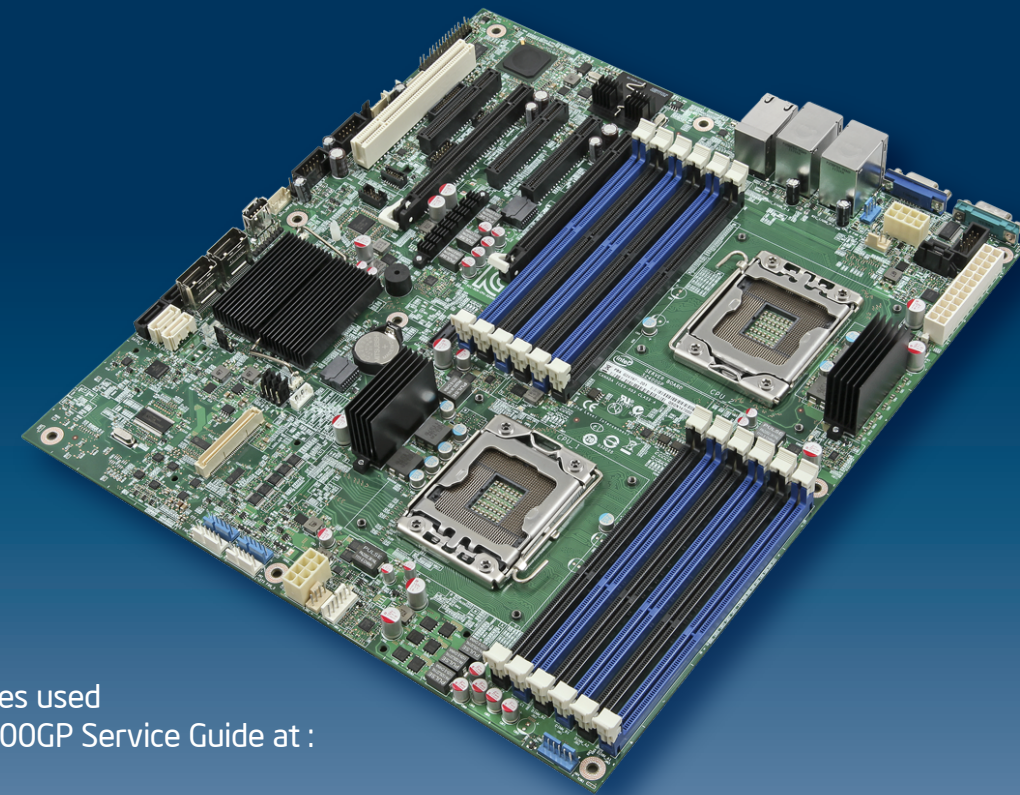# Intel® Server Board S2400GP
Quick Start User's Guide

Thank you for buying the Intel® Server Board S2400GP. The following information will help you integrate your new server board into a server chassis. The Intel® Server Board S2400GP is designed for use with the Intel® Server Chassis P4000M series.
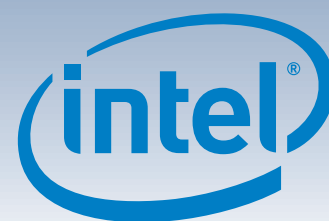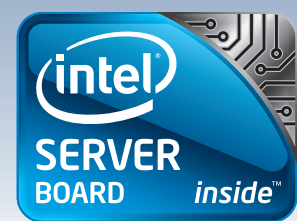
For details on these chassis or to select a third-party chassis, please visit:
http://www.intel.com/go/serverbuilder and
http://www.intel.com/support/motherboards/server.

When installing the server board into a reference chassis, refer to the reference chassis instructions.

If you are not familiar with ESD (Electrostatic Discharge) procedures used during system integration, please see the Intel® Server Board S2400GP Service Guide at :
http://www.intel.com/support/motherboards/server.

Please boot to the Intel® Server Deployment Toolkit CD first for BIOS and firmware configuration and updates.

Read all cautions and warnings first before starting your server system integration.

intel SERVER BOARD inside™

(intel®)

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 E5-2400 series with compatible heat sink(s). Maximum 95-W processor.

- **Memory Type:** Minimum of one 1 GB, 240-pin,RDIMM, LRDIMM or UDIMM, DDR3-800/1066/1333/1600.

- **AC Power:** SSI EPS 12V compliant power supply. Recommend minimum of 460W or calculate your system power demand with the power budget tool.

For a complete list of compatible processors and memory, see: http://www.intel.com/p/en_US/support/

1 Preparing the Chassis

Observe normal ESD (Electrostatic Discharge) procedures.

