



Sun Blade™ 150 Product Notes

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Adobe PostScript

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” on page 1](#)
- [“Hardware Changes” on page 12](#)
- [“Documentation Changes” on page 19](#)

Software Changes and Patch Information

New Preinstalled Software

New software and patches are available with newly shipping Sun Blade 150 systems:

- [Dual-Boot Hard Drive Images](#)
- [Solaris Operating System Patches](#)

Dual-Boot Hard Drive Images

For a brief period, the Sun Blade 150 workstation includes the choice of two different dual-boot images.

- The old Solaris™ 9 and Solaris 8 dual-boot image is available until August 2005.
- The new Solaris 10 and Solaris 8 dual-boot image is available in May 2005.

You can choose only one Solaris OS. After you choose one OS, the system automatically erases the other Solaris Operating System.

Information About the New Solaris 10 and Solaris 8 Dual-Boot Hard Drive Image

Hard Drive Partitions

These are the partitions that remain after you choose either the Solaris 10 Operating System or the Solaris 8 Operating System.

- Hard drive root partition – 14.0 Gbytes
- Hard drive swap partition – 2.0 Gbytes
- Hard drive space partition – the remainder of the primary hard drive

Solaris 10 OS and Sun Java™ Desktop System

The Solaris 10 Operating System on this workstation comes preinstalled with the Sun Java™ Desktop System which includes StarOffice™. For more information, see:

<http://www.sun.com/software/javadesktopsystem/>

Sun Grid Engine

Sun Grid Engine is not preinstalled on the Solaris 10 and Solaris 8 dual-boot image. For more information see:

<http://www.sun.com/software/gridware/>

Mozilla and Netscape Communicator

For the Solaris 10 OS hard drive image, Mozilla is preinstalled. For the Solaris 8 OS hard drive image, Netscape™ Communicator 4.x and Netscape Communicator 7.x are both installed on the hard drive image. They are not spooled on the hard drive.

Information About the Old Solaris 9 and Solaris 8 Dual-Boot Hard Drive Image

Hard Drive Partitions

These are the partitions that remain after you choose either the Solaris 9 OS or the Solaris 8 OS.

- Hard drive root partition – 10.0 Gbytes
- Hard drive swap partition – 0.5 Gbytes
- Hard drive space partition – the remainder of the primary hard drive

Sun Grid Engine

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://www.sun.com/software/gridware/>

Click the following links: Use → Documentation

Netscape Communicator Installation Script

Netscape™ Communicator 4.x is installed on the hard drive image.

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
```

Information About Both Hard Drive Images

PC File Viewer Not Supported

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

Sun ONE Studio 4, Community Edition

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://www.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.

Verifying System Configuration With the Sun Install Check Tool

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://www.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 SunSM, Sun Store, or SunSolveSM 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 System 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 Systems, you must also reinstall the appropriate patches.

If you install one of these Solaris Operating Systems 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 8](#) 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 4](#).

For information about smart card reader patches, see [“Smart Card Reader II” on page 18](#).

Note – Always check the Sun web site for the latest compatible Solaris Operating System, firmware, and software updates for your workstation. For more information, see [“Installing Patches From SunSolve” on page 8](#).

TABLE 1 Required Patches for the Sun Blade 150 Workstation

Patch Description	Solaris 8 & 9 Dual Boot Image		Solaris 8 & 10 Dual Boot Image	
	Solaris 8 5/03	Solaris 9 4/03	Solaris 8 2/04	Solaris 10 3/05
Sun XVR-100 graphics accelerator patch	114537-19	114538-20	114537-28	
Solaris 8 5/03 Japanese SunOS™ 4.x (BCP) Patch (for Japanese locale only)	114152-01			
XVR-500* (Expert3D IFB Graphics Patch)	108576-44	112540-17	108576-49	
Sun VTS™ Patch Set	118956-01	118956-01	118956-01	
Solaris kernel patch	108528-20	112233-08		
patchadd and patchrm	108987-12	112951-04		
ERI driver	110723-05			
usr/bin/mail	111874-06			
Sun GigaSwift Ethernet	111883-14			
Smart card terminal	110457-05			
Smart card reader	109887-16			
USB and audio framework patch	109896-13			
Sun GigaSwift Ethernet		112817-06		
Platform /sun4u/cprboot patch		114360-01		
CDRW patch			118097-01	
OpenGL (32-bit)			113886-27	
OpenGL (64-bit)			113887-27	
XVR-600 (Sun XVR-1200 and Sun XVR-600 Graphics Accelerator Patch)			114554-19	
picld patch			117005-01	
* 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 OS 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 where you are downloading 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 web site:

<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/>

Unsupported OpenBoot Diagnostics Commands

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

- `versions`
- `printenvs`

These commands were replaced with similar *OpenBoot PROM* commands, `version` and `printenv`.

.version Command

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

