port A | F. NIC2 (10/100 Mbit) |

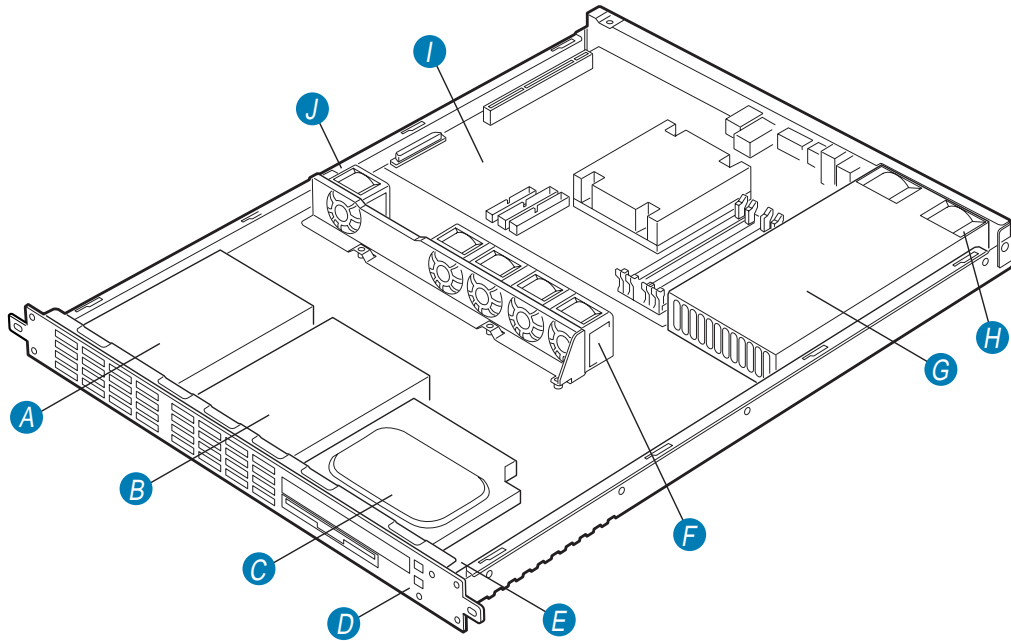
Figure 3. Back Panel Connectors

The NIC LEDs at the right and left of each NIC provide the following information.

Table 3. NIC LEDs

NIC	LED Color	LED State	Description
NIC2 (10/100 Mbit)	Left LED	Off	10 Mbps connection (if right LED is on)
		Solid Green	100 Mbps connection
	Right LED	On	Network connection in place
		Blinking Green	Transmit/receive activity
NIC1 (Gigabit)	Left LED	Off	No network connection
		Solid Amber	Network connection in place
		Blinking Amber	Transmit/receive activity
	Right LED	Off	10 Mbps connection (if left LED is on or blinking)
		Solid Amber	100 Mbps connection
		Solid Green	1000 Mbps connection

Server Chassis Components

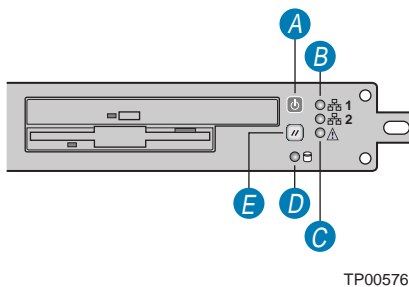


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- | | |
|--|-----------------------------|
| A. Hard Disk Drive 1 (drive purchased separately) | F. Front Fan Module |
| B. Hard Disk Drive 2 (drive purchased separately) | G. Power Supply |
| C. Floppy / CD-ROM / DVD-ROM Drive Module
(drive(s) purchased separately) | H. Power Supply Fans |
| D. Front Panel Controls and Indicators | I. Server Board SE7210TP1-E |
| E. Front Panel Board | J. Chassis Intrusion Switch |

Figure 4. System Components

Server Chassis Front Panel



- A. Power button and power LED
- B. Network activity LEDs (NIC1 top, NIC2 bottom)
- C. System fault LED
- D. Hard drive activity LED
- E. Reset button

Figure 5. Chassis Front

⇒ **NOTE**

The figure above is shown with optional floppy drive and CD-ROM drive installed.

Table 4. Control Button Functions

Power/Sleep button	Toggles the system power on/off. Sleep button for ACPI-compatible operating systems.
Reset button	Reboots and initializes the system.

Table 5. LED Indicator Status

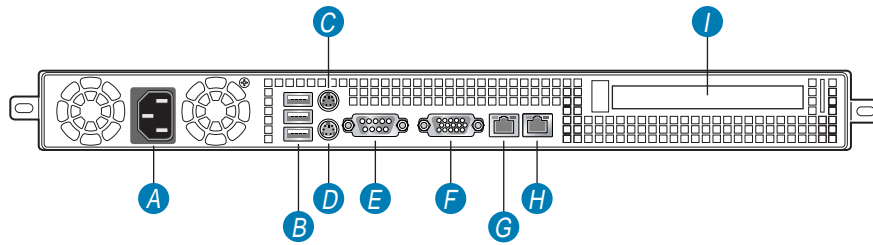
NIC 1 activity LED NIC 2 activity LED	Continuous green light indicates a link between the system and the network to which it is connected. Blinking green light indicates network activity.
Power/Sleep LED	Continuous green light indicates the system has power applied to it. Blinking green light (Note 1) 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 status LED	Random blinking green light indicates hard disk drive activity (SCSI or IDE). 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 Fault LED	LED illuminates if a system fault is detected.

Notes:

The amber status takes precedence over the green status. When the amber LED is on or blinking, the green LED is off.

- 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.
- 2 In order for a hard disk fault indication to occur, an Intelligent Platform Management Interface (IPMI)-based satellite management controller must send a Set Fault Indication command to the mini Baseboard Management Controller (mBMC).
- 3 Off when the system is powered off or in a sleep state.

Server Chassis Back Panel



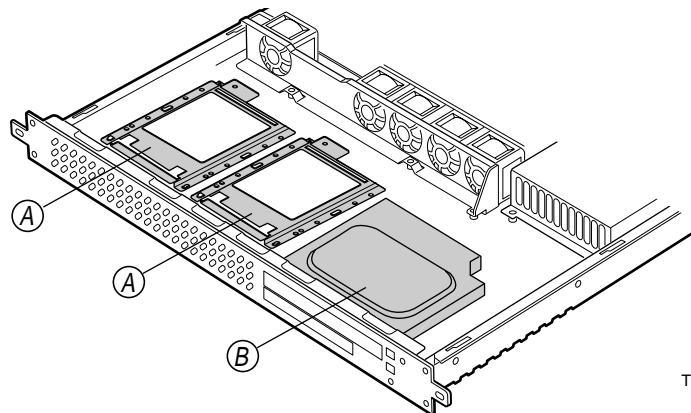
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- | | |
|-----------------------|-----------------------------------|
| A. AC Power Xonnector | F. Video Connector |
| B. USB Ports 1, 2, 3 | G. NIC1 Connecgtor (1 Gbit) |
| C. Keyboard Connector | H. NIC2 Connector (10/100 Mbit) |
| D. Mouse Connector | I. PCI Card Bracket (full height) |
| E. Serial Port A | |

Figure 6. Chassis Back

Server Chassis Peripherals

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



TF

- A. Hard drive bays (2)
- B. Slim-line floppy drive / DVD / CD-ROM drive cage

Figure 7. Optional Peripherals

Hard Disk Drives

The chassis ships with two drive brackets for mounting hard disk drives into the chassis. These drives can be SCSI, Parallel ATA, or Serial ATA, depending on the server board and add-in components that are installed.

The hard drives are NOT hot swappable. Before replacing a 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.

For information on how to install these drives, see “[Installing or Removing a Hard Drive](#)”.

➤ NOTE

The Intel Entry Server Platform SR1325TP1-E does not support all SCSI, ATA, or Serial ATA hard drives. For a list of validated hard drive manufacturers and hard drive types, see

<http://support.intel.com/support/motherboards/server/SR1325TP1-E>

Drives can consume up to 17 watts of power each. Drives must be specified to run at a maximum ambient temperature of 45 °C.

Floppy / CD-ROM / DVD-ROM Slimline Bay

The floppy drive / CD-ROM / DVD-ROM cage can be inserted or removed only when system power is turned off. Drives in the slimline cage are NOT hot swappable. For installation instructions, refer to the documentation that came with your drive kit.

➤ NOTE

The Intel Entry Server Platform SR1325TP1-E does not support all floppy, CD-ROM or DVD-ROM drives. You must order the appropriate accessory kit to install one of these drives. For accessory kit information, see

<http://support.intel.com/support/motherboards/server/SR1325TP1-E>

Power Supply

The power supply is rated for 250 watts of power at the following voltages:

- 100–127 volts (V) at 50/60 Hertz (Hz); 5.11 amperes (A) maximum (max)
- 200–240 V at 50/60 Hz; 2.55 A maximum

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

System Cooling

The chassis includes five front fans for cooling the processor, hard drives, and PCI cards. These fans are not hot-swappable. To replace the front fan module, 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.

The power supply contains two built-in fans at the rear of the chassis. These fans cannot be replaced without replacing the power supply.

Chassis Security

The chassis includes a preinstalled intrusion switch that can be monitored by server management software. The switch is installed at the top left side of the front fan module. When the chassis cover is opened, the switch transmits a signal to the mini Baseboard Management Controller (mBMC) on the server board, where server management software processes the signal. Server management software can be programmed to respond to an intrusion by powering down the server, by locking the keyboard, or to respond in a number of other ways.

Hardware Requirements

To avoid integration difficulties and possible board damage, your system must meet the requirements outlined below. For a list of qualified components see the links under “[Additional Information and Software](#).”

Processor

One 2.0 GHz Intel Pentium 4 processor with 512KB cache support is required. For a complete list of supported processors, see the links under “[Additional Information and Software](#).”

Memory

A minimum of one 128 MB Unbuffered, ECC or non-ECC, DDR266-, DDR333- or DDR400-compliant, 184-pin DIMMs. Only low-profile DIMMs can be installed.

All memory components and DIMMs used with the server platform SR1325TP1-E must comply with the DDR specifications.

For best performance and dual-channel interleave operation, a minimum of two DIMMs must be installed and the DIMMs must be populated as follows:

- DIMM1A and DIMM 1B: Populate these two sockets together first
- DIMM 2A and DIMM 2B: Populate these sockets in addition to DIMM 1A and DIMM 2A if four DIMMs are to be used
- When four DIMMs are installed, the system will use dual-channel interleave. For single-channel memory, a single DIMM can be installed in socket DIMM 1A.

For a complete list of supported memory DIMMs, see the links under “[Additional Information and Software](#).”

⇒ **NOTES**

Although the server board architecture allows the user to mix various sizes of DIMMs between channels, DIMMs must be identical within each bank.

To be fully compliant with all applicable DDR SDRAM memory specifications, the board should be populated with DIMMs that support the Serial Presence Detect (SPD) data structure. This allows the BIOS to read the SPD data and program the chipset to accurately configure memory settings for optimum performance. If non-SPD memory is installed, the BIOS will attempt to correctly configure the memory settings, but performance and reliability may be impacted or the DIMMs may not function under the determined frequency.

For ECC functionality, all installed DIMMs must be ECC. If both ECC and non-ECC DIMMs are used, ECC will be disabled and will not function.

2 Platform Installations and Upgrades

Before You Begin

Before working with your server product, pay close attention to the safety instructions at the beginning of this manual.

Tools and Supplies Needed

- Phillips* (cross head) screwdriver (#1 bit and #2 bit)
- Needle nosed pliers
- A ruler
- Pen or pencil
- Antistatic wrist strap and conductive foam pad (recommended)

System References

All references to left, right, front, top, and bottom and are based on the reader facing the front of the chassis as it would be positioned for normal operation.

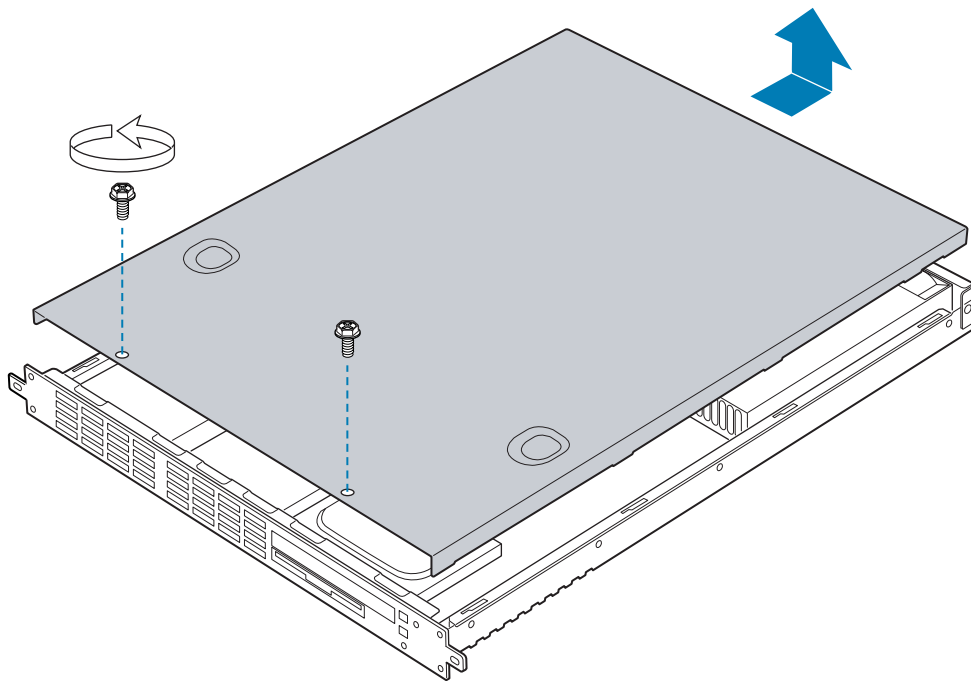
Removing and Installing the Chassis Cover

Removing the Chassis Cover

⇒ **NOTE**

A nonskid surface or a stop behind the chassis may be needed to prevent the chassis from sliding on your work surface.

