



Sun Blade™ 1000 and Sun Blade 2000 Getting Started Guide

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Adobe PostScript

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Safety Agency Compliance Statements

Read this section before beginning any procedure. The following text provides safety precautions to follow when installing a Sun Microsystems product.

Safety Precautions

For your protection, observe the following safety precautions when setting up your equipment:

- Follow all cautions and instructions marked on the equipment.
- Ensure that the voltage and frequency of your power source match the voltage and frequency inscribed on the equipment's electrical rating label.
- Never push objects of any kind through openings in the equipment. Dangerous voltages may be present. Conductive foreign objects could produce a short circuit that could cause fire, electric shock, or damage to your equipment.

Symbols

The following symbols may appear in this book:



Caution – There is a risk of personal injury and equipment damage. Follow the instructions.



Caution – Hot surface. Avoid contact. Surfaces are hot and may cause personal injury if touched.



Caution – Hazardous voltages are present. To reduce the risk of electric shock and danger to personal health, follow the instructions.



Caution – Applies AC power to the system.

Depending on the type of power switch your device has, one of the following symbols may be used:



Caution – Removes AC power from the system.



Caution – The On/Standby switch is in the standby position.

Modifications to Equipment

Do not make mechanical or electrical modifications to the equipment. Sun Microsystems is not responsible for regulatory compliance of a modified Sun product.

Placement of a Sun Product



Caution – Do not block or cover the openings of your Sun product. Never place a Sun product near a radiator or heat register. Failure to follow these guidelines can cause overheating and affect the reliability of your Sun product.



Caution – The workplace-dependent noise level defined in DIN 45 635 Part 1000 must be 70Db(A) or less.

SELV Compliance

Safety status of I/O connections comply to SELV requirements.

Power Cord Connection

Caution – Sun products are designed to work with single-phase power systems having a grounded neutral conductor. To reduce the risk of electric shock, do not plug Sun products into any other type of power system. Contact your facilities manager or a qualified electrician if you are not sure what type of power is supplied to your building.



Caution – Not all power cords have the same current ratings. Household extension cords do not have overload protection and are not meant for use with computer systems. Do not use household extension cords with your Sun product.



Caution – Your Sun product is shipped with a grounding type (three-wire) power cord. To reduce the risk of electric shock, always plug the cord into a grounded power outlet

The following caution applies only to devices with a Standby power switch:



Caution – The power switch of this product functions as a standby type device only. The power cord serves as the primary disconnect device for the system. Be sure to plug the power cord into a grounded power outlet that is nearby the system and is readily accessible. Do not connect the power cord when the power supply has been removed from the system chassis.

Lithium Battery



Caution – On Sun CPU boards, there is a lithium battery molded into the real-time clock, SGS No. MK48T59Y, MK48TXXB-XX, MK48T18-XXXPCZ, M48T59W-XXXPCZ, or MK48T08. Batteries are not customer replaceable parts. They may explode if mishandled. Do not dispose of the battery in fire. Do not disassemble it or attempt to recharge it.

System Unit Cover

You must remove the cover of your Sun computer system unit to add cards, memory, or internal storage devices. Be sure to replace the top cover before powering on your computer system.



Caution – Do not operate Sun products without the top cover in place. Failure to take this precaution may result in personal injury and system damage.

Laser Compliance Notice

Sun products that use laser technology comply with Class 1 laser requirements.

Class 1 Laser Product
Luokan 1 Laserlaite
Klasse 1 Laser Apparat
Laser Klasse 1

CD-ROM

Caution – Use of controls, adjustments, or the performance of procedures other than those specified herein may result in hazardous radiation exposure.

Einhaltung sicherheitsbehördlicher Vorschriften

Auf dieser Seite werden Sicherheitsrichtlinien beschrieben, die bei der Installation von Sun-Produkten zu beachten sind.

Sicherheitsvorkehrungen

Treffen Sie zu Ihrem eigenen Schutz die folgenden Sicherheitsvorkehrungen, wenn Sie Ihr Gerät installieren:

- Beachten Sie alle auf den Geräten angebrachten Warnhinweise und Anweisungen.
- Vergewissern Sie sich, daß Spannung und Frequenz Ihrer Stromquelle mit der Spannung und Frequenz übereinstimmen, die auf dem Etikett mit den elektrischen Nennwerten des Geräts angegeben sind.
- Stecken Sie auf keinen Fall irgendwelche Gegenstände in Öffnungen in den Geräten. Leitfähige Gegenstände könnten aufgrund der möglicherweise vorliegenden gefährlichen Spannungen einen Kurzschluß verursachen, der einen Brand, Stromschlag oder Geräteschaden herbeiführen kann.

Symbole

Die Symbole in diesem Handbuch haben folgende Bedeutung:



Achtung – Gefahr von Verletzung und Geräteschaden. Befolgen Sie die Anweisungen



Achtung – Hohe Temperatur. Nicht berühren, da Verletzungsgefahr durch heiße Oberfläche besteht.



Achtung – Gefährliche Spannungen. Anweisungen befolgen, um Stromschläge und Verletzungen zu vermeiden



Achtung – Setzt das System unter Wechselstrom

Je nach Netzschaltertyp an Ihrem Gerät kann eines der folgenden Symbole benutzt werden:



Achtung – Unterbricht die Wechselstromzufuhr zum Gerät.



Achtung – (Stand-by-Position) - Der Ein-/Wartezustand-Schalter steht auf Wartezustand. Änderungen an Sun-Geräten.

Nehmen Sie keine mechanischen oder elektrischen Änderungen an den Geräten vor. Sun Microsystems, übernimmt bei einem Sun-Produkt, das geändert wurde, keine Verantwortung für die Einhaltung behördlicher Vorschriften

Aufstellung von Sun-Geräten



Achtung – Um den zuverlässigen Betrieb Ihres Sun-Geräts zu gewährleisten und es vor Überhitzung zu schützen, dürfen die Öffnungen im Gerät nicht blockiert oder verdeckt werden. Sun-Produkte sollten niemals in der Nähe von Heizkörpern oder Heizluftklappen aufgestellt werden



Achtung – Der arbeitsplatzbezogene Schalldruckpegel nach DIN 45 635 Teil 1000 beträgt 70Db(A) oder weniger.

Einhaltung der SELV-Richtlinien

Die Sicherung der I/O-Verbindungen entspricht den Anforderungen der SELV-Spezifikation.

Anschluß des Netzkabels



Achtung – Sun-Produkte sind für den Betrieb an Einphasen-Stromnetzen mit geerdetem Nulleiter vorgesehen. Um die Stromschlaggefahr zu reduzieren, schließen Sie Sun-Produkte nicht an andere Stromquellen an. Ihr Betriebsleiter oder ein qualifizierter Elektriker kann Ihnen die Daten zur Stromversorgung in Ihrem Gebäude geben.



Achtung – Nicht alle Netzkabel haben die gleichen Nennwerte. Herkömmliche, im Haushalt verwendete Verlängerungskabel besitzen keinen Überlastungsschutz und sind daher für Computersysteme nicht geeignet.



Achtung – Ihr Sun-Gerät wird mit einem dreiadrigen Netzkabel für geerdete Netzsteckdosen geliefert. Um die Gefahr eines Stromschlags zu reduzieren, schließen Sie das Kabel nur an eine fachgerecht verlegte, geerdete Steckdose an.

Die folgende Warnung gilt nur für Geräte mit Wartezustand-Netzschalter:



Achtung – Der Ein/Aus-Schalter dieses Geräts schaltet nur auf Wartezustand (Stand-By-Modus). Um die Stromzufuhr zum Gerät vollständig zu unterbrechen, müssen Sie das Netzkabel von der Steckdose abziehen. Schließen Sie den Stecker des Netzkabels an eine in der Nähe befindliche, frei zugängliche, geerdete Netzsteckdose an. Schließen Sie das Netzkabel nicht an, wenn das Netzteil aus der Systemeinheit entfernt wurde.

Lithiumbatterie



Achtung – CPU-Karten von Sun verfügen über eine Echtzeituhr mit integrierter Lithiumbatterie (Teile-Nr. MK48T59Y, MK48TXXB-XX, MK48T18-XXXPCZ, M48T59W-XXXPCZ, oder MK48T08). Diese Batterie darf nur von einem qualifizierten Servicetechniker ausgewechselt werden, da sie bei falscher Handhabung explodieren kann. Werfen Sie die Batterie nicht ins Feuer. Versuchen Sie auf keinen Fall, die Batterie auszubauen oder wiederaufzuladen.

Batterien



Achtung – Die Geräte Product Name enthalten auslaufsichere Bleiakkumulatoren. Produkt-Nr. TLC02V50 für portable Stromversorgung. Werden bei der Behandlung oder beim Austausch der Batterie Fehler gemacht, besteht Explosionsgefahr. Batterie nur gegen Batterien gleichen Typs von Sun Microsystems austauschen. Nicht demontieren und nicht versuchen, die Batterie außerhalb des Geräts zu laden. Batterie nicht ins Feuer werfen. Ordnungsgemäß entsprechend den vor Ort geltenden Vorschriften entsorgen.

Gehäuseabdeckung

Sie müssen die obere Abdeckung Ihres Sun-Systems entfernen, um interne Komponenten wie Karten, Speicherchips oder Massenspeicher hinzuzufügen. Bringen Sie die obere Gehäuseabdeckung wieder an, bevor Sie Ihr System einschalten.



Achtung – Bei Betrieb des Systems ohne obere Abdeckung besteht die Gefahr von Stromschlag und Systemschäden.

Einhaltung der Richtlinien für Laser

Sun-Produkte, die mit Laser-Technologie arbeiten, entsprechen den Anforderungen der Laser Klasse 1.

Class 1 Laser Product
Luokan 1 Laserlaitte
Klasse 1 Laser Apparat
Laser Klasse 1

CD-ROM



Achtung – Die Verwendung von anderen Steuerungen und Einstellungen oder die Durchführung von Prozeduren, die von den hier beschriebenen abweichen, können gefährliche Strahlungen zur Folge haben.

Conformité aux normes de sécurité

Ce texte traite des mesures de sécurité qu'il convient de prendre pour l'installation d'un produit Sun Microsystems.

Mesures de sécurité

Pour votre protection, veuillez prendre les précautions suivantes pendant l'installation du matériel :

- Suivre tous les avertissements et toutes les instructions inscrites sur le matériel.
- Vérifier que la tension et la fréquence de la source d'alimentation électrique correspondent à la tension et à la fréquence indiquées sur l'étiquette de classification de l'appareil.

- Ne jamais introduire d'objets quels qu'ils soient dans une des ouvertures de l'appareil. Vous pourriez vous trouver en présence de hautes tensions dangereuses. Tout objet conducteur introduit de la sorte pourrait produire un court-circuit qui entraînerait des flammes, des risques d'électrocution ou des dégâts matériels.

Symboles

Vous trouverez ci-dessous la signification des différents symboles utilisés :



Attention – risques de blessures corporelles et de dégâts matériels. Veuillez suivre les instructions.



Attention – surface à température élevée. Évitez le contact. La température des surfaces est élevée et leur contact peut provoquer des blessures corporelles.



Attention – présence de tensions dangereuses. Pour éviter les risques d'électrocution et de danger pour la santé physique, veuillez suivre les instructions.



Attention – Votre système est sous tension (courant alternatif).

Un des symboles suivants sera peut-être utilisé en fonction du type d'interrupteur de votre système:



Attention – Votre système est hors tension (courant alternatif).



Attention – L'interrupteur Marche/Veilleuse est en position « Veilleuse ».

Modification du matériel

Ne pas apporter de modification mécanique ou électrique au matériel. Sun Microsystems n'est pas responsable de la conformité réglementaire d'un produit Sun qui a été modifié.

Positionnement d'un produit Sun



Attention – pour assurer le bon fonctionnement de votre produit Sun et pour l'empêcher de surchauffer, il convient de ne pas obstruer ni recouvrir les ouvertures prévues dans l'appareil. Un produit Sun ne doit jamais être placé à proximité d'un radiateur ou d'une source de chaleur.



Attention – Le niveau de pression acoustique au poste de travail s'élève selon la norme DIN 45 635 section 1000, à 70 dB (A) ou moins.

Conformité SELV

Sécurité : les raccordements E/S sont conformes aux normes SELV.

Connexion du cordon d'alimentation



Attention – les produits Sun sont conçus pour fonctionner avec des alimentations monophasées munies d'un conducteur neutre mis à la terre. Pour écarter les risques d'électrocution, ne pas brancher de produit Sun dans un autre type d'alimentation secteur. En cas de doute quant au type d'alimentation électrique du local, veuillez vous adresser au directeur de l'exploitation ou à un électricien qualifié.



Attention – tous les cordons d'alimentation n'ont pas forcément la même puissance nominale en matière de courant. Les rallonges d'usage domestique n'offrent pas de protection contre les surcharges et ne sont pas prévues pour les systèmes d'ordinateurs. Ne pas utiliser de rallonge d'usage domestique avec votre produit Sun.



Attention – votre produit Sun a été livré équipé d'un cordon d'alimentation à trois fils (avec prise de terre). Pour écarter tout risque d'électrocution, branchez toujours ce cordon dans une prise mise à la terre.

L'avertissement suivant s'applique uniquement aux systèmes équipés d'un interrupteur VEILLEUSE:



Attention – Le commutateur d'alimentation de ce produit fonctionne comme un dispositif de mise en veille uniquement. C'est la prise d'alimentation qui sert à mettre le produit hors tension. Veuillez donc à installer le produit à proximité d'une prise murale facilement accessible. Ne connectez pas la prise d'alimentation lorsque le châssis du système n'est plus alimenté.

Batterie au lithium



Attention – sur les cartes CPU Sun, une batterie au lithium (référence MK48T59Y, MK48TXXB-XX, MK48T18-XXXPCZ, M48T59W-XXXPCZ, ou MK48T08.) a été moulée dans l'horloge temps réel SGS. Les batteries ne sont pas des pièces remplaçables par le client. Elles risquent d'exploser en cas de mauvais traitement. Ne pas jeter la batterie au feu. Ne pas la démonter ni tenter de la recharger.

