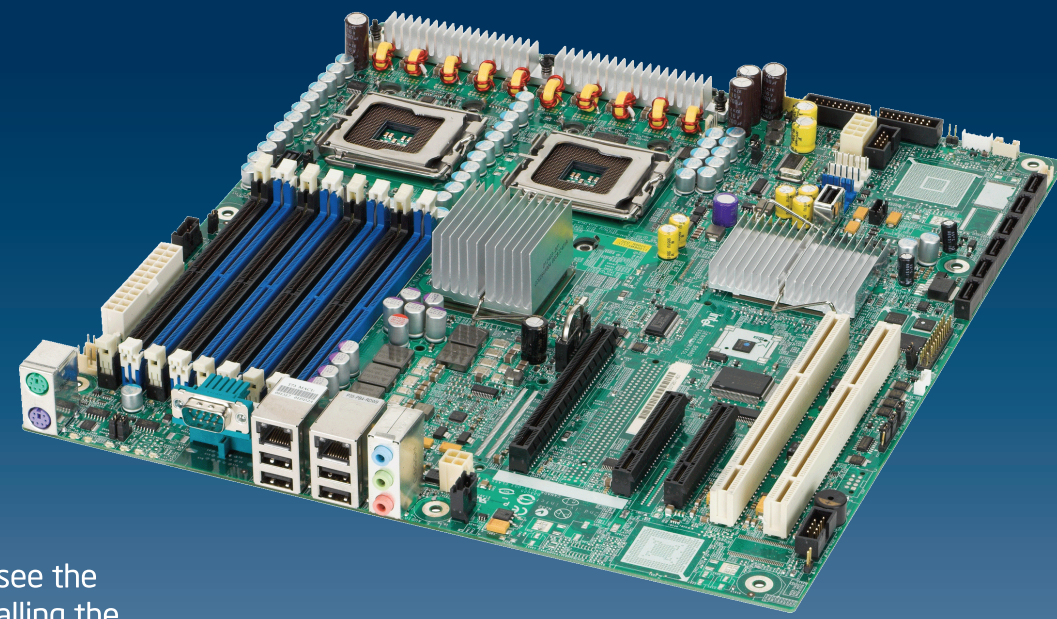# Intel® Workstation Board S5000XVN
# Quick Start User's Guide

Thank you for buying the Intel® Workstation Board S5000XVN. The following information will help you integrate your new workstation board into a chassis. The Intel® Workstation Board S5000XVN is designed for use with the Intel® Server Chassis SC5400 Base and the Intel® Entry Server Chassis SC5299-E WS.

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 workstation board into a reference chassis, see the reference chassis instructions for preparatory steps before installing the workstation board into the chassis.

User Guides are also available on the Intel Server Deployment Toolkit 2.0 CD that accompanied your Intel® Workstation Board S5000XVN.

If you are not familiar with ESD (Electrostatic Discharge) procedures used during system integration, please see the *Intel® Workstation Board S5000XVN User Guide,* available on the Intel® Server Deployment Toolkit 2.0 CD or at http://support.intel.com/support/motherboards/server/s5000xvn/howto.htm.
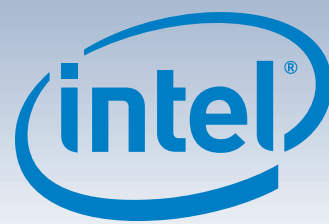
(intel)

Minimum Hardware Requirements

To avoid integration difficulties and possible damage to your system, make sure you have components from each category below.

- **Processor(s):**
  - Minimum of one Dual-Core Intel® Xeon® Processor 5000 sequence or one Dual-Core Intel® Xeon® Processor 5100 sequence.

- **Heatsink(s):**
  - Minimum of one 2U passive heatsink for the Intel® Server Chassis SC5400 Base.
  - Minimum of one 1U active heatsink for the Intel® Entry Server Chassis SC5299-E WS. Heatsink must be appropriate for Dual-Core Intel® Xeon® Processor 5000 sequence

- **Memory:**
  - Minimum of one 512-MB, 240-pin, DDR2 533/667 MHz FBDIMM.

- **AC Power:**
  - Minimum of 550 Watt with 3 Amps of standby current, which meets the SSI EPS 12V specification.

