

Intel® Server Board S5000PAL

Quick Start User's Guide

Thank you for buying the Intel® Server Board S5000PAL. The following information will help you integrate your new server board into a server chassis. The Intel® Server Board S5000PALR is integrated in the following Intel® Server Systems: Intel® Server System SR1500ALR, Intel® Server System SR1500ALSASR, Intel® Server System SR1550ALR, Intel® Server System SR1550ALSASR, Intel® Server System SR2500ALBRPR, and the Intel® Server System SR2500ALLXR.

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>.

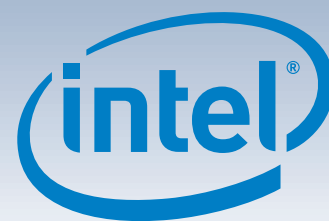
When installing the server board into a non-Intel server chassis, refer to the reference chassis instructions.

User Guides are also available on the Intel® Server Deployment Toolkit 2.0 CD that accompanied your Intel® Server Board S5000PAL.

If you are not familiar with ESD (Electrostatic Discharge) procedures used during system integration, please see the Intel® Server Board S5000PAL User's Guide, available on the Intel® Server Deployment Toolkit 2.0 CD or at <http://support.intel.com/support/motherboards/server/s5000pal/howto.htm>.

Please boot to the Intel® Server Deployment Toolkit 2.0 CD first for BIOS and firmware configuration and updates.

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



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, DDR2 FBDIMM 533/667 MHz compliant 240-pin DIMM. (For best performance, a minimum of four DIMMs is recommended).
- Power: For minimum power requirements, refer to the power budget tool at <http://support.intel.com/support/motherboards/server/s5000pal/>

1 Preparing the Chassis

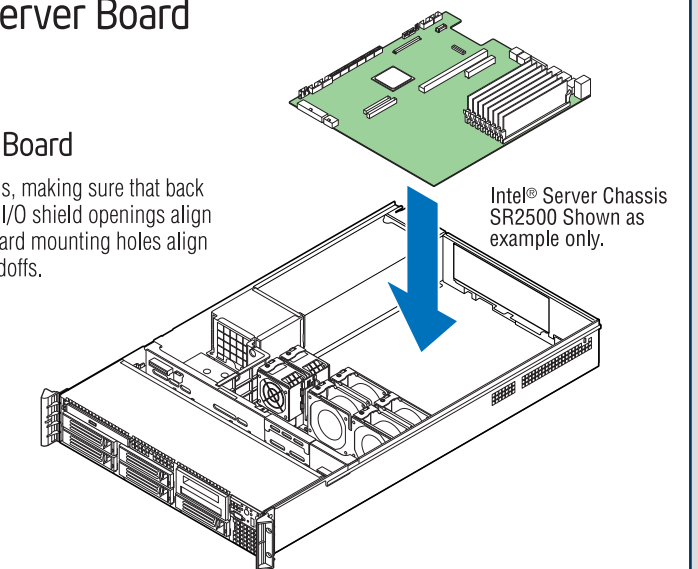
If using a non-Intel server chassis, refer to the documentation that came with your chassis for preparatory steps.

Observe normal ESD (ElectroStatic Discharge) procedures. Place your 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.

2 Install the Server Board

A. Insert the Server Board

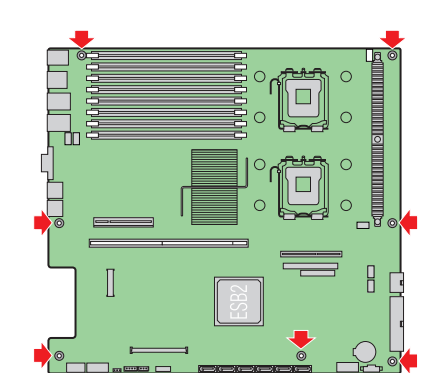
Place the board into the chassis, making sure that back panel I/O ports and chassis or I/O shield openings align correctly. Verify that server board mounting holes align correctly with the chassis standoffs.



