Sun Fire™ High-End and Midrange Systems CPU/Memory Board Installation Guide

Sun Fire E25K/E20K Systems
Sun Fire 15K/12K Systems
Sun Fire E6900/E4900 Systems
Sun Fire 6800/4810/4800/3800 Systems

Locations of the CPU/Memory Boards

System	Number of CPU/Memory Board Slots	Slot Numbers	Location
Sun Fire E25K	18	SB0-SB17	Front and rear
Sun Fire 15K	18	SB0-SB17	Front and rear
Sun Fire E20K	9	SB0-SB8	Front
Sun Fire 12K	9	SB0-SB8	Front
Sun Fire E6900	6	SB0–SB5	Front
Sun Fire 6800	6	SB0–SB5	Front
Sun Fire E4900	3	SB0, SB2, SB4	Rear
Sun Fire 4810	3	SB0, SB2, SB4	Rear
Sun Fire 4800	3	SB0, SB2, SB4	Rear
Sun Fire 3800	2	SB0, SB2	Front

⚠️ **Caution –** The CPU/Memory board weighs approximately 17-22 pounds (7-10 kilograms) and is heavy. Take care when removing the board from the system.

Note – A CPU/Memory board field-replaceable unit (FRU) is for maintenance use only. FRUs must not be used to upgrade CPU performance in systems. Such usage can violate United States export regulations.

You can insert the CPU/Memory board into a powered-on system. However, the board is not recognized by the system until the domain has been dynamically reconfigured to include the board, or the domain is re-initialized and rebooted. For complete procedures for re-initializing a domain, refer to the system administration manual for your product.

Preparing to Install a CPU/Memory Board

If you are installing an UltraSPARC® IV/IV+ CPU/Memory board in a Sun Fire™E25K/E20K, Sun Fire 15K/12K, Sun Fire E6900/E4900 or a Sun Fire 6800/4800 system, additional upgrades may be required for hardware, software, and firmware. Refer to the applicable Sun Fire High-End and Midrange Systems CPU/Memory Board Upgrade Requirements document at `http://sun.com/documentation`.

⚠️ **Caution –** The Sun Fire E25K/E20K, Sun Fire 15K/12K, Sun Fire E6900/E4900 and Sun Fire 6800/4800 systems might shut down if you do not install the additional upgrades that are required for the UltraSPARC IV/IV+ CPU/Memory boards.

If your system requires an OS upgrade and SC firmware upgrade, upgrade the firmware first. Install the new CPU/Memory board only after you have upgraded the firmware and software.

Note – UltraSPARC IV/IV+ CPU/Memory boards are not supported in Sun Fire 4810/3800 systems.

1. **Place an ESD mat close to the system.**

2. **Wear an ESD strap and connect it to the system.**

3. **Place the new CPU/Memory board on the ESD mat.**

4. **Inspect the connector on the new board being installed.**

   a. **Remove the protective cover from the board connector.**

   b. **Check to see if the plastic is deformed or damaged, including both the pin holes and the fins.**

   c. **Insure there are no major (out of the normal) gaps between each pin row.**

5. **Insure the CPU/Memory board alignment tabs are not bent.**

   a. **Check the CPU/Memory board springfingers for damage.**

   b. **Check the springfingers on the empty slots that will receive the new boards for damage (SB5 for Sun Fire E6900 and Sun Fire 6800 systems and SB4 for Sun Fire E4900 and Sun Fire 4800 systems).**

6. **Make sure that the new CPU/Memory board ejector levers are 90 degrees straight out from the board.**

Installing a CPU/Memory Board

The top of the board is identified by a thin rail. The bottom of the board has a thicker rail. The board LEDs should be at the bottom of the handle when the board is inserted properly into the card cage.

⚠️ **Caution –** You must insert a CPU/Memory board into the system within one minute of removing a board or filler board, or overheating will occur.

