Intel® Server Board SE7520JR2
Quick Start User's Guide

intel®

Thank you for buying an Intel® Server Board.
The following information will help you to prepare
your server board for integration with your Intel® Server Chassis
SR1400 or SR2400. When installing the server board into
a reference chassis, refer to the reference chassis instructions
to prepare the chassis for the board installation before using this guide.

These guides and other supporting documents [including
a list of supported server boards] are located on the web at
http://support.intel.com/support/motherboards/server/se7520jr2/
You can also find the guides on the Intel® Server Deployment Toolkit CD that accompanied the Intel® Server Board SE7520JR2.

If you are not familiar with ESD (Electrostatic Discharge) procedures used during system integration, please see the Intel® Server
Board SE7520JR2 User Guide, available on the CD or at
http://support.intel.com/support/motherboards/server/se7520jr2/

Warning

Read all caution and safety statements in this document before performing any of the instructions. Also see the *Intel® Server Board and Server Chassis Safety Information* document at: http://support.intel.com/support/motherboards/server/safecert.htm for complete safety information.
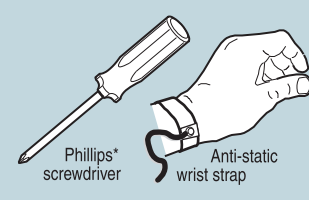
Warning

Installation and service of this product to be performed only by qualified service personnel to avoid risk of injury from electrical shock or energy hazard.
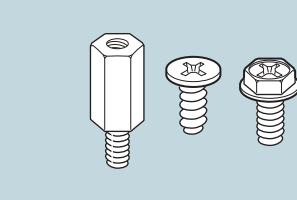
Caution

Observe normal ESD [Electrostatic Discharge] procedures during system integration to avoid possible damage to server board and/or other componets.

Tools Required

Phillips* screwdriver   Anti-static wrist strap
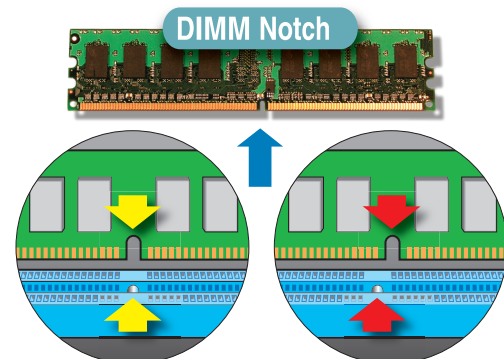
Fastener Identification Guide

Minimum Hardware Requirements

To avoid integration difficulties and possible board damage, your system must meet the following minimum requirements:

• **Processor:** Minimum of one Intel® Xeon™ processor with 1MB L2 cache support and 800 MHz system bus.
• **Power:** Minimum of 450W with 2A of standby current, which meets the SSI EPS 12V specification.
• **Memory** (Depends on model number for server board):
  - SE7520JR2SCSID2 or SE7520JR2SATAD2: Minimum of one 256 MB, DDR-2 400-compliant registered SDRAM 240-pin DIMM.
  - SE7520JR2SCSID1 or SE7520JR2SATAD1: Minimum of one 128 MB, DDR266/333-compliant registered SDRAM 184-pin DIMM.

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1 — Preparing the Chassis

When using an Intel® Server Chassis, begin with the Quick Start User's Guide that came with your chassis. Return to this document when directed by the server chassis Quick Start User's Guide. If using a non-Intel server chassis, refer to the documentation that came with your chassis for preparatory steps.

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4 — DIMM Memory Identification

You must install the correct DIMMs to avoid possible damage to server board DIMM sockets. See the minimum hardware requirements to determine the correct DIMM type for your server board.

