

# Intel® Server Board X38ML

## Quick Start User's Guide



Thank you for buying the Intel® Server Board X38ML. The following information will help you integrate your new server board into a server chassis.

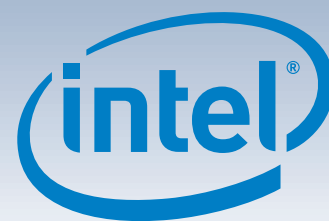
For details on these chassis or to select a third party chassis, please visit <http://www.intel.com/go/serverbuilder> and <http://support.intel.com/support/motherboards/server>.

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

User Guides are also available on the CD that accompanied your Intel® Server Board X38ML.

If you are not familiar with ESD (Electrostatic Discharge) procedures used during system integration, please see the Intel® Server Board X38ML User's Guide, available on the CD or at <http://support.intel.com/support/motherboards/server/x38ml/manual.htm>.

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:

- Supported Intel Processor: See <http://support.intel.com/support/motherboards/server/x38ml>.
- Memory Type: Minimum of one unbuffered 256 MB, 240-pin DDR2 667/800 MHz DIMM.
- Power: Depends on system configuration. Minimum of 270 W per server board.

## 1 Preparing the Chassis

Refer to the documentation that came with your chassis for preparatory steps, then return to this guide when directed to do so by your chassis documentation.

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.

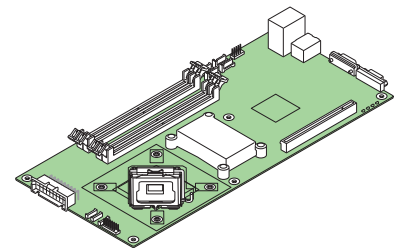


## 2 Install the Server Board

### A. Insert the Server Board

See your chassis documentation for specific server board installation instructions.

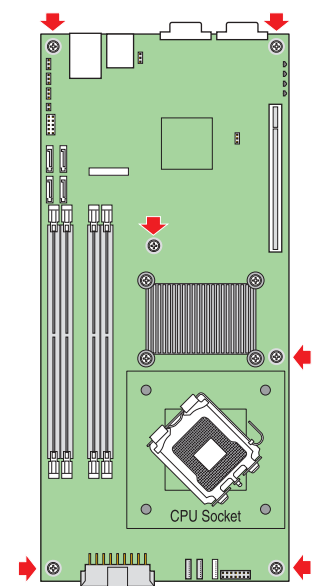
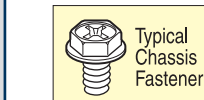
Place the board into the chassis, making sure that back panel I/O ports and chassis or I/O shield openings align correctly. Verify that server board mounting holes align correctly with the chassis standoffs.



### B. Attach the Server Board

Use the fasteners that came with your chassis.

Use screws to attach the board to the chassis at the 6 locations indicated by the solid RED arrows in the figure [A].



### 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.

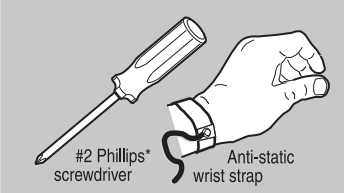
### Warning

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.

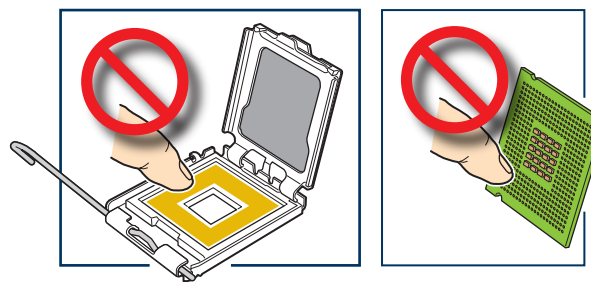
### Tools Required



## 3 Install the Processor

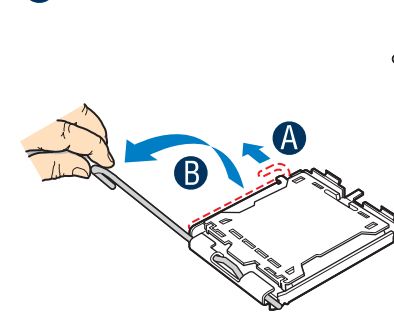
### Notes and Cautions:

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 contacts.



