Sun Blade™ 150 Product Notes

Sun Microsystems, Inc.
www.sun.com

Submit comments about this document at: http://www.sun.com/hwdocs/feedback

Sun Blade 150 Product Notes

The *Sun Blade 150 Product Notes* contain late-breaking information about changes to software, hardware, and documentation that became known after the Sun Blade™ 150 workstation was released:

Software Changes and Patch Information

New Preinstalled Software

New software and patches are available with newly shipping Sun Blade 150 systems:
- Dual-Boot Image
- Solaris Operating Environment Patches
- Sun ONE Studio 4, Community Edition
- Sun ONE Grid Engine

Dual-Boot Image

The Sun Blade 150 now includes a dual-boot image. During the system setup you can choose either a Solaris 8 or Solaris 9 operating environment. You can choose only one Solaris operating environment. After you choose an operating environment, the system automatically erases the other Solaris operating environment.

These are the partitions that remain after you choose the Solaris operating environment. The partitions sizes are the same for both the Solaris 8 operating environment and the Solaris 9 operating environment.

- Hard drive root partition - 10.0 Gbytes (10240 Mbytes)
- Hard drive swap partition - 0.5 Gbytes (512 Mbytes)
- Hard drive space partition - the remainder of the primary hard drive

Verifying System Configuration With the Sun Install Check Tool

Note – Install Check is an optional configuration verification tool. Sun Microsystems encourages its use for customer satisfaction.

The Install Check tool verifies and provides information about your Sun Blade 150 workstation's configuration. Before you can run Install Check, you need to download it from the web.

Downloading Install Check

1. **As superuser of the Sun Blade 150 system, open a web browser and go to the Install Check URL:**

   http://wwws.sun.com/software/installcheck/index.html

   Note – Documentation on the use of Install Check is available at this URL.

2. **Click Get the Software.**

3. **Click Download Sun Install Check Tool.**

4. **Log in with your My Sun[SM], Sun Store, or SunSolve[SM] username and password.**

   Note – If you are not a registered user, click Register Now and register.

5. **Read and agree to the licensing terms.**

6. **Click on the download icon and save the** icapp.bin **file to a download directory.**

7. **Go to the download directory and set the** `icapp.bin` **file as executable:**

```
# chmod +x icapp.bin
```

Running Install Check

1. **Log in as superuser of the system and in a terminal window, run the** `icapp.bin` **application:**

```
# ./icapp.bin -i cli
```

2. **If this is the first time Install Check is run, register your system information:**

   a. **Complete all information marked with an asterisk (*).**

   Note – You can find your system host ID by typing the `hostid` command in a terminal window.

   ---

   b. **Select 1. Return to the Main Menu.**

3. **From the Main Menu, select 1. Check System.**

   The application checks the system. A message states that a report is available in the `/var/opt/SUNWinchk/reports` directory. The report name is a date and time stamp.

4. **From the Main Menu, select 4. Exit.**

   The Install Check application ends.

5. **Use a text editor to read the Install Check report.**

Solaris Operating Environment Patches

TABLE 1 shows a partial list of patches that are preinstalled on the Sun Blade 150 workstation. If you remove and reinstall any of these Solaris operating environments from your system, you must also reinstall the appropriate patches.

If you install one of these Solaris operating environments on a new hard drive, you must also install the appropriate patches.

Note – To restore the workstation software to minimal configuration, see page 32 of the *Sun Blade 150 Getting Started Guide* (816-1161).

"Installing Patches From SunSolve" on page 5 of these product notes describes how to determine which patches are installed on your system. You can also use the automated Install Check tool described in "Verifying System Configuration With the Sun Install Check Tool" on page 2.

For information about smart card reader patches, see "Smart Card Reader II" on page 16.

Note – Always check the Sun web site for the latest compatible Solaris operating environment, firmware, and software updates for your workstation. For more information, see "Installing Patches From SunSolve" on page 5.

TABLE 1 Required Patches for the Sun Blade 150 Workstation

Patch Description	Solaris 8 5/03	Solaris 9 4/03
Sun XVR-100 Graphics Accelerator Patch	114537-19	114538-20
Solaris 8 5/03 Japanese SunOS 4.x (BCP) Patch (for Japanese locale only)	114152-01	N/A
Sun XVR-500 graphics*	108576-44	112540-17
Sun VTS 5.1 Patch Set 2	113614-12	113614-12
Solaris kernel patch	108528-20	112233-08
`patchadd` and `patchrm`	108987-12	112951-04
ERI Driver	110723-05	N/A
`usr/bin/mail`	111874-06	N/A
Sun GigaSwift Ethernet	111883-14	N/A
Smart Card Terminal	110457-05	N/A
Smart Card Reader	109887-16	N/A
USB and audio framework patch	109896-13	N/A
Sun GigaSwift Ethernet	N/A	112817-06

TABLE 1 Required Patches for the Sun Blade 150 Workstation *(Continued)*

Patch Description	Solaris 8 5/03	Solaris 9 4/03
platform /sun4u/cprboot patch	N/A	114360-01

N/A = This patch is not required for this Solaris operating environment.

