

General Installation Instructions



This chapter describes general instructions for installing the ZX board into a SPARCstation, SPARCsystem, or Ultra system.

Chapters 3 through 7 describe how to install the ZX board into different Sun workstations. We recommend that you read the *Installation Guide* that came with your system for detailed information.

You should allow about 30 to 60 minutes to complete the installation.

Installation Kit

The ZX installation kit includes the following:

- ZX Graphics Accelerator SBus board (inside an antistatic envelope)
- Antistatic wrist strap
- ZX Graphics Accelerator Installation Manual (Part Number 800-7213-11)
- Bumpers (three)
- Standoffs (three)
- Nylon screws (three)
- Adapter bracket
- Screws for adapter bracket (three)

To install the ZX Graphics Accelerator in an Ultra 1 system, you will also need the “ZX Ultra 1 Kit,” part number 595-4072-01. This kit includes the following:

- ZX Graphics Accelerator Installation Manual (Part Number 800-7213-11)
- Flat ribbon cable (for SBus connection)
- Ferrite core (see “Stereo Cable on the Ultra 1 System” on page 84)

Tools Needed

The ZX installation procedure does not require any special tools. You only need the following:

-
- Small size Phillips screwdriver #1
 - Medium size Phillips screwdriver #2
 - Medium size flat screwdriver #2
 - Antistatic wrist strap (provided)
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Installation Warnings

Be sure to read and carefully follow the warnings below before beginning the installation procedure.



Caution – Do not open the antistatic envelope containing the ZX board until instructed to do so. Some devices on Sun printed circuit boards are very sensitive to electro-static charges that can be built up in the human body and discharged when you touch the board.

Before handling any board, make sure that you have placed your hand on a conductive surface that is grounded to a common earth ground (such as the metal screws on an ac receptacle cover) to discharge any static electricity in your body. When in doubt, use a grounding wrist strap.

When handling or installing the ZX Graphics Accelerator board, handle the board only by the outer edges. In particular, **do not press anywhere in the area of the board shown in Figure 2-1.**

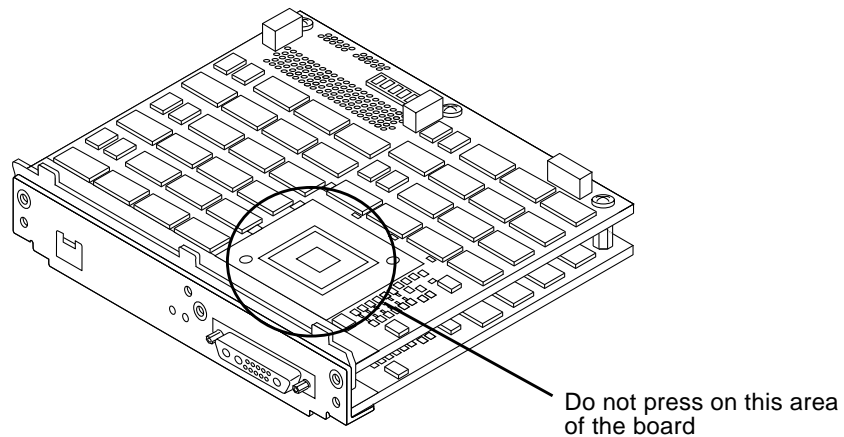


Figure 2-1 ZX Graphics Accelerator Board

System Shut Down

The way you turn off the power depends on whether your system is working normally, as described in the next sections.

When System is Working Normally

1. **Save all your work.**
2. **Exit the windowing environment.**
If you are in a windowing environment, exit from it and wait for the system prompt to appear.
3. **Become superuser, execute the `touch` command, and halt the system.**
The `touch` command allows the system to recognize the newly installed device after power is applied to the system.
 - a. **At the system prompt, type `/usr/bin/su` and press Return.**
 - b. **Type your *superuser password* and press Return.**
 - c. **Type `touch /reconfigure` and press Return.**
 - d. **Type `/usr/sbin/halt` and press Return.**

```
example% /usr/bin/su
Password: Type your superuser password. The password does not appear on the screen.
example# touch /reconfigure
example# /usr/sbin/halt
```

4. **Watch for the following messages:**

```
Syncing file systems ... [1][1]done
Halted
Program Terminated
ok
```

When these messages appear, you can safely turn off the power to the system unit.

5. Turn off the power in sequence to:

- a. External drive (if any)**
- b. System unit**
- c. Monitor**



Caution – Always allow 10 seconds between turning off the power and turning it back on again. This pause prevents possible damage to power supply components in the system unit.

When System Does Not Respond Normally

If your system does not respond to the mouse or normal keyboard strokes, follow this procedure to turn off the power:

1. If your system is on a network, wait a few minutes before turning off the power.

Your system's slow response might be due to NIS problems or network delays.

2. Press L1-a keys or the Break key. If you use a Type 5 keyboard, press the Stop-a keys.

If you use a Wyse WY-50, VT100, or compatible terminal as the console with your SPARCstation system unit, press Break instead of L1-a.

Pressing L1-a, Stop-a, or Break puts the system into the PROM (Programmable Read-Only Memory) monitor command mode. The monitor command prompt is indicated on the screen with `ok`.

If you see that prompt on the screen, continue with the procedure. If you do not see the `ok` prompt at this time, go to step 9 and turn off your system power.

Note – If the system does not respond to the mouse and keyboard at all, pressing L1-a, Stop-a, or Break will not be effective. You may have to turn the power off, wait 10 seconds, and then turn the power on. Try pressing L1-a, Stop-a, or Break again.

3. At the `ok` prompt, type `boot` and press Return.

```
ok boot
system messages
(Banner appears)
system messages
system messages

example login:
```

4. Log in as superuser and halt the system.

- a. At the system prompt, type `root` and press Return.
- b. Type your *superuser password* and press Return.
- c. Type `touch /reconfigure` and press Return.
- d. Type `/usr/sbin/halt` and press Return.

5. Wait for the following messages:

```
Syncing file systems ... [1][1]done
Halted
Program Terminated
ok
```

When these messages appear, you can safely turn off the power to the system unit.

6. Turn off the power in sequence to:

- a. External drives (if any)
- b. System unit
- c. Monitor



Caution – Always allow 10 seconds between turning off the power and turning it back on again. This pause prevents possible damage to power supply components in the system unit.

What's Next

Choose the appropriate installation procedure for your particular system type:

System Type	Installation Procedure
SPARCstation LX SPARCclassic	Chapter 3, "Installing the ZX Board in a Two-slot SPARCstation" on page 13
SPARCstation 10 SPARCstation 20	Chapter 4, "Installing the ZX Board in a Four-slot SPARCstation" on page 27
Ultra 1 Creator Series workstation	Chapter 5, "Installing the ZX Board in the Ultra 1 Workstation" on page 41
Ultra 2 Creator Series workstation	Chapter 6, "Installing the ZX Board in the Ultra 2 Workstation" on page 53.
SPARCserver 1000 SPARCcenter 2000	Chapter 7, "Installing the ZX Board in a Deskside or Data Cabinet System" on page 55