The illustrations below show the correct alignment between the DIMM notch and the server board DIMM socket. DDR and DDR-2 DIMM notches align differently. Before installing your DIMMs, make sure the notch in the DIMM aligns correctly with your server board.
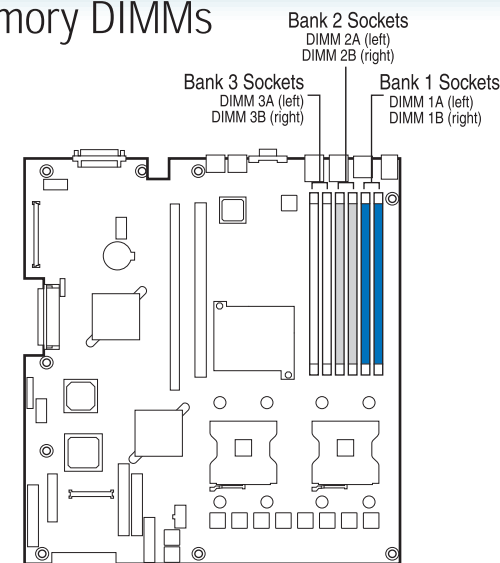
DIMM Notch

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5 — Install Memory DIMMs

See Mimimum Hardware Requirements box for DIMM requirements.

Notes and Cautions:
Bank 1 (DIMM1B and DIMM1A) must be fully populated before populating Bank 2 (DIMM2B and DIMM2A). Memory must be populated in pairs.

The DIMM size, speed and vendor must be the same within a bank. However, the DIMM size can vary between banks. For example, Bank 1 can use two 256 MB DIMMs and Bank 2 can use two 512 MB DIMMs.

For information about memory sparing and memory mirroring, see the User Guide on the Intel Server Deployment Toolkit CD that came with your server board.
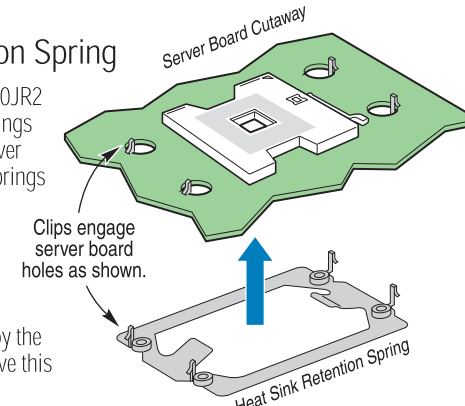
Bank 2 Sockets
DIMM 2A (left)
DIMM 2B (right)

Bank 3 Sockets
DIMM 3A (left)
DIMM 3B (right)

Bank 1 Sockets
DIMM 1A (left)
DIMM 1B (right)

1 Open both DIMM socket levers.
2 Note location of alignment notch.
3 Insert DIMM making sure the connector edge of the DIMM aligns correctly with the slot.
4 Check that socket levers are securely latched.

DIMM Sockets

Avoid touching contacts when handling or installing DIMMs.

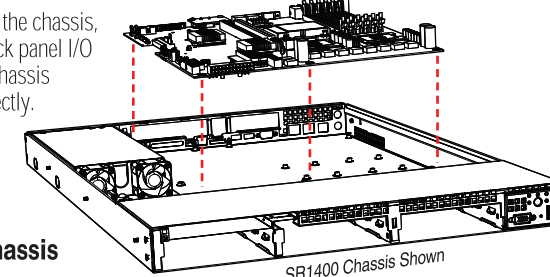## 2 — Install the Server Board

A. Heat Sink Retention Spring

The Intel® Server Board SE7520JR2 has two heat sink retention springs installed on the back of the server board. Make sure that these springs are correctly in place before installing the server board.

A sheet of white mylar insulating material is held to the underside of server board by the retention springs. Do not remove this insulating material

Server Board Cutaway

Clips engage server board holes as shown.

Heat Sink Retention Spring

B. Insert the Server Board

Place the board into the chassis, making sure that back panel I/O port openings and chassis standoffs align correctly.