* Graphics accelerator patches are required only if that graphics accelerator is installed on your workstation.

Installing Patches From SunSolve

1. **Check your Solaris release date:**

```
% cat /etc/release |grep So
Solaris 8 2/02 s28s_u7wos_08a SPARC
```

In this example, the release date is 2/02.

2. **Check your installed patches:**

```
% showrev -p|nawk '{print $2}'|sort
```

This command lists all installed patches in ascending numeric order.

3. **If any patches are outdated or missing, go to the SunSolve web site at:**

```
http://www.sunsolve.sun.com
```

4. **Click the Patchfinder link or the Patches link.**

5. **Find and download the newest versions of the patches for the Solaris operating environment installed on your workstation.**

Newer patches are signified by higher dash (–) numbers.

6. **As superuser, install the patches with the** patchadd **command.**

For example:

```
# patchadd -M /download-directory 109887-13 110457-05
```

Where *download-directory* is the directory to which you will download the patches.

Avoiding Colormap Flash With the Sun XVR-100 Graphics Accelerator

The Sun XVR-100 graphics accelerator ships configured to 24-bit color depth.

If you experience colormap flashing (incorrect colors or color changes), your Sun XVR-100 graphics accelerator might be incorrectly configured. Perform one of the following procedures to set 24-bit or 8+24-bit color depth.

▼ Setting to 24-bit Color Depth

1. **Using the** `fbconfig` **command, set the Sun XVR-100 graphics accelerator to 24-bit color depth.**

   ```
   % fbconfig -dev pfb0 -depth 24
   ```

2. **Log out, then log back in for the change to take effect.**

   Note – 24-bit mode performance might be slower than 8-bit color depth mode.

▼ Setting to 8+24-bit Color Depth

If you require that both 8-bit and 24-bit graphics be run simultaneously (8+24-bit color depth), the Sun XVR-100 graphics accelerator patch must first be installed.

- Solaris 8: 114537-19 or later
- Solaris 9: 114538-20 or later

1. **As superuser, download and install the appropriate patch.**

   a. **Go to the Sun website:**

   http://sunsolve.sun.com

   b. **Click the Patchfinder link.**

   c. **Enter patch id** `114537` **for Solaris 8, or** `114538` **for Solaris 9 into the field and click Find Patch.**

   d. **Download the patch.**

   e. **Unzip the patch.**

   This example unzips the Solaris 8 version of the patch:

   ```
   # unzip 114537-19.zip
   ```

f. Install the patch. For example:

```
# patchadd 114537-19
```

g. After the patch installation is complete, reboot the system:

```
# reboot
```

2. **Using the** fbconfig **command, set the Sun XVR-100 graphics accelerator to 8+24-bit color depth.**

```
% fbconfig -dev pfb0 -fake8 enable
```

Note – The command fbconfig -dev pfb0 -fake8 disable turns off 8+24-bit mode and return to the previous color depth mode.

3. **Log out, then log back in for the change to take effect.**

Note – 8-bit color depth performance is slower in 8+24-bit mode.

For more information on the Sun XVR-100 graphics accelerator, read the
Sun XVR-100 Graphics Accelerator Installation Guide, 816-7560, at this web site:

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

New Netscape Communicator Installation Script

Netscape™ Communicator 4.x is installed on the hard drive image. However,
Netscape Communicator 7.x is spooled on the hard drive in the following directory:

/opt/spool/NSinstaller

Note – If you install Netscape 7.x it will not overwrite Netscape 4.x.

To install Netscape Communicator 7.x, type the following command in a terminal window:

```
%  /opt/spool/NSinstaller/NSinstaller
```

This information updates page 29 of the *Sun Blade 150 Getting Started Guide*, 816-1161.

SunVTS and Error Reporting

SunVTS™ 5.1 is preinstalled on the Sun Blade 150 workstation. There are known issues with Sun VTS 5.1. If you run sutest and disktest simultaneously, you might see messages reporting data corruption. These messages might be invalid.