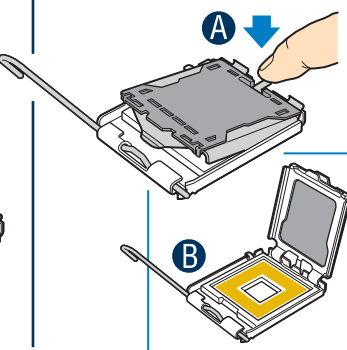
### A. Open the Socket Lever

- A Push the lever handle down and away from the socket to release it.
- B Pull the lever and 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

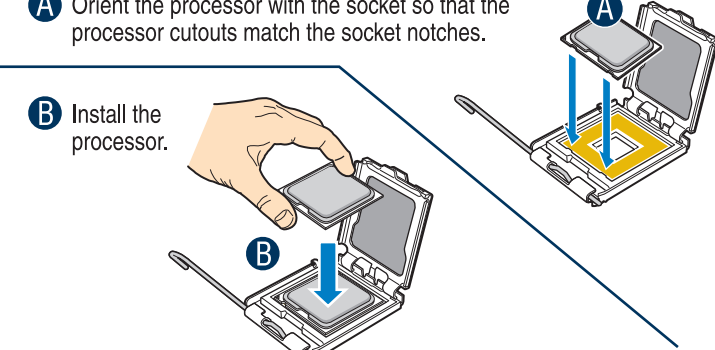
- A Take the processor out of the box and remove the protective shipping cover.



### D. Install the Processor

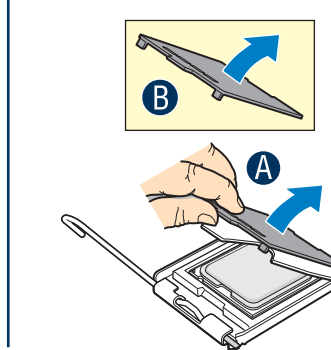
**CAUTION:** The underside of the processor has components that may damage the socket pins if installed improperly. Processor must align correctly with socket opening before installation. DO NOT DROP processor into socket!

- A Orient the processor with the socket so that the processor cutouts match the socket notches.
- B Install the processor.



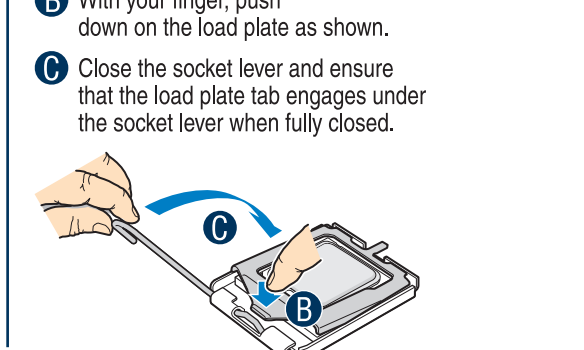
### E. Remove Socket Protective Cover

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



### F. Close Load Plate and Socket Lever

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

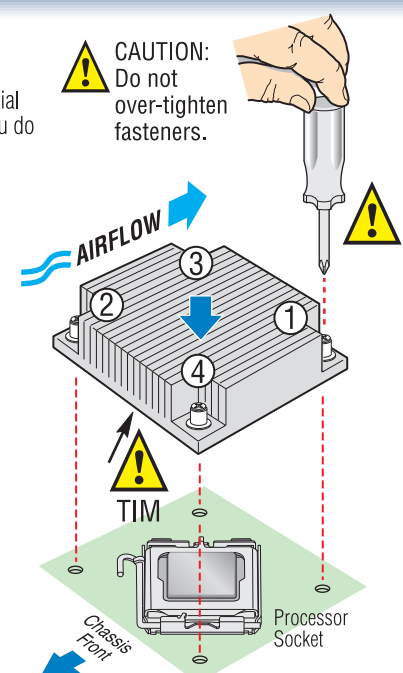


## 4 Install the Heat Sink

- A Remove the protective film on the TIM if present.
- B Align heat sink fins to the front and back of the chassis for correct airflow. Airflow goes from front-to-back of chassis.

