



# Sun Ultra™ 20 Workstation Setup Guide

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www.sun.com

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Adobe PostScript

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# System Setup

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This chapter includes information about the following topics:

- [“Safety and Compliance Information” on page 1](#)
- [“Planning the Installation Process” on page 2](#)
- [“Package Contents Inventory” on page 3](#)
- [“Front and Back Panels” on page 4](#)
- [“Cabling the Workstation” on page 6](#)
- [“Powering On the Workstation” on page 9](#)
- [“Setting Up or Installing the Operating System” on page 10](#)

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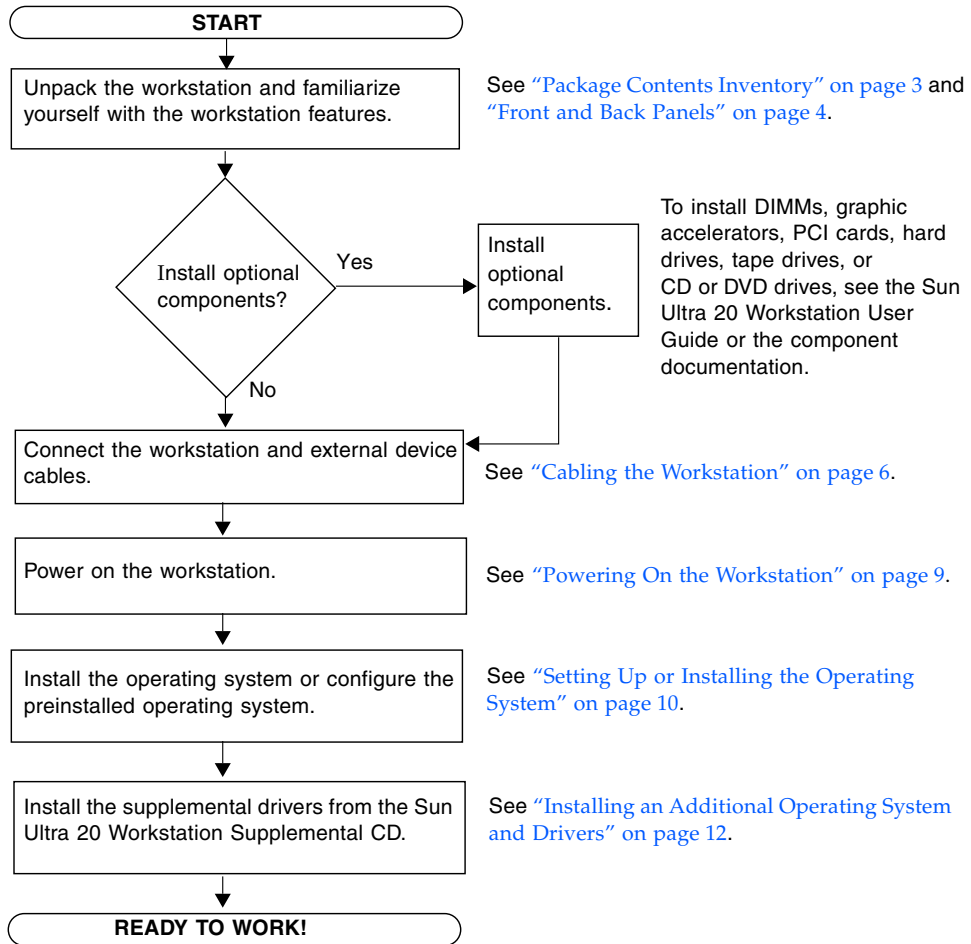
## Safety and Compliance Information

Refer to the following documents for safety information regarding the Sun Ultra™ 20 Workstation:

- *Important Safety Information for Sun Hardware Systems*, 816-7190 (included with the workstation ship kit).
- *Sun Ultra 20 Workstation Safety and Compliance Guide*, 819-2149 (available at the Sun Ultra 20 documentation site. See [“Sun Ultra 20 Workstation Documentation” on page 20](#)).

# Planning the Installation Process

Use the following flowchart as a process tool to assist you with installation of the Sun Ultra 20 Workstation.