Bloc-batterie



Attention – Les unités Product Name contiennent une batterie étanche au plomb (produits énergétiques portatifs n°TLC02V50). Il existe un risque d'explosion si ce bloc-batterie est manipulé de façon erronée ou mal mis en place. Ne remplacez ce bloc que par un bloc-batterie Sun Microsystems du même type. Ne le démontez pas et n'essayez pas de le recharger hors du système. Ne faites pas brûler la batterie mais mettez-la au rebut conformément aux réglementations locales en vigueur.

Couvercle

Pour ajouter des cartes, de la mémoire, ou des unités de stockage internes, vous devrez démonter le couvercle de l'unité système Sun. Ne pas oublier de remettre ce couvercle en place avant de mettre le système sous tension.



Attention – il est dangereux de faire fonctionner un produit Sun sans le couvercle en place. Si l'on néglige cette précaution, on encourt des risques de blessures corporelles et de dégâts matériels.

Conformité aux certifications Laser

Les produits Sun qui font appel aux technologies lasers sont conformes aux normes de la classe 1 en la matière.

Class 1 Laser Product
Luokan 1 Laserlaite
Klasse 1 Laser Apparat
Laser Klasse 1

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Attention – L'utilisation de contrôles, de réglages ou de performances de procédures autre que celle spécifiée dans le présent document peut provoquer une exposition à des radiations dangereuses.

Normativas de seguridad

El siguiente texto incluye las medidas de seguridad que se deben seguir cuando se instale algún producto de Sun Microsystems.

Precauciones de seguridad

Para su protección observe las siguientes medidas de seguridad cuando manipule su equipo:

- Siga todas los avisos e instrucciones marcados en el equipo.
- Asegúrese de que el voltaje y la frecuencia de la red eléctrica concuerdan con las descritas en las etiquetas de especificaciones eléctricas del equipo.
- No introduzca nunca objetos de ningún tipo a través de los orificios del equipo. Pueden haber voltajes peligrosos. Los objetos extraños conductores de la electricidad pueden producir cortocircuitos que provoquen un incendio, descargas eléctricas o daños en el equipo.

Símbolos

En este libro aparecen los siguientes símbolos:



Precaución – Existe el riesgo de lesiones personales y daños al equipo. Siga las instrucciones.



Precaución – Superficie caliente. Evite el contacto. Las superficies están calientes y pueden causar daños personales si se tocan.



Precaución – Voltaje peligroso presente. Para reducir el riesgo de descarga y daños para la salud siga las instrucciones.

Precaución – Aplica la alimentación de CA al sistema.

Según el tipo de interruptor de encendido que su equipo tenga, es posible que se utilice uno de los siguientes símbolos:



Precaución – Elimina la alimentación de CA del sistema.



Precaución – El interruptor de Encendido/En espera se ha colocado en la posición de En espera.

Modificaciones en el equipo

No realice modificaciones de tipo mecánico o eléctrico en el equipo. Sun Microsystems no se hace responsable del cumplimiento de las normativas de seguridad en los equipos Sun modificados.

Ubicación de un producto Sun



Precaución – Para asegurar la fiabilidad de funcionamiento de su producto Sun y para protegerlo de sobrecalentamientos no deben obstruirse o taparse las rejillas del equipo. Los productos Sun nunca deben situarse cerca de radiadores o de fuentes de calor.



Precaución – De acuerdo con la norma DIN 45 635, Parte 1000, se admite un nivel de presión acústica para puestos de trabajo máximo de 70Db(A).

Cumplimiento de la normativa SELV

El estado de la seguridad de las conexiones de entrada/salida cumple los requisitos de la normativa SELV.

Conexión del cable de alimentación eléctrica



Precaución – Los productos Sun están diseñados para trabajar en una red eléctrica monofásica con toma de tierra. Para reducir el riesgo de descarga eléctrica, no conecte los productos Sun a otro tipo de sistema de alimentación eléctrica. Póngase en contacto con el responsable de mantenimiento o con un electricista cualificado si no está seguro del sistema de alimentación eléctrica del que se dispone en su edificio.



Precaución – No todos los cables de alimentación eléctrica tienen la misma capacidad. Los cables de tipo doméstico no están provistos de protecciones contra sobrecargas y por tanto no son apropiados para su uso con computadores. No utilice alargadores de tipo doméstico para conectar sus productos Sun.



Precaución – Con el producto Sun se proporciona un cable de alimentación con toma de tierra. Para reducir el riesgo de descargas eléctricas conéctelo siempre a un enchufe con toma de tierra.

La siguiente advertencia se aplica solamente a equipos con un interruptor de encendido que tenga una posición "En espera":



Precaución – El interruptor de encendido de este producto funciona exclusivamente como un dispositivo de puesta en espera. El enchufe de la fuente de alimentación está diseñado para ser el elemento primario de desconexión del equipo. El equipo debe instalarse cerca del enchufe de forma que este último pueda ser fácil y rápidamente accesible. No conecte el cable de alimentación cuando se ha retirado la fuente de alimentación del chasis del sistema.

Batería de litio



Precaución – En las placas de CPU Sun hay una batería de litio insertada en el reloj de tiempo real, tipo SGS Núm. MK48T59Y, MK48TXXB-XX, MK48T18-XXXPCZ, M48T59W-XXXPCZ, o MK48T08. Las baterías no son elementos reemplazables por el propio cliente. Pueden explotar si se manipulan de forma errónea. No arroje las baterías al fuego. No las abra o intente recargarlas.

Paquete de pilas



Precaución – Las unidades Product Name contienen una pila de plomo sellada, Productos de energía portátil n° TLC02V50. Existe riesgo de estallido si el paquete de pilas se maneja sin cuidado o se sustituye de manera indebida. Las pilas sólo deben sustituirse por el mismo tipo de paquete de pilas de Sun Microsystems. No las desmonte ni intente recargarlas fuera del sistema. No arroje las pilas al fuego. Deséchelas siguiendo el método indicado por las disposiciones vigentes.

Tapa de la unidad del sistema

Debe quitar la tapa del sistema cuando sea necesario añadir tarjetas, memoria o dispositivos de almacenamiento internos. Asegúrese de cerrar la tapa superior antes de volver a encender el equipo.



Precaución – Es peligroso hacer funcionar los productos Sun sin la tapa superior colocada. El hecho de no tener en cuenta esta precaución puede ocasionar daños personales o perjudicar el funcionamiento del equipo.

Aviso de cumplimiento con requisitos de láser

Los productos Sun que utilizan la tecnología de láser cumplen con los requisitos de láser de Clase 1.

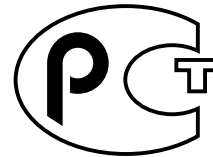
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Precaución – El manejo de los controles, los ajustes o la ejecución de procedimientos distintos a los aquí especificados pueden exponer al usuario a radiaciones peligrosas.

GOST-R Certification Mark



Nordic Lithium Battery Cautions

Norge



Caution – Litiumbatteri –
Ekspløsjonsfare. Ved utskifting benyttes kun
batteri som anbefalt av apparatfabrikanten.
Brukt batteri returneres apparatleverandøren.

Sverige



**Caution – Explosionsfara vid felaktigt
batteribyte.** Använd samma batterityp eller en
ekvivalent typ som rekommenderas av
apparatillverkaren. Kassera använt batteri
enligt fabrikantens instruktion.

Danmark



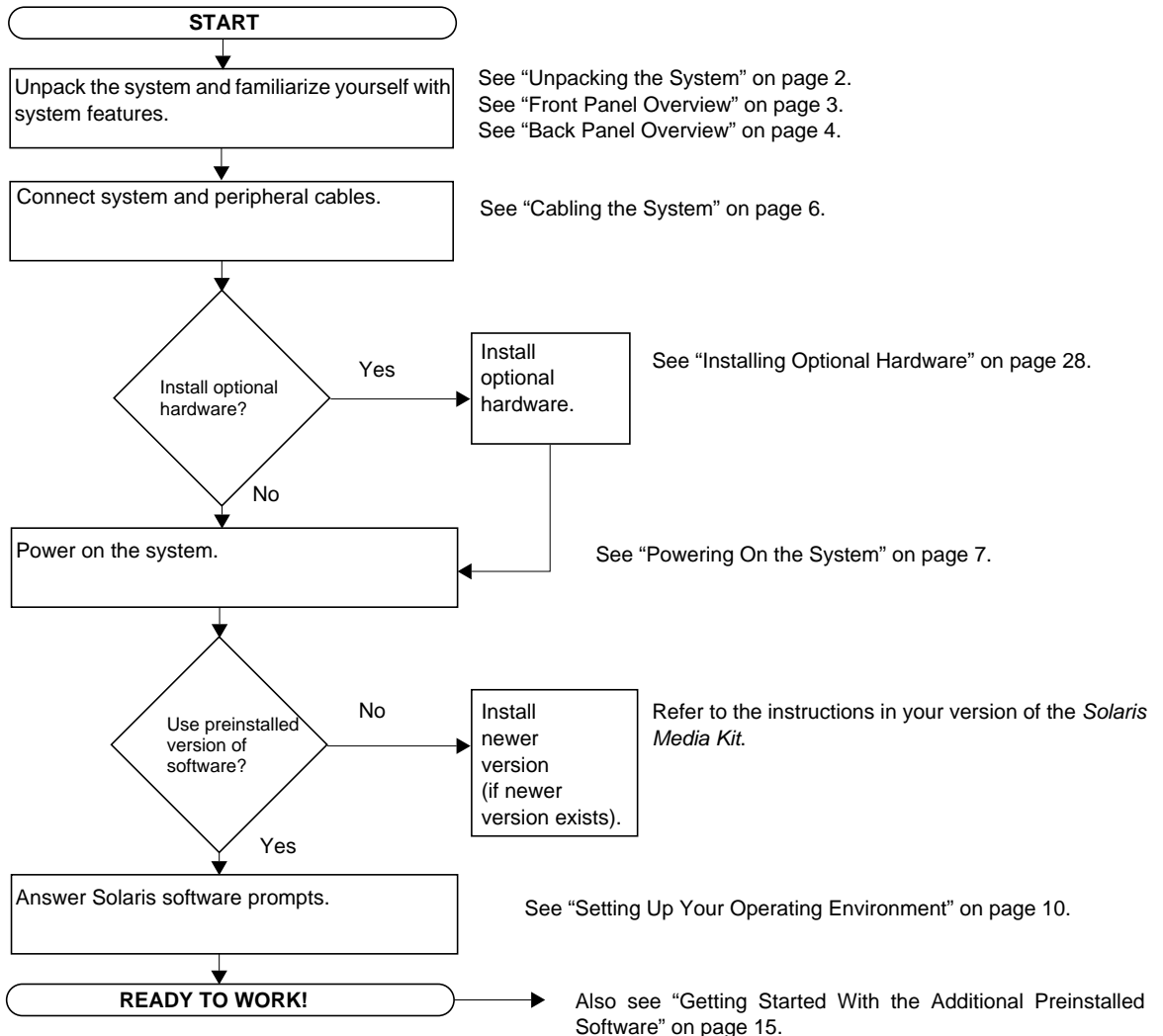
Caution – Litiumbatteri – Ekspløsjonsfare
ved fejlagtig håndtering. Udsiftning må kun
ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til
leverandøren.

Suomi



**Caution – Paristo voi räjähtää, jos se on
virheellisesti asennettu.** Vaihda paristo
ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan
ohjeiden mukaisesti.

Getting Started With the Sun Blade 1000 and Sun Blade 2000 Systems



Setting Up the System

Unpacking the System

Carefully remove all system components and documentation from all packing cartons. The contents shown in FIGURE 1 may vary, depending on what system configuration you have ordered.

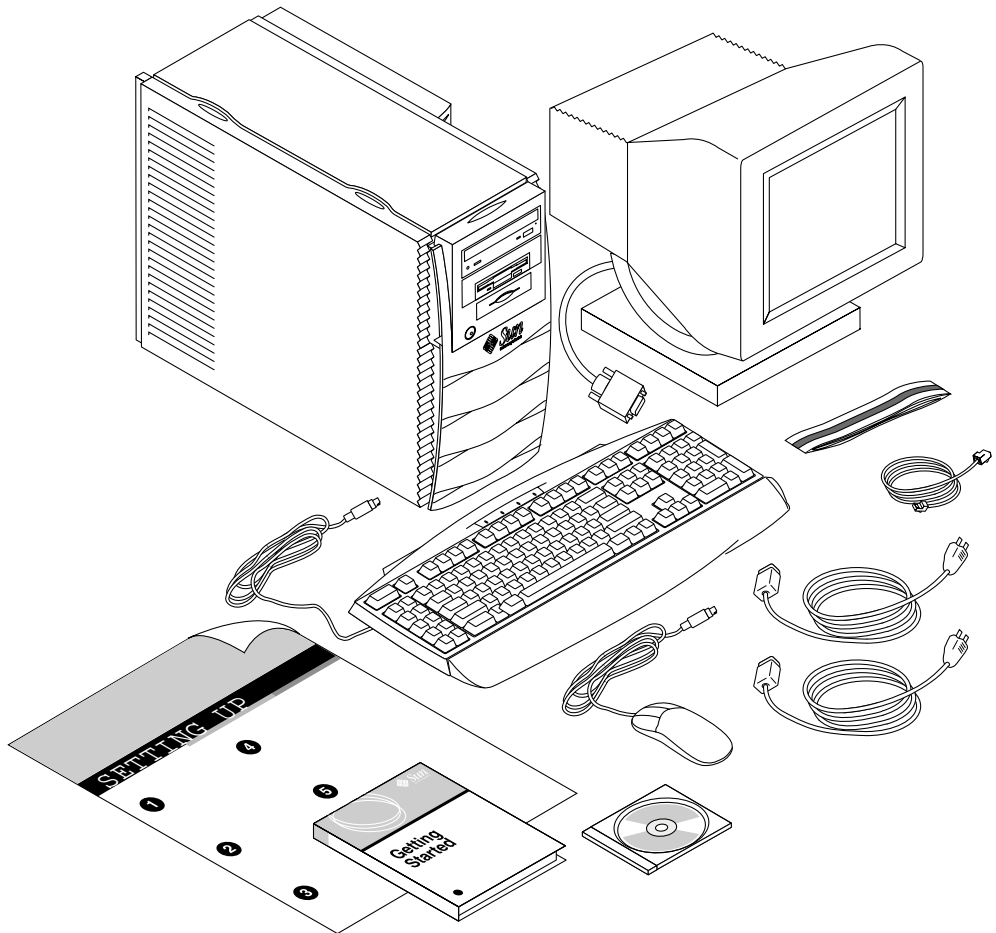


FIGURE 1 Unpacking the System

Front Panel Overview

The numbered list below corresponds to the numeric captions in FIGURE 2.

