Sun™ Ultra™ 30 UltraSPARC™-II Module Upgrade

THE NETWORK IS THE COMPUTER™

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Part No.: 805-2808-10
Revision A, November 1997

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2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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2. This device must accept any interference received, including interference that may cause undesired operation.

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- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

Shielded Cables: Connections between the workstation and peripherals must be made using shielded cables in order to maintain compliance with FCC radio frequency emission limits. Networking connections can be made using unshielded twisted pair (UTP) cables.

Modifications: Any modifications made to this device that are not approved by Sun Microsystems, Inc. may void the authority granted to the user by the FCC to operate this equipment.

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CHAPTER **1**

UltraSPARC-II Module Upgrade

Sun Ultra 30 UltraSPARC-II Module Upgrade describes how to upgrade from a 248-MHz UltraSPARC™-II to a 296-MHz UltraSPARC-II in a Sun™ Ultra™ 30 system.

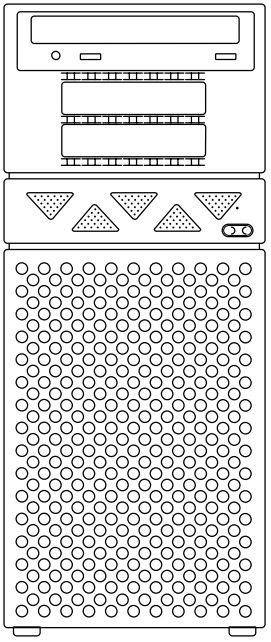

FIGURE 1-1 Ultra 30 System (Front View)

1.1 UltraSPARC-II Module Upgrade Kit

Each UltraSPARC-II module upgrade kit contains:

- This book
- 296-MHz UltraSPARC-II module
- Antistatic wrist strap

Note – Retain the packing box and shipping material to use when returning the removed module.

1.2 System Requirements

This document assumes you are upgrading from an Ultra 30 system with one 248-MHz UltraSPARC-II module to an Ultra 30 system with one 296-MHz UltraSPARC-II module.

The Ultra 30 system must use the Solaris™ 2.5.1, Hardware: 4/97 or later system software release. All OpenBoot™ PROM versions are compatible without modification.

1.3 SCD Compliance

Sun Ultra 30 systems have been independently tested and verified to comply with revision 2.1 of the SPARC Compliance Definition (SCD) developed by SPARC International, Inc. These systems are binary compatible with all other systems and software that conform to SCD version 2.1.

1.4 Opening the System Unit

This section describes how to:

- Power off the system
- Remove the system unit cover
- Attach the wrist strap

1.4.1 Powering Off the System

Caution – Before turning off the system power, exit from the operating system. Failure to do so may result in data loss.

1. **If your system is not a standalone, notify users that the system is going down.**
2. **Back up system files and data.**
3. **Halt the system.**
4. **Set the front panel power switch to the off position (**FIGURE 1-2**).**
5. **Verify that the front panel LED is off and that the system fans are not spinning.**

Caution – When the power switch is in the off position and the AC power cord remains connected to a power receptacle, AC voltage is present in the power supply primary circuit. Disconnect the AC power cord from the AC receptacle prior to servicing system components.

