



Sun Ultra 27 Workstation Product Notes



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Preface

This document describes hardware issues, software issues, and documentation issues for the Sun Ultra™ 27 Workstation. These Product Notes provide late-breaking information about the system, as well as workarounds for problems you might encounter when installing, configuring, or operating your Sun Ultra 27 workstation.

Who Should Use This Book

This information is designed for system administrators who are experienced with the installation and configuration of the basic system components and its software.

Related Books

For a description of the document set for the Sun Ultra 27 workstation, see the *Where To Find Sun Ultra 27 Workstation Documentation* sheet that is packed with your system and also posted at the product's documentation site at:

<http://docs.sun.com/app/docs/prod/ultra27.ws-1925.1#hic>

Related Third-Party Web Site References

Third-party URLs are referenced in this document and provide related information.

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Documentation, Support, and Training

The Sun web site provides information about the following additional resources:

- [Documentation](http://www.sun.com/documentation/) (<http://www.sun.com/documentation/>)
- [Support](http://www.sun.com/support/) (<http://www.sun.com/support/>)
- [Training](http://www.sun.com/training/) (<http://www.sun.com/training/>)

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Typographic Conventions

The following table describes the typographic conventions that are used in this book.

TABLE P-1 Typographic Conventions

Typeface	Meaning	Example
AaBbCc123	The names of commands, files, and directories, and onscreen computer output	Edit your <code>.login</code> file. Use <code>ls -a</code> to list all files. <code>machine_name%</code> you have mail.
AaBbCc123	What you type, contrasted with onscreen computer output	<code>machine_name%</code> su Password:
<i>aabbcc123</i>	Placeholder: replace with a real name or value	The command to remove a file is <i>rm filename</i> .
<i>AaBbCc123</i>	Book titles, new terms, and terms to be emphasized	Read Chapter 6 in the <i>User's Guide</i> . A <i>cache</i> is a copy that is stored locally. Do <i>not</i> save the file. Note: Some emphasized items appear bold online.

Shell Prompts in Command Examples

The following table shows the default UNIX® system prompt and superuser prompt for the C shell, Bourne shell, and Korn shell.

TABLE P-2 Shell Prompts

Shell	Prompt
C shell	machine_name%
C shell for superuser	machine_name#
Bourne shell and Korn shell	\$
Bourne shell and Korn shell for superuser	#

Hardware and Software Issues

The following sections contain known issues and late-breaking information about the Sun Ultra 27 workstation:

- “General Information” on page 9
- “Firmware Updates” on page 10
- “Hardware and BIOS Issues” on page 11
- “Pc-Check Issues” on page 14
- “Software Issues” on page 15

General Information

Documentation

The following is a list of the available documentation:

- 820-6774 *Sun Ultra 27 Product Notes* (this document)
- 820-6771 *Sun Ultra 27 Workstation Installation Guide*
- 820-6772 *Sun Ultra 27 Workstation Linux, OpenSolaris and Solaris Operating System Installation Guide*
- 820-6773 *Sun Ultra 27 Workstation Windows Operating System Installation Guide*
- 820-6776 *Sun Ultra 27 Workstation Service Manual*
- 820-6777 *Where to Find Sun Ultra 27 Workstation Documentation*
- 820-6775 *Sun Ultra 27 Workstation Safety and Compliance Guide*

These documents are available online at:

<http://docs.sun.com/app/docs/prod/ultra27.ws~1925.1#hic>

Supported Operating Systems

Sun supports the following operating systems for the Sun Ultra 27 workstation:

- Solaris™ 10, 10/09
- Open Solaris 2008.11 and 2009.06
- Red Hat Enterprise Linux 4.8, 32-bit and 64-bit
- Red Hat Enterprise Linux 5.3, 32-bit and 64-bit
- SUSE Linux Enterprise Desktop (SLED) 10 SP2, 64-bit only
- Windows 2008 DataCenter, 32-bit and 64-bit (WHQL certified)
- Windows Vista Ultimate 32-bit and 64-bit (WHQL certified)

For an up-to-date listing of supported operating systems for the Sun Ultra 27 workstation, go to:

<http://www.sun.com/desktop/index.jsp>

Preinstalled Software

Depending on the configuration of your workstation, the following software might be preinstalled:

- Solaris 10 5/09
- StarOffice 8
- Sun Studio 12
- Net Beans 5.5.1 IDE and 6.0.1 IDE

Firmware Updates

Versions of the Tools and Drivers DVD contain:

- Platform-specific drivers for Linux, Windows, and the Solaris 10 operating systems
- Hardware drivers
- Patches, drivers, and fixes
- Hardware diagnostics software