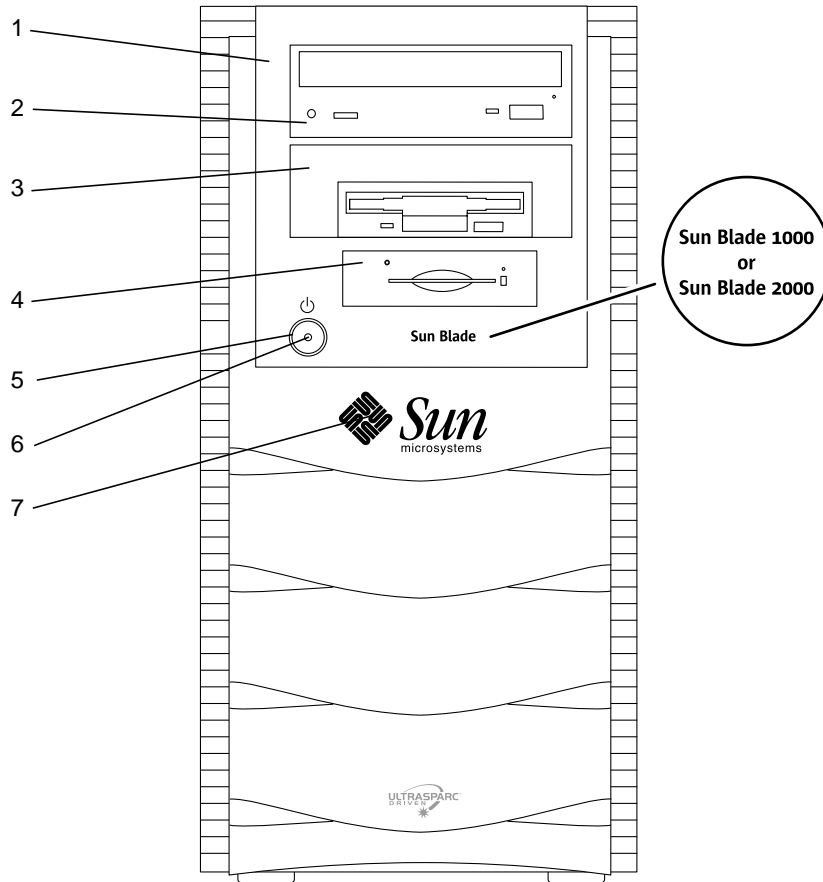


FIGURE 2 Front Panel Overview

1. Peripheral bezel
2. 5.25-inch drive bay (optional DVD-ROM drive shown)
3. 5.25- or 3.5-inch drive bay (optional diskette drive shown)
4. Smart card reader
5. Power switch
6. Power indicator LED
7. Back-lit Sun logo

Back Panel Overview

TABLE 1 defines the items and symbols shown in FIGURE 3.

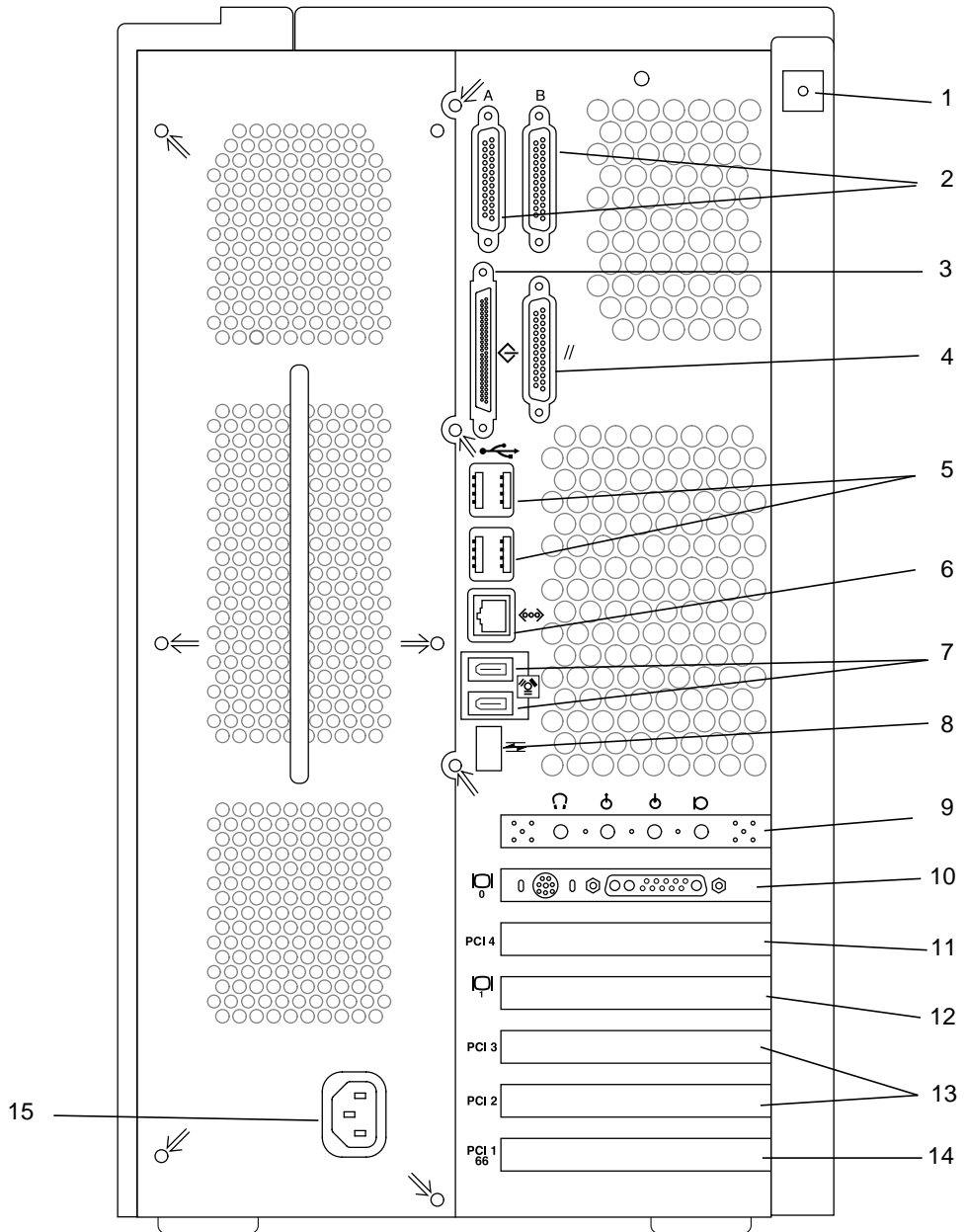













FIGURE 3 Back Panel Overview

TABLE 1 Back Panel Description and Connector Symbols

Item shown in Figure 3	Explanation	Back Panel Symbol
1	Access panel lock block (customer-installed, included in the accessory box)	None
2	Serial connectors A and B, DB-25 (can support RS-423 and RS-232 protocols, see “Setting the Serial Port Mode” on page 8)	A B
3	SCSI connector (Ultra SCSI, 68-pin)	
4	Parallel connector, DB-25	//
5	Universal serial bus (USB) connectors	
6	Twisted-pair Ethernet (TPE) connector	
7	IEEE 1394 (Firewire) connectors	
8	Fibre Channel-Arbitrated Loop (FC-AL) connector	
9	Audio module headphone connector	
9	Audio module line-in connector	
9	Audio module line-out connector	
9	Audio module microphone connector	
10	Graphics card/video connector (frame buffer 0)	
11	PCI card slot 4 (33 MHz)	PCI 4
12	Graphics card/video connector (frame buffer 1)	
13	PCI card slot 3 (33 MHz)	PCI 3
13	PCI card slot 2 (33 MHz)	PCI 2
14	PCI card slot 1 (66 MHz)	PCI 1 66
15	Power connector	None

Cabling the System

1. Connect the system power cord to a grounded electrical outlet (see FIGURE 4).
2. Connect the keyboard and the mouse to the USB connectors on the system.

Note – Use of more than one mouse or keyboard at a time is not supported.

3. Connect the monitor power cord to a grounded electrical outlet.
4. Connect the monitor video cable to a graphics card connector on the system.
5. Connect the Ethernet cable to the TPE connector on the system (if the system is to be networked).
6. Connect any additional external devices to the system's other connectors.

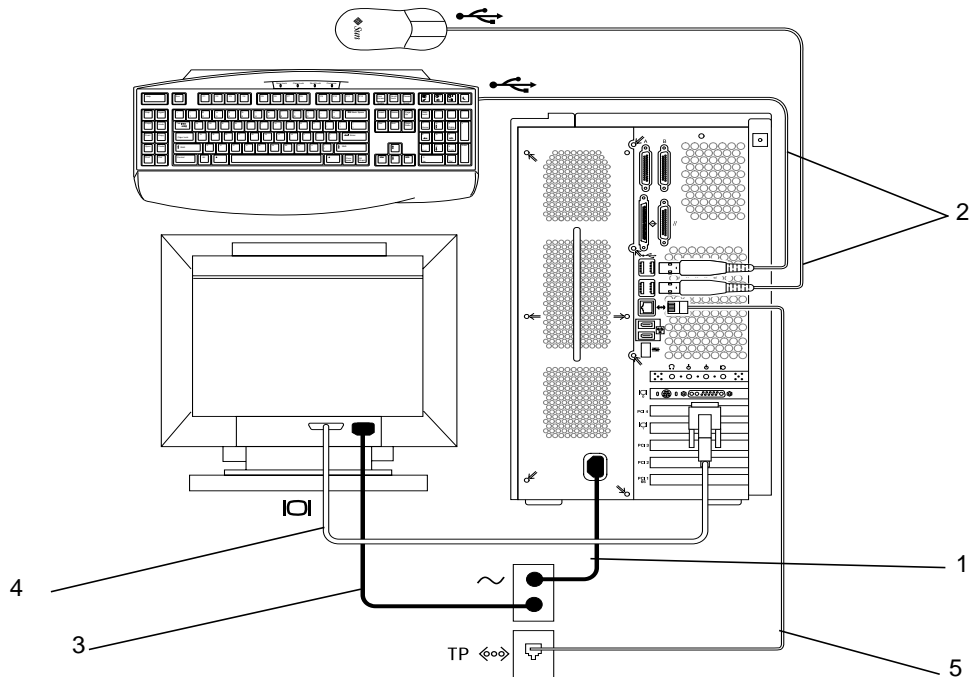


FIGURE 4 Cabling the System

Powering On the System



Helpful Hint – If you are installing optional components, go to “Installing Optional Hardware” on page 28 before powering on the system. If you are not installing optional components, you are ready to power on the system.

Note – Any keyboard or mouse must be connected before you power on the system. If you connect a keyboard or mouse after power on, you must reboot the system. For more information, refer to Appendix D, “USB Supplement,” in the *Sun Blade 1000 and Sun Blade 2000 Service Manual* (816-3217).

1. Turn on power to the monitor and to all external devices.
2. Press the power switch on the front panel and release it (see FIGURE 2).
3. After several seconds, verify that the power indicator LED on the power switch is lit and listen to verify that the system fans are spinning.
 - The power indicator LED on the power switch lights after the system begins the internal booting process. If you experience problems during power on, see “Troubleshooting” on page 47.

Note – The first time that you power on the system, an illustration of your Sun Blade™ system should be displayed. This illustration is only displayed on the first power on sequence.



Helpful Hint – After you power on the system for the first time, you are ready to set up the preinstalled Solaris operating environment software. Go to “Setting Up the Preinstalled Solaris Operating Environment Software” on page 9.

Setting the Serial Port Mode

The serial ports of the system support the RS-232 and RS-423 protocols. The default mode on both ports of new systems is RS-423. You can set the modes of the ports with a software command, as follows:

1. **Halt the system to display the system `ok` prompt.**
2. **Type one of the following, depending on which port you are setting:**
 - To set the serial port A mode, type:
`setenv ttya-mode 9600,8,n,1,-,mode`
 - To set the serial port B mode, type:
`setenv ttyb-mode 9600,8,n,1,-,mode`
where *mode* is either `rs232` or `rs423`.
3. **Type `reset-all` to make the new mode operational on your system.**

Note – If you set the mode of only one of the serial ports, both ports are set to the mode of this single port.



