Heatsink Field Replaceable Unit Installation Guide

This document contains instructions for replacing the heatsink field replaceable unit (FRU) on the Sun Fire™ V125, V210, and V240 servers, and the Netra™ 210 server.

Required Tools

You will need the following tools to replace the heatsink FRU:

■ No. 1 Phillips screwdriver
■ Antistatic wrist strap
■ Clean, lint-free cloth
■ Cleaning solvent (isopropyl alcohol)

Caution – The system board is extremely sensitive to static electricity. To prevent damage to the board, properly ground yourself by using an antistatic wrist strap.

Thermal Interface Material

The CPU and heatsink FRU are separated by a thermal interface material (TIM). The TIM affects both the timing and process of removing the heatsink FRU. Therefore, before you start to remove the heatsink FRU, you must determine which type of TIM is separating the CPU and heatsink FRU.
The following list will help you identify the TIM:

- TIM1 is used on 1.0 GHz and 1.28 GHz servers
  TIM1 is a glue backed foil material and is likely to have glued itself to the CPU. You should remove the heatsink FRU within ten minutes of having shut down the server while the CPU is still warm and the glue is workable.

- TIM2 is used on 1.34 GHz and 1.5 GHz servers
  TIM2 is a gray paste. You should wait at least ten minutes after you shut down the server before you remove the heatsink FRU. TIM2 is a solid at room temperature, and the bond can be easily broken. Above 100 degrees Farenheit, TIM2 becomes a sticky paste and is hard to remove.

### Replacing the Heatsink FRU

Replacing the heatsink FRU does not require the removal of the system board. However, it does require getting the server ready for service, the removal of power, the removal of the top cover, and the removal of any components that interfere with the removal of the heatsink FRU.

▼ **To Remove the Heatsink FRU**

1. Get the server ready for service by following the appropriate procedures in the server’s service manual.
2. Remove all power to the server by disconnecting the power cords.
3. Remove the top cover.
4. Connect an antistatic wrist strap to your wrist and to a properly grounded chassis or grounded receptacle.
   For complete antistatic precautions, refer to the server’s service manual.
5. Remove any components that would interfere with the removal of the heatsink FRU.
6. Locate the heatsink FRUs on the system board (FIGURE 1).
   Depending on the system board, it will have either one or two heatsink FRUs.
7. Detach the fan power cable connectors from the system board (FIGURE 2).

Follow the fan power cables from the fans to the cable connectors on the system board.
FIGURE 2  Detaching the Fan Power Cables

**Note** – The connectors for the CPU0 heatsink fans are labeled P0 F0 and P0 F1 on the system board, and the connectors for the CPU1 heatsink fans are labeled P1 F0 and P1 F1.

8. Unlock the heatsink FRU from the CPU socket by first pressing down on the fasteners securing the heatsink FRU and then lifting them up (FIGURE 3). Repeat this step for both fasteners on the heatsink FRU.
9. Remove the heatsink FRU by:

a. Twisting the heatsink FRU 1 degree in a clockwise then 1 degree in the counter clockwise direction until the heatsink FRU is loose (FIGURE 4).

b. Lifting the heatsink FRU off of the CPU.
10. Use a clean, dust-free cloth with cleaning solvent (isopropyl alcohol) to clean any residue left by the TIM from the top of the CPU.

Caution – TIM2 residue might irritate your skin. Read the MSDS before coming in contact with it.

11. If the system board has two CPUs, repeat Step 7 through Step 10 for the second heatsink FRU.

▼ To Install the Heatsink FRU

1. Remove the heatsink FRU from the packaging.

2. Carefully remove the protective liner on the TIM on the bottom of the heatsink FRU, ensuring that you do not damage the TIM.

Caution – Do not contaminate the TIM with dirt before you install the heatsink FRU onto the CPU.
3. Place the heatsink FRU on the CPU socket and secure the heatsink FRU by first attaching the rear clips and then pushing down the two front fasteners to the CPU socket (FIGURE 5).

4. Connect the fan connectors.

5. If the system board has two CPUs, repeat Step 1 through Step 4 for the second heatsink FRU.

6. Replace all of the components that you removed to access the heatsink FRU.

7. Remove the antistatic strap, and replace the top cover.

8. Reconnect the power cords.

9. Return the server to its original position in the rack, if applicable.

   You can now log into the server to check the performance of the heatsink FRU by using the appropriate commands or user interface.