PCI Cards in the Sun Fire™ V20z and Sun Fire V40z Servers

Congratulations on your purchase of a Sun Fire™ V20z or Sun Fire V40z server.

General Information

Supported PCI Cards

For the current list of PCI cards that are supported for the Sun Fire V20z and Sun Fire V40z servers, visit
http://www.sun.com/servers/entry/v20z/optioncards.html.

This page also contains links to third-party Web sites for further information on each of the cards.

Warranty Information

For specific details regarding your warranty, please visit:

http://www.sun.com/service/support/warranty/index.html

Technical Support

For online technical support, visit http://www.sun.com/service/online/.

If you want to create an account with www.sun.com, click on **My Sun** at the top. Then click on **Sign Me Up** under New User Login on the left.

Privacy Policy

Sun Microsystems, Inc. is committed to respecting your privacy and recognizes the need for appropriate protection and management of personally identifiable information you share with us.

We urge you to review our privacy policy at http://www.sun.com/privacy/ to understand the steps we take to respect your privacy.

Replacing PCI Cards in a Sun Fire V20z or Sun Fire V40z Server

This document contains:

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

Before You Start

PCI Slot Labelling

The PCI slots are labelled on the server back panel as PCI O (next to the power supply) and PCI 1 (between the SP and platform ethernet ports).

Note – PCI 0 can take up to a regular full-length PCI card; PCI 1 takes a PCI-X card.

- The slot on the motherboard that corresponds to PCI 0 is identified by the silkscreen label "Slot 2 133MHz".
- The slot on the motherboard that corresponds to PCI 1 is identified by the silkscreen label "Slot 1 66MHz".

Support Guide for Half-Length PCI Card Removed

In the original release of the Sun Fire V20z server (chassis PN 380-0979), there is a plastic guide on the motherboard for supporting a half-length PCI-X card. This support guide prevents you from installing a full-length PCI-X card in the PCI 1 (66 MHz) position.

In the updated release of the server (chassis PN 380-1168), the guide has been removed. You can now install a full-length PCI-X card in this slot.

To Replace a PCI Card in a 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.**
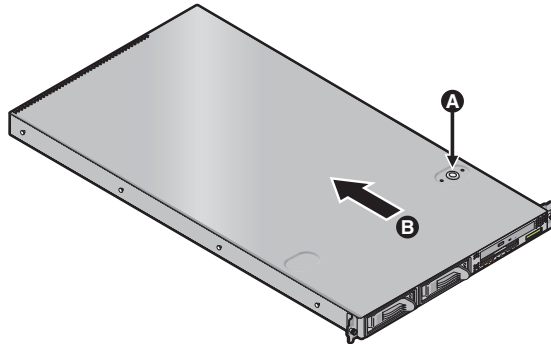
FIGURE 1   Removing the Cover

Note – **Before installing or replacing a PCI card, refer to the following guidelines:** If you are using the onboard NICs and one PCI card, install the PCI card in the right (full-length) slot.

If you are using the onboard NICs, and two PCI cards, install the faster PCI card in the right (full-length) slot, and the slower card in the left (half-length) slot.

If you are not using the onboard NICs, install a half-length card in the left (half-length) slot and a full-length card in the right (full-length) slot.

Caution – Do not use +5 V PCI cards or you may cause damage to the motherboard. Use only +3 V PCI cards in your Sun Fire V20z and Sun Fire V40z servers.


To Remove an Existing PCI Card

1. **Unfasten all cables connected to the card.**

2. **Withdraw the card and riser from the PCI card connector on the motherboard.**

3. **Remove the PCI card from the riser.**

To Install a New PCI Card

1. **Loosen the screw holding the card latch.**

2. **Raise the latch as far as possible and then pivot it towards the rear of the chassis (see** FIGURE 2**).**