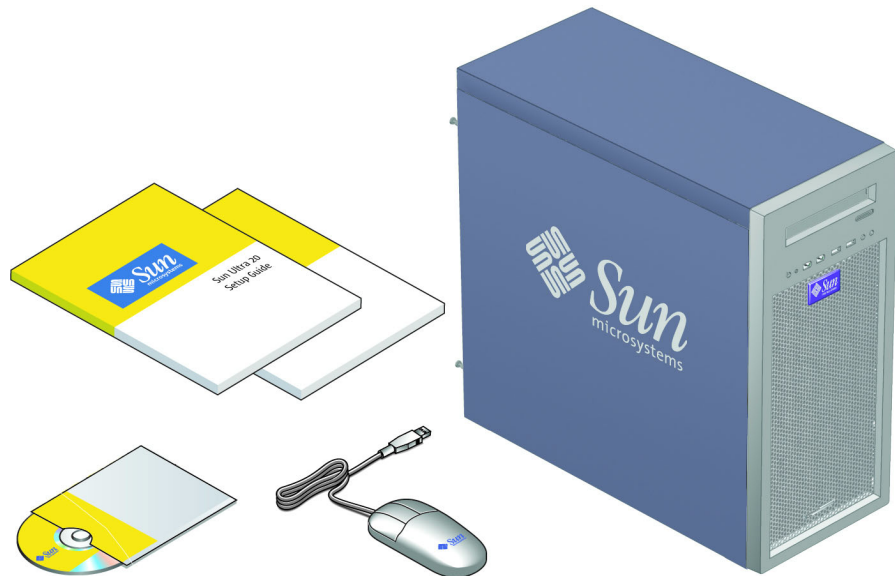
**FIGURE 1-1** Process for Setting Up the Sun Ultra 20 Workstation

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# Package Contents Inventory

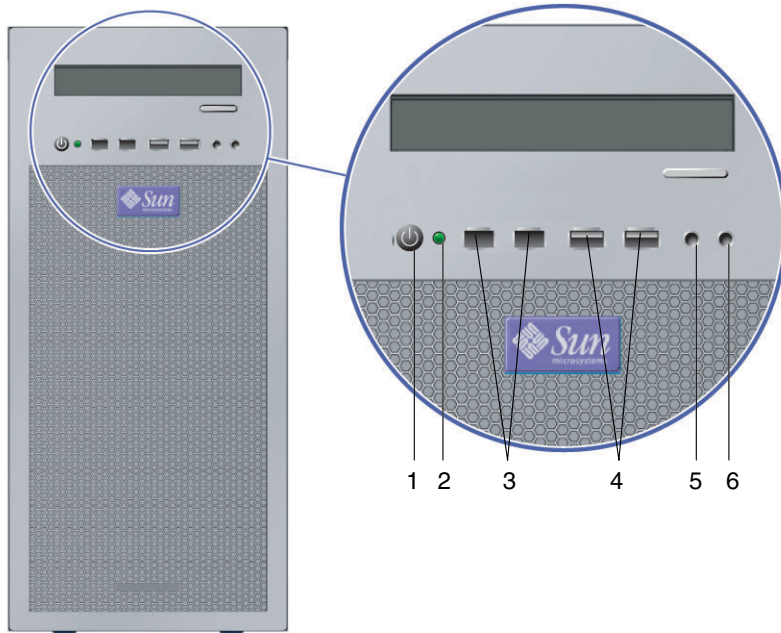
Carefully unpack all workstation components from the packing cartons. The following items should be packaged with the Sun Ultra 20 Workstation:

	Description
Hardware	<ul style="list-style-type: none"><li>• DMS 59 cable (if the workstation has a NVS280 or NVS285 video card installed)</li><li>• Keyboard, mouse and power cord (in separate county kits)</li></ul>
Media	<ul style="list-style-type: none"><li>• Sun Ultra 20 Workstation Supplemental CD (includes drivers and diagnostics software)</li></ul>
Documentation	<ul style="list-style-type: none"><li>• <i>Sun Ultra 20 Workstation Setup Guide</i></li><li>• <i>Sun Ultra 20 Workstation Release Notes</i></li><li>• <i>Where to Find Sun Ultra 20 Workstation Documentation</i></li><li>• Additional safety and license documentation</li></ul>



