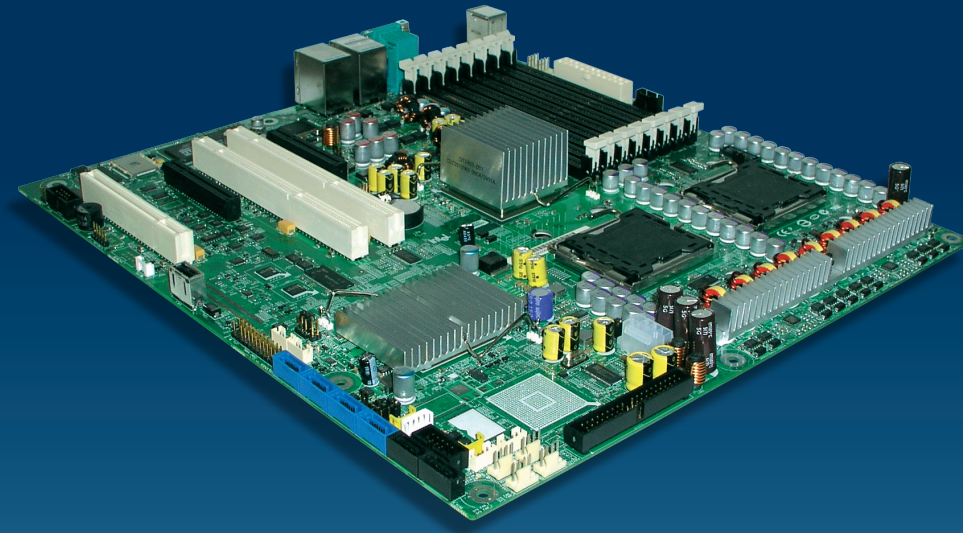


# Intel® Server Board S5000VSA Quick Start User's Guide



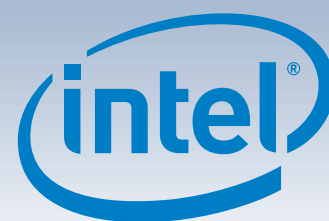
Thank you for buying the Intel® Server Board S5000VSA. The following information will help you integrate your new server board into a server chassis. The Intel® Server Board S5000VSA is designed for use with the Intel® Entry Server Chassis SC5299-E.

For details on these chassis or to select a third party chassis, please visit <http://www.intel.com/go/serverbuilder> and <http://support.intel.com/support/motherboards/server>.

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

User Guides are also available on the Intel® Server Deployment Toolkit 2.0 CD that accompanied your Intel® Server Board S5000VSA.

If you are not familiar with ESD (Electrostatic Discharge) procedures used during system integration, please see the Intel® Server Board S5000VSA User's Guide, available on the Intel® Server Deployment Toolkit 2.0 CD or at <http://support.intel.com/support/motherboards/server/s5000vsa/howto.htm>.



## Minimum Hardware Requirements

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

- Processor: Dual-Core Intel® Xeon® processor 5000 sequence with compatible heat sink.
- Memory Type: Minimum of one 512MB, 240-pin DDR2 533/667 MHz FB DIMM.
- Power: Minimum of 550W with 3A of standby current, which meets the SSI EPS 12V specification.

## 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.

Observe normal ESD (ElectroStatic Discharge) procedures. Place your Intel® Server Chassis on a flat anti-static surface to perform the following integration procedures. Always touch the chassis frame first, before reaching inside to make server board connections or to install components.

## 3 Install Server Board Bumpers

**IMPORTANT NOTE:** If you are using a non-Intel server chassis, see your chassis documentation for preparatory steps prior to server board installation. Use the bumpers that came with your Intel® Server Board S5000VSA for a non-Intel chassis. If you are using an Intel® Server Chassis, use the bumpers that came with the chassis.

### Prepare Server Board

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

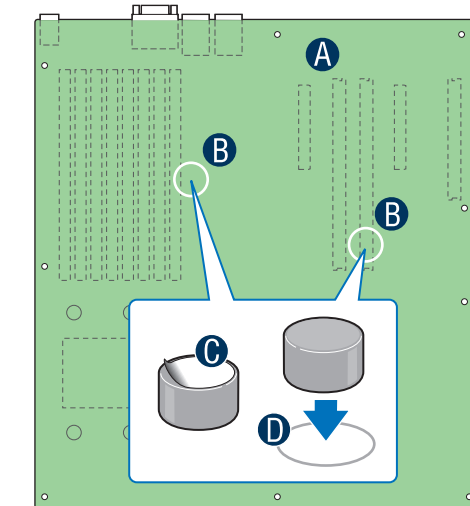
**CAUTION:** To avoid damage to the board, do not lay flat with the component side down.