1. Remove the two access screws from the top cover.
2. Slide the top cover back until it stops.
3. Lift the cover straight up to remove it from the chassis.

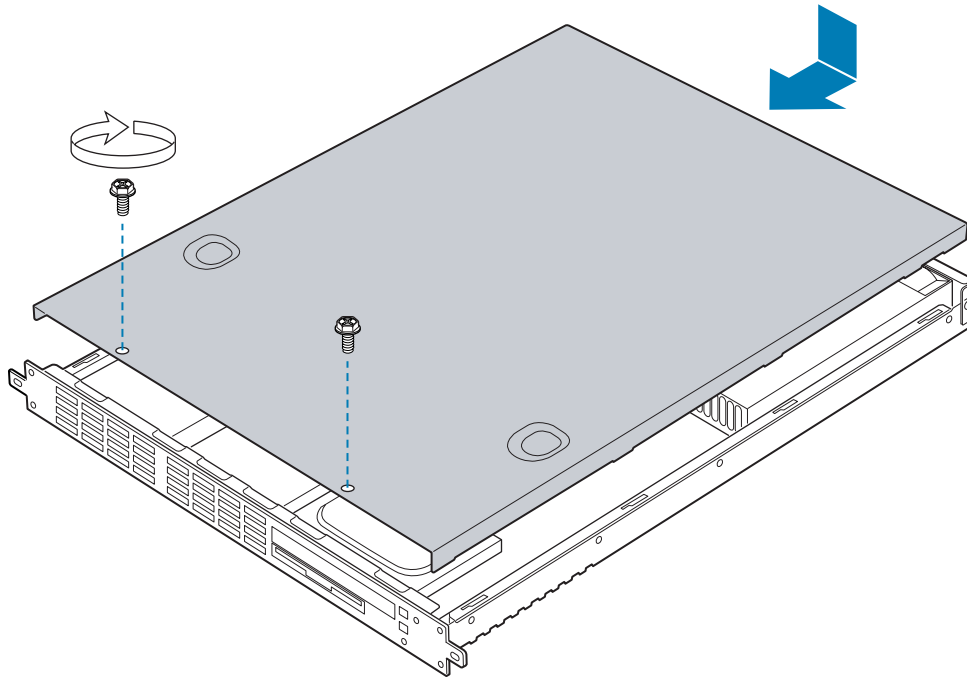


TP00580

Figure 8. Removing the Cover

Installing the Chassis Cover

1. 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 fits in place.
2. Replace the two screws that secure the cover to the chassis.



TP00582

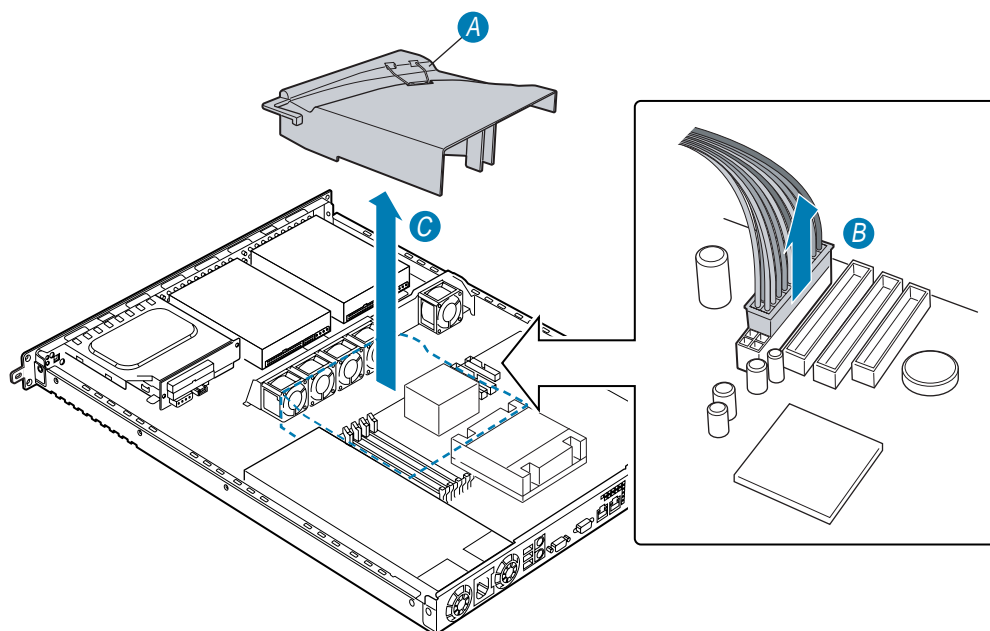
Figure 9. Installing Chassis Cover

Removing and Installing the Processor Air Duct

The air duct must be removed to access the processor assembly and DIMMs. The processor air duct is required for proper airflow within the chassis. Be sure the air duct is in place before installing the chassis cover

Removing the Processor Air Duct

1. Unlatch the clip at the top of the air duct. See letter “A” in Figure 10.
2. Disconnect the main power cable. See letter “B” in the figure below.
3. Lift the air duct from the server chassis. See letter “C” in the figure.

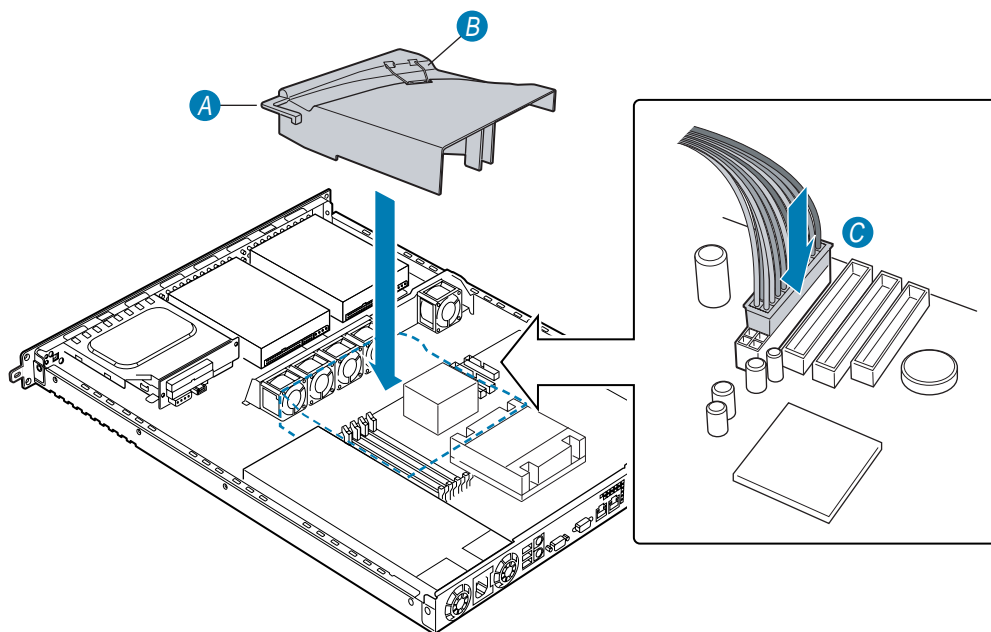


TP00613

Figure 10. Removing Processor Air Duct

Installing the Processor Air Duct

1. Place the processor air duct over the processor socket and DIMMs, using caution to make sure you do not pinch any wires beneath the air duct. The front edge of the air duct should contact the front fan module and the top of the installed air duct should be flush with the top surface of the power supply.
2. Route the power cable through the clip at the side of the air duct. See letter “A” in Figure 11.
3. Lay the power cable across the top of the air duct and close the metal clip over the top of the cable to hold it in place. See letter “B” in the figure.
4. Reconnect the power cable. Be sure to align the cable as demonstrated by letter “C” in the figure below.



TP00579

Figure 11. Installing Processor Air Duct

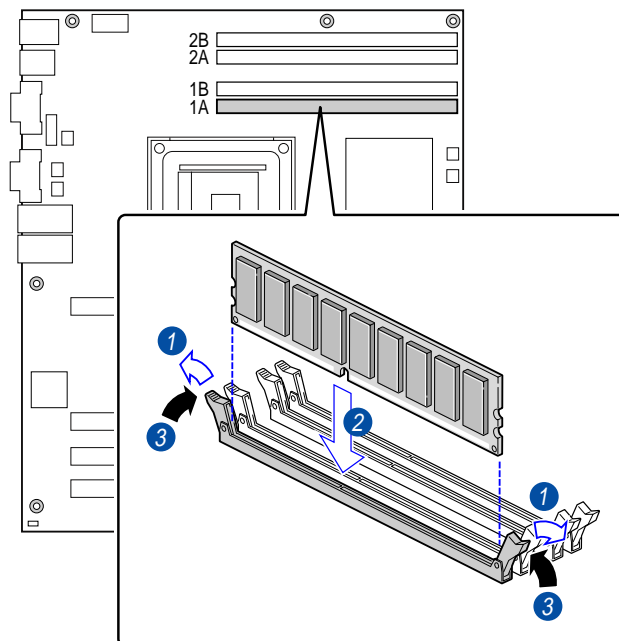
Installing and Removing Memory

The silkscreen on the board for the DIMMs displays DIMM1A, DIMM2A, DIMM1B, and DIMM2B, starting from the inside of the board. DIMM1A is the socket closest to the processor socket.

Installing DIMMs

To install DIMMs, follow these steps:

1. Observe the safety and ESD precautions at the beginning of this book.
2. Turn off all peripheral devices connected to the server. Turn off the server.
3. Disconnect the AC power cord.
4. Remove the chassis cover and locate the DIMM sockets (see Figure 12).
5. Remove the processor air duct that covers the processor and partially obscures the DIMMs. For instructions on removing the air duct, see [“Removing the Processor Air Duct.”](#)



TP00518

Figure 12. Installing Memory DIMMs

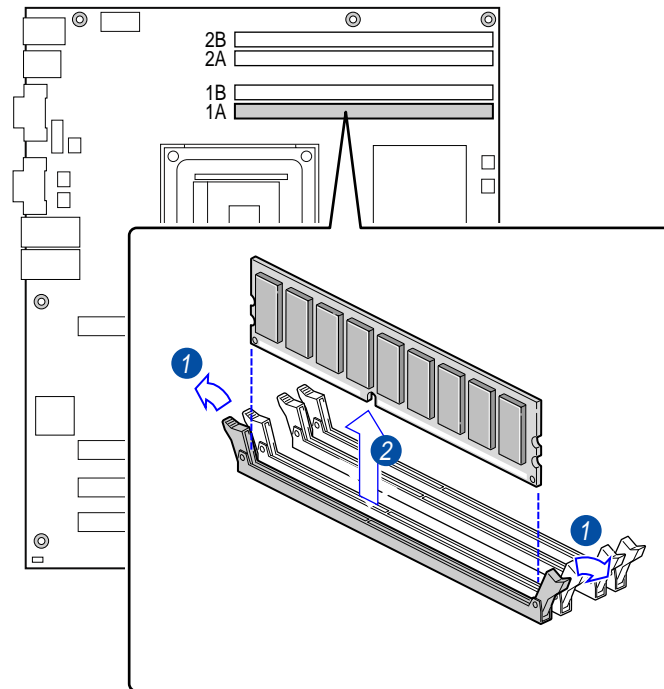
6. Push the clips at each end of the DIMM socket(s) outward to the open position. See number 1 in the figure above.
7. Holding the DIMM by the edges, remove it from its anti-static package.
8. Position the DIMM above the socket. Align the small notch in the bottom edge of the DIMM with the keys in the socket. See number 2 in Figure 12.
9. Insert the bottom edge of the DIMM into the socket.

10. When the DIMM is inserted, push down on the top edge of the DIMM until the retaining clips snap into place. Make sure the clips are firmly in place. See number 3 in the figure above.
11. Install the processor air duct. The air duct must be in place for proper system cooling. For instructions on installing the processor air duct, see “[Installing the Processor Air Duct.](#)”
12. Replace the chassis cover and reconnect the AC power cord.

Removing DIMMs

To remove a DIMM, follow these steps:

1. Observe the safety and ESD precautions at the beginning of this document.
2. Turn off all peripheral devices connected to the server. Turn off the server.
3. Remove the AC power cord from the server.
4. Remove the chassis cover and locate the DIMM(s). See Figure 13.
5. Remove the processor air duct that covers the processor and partially obscures the DIMMs. For instructions on removing the air duct, see “[Removing the Processor Air Duct.](#)”



TP00518

Figure 13. Removing Memory DIMMs

6. Push the clips at each end of the DIMM socket(s) outward to the open position. See number 1 in the figure above. The DIMM lifts from the socket.
7. Hold the DIMM by the edges, lift it away from the socket, and store it in an anti-static package. See number 2 in the figure above.
8. Reinstall and reconnect any parts you removed or disconnected to reach the DIMM sockets.
9. Replace the chassis cover and reconnect the AC power cord.

Installing or Replacing the Processor

NOTE

Use the instructions provided below to install or replace a processor instead of using the instructions that came with the processor.

