



# Sun Blade™ 100 Motherboard Update and Sun PGX64 Patch Procedures

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For Sun Blade 100 Systems with the Solaris™ 8  
10/00, 1/01, or 4/01 Operating Environments

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# Sun Blade 100 Motherboard Update and Sun PGX64 Patch Procedures

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## Procedure Overview and Patch Description

Installing a new motherboard into the Sun Blade™ 100 may cause the system monitor to go blank if the system is using certain Solaris™ releases. A patch resolves the problem. To order the patch kit, contact your Sun service representative.

This procedure is only required for Sun Blade 100 workstations with motherboard part number 375-3106 *and* one of these Solaris releases:

- Solaris 8 10/00
- Solaris 8 1/01
- Solaris 8 4/01

These procedures should only be performed by experienced system administrators or authorized Sun service representatives.

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**Note** – There are two main procedures in this document. Each procedure is distinctly different depending on the system configuration. Be sure to follow the correct procedure for your system.

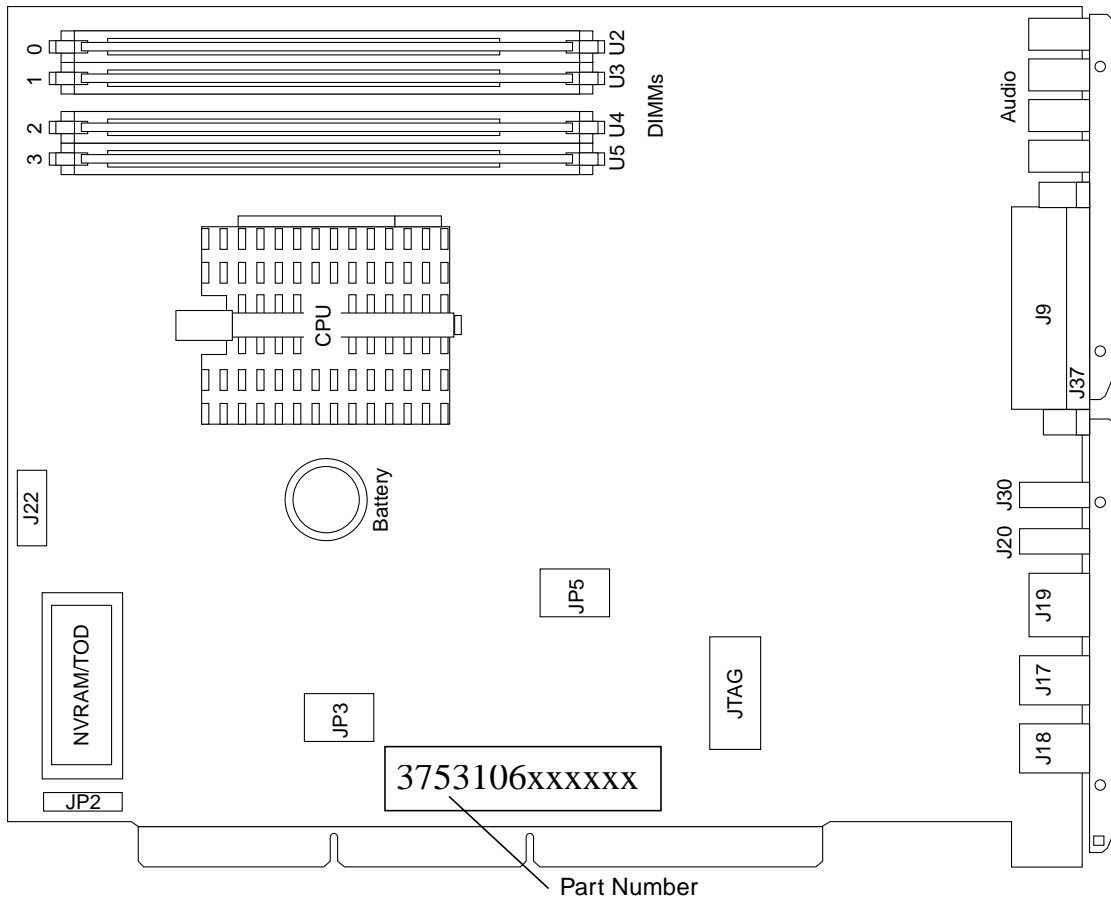
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- Patch Procedure 1 is necessary if your Sun Blade 100 workstation *is currently operating* with Solaris 8 10/00, 1/01, or 4/01 and requires a new motherboard, part number 375-3106.