Features of the Tools and Drivers DVD v1.4.0

The following are some of the features included on the Tools and Drivers DVD v1.4.0:

- BIOS v1.07
- Fixed: BIOS 1.05 causes slow performance on Vista SP2 64-bit (CR 6868609)

- Driver Update: Intel Chipset driver to 9.1.1.1019
- Driver Update: Intel NIC driver 14.4 to support Windows 2008, e1000e 1.0.25 for Linux
- Driver Update: Realtek audio driver 2.33 to fix WHQL failed issue
- Driver Update: SATA IMSM driver 8.9.0.1023
- Diagnostic Tool Update: Pc-Check v6.23s

Download an ISO image of the Tools and Drivers DVD from the Sun Ultra 27 workstation product page at:

<http://www.sun.com/desktop/index.jsp>

Hardware and BIOS Issues

The following hardware issues apply to the Sun Ultra 27 workstation, regardless of the operating system (OS) installed on the workstation.

- “SunVTS Requires 2 Gb System Memory” on page 12
- “Workstation Does Not Boot (POST Code 94) with LSI SAS1064E 4-Port Controller Card in x16 Slots” on page 12
- “Corrupted BIOS: System Does Not Perform POST” on page 13
- “Headphone Volume Might Be Too Loud” on page 13
- “ROM Initialization Error Occurs When RAID is Enabled for On-board SATA Drives” on page 13

When Updating the BIOS to v1.03, the Preserve CMOS Settings Option is Not Available

Due to CMOS structure change, users are unable to preserve the CMOS settings when updating BIOS to v1.03.

Workaround

Record customized CMOS settings before flashing the BIOS. After the update, access the BIOS Setup Utility and enter the recorded settings to customize BIOS v1.03.

C6 Package Sleep State

You must invoke C6 package sleep state to use it. There is no impact too the user if this is turned off. However, it may provide a marginal power usage improvement if set.

▼ Workaround

- 1 **Access the BIOS Setup utility** (see [“To Access the BIOS Setup Utility”](#) in *Sun Ultra 27 Workstation Service Manual*).
- 2 **Ensure that the BIOS is at v1.03 or later.**
The BIOS version is listed under the Product Information menu in the BIOS Setup Utility.
- 3 **Use the right or left arrow key to navigate to the Advanced menu screen.**
- 4 **Use the down arrow key to highlight Configure Advanced CPU Settings and press Enter.**
The Configure Advanced CPU Setting submenu screen appears.
- 5 **Use the down arrow key to highlight Package C-State Limit (under Intel(R) C-State Tech) and press Enter.**
An Options popup window appears.
- 6 **Highlight C6 and press Enter.**
- 7 **Save and exit the BIOS Setup Utility.**
The workstation reboots.

SunVTS Requires 2 Gb System Memory

The workstation ships with 1 Gb of system memory. For SunVTS to function properly, 2 Gb of system memory is required, with a 1 Gb swap file.

Workstation Does Not Boot (POST Code 94) with LSI SAS1064E 4-Port Controller Card in x16 Slots

The workstation might halt at POST code 94 and not boot with an LSI SAS1064E controller card installed in slots PCIe 0 or PCIe 2. PCIe 0 and PCIe 2 are x16 slots. Functionality internal to the card prevents initialization when the card is installed in the x16 slots.

Workaround

Do not install the card in slot PCIe 0 or slot PCIe 2.

Corrupted BIOS: System Does Not Perform POST

An interrupted or failed BIOS update, might result in a corrupted BIOS, which could cause the system to fail POST and not boot. To resolve this, you must recover the BIOS by performing the following BIOS recovery procedure. This procedure will be added to the *Sun Ultra 27 Workstation Service Manual*.

▼ To Perform BIOS Recovery Procedure

- 1 **Copy the file /BIOS/RELEASED_BIOS/xxx/xxx.ROM from the Tools and Drivers DVD to the root directory of a USB flash drive.**
where xxx is the BIOS version number (for example, 102 or 103).
- 2 **On the flash drive, rename the file xxx.ROM to AMIBOOT.ROM.**
- 3 **Insert USB flash drive into an available USB port on the workstation.**
- 4 **Power on the workstation, press and hold the Ctrl + Home keys, and watch the USB flash drive's access light.**
- 5 **When the flash drive's access light starts to blink, release the keys.**
- 6 **Follow the onscreen instructions to recover system BIOS.**

Headphone Volume Might Be Too Loud



Caution – Possible hearing loss. Listening to headphones and earphones with the equalizer on or near the maximum setting can cause excessive sound pressure levels, which might cause hearing loss.