6. **Disconnect the AC power cord from the AC receptacle.**

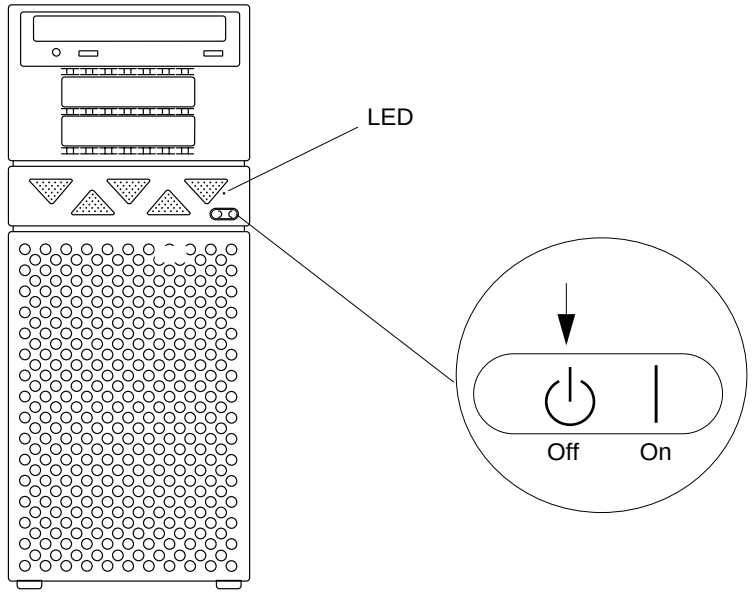

FIGURE 1-2 Front Panel Power Switch and LED

7. **Turn off the power to the monitor.**
8. **Disconnect the cables to any peripheral equipment.**

1.4.2 Removing the Side Access Cover

1. **Lay the system in the service position (**FIGURE 1-3**).**
2. **Remove the lock block using a Phillips-head screwdriver (**FIGURE 1-3**).**

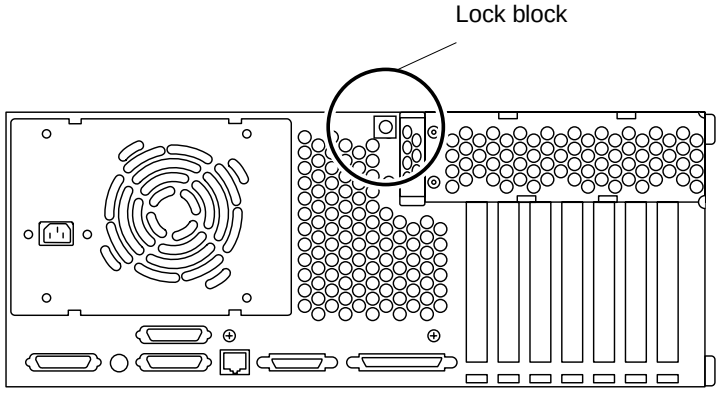

FIGURE 1-3 Lock Block Location (System in Service Position)

3. **Remove the side access cover as follows (**FIGURE 1-4**):**
   a. **Grasp the side panel and pull it toward the back of the system.**
   b. **Disengage the side access cover from the chassis hooks.**
   c. **Grasping the access cover sides, lift the side access cover upward and remove.**