**FIGURE 1-2** Sun Ultra 20 Workstation Ship Kit Contents

# Front and Back Panels

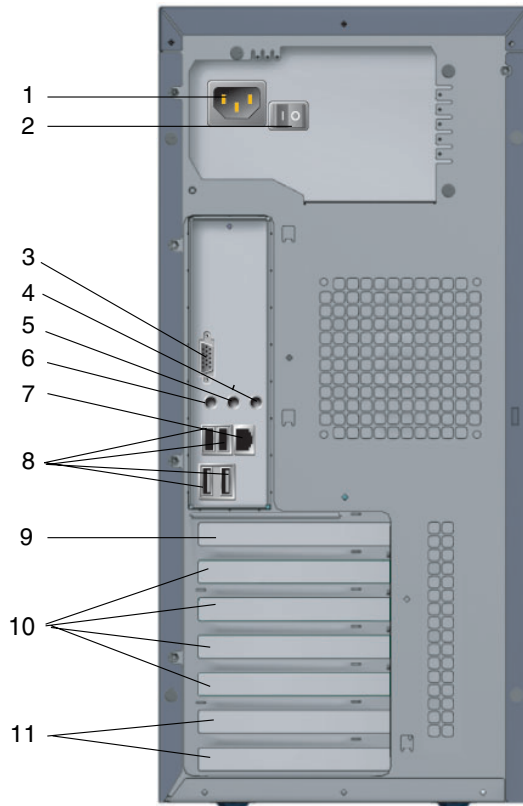


**FIGURE 1-3** Front Panel

**TABLE 1-1** Front Panel

Label	Button/LED/Port	Label	Button/LED/port
1	Power button	4	2 USB ports
2	Power LED	5	Microphone-in jack
3	2 1394 (firewire) ports	6	Headphone-out jack





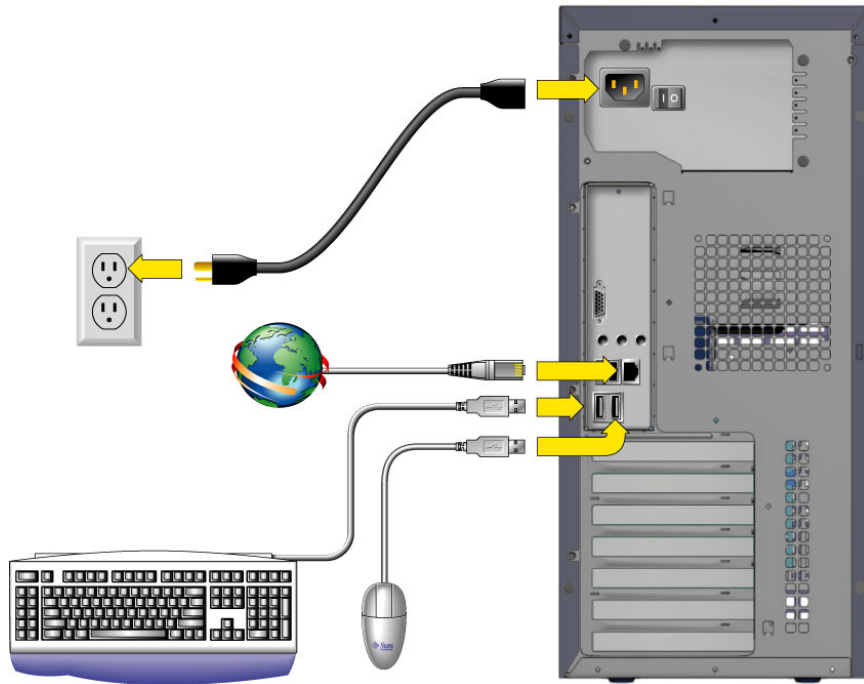
**FIGURE 1-4** Rear Panel

**TABLE 1-2** Rear Panel

Label	Connector/Slot	Label	Connector/Slot
1	Power connector	7	Ethernet connector
2	Power switch	8	4 USB connectors
3	Onboard HDI15 video connector	9	PCI Express x16 graphics slot
4	Microphone jack	10	4 PCI slots
5	Line-in jack	11	2 PCI Express x1 slots
6	Line-out jack		