Excessive sound pressure from earphones and headphones can cause hearing loss. Adjusting the equalizer to the maximum setting increases the earphone and headphone sound pressure output voltage, and therefore the sound pressure level.

ROM Initialization Error Occurs When RAID is Enabled for On-board SATA Drives

Enabling RAID for the on-board SATA drives with a U320 SCSI card installed might cause the card to function incorrectly and the following BIOS error message to appear:

Expansion ROM not initialized.

Workaround

Disable SATA RAID if the option card's expansion ROM is greater than the available shadow memory.

For example, you can use the Single Ultra-320 (1-Port) SCSI PCI-X card only when the on-board SATA RAID is disabled in the BIOS.

Pc-Check Issues

These issues apply to a Sun Ultra 27 workstation running Eurosoft Pc-Check:

- [“DVD Is Not Detected If SATA Is Configured as RAID in the BIOS” on page 14](#)
- [“Keyboard Functionality Is Lost After Running USB Controller or Functionality Test” on page 14](#)

DVD Is Not Detected If SATA Is Configured as RAID in the BIOS

When running CD-ROM/DVD test. Pc-Check displays the following message:

There are no CD/DVD drives installed.

Workaround

Change the setting to Compatible IDE in the BIOS and run CD-ROM/DVD test.

This issue is under investigation.

Keyboard Functionality Is Lost After Running USB Controller or Functionality Test

The user might experience the lost of keyboard functionality after running multiple iterations of USB Controller or Functional test.

Workaround

This issue is under investigation.

Software Issues

The following software issues apply to the Sun Ultra 27 workstation:

- “Solaris OS and OpenSolaris OS Issues” on page 15
- “Linux Issues” on page 16
- “Windows Issues” on page 19

Solaris OS and OpenSolaris OS Issues

These issues apply to a Sun Ultra 27 workstation running the minimum supported Solaris OS, or later versions:

- “Nvidia Video Driver Version 180.xxx Does Not Install Successfully on OpenSolaris” on page 15
- “Solaris 10 10/08 OS Does Not Support IEEE-1394 Firmware Devices” on page 15
- “Clarification of the Host ID and the Preinstalled Solaris OS” on page 16
- “Limited RAID Support in the Solaris OS” on page 16
- “Open Solaris Installation Fails When VT-d is Enabled” on page 16
- “Unable to Remove Existing Nvidia Driver on Open Solaris” on page 16

Xserver Fails to Start on OpenSolaris

Xserver might fail to start on an Ultra 27 workstation running OpenSolaris 2009.06 with dual configuration (two) Nvidia graphics cards (for example, two Nvidia FX3800 graphic cards).

Workaround

Use OpenSolaris 2008.11.

Nvidia Video Driver Version 180.xxx Does Not Install Successfully on OpenSolaris

Workaround

Use the inbox OpenSolaris Nvidia driver (for example, version 180.29).

This issue will be fixed in Nvidia video driver 185.XX.

Solaris 10 10/08 OS Does Not Support IEEE-1394 Firmware Devices

This issue is under investigation.

Clarification of the Host ID and the Preinstalled Solaris OS

On x64 systems, the Host ID is only created when you configure and use the preinstalled Solaris OS (on the HDD shipped with the system). When you boot the system for the first time, the Solaris OS will randomly generate a unique Host ID. This Host ID is for use with the software license. If you do not use the preinstalled Solaris OS, then there is no need for the Host ID. Because the Host ID is randomly generated during the initial boot, it is not provided on the CIS sheet that is shipped with your system.

Limited RAID Support in the Solaris OS

Current released versions of the Solaris OS do not have support for RAID through the on-board ICH10R controller. However, RAID is supported through the LSI 3041E HBA controller card.

Open Solaris Installation Fails When VT-d is Enabled

Open Solaris might fail when VT-d is set to Enabled in the workstation BIOS.

Workaround

Before installing Open Solaris, access the workstation BIOS and set the VT-d option to Disable.

Unable to Remove Existing Nvidia Driver on Open Solaris

Workaround

Open a terminal and type the following command:

```
# pkg uninstall NVDAgraphics
```

Linux Issues

The following issues apply to a Sun Ultra 27 workstation running a Linux OS:

SUSE-Specific Issues:

- [“On SLED 11 64-Bit, X-Server Might Fail to Start on a Dual Display System that Uses the Nvidia FX 3800 Card” on page 17](#)
- [“On SLED 11 64-Bit, LSI MSM RAID Manager Requires Specific RPM” on page 17](#)
- [“A dmesg Error Occurs on SLED 10 SP2 64-bit” on page 17](#)
- [“Firefox Fails to Launch in SLED 10 SP2 64-bit” on page 17](#)