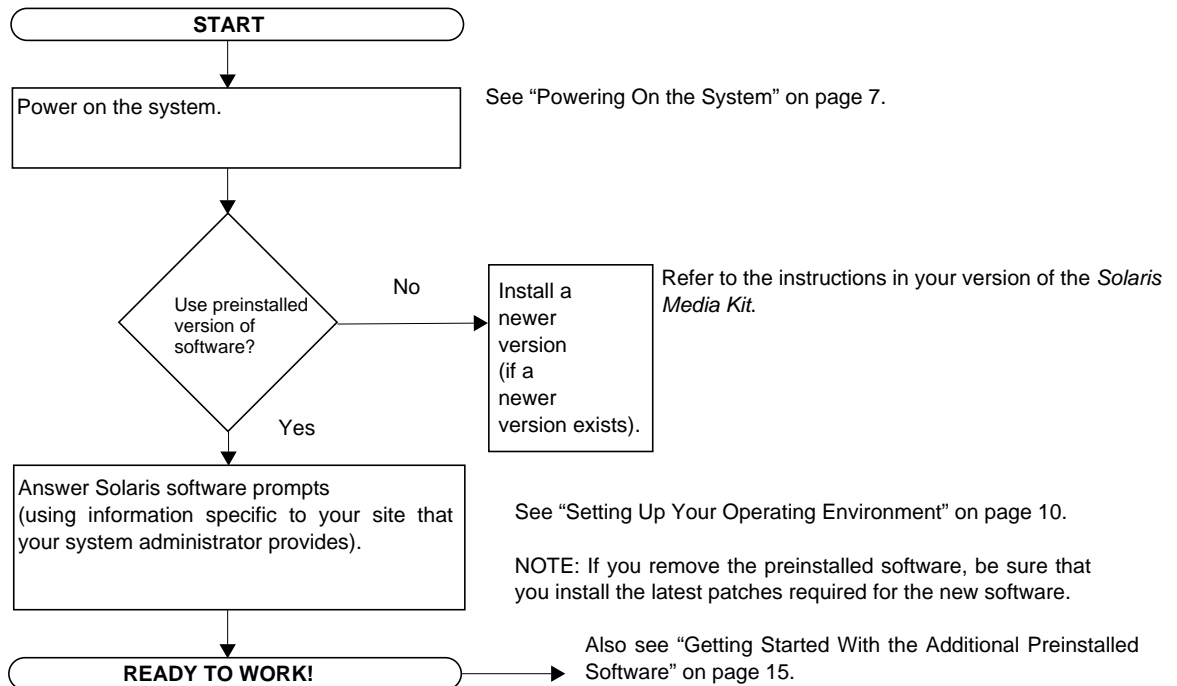
Setting Up the Preinstalled Solaris Operating Environment Software

Your system has the Solaris™ operating environment and additional productivity software installed on its hard disk. The exact configuration that has been preinstalled is as follows:

- Disk root partition—6144 Mbytes
- Disk swap partition—512 Mbytes
- Disk/space partition—the remainder of the disk

As the flowchart below shows, simply power on your system, answer the Solaris setup prompts, and you are ready to begin using your system. Alternatively, you can install a newer version of the Solaris software (if any).

Caution – The Sun Blade 1000 system requires Solaris 8, software release 10/00 or a subsequent compatible release. The Sun Blade 2000 system requires Solaris 8, software release 10/01 or a subsequent compatible release.



Setting Up Your Operating Environment

1. Power on the system (see “Powering On the System” on page 7).
2. Answer the setup prompts by following the on-screen instructions. TABLE 2 summarizes the setup prompts.



Helpful Hint – To help answer the setup prompts, your system administrator (SA) should provide you with information specific to your site before you begin. Some of this information might already be set up in a JumpStart™ profile on an install server in your network—check with your SA. Before you begin, you can use a copy of TABLE 2 to write down the information you must input.

TABLE 2 Information Needed to Set Up the Solaris Desktop Operating Environment

Setup Window	Explanation and Notes	Your Information
Select Language	Asks for the native language to use for the system.	
Host Name	Asks for the name to give this system.	
Network Connectivity/ IP Address	Asks whether this system is on a network. Note: Depending on how you answer and what information is provided by your network, you may also be prompted for this system's IP address.	
Name Service	Asks which service to use: NIS+, NIS, DNS, or None. This window is not displayed if the system is not networked.	
Domain Name	Asks for the domain where the system resides. This window is not displayed if the system is not networked.	
Name Server/ Subnet/ Subnet Mask	Asks for the name server (specify the server or have the system find one on a local subnet). This window is not displayed if the system is not networked. Note: Depending on how you answer and what information is provided by your network, you may also be prompted for: - Subnet (Asks whether this system is on a subnet.) - Subnet Mask (Asks for subnet mask for this system's subnet.)	
Time Zone	Asks for local time zone (select by geographic region, GMT offset, or a time zone file).	
Date and Time	Asks for the current date and time (accept the default or enter the current date and time).	
Root Password	Asks for the root (superuser) password for the system.	
Proxy Server Configuration	Asks whether this system is connected to the Internet directly or through a proxy server.	

3. When you reach the setup window titled End, click the Confirm button.

The system displays the login window, in which you can enter your user name and password to log in and begin using the system.



Helpful Hint – A number of other useful software packages have also been preinstalled on your system. For information on those applications, see “Getting Started With the Additional Preinstalled Software” on page 15.

4. Review the Solaris release notes for any late-breaking information about your preinstalled software:

The *Solaris 8 Release Notes* are installed on your system at:

`/usr/share/release_info/Solaris_8/locale/S8FCSreleasenotes`

Power Management Features



All standard configurations of the Sun Blade 1000 and Sun Blade 2000 workstations meet Energy Star® guidelines. Any other configuration may not comply with Energy Star guidelines.

For additional information about Sun Blade 1000 and Sun Blade 2000 configurations that are Energy Star compliant go to: <http://store.sun.com>

Then, select the following links in order:

1. Desktops
2. Workstations
3. Sun Blade 1000 Workstation (or Sun Blade 2000 Workstation)

The Power Management™ software that is integrated with your Solaris software improves the energy efficiency of your system. Internal subsystems enter a low-power mode after a specified period of inactivity. Power is returned to subsystems on an as-needed basis.

While in low-power mode, your system retains network-awareness, such that it responds to tasks directed to it. For details and information on how to change the power management settings on your system, refer to the preinstalled “Solaris User Collection” document, *Using Power Management* (see “Hardware and Software Documentation” on page 16).

The power-indicator LED in the center of the front panel power switch has three states that indicate the power status of the system, as described in TABLE 3.

TABLE 3 Power-Indicator LED States

LED Activity	Meaning
LED off	System power is off or system is booting up.
LED blinking	All internal subsystems are in lowest possible power consumption mode for this system*. *Some hardware components and software drivers do not support this system's lowest possible power consumption mode. When this occurs, the power indicator LED will not blink.
LED on	Full power is on in one or more of the internal subsystems and system self test has completed successfully.

Putting the System Into Low-Power Mode

Although the system (or subsystems) automatically enter low-power mode after a period of inactivity, you can manually put the system into low-power mode, such as when you are leaving for the day. To put a system into low-power mode:

1. Press the Sun™ Type-6 USB keyboard Power key (see FIGURE 5).

The Power Off Selection dialog box is displayed.

Note – The Sun Type-6 USB keyboard Power key cannot be used to power on the system (as the Power key could be used on earlier versions of Sun keyboards).

2. Select “Low Power” from the Power Off Selection dialog box.

The system completes any in-process activities and then places all idle subsystems into low-power mode.

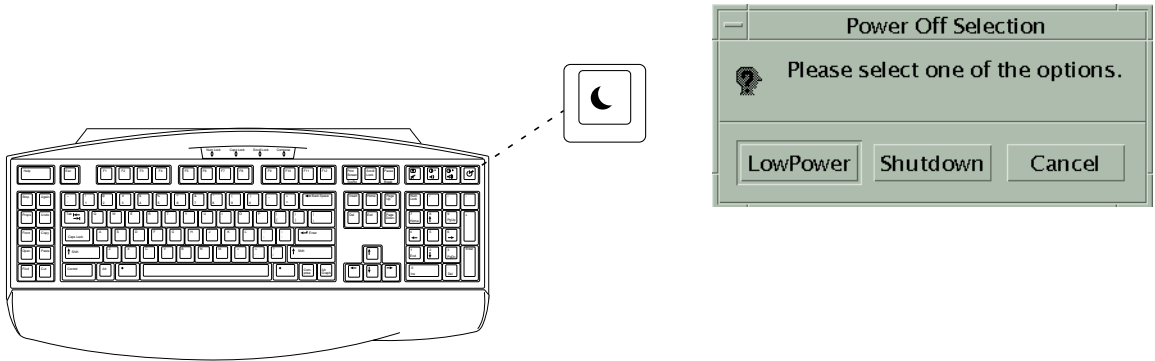


FIGURE 5 Sun USB Type-6 Keyboard Power Key and Power Off Selection Dialog Box

Activating the System From Low-Power Mode

To activate a system that is in low-power mode, click a mouse button or press any key on your keyboard. The monitor display, if blank, refreshes and the subsystems return to full power as they are needed while you use the system.

Note – By default, the hard disk drive is spun down when the system is in the low-power mode. The drive can take as long as 30 seconds to spin back up. If this delay is unacceptable, you can disable hard disk drive power management. Refer to the “Solaris User Collection” document, *Using Power Management* (see “Hardware and Software Documentation” on page 16).

Disabling Power Management

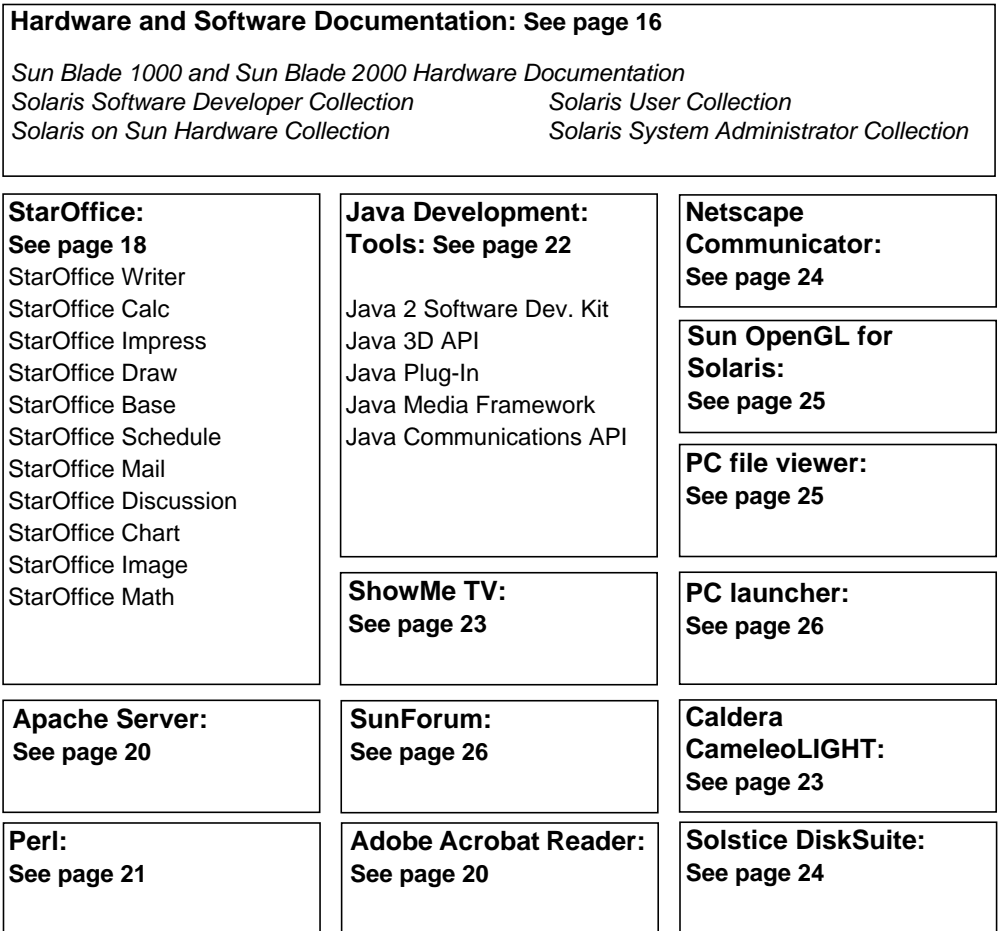
Sun Blade 1000 and Sun Blade 2000 users can disable the Energy Star power management feature by using the Dtpower GUI.

1. **At the system prompt, type: `/usr/dt/bin/dtpower`**
2. **Select Disabled for the Current Power Saving Scheme.**

Note – You can select Customized, Disabled, Minimal, or Standard as the Current Power Saving Scheme.

Getting Started With the Additional Preinstalled Software

Sun has preinstalled an additional collection of useful software applications. The following diagram gives an overview of this preinstalled software and shows which page contains information about getting started for each application.



Hardware and Software Documentation

The following preinstalled documentation collections contain reference information about your system's hardware and software.

- *Sun Blade 1000 and Sun Blade 2000 Hardware Documentation Collection*
- *Solaris on Sun Hardware Collection*
- *Solaris User Collection*
- *Solaris System Administrator Collection*
- *Solaris Software Developer Collection*

The hardware documentation is installed in HTML format that can be viewed with any HTML-compliant browser. You can view or print the HTML file from:

```
/opt/SunBlade1000_2000_Service_Manual/HTML/index.html
```

The Sun Blade 1000 and Sun Blade 2000 hardware documentation is also installed in PDF format, which can be viewed with Adobe® Acrobat Reader. You can view or print the PDF file from:

```
/opt/SunBlade1000_2000_Service_Manual/PDF/816-3217-10.pdf
```

The Solaris documentation is installed as AnswerBook2™ collections. Refer to the following section for instructions on viewing AnswerBook2 documents. You can view the documents online or print them.

Viewing AnswerBook2 Documentation

English and European-language AnswerBooks are preloaded on the system. When AnswerBook2 is launched, documentation in English and European languages is listed.

1. To start AnswerBook2, do one of the following:

- Type the following at a command line:

```
/usr/dt/bin/answerbook2
```
- Click on the arrow above the Help menu icon on your Common Desktop Environment (CDE) task bar (as shown by the icon on the left), then select AnswerBook2 from the pop-up Help menu.



2. When the browser window appears, select the document you want from the Contents list.

Smart Card Documentation

Your smart card reader can be used for Dtlogin authentication. For more information, read the *Solaris Smart Cards Administration Guide* (806-1646).



StarOffice™ is the optimum in office productivity software from Sun Microsystems. StarOffice is a powerful and comprehensive office suite that integrates word processing, spreadsheets, graphics, presentations, HTML, and database components into a single workspace.