1 Prepare 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 ESD (Electrostatic discharge) procedures. Place the chassis on a flat, anti-static surface and touch the chassis frame before reaching inside.

2 Install the I/O Shield

Prepare the I/O Shield

You must remove the sheet metal knock-outs for the audio connectors before installing the I/O shield. Press out the knock-outs at the areas indicated by the arrows in the diagram.

Do not remove the knock-out below the serial A port. Use caution so you do not deform the shield.

Do not remove this knock-out
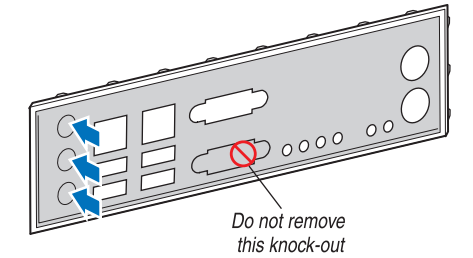
Attach the Labels to the I/O Shield

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.
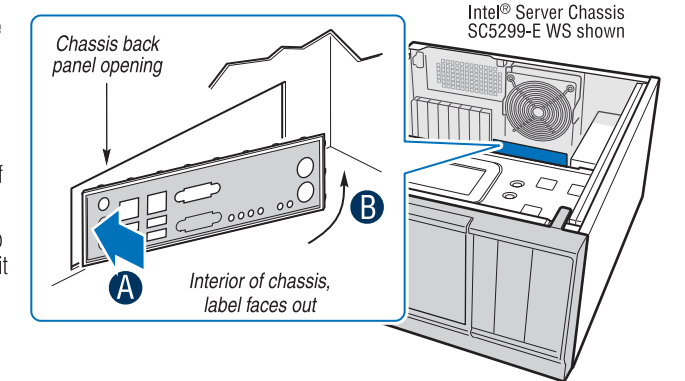
A Remove the backing from one of the two I/O shield labels included with your workstation board.

B Press the label onto the I/O shield as shown.

C Repeat steps to install the second I/O shield label.

Labels on outside face of I/O shield
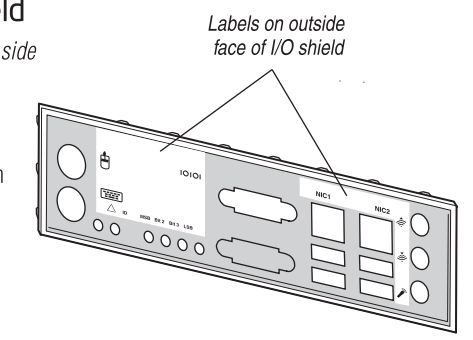
Install the I/O Shield

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.

Chassis back panel opening

Intel® Server Chassis SC5299-E WS shown

Interior of chassis, label faces out

3 Install Workstation Board Bumpers

Note: Install the correct bumpers:
- *If you are using an Intel chassis, use the bumpers that are included with your chassis.*
- *If you are not using an Intel chassis, use the bumpers that are included with your workstation board.*

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

⚠ To avoid damage to the board, do not set board down on hard surface with the component side down.

B Locate the two circles, as shown.

C Remove the backing from each bumper.

D Press a bumper firmly onto each circle.
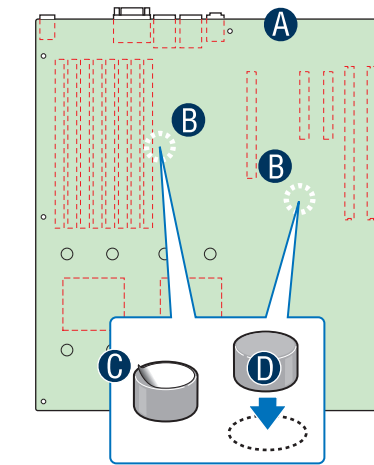
4 Install the Workstation Board

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

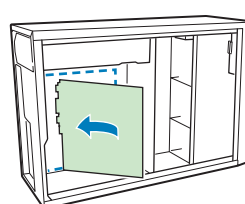### A. Insert the Workstation Board

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

- When using the Intel® Server Chassis SC5400 Base, insert the I/O connector side [back] of the board first.
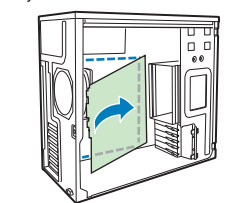
or

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

Intel® Server Chassis SC5400 Base

Intel® Entry Server Chassis SC5299-E WS

B. Attach the Workstation Board

The Intel® Server Chassis SC5400 Base and the Intel® Entry Server Chassis SC5299-E WS use different screws to attach the workstation board to the chassis. Use the screws indicated for your chassis. For a non-Intel server chassis, use the fasteners that came with your chassis.