3. **Withdraw the PCI card slot cover.**
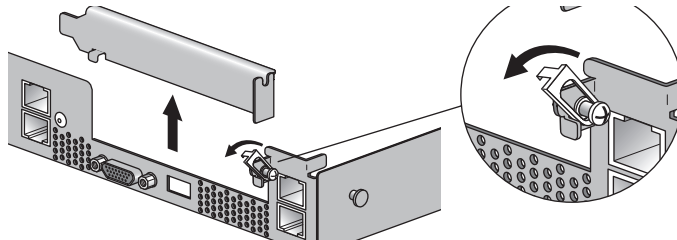
FIGURE 2   PCI Card Slot Cover

4. **Remove the card riser assembly from the PCI card connector on the motherboard.**

5. **Install the PCI card in the riser assembly.**

6. **Reinstall the riser and card in the connector on the motherboard (see** FIGURE 3**).**
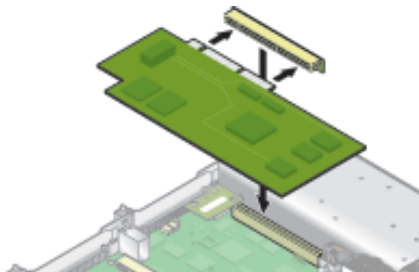
FIGURE 3   PCI Card and Riser

7. **Pivot the card latch up and then slide it down until it captures the PCI card bracket. Tighten the screw to secure the latch (refer to** FIGURE 2**).**

8. **Check the routing of all cables for obstructions before reinstalling the cover.**

Note – If the PCI card is being removed, but not replaced with another card: Reinstall the empty riser assembly in the empty PCI-card connector on the motherboard. Reinstall the PCI-card slot cover.

To Replace a PCI Card in a Sun Fire V40z Server

This section contains:

- "To Install a PCI Card in a Vertical Slot in a Sun Fire V40z Server" on page 7
- "To Install a PCI Card in a Horizontal Slot in a Sun Fire V40z Server" on page 10
- "To Install a SCSI Extender Cable in a Sun Fire V40z Server (LSI MegaRAID Card)" on page 12

The following procedures describe how to add or replace a PCI card. The seven PCI card slots are comprised of four different types of slots on the Sun Fire V40z server (see FIGURE 4):

- Four full-length, 133 MHz/64-bit, vertical slots
- One full-length, 100 MHz/64-bit, vertical slot
- One half-length, 100 MHz/64-bit, vertical slot
- One half-length, 66MHz/64-bit, horizontal slot (with PCI riser)

Sun Fire V40z Server PCI Card Slot Locations

PCI Slot Layout

FRONT

REAR

66MHz Horizontal — ①

CPU 0

100 MHz 1/2 Length — ②

100 MHz — ③

④
133 MHz — ⑤
⑥
⑦
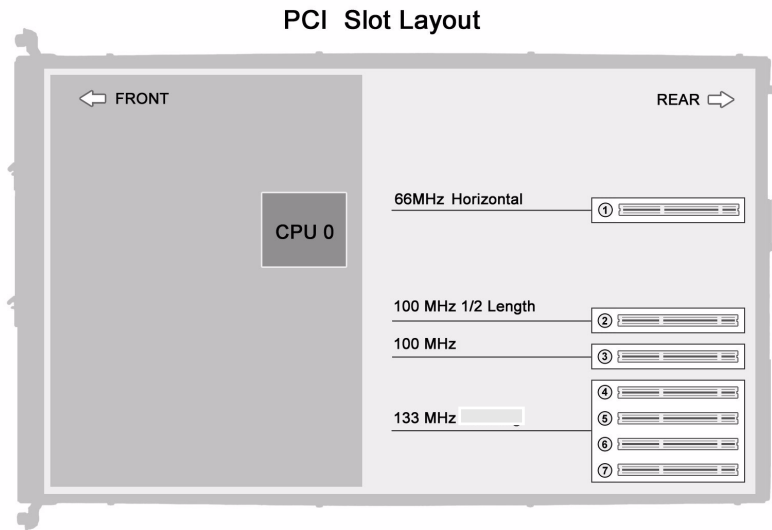
FIGURE 4 Sun Fire V40z Server PCI Card Slot Locations

Each slot is capable of providing 25 watts maximum power.

⚠ **Caution –** Do not use +5 V PCI cards or you may cause damage to the motherboard. Use only +3 V PCI cards in your Sun Fire V40z server.