CAUTIONS

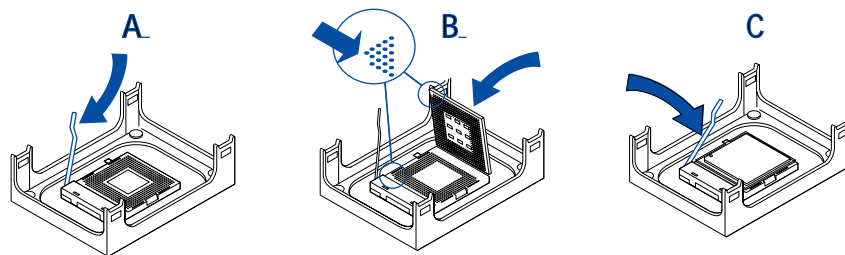
Processor must be appropriate: You may damage the server board if you install a processor that is inappropriate for your server. See [“Additional Information and Software”](#) for a link to the list of compatible processors.

ESD and handling processors: Reduce the risk of electrostatic discharge (ESD) damage to the processor by doing the following: (1) Touch the metal chassis before touching the processor or server board. Keep part of your body in contact with the metal chassis to dissipate the static charge while handling the processor. (2) Avoid moving around unnecessarily.

Installing the Processor

To install a processor, follow these instructions:

1. Observe the safety and ESD precautions at the beginning of this document.
2. Remove the processor air duct that covers the processor. For instructions on removing the air duct, see [“Removing the Processor Air Duct.”](#)
3. Locate the processor socket and raise the socket handle completely. See Figure 14, letter A.
4. Aligning the pins of the processor with the socket, insert the processor into the socket. See letter B in the figure below
5. Close the handle completely. See letter C.



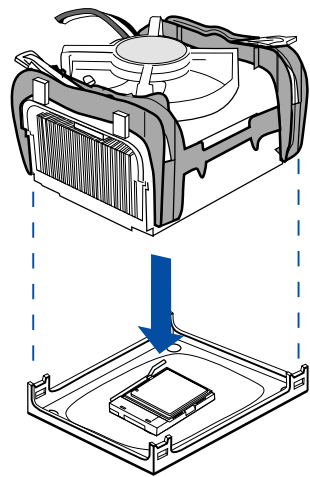
TP00519

Figure 14. Installing the Processor in the Processor Socket

⇒ **NOTE**

The bottom of the heat sink may have thermal interface material (TIM) already applied. Be careful not to damage the thermal interface material.

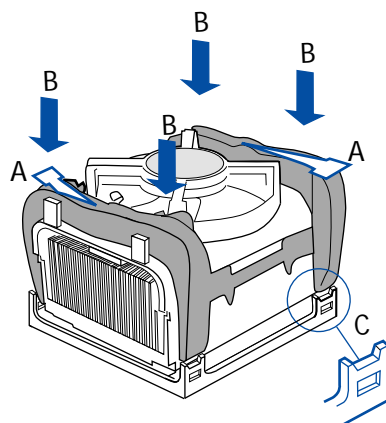
5. If there is no thermal interface material on the bottom of the heat sink, use the enclosed syringe and apply the thermal interface material to the top of the processor.
6. Place the fan heat sink on top of the processor. See Figure 15.



TP00520

Figure 15. Attaching the Heat Sink to the Processor

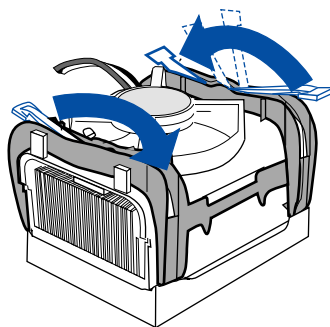
7. Fully open the levers at the top of the heat sink, as shown by letter “A” in Figure 16.
8. With the levers in their fully opened position, push down firmly to secure the retention mechanism clips, represented by letter “B” in Figure 16.



TP00521

Figure 16. Attaching the Fan Heat Sink Clips to the Processor Socket

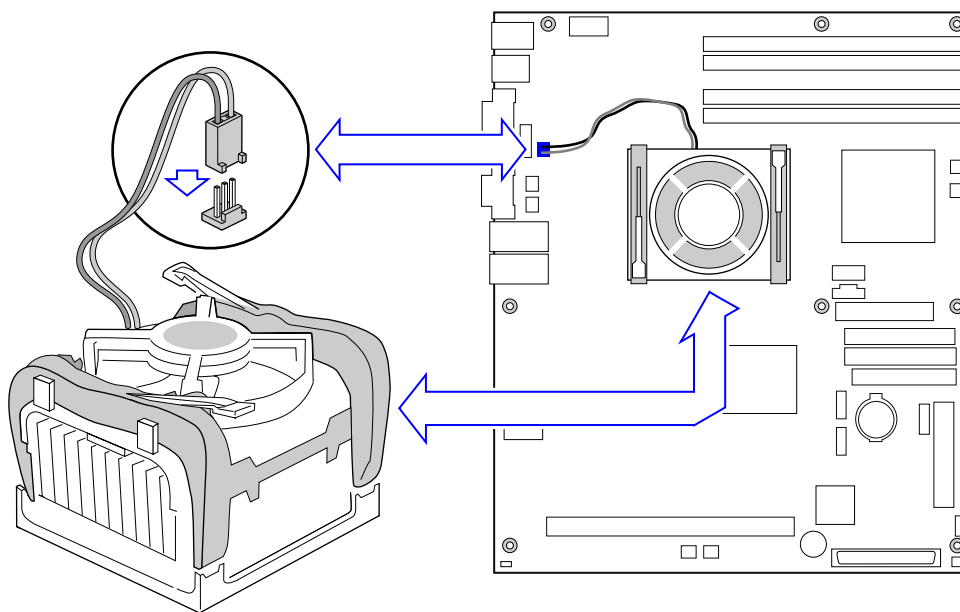
9. Firmly push the levers closed. It may be necessary to exert pressure to close the levers. See Figure 17.



TP00522

Figure 17. Attaching the Fan Heat Sink Clips to the Processor Socket

10. Connect the processor fan cable to the processor fan connector. See Figure 18.



TP00523

Figure 18. Connecting the Processor Fan Cable to the Processor Fan Connector

11. Install the processor air duct. The air duct must be in place for proper system cooling. For instructions on installing the processor air duct, see [“Installing the Processor Air Duct.”](#)

Removing the Processor

To remove the processor, follow these instructions:

1. Observe the safety and ESD precautions at the beginning of this chapter.
2. Remove the processor air duct that covers the processor. For instructions on removing the air duct, see “[Removing the Processor Air Duct.](#)”
3. Disconnect the processor fan cable.
4. Open the levers on the heat sink.
5. Disengage the retention mechanism hooks at the bottom of the heat sink.
6. Lift the heat sink from the processor.
7. Lift the processor lever.
8. Remove the processor.

Installing or Removing a Hard Drive

Up to two SCSI, ATA, or Serial ATA drives can be installed into your chassis as it was shipped. The drive type allowed depends on the installed version of Intel® Server Board SE7210TP1-E and the add-in components that you are installing. Drives installed into the Intel Entry Server Platform SR1325TP1-E are not hot-swappable.

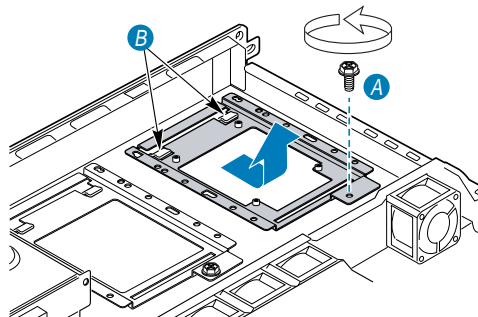


CAUTION

The Intel Entry Server Platform SR1325TP1-E does not support all hard drives. To see a list of validated manufacturers and hard drive types, go to: <http://support.intel.com/support/motherboards/server/SR1325TP1-E>

Installing a Hard Drive

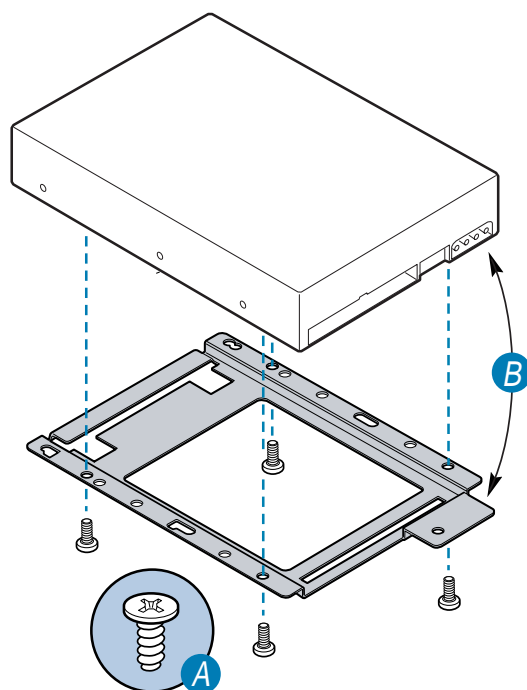
1. Remove the screw that holds the hard drive bracket in the chassis. Retain the screw. See letter “A” in Figure 19.
2. Slide the bracket rearward to disengage the metal tabs, then lift it from the chassis. See letter “B” in the figure below.



TP00428

Figure 19. Removing Hard Drive Bracket from Chassis

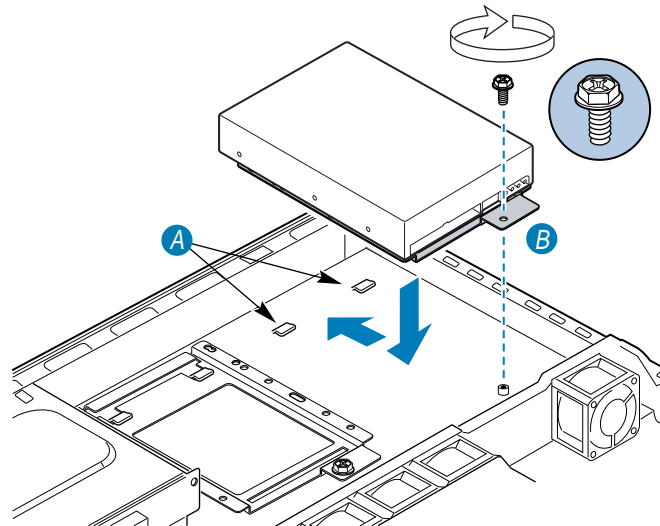
3. Remove the hard drive from its wrapper and place it on an antistatic surface.
4. Set any jumpers and/or switches on the drive according to the drive manufacturer's instructions.
5. With the drive circuit-side down, position the connector end of the drive so that it is facing the rear of the bracket (Letter "B" in the figure below).
6. Align the holes in the drive to the holes in the drive bracket and insert four screws from the fastener bag marked "A" to secure the drive to the bracket. The fastener bag was included with your server platform.



TP00429

Figure 20. Attaching a Hard Disk Drive to a Bracket

7. Set the drive assembly on the bottom of the chassis, slightly behind the sheet metal tabs (Letter “A” in Figure 21), and slide the drive assembly forward to engage the tabs with the hard drive carrier.
8. Reinsert the screw removed in step 1 to attach the drive assembly to the chassis. See letter “B” in the figure below.



TP00430

Figure 21. Attaching Hard Disk Drive and Bracket to Chassis

Removing a Hard Drive

1. To remove a hard drive, remove the screw that holds the drive to the chassis. See letter “B” in Figure 21.
2. Slide the drive rearward to disengage it from the sheetmetal tabs and then lift it from the chassis.
3. Unscrew the hard drive from the bracket.
4. Store the drive in an anti-static bag.

Installing Third Hard Drive (optional accessory kit)

As an option, you can install a third hard drive into your chassis. For instructions on installing this drive, refer to the instructions included with the third hard drive kit.

To replace the third hard drive, see [“Installing or Removing a Hard Drive”](#)

Installing a Floppy / CD-ROM and / or DVD-ROM Drive (optional accessory kit)

Your server chassis comes with the backplane board and cable that are required for installing a floppy drive, CD-ROM drive, or DVD-ROM drive. If you want to install one of these drives, you need to purchase the following items separately:

- Floppy, CD-ROM or DVD-ROM drive, CD-ROM/DVD-ROM combo drive.
- You can install one of the following drive combinations:
- Floppy drive alone
- CD-ROM drive alone
- DVD-ROM drive alone
- CD-ROM/DVD-ROM combo drive
- Floppy drive and CD-ROM drive
- Floppy drive and DVD-ROM drive
- Floppy drive and CD-ROM/DVD-ROM combo drive

Follow the installation instructions that are included with the drive kit to install these drives.

Replacing a Floppy Drive, CD-ROM Drive / DVD-ROM Drive

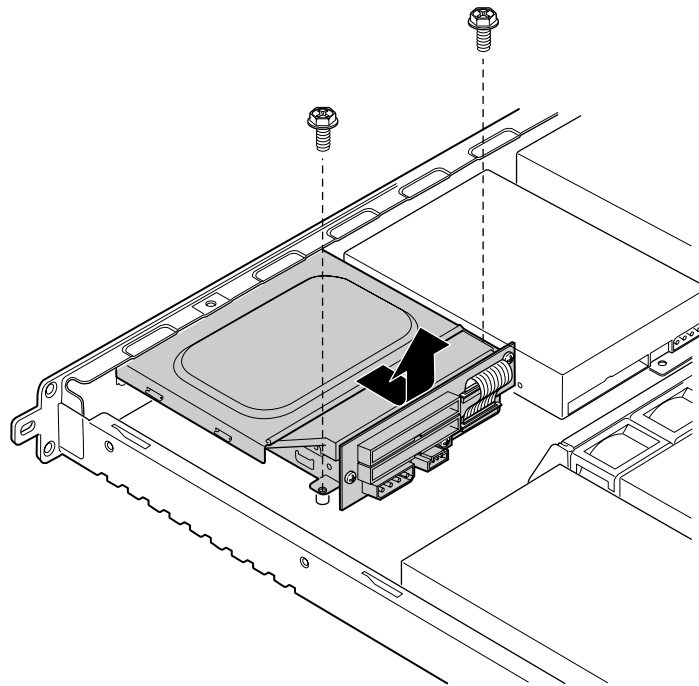


CAUTION

A floppy drive, CD-ROM / DVD-ROM drive 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.