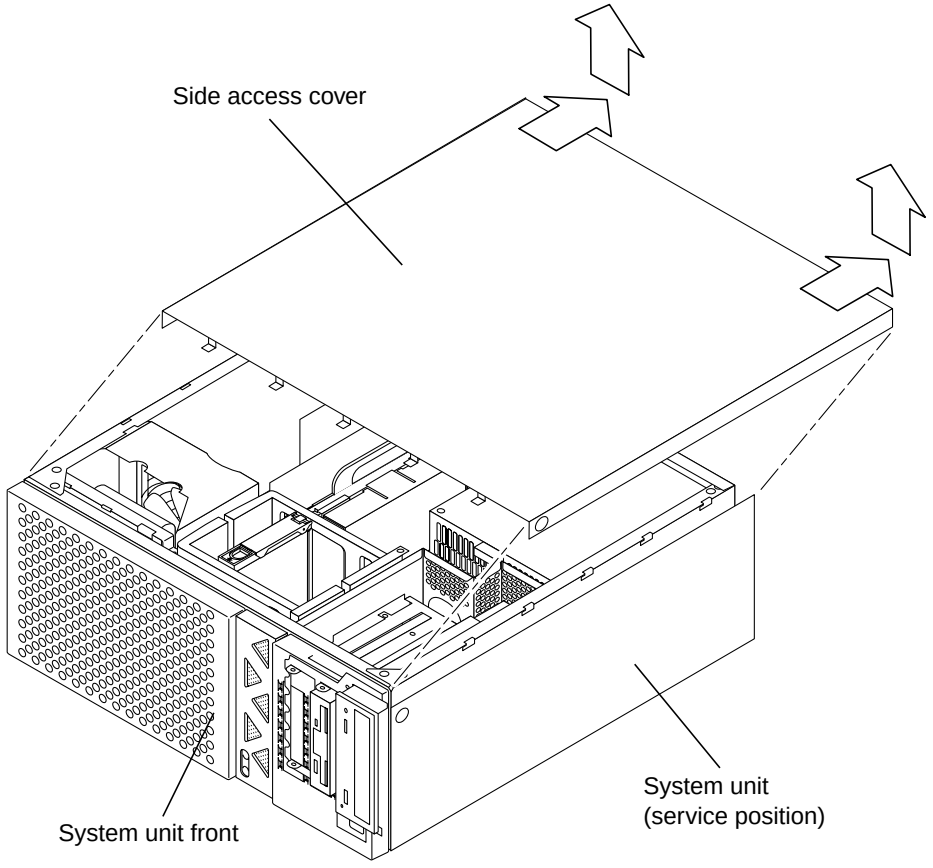

FIGURE 1-4 Removing the Side Access Cover

1.4.3 Attaching the Wrist Strap

Caution – Wear an antistatic wrist strap and use an ESD-protected mat when handling components.

1. **Unwrap the first two folds of the wrist strap; wrap the adhesive side firmly against the wrist.**
2. **Peel the liner from the copper foil at the opposite end of the wrist strap.**
3. **Attach the copper end of the wrist strap to the power supply top (**FIGURE 1-5**).**

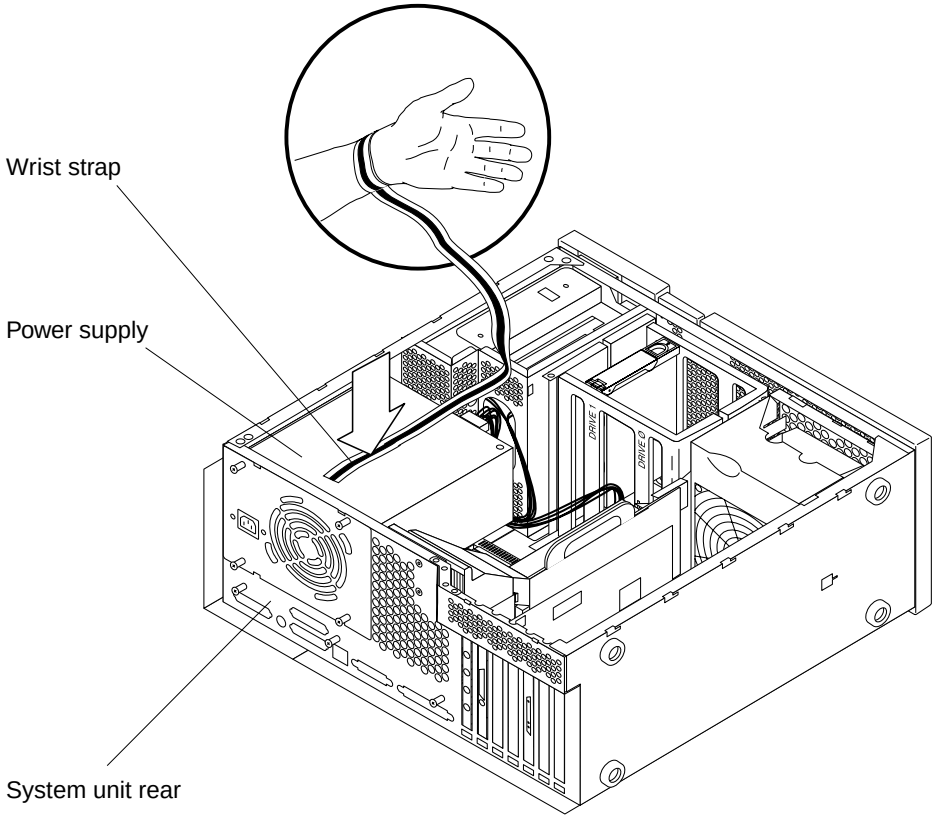

FIGURE 1-5 Attaching the Wrist Strap to the Power Supply

1.5 Installing the UltraSPARC-II Module

1.5.1 Removing the Original UltraSPARC-II Module

1. **Remove the original UltraSPARC-II module as follows (**FIGURE 1-6**):**

   a. **Using the thumbs of both hands, simultaneously lift the two levers on the CPU module upward and to the side to approximately 135 degrees.**