```
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

This is the sample output of the `printenv` 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 System.

New circuitry on the motherboard provides thermal management independent of the Solaris Operating System. 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/>

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.

Memory Requirements for SunPCi IIIpro Coprocessor Cards

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

SunPCi IIIpro Coprocessor Card

The SunPCi IIIpro card drivers are preinstalled on the hard drive. You can find more information about the Sun PCi IIIpro coprocessor card at the following web site:

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

Correct Slot Placement for the SunPCi IIIpro Coprocessor Cards

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

Note – The SunPCi IIIpro card with two optional backplates fills all three PCI slots. You cannot install any other cards if you install both Sun PCi IIIpro card backplate options. [FIGURE 1](#) and [FIGURE 2](#) show the correct installation.

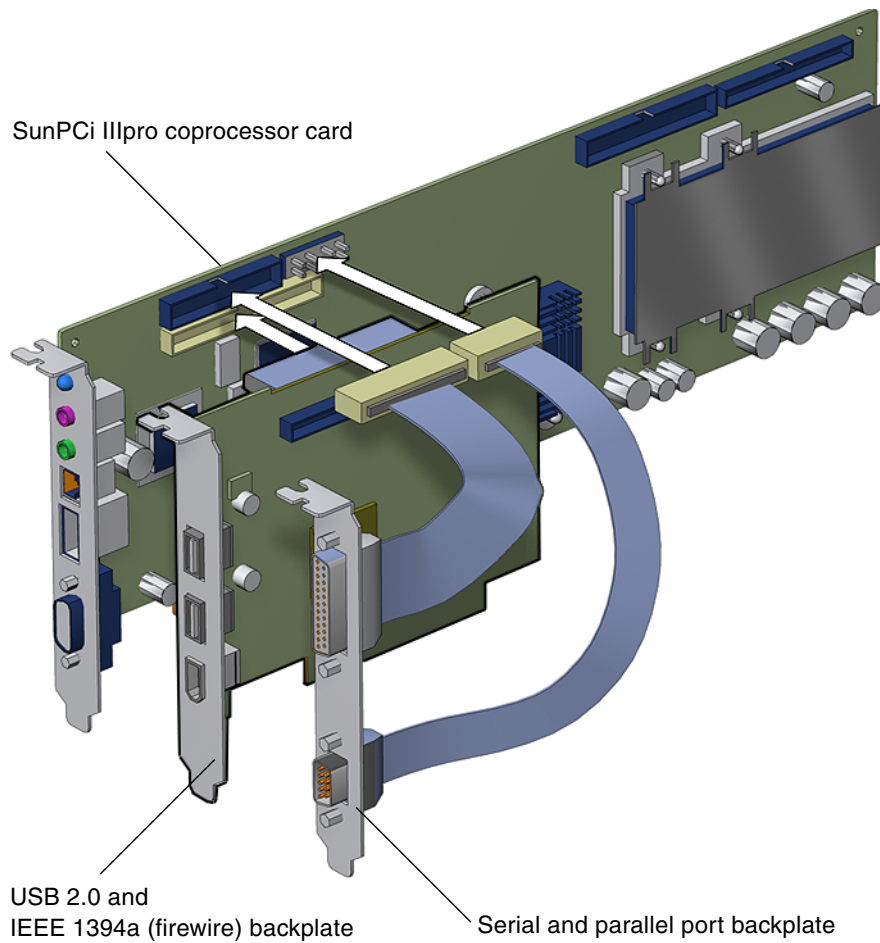


FIGURE 1 SunPCi IIIpro Coprocessor Card With Both Optional Backplates

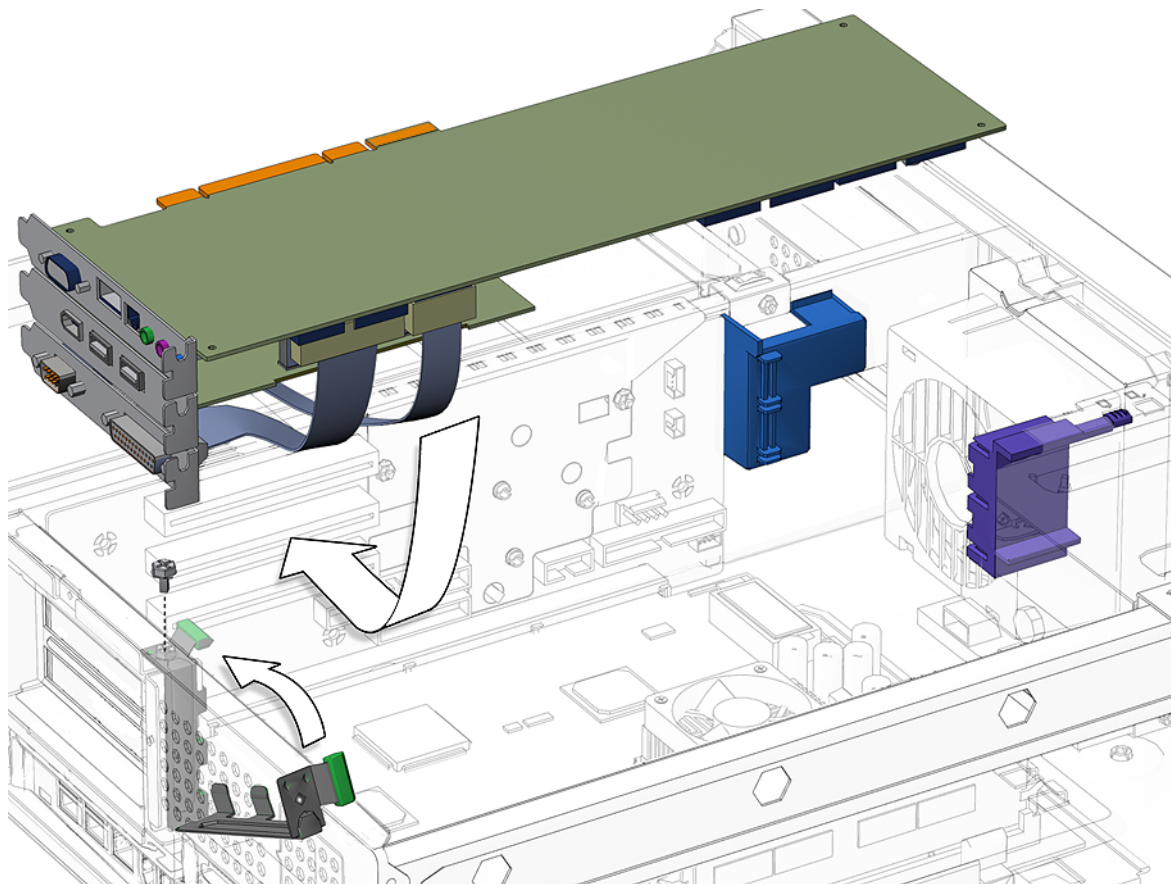


FIGURE 2 Installing the SunPCi IIIpro Coprocessor Card With Both Backplates

If you are using both backplates, install the firewire backplate in PCI-2, and the parallel/serial backplate in PCI-1. See [FIGURE 2](#).