Removing Drive Cage from Chassis

1. Before removing the cover to work inside the system, observe the safety guidelines at the beginning of this document.
2. Remove the top cover from the chassis.
3. Remove the power and data cables from the rear of the floppy drive / CD-ROM / DVD-ROM drive backplane.
4. Remove the two screws that attach the drive cage to the chassis.
5. Tilt up the rear of the drive cage, then pull it back to lift it up and out of the chassis. See Figure 22.



TP00292

Figure 22. Removing Drive Cage

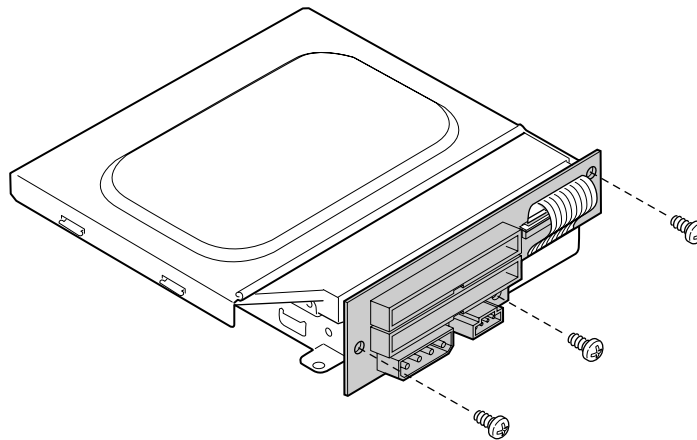
Removing Backplane Board and Cage Cover

1. Remove the three screws that attach the backplane board to the cage. Retain the screws.
2. Pull out gently on the backplane to disengage the connection to an installed CD-ROM or DVD-ROM drive.



CAUTION

If a floppy drive is installed in your drive cage, a Flat Flex Cable (FFC) will be attached between the backplane board and the floppy drive. Be careful not to bend or twist the Flat Flex Cable.



TP00148A

Figure 23. Removing the Backplane

3. Facing the front of the drives, pull out slightly on the rolled lip at the left side of the drive cage top to disengage the top from the tabs at the left side.
4. Lift the left side of the cage top, and then disengage the tabs on the right side to remove the top.

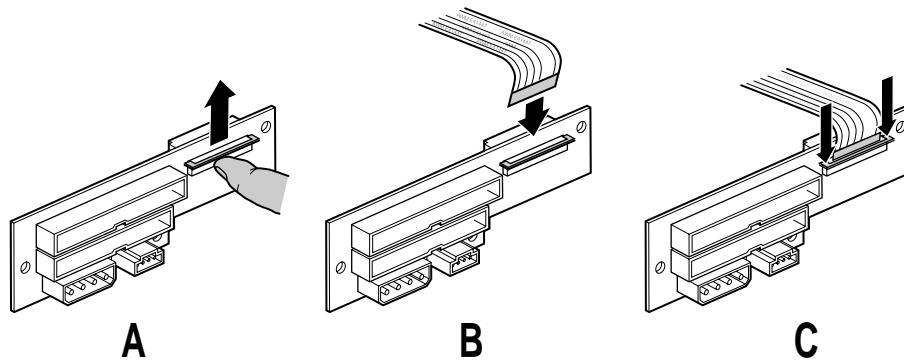
Removing the Drives

1. Remove the four screws that attach the CD-ROM or DVD-ROM drive to the cage. Two screws are on each side of the drive. Retain the screws.
2. Lift the CD-ROM or DVD-ROM from the cage.
3. If you are replacing a floppy drive:
 - a. Remove the four screws that attach the floppy drive to the cage. Two screws are on each side of the drive. Retain the screws.
 - b. Lift the floppy drive from the cage.
 - c. Lift the brown locking mechanism at the front of the Flat Flex Cable (FFC) connector to disengage the FFC from the floppy drive. See letter “A” in Figure 24. Leave the FFC attached to the backplane board.

Reattaching Flat Flex Cable to Backplane Board

The Flat Flex Cable (FFC) is used only when a floppy drive is installed into the slimline drive cage. Use these steps if your flat flex cable becomes loosened or disengaged from the backplane board. Attach the Flat Flex Cable to the backplane board before attaching the cable to the floppy drive.

1. Lift the brown locking mechanism at the front of the connector to disengage the FFC. See letter “A” in Figure 24. Reattaching Flat Flex Cable to Backplane Board.
2. Position the Flat Flex Cable so the printed side is facing you. See letter “B” in Figure 24.
3. Insert the FFC into the connector.
4. Hold the FFC in place while you push down on each side of the locking mechanism. See letter “C” in Figure 24.
5. Tug gently on the cable to ensure the locking mechanism is firmly latched down at both sides. When firmly latched, the cable will be tightly secure.
6. When correctly installed, you will see a narrow strip of blue ribbon extending up from the connector. If this strip of blue is not parallel to the connector, repeat these steps to reposition / re-install the FFC.

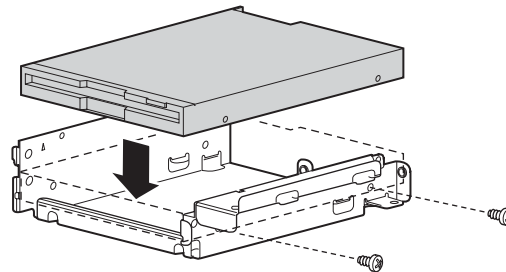


TP00143A

Figure 24. Reattaching Flat Flex Cable to Backplane Board

Inserting Replacement Floppy Drive

1. Turn the cage so that the metal flange at the side of the drive extends to the right.
2. Lay the floppy drive on the bottom of the cage, with the back of the drive facing you.
3. Line up the screw holes on the left and right sides of the drive and the cage. The front of the drive will extend slightly from the front of the cage.
4. Insert the four screws removed from the old drive to attach the replacement drive to the cage.



TP00143B

Figure 25. Installing the Floppy Drive

5. Lift the brown locking mechanism at the front of the FFC connector on the floppy drive. See Figure 26. Attaching the FFC to the Floppy Drive, A.
6. Hold the backplane board with the attached FFC above the floppy drive. Hold the backplane board so that the silkscreen label “IDE CONN” is at the top left and the FFC is at the right. See Figure 26, B.

➔ **NOTE**

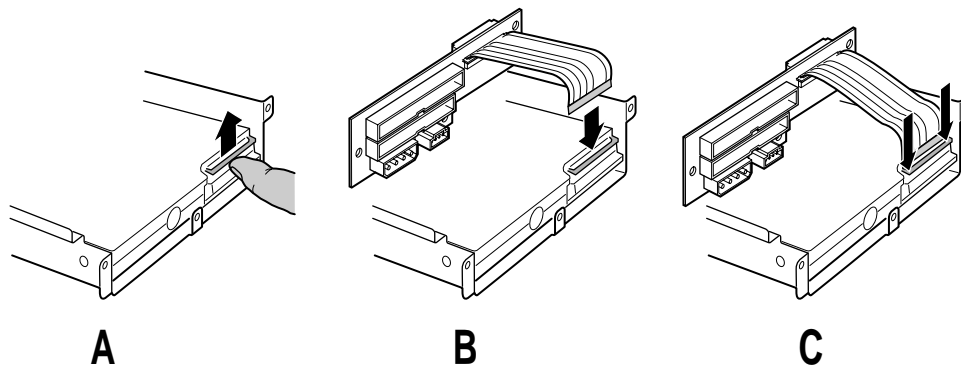
If the FFC is not attached to the backplane board, see “Reattaching Flat Flex Cable to Backplane Board” for instructions on reinstalling it. Install the FFC into the backplane board before attaching it to the floppy drive.

7. Pull down gently on the FFC that is attached to the backplane board. Insert the blue edge of the FFC cable into the connector on the floppy drive. See Figure 26, B.
8. Holding the FFC in place, push down on each side of the locking bar on the floppy drive connector to lock the FFC into place. See Figure 26, C.
9. Ensure the FFC is correctly installed by verifying the following:

A small line of blue ribbon shows above the floppy drive connector

The side of the cable facing you is solid gray (not printed).

If line of blue ribbon is not parallel to the top of the connector, or if the printed side of the FFC is facing you, disengage the locking bar and re-insert the FFC as described in the steps above.



TP00143C

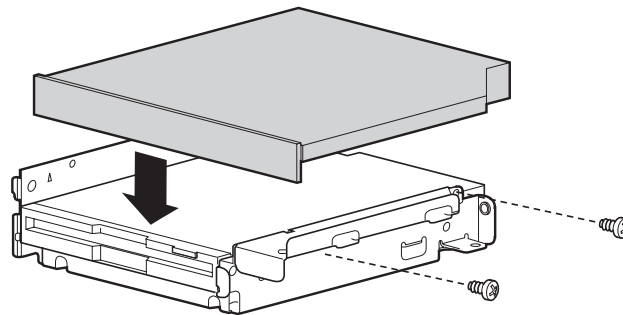
Figure 26. Attaching the FFC to the Floppy Drive

➔ **NOTE**

The backplane board will hang loose from the floppy drive while you move to your next steps. Use caution to avoid twisting or bending the FFC.

Inserting Replacement CD-ROM / DVD-ROM Drive

1. Turn the cage so that the metal flange at the side of the drive extends to the right.
2. Lay the CD-ROM drive or the DVD-ROM drive into the cage, with the back of the drive facing you. If you have installed a floppy drive, the CD-ROM drive / DVD-ROM drive lies on top of it.
3. Line up the screw holes on the left and right sides of the drive and the cage. The front of the drive will extend slightly from the front of the cage.
4. Use the four screws removed from the old drive to attach the replacement drive to each side of the cage (two screws on each side).

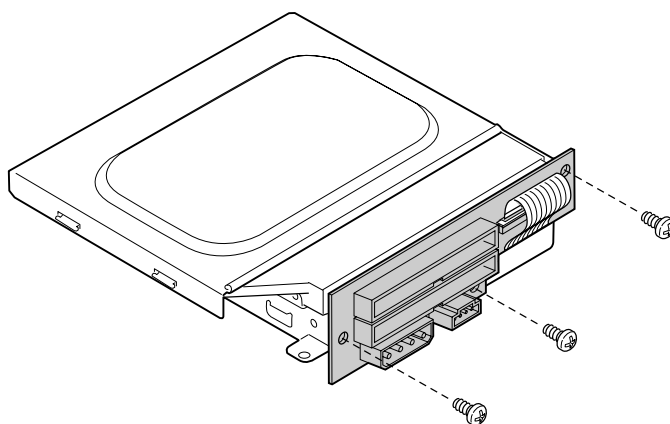


TP00143D

Figure 27. Installing Replacement CD-ROM or DVD-ROM Drive

Attach Backplane to Cage

1. If a floppy drive is installed, hold the backplane board so the silkscreen label “IDE CONN” is at the top left. If you are looking at the printed side of the FFC instead of the solid gray side of it, roll the bottom of the backplane board up and over until you are looking at the solid gray surface of the FFC. When correctly positioned, the ribbon will go underneath the backplane board, not over the top of the board.
2. If a CD-ROM drive or DVD-ROM drive is installed, attach the connector at the back of the backplane board to the matching connector at the back of the CD-ROM drive or DVD-ROM drive.
3. Use the three screws you removed from the backplane board earlier to reattach the backplane board to the cage.

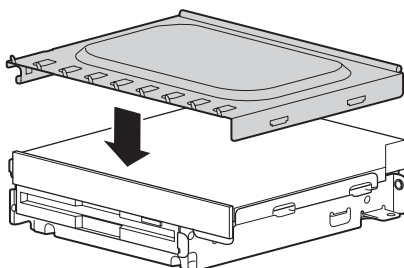


TP00148A

Figure 28. Attaching the Backplane

Install Cage Top

1. Facing the front of the cage, engage the slots at the right side of the cage top to the tabs at cage base.
2. Rotate the top downward at the left side to engage the left tabs.



TP00143E

Figure 29. Installing the Cage Top

Re-insert Drive Cage into Chassis

1. Insert the front of the drive cage into the chassis, then lower the back of the cage. When properly positioned, the front of the cage will be flush with the front of the chassis, and the screw holes in the drive cage will match the screw holes in the bottom of the chassis.
2. Replace the screws to secure the drive cage to the chassis.
3. Reattach the drive and power cables.