To assure valid test results, be sure to:

- Deselect disktest when you run sutest.
- Deselect sutest when you run disktest.

If you are running graphics tests and you press a key on the keyboard, the system may hang. Do not touch the keyboard until the SunVTS graphics tests are completed.

StarOffice Software Installation Pathname

Page 23 of the *Sun Blade 150 Getting Started Guide,* 816-1161, contains a typographical error in the StarOffice™ software installation pathname. The correct pathname uses a lowercase letter "e" in "english".

/opt/office60/english/program/soffice

PC File Viewer Not Supported

PC File Viewer is no longer supported in the Solaris operating environment. Use StarOffice software to access PC file types.

Sun Grid Engine

Sun Grid Engine is distributed resource-management software that mediates the processing demands of users and the computational resources available over a wide area network of interconnected clients and servers. Through Sun Grid Engine software, idle computing resources joined to the grid in one location become available to distant users in another, thereby increasing the productivity of both the users and the resources.

Sun Grid Engine is spooled on your hard drive at:

`/opt/spool/sge/`

Before using Sun Grid Engine, see the Sun Grid Engine documentation at:

http://wwws.sun.com/software/gridware/sge.html

Click the following links: Use → Documentation

Sun ONE Studio 4, Community Edition

http://wwws.sun.com/software/sundev/jde/index.html

Sun ONE Studio is a Java programming environment. Sun ONE Studio is set on the foundation of the NetBeans™ open tools platform and augmented with J2EE™ support. Sun ONE Studio makes the development and deployment of J2EE applications easy for the professional and accessible to the novice.

More information is available at this web site:

http://wwws.sun.com/software/sundev/jde/index.html

XMCD Audio Player

XMCD is no longer preinstalled on the Sun Blade 150 workstation. You can download XMCD or obtain more information from the following web sites:

http://www.ibiblio.org/tkan/xmcd/

http://www.amb.org

This information updates page 24 of the *Sun Blade 150 Getting Started Guide*, 816-1161.

Unsupported OpenBoot Diagnostics Commands

The Sun Blade 150 workstation does not support the following commands in OpenBoot Diagnostics:

- `versions`
- `printenvs`

The OpenBoot Diagnostics commands, `versions` and `printenv`, were replaced with similar OpenBoot PROM commands.

`.version` Command

This is the `.version` OpenBoot PROM command with sample output:

```
ok .version
Release 4.10.6 Created 2003/06/06 12:30
OBP 4.10.6 2003/06/06 12:30
POST 2.0.1 2001/08/23 17:13
OBDIAG 4.10.6 2003/06/06 12:32
```

`Printenv` Command

The `printenv` command is an OpenBoot PROM command.

```
ok printenv
Variable Name        Value                          Default Value

test-args
diag-passes          1                              1
local-mac-address?   true                           true
fcode-debug?         false                          false
silent-mode?         false                          false
...
```

This information updates the *Sun Blade 150 Service Manual*, 816-4379.

Hardware Changes

CPU Thermal Monitoring

On Sun Blade 150 workstations, thermal management is not supported by the Solaris operating environment.

New circuitry on the motherboard provides thermal management independent of the Solaris operating environment. This circuitry automatically initiates a shut-down sequence if the CPU temperature is too high.

If the system is rebooted while the CPU is too hot, OpenBoot PROM issues an over-temperature warning and OpenBoot PROM will prevent the system from booting and remains at the ok prompt.

Note – This function is included on motherboards released after November 2003 with part number: 375-3152-xx. This motherboard requires OpenBoot PROM version 4.10 or later.

Sun XVR-600

The Sun XVR-600 graphics accelerator is now available for the Sun Blade 150 workstation. For more information, see this web site:

http://www.sun.com/desktop/products/graphics/XVR600/

http://www.sun.com/products-n-solutions/hardware/docs/html/817-2195-10/

SunPCi III Coprocessor Card

The Sun Blade 150 now supports the SunPCi™ III coprocessor card. The SunPCi III card drivers are preinstalled on the hard drive. You can find more information about the SuPCi III coprocessor card at the following web site:

http://www.sun.com/desktop/products/sunpci/articles.html

Correct Slot Placement for the SunPCi III Coprocessor Cards

For optimal cooling, install the SunPCi III coprocessor card into PCI card connector PCI-2 (J3) on the riser board.

If you install an XVR-100 graphics accelerator with the SunPCi card, install the XVR-100 graphics accelerator into connector PCI-3 (J1). Install the SunPCi III card into connector PCI-2 (J3) on the riser board.