Key features include:

- Robust and scalable integrated office productivity tools that include word processing, spreadsheets, e-mail, graphics, web publishing, scheduling, and database applications.
- A cross-platform, open-world approach—StarOffice runs natively on Solaris software (SPARC™ and Intel processors), Microsoft Windows NT, Windows 95, Windows 98, and Linux.
- Inter operability with Microsoft Office files, allowing seamless and transparent migration and exchange of word processing, spreadsheet, and presentation files.
- A fully integrated work environment that utilizes a single workspace, enabling easy access, management, editing, and sharing of information.
- Built-in web publishing that enables easy HTML web page creation, design, and publishing.
- Team-oriented communication and workflow management, promoting workgroup collaboration for time-critical projects.

Product Components:

- StarOffice Writer—a universal word processing application for creating business letters, extensive text documents, professional layouts, and HTML creation
- StarOffice Calc—a sophisticated application for performing advanced spreadsheet functions, such as analyzing figures, creating lists, and viewing data
- StarOffice Impress—a tool for creating effective, eye-catching presentations
- StarOffice Draw—a vector-oriented drawing module that enables the creation of 3D illustrations
- StarOffice Base—a powerful data management tool that enables data to be moved between documents
- StarOffice Schedule—a seamless, integrated organizer that helps users keep their events, tasks, contacts, and projects under control
- StarOffice Mail—an electronic mail application
- StarOffice Discussion—an application that enables participation in Internet newsgroups



Getting Started With StarOffice

To start the preinstalled StarOffice software, click the StarOffice icon on the CDE desktop task bar, as shown at left.

You can also start StarOffice by typing a command:

- To start the English version of StarOffice, type:
`/opt/office52/program/soffice`

To start the other available languages, type one of the path names given in TABLE 4.

TABLE 4 StarOffice Language Versions

Language	Pathname
Danish	<code>/opt/office52/danish/so-5_2-ga-bin-solsparc-da.bin</code>
Dutch	<code>/opt/office52/dutch/so-5_2-ga-bin-solsparc-nl.bin</code>
English	<code>/opt/office52/english/so-5_2-ga-bin-solsparc-en.bin</code>
French	<code>/opt/office52/french/so-5_2-ga-bin-solsparc-fr.bin</code>
German	<code>/opt/office52/german/so-5_2-ga-bin-solsparc-de.bin</code>
Italian	<code>/opt/office52/italian/so-5_2-ga-bin-solsparc-it.bin</code>
Polish	<code>/opt/office52/polish/so-5_2-ga-bin-solsparc-pl.bin</code>
Portuguese	<code>/opt/office52/portuguese/so-5_2-ga-bin-solsparc-pt.bin</code>
Russian	<code>/opt/office52/russian/so-5_2-ga-bin-solsparc-ru.bin</code>
Spanish	<code>/opt/office52/spanish/so-5_2-ga-bin-solsparc-es.bin</code>
Swedish	<code>/opt/office52/swedish/so-5_2-ga-bin-solsparc-sv.bin</code>

The first time you start StarOffice, the application will prompt you to select an installation method. Select “Standard Workstation Installation.”

For details about using StarOffice software, refer to the application’s built-in help system. You can also order a full product media kit that includes user documentation and the software on CD from the following web site:

<http://www.sun.com/products/staroffice/get.cgi#fullmediakit>

Note – If you need to restore the StarOffice software, you can download the latest version from the following web site:

<http://www.sun.com/products/staroffice/>

Note – Support for StarOffice is not included with your hardware purchase. StarOffice software support services must be contracted separately. For the latest information on StarOffice support services, see the following web site:
<http://www.sun.com/staroffice/support>

Adobe Acrobat Reader

Adobe Acrobat Reader is a free and freely distributable software program that allows you to view and print Portable Document Files Format (PDF) files. PDF is a file format that allows you view and print a file exactly as the author designed it without needing to have the same application or fonts used to create the file.

Getting Started with Acrobat Reader

Adobe Acrobat Reader is installed on your system at `/usr/bin/acroread`

Apache Server

Apache Server is an open-source HTTP server for various modern desktop and server operating systems, such as UNIX[®] and Microsoft Windows NT. The Apache Server provides a secure, efficient, and expandable server that provides HTTP services that comply with the current HTTP standards.

Getting Started With Apache Server

To activate the web server on your system, follow the steps below:

- 1. Become superuser (root) by typing `su` and your superuser password.**
- 2. Copy the example configuration file `httpd.conf-example` to `httpd.conf` by typing the following:**

```
cp /etc/apache/httpd.conf-example /etc/apache/httpd.conf
```

3. **Edit the configuration file to customize it for your system. For example, you should set the HTML directory for your system.**

For more information, refer to the online Apache User's Guide by following the "Server Documentation" link from the following web site:

<http://www.apache.org/httpd.html>

4. **Start the web server daemon by typing the following:**

```
/etc/rc3.d/S50apache start
```

Perl

Perl is a programming language available as open-source software. Perl's process, file, and text manipulation facilities make it particularly well-suited for tasks involving quick prototyping, system utilities, or software tools.

Getting Started With Perl

Perl is installed on your system at `/usr/bin`. For information about using Perl, refer to the man pages for the application by typing: `man perl`.



Development Tools for the Java Platform

The following Sun development tools for the Java™ platform are preinstalled on your system.

Note – If you need to restore the Java products, you can download the latest versions by selecting links from the following web site:

<http://java.sun.com/products/>

- Java 2 Runtime Environment and Software Development Kit is installed at `/usr/java/`. For more information, refer to the following web site:
<http://java.sun.com/products/j2se/>
- Java 3D™ API is available in the Java 2 SDK. For more information, refer to the documentation links from the following web site:
<http://java.sun.com/products/java-media/3D/>
- Java Plug-In is a plug-in for the Netscape™ browser that provides complete support for the standard Java runtime. For more information refer to the following web site:
<http://java.sun.com/products/plugin>
- Java Media Framework is installed at `/opt/JMF`. For more information, refer to the following web site:
<http://java.sun.com/products/java-media/jmf>
- The Java Communications API can be used to write platform-independent communications applications for technologies such as voice mail, fax, and smart cards. For more information, refer to the following web site:
<http://java.sun.com/products/javacomm>

ShowMe TV

ShowMe TV™ is a powerful audio/video tool that delivers up-to-the-minute news, special reports, or internal communications directly to the system. ShowMe TV is a television system for local and wide-area networks that can be used to view and broadcast live or prerecorded video programs on the network, or to play back video or audio files (QuickTime, AVI, and MPEG). It is also a tool for broadcasting and viewing training courses, lectures, corporate messages, and for monitoring important news events.

Getting Started With ShowMe TV

For more information, refer to the readme file installed on your system at `/opt/SUNWSmtv/GettingStarted.txt`, or the following web site:

<http://www.sun.com/desktop/products/software/ShowMeTV>

The ShowMe TV program also has its own help system.

To start ShowMe TV, type: `/opt/SUNWSmtv/bin/showmetv`

Caldera Graphics CameleoLIGHT

CameleoLIGHT from Caldera Graphics is a professional UNIX software package that provides a number of graphics capabilities such as image acquisition from scanners or digital cameras, image processing, retouching, composing, and image output to devices such as printers, film recorders, and CD recorders. CameleoLIGHT is a useful complement to the tools used in CAD, technical desktop publishing, scientific and medical imaging, and web authoring. CameleoLIGHT is also available from the following web site:

<http://www.calderagraphics.com/en/download/index.html>

Getting Started With CameleoLIGHT

To start CameleoLIGHT, type: `/opt/caldera/bin/cameleo`

User documentation for CameleoLIGHT is pre-installed on the system. Launch the CameleoLIGHT application and use the right mouse button to select user documentation. This will open the user documentation from the Netscape Communicator application.

Netscape Communicator

Netscape Communicator is the world's premiere browser for the Internet.

The version of Netscape Communicator that is preinstalled on your system has been modified to allow shipment into countries that restrict the importation of encryption software. Therefore, this version does not support the encryption required for secure HTTP connections such as those used in e-commerce.

To obtain an S/MIME version of Netscape Communicator, you can order the *Solaris Media Kit* ("Restoring the Preinstalled Software" on page 27). You can also download the S/MIME version from the following Sun web sites:

<http://sunsolve.sun.com>
<http://www.sun.com/solaris/netscape>

Alternatively, you can download the latest full 128-bit encryption version of Netscape Communicator directly from the Netscape web site:

<http://www.netscape.com>

Note – The version of Netscape Communicator available from the Netscape site might be more recent, but has not been compatibility-tested by Sun.



Getting Started With Netscape

To start Netscape, click on the globe/clock face icon on the CDE desktop task bar (as shown at left). Netscape has built-in help files for more information. The Netscape files on your system are installed at `/usr/dt/apponfig/netscape`.

Solstice DiskSuite

Solstice DiskSuite™ is a disk and storage management application for the Solaris operating environment that enables high data availability, improved data reliability, enhanced system and I/O performance and simple large system and disk administration.

Getting Started with Solstice DiskSuite

The Solstice DiskSuite binaries are installed on your system at `/usr/sbin`. For additional information on starting Solstice DiskSuite, see the *Solstice DiskSuite User's Guide* at <http://docs.sun.com>.

Sun OpenGL for Solaris

Sun OpenGL[®] for Solaris is Sun's native implementation of the OpenGL application programming interface (API). The OpenGL API is an industry-standard, vendor-neutral graphics library.

Getting Started With OpenGL

The runtime portion of OpenGL is already preinstalled on your system and no instructions are required.

PC File Viewer

PC File Viewer provides the ability to view and copy text from many popular types of PC files instantly, whether or not users have the originating applications installed on their systems. For example, PC File Viewer incorporated into the Solaris operating environment allows users to share attachments and files created in Microsoft Word, Excel, PowerPoint, Lotus 1-2-3, and AutoCAD applications.

Getting Started With PC File Viewer

For details about PC File Viewer features and supported file types, refer to the text file installed on your system at: `/opt/SUNWdtpcv/GettingStarted.txt`, or the following web site:

`http://www.sun.com/products-n-solutions/
software/interoperability`

PC Launcher

Note – PC Launcher requires an optional SunPCi card to be installed in the system.

PC Launcher gives SunPCi™ card users seamless access and power to view, edit, and print many popular types of PC files or attachments instantly, by automatically launching the associated Microsoft Windows application and file.

PC Launcher provides easy editing, viewing, searching, and navigating of PC file attachments and Microsoft Windows executable files. Users can copy and paste text from Windows applications into any Solaris application. PC Launcher also gives easy and quick access to PC file type attachments in Sun's CDE Mail and File Manager, as well as drag-and-drop capability for any file on the CDE front panel icon.

Getting Started With PC Launcher

For details about PC Launcher features and supported file types, refer to the following web site:

[http://www.sun.com/products-n-solutions/
software/interoperability](http://www.sun.com/products-n-solutions/software/interoperability)

SunForum

SunForum™ lets you collaborate with colleagues while working in a heterogeneous environment of Sun workstations, PCs, and Apple computers. Using SunForum, you can choose to interact through any of the following industry standard H.323 features over your TCP/IP network:

- Video and audio conferencing between two or more people
- Shared native and non-native applications that enable PC applications to run on a Solaris desktop, and vice-versa, providing the ability to transfer control of the applications between participants
- A shared whiteboard, chat window, clipboard, or file

Getting Started With SunForum

For more information about SunForum, or to download the latest version, refer to the following web site:

<http://www.sun.com/desktop/products/software/sunforum>

Restoring the Preinstalled Software

Your system comes preconfigured with the Solaris operating environment and other preinstalled software. However, if you should replace your hard drive for any reason, the replacement drive does not come preconfigured with the Solaris operating environment or the other preinstalled software.

Therefore, you should make and keep a full backup of the operating environment, which can be used to restore your system if it is ever needed. Instructions for backing up your operating environment are included in the preinstalled *Solaris System Administration Guide AnswerBook2*.

You can also restore some of the software that is preinstalled on your disk from the CDs included in the appropriate version of the *Solaris Media Kit*. This media kit contains some of the same software that is preinstalled on your system, with the exception of the Java software. However, you can download these products from the web sites listed in their respective sections in this document (also note that some software products, such as Netscape, offer different versions than those in the media kit, from their respective web sites).

To restore your hard drive from the *Solaris Media Kit* CDs, take the following steps:

1. Get the backup media, the *Solaris Media Kit*.

You might already have this kit if you ordered it with your system. If you did not order the kit with your system, contact your Sun sales representative and ask to order the *Solaris Media Kit* for your language and Solaris version.

2. Follow the installation instructions in the *Start Here* document that comes with the kit.

You can install the Solaris operating environment and as much of the additional software as you want.

3. To restore the system hardware documentation, reinstall it from the Sun Blade 1000 and Sun Blade 2000 Hardware Documentation CD (705-0073) that is included with your system.

Use the instructions in the CD insert document *Sun Blade 1000 and Sun Blade 2000 Hardware Documentation* (818-0073).

Installing Optional Hardware

Preparing for Installation

To prepare for installation of optional hardware, you must power off the system, remove the access panel, and attach an antistatic wrist strap.

Powering Off the System

- 1. Prior to turning off power to the workstation, save, back up, and close any open files. Notify any affected users that you are powering off your workstation.**
- 2. To power off the workstation:**
 - If the Solaris OS *is* running in a windowing environment:
 - a. Press and immediately release the front panel Power switch (see FIGURE 6) to automatically shut down all programs and the operating system, and to power off the workstation.**
 - b. From the menu displayed on the system monitor, select Shutdown.**

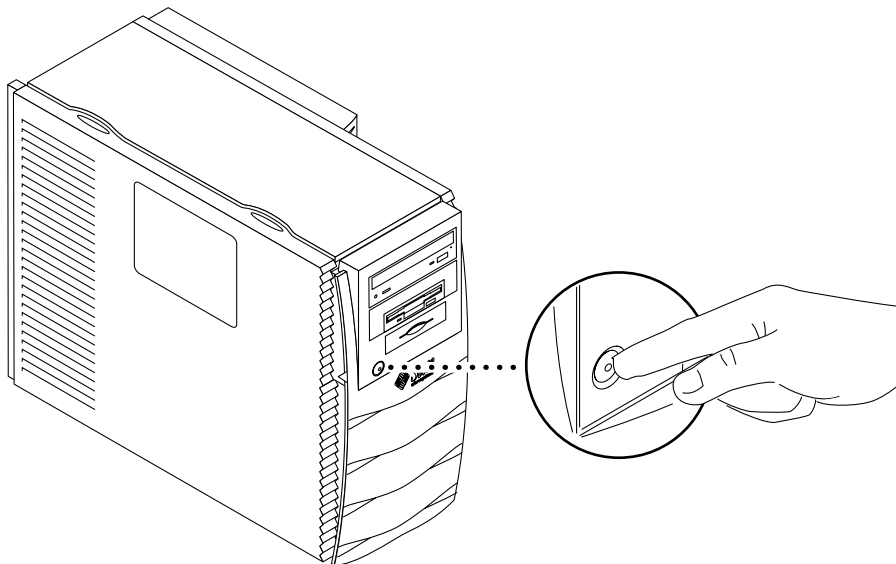


FIGURE 6 Powering off the System

If the Solaris OS *is not* running in a windowing environment:

- a. **Press the front panel Power switch** (see FIGURE 6) **to power off the workstation.**

This action automatically shuts down the operating system, all software programs, and it powers off the workstation.