   b. **Lift the CPU module upward until it clears the system chassis.**

2. **Place the CPU module on an antistatic mat.**

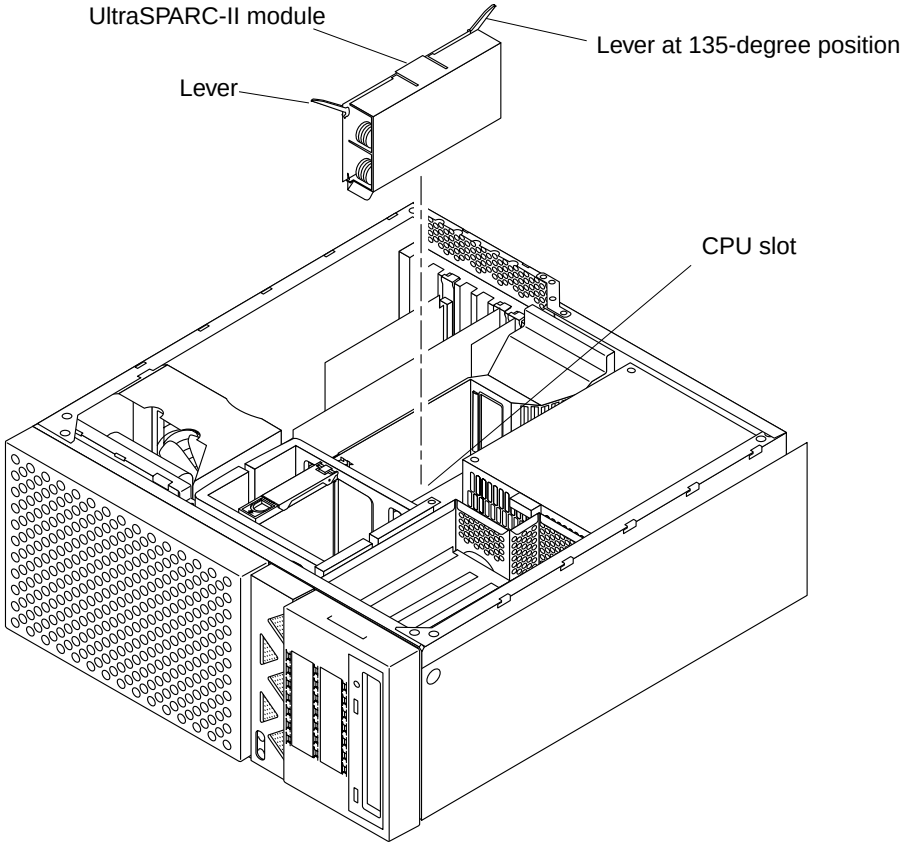

FIGURE 1-6 UltraSPARC-II Module and Slot Locations

1.5.2 Installing the New UltraSPARC-II Module

1. **Unpack the new UltraSPARC-II processor module.**
2. **Place the module on an antistatic surface.**
3. **On the antistatic surface, hold the module in an upright position so that the plastic surface faces you.**
4. **Move the levers on the module to an approximately 135-degree position (**FIGURE 1-7**).**
5. **Lower the module along the vertical plastic guides until the module touches the slot socket on the main logic board.**
6. **With both hands, simultaneously turn and press the levers downward to the fully horizontal position (**FIGURE 1-7**). Firmly press the module downward into the slot socket until it is fully seated and the levers are fully locked.**