Note – The SunPCi III card with two optional backplates fills all three PCI slots. You cannot install any other cards if you install both PCi card backplate options. FIGURE 1 and FIGURE 2 show the correct installation.
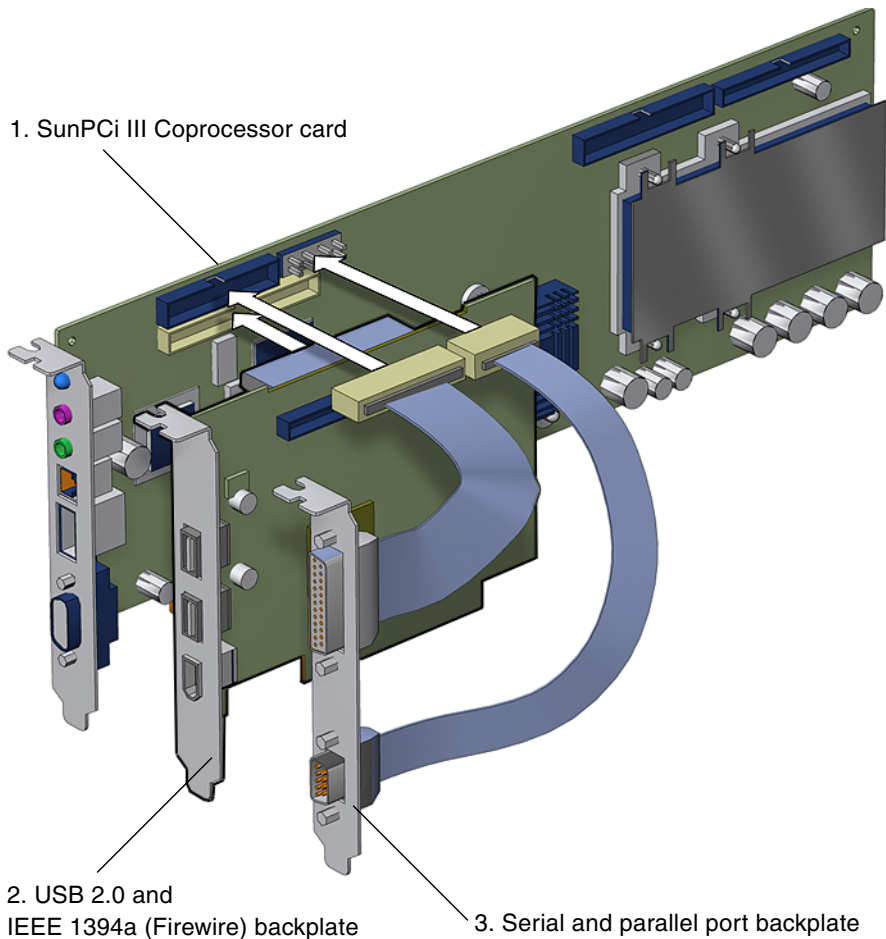
FIGURE 1   SunPCi III Coprocessor Card with Both Optional Backplates