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# Cabling the Workstation



**FIGURE 1-5** Cable Connections

Connect the workstation and external devices in this order (See [FIGURE 1-5](#)):

1. Connect the workstation power cord to a grounded electrical outlet.
2. Connect the keyboard and mouse to the USB connectors on the rear of the panel.
3. Connect an Ethernet cable to the Ethernet connector on the Sun Ultra 20 Workstation and connect the other end to an Ethernet RJ45 jack.

**4. Connect the monitor cable as follows:**

- If a x16 PCI Express graphics card is not installed in the top PCI slot, connect the monitor to the onboard video connector. See the top pane of [FIGURE 1-6](#).
- If a x16 PCI Express graphics card is installed in the top PCI slot, connect the monitor to the graphics card connector. See the bottom pane of [FIGURE 1-6](#).

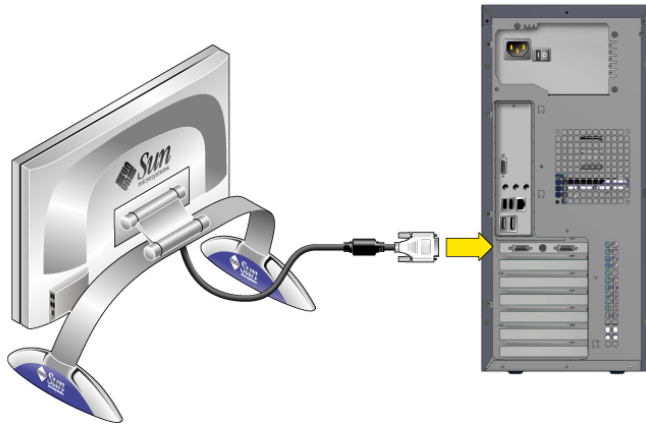
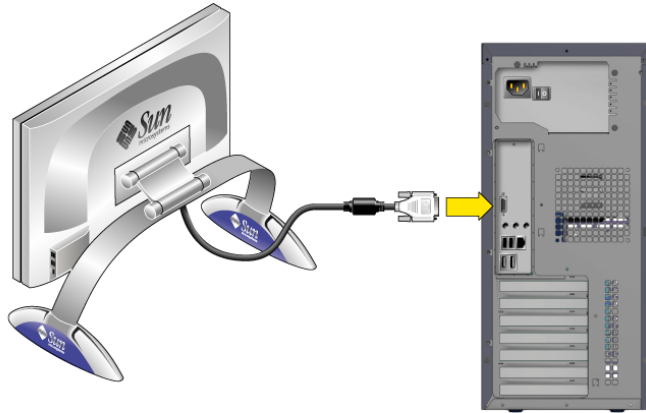
You might need a DVI connector to attach the monitor to the graphics card. A DMS59 cable is included for systems that have an NVS280 or NVS285 card installed.

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**Note** – The onboard video connector is disabled by default if a graphics card is installed. If you want to enable the onboard ATI connector, follow the instructions in the *Sun Ultra 20 Workstation User Guide*, Appendix B.

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**5. Connect any additional external devices to the workstation's other connectors.**



**FIGURE 1-6** Connecting the Monitor

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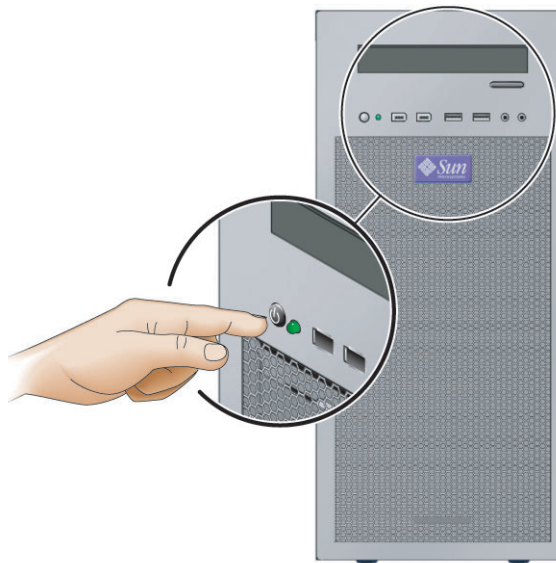
# Powering On the Workstation