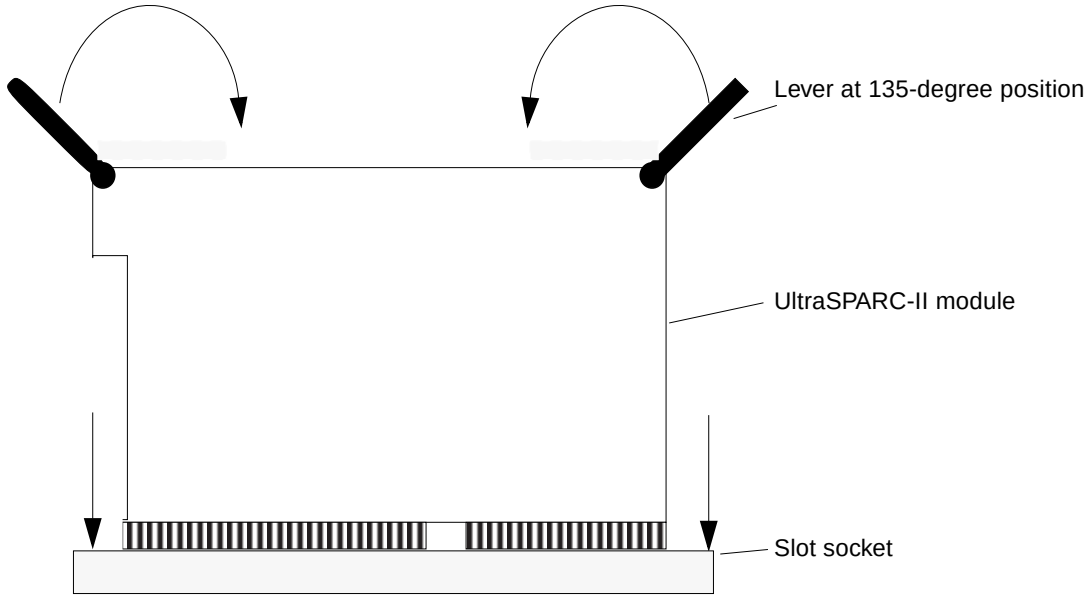

FIGURE 1-7 Locking the Module in Place

1.6 Completing the Installation

1.6.1 Replacing the Side Access Cover

1. **Position the side access cover (**FIGURE 1-8**).**
2. **Engage the side access cover and the chassis hooks. Push the access cover toward the system unit front.**