If using both backplates, install the Firewire backplate in PCI-2, and the parallel/serial backplate in PCI-1.
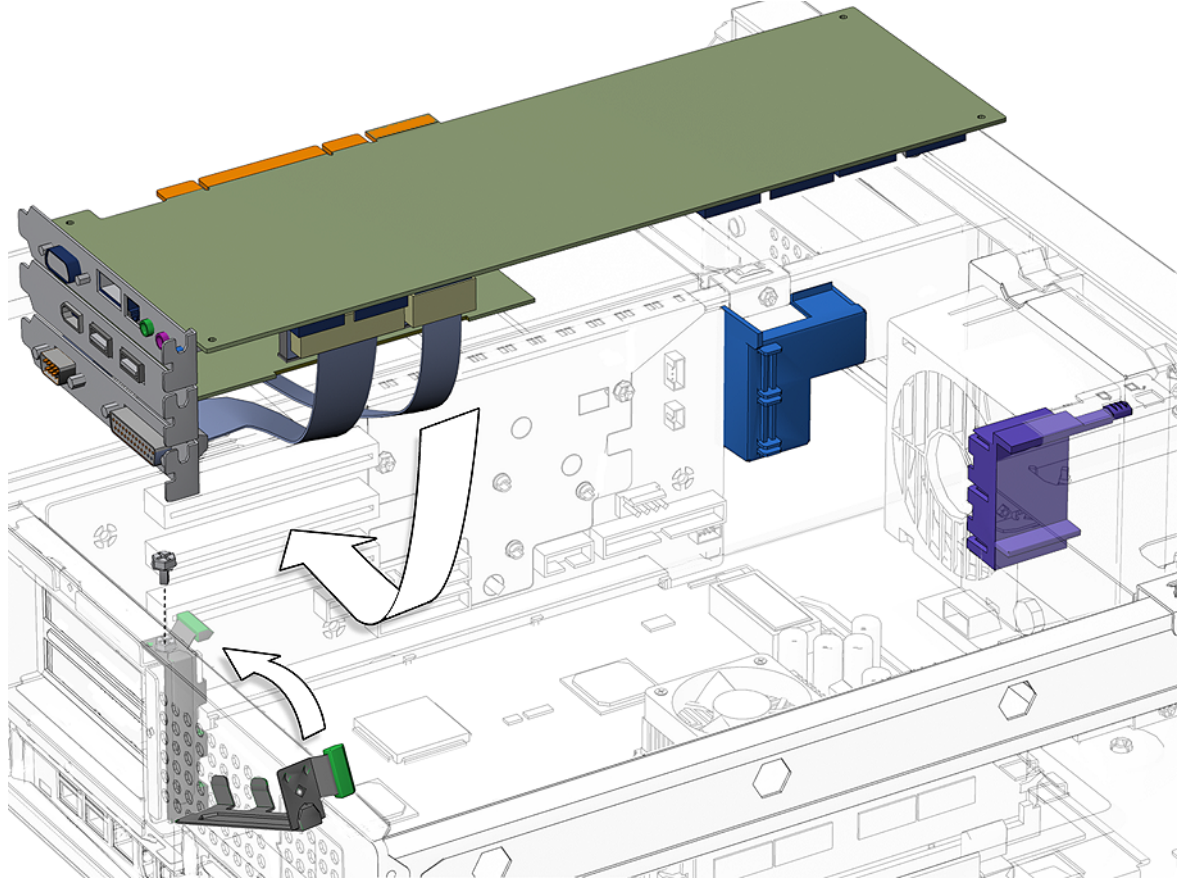
FIGURE 2 Installing SunPCi III Coprocessor Card with Both Backplates into Sun Blade 150 Workstation
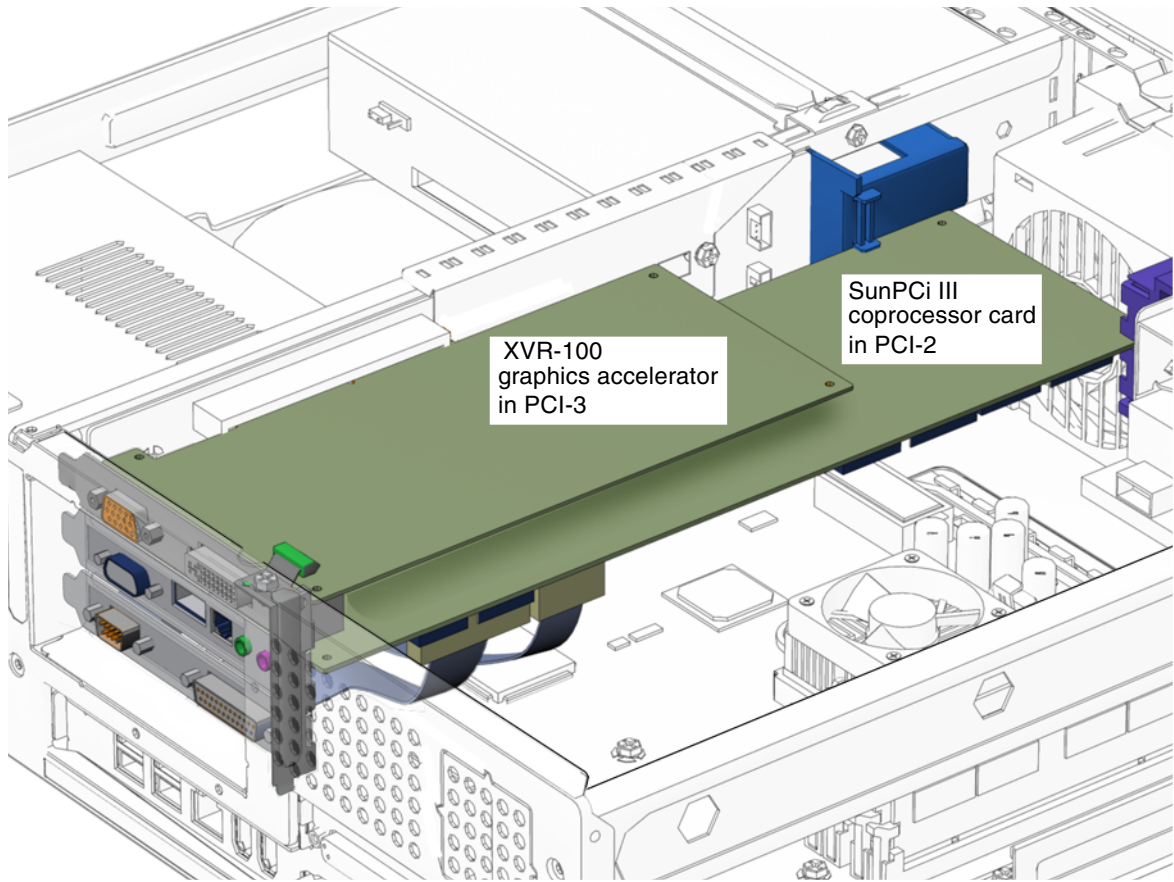
FIGURE 3 XVR-100 Graphics Accelerator with SunPCi III Coprocessor Card and Serial/Parallel Port Backplate