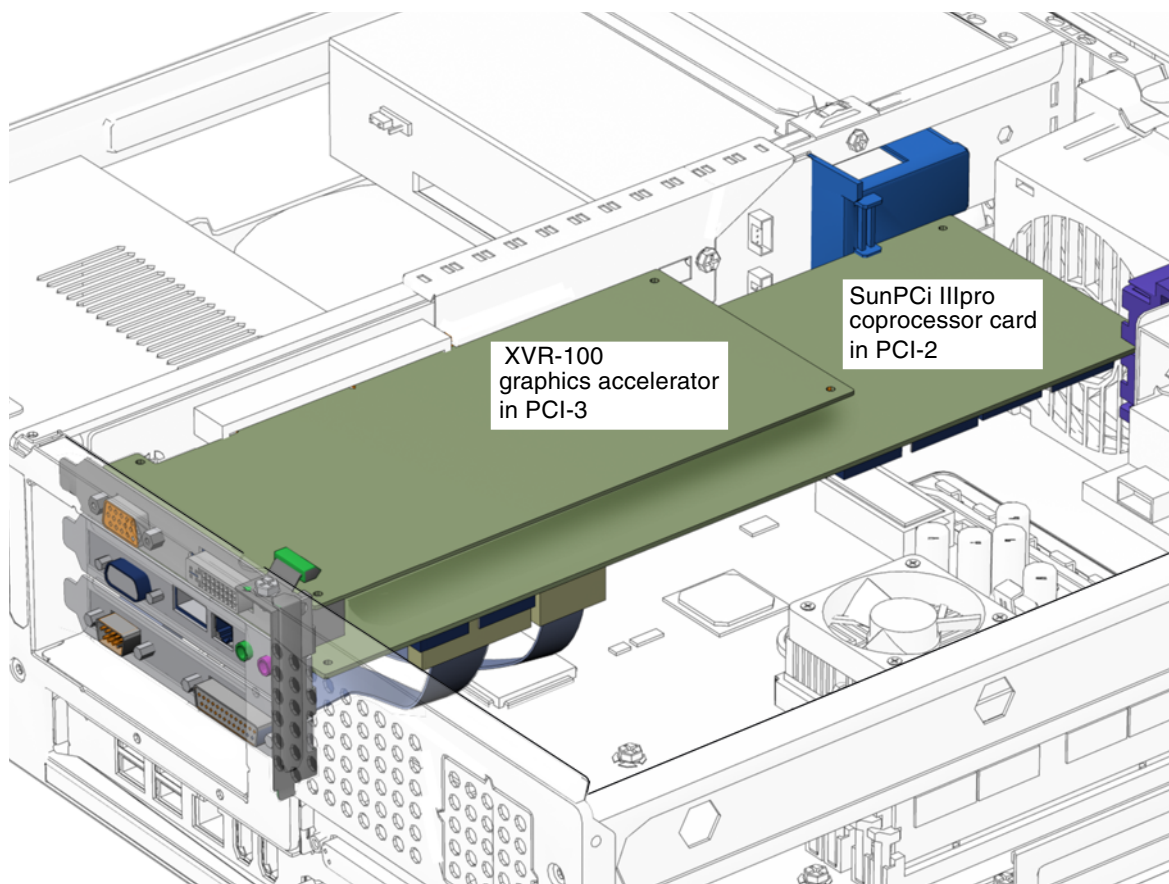


FIGURE 3 XVR-100 Graphics Accelerator With SunPCi IIIpro Coprocessor Card and Serial/Parallel Port Backplate

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

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

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.

