

Replacing Sun Fire V20z or Sun Fire V40z Memory Modules

This document contains:

- [“Replacing Memory Modules in a Sun Fire V20z Server” on page 1](#)
- [“Replacing Memory Modules in a Sun Fire V40z Server” on page 4](#)

Refer to the Service Label, on the inside of the chassis cover, for the location of the component.

Replacing Memory Modules in a Sun Fire V20z Server

Sun Fire V20z DIMM Population Rules

Note – Use the following information and rules when you use the procedures in this section to replace or add dual inline memory modules (DIMMs) to the server.

- DIMMs used in the server must all be the “Registered DDR 333” type.
- Four DIMMs are supported per CPU. The four DIMM slots for each CPU are grouped into two banks that contain two slots each.
- The Sun Fire V20z supports either single- or two-CPU configurations. In a single-CPU system, you can only use the four DIMM slots that are adjacent to CPU0.
- In a two-CPU system, each CPU can use two or four DIMMs; when using only two DIMMs for a CPU, populate the bank closest to the CPU first.
- DIMMs must be installed in matched pairs (one bank at a time). The two DIMMs in a bank must be of the same size, type, and vendor.
- Each CPU can support two banks of DIMMs. While each bank must contain a pair of matching DIMMs, the size and vendor of the DIMMs between banks do not have to match.
 - For example, [TABLE 1](#) shows some valid sample configurations for CPU0. In each example, DIMM 1 and DIMM 2 match in size (and vendor), but they do not have to match DIMM 3 and DIMM 4. DIMM 3 and DIMM 4 must match within their bank, but they do not have to match DIMM1 and DIMM 2.

TABLE 1 Valid Sample DIMM Configurations

CPU 0	BANK 0	BANK 1
Example 1	DIMM 1 = 512, DIMM 2 = 512	DIMM 3 = 1GB, DIMM 4 = 1GB
Example 2	DIMM 1 = 1GB, DIMM 2 = 1GB	DIMM 3 = 1GB, DIMM 4 = 1GB
Example 3	DIMM 1 = 1GB, DIMM 2 = 1GB	DIMM 3 = 512, DIMM 4 = 512
Example 4	DIMM 1 = 512, DIMM 2 = 512	DIMM 3 = 2GB, DIMM 4 = 2GB

- The sample configurations in [TABLE 2](#) are *not* valid because in each case, at least one of the banks contains mismatched DIMM pairs.

TABLE 2 Non-Valid Sample DIMM Configurations

CPU 0	BANK 0	BANK 1
Example 1	DIMM 1 = 512, DIMM 2 = 1GB	DIMM 3 = 1GB, DIMM 4 = 512
Example 2	DIMM 1 = 1GB, DIMM 2 = 1GB	DIMM 3 = 512, DIMM 4 = 1GB
Example 3	DIMM 1 = 512, DIMM 2 = 1GB	DIMM 3 = 2GB, DIMM 4 = 2GB
Example 4	DIMM 1 = 512, DIMM 2 = 1GB	DIMM 3 = 512, DIMM 4 = 1GB

To Replace a Memory Module in the Sun Fire V20z server

1. Turn off the system, including any attached peripherals.
2. While pressing the cover latch release button with your right thumb (A), slide the cover towards the rear of the chassis until it contacts the stop (B).
3. Lift the cover up and remove it.

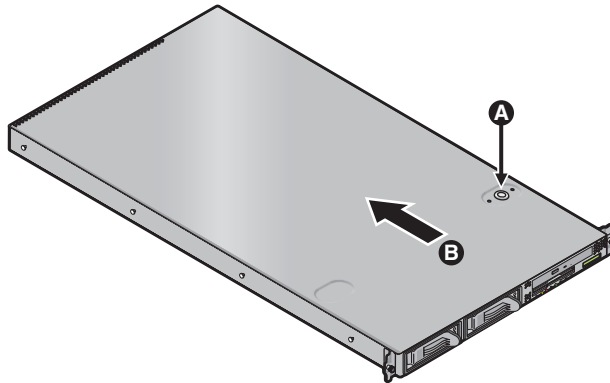


FIGURE 1 Removing the Cover

4. Locate the memory module connector in which you will install or replace a memory module.

5. Remove a memory module by pressing down on the ejector bars at both ends of the memory module's socket.

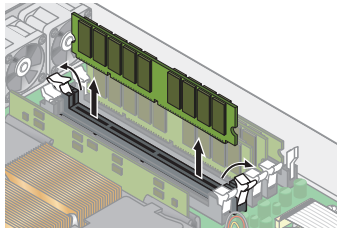


FIGURE 2 Removing a Memory Module

6. Ensure that the memory module socket's ejectors are open (rotated outward) to allow the new module to be inserted.

Note – Refer to [“Sun Fire V20z DIMM Population Rules” on page 1](#) for important information about DIMM requirements.