To Install a PCI Card in a Vertical Slot in a Sun Fire V40z Server

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 (see FIGURE 5).**

3. **Lift the cover up and remove it.**
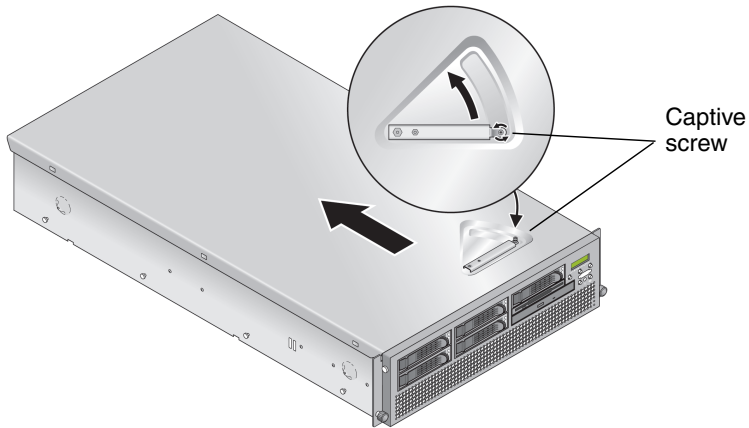
FIGURE 5 Removing the Sun Fire V40z Cover

4. **Remove the card you are replacing using one of the following two methods, depending on which slot you are installing to:**

   - If you are replacing a card in a slot that has a mechanical retention latch (MRL), push the button on the end of the MRL and lift the MRL flap (see FIGURE 6).

   - If you are replacing a card in a slot that does not have an MRL, remove the securing screw and the retaining bracket from the slot (see FIGURE 7).
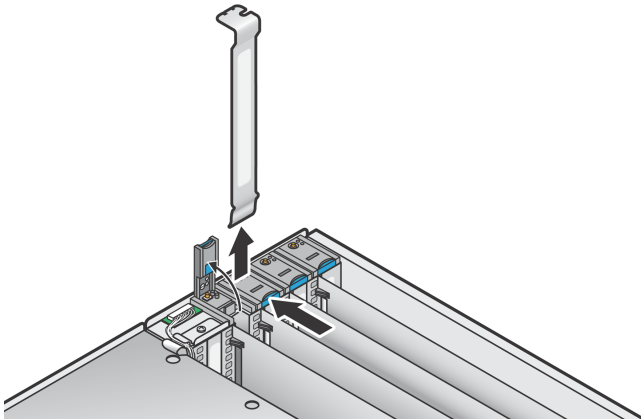
FIGURE 6 Removing a Vertical PCI Card That Has an MRL
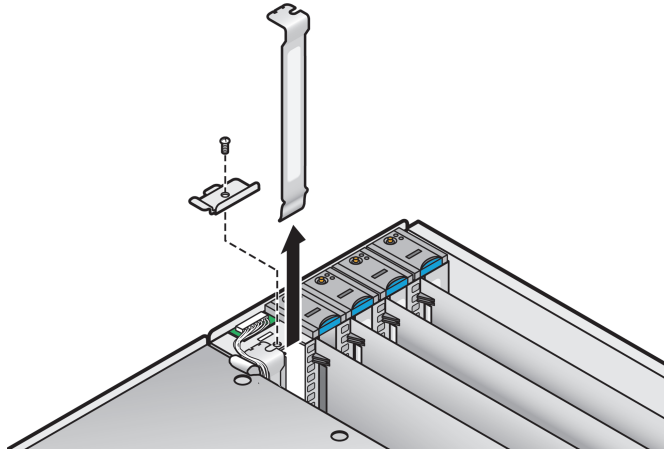
FIGURE 7   Removing a Vertical PCI Card That Does Not Have an MRL

5. **Remove the card you are replacing. If the slot is blank, remove its metal slot cover from the back panel and remove any plastic air-baffle insert from the PCI slot.**

Caution – Before you power on a *Sun Fire V40z* server the *first time*, you must open the top cover and remove the packaging insert from the server's PCI slots to ensure proper air flow and cooling. You can discard this packaging insert, which serves as protection during shipping.