Place your Intel® Server Chassis on a flat anti-static surface to perform the following integration procedures. Observe ESD procedures before reaching inside to make server board connections or install components.
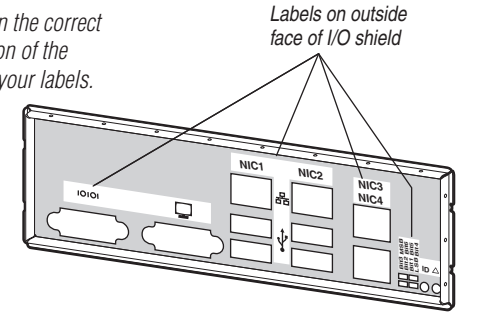
2 Installing the I/O Shield and Attach I/O Labels

Note: The I/O shield and label installation procedures shown below apply to the Intel® Server Chassis P4000M series.
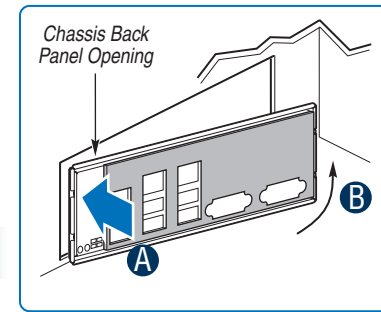
Attach the Labels to the I/O Shield (optional)

Note: Make sure you install the labels on the correct side of the I/O shield. Note the orientation of the cutouts in the drawing before attaching your labels.

Labels on outside face of I/O shield

A Remove the backing from one of the four I/O shield labels included with your server board.
B Press the label onto the I/O shield as shown.
C Repeat steps to install the rest of the I/O shield labels.

Install the I/O shield

Chassis Back Panel Opening

Intel® Server Chassis P4000M Series shown

IO Shield should be installed from **inside** of the chassis. The labels should be visible from the outside of the chassis.

A Insert one side edge of shield as shown.
B Push shield firmly into chassis opening until it clicks into place.

Install the chassis screw stand-offs

If installing the server board inside a Intel® Server Chassis P4000M. The stand-off for the server boardmounting screws come with chassis must be installed first.

Following EEB standard, the server board has mounting screw holes as indicated by A ... Z.

Please install the chassis stand-offs to the according chassis locations indicated by same marks.

3 Install the Chassis Bumpers

NOTE: If you are using an Intel Server Chassis you must install the chassis bumpers included with the chassis. Refer to your Intel® Server board and Intel® Server Chassis Quick-Start User's Guide for proper bumper installation guidelines. If you are using a non-Intel server chassis that includes bumpers, refer to the non-Intel server chassis documentation for the correct bumper installation procedure. If the non-Intel server chassis does not include bumpers, then you should consult with the chassis vendor to determine whether bumpers are required or not.
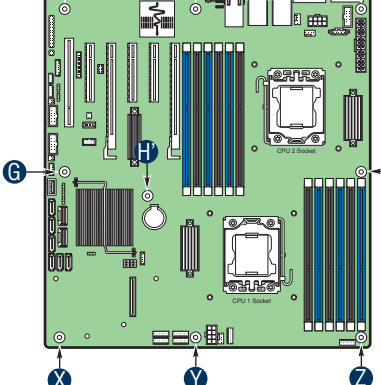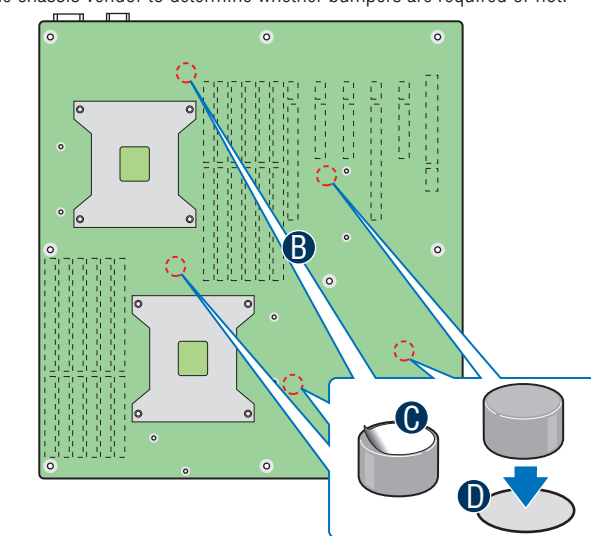
Prepare Server Board

A Rotate board to show underside and hold upright as shown.

⚠ **CAUTION:** To avoid damage to the board, do not lay flat with the component side down.

B Locate the five circles as shown.

Attach the Bumpers

C Remove the backing from each bumper.
D Press a bumper onto each of the five circles.