7. Align the memory module's edge connector with the alignment key, and insert the memory module into the connector.

Note – The manufacturer and capacity of both modules in the same memory bank (Banks 1-4) must be identical.

8. Check the routing of all cables for obstructions and then reinstall the cover.

Replacing Memory Modules in a Sun Fire V40z Server

This section contains:

- [“Sun Fire V40z DIMM Population Rules” on page 4](#)
- [“To Replace a Memory Module on the Sun Fire V40z Motherboard” on page 5](#)
- [“To Replace a Memory Module on the Sun Fire V40z CPU Card” on page 7](#)

Sun Fire V40z DIMM Population Rules

Note – Use the following information and rules when you use the procedures in this section to replace or add dual inline memory modules (DIMMs) to the server.

- DIMMs used in the server must all be the “Registered DDR 333” type.
- Four DIMMs are supported per CPU. The four DIMM slots for each CPU are grouped into two banks that contain two slots each.
- The Sun Fire V40z server supports either two- or four-CPU configurations. Each CPU can use two or four DIMMs; when using only two DIMMs for a CPU, populate the bank closest to the CPU first.
- DIMMs must be installed in matched pairs (one bank at a time). The two DIMMs in a bank must be of the same size, type, and vendor.
- Each CPU can support two banks of DIMMs. While each bank must contain a pair of matching DIMMs, the size and vendor of the DIMMs between banks do not have to match.
 - For example, [TABLE 3](#) shows some valid sample configurations for CPU0. In each example, DIMM 1 and DIMM 2 match in size (and vendor), but they do not have to match DIMM 3 and DIMM 4. DIMM 3 and DIMM 4 must match within their bank, but they do not have to match DIMM1 and DIMM 2.

TABLE 3 Valid Sample DIMM Configurations

CPU 0	BANK 0	BANK 1
Example 1	DIMM 1 = 512, DIMM 2 = 512	DIMM 3 = 1GB, DIMM 4 = 1GB
Example 2	DIMM 1 = 1GB, DIMM 2 = 1GB	DIMM 3 = 1GB, DIMM 4 = 1GB
Example 3	DIMM 1 = 1GB, DIMM 2 = 1GB	DIMM 3 = 512, DIMM 4 = 512
Example 4	DIMM 1 = 512, DIMM 2 = 512	DIMM 3 = 2GB, DIMM 4 = 2GB

- The sample configurations in [TABLE 4](#) are *not* valid because in each case, at least one of the banks contains mismatched DIMM pairs.

TABLE 4 Non-Valid Sample DIMM Configurations

CPU 0	BANK 0	BANK 1
Example 1	DIMM 1 = 512, DIMM 2 = 1GB	DIMM 3 = 1GB, DIMM 4 = 512
Example 2	DIMM 1 = 1GB, DIMM 2 = 1GB	DIMM 3 = 512, DIMM 4 = 1GB
Example 3	DIMM 1 = 512, DIMM 2 = 1GB	DIMM 3 = 2GB, DIMM 4 = 2GB
Example 4	DIMM 1 = 512, DIMM 2 = 1GB	DIMM 3 = 512, DIMM 4 = 1GB

To Replace a Memory Module on the Sun Fire V40z Motherboard

1. Turn off the system, including any attached peripherals.

Refer to the *Sun Fire V20z and Sun Fire V40z Servers User Guide* for full instructions on powering off the server.

2. Loosen the captive screw on the cover latch, then rotate the latch toward the system rear to push back the cover.
3. Lift the cover up and remove it.