- Patch Procedure 2 is necessary if you have a workstation that already has a motherboard, part number 375-3106, with Solaris 8 7/01 or later installed, *and you want to install an earlier version of Solaris 8 (10/00, 1/01, or 4/01)*.

## Identifying the Motherboard

All motherboards that require the patch will have part number 375-3106 on a label or silk-screened onto the board. See FIGURE 1.



**FIGURE 1** The Motherboard Part Number Label or Silkscreen is Near the Edge Connector

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# Removing and Replacing the Motherboard, CPU, and DIMMs

## Required Tools and Documentation

- A #2 Phillips screwdriver
- *Sun Blade 100 Service Manual*, 806-3416

Follow the procedures in the *Sun Blade 100 Service Manual*, Chapter 8, “Removing and Replacing the Motherboard and Related Components.”

The service manual was provided on a CD-ROM that shipped with your workstation. The service manual is online at:

<http://www.sun.com/documentation>

Click the following links:

Additional Hardware Documentation -> Desktop & Workstation -> Sun Blade Workstations. Then click on the link for the Sun Blade 100.

## Motherboard Replacement Procedure

- 1. Follow the procedures in the *Sun Blade 100 Service Manual* to remove the CPU and DIMMs from the original motherboard.**
- 2. Install the CPU and DIMMs onto the new motherboard.**
- 3. Install the new motherboard into the Sun Blade 100 workstation.**
- 4. Connect all the cables to the system.**

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# Patch Procedure 1: Installing the Sun PGX64 Patch on Sun Blade 100 Workstations with Solaris 8 10/00, 1/01, or 4/01

## Required Tools

- Sun PGX64 CD

## Before You Begin

Only use this procedure if your Sun Blade 100 workstation *is currently operating with Solaris 8 10/00, 1/01, or 4/01*.

## Adding the PGX64 Patch

1. **Power on the system.**
2. **As soon as you see the Sun Blade 100 system banner, press Stop-A.**

```
Sun Blade 100 (UltraSPARC-IIe), Keyboard Present
Copyright 1998-2002 Sun Microsystems, Inc. All rights reserved.
OpenBoot 4.6, 128 MB memory installed, Serial #516xxxxxx.
Ethernet address 0:x:xx:xx:xx:xx, Host ID: 8x1x3xxx.
```

The system stops loading the Solaris operating environment and displays the `ok` prompt.

3. **Boot the system in single user mode by typing:**

```
ok boot -s
```

The system boots and asks for your root password.

```
Resetting...
...
INIT: SINGLE USER MODE
Type control-d to proceed with normal startup
(or give root password for system maintenance)
```

**4. Type the root password and press the Enter key.**

The system displays the # prompt indicating that you are superuser.

**5. Insert the PGX64 CD into the CD-ROM drive.**

**6. At the # prompt, type:**

```
# mkdir /cdrom
```

**7. Type:**

```
# cd /
```

**8. To mount the CD-ROM, type:**

```
# mount -F hsfs /dev/dsk/c0t1d0s0 /cdrom
```

**9. To access the directory on the CD-ROM which contains the patches, type:**

```
# cd /cdrom/Solaris_8/Patches
```

**10. Type `ls` to determine the latest patch revision contained on the CD-ROM:**

```
# ls
108606-09
```

11. Type the `patchadd` command using the exact patch number in the `/Patches` directory:

```
# patchadd 108606-09
```

The system shows the packages being added and returns you to the command prompt.

12. Power off the system.

The patch procedure is complete.

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## Patch Procedure 2: Installing Earlier Solaris 8 Operating Environments and the Sun PGX64 Patch on Sun Blade 100 Workstations with Solaris 8 7/01 or Later

Use this procedure if you have a workstation that has a motherboard part number 375-3106 with Solaris 8 7/01 (or later) installed and you want to install Solaris 8 10/00, 1/01, or 4/01.

### Required Tools

- Solaris 8 10/00, 1/01, or 4/01 media kit
- Sun PGX64 CD

### Recommended TTY Connection Procedure

If possible, you should use a TTY connection to install the Solaris 8 operating environment and the PGX64 patch.

If you don't use the TTY procedure, you must complete an immediate system shutdown after installing Solaris 8 10/00, 1/01, or 4/01. Therefore, you may have to run `fsck` to clean the file system. The immediate shutdown is necessary because the PGX 64 patch is added after installing the Solaris 8 operating environment and the system monitor is blank until the PGX64 patch is installed.