1. **Remove the old board or filler board and immediately insert the CPU/Memory board into the grooves of the proper slot.**

2. **Hold the board by the handle vertically with one hand. Place the other hand under the bottom mounting rail.**

3. **Install the board in the chassis by tipping the handle of the board down so that the bottom rail meets the bottom chassis guide rail.**

4. **When the bottom board rail is in the chassis guide rail, tip the board back up and align the top rail into the chassis rail guide.**

5. **Slide the board into the chassis slowly until the ejector lever handles start to collapse inward.**
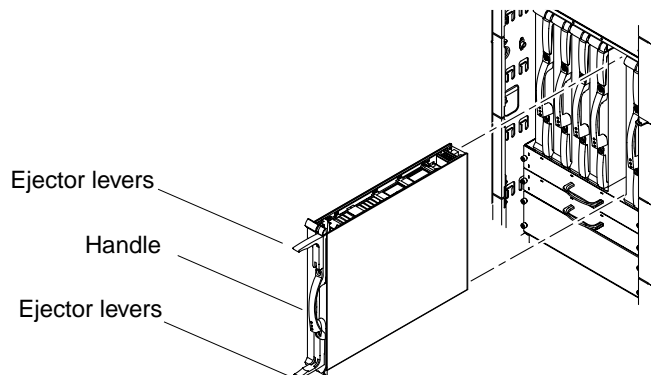
6. **Simultaneously rotate both ejectors until they are in the closed position (flush with the board).**
   When properly installed, the ejectors lock automatically.

Note – The board is not recognized by the system until the domain has been dynamically reconfigured to include the board, or the domain is re-initialized and rebooted.

7. **Reconfigure the CPU/Memory board into the system by either of the following procedures:**
   - Dynamically reconfigure the CPU/Memory board into a domain.
     Refer to the dynamic reconfiguration manual for your product.
   - Power on the board and initialize a domain.
     Refer to the system administration manual for your product.

Note – After reconfiguration, the Activated LED should be on (lit).

Preparing to Remove a CPU/Memory Board

If it is necessary to remove a board from a running system, use this procedure:

1. **Be sure that you have a filler board or replacement board ready.**

2. **Prepare the system to remove the CPU/Memory board by either of the following methods:**
   - Refer to the system administration manual for your product for complete procedures for powering off the board.
   - If the board is being used by the Solaris Operating System, identify the board to be removed and dynamically reconfigure it out of the domain. Refer to the dynamic reconfiguration manual for your product for complete procedures.

Note – It is safe to continue when the green Activated LED on the board is off and the amber or blue OK to remove LED is on.

⚠ **Caution –** The CPU/Memory board weighs approximately 17-22 pounds (7-10 kilograms) and is heavy. Take care when removing the board from the system.

3. **Place a grounded ESD mat close to the system.**

4. **Wear an ESD strap and connect it to the system.**

Removing a CPU/Memory Board

⚠ **Caution –** You must insert a replacement board or filler board into the system within one minute of removing a CPU/Memory board, or overheating will occur.

1. **Make sure the replacement board or filler board is close to the system.**

2. **Unlock the ejector levers on the CPU/Memory board with a Phillips No. 2 screwdriver.**
   The ejector levers will pop out slightly.

3. **Rotate the ejector levers simultaneously until they are 90 degrees straight out from the board.**
   This action unseats the board from the connector.

4. **Remove the CPU/Memory board by pulling the board out of the slot.**

   a. **Hold the handle while grasping the bottom rail with your other hand.**

   b. **Slide the board along the track until the board is out of the card cage.**
      Be careful not to touch neighboring boards.

5. **Place the board on the ESD mat.**

6. **Install a replacement board or filler board.**

 Caution – Before the system is powered back on, make sure ALL slots in the CPU/Memory board slots are filled.

7. **If you installed a replacement CPU/Memory board, reconfigure the board into the system by either of the following procedures:**

   ■ Dynamically reconfigure the CPU/Memory board into a domain.

   Refer to the dynamic reconfiguration manual for your product.

   ■ Power on the board and initialize a domain.

   Refer to the system administration manual for your product.

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