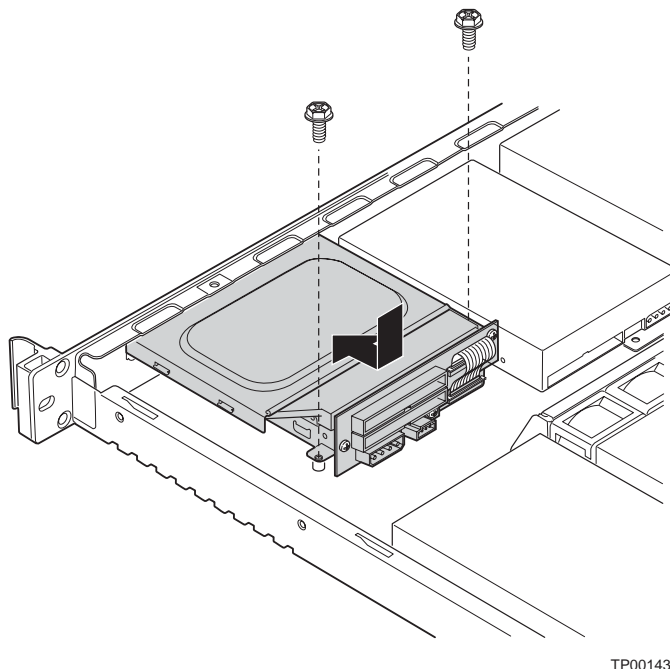


Figure 30. Inserting the Cage

Installing or Replacing a PCI Add-in Card

➡ NOTE

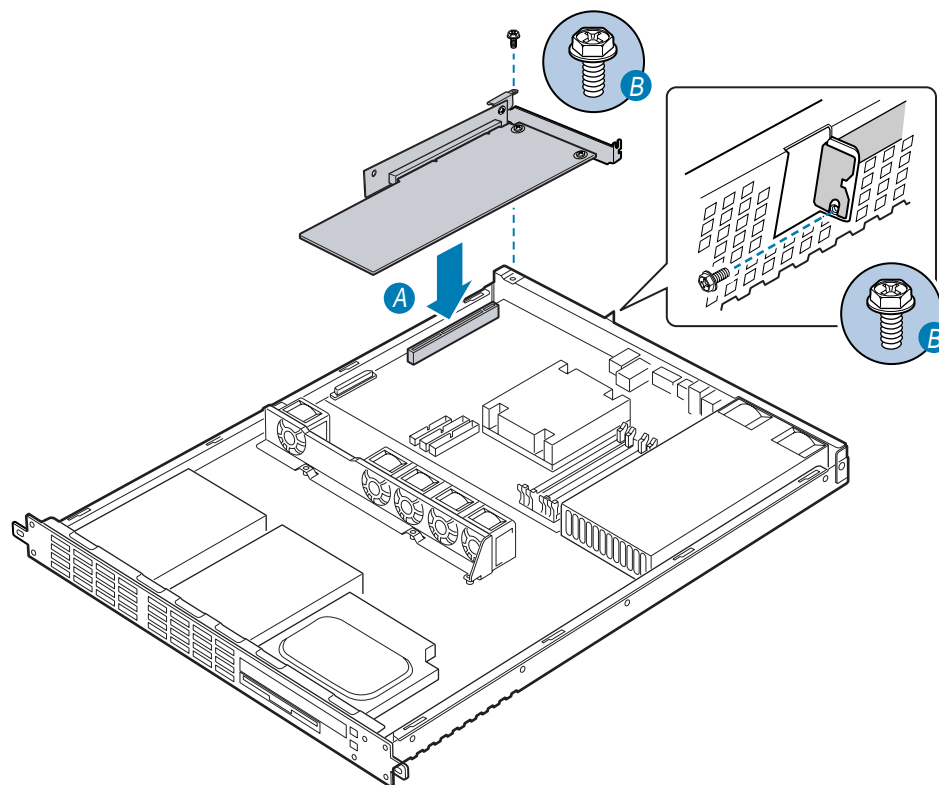
Add-in cards must be replaced while the riser card is removed from the chassis.

1. Before removing the cover to work inside the system, observe the safety guidelines at the beginning of this document.
2. Remove the chassis cover.
3. Remove the screw that holds the PCI card and the riser to the rear of the chassis.
4. Pull straight up on the riser to remove the riser card assembly from the chassis.
5. Pull the PCI card out of the riser card slot.
6. Install the new PCI add-in card on the riser.
7. 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.

 **CAUTION**

Press the riser card straight down into the slot. Press down on the riser card, not on the PCI card. Tipping it in the slot while installing it or pressing on the PCI card may damage the riser card, board slot, or the PCI card.

8. Firmly press the riser card straight down until it is seated in the server board slot.
9. Replace the screw that attaches the riser assembly to the chassis.



TP00586

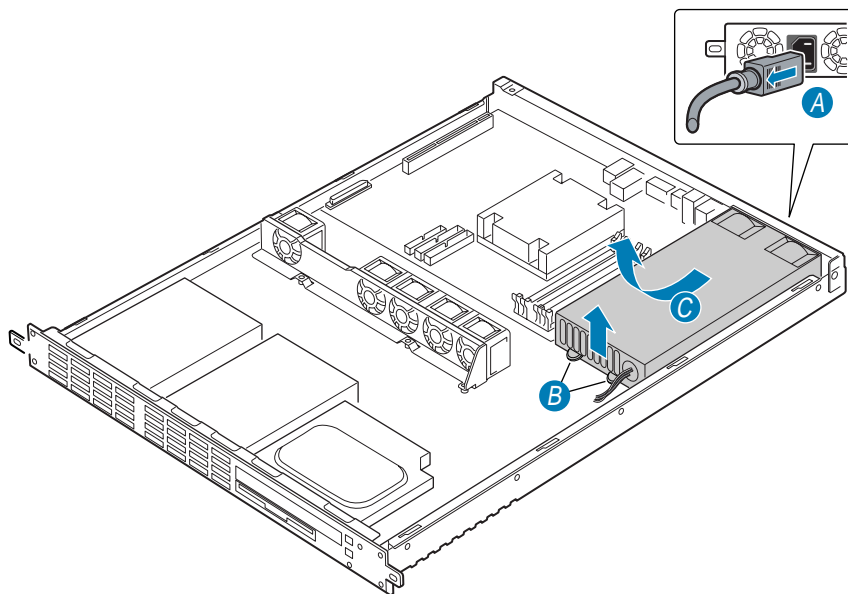
Figure 31. Replacing a Riser Card

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.

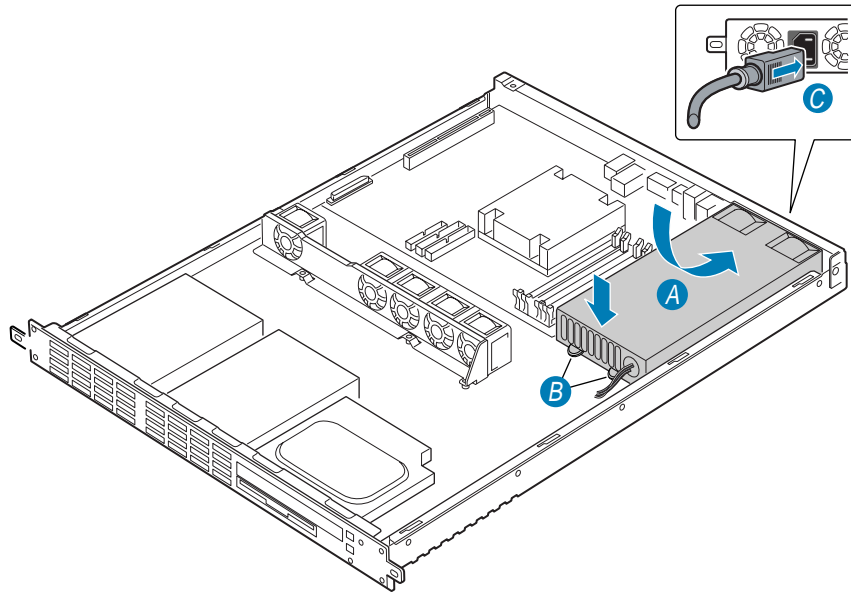
1. Before removing the cover to work inside the system, observe the safety guidelines in the beginning of the book.
2. Unplug the power cord from the power source and the power supply. See letter “A” in Figure 32.
3. Remove the chassis cover.
4. Disconnect the power cables from the server board and the drives. Note the connections you are removing so you can reconnect them after you install the new power supply.
5. Remove the two screws from the power supply. See letter “B” in the figure below.
6. Slide the power supply slightly forward to disengage it from the tabs that attach it to the bottom of the chassis. See letter “C” in Figure 32.
7. Lift the power supply out of the chassis.



TP00587

Figure 32. Removing the Power Supply

8. Set the replacement power supply onto the chassis floor.
9. Connect the power connector at the rear of the power supply. See letter “C” in Figure 33.
10. Slide the power supply toward the rear of the chassis to engage the tab. See letter “B” in Figure 33.
11. Replace the two screws at the front of the power supply. See letter “A” in Figure 33.
12. Connect the power cables to the server board and the drives.
13. Replace the chassis cover.
14. Plug the power cord back into the power supply and the power source.

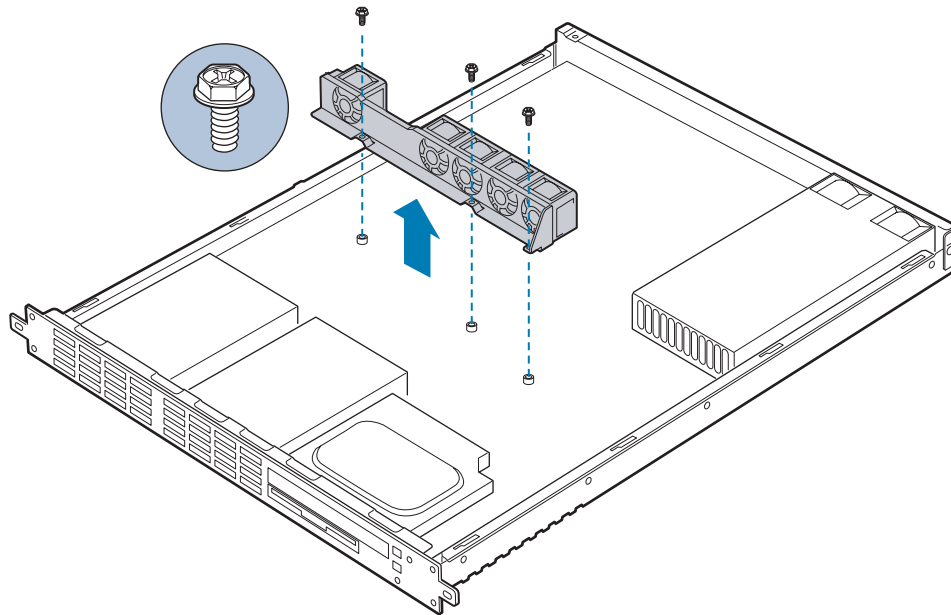


TP00618

Figure 33. Installing the Power Supply

Replacing the Front Fan Module

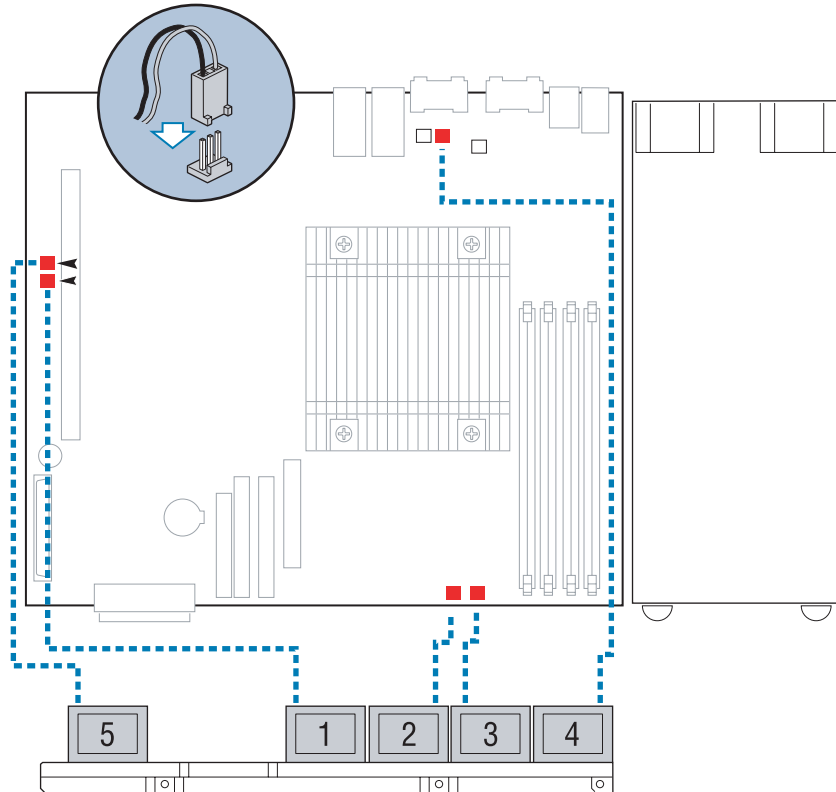
1. Unplug all power and peripheral cables from the chassis.
2. Remove the two screws from the top of the chassis.
3. Facing the rear of the chassis, pull the top cover toward you and then lift it up to remove it.
4. Note where the chassis intrusion cable is plugged into your server board and then disconnect the chassis intrusion cable.
5. Disconnect the front fan cables from the server board.
6. Remove the three screws that attach the front fan module to the chassis.
7. Lift the fan module from the chassis. See Figure 34.



TP00584

Figure 34. Removing the Front Fan Module

8. Install the replacement fan module into the chassis using the three screws that held the original fan module in place.
9. Reattach the chassis intrusion cable.
10. Reconnect the cable from each fan at the appropriate location on the server board. Fans are routed as shown in the figure below.