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**Tip** – If you are installing optional internal components such as additional DIMMs, PCI cards, optical drives, or hard drives, install those components before you power on the workstation. If you are not installing optional components, you are ready to power on the workstation.

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1. Turn on power to the monitor and to all external devices.
2. Turn the power switch on the rear of the workstation to the On ( | ) position.  
See [FIGURE 1-4](#) for the location of the power switch.
3. Press and release the workstation Power button on the front panel ([FIGURE 1-7](#)).



**FIGURE 1-7** Powering on the Workstation

4. After several seconds, verify that the platform power LED next to the Power button lights.  
The platform power LED lights after the workstation begins the internal booting process. See [FIGURE 1-3](#) for location of the platform power LED.

5. If you are powering on the workstation for the first time, you will need to install the operating system or configure the preinstalled operating system after the system is finished booting.

See [“Setting Up or Installing the Operating System”](#) on page 10.

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## Setting Up or Installing the Operating System

Your workstation will have the Solaris™ 10 Operating System preinstalled and the following software also preinstalled: Sun Studio, Sun Java Studio Enterprise and Sun Java Studio Creator, and NetBeans IDE.

- See [“Setting Up the Preinstalled Software”](#) on page 10 if you plan to use the installed operating system.
- See [“Installing an Additional Operating System and Drivers”](#) on page 12 if you plan to install an additional operating system.

## Setting Up the Preinstalled Software

Further information on preinstalled software can be found in the *Sun Ultra 20 Workstation Getting Started Guide*, 819-2148.

The preinstalled software applications are also available for download. See [“Downloading Developer Software Applications”](#) on page 21.

To configure the preinstalled operating system: Use [TABLE 1-3](#) to collect the information that you need, then follow the system prompts to configure the operating system.

**TABLE 1-3** Information for Preinstalled Solaris 10 Setup

Setup Window	Explanation and Notes	Your Information
Select Language and Locale	Native language and locale to use for the workstation.	
Host Name	A name to give the workstation.	
Network Connectivity (IP Address)	Network or stand-alone workstation protocols. A system administrator might be required to complete this section. <b>Note:</b> Depending on how you answer and what information is provided by your network, you might also be prompted for the workstation's IP address.	
IPv6	Enable IPv6 on the workstation.	
Security Settings	Security settings and protocols.	
Name Service	Name service to use: NIS+, NIS, DNS, LDAP, or None. <b>Note:</b> This window is not displayed if the workstation is not connected to a network.	
Domain Name	NIS or NIS+ domain for this workstation. <b>Note:</b> This window is not displayed if the workstation is not using the NIS or NIS+ service.	
Name Server/ Subnet/ Subnet Mask	Name server (specify the server or have the workstation find one on a local subnet). <b>Note:</b> This window is not displayed if the workstation is not connected to a network. <b>Note:</b> Depending on how you answer and what information is provided by your network, you might also be prompted for: <ul style="list-style-type: none"> <li>• The subnet for the workstation</li> <li>• The subnet mask for the workstation</li> </ul>	
Time Zone	Local time zone (select by geographic region, GMT offset, or a time zone file).	
Date and Time	Current date and time (accept the default or enter the current date and time).	
Root Password	Root (superuser) password for the workstation.	
Proxy Server Configuration	Workstation connection: direct to the Internet or through a proxy server.	

# Installing an Additional Operating System and Drivers

The Solaris 10 Operating System is preinstalled on your workstation. If you plan to install an additional operating system, install it at this time. You might need to remove the Solaris 10 Operating System in order to do this.