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://www.intel.com/p/en_US/support/ for complete safety information.
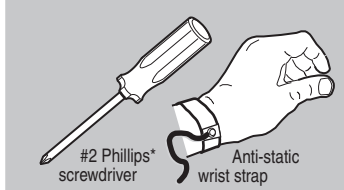
Warning

Installation and service of this product should only be performed 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 components.

Tools Required

#2 Phillips screwdriver   Anti-static wrist strap

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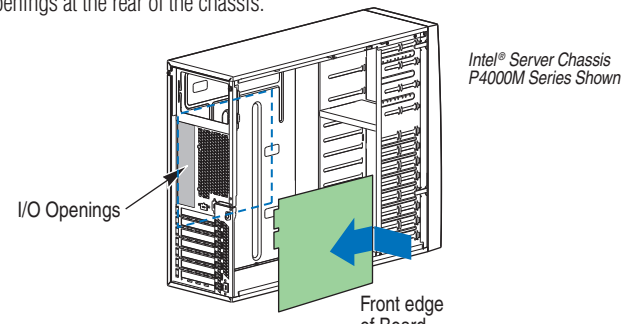
G42037-003

4 Install the Server Board

IMPORTANT NOTE: If you are using a non-Intel server chassis, see your chassis documentation for preparatory steps prior to server board installation.

A. Insert the Server Board

Place the board into the chassis, making sure that back panel I/O openings and chassis standoffs align correctly.
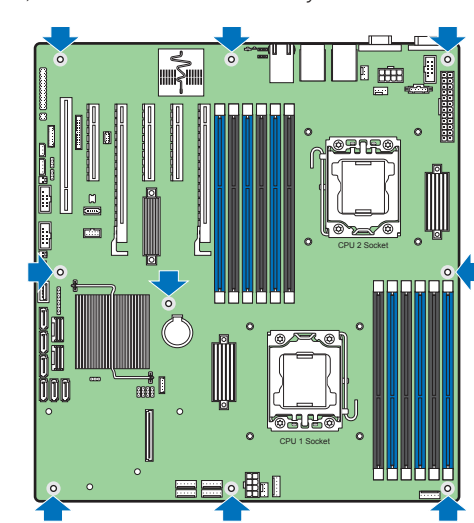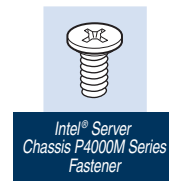
- When using the Intel® Server Chassis P4000M series, insert the front of the board first, then slide the board back so the I/O connectors fit through the I/O openings at the rear of the chassis.

I/O Openings

Intel® Server Chassis P4000M Series Shown

Front edge of Board

B. Attach the Server Board

The directions below are for the Intel® Server Chassis P4000M series.
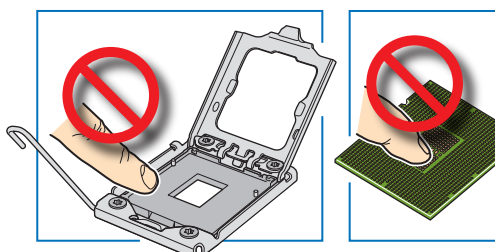*For a non-Intel server chassis, use the fasteners that came with your chassis.*

Use screws to attach the board to the chassis at the 9 locations indicated by the solid blue arrows in the figure [◆].

Intel® Server Chassis P4000M Series Fastener
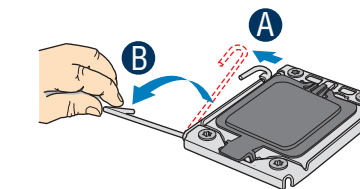
5a Install the Processor(s)

Cautions:

⚠ 1. When opening a socket, DO NOT TOUCH the gold socket wires.

⚠ 2. When unpacking a processor, hold by the edges only to avoid touching the gold contact wires.
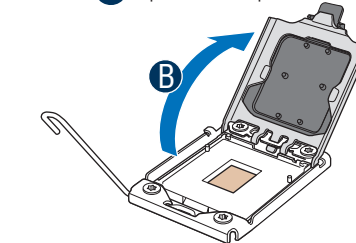
A. Open the Socket Lever

A Push the lever handle down and away from the socket to release it.
B Rotate the lever open all the way.

B. Open the Load Plate

A Push the rear tab with your finger tip to bring the front end of the load plate up slightly.
B Open the load plate as shown.

C. Remove the Processor Protective Cover

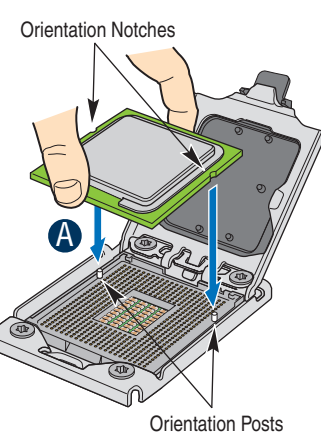A Take the processor out of the box and remove the protective shipping cover.