B. Attach the Server Board

Note: Non-Intel chassis may use different fasteners to attach the server board to the chassis. Use the fasteners that came with your chassis.

Use screws to attach the board to the chassis at the 7 locations indicated by the solid RED arrows in the figure [4].



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.

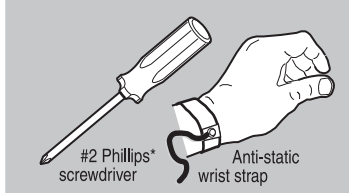
Warning

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



D31955-007

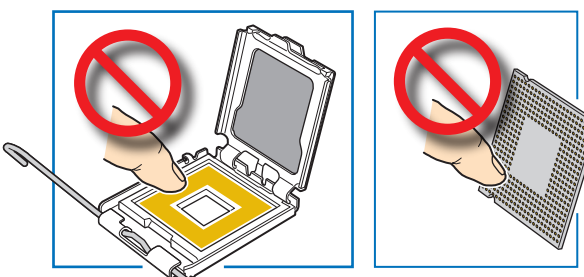


Intel is a registered trademark of Intel Corporation or its subsidiaries in the United States and other countries. *Other names and brands may be claimed as the property of others. Copyright © 2007, Intel Corporation. All rights reserved.

3 Install the Processor(s)

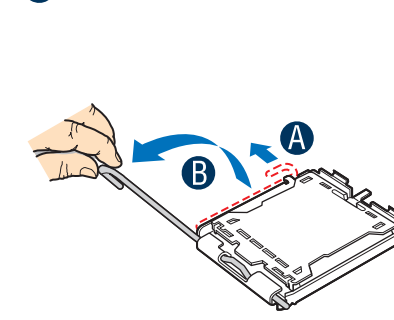
Caution:

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



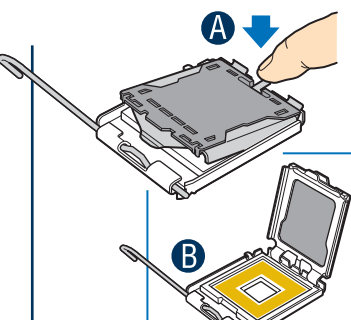
A. Open the Socket Lever

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



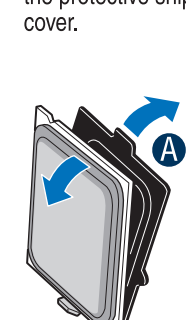
B. Open the Load Plate

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



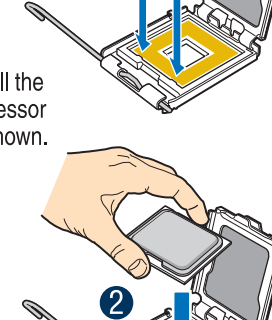
C. Remove the Processor Protective Cover