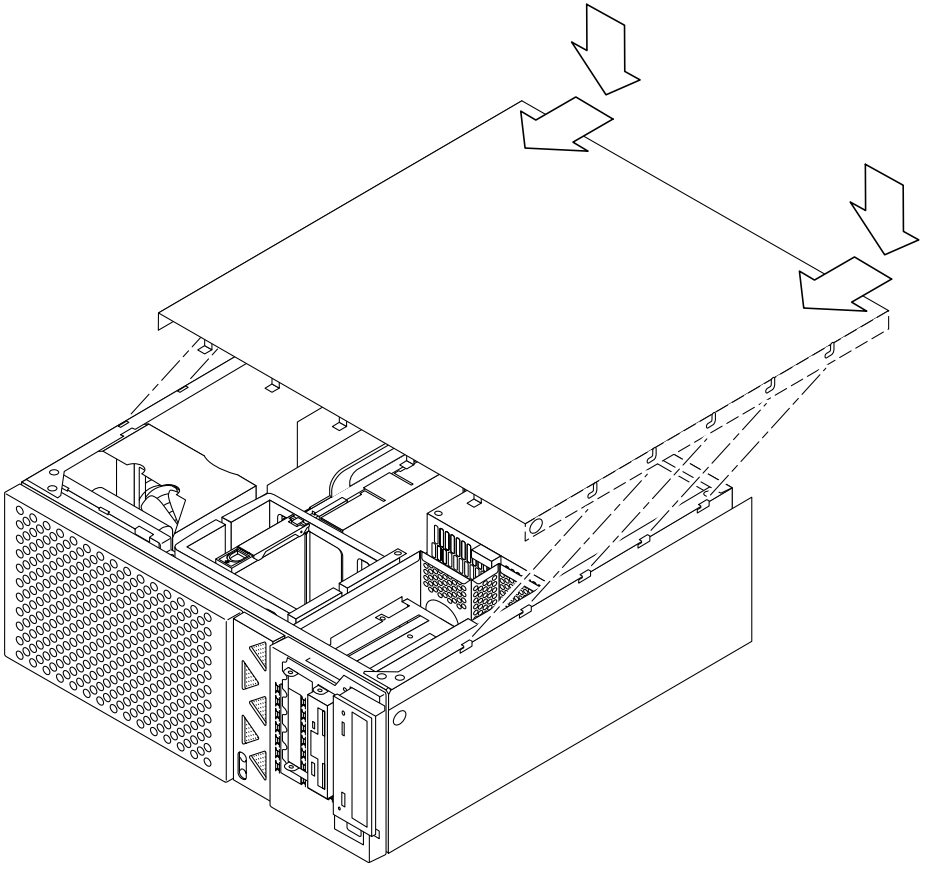

FIGURE 1-8 Lowering the Cover onto the System Unit Back Panel

3. **Replace the lock block using a Phillips-head screwdriver (**FIGURE 1-9**).**

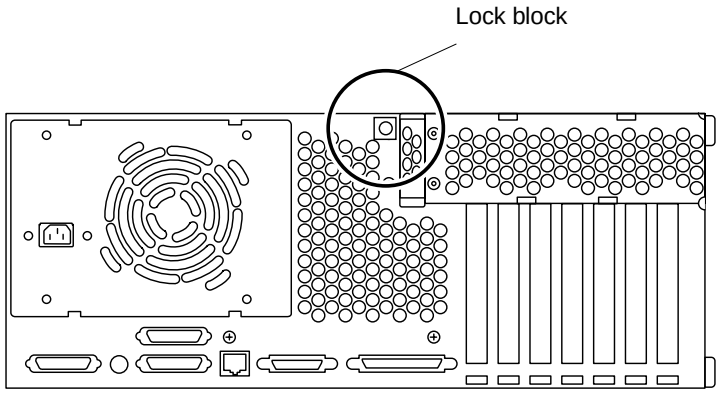

FIGURE 1-9 Lock Block Location (System in Service Position)

4. **Reposition the system unit to the operating position.**

1.6.2 Powering On the System

1. **Turn on power to all connected peripherals.**

Note – Peripheral power is activated prior to system power so the system can recognize the peripherals when it is activated.

Set the front panel power switch to the On position (FIGURE 1-2**) or press the Sun type-5 keyboard power on key (**FIGURE 1-10**).**

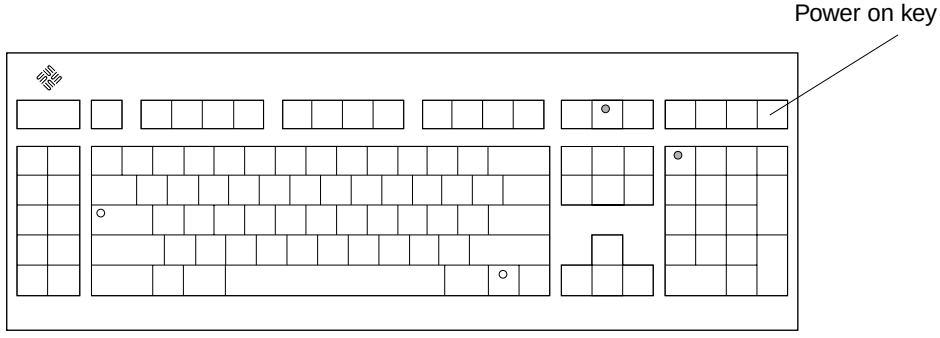

FIGURE 1-10 Sun Type-5 Keyboard

The operating system should load or the ok prompt should appear on the monitor.

1.6.3 Power-On Self-Test (POST)

For a full description of the power-on self-test (POST), refer to the *Sun Ultra 30 Service Manual*, part number 802-7719.

1.6.4 Returning the Removed Module

To return the removed module to Sun Microsystems, Inc., use the shipping box and packing materials for the UltraSPARC-II module and:

1. **Place the removed module in the antistatic bag.**
2. **Fold and tape the end of the bag.**
3. **Place the bag and other shipping materials in the shipping box.**
4. **Affix the RMA (Return Material Authorization) label from the upgrade kit onto the shipping carton.**
5. **Return the shipping carton to Sun Microsystems, Inc.**