If the system is at the `ok` prompt (OpenBoot™ interface):

- a. **Press and hold the front panel Power switch for four seconds** (see FIGURE 6) **to power off the workstation.**

This action forces an immediate power off of the workstation. Any unsaved data is lost.



Caution – Pressing the power switch does not remove all power from the workstation. A trickle current remains in the power supply. To remove all power from the workstation, disconnect the power cord.

3. **Verify that the backlit Sun logo on the front panel is off and the workstation fans are not spinning.**
4. **Turn off power to the monitor and other external peripherals.**
5. **Disconnect the cables for any peripheral equipment.**

Removing the Access Panel

Note – If the power cord is connected, removal of the access panel activates the workstation power interlock circuit. This safety mechanism prevents all DC voltages (except +5 VDC standby power) from reaching any internal components.

1. Remove the lock block, if one is installed (see FIGURE 7).
2. Press down on the two depressions at the top of the access panel (see FIGURE 8).
3. Tilt the top of the access panel about an inch away from the chassis.
4. Lift the access panel up.
5. Lift the access panel off.

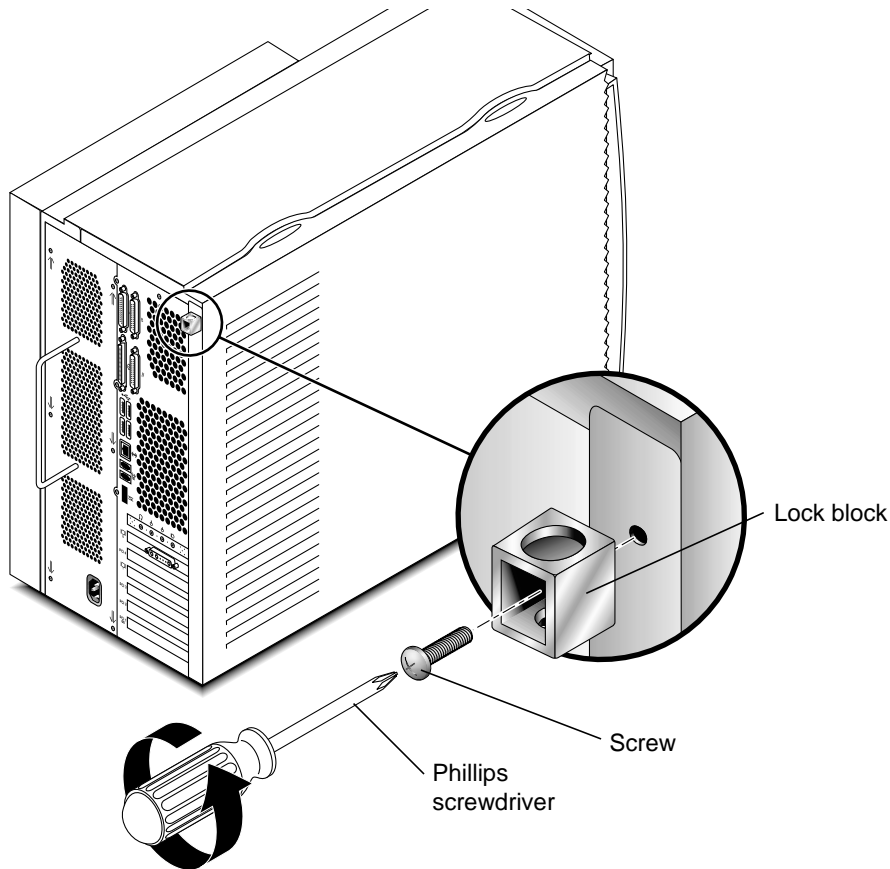


FIGURE 7 Removing the Lock Block

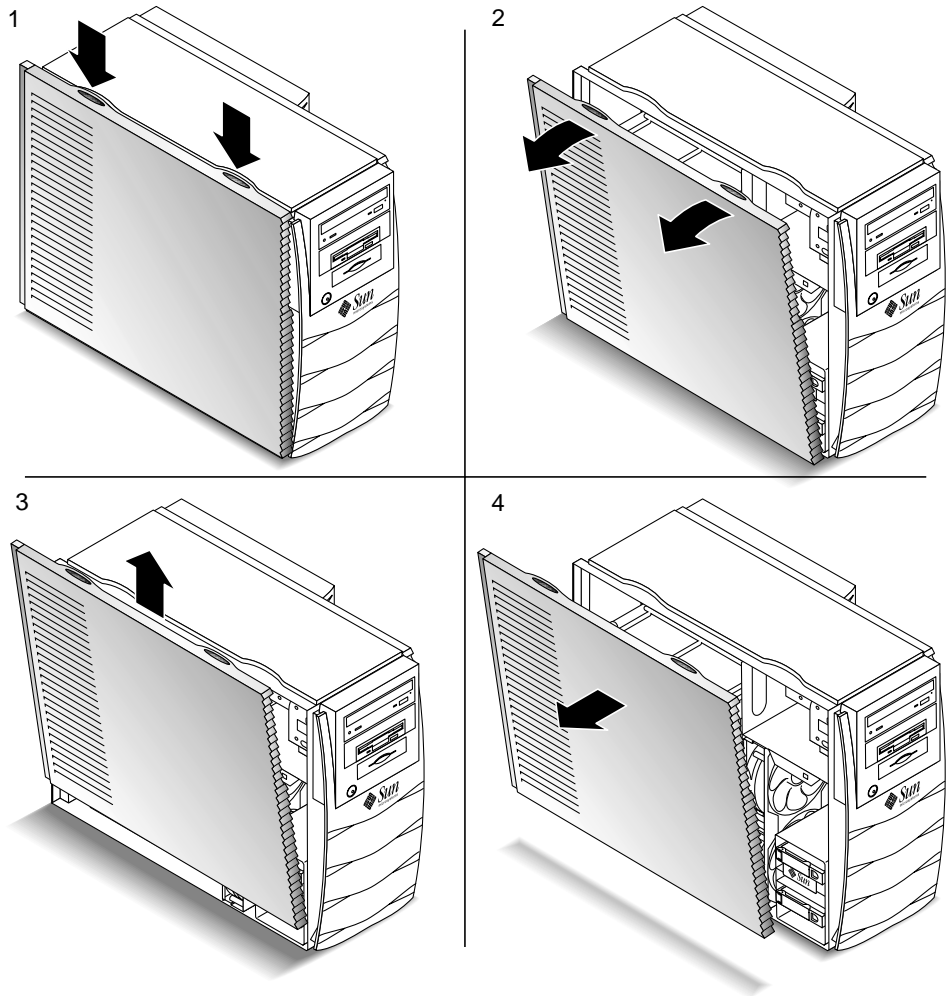


FIGURE 8 Preparing for Installation of Internal Components

Attaching an Antistatic Wrist Strap



Caution – Wear an antistatic wrist strap and use an antistatic mat when handling workstation components. Before servicing or removing workstation components, attach the strap to your wrist and then to a metal area on the chassis. Then disconnect the power cord from the workstation and the wall receptacle. Following this caution equalizes all electrical potentials within the workstation.

1. Place the workstation on its side on a work surface, open side facing up (see FIGURE 9).
2. Unwrap the first two folds of the disposable antistatic wrist strap and wrap the adhesive side firmly against your wrist.
3. Peel the liner from the copper foil at the opposite end of the wrist strap.
4. Attach the copper end of the wrist strap to the chassis (see FIGURE 9).
5. Disconnect the power cord.

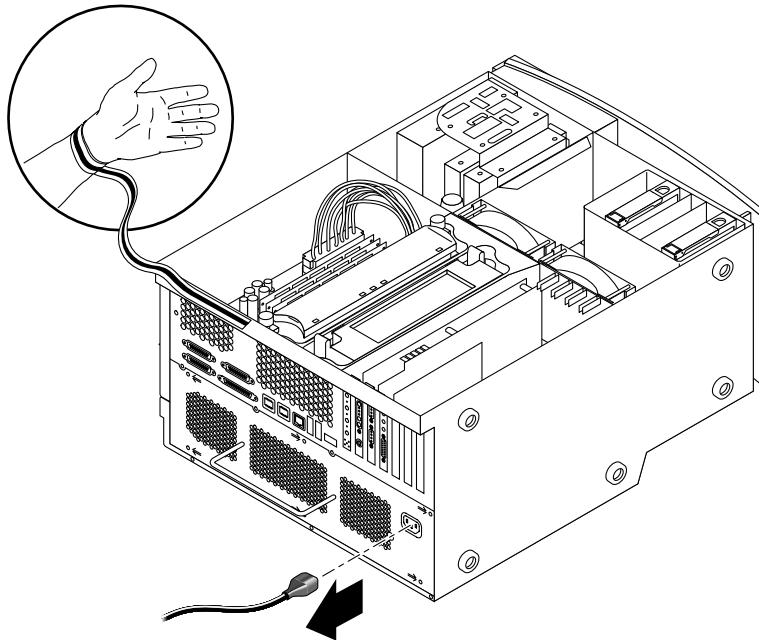


FIGURE 9 Attaching the Antistatic Wrist Strap

System Internal Layout

The system's internal layout is shown in FIGURE 10 to help you locate internal components discussed in this guide.

Note – Two types of torque indicator tool will work with your system. Your system is equipped only with one type of torque indicator tool.

1. Dual in-line memory module (DIMM) connectors on the motherboard (eight)
2. Torque indicator tool A (green socket driver)
3. Peripheral assembly, which contains a smart card reader, and optionally, a DVD-ROM, tape, or diskette drive
4. Hard drive bracket with two hard drive bays
5. Torque indicator tool B in green plastic holder
6. System/CPU cooling fans (two)
7. PCI card slots (four)
8. Graphics card slots (two)
9. CPU slots (two) in the CPU shroud

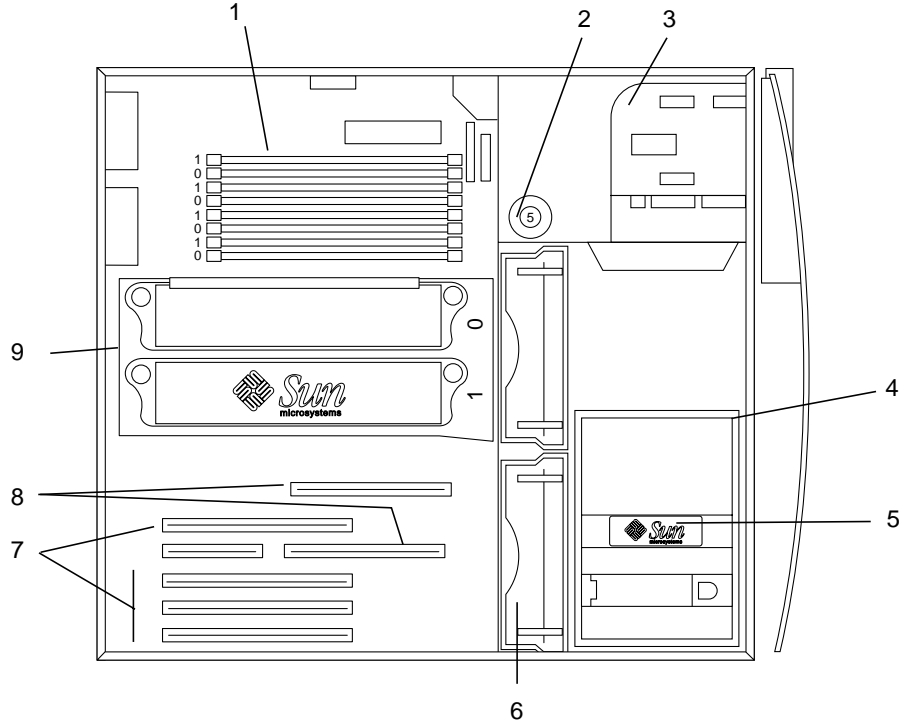


FIGURE 10 System Internal Layout

Installing an Additional Hard Drive

1. **Power off the system, remove the access panel, and attach an antistatic wrist strap as described in “Preparing for Installation” on page 28.**
2. **Locate the empty hard drive bay in the hard drive bracket (see FIGURE 11).**

Caution – Ensure that the metal plate on the face of the new hard disk drive has two notches. If the metal plate does not have notches do not install the hard disk drive.