The following sources of information can help you with installing additional operating systems on the Sun Ultra 20 Workstation:

- Overview instructions for installing the drivers can be found in the following section: “[Overview Instructions for Additional Operating Systems and Drivers](#)” on page 12.
- Detailed information on removing the existing operating system, installing additional drivers, and installing another operating system is in the *Sun Ultra 20 Workstation Getting Started Guide*, available at:  
[http://www.sun.com/products-n-solutions/hardware/docs/Workstation\\_Products/Workstations/ultra\\_20/index.html](http://www.sun.com/products-n-solutions/hardware/docs/Workstation_Products/Workstations/ultra_20/index.html)
- Drivers for supported operating systems are available on the Sun Ultra 20 Workstation Supplemental CD included with your system and can also be downloaded from the download link at:  
<http://www.sun.com/desktop/workstation/ultra20/downloads.html>
- The most recent list of operating systems supported for Sun Ultra 20 Workstation can be found on the product web site at:  
<http://sun.com/ultra20>

## Overview Instructions for Additional Operating Systems and Drivers

If you want detailed instructions on installing drivers, see the *Sun Ultra 20 Workstation Getting Started Guide*. If you want to install using overview instructions only, refer to the following procedures.



## *Installing the Operating System*

Follow these directions for installing a supported operating system (OS) on the Sun Ultra 20 Workstation.

1. **Power on the Sun Ultra 20 Workstation.**
2. **Do one of the following:**
  - If you are installing a Windows XP or the Solaris 10 Operating System, and the BIOS Installed O/S option has not been changed from the default, proceed to Step 3.
  - If you are installing a Linux OS, make the following change to the BIOS settings:
    - a. **Select the Advanced tab and change the Installed O/S option to Linux.**
    - b. **Press the F10 key to save your changes and exit the BIOS Setup Utility.**
3. **Install the operating system, following the instructions that come with the software.**

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**Note** – If you need to install RAID drivers for Windows XP, you will need to create a new Windows CD before installing the Windows XP OS. See the *Sun Ultra 20 Workstation Getting Started Guide* for further information.

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4. **After installing the operating system, install the appropriate drivers from the Sun Ultra 20 Workstation Supplemental CD, using one of the following procedures.**

## *Installing the Drivers for a Linux OS*

To install the drivers from the Supplemental CD for supported Red Hat and SUSE operating systems:

- a. **If you have installed Red Hat Enterprise Linux, run the `up2date` utility.**
- b. **If the CD does not automount, manually mount the CD.**
- c. **Change to the following directory:**  
*/mountpoint/drivers/linux/operating\_system*  
Where *mountpoint* is the directory the CD is mounted to, and *operating\_system* is the operating system installed (`red_hat` or `suse`).
- d. **Run `./install.sh`**

### *Installing the Drivers for a Windows XP OS*

To install the drivers from the Supplemental CD for Windows XP 32-bit or 64-bit:

- a. **Change to the following directory: `D:\drivers\windows\OS\chipset`**  
Where OS is XP32 or XP64.
- b. **Double-click on the executable file.**
- c. **Follow the instructions in the installation software.**
- d. **Repeat the above instructions for the video drivers in the following directory:**  
**`D:\drivers\windows\OS\video`**  
Where OS is XP32 or XP64.

### *Installing the Drivers for the Solaris 10 OS*

If you are using the preinstalled version of Solaris, the drivers are already installed. To install the drivers from the Supplemental CD if you have reinstalled the Solaris 10 Operating System:

- a. **Change to the following directory: `/cdrom/cdrom0/drivers/sx86`**
- b. **Run `./install.sh`**

# Troubleshooting Setup, Documentation, and Downloading Developer Software Applications

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This chapter contains information to help you troubleshoot minor workstation problems.

This chapter includes information on the following topics:

- [“Troubleshooting the Sun Ultra 20 Workstation Setup” on page 16](#)
- [“Technical Assistance” on page 18](#)
- [“Sun Ultra 20 Workstation Documentation” on page 20](#)
- [“Downloading Developer Software Applications” on page 21](#)

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# Troubleshooting the Sun Ultra 20 Workstation Setup

If you experience problems while setting up your workstation, refer to the troubleshooting information in [TABLE 2-1](#). For additional troubleshooting information, see the *Sun Ultra 20 Workstation User Guide*, 819-2146.