If you use the TTY connection to install the Solaris 8 operating environment and the PGX64 patch, you can complete an orderly shutdown procedure and avoid the blank monitor problem and any file system repairs.

**1. Power on the Sun Blade 100 workstation.**

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**Note** – If you will *not* use a TTY connection, begin your procedure with “Installing the Solaris 8 Operating Environment” on page 8.

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**2. At the `ok` prompt, type `printenv` to check the OpenBoot PROM parameters for the input and output devices:**

```
ok printenv
```

**3. Set the `input-device` to `TTYA`:**

```
ok setenv input-device TTYA
```

**4. Set the `output-device` to `TTYA`:**

```
ok setenv output-device TTYA
```

**5. Reset the OpenBoot PROM parameters:**

```
ok reset-all  
resetting...
```

The TTY procedures are complete for the Sun Blade 100 system. Now set the remote console to communicate with the Sun Blade 100 system.

**6. Connect the remote console device to the TTYA serial port.**

**7. Using the remote console, access the `ok` prompt and boot the Sun Blade 100 system in single user mode:**

```
ok boot -s
```

Both systems are now ready for the Solaris 8 installation and the PGX64 patch installation.

# Installing the Solaris 8 Operating Environment

1. Install the Solaris 8 operating environment by following the directions provided in your Solaris media kit.

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**Note** – Following the Solaris installation, the workstation monitor is blank. *If you are not using a TTY connection*, an immediate shutdown sequence is required before you can add the PGX64 patch. If you *are* using a TTY connection, an orderly shutdown is possible.

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2. If you are using a TTY connection, halt the Sun Blade 100 system by typing `sync` and `halt` at the remote console:

```
# sync
# halt
```

Skip Step 3 and proceed with PGX64 patch installation.

3. If you are *not* using a TTY connection:
  - a. Press and hold the power button for four seconds to power off the Sun Blade 100 system.  
Wait at least five seconds before powering on the system.
  - b. Power on the Sun Blade 100 system again by pressing the power button.

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**Note** – You may need to run the `fsck` command to clean the file system after the power off and power on sequence.

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## Adding the Sun PGX64 Patch

1. If you have not already powered on the Sun Blade 100 workstation, power on the workstation now.

**2. As soon as you see the Sun Blade 100 system banner, press Stop + A.**

```
Sun Blade 100 (UltraSPARC-IIe), Keyboard Present
Copyright 1998-2002 Sun Microsystems, Inc. All rights reserved.
OpenBoot 4.6, 128 MB memory installed, Serial #516xxxxxx.
Ethernet address 0:x:xx:xx:xx:xx, Host ID: 8x1x3xxx.
```

The system stops loading the Solaris operating environment and stops at the ok prompt.

**3. Boot the Sun Blade 100 system in single user mode by typing:**

```
ok boot -s
```

The system boots and asks for your root password.

```
Resetting...
...
INIT: SINGLE USER MODE
Type control-d to proceed with normal startup
(or give root password for system maintenance)
```

**4. Enter the root password and press the Enter key.**

The system displays the # prompt indicating that you are superuser.

**5. Insert the PGX64 CD into the CD-ROM drive.**

**6. At the # prompt, type:**

```
# mkdir /cdrom
```

**7. Type:**

```
# cd /
```

**8. To mount the CD-ROM, type:**

```
# mount -F hsfs /dev/dsk/c0t1d0s0 /cdrom
```

9. To access the directory on the CD-ROM which contains the patches, type:

```
# cd /cdrom/Solaris_8/Patches
```

10. Type `ls` to determine the latest patch revision contained on the CD-ROM:

```
# ls
108606-09
```

11. Type the `patchadd` command:

```
# patchadd 108606-09
```

The system shows the packages being added and returns you to the command prompt.

12. If you are using a TTY connection, redirect the system to the OK prompt by typing:

```
# sync
# halt
```

If you are using a TTY connection, you should reset the Sun Blade 100 OpenBoot PROM `input-device` and `output-device` parameters to keyboard and screen.

13. Set the Sun Blade 100 `input-device` to keyboard:

```
ok setenv input-device keyboard
```

14. Set the Sun Blade 100 `output-device` to screen:

```
ok setenv output-device screen
```

15. Reset the Sun Blade 100 OpenBoot PROM parameters:

```
ok reset-all
resetting...
```

The Sun Blade 100 workstation reboots.