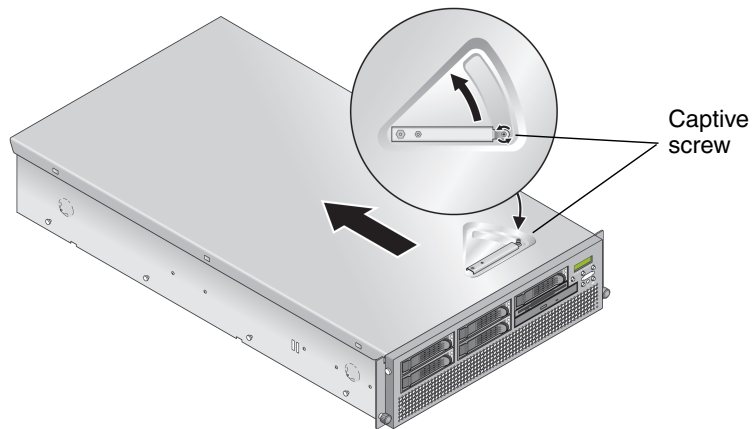


FIGURE 3 Removing the Sun Fire V40z Cover

4. Remove the main air baffle (see [FIGURE 4](#)).

Lift the rear edge of the baffle, then move it toward the server rear to disengage the hooks on the front edge of the baffle.

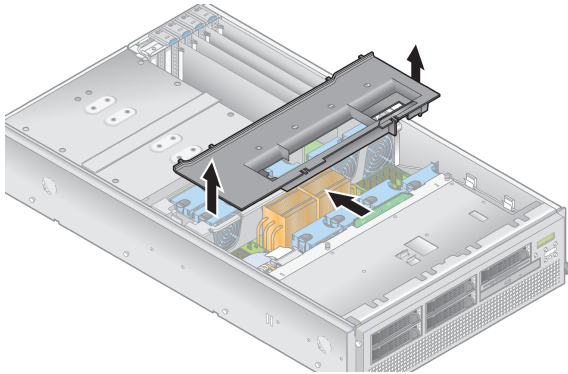


FIGURE 4 Removing the Main Air Baffle

5. Locate the memory module connector in which you will install or replace a memory module.
6. Remove a memory module by pressing down on the ejector bars at both ends of the memory module's socket (see [FIGURE 5](#)).

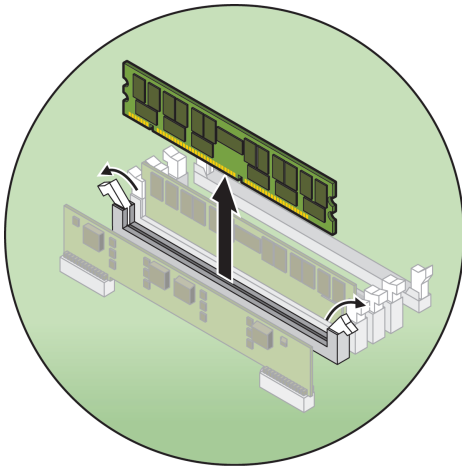


FIGURE 5 Removing a Memory Module

7. Ensure that the memory module socket's ejectors are open (rotated outward) to allow the new module to be inserted.
8. Align the memory module's edge connector with the alignment key, and insert the memory module into the connector.

Note – Refer to “Sun Fire V40z DIMM Population Rules” on page 4 for important information about DIMM requirements.

9. Replace the main air baffle.
10. Check the routing of all cables for obstructions and then reinstall the cover.

To Replace a Memory Module on the Sun Fire V40z CPU Card

1. Remove the front bezel from the server by pressing in on the rubberized buttons on each side of the bezel, then swinging the bezel top downward (see [FIGURE 6](#)).

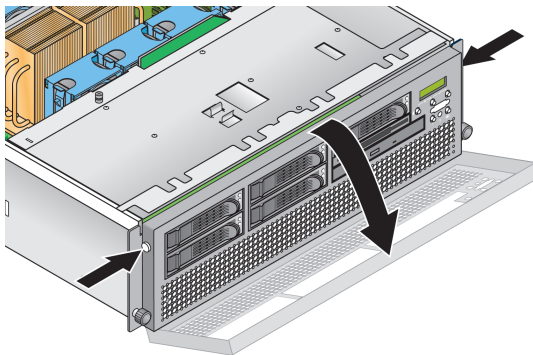


FIGURE 6 Removing the Front Bezel

2. Open the CPU card door, which is located under the hard drive bays, to access the CPU card. Press in the two buttons on the door and swing it downward so that it is open 180-degrees from the closed position (see [FIGURE 7](#)).