Red Hat and General Linux-Related Issues:

- [“Unknown CPU Information is Shown in HAL Device Manager” on page 18](#)

- “Automount Might Cause a Permission Problem When `install.sh` is Executed” on page 18
- “Limited RAID Support in Linux Operating Systems” on page 18
- “Error Message Appears in Red Hat 5.1 and 5.2 Operating System” on page 18
- “System Fails to Perform PXE Installation of Linux Operating Systems” on page 18
- “Older Versions of Linux Operating Systems Do Not Support AHCI” on page 19

On SLED 11 64–Bit, X-Server Might Fail to Start on a Dual Display System that Uses the Nvidia FX 3800 Card

Workaround

Open a terminal and run `nvidia-xconfig -a` and then restart X-server.

On SLED 11 64–Bit, LSI MSM RAID Manager Requires Specific RPM

Workaround

Download and install `compat-libstdc++-5.0.7-121.1x86.rpm` *before* installing LSI MSM RAID Manager.

A `dmesg` Error Occurs on SLED 10 SP2 64–bit

Workaround

Download and update the latest kernel from the Novell website at:

<http://www.novell.com/linux/>

Firefox Fails to Launch in SLED 10 SP2 64-bit

The following message will appear when launching Firefox:

```
/usr/lib/firefox/firefox-bin: error while loading share libraries: libasound.so.2: wrong ELF class: ELFCLASS64
```

There is a shared library error with the RealTek audio driver and the preinstalled Firefox web browser.

Workaround

Download and install the latest version of Firefox at:

<http://www.mozilla.com/en-US/firefox/all.html>

Unknown CPU Information is Shown in HAL Device Manager

For Linux operating systems, the HAL Device Manager shows Unknown for CPU information.

This issue is under investigation.

Automount Might Cause a Permission Problem When `install.sh` is Executed

For Linux operating systems, executing `install.sh` might cause a permission error message.

Workaround

Manually mount the Tools and Drivers DVD using the following commands:

```
# init 3 (login as root)
# mount /dev/cdrom /mnt
# /mnt/drivers/linux/OS/install.sh
where OS is either red_hat or suse
```

Limited RAID Support in Linux Operating Systems

Current released versions of Linux operating systems do not have support for RAID through the on-board ICH10R controller, but RAID is supported through the LSI3041E HBA.

Error Message Appears in Red Hat 5.1 and 5.2 Operating System

The following error messages might appear in `dmesg` and `/var/log/messages`:

```
kernel: ata2: spurious interrupt (irq_stat 0x4 active_tag -84148995 sactive 0x3)
```

This issue is under investigation.

System Fails to Perform PXE Installation of Linux Operating Systems

The system can successfully PXE boot from the on-board Intel 82567LM-2 NIC, but Red Hat and SUSE installation setups fail to detect the NIC. Current released versions of Red Hat and SUSE do not support the Intel 82567LM-2 NIC.

Please wait until RHEL 4.8, RHEL 5.3, SLED10 SP3, and SLED 11 for built-in 82567LM-2 Ethernet support or perform the following workaround.

Workaround

Install a PCI/PCIe NIC card, and then PXE install from the new NIC.

-or-

Do a CD/DVD installation, and then run the following command to install all (graphics, NIC, audio) drivers:

```
tools_and_drivers/drivers/linux/OS/install.sh
```

where *tools_and_drivers* is the location of the Tools and Drivers DVD, and *OS* is the directory of the operating system (either **red_hat** or **suse**).

Older Versions of Linux Operating Systems Do Not Support AHCI

The operating system installation setup does not detect the hard drive or CD/DVD media. You will have to configure SATA as IDE in the system BIOS to work around this issue.

See the [Sun Ultra 27 Workstation Linux, OpenSolaris and Solaris Operating System Installation Guide](#) for instructions.

Windows Issues

The following issues apply to a Sun Ultra 27 Workstation running Windows:

Windows Vista-Related Issues

- “Windows Vista Boot Halts With a Black Screen” on page 19
- “Windows Vista/2008 Blue Screen After Installing SATA RAID Driver Using Tools and Drivers DVD” on page 20
- “Incompatibility Between Intel QuickPath Architecture I/O hub and Windows Vista.” on page 20

Windows XP-Related Issues

- “Blue Screen Error on Windows XP With LSI SAS HBA and AHCI Setting” on page 20
- “RAID Driver is Required for Installing Windows XP on a SATA Configuration Set to RAID Mode” on page 21
- “XP Reburn Does Not Include Audio and Video Drivers” on page 21
- “AHCI Mode Not Supported on Windows XP” on page 22

Windows—Related General Issues

- “Blank Screen during Windows Installation” on page 22
- “Install the Windows Intel Matrix Manager on RAID-Configured Systems Only” on page 22

Windows Vista Boot Halts With a Black Screen

During boot-up a Windows Vista system might halt resulting in a black screen and a failure to boot. Rebooting the workstation might resolve the issue.