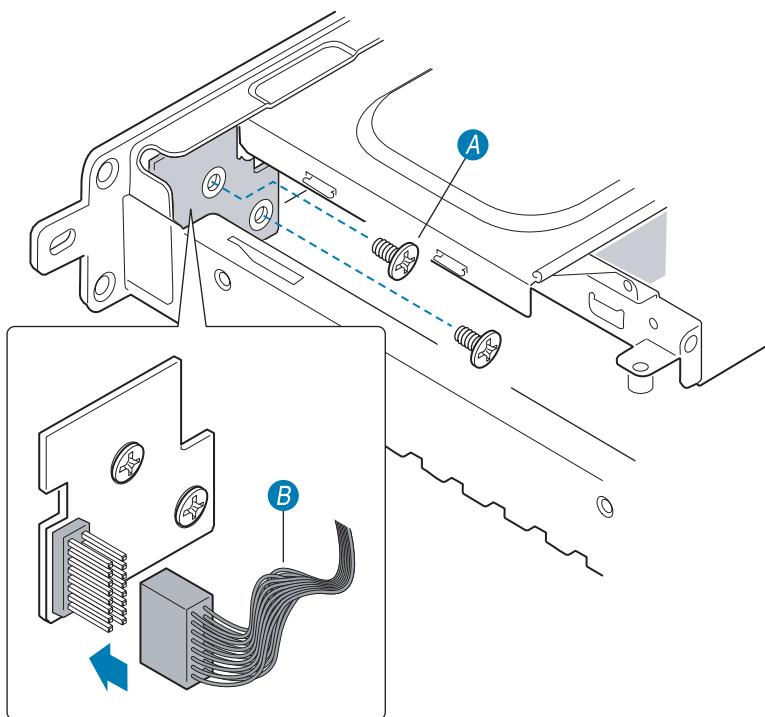


TP00619

Figure 35. Routing the Front Fan Cables

Replacing the Front Panel Board

1. Before removing the cover to work inside the system, observe the safety guidelines at the beginning of this document.
2. Remove the cover from the chassis.
3. Unplug the cable on the front panel that leads to the connection on the server board. See Figure 36, letter “B”. Leave the cable attached to the server board.
4. Remove the front panel board from the chassis by removing the two screws that hold it in place. See letter “A” in the figure below.
5. Attach the replacement front panel board to the chassis with the two screws removed from the old front panel board.
6. Plug the cable from the server board back into the front panel board.
7. Replace the chassis cover.



TP00615

Figure 36. Replacing the Front Panel Board

Replacing the Backup Battery

The lithium battery on the server board powers the RTC for up to 10 years in the absence of power. When the battery starts to weaken, it loses voltage, and the server settings stored in CMOS RAM in the RTC (for example, the date and time) may be wrong. Contact your customer service representative or dealer for a list of approved devices.



WARNING

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



ADVARSEL!

Lithiumbatteri - Eksplosjonsfare ved feilagtig 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.



WARNING

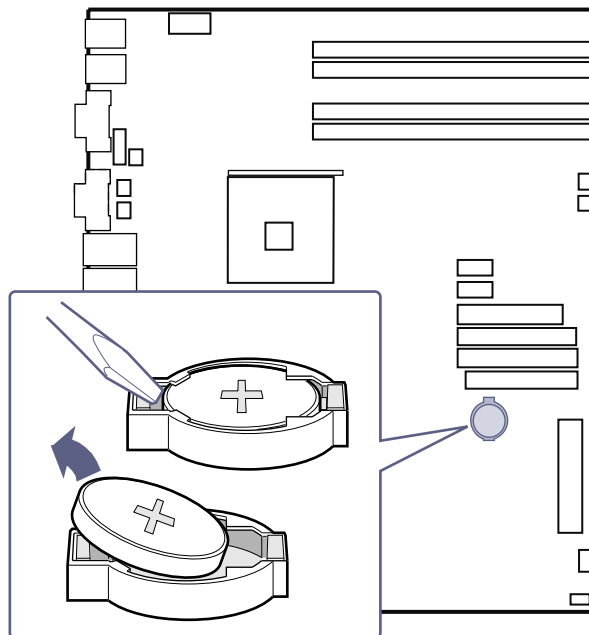
Explosionsfara vid felaktigt batteribyte. Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren. Kassera använt batteri enligt fabrikantens instruktion.



VAROITUS

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

1. Observe the safety and ESD precautions at the beginning of this book.
2. Turn off all peripheral devices connected to the server. Turn off the server.
3. Disconnect the AC power cord from the server.
4. Remove the server's cover and locate the battery.
5. Insert the tip of a small flat bladed screwdriver, or an equivalent, under the tab in the plastic retainer. Gently push down on the screwdriver to lift the battery.
6. Remove the battery from its socket.



TP00511

Figure 37. Replacing the Battery

7. Dispose of the battery according to local ordinance.
8. Remove the new lithium battery from its package, and, being careful to observe the correct polarity, insert it in the battery socket.
9. Close the chassis.
10. Run Setup to restore the configuration settings to the RTC.

Installing or Replacing the Power Cord

➡ 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.
Plug the power cord into the power supply.

Installing the Platform into a Rack

Installation instructions for the standard bracket kit and the optional rail kit are included with each kit. These instructions can also be found at

<http://support.intel.com/support/motherboards/server/chassis/SR1300/>:

- Intel® Server Chassis SR1200, SR1300, SR2200, and SR2300 Rail Kit Installation Guide
- Intel® Server Chassis SR1200, SR1300, SR2200, and SR2300 Bracket Kit Installation Guide

➤ NOTES

Although these documents do not refer specifically to the Intel® Entry Server Platform SR1325TP1-E, the instructions in these documents are correct for this platform.

The rail kit does not provide enough screws to mount the server chassis into a rack. Your Intel Entry Server Platform SR1325TP1-E includes the extra screws necessary to complete the installation.

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.



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. In a 3GHz system, the temperature cannot rise above 30°C (86 °F)

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 server system using the Server Platform SR1325TP1-E.

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.

3 Server Utilities

Table 6. Keyboard Commands

Press	Description			
<F1>	Help - Pressing F1 on any menu invokes the general Help window.			
	The left and right arrow keys are used to move between the major menu pages. The keys have no effect if a submenu or pick list is displayed.			
	Select Item up - The up arrow is used to select the previous value in a menu item's option list, or a value field pick list. Pressing the Enter key activates the selected item.			
	Select Item down - The down arrow is used to select the next value in a menu item's option list, or a value field pick list. Pressing the Enter key activates the selected item.			
F5/-	Change Value - The minus key or the F5 function key is used to change the value of the current item to the previous value. This key scrolls through the values in the associated pick list without displaying the full list.			
F6/+	Change Value - The plus key or the F6 function key is used to change the value of the current menu item to the next value. This key scrolls through the values in the associated pick list without displaying the full list. On 106-key Japanese keyboards, the plus key has a different scan code than the plus key on the other keyboard, but it has the same effect.			
<Enter>	Execute Command - The Enter key is used to activate submenus when the selected feature is a submenu, or to display a pick list if a selected feature has a value field, or to select a sub-field for multi-valued features like time and date. If a pick list is displayed, the Enter key will undo the pick list, and allow another selection in the parent menu.			
<Esc>	Exit - The ESC key provides a mechanism for backing out of any field. This key will undo the pressing of the Enter key. When the ESC key is pressed while editing any field or selecting features of a menu, the parent menu is re-entered. When the ESC key is pressed in any submenu, the parent menu is re-entered. When the ESC key is pressed in any major menu, the exit confirmation window is displayed and the user is asked whether changes can be discarded.			
<F9>	<p>Setup Defaults - Pressing F9 causes the following to appear:</p> <table border="1" style="margin-left: 40px;"> <tr> <td style="text-align: center;">Setup Confirmation</td> </tr> <tr> <td style="text-align: center;">Load default configuration now?</td> </tr> <tr> <td style="text-align: center;">[Yes] [No]</td> </tr> </table> <p>If "Yes" is selected and the Enter key is pressed, all Setup fields are set to their default values. If "No" is selected and the Enter key is pressed, or if the ESC key is pressed, the user is returned to where they were before F9 was pressed without affecting any existing field values.</p>	Setup Confirmation	Load default configuration now?	[Yes] [No]
Setup Confirmation				
Load default configuration now?				
[Yes] [No]				
<F10>	<p>Save and Exit - Pressing F10 causes the following message to appear:</p> <table border="1" style="margin-left: 40px;"> <tr> <td style="text-align: center;">Setup Confirmation</td> </tr> <tr> <td style="text-align: center;">Save Configuration changes and exit now?</td> </tr> <tr> <td style="text-align: center;">[Yes] [NO]</td> </tr> </table> <p>If "Yes" is selected and the Enter key is pressed, all changes are saved and Setup is exited. If "No" is selected and the Enter key is pressed, or the ESC key is pressed, the user is returned to where they were before F10 was pressed without affecting any existing values.</p>	Setup Confirmation	Save Configuration changes and exit now?	[Yes] [NO]
Setup Confirmation				
Save Configuration changes and exit now?				
[Yes] [NO]				

Upgrading the BIOS

The upgrade utility allows you to upgrade the BIOS in flash memory. The code and data in the upgrade file include the following:

- On-board BIOS, ATA-100 RAID BIOS, and PXE option ROMs for the devices that are embedded on the system board
- The Setup Utility
- The System BIOS

Preparing for the Upgrade

The steps below explain how to prepare to upgrade the BIOS, including how to:

- Record the current BIOS settings
- Obtain the upgrade utility
- Prepare a bootable diskette for the utility

In the unlikely event that a BIOS error occurs during the BIOS update process, see “[Recovering the BIOS](#)” for instructions on performing a BIOS recovery.

Recording the Current BIOS Settings

1. Boot the computer and press <F2> when you see the message:
`Press <F2> Key if you want to run SETUP`
2. Write down the current settings in the BIOS Setup program.

⇒ NOTE

Do not skip step 2. You will need these settings to configure your computer at the end of the procedure.

Obtaining the Upgrade

Download the BIOS image file to a temporary folder on your hard drive. See “[Additional Information and Software](#)” for a link to the update software.

⇒ NOTE

Review the instructions distributed with the upgrade utility before attempting a BIOS upgrade. Review also any release notes in the release notes file that accompanies the new version of the BIOS. The release notes may contain critical information regarding jumper settings, specific fixes, or other information to complete the upgrade.

Creating a Bootable Diskette

Use a DOS system to create the diskette as follows:

1. Insert a diskette in diskette drive A.
2. At the C:\ prompt, for an unformatted diskette, type:

```
format a: /s
```

or, for a diskette that is already formatted, type:

```
sys a:
```

4. Press <Enter>.

Creating the BIOS Upgrade Diskette

The BIOS upgrade file is a compressed self-extracting archive that contains the files you need to upgrade the BIOS.

1. Insert the bootable diskette into the diskette drive.
2. While in the directory into which you downloaded the upgrade file(s), type `[filename] a:` where “[filename]” is the name of the file that you downloaded. This command extracts the update files and places them onto the bootable diskette

Upgrading the BIOS

1. Place the bootable diskette containing the BIOS update files into the diskette drive of your system. Boot the system with the diskette in the drive.
2. A menu will appear with two options. Use option 1 to automatically update the system BIOS. Use option 2 to manually update the system BIOS and the User Binary.
3. If you selected option 1, to automatically update the system BIOS:
The system will execute the AfuDOS update utility to update the BIOS. When the update is complete, the utility will display a green box with a message that says “Completed Successfully.” The system will then reboot.
4. If you selected option 2, to manually update the BIOS or to update the flash memory, you can either select “Update Flash Memory From a File” or “Update System BIOS”:
 - Update Flash Memory From a File: When prompted for a file name, type BIOS.wph and press Enter.
 - Update System BIOS: The system will warn you that the BIOS will be updated. Verify the BIOS version is correct and press Enter to continue. When the update is complete, the utility will display a green box with a message that says “Completed Successfully.” The system will then reboot.
5. Wait while the BIOS files are updated. **Do not power down the system during the BIOS update process!** The system will reset automatically when the BIOS update process is completed. Remove the diskette from the diskette drive.
6. Check to make sure the BIOS version displayed during POST is the new version as the system reboots.
7. Enter Setup by pressing the F2 key during boot.
8. In Setup, press the F9 and <Enter> to set the parameters back to default values.

9. Re-enter the values you wrote down at the beginning of this process. Press F10 and <Enter> to exit BIOS Setup and Save Changes.
10. If you do not set the CMOS values back to defaults using the F9 key, the system may function erratically.

⇒ **NOTE**

You may encounter a CMOS Checksum error or other problem after reboot. If this happens, shut down the system and boot it again. CMOS checksum errors require that you enter Setup, check your settings, save your settings, and exit Setup.

Changing the BIOS Language

You can use the BIOS upgrade utility to change the language the BIOS uses for messages and the Setup program. Use a bootable diskette containing the Intel flash utility and language files.

1. Boot the computer with the bootable diskette in drive A. The BIOS upgrade utility screen appears.
2. Select `Update Flash Memory From a File`.
3. Select `Update Language Set`. Press <Enter>.
4. Select drive A and use the arrow keys to select the correct `.lng` file. Press <Enter>.
5. When the utility asks for confirmation that you want to flash the new language into memory, select `Continue with Programming`. Press <Enter>.
6. When the utility displays the message `upgrade is complete`, remove the diskette. Press <Enter>.
7. The computer will reboot and the changes will take effect.

Recovering the BIOS

In the rare event that the BIOS becomes damaged, a recovery process needs to be followed to return the system to service. Two methods are available to recover the BIOS: automatically with the crisis recovery diskette, and manually by moving a jumper on the system board. These methods are described below.

⇒ **NOTE**

BIOS recovery is the mode of last resort, used only when the main system BIOS will not come up.

Recovering the BIOS with the Crisis Recovery Diskette

Manually Recovering the BIOS

A BIOS recovery can be manually initiated. This option would be used only when the BIOS is corrupt, but the ROM checksum error does not occur during POST. To manually initiate a BIOS recovery, use the following steps:

1. Power down and unplug the system from the AC power source.
2. Move the recovery jumper at J1D1 from pins 13 and 14 to cover pins 14 and 15.
3. Insert a bootable diskette containing the file AMIBOOT.ROM into the A: diskette drive.
4. Plug the system into the AC power source and power it on.
5. A blue screen will be displayed and the recovery process will automatically run. The system will continue to beep throughout the recovery process. The recovery process is complete when the beeping stops.
6. Remove the diskette.
7. Power down and unplug the system from the AC power source.
8. Move the BIOS recovery jumper at J1D1 back to the original position, covering pins 13 and 14.
9. Plug the system into the AC power source and power it up to confirm that the recovery was successful.