6. **Insert the new card into the slot. Push down evenly on both corners of the card to ensure it is seated correctly.**

7. **Secure the PCI card using one of the following two methods:**
   - If the slot has an MRL, close the MRL and push down on it until it clicks.
   - If the slot does not have an MRL, replace the retaining bracket and its single securing screw to the top of the card.

8. **If you are installing an LSI MegaRAID card, install a SCSI extender cable (otherwise, skip to Step 9). Perform the steps in "To Install a SCSI Extender Cable in a Sun Fire V40z Server (LSI MegaRAID Card)" on page 12, then continue with Step 9 of this procedure.**

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

To Install a PCI Card in a Horizontal Slot in a Sun Fire V40z Server

1. **Power off the system and remove the cover as described in "To Install a PCI Card in a Vertical Slot in a Sun Fire V40z Server" on page 7.**

2. **Remove the power supply cage assembly:**

   a. **Pull the metal handle on the top of the cage toward the server front so that the hinged cams lift the cage and disconnect it from the motherboard (see FIGURE 8).**

   b. **Lift the front of the cage and disengage its metal tabs from their mounting holes on the server back panel to remove it from the chassis.**
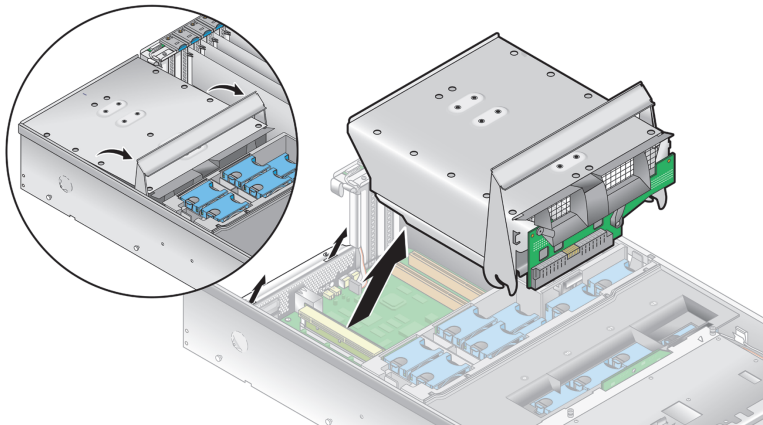
FIGURE 8   Removing the Power Supply Cage Assembly

3. **On the outside of the server back panel, loosen the screw holding the card latch (see FIGURE 9).**

4. **Raise the card latch as far as possible and then pivot it towards the rear of the chassis.**
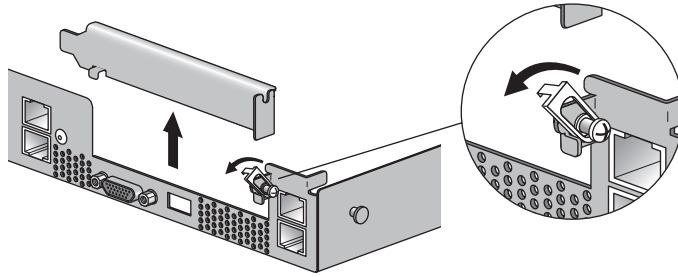
FIGURE 9   Removing the Horizontal PCI Card

5. **Remove any existing PCI card from the PCI riser. If the slot is blank, remove its metal slot cover from the server back panel.**

6. **Remove the PCI riser from the PCI card connector on the motherboard. Press on the connector-release levers to release the riser.**

7. **Install the new PCI card in the riser assembly (see** FIGURE 10**).**

8. **Reinstall the riser with card into the connector on the motherboard. Push down evenly on both corners of the riser until the release-levers close.**