**B** Locate the two white-line circles as shown.

### Attach the Bumpers

**C** Remove the backing from each bumper.

**D** Press a bumper onto each of the two white-line circles.

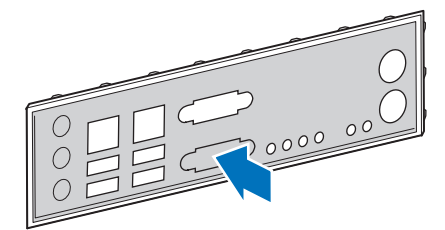


## 2 Installing the I/O Shield and Attach I/O Label

**Note:** The I/O shield and label installation procedures shown below apply to the Intel® Entry Server Chassis SC5299-E.

### Prepare the I/O shield

You must remove the sheet metal plug for the video connector before installing the I/O shield. Use a flat-blade screwdriver if necessary, but do not deform the shield.



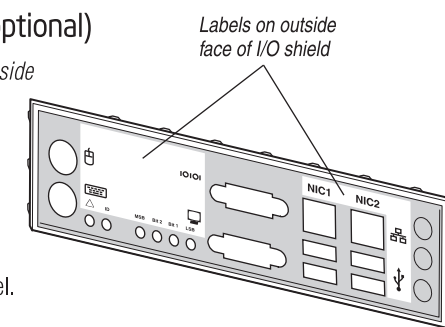
### Attach the Labels to the I/O Shield (optional)

**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.

**A** Remove the backing from one of the two 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 second I/O shield label.

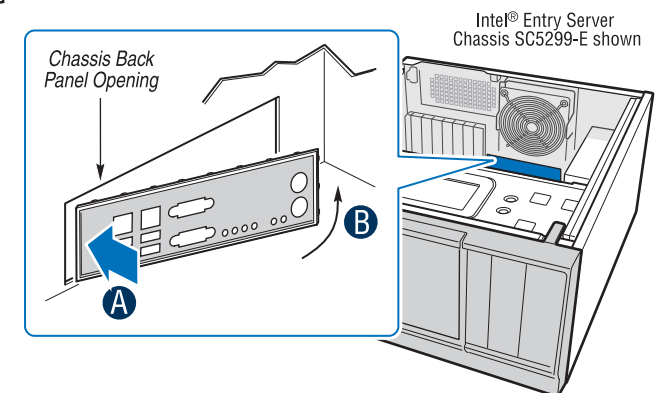


### Install the I/O shield

Shield installs from **inside** of 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.



## 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/sb/cs-010770.htm> for complete safety information.

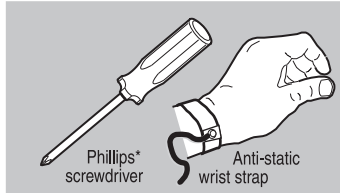
## Warning

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.

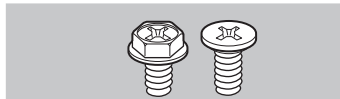
## Caution

Observe normal ESD (Electrostatic Discharge) procedures during system integration to avoid possible damage to server board and/or other components.

## Tools Required



## Fastener Identification Guide

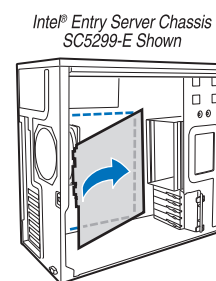


## 4 Install the Server Board

**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 shield openings and chassis standoffs align correctly.



- When using the Intel® Entry Server Chassis SC5299-E, insert the front of the board first, then slide the board back so the I/O connectors fit through the I/O shield.

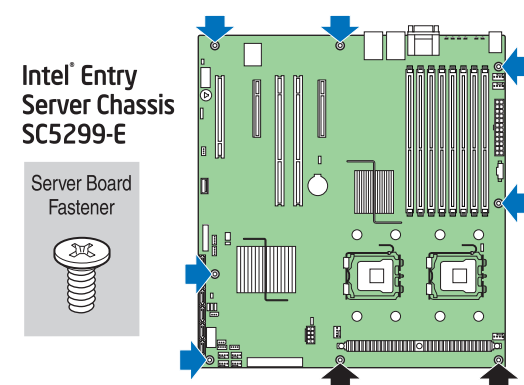
### B. Attach the Server Board

The directions below are for the Intel® Entry Server Chassis SC5299-E. For a non-Intel server chassis, use the fasteners that came with your chassis.

Your chassis has two snap-standoffs installed at the 2 locations indicated by the solid black arrows in the figure.

Use screws to attach the board to the chassis at the 6 locations indicated by the solid blue arrows in the figure.

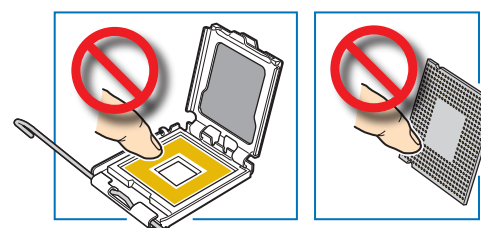
Be sure the server board engages the two snap-standoffs first, then proceed with attaching the server board with 6 screws.



## 5 Install the Processor

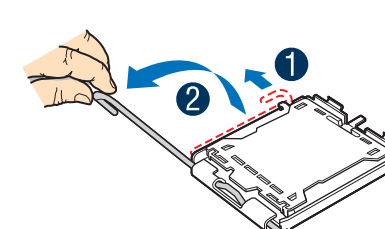
### Caution:

When unpacking a processor, hold by the edges only to avoid touching the contacts.