- Intel® Server Chassis SC5400: Screw the board to the chassis at the 6 locations indicated by the solid blue arrows in the figure [◄] and at the 2 locations indicated by the solid black arrows [◄].
- Intel® Entry Server Chassis SC5299-E: Push down firmly to engage the snap-top standoffs at at the 2 locations indicated by the solid black arrows [◄]. Screw the board to the chassis at the 6 locations indicated by the solid blue arrows [◄].

| Intel® Server Chassis SC5400	Intel® Entry Server Chassis SC5299-E
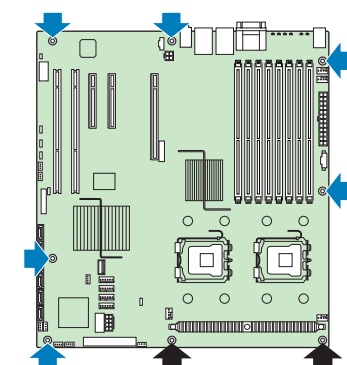
5 Install Memory FBDIMMs

DDR2 FBDIMM Memory Identification

⚠ This workstation board supports up to eight DDR2-533 or DDR2-667 Fully Buffered DIMMs (FBDIMM memory). DDR2 DIMMs that are not FBDIMM memory are not supported on on this workstation board.

⚠ FBDIMM DDR2 memory varies in height. Only FBDIMMs with a height of up to 1.2 inches are supported. DO NOT MIX different FBDIMM heights and types.

DIMM notch and socket bump must align as shown.
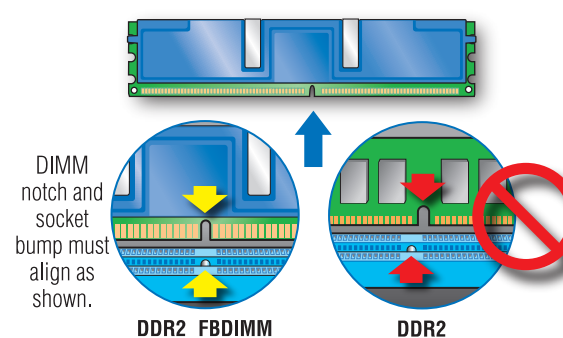
DDR2 FBDIMM   DDR2

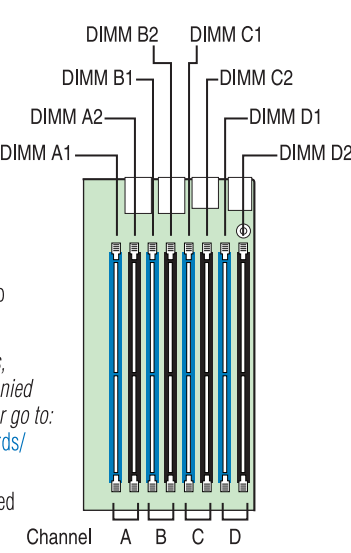### Memory Configurations and Population Order

Memory Type: Minimum of one 512-MB, DDR2 FBDIMM 533/667-MHz compliant 240-pin gold DIMM.

A FBDIMM must be installed in socket DIMM_A1. Populate DDR2 FBDIMMs in the order of A1, B1, C1, and D1 then A2, B2, C2, and D2.

DIMM pairs must be identical with respect to size, speed, and organization.