- C Using a #2 Phillips\* screwdriver, finger-tighten each fastener diagonally, according to the numbers shown.
- D Securely re-tighten each fastener again in the same order as performed in Step C.

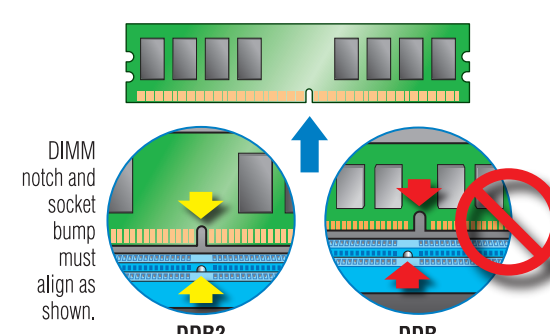
Note: Heat sink styles may vary.



## 5 Install Memory DIMMs

### DDR2 DIMM Memory Identification:

- This server board supports up to four DDR2-667 or DDR2-800 EEC or non-EEC unbuffered DIMMs. DDR DIMMs are not supported on this server board.
- DDR2 memory varies in height. DO NOT MIX different DIMM heights and types.



### Memory Configurations and Population Order:

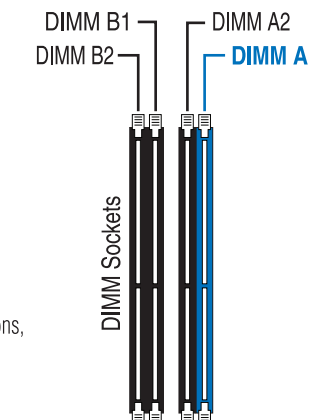
Memory Type: Minimum of one 256 MB DDR2 DRAM in socket A1.

For dual-channel asymmetric mode, DIMM sockets may be populated in any order.

Use only DDR2-667 and DDR2-800 DIMM modules. The speed used on all channels is that of the slowest DIMM on the server board.

Note: For additional memory configurations, see the User Guide on the CD that accompanied your Intel® Server Board X38ML, or go to: <http://support.intel.com/support/motherboards/server/x38ml>

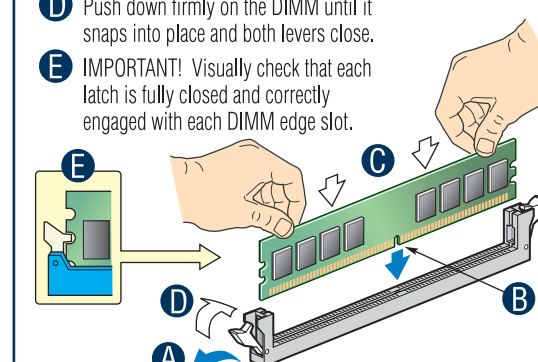
Memory sizing and configuration is supported only for qualified DIMMs approved by Intel. For a list of supported memory, see the tested memory list at <http://support.intel.com/support/motherboards/server/x38ml>



### To Install DIMMs:

**CAUTION:** Avoid touching contacts when handling or installing DIMMs.

- A Open both DIMM socket levers.
- B Note location of alignment notch.
- C Insert DIMM making sure the connector edge of the DIMM aligns correctly with the slot.
- D Push down firmly on the DIMM until it snaps into place and both levers close.
- E IMPORTANT! Visually check that each latch is fully closed and correctly engaged with each DIMM edge slot.



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