For complete installation instructions refer to the *SunPCi III Quick Start Installation Guide*, 817-4343.

This information updates Chapter 8, "Replacing a PCI Card", in the *Sun Blade 150 Service Manual*, 816-4379.

Memory Requirements for SunPCi III Coprocessor Cards

Before installing a SunPCi card into a Sun Blade 150 workstation, ensure that a minimum of 256 MB of SDRAM is installed on the workstation motherboard.

Maximum PCI Card Power Consumption

Maximum power consumption for all three PCI connectors is 50 watts. Do not install a combination of PCI cards and/or graphics accelerators that exceed 50 watts power consumption. To determine power consumption levels, check the specifications supplied with each PCI card or graphics accelerator.

CPU Jumpers Misidentified

The CPU jumper label is JP6, not JP3. The CPU jumpers on the motherboard were incorrectly identified in the *Sun Blade 150 Service Manual*, 816-4379, on pages 8-4, C-3, C-5, and C-15. FIGURE 4 shows the correct jumper labeling.
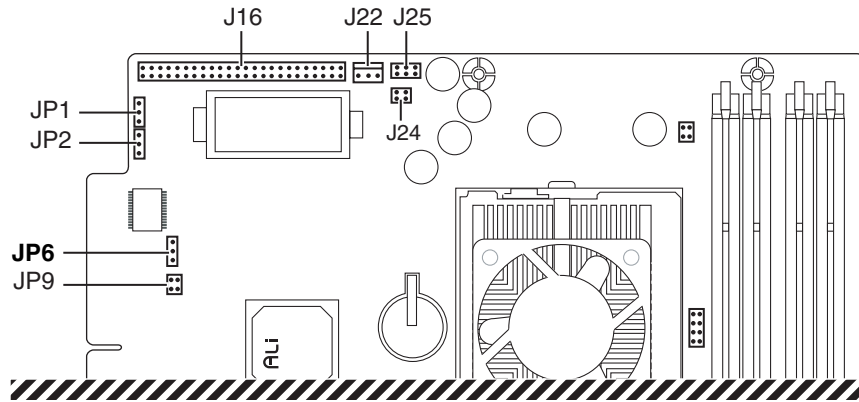
FIGURE 4   CPU Jumper, JP6

IEEE 1394 High-Speed Digital Interface

Before using a 1394 high-speed digital interface (Firewire) to connect a camera or video device to a Sun Blade 150 workstation, ensure that a minimum of 256 MB of SDRAM is installed on the workstation motherboard.

Installing or Replacing DIMMs

The *Sun Blade 150 Service Manual*, 816-4379, stated that the Sun Blade 150 workstation cannot be operated with three DIMMS. This information was incorrect.

You can install one, two, three, or four DIMMs in the Sun Blade 150 workstation.

The Sun Blade 150 workstation currently supports 128 MB, 256 MB, and 512 MB SDRAM, DIMM densities. You can mix DIMM sizes. (You can install DIMMs of any supported density in any DIMM connector on the workstation motherboard.)