Note: For additional memory configurations, see the User Guide on the CD that accompanied your Intel® Workstation Board S5000XVN, or go to: http://support.intel.com/support/motherboards/server/s5000xvn/howto.htm
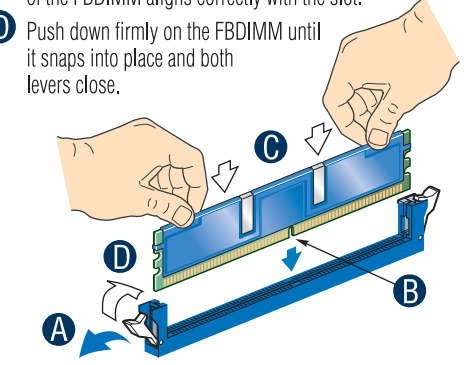
Memory sizing and configuration is supported only for qualified DIMMs approved by Intel. For a list of supported memory, see the tested memory list at http://support.intel.com/support/motherboards/server/s5000xvn/compat.htm

DIMM B2 DIMM C1
DIMM B1 DIMM C2
DIMM A2 DIMM D1
DIMM A1 DIMM D2

Channel   A B C D

To Install FBDIMMs

⚠ Avoid touching gold contacts when handling or installing DIMMs.

A Open both FBDIMM socket levers.

B Note location of alignment notch.

C Insert FBDIMM making sure the connector edge of the FBDIMM aligns correctly with the slot.

D Push down firmly on the FBDIMM until it snaps into place and both levers close.
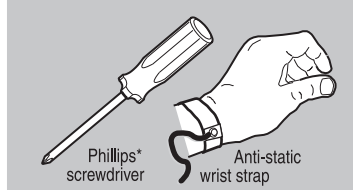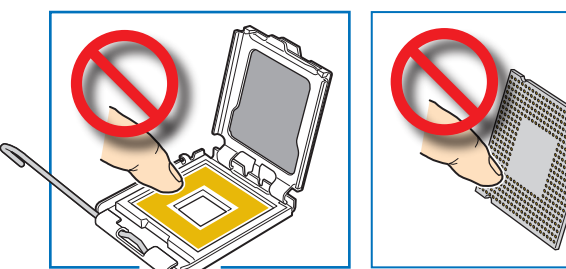
6 Install the Processor(s)

Notes and Cautions:
⚠ 1. When unpacking a processor, hold it only by the edges. Never touch the underside of the processor.
2. This workstation board has a "zero-insertion force" socket. If processor does not drop easily into socket, make sure lever is in the full-open position.
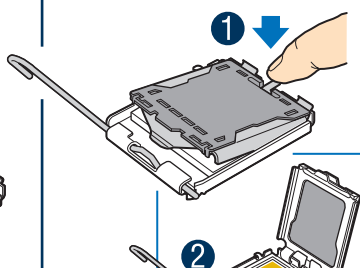
A. Open the Socket Lever
1 Push the lever handle down and away from the socket to release it.
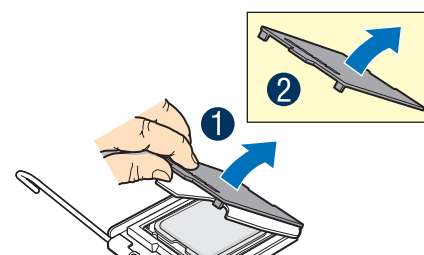2 Pull the lever and open all the way.
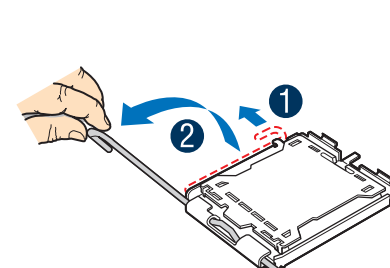
B. Open the Load Plate
1 Push the rear tab with your finger tip to bring the front end of the load plate up slightly.
2 Open the load plate as shown.

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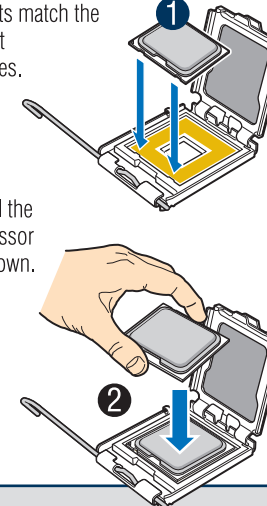2 Remove the socket protective cover and store for future use.

D. Remove the Processor Protective Cover
1 Take the processor out of the box and remove the protective shipping cover.

E. 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.

F. Close Load Plate and Socket Lever
1 Close the load plate all the way as shown.
2 With your finger, hold down the load plate as shown.
3 While holding down the load plate, close the socket lever. Ensure that the load plate tab engages under the socket lever when fully closed.

Tools Required
Phillips* screwdriver   Anti-static wrist strap

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