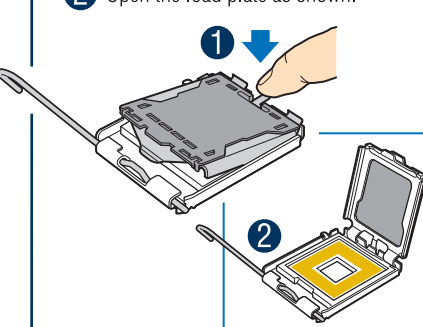
### A. Open the Socket Lever

- 1 Push the lever handle down and away from the socket to release it.
- 2 Pull the lever and open all the way.



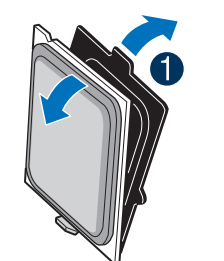
### B. Open the Load Plate

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



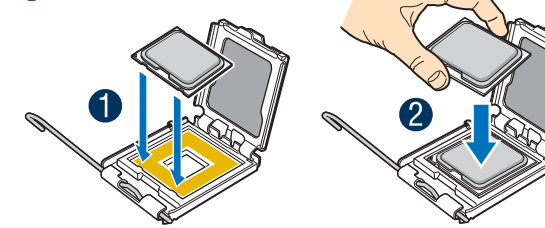
### C. Remove the Processor Protective Cover

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



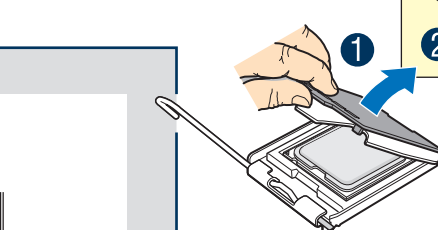
### D. Install the Processor

- 1 Orient the processor with the socket so that the processor cutouts match the socket notches.
- 2 Install the processor as shown.



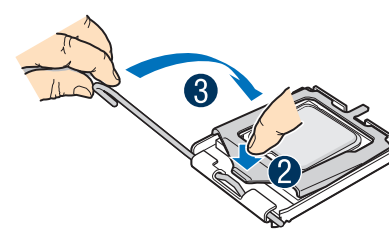
### E. Remove Socket Protective Cover

- 1 Grasp the socket protective cover tab and pull away from the load plate as shown.
- 2 Remove the socket protective cover and store for future use.



### F. Close Load Plate and Socket Lever

- 1 Close the load plate all the way as shown.
- 2 With your finger, push down on the load plate as shown.
- 3 Close the socket lever and ensure that the load plate tab engages under the socket lever when fully closed.



## 6 Install Active Heat Sink(s)

**An active heat sink is required for the Intel® Entry Server Chassis SC5299-E DP and BRP. A typical active heat sink is shown below.**

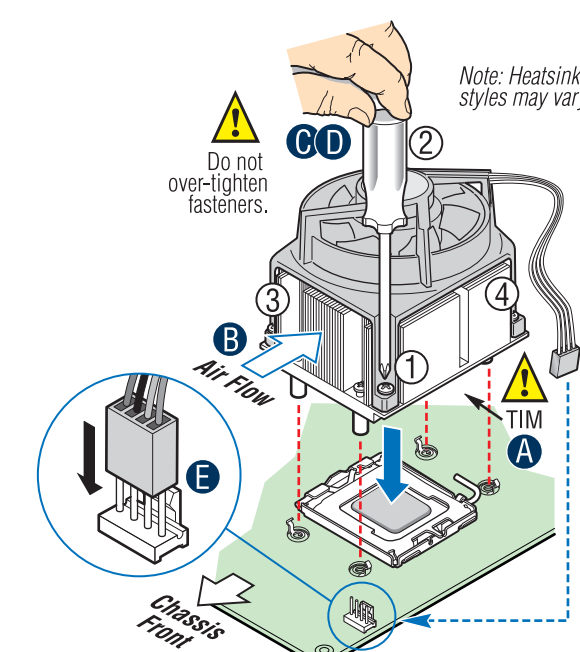
For a non-Intel chassis, see the documentation accompanying your chassis.

**CAUTION:** The heat sink has thermal interface material (TIM) on the underside of it. Use caution so that you do not damage the thermal interface material. Use gloves to avoid sharp edges.

- A** If a protective film covers the thermal interface material (TIM) on the underside of the heatsink, remove the protective film.
- B** Align heatsink fins to the front and back of the chassis for correct airflow. Airflow goes from front-to-back of chassis.

Each heatsink has four captive fasteners and should be tightened as follows:

- C** Using a #2 Phillips® screwdriver, finger-tighten each fastener diagonally, according to the white-circled numbers.
- D** Securely re-tighten each fastener again in the same order as performed in Step C.
- E** Attach fan power cable to server board as shown.



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