3. **Open the drive handle on the new hard drive by sliding the release button in the direction indicated by the arrow printed on the hard drive.**
4. **Holding the drive handle, insert the hard drive into the bay along the plastic guides until the drive handle begins to close.**
5. **Push down and lock the hard drive handle to secure the hard drive into the bracket.**
6. **Continue with “Finishing the Installation” on page 42.**

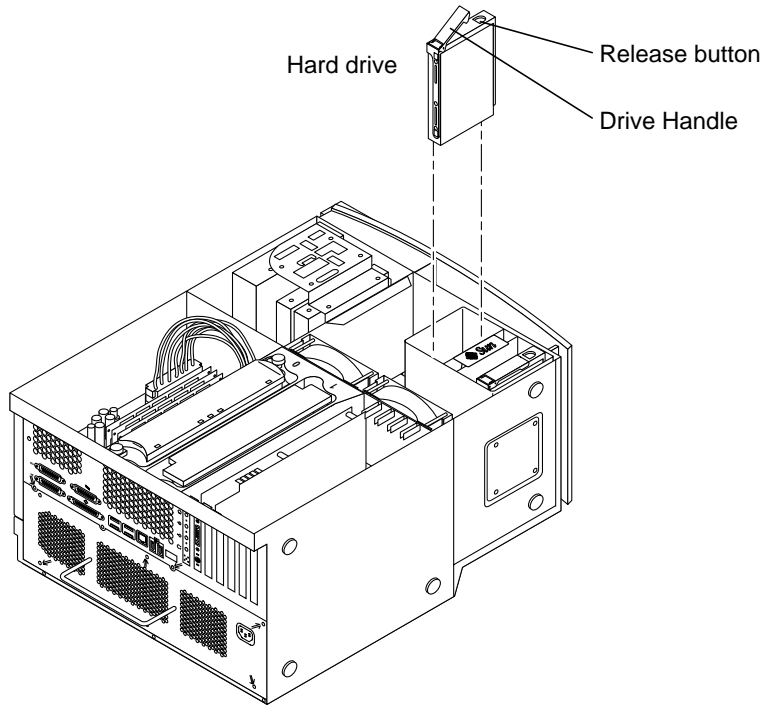


FIGURE 11 Installing an Additional Hard Drive

Installing Graphics or PCI Cards

1. Power off the system, remove the access panel, and attach an antistatic wrist strap as described in “Preparing for Installation” on page 28.
2. Use a No. 2 Phillips screwdriver to remove an empty card slot’s metal filler panel from the chassis back panel (see FIGURE 12).

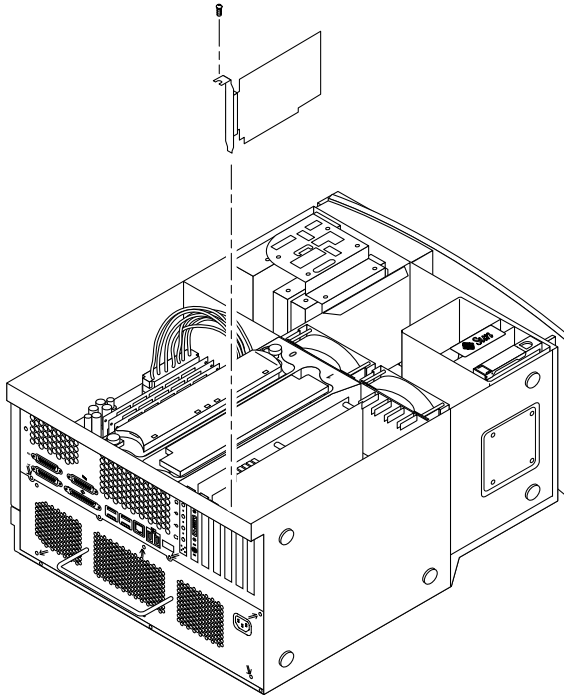


FIGURE 12 Installing Additional Graphics or PCI Cards

3. Position the card into the chassis above the empty connector on the motherboard.

Note – If you are installing an Expert3D card, do *not* install it in the 66-MHz PCI slot (the bottom slot). The Expert3D card does not operate in the 66-MHz slot.

Note – Some stereo graphics cards occupy two motherboard slots. For special installation instructions for these cards, refer to the installation guide that is shipped with the card.

4. Position the card's metal bracket tab into the chassis back panel opening; position the opposite end of the card into the card guide on the fan bracket so that the card is aligned evenly with the motherboard connector.
5. Push the card straight into the motherboard connector until it is fully seated.
6. Install the screw that secures the card's bracket tab to the chassis back panel.
7. Continue with "Finishing the Installation" on page 42.

Installing Peripheral Drives

1. Power off the system, remove the access panel, and attach an antistatic wrist strap as described in "Preparing for Installation" on page 28.
2. Remove the peripheral assembly as follows (see FIGURE 13):

Note – This procedure is easier if the system is standing upright on its feet.

- a. Remove the front peripheral bezel by pushing down on the depression on the bezel top.
 - b. Remove the four screws that secure the peripheral assembly to the chassis.
 - c. Partially pull out the peripheral assembly from the chassis front.
 - d. Disconnect the data cables and power cables from any existing drives, including the smart card reader.
 - e. Remove the peripheral assembly from the chassis.
3. Place the peripheral assembly on an antistatic mat.
 4. If necessary, remove any metal filler panel from the peripheral bay to which you are installing.
 5. Position the new peripheral drive into the peripheral assembly.
 6. Install the four screws that secure the peripheral drive to the peripheral assembly.

Note – If you are installing a diskette drive, you must remove the smart card reader from the peripheral assembly to provide clearance for the diskette drive screws, which are inserted into the bottom of the diskette drive.

7. Replace the peripheral assembly as follows:
 - a. Position the peripheral assembly into the chassis front.
 - b. Connect power and data cables to the rear cable connectors on all drives, including the smart card reader.
 - c. Replace the four screws that secure the peripheral assembly to the chassis.
8. If necessary, remove any plastic filler panel from the front peripheral bezel opening to which you are installing.
9. Replace the front peripheral bezel.
10. Continue with “Finishing the Installation” on page 42.

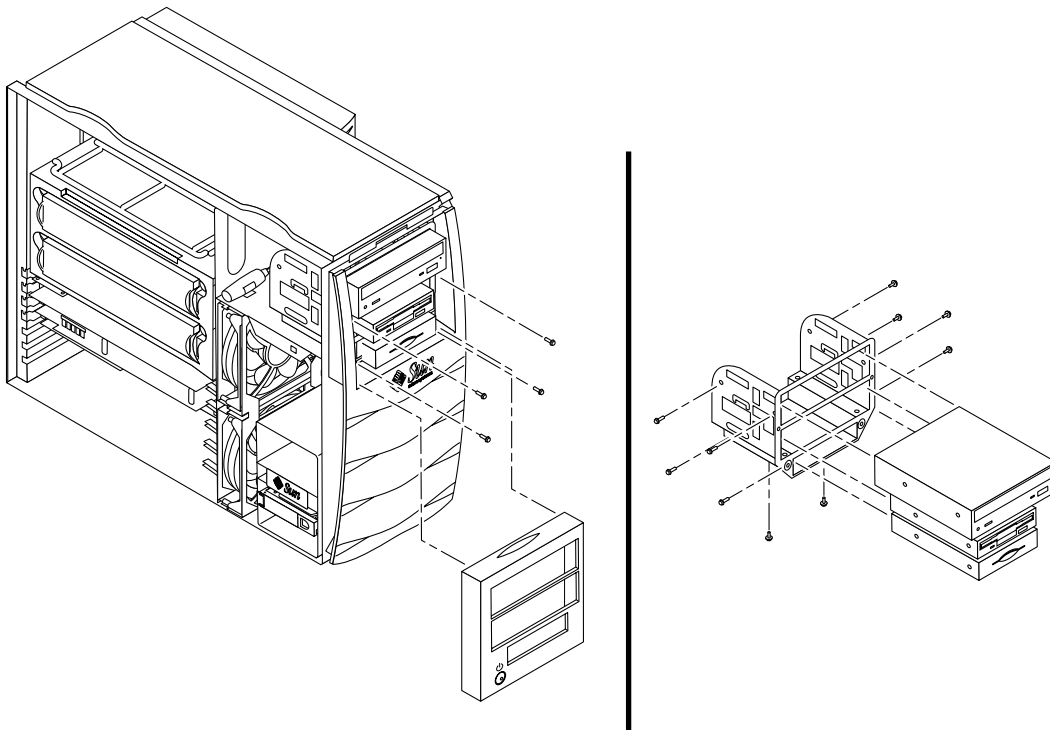


FIGURE 13 Installing Additional Peripheral Drives

Installing Additional Memory

1. Power off the system, remove the access panel, and attach an antistatic wrist strap as described in “Preparing for Installation” on page 28.
2. Review the following important memory installation information before you begin installing the memory:
 - The system’s dual in-line memory modules (DIMMs) are arranged in two logical banks, bank 0 and bank 1, each bank consisting of four connectors. See FIGURE 14.
 - The system must have either four or eight DIMMs installed to operate.
 - Each DIMM bank being used must contain four DIMMs of equal density to function properly (for example, four 256-Mbyte DIMMs in bank 0, four 1-GB DIMMs in bank 1). Do *not* mix DIMM densities within any logical bank.
 - The default position for DIMMs installed at the factory is in the four connectors labeled “0” in FIGURE 14.
 - When adding additional DIMMs, fill the four connectors labeled “1”.

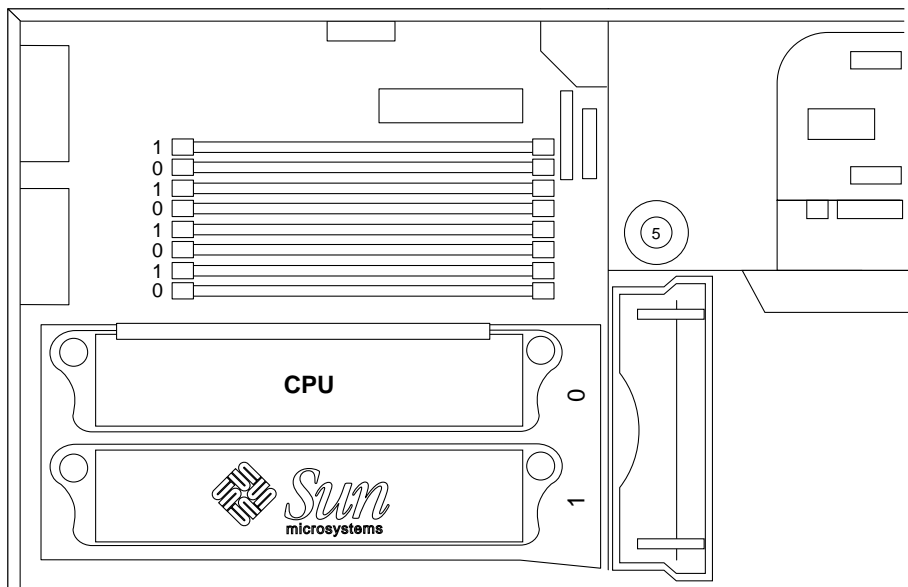


FIGURE 14 DIMM Banks on the Motherboard



Caution – Hold DIMMs only by their edges. Place DIMMs on an antistatic mat whenever you set them down. Small amounts of static electricity can damage DIMMs.

3. Install four DIMMs in the empty motherboard DIMM connectors as follows (see FIGURE 15):

- a. Open both ejector levers outward on the empty DIMM connector.**
- b. Position the DIMM into the connector. Use the alignment notches on the bottom edge of the DIMM to ensure correct orientation.**
- c. Without touching any DIMM components, press straight down on both DIMM top corners until the DIMM is fully seated and both ejector levers on the connector close into the DIMM's side notches.**



Caution – Verify that the DIMMs are fully and evenly seated. Failure to properly seat the DIMM can cause electrical shorts that can damage the DIMM and/or the system.

d. Continue installing DIMMs until you have filled the DIMM bank with four identical DIMMs.

4. Continue with “Finishing the Installation” on page 42.

Note – For additional information on configuring system memory and memory interleaving techniques, see the *Sun Blade 1000 and Sun Blade 2000 Service Manual* (816-3217).

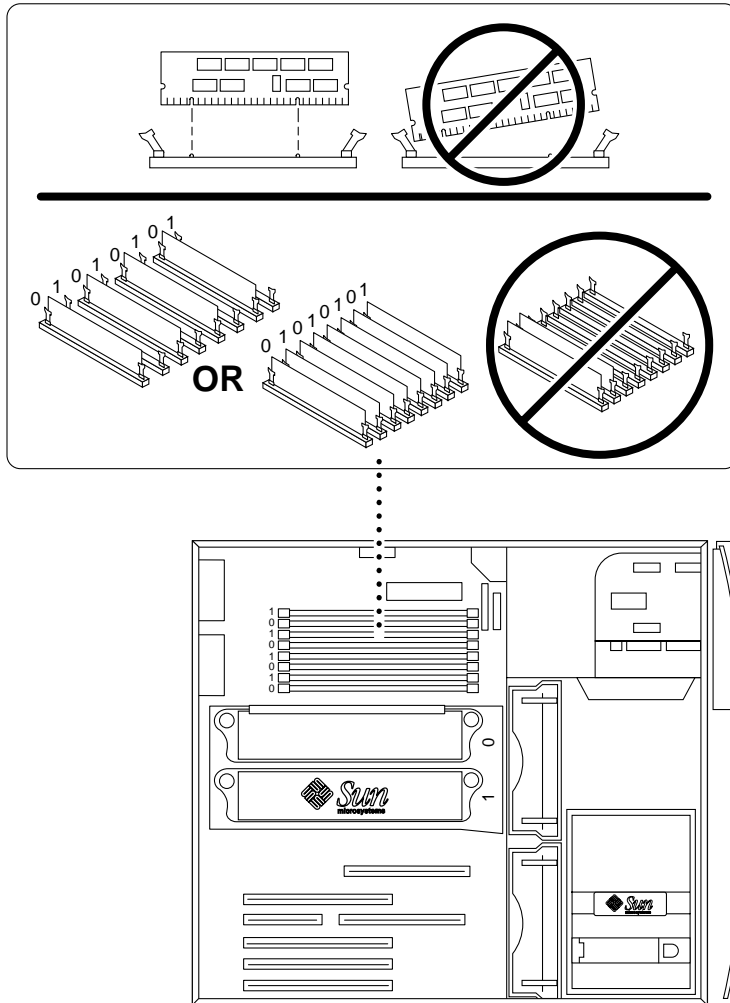


FIGURE 15 Installing Additional DIMMs

Finishing the Installation

1. Remove the antistatic wrist strap from the chassis.
2. Replace the access panel.
3. If desired, install a lock block on the back panel of the workstation. See FIGURE 7.
4. Reconnect any cables from external devices to the workstation.
5. Reconnect the workstation power cord.
6. Power on the workstation:
 - a. Turn on power to the monitor and to all external devices.
 - b. Press the power switch on the front panel and release it.
 - c. After several seconds, verify that the power-indicator LED on the power switch is energized and listen to verify that the workstation fans are operating (spinning).