5b Install the Processor(s) ... *continued*

D. Install the Processor

⚠ CAUTION: The underside of the processor has components that may damage the socket wires if installed improperly.

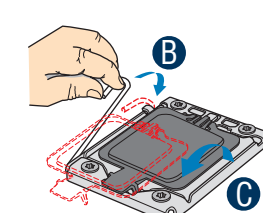Orientation Notches

Components

Processor must align correctly with the socket opening before installation.

DO NOT DROP processor into the socket!

A Orient the processor with the socket so that the orientation notches on the processor align with the two orientation posts on the socket. *Install the processor as shown.*

B Close the socket lever.
C Remove the protective cover after it been automatically disengaged from the load plate.

Orientation Posts

E. Close Load Plate and Socket Lever

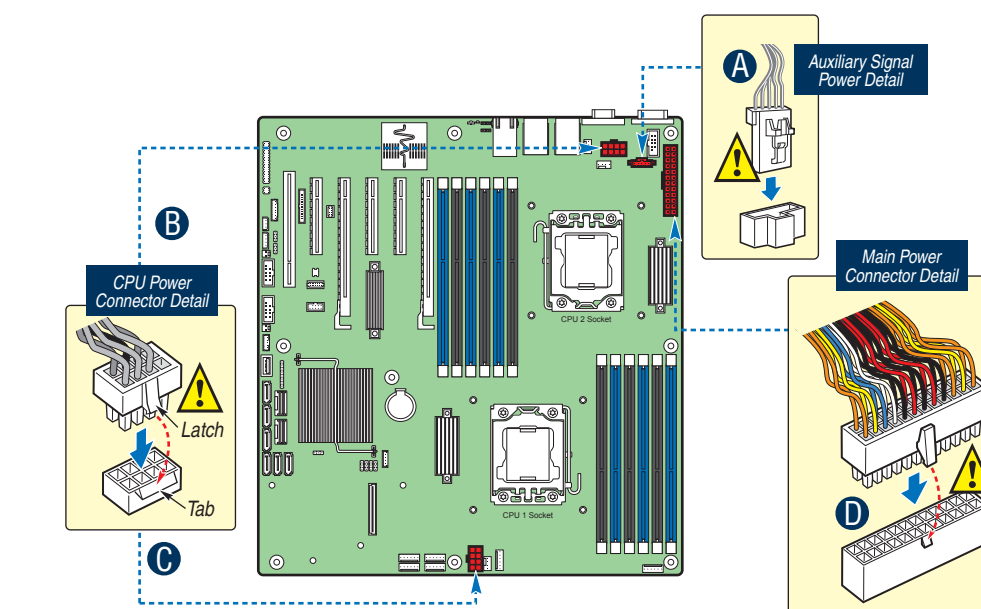A Close the load plate all the way as shown.

6 Make Server Board Power Connections

A Attach auxiliary power signal connector to the server board.
B Attach the CPU 1 power connector to the server board.
C Attach the CPU 2 power connector to the server board.
D Attach the main power connector to the server board.

⚠ CAUTION:
Note the location of the latch on each power cable connector and align it with the matching tab on each server board socket.
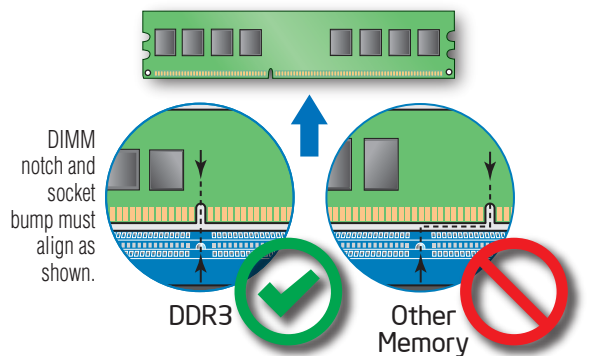
IMPORTANT NOTE: If you are using a non-Intel server chassis with an ATX power supply, see the documentation that came with your chassis for installation information.

Auxiliary Signal Power Detail

CPU Power Connector Detail

Latch

Tab

Main Power Connector Detail

7 Install DIMM Memory Modules

DDR3 DIMM Memory Identification:

⚠ CAUTION: Observe normal ESD (ElectroStatic Discharge) procedures to avoid possible damage to system components.

⚠ This server board supports up to 12 DDR3 800/1066/1333/1600 ECC UDIMM/RDIMM/LRDIMM.

DIMM notch and socket bump must align as shown.

DDR3   Other Memory