Intel® Server Chassis SR1400/SR2400

Insert the I/O connector side (back) of the board first, fitting the board under the metal rim over the I/O port area.
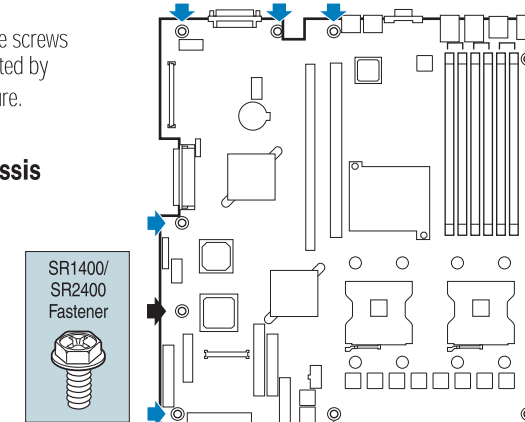
Align and seat the board onto the two shoulder standoffs at the front of the board.

SR1400 Chassis Shown

C. Attach the Server Board

Attach the board with the screws at the 7 locations indicated by **blue** arrows in the figure.

Intel® Server Chassis SR1400/SR2400

Do not insert screws in the positions indicated by the two **black** arrows in the figure
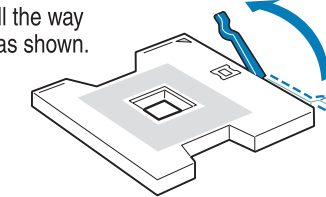
SR1400/ SR2400 Fastener

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3 — Install the Processor[s] and Heat Sink[s]

Notes and Cautions

1. If only ONE processor is to be used, it must be installed in the Processor Socket 1 (CPU1), closest to the edge of the server board.
2. Do not mix processors of different types or frequencies.
3. When unpacking a processor, hold it by the edges only to avoid touching the pins.
4. This server board has "zero-insertion force" sockets. If the processor does not drop easily into the socket holes, make sure lever is in the full-open position and verify none of the processor pins is bent.
5. The heat sink has thermal interface material on the underside of it. Use caution so that you do not damage the thermal interface material.
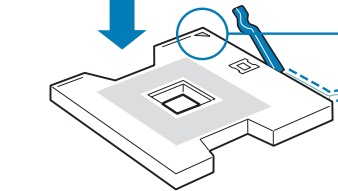
A. Open the Socket Lever
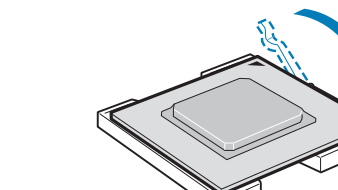
Open the lever all the way as shown.

B. Install the Processor

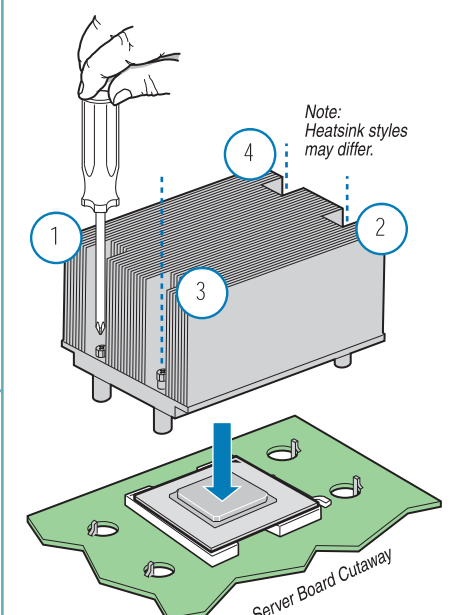Align corner mark on the processor to the socket as shown.

C. Close the Socket Lever

D. Install the Heat Sink

The heat sink attaches directly to the chassis standoffs installed in the bottom of the chassis. Each heat sink has four captive fasteners and should be tightened using the following procedure:

A. Lightly tighten each fastener equally, working across the heatsink in a diagonal manner, as noted by numbers 1, 2, 3, and 4 in the diagram below. Working diagonally ensures the heat sink rests flatly over the processor.