Clearing the Password

If the user or administrator password(s) is lost or forgotten, moving the password clear jumper into the “clear” position clears both passwords. The password clear jumper must be restored to its original position before a new password(s) can be set. The password clear jumper is located on jumper block J1D1.

1. Power down the system and disconnect the AC power.
2. Open the server chassis.
3. Move the jumper from pins 5 and 6 to the Clear Password position, covering pins 6 and 7.
4. Reconnect the AC power, power up the system.
5. Power down the system and disconnect the AC power.
6. Return the Password Clear jumper to the spare location, covering pins 5 and 6.
7. Close the server chassis.

Clearing the CMOS

If you are not able to access the BIOS setup screens, the CMOS Clear jumper will need to be used to reset the configuration RAM. The CMOS Clear jumper is located on jumper block J1D1.

1. Power down the system and disconnect the AC power.
2. Open the server.
3. Move the jumper from pins 1 and 2 to the Clear CMOS position, covering pins 2 and 3.
4. Reconnect the AC power, power up the system.
5. When the system begins beeping, power it down and disconnect the AC power.
6. Return the CMOS Clear jumper to the original location, covering pins 1 and 2.
7. Close the server chassis, reconnect the AC power and power up the system.

4 Troubleshooting

This chapter helps you identify and solve problems that might occur while you are using the system.

For any issue, first ensure you are using the latest firmware and files. Firmware upgrades include updates for BIOS, the mini baseboard management controller (mBMC), and the hot-swap controller (HSC). See “[Additional Information and Software](#)” for a link to the software updates. In addition to the server firmware and files, also update any drivers used for components you have installed in your system, such as video drivers, network drivers, and SCSI drivers.

Intel provides a package called the “Platform Confidence Test” that may help with your diagnostics. See “[Additional Information and Software](#)” for a link to this software.

If you are unable to resolve your server problems on your own, see “[Getting Help](#)” for assistance.

Resetting the System

Before going through in-depth troubleshooting, attempt first to perform reset your system using one of the methods below.

To do this:	Press:
Soft boot reset to clear the system memory and reload the operating system.	<Ctrl+Alt+Del>
Clear system memory, restart POST, and reload the operating system.	Reset button
Cold boot reset. Turn the system power off and then on. This clears system memory, restarts POST, reloads the operating system, and halts power to all peripherals.	Power off/on

Problems following Initial System Installation

Problems that occur at initial system startup are usually caused by an incorrect installation or configuration. Hardware failure is a less frequent cause. If the problem you are experiencing is with a specific software application, see “[Problems with Newly Installed Application Software](#).”

First Steps Checklist

- Is AC power available at the wall outlet?
- Are the power supplies plugged in? Check the AC cable(s) on the back of the chassis and at the AC source.
- Are all cables correctly connected and secured?
- Are the processors fully seated in their sockets on the server board?
- Are all standoffs in the proper location and not touching any components, causing a potential short?
- Are all add-in PCI boards fully seated in their slots on the server board?
- Are all jumper settings on the server board correct?

- Are all jumper and switch settings on add-in boards and peripheral devices correct? To check these settings, refer to the manufacturer's documentation that comes with them. If applicable, ensure that there are no conflicts—for example, two add-in boards sharing the same interrupt.
- Are all peripheral devices installed correctly?
- If the system has a hard disk drive, is it properly formatted or configured?
- Are all device drivers properly installed?
- Are the configuration settings made in Setup correct?
- Is the operating system properly loaded? Refer to the operating system documentation.
- Did you press the system power on/off switch on the front panel to turn the server on (power on light should be lit)?
- Is the system power cord properly connected to the system and plugged into a NEMA 5-15R outlet for 100-120 V or a NEMA 6-15R outlet for 200-240 V ?
- Are all integrated components from the tested components lists? Check the tested memory, and chassis lists, as well as the supported hardware and operating system list. See "[Additional Information and Software](#)" for links to the tested component lists.

Hardware Diagnostic Testing

This section provides a more detailed approach to identifying a hardware problem and locating its source.



CAUTION

Turn off devices before disconnecting cables: Before disconnecting any peripheral cables from the system, turn off the system and any external peripheral devices. Failure to do so can cause permanent damage to the system and/or the peripheral devices.

1. Turn off the system and all external peripheral devices. Disconnect each of device from the system, except for the keyboard and the video monitor.
2. Make sure the system power cord is plugged into a properly grounded AC outlet.
3. Make sure your video display monitor and keyboard are correctly connected to the system. Turn on the video monitor. Set its brightness and contrast controls to at least two thirds of their maximum ranges (see the documentation supplied with your video display monitor).
4. If the operating system normally loads from the hard disk drive, make sure there is no diskette in drive A and no CD-ROM disk in the CD-ROM drive.
5. If the power LED does light, attempt to boot from a floppy diskette or from a CD-ROM disk.
6. Turn on the system. If the power LED does not light, see "[Power Light Does Not Light.](#)"

Verifying Proper Operation of Key System Lights

As POST determines the system configuration, it tests for the presence of each mass storage device installed in the system. As each device is checked, its activity light should turn on briefly. Check for the following:

- Does the diskette drive activity light turn on briefly? If not, see “[Diskette Drive Activity Light Does Not Light.](#)”
- If system LEDs are illuminated, see “[LED Information](#)” for a description of the light and steps to take to correct the problem.

Confirming Loading of the Operating System

Once the system boots up, the operating system prompt appears on the screen. The prompt varies according to the operating system. If the operating system prompt does not appear, see “[No Characters Appear on Screen.](#)”

Specific Problems and Corrective Actions

This section provides possible solutions for these specific problems:

- Power light does not light.
- No characters appear on screen.
- Characters on the screen appear distorted or incorrect.
- System cooling fans do not rotate.
- Diskette drive activity light does not light.
- Hard disk drive activity light does not light.
- CD-ROM drive activity light does not light.
- There are problems with application software.
- The bootable CD-ROM is not detected.

Try the solutions below in the order given. If you cannot correct the problem, contact your service representative or authorized dealer for help.

Power Light Does Not Light

Check the following:

- Did you press the power-on button?
- Is the system operating normally? If so, the power LED might be defective or the cable from the front panel to the server board might be loose.
- Have you securely plugged the server AC power cord into the power supply?
- Is the power supply correctly set to 110V or 235V, depending on your power output?
- Will other items plugged into the same power outlet function correctly?
- Remove all add-in cards and see if the system boots. If successful, add the cards back in one at a time with a reboot between each addition.
- Make sure the memory DIMMs comply with the system requirements.
- Make sure the memory DIMMs have been populated according to the system requirements.
- Remove the memory DIMMs and re-seat them.
- Make sure the processor(s) comply with the system requirements.
- Make sure the processor(s) have been populated according to the system requirements.
- Remove the processor(s) and re-seat them.
- Make sure the chassis standoffs are installed only below mounting holes. Misplaced standoffs can contact the pins on the bottom of the server board and cause a short.

No Characters Appear on Screen

Check the following:

- Is the keyboard functioning? Test it by turning the “Num Lock” function on and off to make sure the Num Lock light is functioning.
- Is the video monitor plugged in and turned on? If you are using a switch box, is it switched to the correct system?
- Are the brightness and contrast controls on the video monitor properly adjusted?
- Is the video monitor signal cable properly installed?
- Does this video monitor work correctly if plugged into a different system?
- Is the onboard video controller enabled in the BIOS?
- Remove all add-in cards and see if the video returns. If successful, add the cards back in one at a time with a reboot between each addition.
- Make sure the memory DIMMs comply with the system requirements.
- Make sure the memory DIMMs have been populated according to the system requirements.
- Remove the memory DIMMs and re-seat them.
- Make sure the processor(s) comply with the system requirements.
- Make sure the processor(s) have been populated according to the system requirements.
- Remove the processor(s) and re-seat them.

If you are using an add-in video controller board, do the following:

1. Verify that the video works using the onboard video controller.
2. Verify that the video controller board is fully seated in the server board connector.
3. Reboot the system for changes to take effect.
4. If there are still no characters on the screen after you reboot the system and POST emits a beep code, write down the beep code you hear. This information is useful for your service representative.
5. If you do not receive a beep code and characters do not appear, the video display monitor or video controller may have failed. Contact your service representative or authorized dealer for help.

Characters Are Distorted or Incorrect

Check the following:

- Are the brightness and contrast controls properly adjusted on the video monitor? See the manufacturer's documentation.
- Are the video monitor's signal and power cables properly installed?
- Does this video monitor work correctly if plugged into a different system?

System Cooling Fans Do Not Rotate Properly

If the system cooling fans are not operating properly, it is an indication of possible system component failure.

Check the following:

- Is the power-on light lit? If not, see [“Power Light Does Not Light”](#)
- If your system has LED lights for the fans, is one or more of these LEDs lit?
- Are any other front panel LEDs lit?
- Have any of the fan motors stopped? Use the server management subsystem to check the fan status.
- Have your fans speeded up in response to an overheating situation?
- Have your fans speeded up in response to a fan that has failed?
- Are the fan power connectors properly connected to the server board?
- Is the cable from the front panel board connected to the both the front panel board and to the server board?
- Are the power supply cables properly connected to the server board?
- Are there any shorted wires caused by pinched-cables or have power connector plugs been forced into power connector sockets the wrong way?

Diskette Drive Activity Light Does Not Light

Check the following:

- Are the diskette drive's power and signal cables properly installed?
- Are all relevant switches and jumpers on the diskette drive set correctly?
- Is the diskette drive properly configured?
- Is the diskette drive activity light always on? If so, the signal cable may be plugged in incorrectly.

If you are using the onboard diskette controller, use the BIOS setup to make sure that "Onboard Floppy" is set to "Enabled." If you are using an add-in diskette controller, make sure that "Onboard Floppy" is set to "Disabled."

CD-ROM Drive or DVD-ROM Drive Activity Light Does Not Light

Check the following:

- Are the CD-ROM/DVD-ROM drive's power and signal cables properly installed?
- Are all relevant switches and jumpers on the drive set correctly?
- Is the drive properly configured?

Cannot Connect to a Server

- Make sure the network cable is securely attached to the correct connector at the system back panel.
- Try a different network cable.
- Make sure you are using the correct and the current drivers. See "[Additional Information and Software](#)" for a link to the current drivers.
- Make sure the driver is loaded and the protocols are bound.
- Make sure the hub port is configured for the same duplex mode as the network controller.
- Make sure the correct networking software is installed.
- If you are directly connecting two servers (without a hub), you will need a crossover cable.
- Check the network controller LEDs next to the NIC connectors.

Problems with Network

The server hangs when the drivers are loaded.

- Certain drivers may require interrupts that are not shared with other PCI drivers. For these drivers, it may be necessary to alter settings so that interrupts are not shared. See the documentation that came with your PCI card(s) for information on changing interrupts..

Diagnostics pass but the connection fails.

- Make sure the network cable is securely attached.
- Make sure you specify the correct frame type in your NET.CFG file.

The controller stopped working when an add-in adapter was installed.

- Make sure the cable is connected to the port from the onboard network controller.
- Make sure your BIOS is current. See “[Additional Information and Software](#)” for a link to the current version.
- Make sure the other adapter supports shared interrupts. Make sure your operating system supports shared interrupts.
- Try reseating the add-in adapter.

The add-in adapter stopped working without apparent cause.

- Try reseating the adapter first; then try a different slot if necessary.
- The network driver files may be corrupt or deleted. Delete and then reinstall the drivers.
- Run the diagnostics.

System Boots when Installing PCI Card

System Server Management features require full-time “standby” power. This means some parts of the system have power going to them whenever the power cord is plugged in, even if you have turned the system power off with the power button on the front panel. If you install a PCI card with the AC power cord plugged in, a signal may be sent to the command the system to boot. Before installing a PCI card, you should always:

- Turn off the server power by using the power button on the front of the system.
- Unplug the AC power cord(s) from the server.

Problems with Newly Installed Application Software

Problems that occur when you run new application software are usually related to the software, not the server hardware. Faulty equipment is unlikely, especially if other software runs correctly.

Check the following:

- Make sure the system meets the minimum hardware requirements for the software. See the software documentation.
- Make sure the software is properly installed and configured for the system. See the software documentation.
- Use only an authorized copy. Unauthorized copies often do not work.
- If you are running the software from a diskette, CD-ROM or DVD-ROM, try a different diskette.
- Make sure the correct device drivers installed.

If the problems persist, contact the software vendor's customer service representative.

Problems with Application Software that Ran Correctly Earlier

Problems that occur after the system hardware and software have been running correctly sometimes indicate equipment failure. However, they can also be caused by file corruption or changes to the software configuration.

Check the following:

- If you are running the software from a diskette, CD-ROM or DVD-ROM, try a different diskette.
- Uninstall and reinstall the software. Make sure all necessary files are installed.
- If the problems are intermittent, there may be a loose cable, dirt in the keyboard (if keyboard input is incorrect), a marginal power supply, or other random component failures.
- If you suspect that a transient voltage spike, power outage, or brownout might have occurred, reload the software and try running it again. Symptoms of voltage spikes include a flickering video display, unexpected system reboots, and the system not responding to user commands.

⇒ NOTE

Random errors in data files: If you are getting random errors in your data files, they may be getting corrupted by voltage spikes on your power line. If you are experiencing any of the above symptoms that might indicate voltage spikes on the power line, you may want to install a surge suppressor between the power outlet and the system power cord.