9. **Pivot the back panel card latch up and then slide it down until it captures the PCI card bracket. Tighten the screw to secure the latch.**
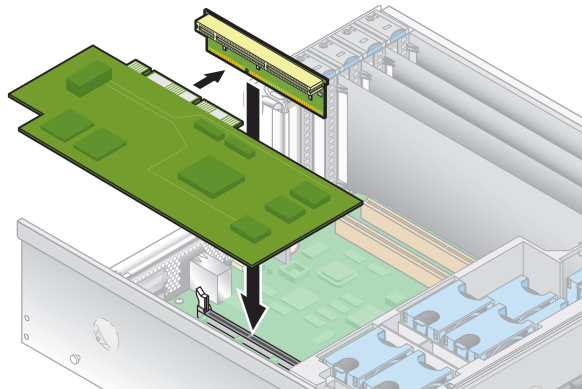
**FIGURE 10**   Installing the Horizontal PCI Card and Riser

10. **If you are installing an LSI MegaRAID card, install a SCSI extender cable (otherwise, skip to Step 12). Perform the steps in "To Install a SCSI Extender Cable in a Sun Fire V40z Server (LSI MegaRAID Card)" on page 12, then continue with Step 12 of this procedure.**

11. **Reinstall the power supply cage assembly:**

    a. **Insert the assembly into the chassis with the rear of the assembly angled downward and the assembly handle in the fully open position.**

    b. **Carefully insert the metal tabs on the rear of the assembly into their slots on the chassis back panel.**

    c. **With the tabs in place, set the front of the assembly down on the motherboard connector.**

    d. **Press the metal handle on the top of the assembly down until the connectors on the motherboard engage with the assembly backplane.**

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

To Install a SCSI Extender Cable in a Sun Fire V40z Server (LSI MegaRAID Card)

If you are installing an LSI MegaRAID card, you must install the SCSI extender cable that is shipped with the card:

1. **If you have not already done so, remove the power supply cage assembly, as described in "To Install a PCI Card in a Horizontal Slot in a Sun Fire V40z Server" on page 10.**

2. **Disconnect the server's SCSI signal cable from the motherboard.**

   See FIGURE 11 for the location of the SCSI signal cable motherboard connector.

SCSI signal cable
motherboard-connector
location under power-supply cage
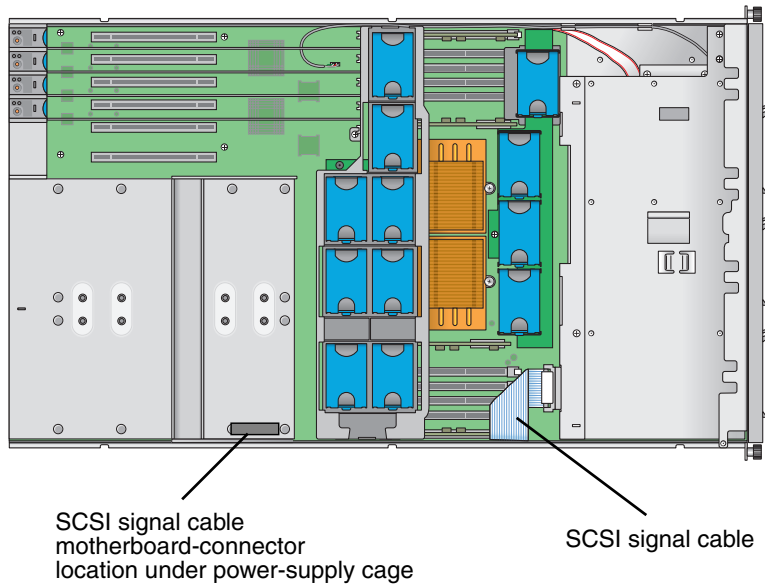
SCSI signal cable

FIGURE 11 SCSI Signal Cable

3. **Plug the end of the extender cable that is labeled, "SCSI Cable" into the SCSI signal cable that you disconnected from the motherboard.**

4. **Plug the other end of the extender cable, which is labeled, "SCSI CNTRLR Board," into the LSI MegaRAID card connector.**

   Lay the extender cable over any existing cards.

5. **Reinstall the power supply cage assembly as described in "To Install a PCI Card in a Horizontal Slot in a Sun Fire V40z Server" on page 10.**

Part Number: 817-5274-12

November 2004, Revision A

PCI Cards in the Sun Fire V20z and Sun Fire V40z Servers