Monitors

Some monitors require installation of the Sun 13W3 to VGA adapter cable. This optional adapter cable (X471a) can be obtained from your Sun marketing representative or the Sun store at:

http://store.sun.com/catalog/doc/BrowsePage.jhtml?catid=26828

Smart Card Reader II

Sun Blade 150 systems released after November 2003, do not require the Smart Card patches below. Older Sun Blade 150 systems require these patches if you are running the Solaris 8 02/02 operating environment.

Sun Blade 150 Required Patches for Support of Smart Card Reader II

Solaris Operating Environment	Patch Number	Description
Solaris 8 02/02	109887-12	Smart card core fixes
	110457-05	Internal card reader fixes

Note – Always check the Sun web site for the latest compatible Solaris operating environment, firmware, and software updates.

Smart card reader II also requires installation of Java Development Kit (JDK™) v1.2.2 build 11. To obtain this software update visit the Java web site at:

http://java.sun.com/products/jdk/1.2/download-solaris.html

Smart Card Reader II LED Indicator

Smart card reader II for the Sun Blade 150 workstation has a bi-color light emitting diode (LED) indicator. This LED indicates the operational status of the smart card and its reader.

TABLE 2   Operational Status of Smart Card and Reader

Color and Status of Smart Card II Reader LED	Smart Card Operational Status
Green, non flashing	Smart card (media) is correctly inserted into the smart card reader
Green, flashing	Data read/write to or from smart card (media) is occurring
Amber, non flashing	Smart card (media) not inserted correctly into the smart card reader

Documentation Changes

System Power-On

When the system is powered on you should hear a single beep. If you do not hear a beep upon power-on, diagnostics might be required.

This information updates page 10 of the *Sun Blade 150 Getting Started Guide*, 816-1161.

Documentation for the Sun Blade 150 Workstation

The following table is a summary of the documentation supporting the Sun Blade 150 workstation:

TABLE 3   Documentation for the Sun Blade 150 Workstation

Documentation	Format of Documentation	Part Number
Setting Up Poster	Print, CD-ROM, HTML	816-1162-10
Getting Started Guide	Print, English only English, French, German, Spanish, Italian, Swedish, Japanese, Korean, Simplified Chinese, Traditional Chinese, on both CD-ROM and `www.sun.com/ documentation`	816-1161 English 816-4216 French 816-4217 German 816-4218 Spanish 816-4219 Italian 816-4220 Swedish 816-4221 Japanese 816-4222 Korean 816-4223 Simplified Chinese 816-4224 Traditional Chinese
Service Manual	HTML and PDF on CD-ROM and `www.sun.com/ documentation/`	816-4379
Product Notes	`www.sun.com/ documentation`	816-1163
Documentation CD Insert	Print	818-0122
Safety and Compliance Information	Print	816-7190
Safety Compliance Guide	`www.sun.com/ documentation`	816-4779

Crossover Serial Cable for TIP Connections

The Sun Blade 150 workstation has a 9-pin serial connector. The *Sun Blade 150 Service Manual* incorrectly showed two 25-pin connectors for TIP crossover cable connections. FIGURE 5 and FIGURE 6 below show TIP crossover cable wiring for:

- 9-pin serial cable connector to 9-pin serial cable connector
- 9-pin serial cable connector to 25-pin serial cable connector
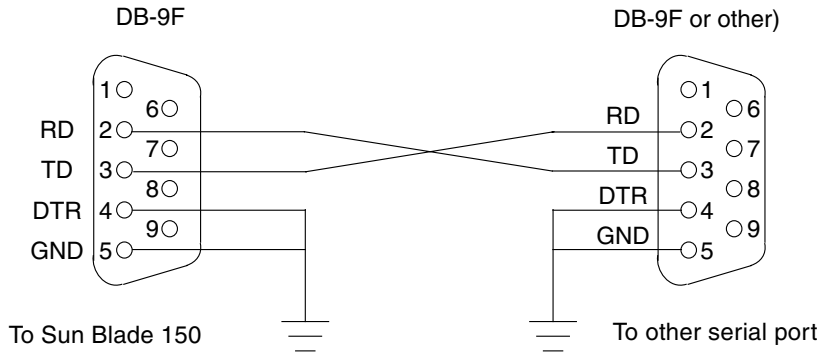
FIGURE 5   Crossover Serial Cable Wiring for TIP Connections   9-pin to 9-pin
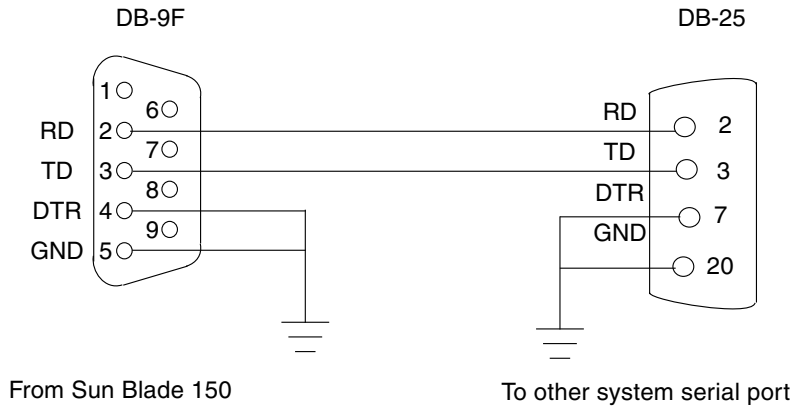
FIGURE 6   Crossover Serial Cable Wiring for TIP Connections   9-pin to 25-pin