Devices are not Recognized under Device Manager (Windows* Operating System)

The Windows* operating systems do not include all of the drivers for the Intel® chipsets, onboard NICs, and other components. See “[Additional Information and Software](#)” for a link to the current drivers and chipset files.

Hard Drive(s) are not Recognized

Check the following:

- Make sure the drive is not disabled in BIOS Setup.
- Make sure the drive is connected correctly and that is plugged into the power supply.
- Make sure the drive is compatible. See “[Additional Information and Software](#)” for a link to the tested drives.
- Make sure you have not exceeded the power budget for the server. See “[Additional Information and Software](#)” for a link to software to check your power budget.
- If using SCSI drives, verify that each SCSI ID number is unique on the SCSI bus. See your drive documentation for details on setting the SCSI ID for your drives.
- If using IDE drives, verify that the master/slave settings are set correctly. See your drive documentation for details on setting the master/slave settings.
- If using a RAID configuration with SCSI or SATA drives, make sure the RAID card is installed correctly.

Bootable CD-ROM Is Not Detected

Check the following:

- Make sure the BIOS is configured to allow the CD-ROM to be the first bootable device.

LED Information

The Intel® Server Board SE7210TP1-E includes LEDs that can aid in troubleshooting your system. A table of these LEDs with a description of their use is listed below.

LED Name	Function	Location	Color	Correction
ID	Aid in server identification from the back panel	Front Panel and board rear left corner	Blue	Press ID LED button or user Server Management software to turn off the LED.
System fault	Visible fault warning	Front panel and board rear left corner	Green or Amber	<ul style="list-style-type: none"> ▪ On = No Fault ▪ Green Blink = degraded ▪ Amber = critical error or non-recoverable ▪ Amber blink = non-critical
IDE activity	Front panel	Front panel and board left side	Green	Blinking = Activity. No action required.
Memory fault 1–6	Identify failing memory module	DIMM end front of board	Amber	On = Fault
POST code 1–4 (LSB, bit1, bit2, MSB)	Display boot 80 POST code	Left rear of board	Each LED can be Off, Green, Amber, Red	See the POST code table
Fan Pack Fault	Warn on fan failure	Front center board	Amber	On = Fault
CPU 1 & 2 Fan Fault	Identify fan failure	Front center board	Amber	On = Fault
CPU 1 & 2 Fault	Identify processor failure	1" behind processor socket	Amber	On = Fault
5v Standby	Identify 5v standby power on state	Front left board	Amber	On = 5v standby power on
Power LED	Identify the power state of the system	Front Panel	Green	<ul style="list-style-type: none"> ▪ Off = Power is off (off or S5) ▪ On = Power on or S0) ▪ Slow Blink = Low power state (S1 – S3)

BIOS Error Messages

When a recoverable error occurs during the POST, the BIOS displays an error message describing the problem (see Table 7).

Table 7. BIOS Error Messages

Error Message	Explanation
GA20 Error	An error occurred with Gate A20 when switching to protected mode during the memory test.
Pri Master HDD Error Pri Slave HDD Error Sec Master HDD Error Sec Slave HDD Error	Could not read sector from corresponding drive.
Pri Master Drive - ATAPI Incompatible Pri Slave Drive - ATAPI Incompatible Sec Master Drive - ATAPI Incompatible Sec Slave Drive - ATAPI Incompatible	Corresponding drive is not an ATAPI device. Run Setup to make sure device is selected correctly.
A: Drive Error	No response from diskette drive.
CMOS Battery Low	The battery may be losing power. Replace the battery soon.
CMOS Display Type Wrong	The display type is different than what has been stored in CMOS. Check Setup to make sure type is correct.
CMOS Checksum Bad	The CMOS checksum is incorrect. CMOS memory may have been corrupted. Run Setup to reset values.
CMOS Settings Wrong	CMOS values are not the same as the last boot. These values have either been corrupted or the battery has failed.
CMOS Date/Time Not Set	The time and/or date values stored in CMOS are invalid. Run Setup to set correct values.
DMA Error	Error during read/write test of DMA controller.
FDC Failure	Error occurred trying to access diskette drive controller.
HDC Failure	Error occurred trying to access hard disk controller.
Checking NVRAM.....	NVRAM is being checked to see if it is valid.
Update OK!	NVRAM was invalid and has been updated.
Updated Failed	NVRAM was invalid but was unable to be updated.
Keyboard Error	Error in the keyboard connection. Make sure keyboard is connected properly.
KB/Interface Error	Keyboard interface test failed.

continued

BIOS Error Messages (continued)

Error Message	Explanation
Memory Size Decreased	Memory size has decreased since the last boot. If no memory was removed, then memory may be bad.
Memory Size Increased	Memory size has increased since the last boot. If no memory was added, there may be a problem with the system.
Memory Size Changed	Memory size has changed since the last boot. If no memory was added or removed, then memory may be bad.
No Boot Device Available	System did not find a device to boot.
Off Board Parity Error	A parity error occurred on an off-board card. This error is followed by an address.
On Board Parity Error	A parity error occurred in onboard memory. This error is followed by an address.
Parity Error	A parity error occurred in onboard memory at an unknown address.
NVRAM / CMOS / PASSWORD cleared by Jumper	NVRAM, CMOS, and passwords have been cleared. The system should be powered down and the jumper removed.
<CTRL_N> Pressed	CMOS is ignored and NVRAM is cleared. User must enter Setup.

BIOS POST Beep Codes

The table below lists the POST error beep codes. Prior to system video initialization, the BIOS uses these beep codes to inform users of error conditions. The beep code occurs only when a critical error occurs or when the BIOS fails to boot to the operating system. Please note that not all error conditions are supported by BIOS beep codes.

Table 8. Beep Codes

Number of Beeps	Description
1	Refresh failure
2	Parity cannot be reset
3	First 64 Kb memory failure
4	Timer not operational
5	Processor failure (Reserved; not used)
6	8042 GateA20 cannot be toggled (memory failure or not present)
7	Exception interrupt error
8	Display memory R/W error
9	(Reserved; not used)
10	CMOS Shutdown register test error
11	Invalid BIOS (such as, POST module not found)

BIOS Recovery Beep Codes

Table 9. BIOS Recovery Beep Codes

Beeps	Reason
1	One long beep – video is active.
1-2	One long beep and two short beeps: Insert the BIOS recovery diskette.

An error or warning condition at boot can result in a series of beeps being issued known as "beep codes." These beeps have a code that identifies system or PCI card events. For example, some Intel® RAID controller cards have beep codes. Before checking for a system beep code error make sure the PCI card is not causing the beeping.

In the case of a Bootblock update, where video is not available for text messages to be displayed, speaker beeps are necessary to inform the user of errors. For beep codes associated with a Bootblock update refer to the *Intel® Server Board SE7210TP1-E Technical Product Specification*.

Regulatory and Compliance Information

Product Regulatory Compliance

Product Safety Compliance

The Server Board SE7210TP1-E complies with the following safety requirements:

- 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)

Product EMC Compliance

The Server Board SE7210TP1-E has been tested and verified to comply with the following electromagnetic compatibility (EMC) regulations when installed a compatible Intel® host system. For information on compatible host system(s) refer to Intel's Server Builder Web site or contact your local Intel representative.

- FCC (Class A Verification) – Radiated & Conducted Emissions (USA)
- ICES-003 (Class A) – Radiated & Conducted Emissions (Canada)
- CISPR 22, 3rd Edition (Class A) – Radiated & Conducted Emissions (International)
- EN55022 (Class A) – Radiated & Conducted Emissions (European Union)
- EN55024 (Immunity) (European Union)
- CE – EMC Directive (89/336/EEC) (European Union)
- VCCI (Class A) – Radiated & Conducted Emissions (Japan)
- AS/NZS 3548 (Class A) – Radiated & Conducted Emissions (Australia / New Zealand)
- RRL (Class A) Radiated & Conducted Emissions (Korea)
- BSMI CNS13438 (Class A) Radiated & Conducted Emissions (Taiwan)
- GOST R 29216-91 (Class A) Radiated & Conducted Emissions (Russia)
- GOST R 50628-95 (Immunity) (Russia)

Product Regulatory Compliance Markings

This product is marked with the following Product Certification Markings:

Table 10. Product Certification Markings

UL Recognition Mark	
CE Mark	
Russian GOST Mark	
Australian C-Tick Mark	
BSMI DOC Marking	
BSMI EMC Warning	警告使用者： 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 MIC Mark	

Electromagnetic Compatibility Notices

FCC (USA)

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.

For questions related to the EMC performance of this product, contact:

Intel Corporation
5200 N.E. Elam Young Parkway
Hillsboro, OR 97124
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 to an outlet on a circuit other than the one 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.

Industry Canada (ICES-003)

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.

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

Europe (CE Declaration of Conformity)

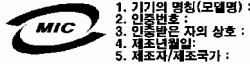
This product has been tested in accordance too, and complies with the Low Voltage Directive (73/23/EEC) and EMC Directive (89/336/EEC). The product has been marked with the CE Mark to illustrate its compliance.

Taiwan Declaration of Conformity

This product has been tested and complies with CNS13438. The product has been marked with the BSMI DOC mark to illustrate compliance.

Korean RRL Compliance

This product has been tested and complies with MIC Notices No. 1997-41 and 1997-42. The product has been marked with the MIC logo to illustrate compliance.



The English translation for the above is as follows:

1. Type of Equipment (Model Name): SE7210TP1-E
2. Certification No.: Contact Intel Representative
3. Name of Certification Recipient: Intel
4. Date of Manufacturer: Marked on Product
5. Manufacturer / Nation : Intel

Australia / New Zealand

This product has been tested and complies with AS/NZS 3548. The product has been marked with the C-Tick mark to illustrate compliance.

Getting Help

World Wide Web

<http://support.intel.com/support/motherboards/server/SR1325TP1-E>

Telephone

All calls are billed US \$25.00 per incident, levied in local currency at the applicable credit card exchange rate plus applicable taxes. (Intel reserves the right to change the pricing for telephone support at any time without notice).

Before calling, fill out an “[Intel® Server Issue Report Form](#).” A sample form is provided on the following pages. However, for the fastest service, please submit your form via the Internet.

In U.S. and Canada		1-800-404-2284	
In Europe			
UK	0870 6072439	Finland	9 693 79297
France	01 41 918529	Denmark	38 487077
Germany	069 9509 6099	Norway	23 1620 50
Italy	02 696 33276	Sweden	08 445 1251
Spain	91 377 8166	Holland	020 487 4562
In Asia-Pacific region			
Australia	1800 649931	Indonesian	001-803 65 7249
Hong Kong	852 2 844 4456	Malaysia	1-800 80 1390
Korea	822 767 2595	New Zealand	0800 444 365
PRC	800 820 1100	Pakistan	632 6368415 (IDD via Philippines)
Singapore	65 213-1311	Philippines	1-800 1 651 0117
Taiwan	2 2545-1640	Thailand	1-800 6310003
India	0006517-830 3634	Vietnam	632 6368416 (IDD via Philippines)
In Japan			
0120-868686 (Domestic)		81-298-47-0800 (outside country)	
In Latin America			
Brazil	0021-0811-408-5540	Ecuador	999-119, 800-628-8686 (via AT&T)
Mexico	001-800-628-8686	Guatemala	99-99-190, 800-628-8686 (via AT&T)
Colombia	980-9-122-118	Venezuela	800-11-120, 800-628-8686 (via AT&T)
Costa Rica	0-800-011-0395	Argentina	001-800-222-1001, 800-628-8686 (via AT&T)
Panama	001-800-628-8686	Paraguay	008-11, 800-628-8686 (via AT&T)
Chile	800-532-992	Peru	0-800-50000, 800-628-8686 (via AT&T)
Miami	1-800-621-8423	Uruguay	000-410, 800-628-8686 (via AT&T)

For an updated support contact list, see <http://www.intel.com/support/9089.htm/>

Intel® Server Issue Report Form

⇒ **NOTE**

An on-line / automatic submission version of this form is available at <http://support.intel.com/support/motherboards/server/SR1325TP1-E> . For the fastest service, please submit your form via the Internet.

Date Submitted: _____

Company Name: _____

Contact Name: _____

Email Address: _____

Intel Server Product: _____

Priority (Critical, Hot, High, Low): _____

Brief Problem Description. Provide a brief description below. See the last page for space to include a detailed problem description.

Board / Chassis Information

Baseboard Revision – PBA#:	DIMM Configuration
Baseboard Serial Number:	DIMM1A MB:
CPU1 Speed/Stepping/Spec:	DIMM1A Vendor/part number:
CPU2 Speed/Stepping/Spec:	DIMM1B MB:
System BIOS Version:	DIMM1B Vendor/part number:
HSC Firmware Version:	DIMM2A MB:
Chassis Model	DIMM2A Vendor/part number:
<input type="checkbox"/> Intel SR1325-E	DIMM2B MB:
	DIMM2B Vendor/part number:

Operating System Information

Operating System _____
Version _____
Service Pack _____

Peripheral Information

Check each box below that is used, and provide the requested information

Peripheral	Card Or Peripheral Description	Driver Revision	IRQ #	I/O Base Address	FW Rev#
P64 Segment B (PCI-X 64/66)					
<input type="checkbox"/>	PCI Slot 1				
Video					
<input type="checkbox"/>	On-Board Video				
<input type="checkbox"/>	Add-in Video				
NIC					
<input type="checkbox"/>	On-Board NIC1 (1.0 Gb)				
<input type="checkbox"/>	On-Board NIC2 (10/100 Mb)				

Hard Drive Information:

- IDE # of drives installed: _____
 Make/Model/Firmware Revision _____
- SCSI # of drives installed: _____
 Make/Model/Firmware Revision _____
- SATA # of drives installed: _____
 Make/Model/Firmware Revision _____

Server Issue Report Form

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

Returning a Defective Product

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