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



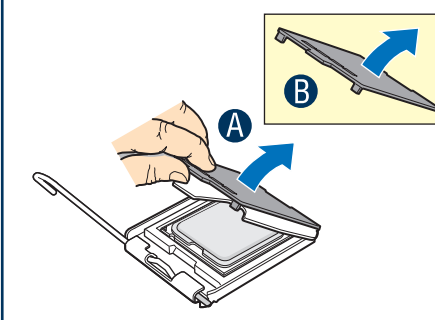
D. Install the Processor

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



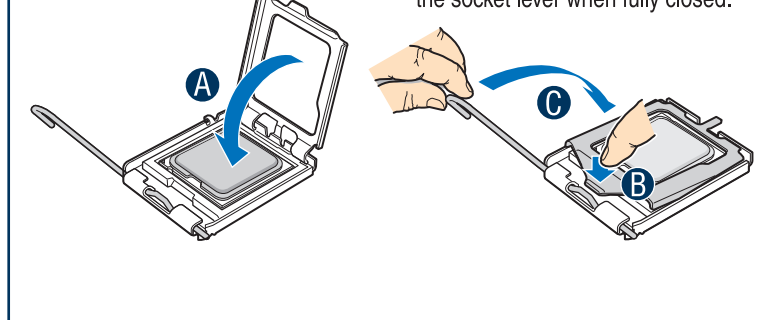
E. Remove Socket Protective Cover

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



F. Close Load Plate and Socket Lever

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



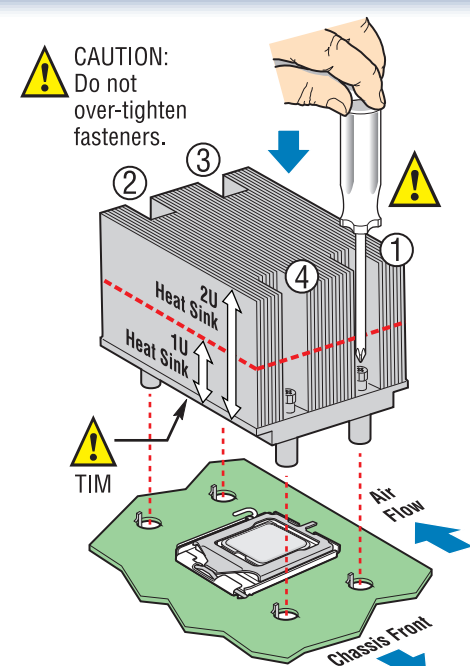
4 Install Heat Sink(s)

IMPORTANT NOTE: Intel® Server Chassis require passive heat sinks. For a non-Intel server chassis, see the documentation that came with your chassis for heat sink requirements.

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.

- Remove the protective film on the TIM if present.
- Align heat sink fins to the front and back of the chassis for correct airflow. Air flow goes from front-to-back of chassis.
- Using a #2 Phillips* screwdriver, finger-tighten each fastener diagonally, according to the numbers shown.
- Securely re-tighten each fastener again in the same order as performed in Step C.

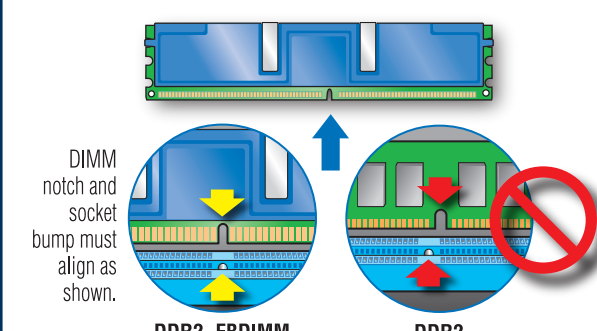
Note: Heat sink styles may vary.



5 Install Memory DIMMs

DDR2 FBDIMM Memory Identification:

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



Memory Configurations and Population Order:

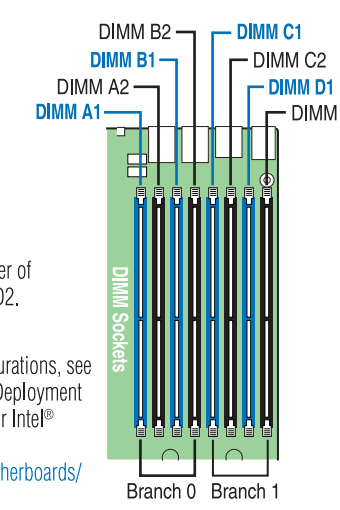
Memory Type: Minimum of one 512MB, DDR2 FBDIMM 533/667 MHz compliant 240-pin DIMM.

For best performance, a minimum of four DIMMs is recommended.

Populate DDR2 FBDIMMs in the order of A1, B1, C1, D1 and A2, B2, C2 and D2.

Note: For additional memory configurations, see the User Guide on the Intel® Server Deployment Toolkit 2.0 CD that accompanied your Intel® Server Board S5000PAL, or go to: <http://support.intel.com/support/motherboards/server/s5000pal>

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/s5000pal/compat.htm>



To Install DIMMs:

CAUTION: Avoid touching contacts when handling or installing DIMMs.

- Open both DIMM socket levers.
- Note location of alignment notch.
- Insert DIMM making sure the connector edge of the DIMM aligns correctly with the slot.
- Push down firmly on the DIMM until it snaps into place and both levers close.