B. Securely tighten each fastener, again working diagonally across the heatsink.

Note: Heatsink styles may differ.

Server Board Cutaway

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6 — Finishing Up the Hardware

A. Install Intel® Management Module (optional)

If you have purchased either of the Intel Management Modules, see the Intel Management Module Installation and User's Guide for installation instructions. The Installation and User's Guide is on the Intel Server Deployment Toolkit CD that came with your server board.

B. Internal Connections

Refer to the references on the back of this document to complete your internal connections.

C. Complete Chassis Steps

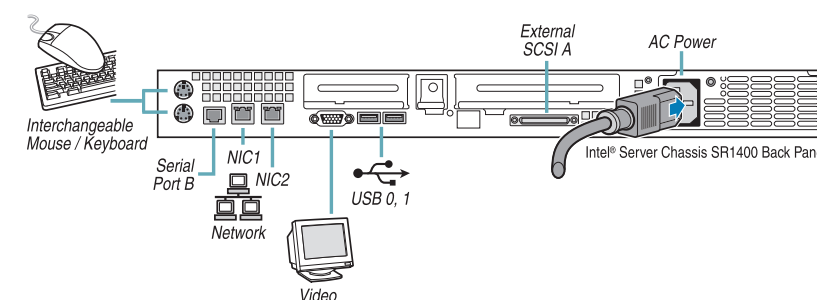Complete any remaining steps in your server chassis installation guide.

D. Configuration Label

Attach the configuration label to the inside cover of your chassis.

E. Back Panel Connections

Before installing your operating system, you must finish your chassis installation, make I/O connections and plug in AC power.

1. Replace the chassis cover.
2. Connect your keyboard, mouse, video, and other I/O cables as shown.
3. Connect the AC power cable last.

Interchangeable Mouse / Keyboard

Serial Port B   NIC1   NIC2   USB 0, 1

Network

Video

External SCSI A   AC Power

Intel® Server Chassis SR1400 Back Panel

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7 — Install Drivers, Firmware, and Software

A. Confirm BIOS and FRU/SDR Versions

Look on the Server/System Management screen in the BIOS Setup Utility to determine the installed BIOS and FRU/SDR versions. Compare these to the versions at http://support.intel.com/support/motherboards/server/se7520jr2/. If new versions are available, update the BIOS and FRU/SDR on your server. See the User Guide on the Intel Server Deployment Toolkit CD for update instructions.

B. Configure your Server with the Server Configuration Wizard

Boot to the Server Board SE7520JR2 Intel Server Deployment Toolkit CD. Select the Server Configuration Wizard to configure your server for remote server management. If you did not download a newer version of the FRU/SDR from the Web, use the Server Configuration Wizard to load the FRU/SDR.

C. Configure your RAID Controller

Use the instructions provided with the RAID controller.

D. Install your Operating System

Use the instructions provided with the RAID controller and with the operating system.

E. Install Operating System Drivers

With the operating system running, insert the Intel Server Deployment Toolkit CD. If using a Windows operating system, the Express Installer will autorun and allow you to select the appropriate drivers to install. On other operating systems, browse the CD folders to locate and install the driver files.

F. Install Intel Server Management 8 (optional)

With the operating system running, insert the Intel Server Management 8 CD that came with your server board. On a Windows operating system, the Setup program will auto-run. Follow the on-screen instructions. For installation details, see *Getting Started with Intel Server Manager 8*, located on the ISM CD.

G. Install Intel SMaRT Tool (optional)

With the operating system running, insert the Intel Server Deployment Toolkit CD. The Express Installer will autorun. Click Intel SMaRT Tool at the left side of the screen. Follow the on-screen instructions. For information about the Intel SMaRT Tool, see http://developer.intel.com/design/servers/smarttool/index.htm.

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