**TABLE 2-1** Troubleshooting Procedures

Problem	Possible Solution
Workstation powers on, but the monitor does not.	<ul style="list-style-type: none"><li>• Is the Power button for the monitor turned on?</li><li>• Is the monitor power cord connected to a wall outlet?</li><li>• Does the wall outlet have power? Test by plugging in another device.</li><li>• Is the monitor connected to the onboard video connector or PCI Express video connector?</li></ul>
CD or DVD does not eject from the media tray when you press the Eject button.	<ul style="list-style-type: none"><li>• Move the mouse or press any key on the keyboard. The drive might be in low-power mode.</li><li>• Use the utility software installed on your workstation to eject the CD.</li></ul>
No video displays on the monitor screen.	<ul style="list-style-type: none"><li>• Is the monitor cable attached to the onboard video connector or PCI Express video connector?</li><li>• Does the monitor work when connected to another system?</li><li>• If you have another monitor, does it work when connected to the original system?</li><li>• Verify that the BIOS settings are correct.</li></ul>

**TABLE 2-1** Troubleshooting Procedures

<b>Problem</b>	<b>Possible Solution</b>
Workstation does not power on when the front panel Power button is pressed.	Keep notes on the following situations in case you need to call service: <ul style="list-style-type: none"><li>• Is the power switch on the back of the workstation turned on (see <a href="#">FIGURE 1-4</a>)?</li><li>• Is the Power button LED illuminated on the front of the system? (Ensure that the power cord is connected to the system and to a grounded power receptacle.)</li><li>• Does the wall outlet have power? Test by plugging in another device.</li><li>• Do you hear a beep when the system is powered on? (Ensure that the keyboard is plugged in.)</li><li>• Test with another keyboard that you know is functional. Do you hear a beep when you connect the keyboard and power on the system?</li><li>• Does the monitor sync within 5 minutes after power on? (The green LED on the monitor stops flashing and remains illuminated.)</li></ul>
Keyboard or mouse does not respond to actions	<ul style="list-style-type: none"><li>• Verify that the mouse and keyboard cables are connected to the on-board USB 2.0 connectors on the workstation.</li><li>• Verify that the workstation is powered on and the front Power LED is illuminated.</li></ul>
Workstation appears to be in low-power mode, but the Power button LED does not blink.	The power-indicator LED blinks only when all workstation components are in low-power mode. A tape drive might be connected to your workstation. Because tape drives do not enter low-power mode, the power-indicator LED does not blink.
Hung or frozen workstation: No response from mouse, keyboard or any application.	Try to access your workstation from another system on the network. <ol style="list-style-type: none"><li>1. From a terminal window, type: <b>ping</b> <i>hostname</i></li><li>2. If there is no response, remotely log in from another system using <b>telnet</b> or <b>rlogin</b>, and ping the system again.</li><li>3. Attempt to kill processes until the system responds.</li></ol> If the above procedure does not work: <ol style="list-style-type: none"><li>1. Press the Power button to power off the system.</li><li>2. Wait 20 to 30 seconds and power on the system.</li></ol>

# Technical Assistance

If the troubleshooting procedures in this chapter fail to solve your problem, use [TABLE 2-2](#) to collect information that you might need to communicate to the support personnel. [TABLE 2-3](#) lists the Sun web sites and telephone numbers for additional technical support.