This issue is under investigation

Windows Vista/2008 Blue Screen After Installing SATA RAID Driver Using Tools and Drivers DVD

On SATA RAID systems, a blue screen might appear after you install the SATA RAID driver/manager from the Tools and Drivers DVD.

Workaround

Enter the BIOS and change from ACHI to RAID mode if the system is configured as SATA RAID.

Incompatibility Between Intel QuickPath Architecture I/O hub and Windows Vista.

An incompatibility issue might exist between the Intel QuickPath architecture I/O hub and the Windows Vista OS.

Workaround

- Click Start —> Control Panel —> Problem Reports and Solutions —> Clear Solution and Problem History
- Use Intel Matrix Storage Manager v8.8.0 or greater.

Blue Screen Error on Windows XP With LSI SAS HBA and AHCI Setting

When the BIOS is set to AHCI on a Windows XP system with an LSI SAS HBA controller card, a blue screen error might occur. To resolve this issue, load the LSI SAS driver before the Windows XP installation process.

▼ Load the LSI SAS Driver

- 1 **Access the BIOS Setup Utility** (see [“To Access the BIOS Setup Utility” in Sun Ultra 27 Workstation Service Manual](#)).
- 2 **Use the left or right arrow keys to navigate to the Advanced menu.**
- 3 **Use the down arrow key to highlight Integrated Device and press Enter.**
- 4 **Highlight the option to Configure Slot 0–3 and press Enter.**
An Options pop-up window appears.
- 5 **Highlight IDE and press Enter.**
- 6 **Press F10 to save and exit.**

- 7 Reboot using the Windows XP installation media and follow the prompts.
- 8 When *Press F6 if you need to install a third-party SCSI or RAID driver...* appears at the bottom of the Windows Setup screen, press F6 and follow the instructions to install the LSI driver.
- 9 After installing the LSI SAS driver, continue with the Windows XP installation.

RAID Driver is Required for Installing Windows XP on a SATA Configuration Set to RAID Mode

When the BIOS is set to RAID mode, the RAID driver must be installed before you install the OS.

▼ To Install the RAID Driver

- 1 Copy the RAID driver from the Tools and Drivers DVD to a USB floppy drive.
- 2 Connect the USB floppy drive to a USB port on the workstation.
The USB floppy drive must be connected directly to a USB port on the workstation. Do *not* connect to a USB hub.
- 3 Reboot the workstation and access the BIOS Setup Utility (see [“To Access the BIOS Setup Utility” in Sun Ultra 27 Workstation Service Manual](#)).
- 4 Use the Boot menu in the BIOS Setup Utility to verify that the USB floppy drive is seen by the workstation.
- 5 Press the Esc key to exit the BIOS Setup Utility and reboot the workstation using the Windows XP installation media.
- 6 When *Press F6 if you need to install a third-party SCSI or RAID driver...* appears at the bottom of the Windows Setup screen, press F6 and follow the instructions to install the RAID driver from the USB floppy drive.
- 7 Press S to specify an additional device.
A list appears.
- 8 Select the Intel ICH10R RAID SATA controller from the list and proceed with the installation.

XP Reburn Does Not Include Audio and Video Drivers

Due to the limited size of the XP reburn CD, you must install audio and video drivers from the Tools and Drivers DVD.

AHCI Mode Not Supported on Windows XP

Only IDE mode of RAID mode of SATA Configurations is supported when installing Windows XP.

Blank Screen during Windows Installation

During a Windows installation, you might encounter a blank screen if there is a Linux partition present on the hard drive.

▼ Workaround

- 1 **If there is a Linux partition on the hard drive, run the `wipedisk` utility to erase the primary boot partition before you install Windows.**

The `wipedisk` utility is available on the Tools and Drivers DVD by accessing the Erase Primary Boot Hard Disk (option 5).

- 2 **Install Windows.**

Install the Windows Intel Matrix Manager on RAID-Configured Systems Only

Installing the Intel Matrix Manager Software from the Tools and Drivers DVD on non-RAID systems might cause a blue screen crash.

Workaround

Do not install the Intel Matrix Manager on non-RAID systems. If you have the Intel Matrix Manager installed on a non-RAID system, boot the workstation using `safemode` and uninstall the Intel Matrix Manager software.