Cables and adapters are available from most computer supply stores or from your Sun Microsystems sales representative. The following URL provides part numbers for adapters and other Sun cables:
http://sunsolve.sun.com/handbook_pub/Devices/
Cables/cables_ext_data.html

This information updates page 3-3 of the *Sun Blade 150 Service Manual*, 816-4379.

SDRAM Address Multiplexing

Refer to Appendix C, "SDRAM Address Multiplexing", in the *Sun Blade 150 Service Manual*, 816-4379.

Table C-4 incorrectly added signal names BA1 and BA0 to the SDRAM Address Multiplexing Scheme. Table C-4 was also missing the column labeled "512 Mbit".

The information originally contained within Table C-4 is now divided into tables C-4a and C-4b.

Table C-4a SDRAM Address Multiplexing

DIMM Pin No.	Signal Name	16 Mbit				64 Mbit				128 Mbit			
			x16x	x8	x4		x16	x8	x4		x16	x8	x4
		Row	Col	Col	Col	Row	Col	Col	Col	Row	Col	Col	Col
126	MA[12]												
123	MA[11]					A22	-	-	-	A22	-	-	A27
38	MA[10]	A21	0	0	0	A21	0	0	0	A21	0	0	0
121	MA[9]	A20	-	-	A24	A20	-	-	A26	A20	-	A26	A26
37	MA[8]	A19	-	A23	A23	A19	-	A25	A25	A19	A25	A25	A25
120	MA[7]	A18	A10	A10	A10	A18	A10	A10	A10	A18	A10	A10	A10
36	MA[6]	A17	A9	A9	A9	A17	A9	A9	A9	A17	A9	A9	A9
119	MA[5]	A16	A8	A8	A8	A16	A8	A8	A8	A16	A8	A8	A8
35	MA[4]	A15	A7	A7	A7	A15	A7	A7	A7	A15	A7	A7	A7
118	MA[3]	A14	A6	A6	A6	A14	A6	A6	A6	A14	A6	A6	A6
34	MA[2]	A13	A5	A5	A5	A13	A5	A5	A5	A13	A5	A5	A5
117	MA[1]	A12	A4	A4	A4	A12	A4	A4	A4	A12	A4	A4	A4
33	MA[0]	A11	A3	A3	A3	A11	A3	A3	A3	A11	A3	A3	A3

Table C-4b SDRAM Address Multiplexing Scheme

DIMM Pin No.	Signal Name	256 Mbit				512 Mbit			
			x16	x8	x4		x16	x8	x4
		Row	Col	Col	Col	Row	Col	Col	Col
126	**MA[12]**	A23	-	-	-	A23	-	-	A29
123	**MA[11]**	A22	-	-	A28	A22	-	A28	A28
38	**MA[10]**	A21	0	0	0	A21	0	0	0
121	**MA[9]**	A20	-	A27	A27	A20	A27	A27	A27
37	**MA[8]**	A19	A26	A26	A26	A19	A26	A26	A26
120	**MA[7]**	A18	A10	A10	A10	A18	A10	A10	A10
36	**MA[6]**	A17	A9	A9	A9	A17	A9	A9	A9
119	**MA[5]**	A16	A8	A8	A8	A16	A8	A8	A8
35	**MA[4]**	A15	A7	A7	A7	A15	A7	A7	A7
118	**MA[3]**	A14	A6	A6	A6	A14	A6	A6	A6
34	**MA[2]**	A13	A5	A5	A5	A13	A5	A5	A5
117	**MA[1]**	A12	A4	A4	A4	A12	A4	A4	A4
33	**MA[0]**	A11	A3	A3	A3	A11	A3	A3	A3