**TABLE 2-2** System Information Required for Support

System Configuration Information Needed	Your Information
Sun service contract number	
System model	
Operating system, including service pack number or update number	
System serial number	
Peripherals attached to the system	
Hardware configuration information, including the following: <ul style="list-style-type: none"><li>• Graphics cards installed</li><li>• PCI or PCI Express cards installed</li><li>• Amount of memory</li><li>• Processor speed</li><li>• Optical disk type</li></ul>	
Email address and phone number for you and a secondary contact	
Street address where the system is located	
Superuser password	
Summary of the problem and the work being done when the problem occurred	
Output of diagnostics test, if applicable	
<b>Other useful information</b>	
IP address	
Workstation name (System host name)	
Network or internet domain name	
Proxy server configuration	

**TABLE 2-3** Sun Web Sites and Telephone Numbers

<b>Workstation Documents and Support Resources</b>	<b>URL or Telephone Number</b>
PDF and HTML files for all the current Sun Ultra 20 Workstation documents.	<a href="http://www.sun.com/documentation/">http://www.sun.com/documentation/</a>
Solaris and other software documents. This web site has full search capabilities.	<a href="http://docs.sun.com/documentation/">http://docs.sun.com/documentation/</a>
Discussion and troubleshooting forums.	<a href="http://supportforum.sun.com/">http://supportforum.sun.com/</a>
Support, diagnostic tools, and alerts for all Sun products.	<a href="http://www.sun.com/bigadmin/">http://www.sun.com/bigadmin/</a>
Software patches, lists of system specifications, troubleshooting and maintenance information, and other tools.	<a href="http://www.sunsolve.sun.com/handbook_pub/">http://www.sunsolve.sun.com/handbook_pub/</a>
Service support phone numbers.	1-800-872-4786 (1-800-USA-4Sun) Select Option 1
International telephone numbers for SunService Support.	<a href="http://www.sun.com/service/contacting/solution.html">http://www.sun.com/service/contacting/solution.html</a>
Warranty and contract support contacts. Links to other service tools.	<a href="http://www.sun.com/service/warrantiescontracts/">http://www.sun.com/service/warrantiescontracts/</a>
Warranties for every Sun product.	<a href="http://www.sun.com/service/warranty">http://www.sun.com/service/warranty</a>

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# Sun Ultra 20 Workstation Documentation

## Finding the Documentation

The documentation in the following table for the Sun Ultra 20 Workstation can be found at:

[http://www.sun.com/products-n-solutions/hardware/docs/Workstation\\_Products/Workstations/ultra\\_20/](http://www.sun.com/products-n-solutions/hardware/docs/Workstation_Products/Workstations/ultra_20/)

<b>Application</b>	<b>Title</b>	<b>Part Number</b>
System overview, troubleshooting, diagnostics and service information	<i>Sun Ultra 20 Workstation User Guide</i>	819-2146
Installation information	<i>Sun Ultra 20 Workstation Getting Started Guide</i>	819-2148
Safety Information	<i>Sun Ultra 20 Workstation Safety and Compliance Guide</i>	819-2149
Late-breaking information	<i>Sun Ultra 20 Workstation Release Notes</i>	819-2147

## Localization

This document, and others, are available in the following languages: French, Spanish, German, Italian, Swedish, Japanese, Traditional Chinese, Simplified Chinese, Korean or Russian. Please refer to the *Sun Ultra 20 Workstation Getting Started Guide*, the *Sun Ultra 20 Workstation User Guide*, and the *Sun Ultra 20 Workstation Release Notes* at:

[http://www.sun.com/products-n-solutions/hardware/docs/Workstation\\_Products/Workstations/ultra\\_20/](http://www.sun.com/products-n-solutions/hardware/docs/Workstation_Products/Workstations/ultra_20/)

Please note that English versions of these documents are updated more frequently and may contain more current information about the Sun Ultra 20 Workstation.



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# Downloading Developer Software Applications

Developer software applications are preinstalled on the Sun Ultra 20 workstation. To download the software packages, go to the web sites below. The sites contain the software packages, updates, documentation, and more.

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Software Package	Download Site
Sun Studio	<a href="http://developers.sun.com/sunstudio">http://developers.sun.com/sunstudio</a>
Java Studio Enterprise	<a href="http://developers.sun.com/jsenterprise">http://developers.sun.com/jsenterprise</a>
Java Studio Creator	<a href="http://developers.sun.com/jscreator">http://developers.sun.com/jscreator</a>
NetBeans	<a href="http://www.netbeans.org">http://www.netbeans.org</a>

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