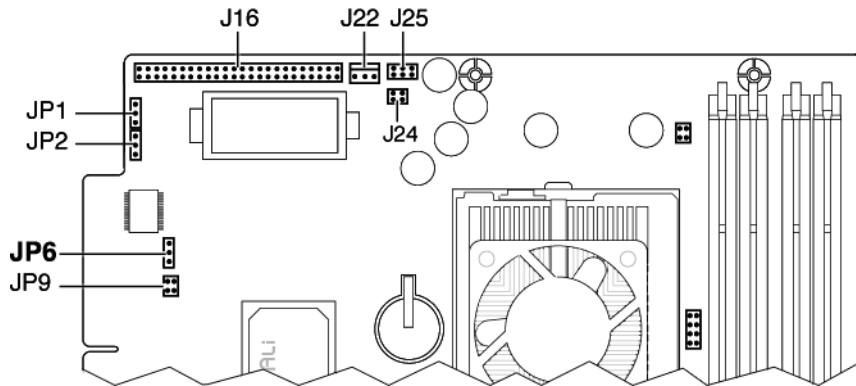


FIGURE 4 CPU Jumper, JP6

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 from 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 OS.

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

Solaris Operating System	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 System, 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 two-color 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	816-1161 English
	-----	816-4216 French
	The CD-ROM and web site include:	816-4217 German
	English, French, German, Spanish, Italian,	816-4218 Spanish
	Swedish, Japanese, Korean, Simplified Chinese,	816-4219 Italian
	Traditional Chinese.	816-4220 Swedish
	http://www.sun.com/documentation/	816-4221 Japanese
		816-4222 Korean
		816-4223 Simplified Chinese
Service Manual	HTML and PDF on CD-ROM and web site	816-4379
	http://www.sun.com/documentation/	
Product Notes	http://www.sun.com/documentation/	816-1163

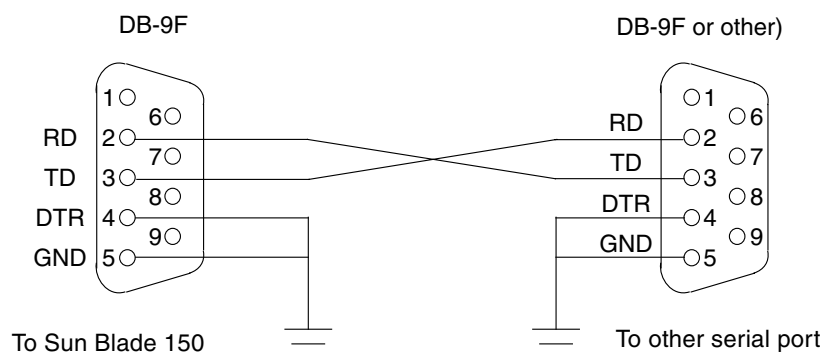
TABLE 3 Documentation for the Sun Blade 150 Workstation

Documentation	Format of Documentation	Part Number
Documentation CD Insert	Print	818-0122
Safety and Compliance Information	Print	816-7190
Safety Compliance Guide	http://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

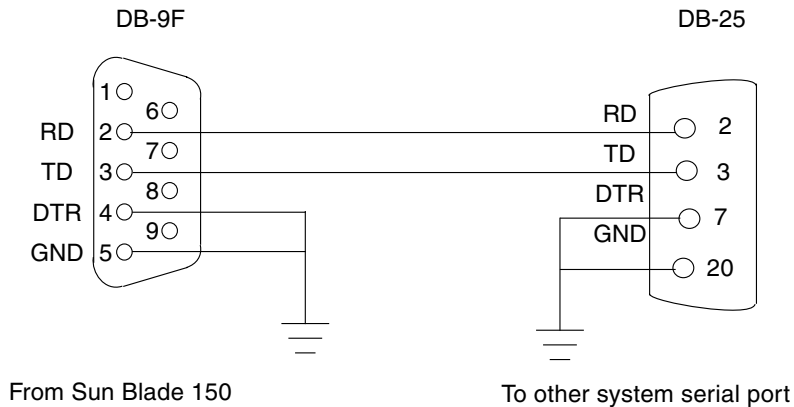


FIGURE 6 Crossover Serial Cable Wiring for TIP Connections, 9-pin to 25-pin

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