Helpful Hint – After you finish installing optional internal components and power on the system, you are ready to set up the Solaris operating environment software (if you have not already done so). See “Setting Up the Preinstalled Solaris Operating Environment Software” on page 9 for instructions.

Installing a CPU Module

There are two types of UltraSPARC III CPU modules:

- UltraSPARC III 600, 750, or 900 MHz CPU modules
- UltraSPARC III Cu CPU modules

Note – UltraSPARC III Cu CPU modules are marked “USIII Cu” (FIGURE 16).

To Install an UltraSPARC III 600, 750, or 900 MHz CPU module, see the *Sun Blade 1000 UltraSPARC III Module Installation Instructions* (816-0416).

To Install an UltraSPARC III Cu CPU module, see the *Sun Blade 1000 UltraSPARC III Cu Module Installation Instructions* (816-2722).

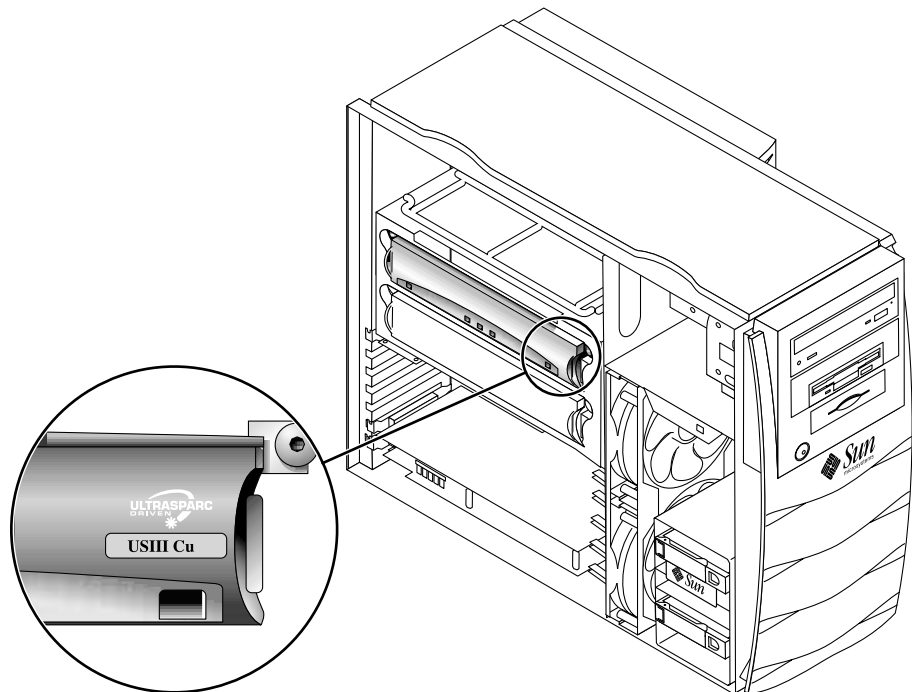


FIGURE 16 UltraSPARC III Cu CPU Module

About UltraSPARC III and UltraSPARC III Cu CPU Modules

The UltraSPARC III and UltraSPARC III Cu CPU modules are high-performance, highly-integrated superscalar processors, implementing the SPARC-V9 64-bit reduced instruction set computer (RISC) architecture. Both types of CPU modules have been updated and improved to further advance reliability, availability, scalability, and serviceability features.

The workstation motherboard provides slots for two CPU modules.

Note – Never mix an UltraSPARC III 600, 750, or 900 MHz CPU module with an UltraSPARC III Cu CPU module. If the modules are mixed, the workstation will not boot.

Each processor module includes one CPU chip with an integrated memory cache for data and instructions, as well as up to 8 Mbytes of external static random access memory (SRAM) cache memory.

The CPU modules communicate with the main memory and I/O subsystem via the high-speed data bus. The CPU modules are automatically synchronized with the system bus that runs at the appropriate clock speeds.

Configuration Rules

- You can install one or two CPU modules into the workstation motherboard.
- Always insert the first CPU module into CPU (processor) slot 0 (connectors J0501 and J0601).
- Install the second CPU module into CPU (processor) slot 1 (connectors J0701 and J0801).
- You can install more than one UltraSPARC III 600, 750, or 900 MHz CPU module. These modules *do not* need to be identical speeds.
- You can install more than one UltraSPARC III Cu CPU module. However, these modules *must be* identical speeds.

CPU Module Positions in the Workstation

The CPU modules are enclosed in a cooling shroud and secured to the shroud with captive screws that must be torqued to specific values.



Caution – CPU processor slot 0 is the required position for all workstations that contain only one CPU. The slot positions of the two CPU modules are shown in FIGURE 17.

Your workstation will only contain one torque indicator tool, either torque tool A, or torque tool B. The CPU installation guides describe how to use each tool for each type of CPU module.

Sun Blade 1000 UltraSPARC III Module Installation Instructions (816-0416).

Sun Blade 1000 UltraSPARC III Cu Module Installation Instructions (816-2722).

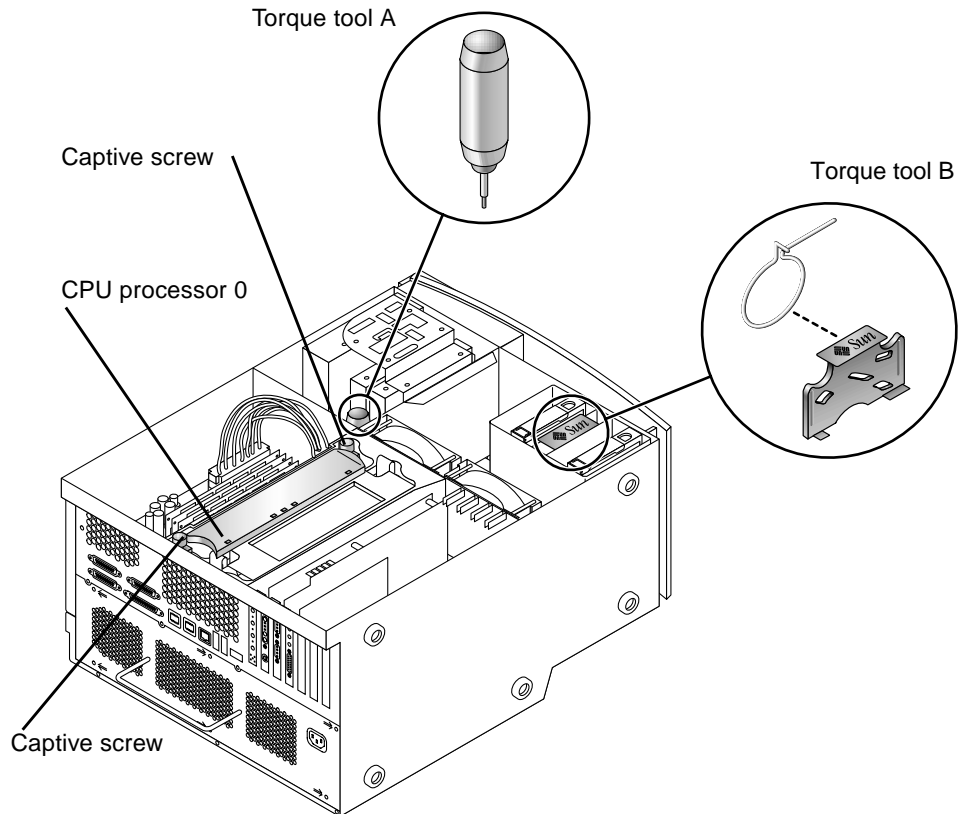


FIGURE 17 Location of CPU Processor Slot 0, Captive Screws, and Torque Tools

For More Information

Refer to the following documentation for more detailed information about system specifications and service procedures.

Hardware

The *Sun Blade 1000 and Sun Blade 2000 Hardware Documentation CD (705-0073)*, which is shipped with your system, contains:

- *The Sun Blade 1000 and Sun Blade 2000 Service Manual*. This manual provides detailed procedures for removing and replacing system components and includes system specifications. You can also order this manual as hard copy (816-3217), or view it online at: <http://docs.sun.com>
- *The Sun Blade 1000 and Sun Blade 2000 ShowMe How™ Multimedia* documentation, which demonstrates service procedures with interactive audio and video animations. These multimedia procedures are launched from links within the service manual.

Additional information can be found in these documents:

- *Sun Blade 1000 UltraSPARC III Module Installation Instructions (816-0416)*
- *Sun Blade 1000 UltraSPARC III Cu Module Installation Instructions (816-2722)*
- *Solaris Smart Cards Administration Guide (806-1646)*

Software

Much detailed information about the Solaris software and the additional preinstalled software on your system is preinstalled on your hard disk. See “Hardware and Software Documentation” on page 16.

Troubleshooting

If you experience problems when setting up your system, refer to the troubleshooting information in the following table. If the problem persists, see “How to Get Technical Assistance” on page 49.

TABLE 5 Setup Troubleshooting the Sun Blade 1000 and Sun Blade 2000

Problem	Solution
System does not power on when the front panel power switch is pressed.	<ol style="list-style-type: none">1) Verify the system power cord is connected to the system and a wall outlet.2) Verify there is power to the wall outlet.3) Verify that the system access panel is fully closed (system will not power on if access panel interlock-switch is open).
System and monitor power on, but no video displays on the monitor screen.	<ol style="list-style-type: none">1) Verify the monitor cable is firmly attached to the system graphics card.
Keyboard or mouse does not respond to actions.	<ol style="list-style-type: none">1) Verify the mouse cable is attached to a system USB connector.2) Verify the keyboard cable is attached to a system USB connector.3) Verify that the system is powered on.
An installed hard drive or peripheral drive is not recognized by the system after power on.	<ol style="list-style-type: none">1) Power off the system, remove the access panel, and attach an antistatic wrist strap as described in “Preparing for Installation” on page 28.2) Verify that power and data cables are firmly attached to peripheral drives.3) Close and power on the system as described in “Finishing the Installation” on page 42.4) Reboot your system with the command: <code>boot -r</code>
Installed memory is not recognized by the system after power on.	<ol style="list-style-type: none">1) Power off the system, remove the access panel, and attach an antistatic wrist strap as described in “Preparing for Installation” on page 28.2) Verify that DIMMs are firmly pressed down into the motherboard connector. See “Installing Additional Memory” on page 39 for more information.3) Verify that each DIMM bank contains DIMMs of the same density.4) Close and power on the system as described in “Finishing the Installation” on page 42.
During boot procedure, the system gives the error message: Warning: timed out waiting for NIS to come up.	<ol style="list-style-type: none">1) Verify the Ethernet cable is connected at the system and at the wall outlet.2) Verify with your system administrator that the network is operational.

TABLE 5 Setup Troubleshooting the Sun Blade 1000 and Sun Blade 2000

Problem	Solution
<p>The system does not recognize external plug-and-play devices that are connected to the system IEEE 1394 connectors.</p>	<p>The buses for the connectors might be in low-power mode.</p> <ol style="list-style-type: none"> 1) To activate the buses, start an application that the plug-and-play device uses. For example, starting ShowMeTV activates the 1394 bus when the application searches for cameras or other plugged-in devices. 2) Alternatively, you can set your Power Management software to the Minimal setting to turn off power management to the buses. Refer to the “Solaris User Collection” document, <i>Using Power Management</i> (see “Hardware and Software Documentation” on page 16).
<p>The system does not recognize external plug-and-play devices that are connected to the system FC-AL connector.</p>	<p>The bus for the connector might be in low-power mode.</p> <ol style="list-style-type: none"> 1) To activate the bus, start an application that accesses the devices on the bus. For example, accessing internal FC-AL disks will activate the FC-AL bus. 2) Set your Power Management software to the Minimal setting to turn off power management to the buses. Refer to the “Solaris User Collection” document, <i>Using Power Management</i> (see “Hardware and Software Documentation” on page 16).
<p>Pressing the eject button on the DVD-ROM drive does not eject the media tray.</p>	<p>The drive might be in low-power mode.</p> <ol style="list-style-type: none"> 1) To activate peripheral drives that are in low-power mode, move the mouse or press any key on the keyboard.
<p>The system appears to be in low-power mode, but the power-indicator LED does not blink.</p>	<ol style="list-style-type: none"> 1) If your system has a tape drive* installed, the power-indicator LED will not blink. Tape drives do not go into low-power mode. The power-indicator LED only blinks when all system components are in low-power mode. <p>*Some hardware options and software drivers do not support this system’s lowest possible power consumption mode, when this occurs, the power indicator LED will not blink.</p>

How to Get Technical Assistance

There are three ways to get further information and assistance:

1. Refer to the system documentation (see “For More Information” on page 46).

2. Refer to Sun’s online support tools.

Sun has designed interactive support tools to help you solve problems, provide patches, and give you access to bug reports and other valuable information. These tools are located at the following website:

<http://www.sun.com/service/online/>

- SunSolve OnlineSM

In conjunction with the SunSpectrumSM support program, SunSolve Online provides 24-hour access to Sun’s extensive knowledge database. This site contains many free downloadable patches.

- Access1SM

In conjunction with the Access support programs, Access1 provides up-to-date information on the full line of Sun’s software products, technical bulletins written by support engineers, and product patches. Like SunSolve Online, Access1 provides a variety of free patches and drivers.

- docs.sun.comSM

The <http://docs.sun.com> online documentation system contains new and existing product information, including a searchable list of manuals, guides, AnswerBook2 collections, and man pages.

- Free Services Areas

This page provides access to recommended patches, security information, x86 drivers, and public information.

3. Call a SunServiceSM Solution Center.

To contact SunService Solution Centers for answers to your technical questions, find the Solution Center closest to you at the following website:

<http://www.sun.com/service/contacting/solution.html>