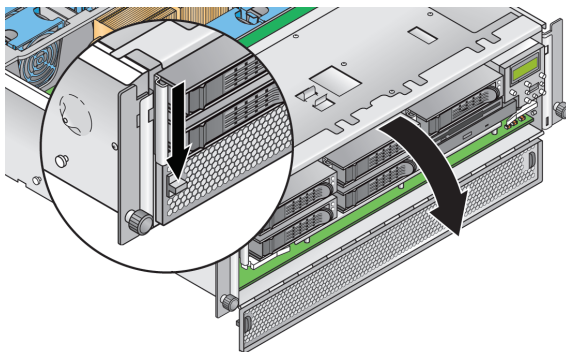


FIGURE 7 Opening the CPU Card Door



Caution – The electronic components and solder joints on the bottom of the CPU card are fragile. Use care to avoid scraping the bottom of the CPU card on the chassis or door when removing or installing it.

3. Open the two plastic levers on the CPU card corners *simultaneously* to release it from its backplane, then carefully pull it out of the server (see [FIGURE 8](#)).

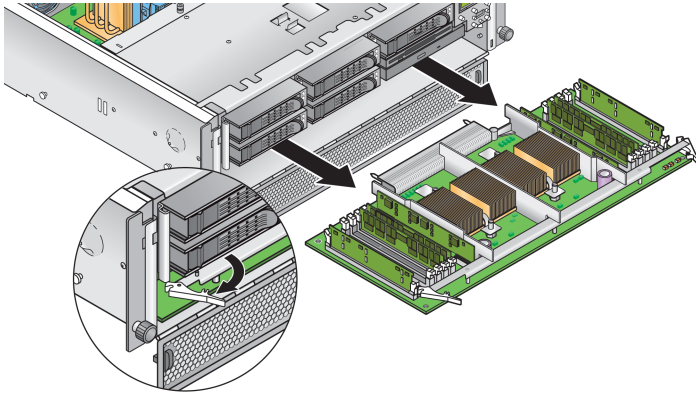


FIGURE 8 Removing the CPU Card From the Chassis

4. Set the CPU card on an ESD-resistant surface.
5. Locate the memory module connector in which you will install or replace a memory module.
6. Remove a memory module by pressing down on the ejector bars at both ends of the memory module's socket (see [FIGURE 5](#)).
7. Ensure that the memory module socket's ejectors are open (rotated outward) to allow the new module to be inserted.
8. Align the memory module's edge connector with the alignment key, and insert the memory module into the connector.

Note – Refer to “[Sun Fire V40z DIMM Population Rules](#)” on page 4 for important information about DIMM requirements.

9. Replace the CPU card into the server (see [FIGURE 9](#)):
 - a. Carefully align the rear corners of the CPU card with the plastic alignment tracks inside the server chassis, then slide the CPU card into the tracks.
 - b. Press in firmly and evenly on both corners of the CPU card until it engages the backplane.
 - c. Lock down the two plastic latches on the corners of the CPU card to secure it in place.

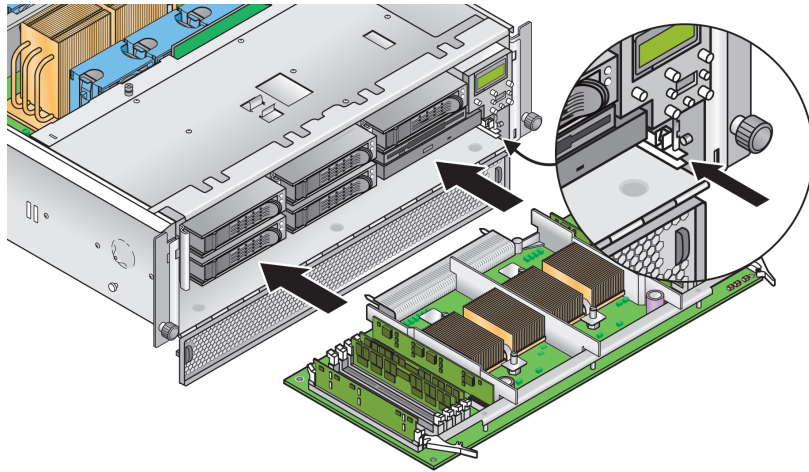


FIGURE 9 Installing the CPU Card Into the Chassis

10. Close the CPU door.
11. Replace the front bezel onto the server.

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