



# Sun Blade™ T6300 Server Module Installation Guide

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# Preface

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This guide includes general information about the Sun Blade™ T6300 server module and instructions for installing the server module into the Sun Blade T6000 chassis.

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## Using UNIX Commands

This document might not contain information about basic UNIX® commands and procedures such as copying files, listing directories, and configuring devices. Refer to the following for this information:

- Software documentation that you received with your system
- Solaris™ Operating System documentation, which is at:

<http://docs.sun.com>

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# Shell Prompts

Shell	Prompt
C shell	<i>machine-name%</i>
C shell superuser	<i>machine-name#</i>
Bourne shell and Korn shell	\$
Bourne shell and Korn shell superuser	#

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# Typographic Conventions

Typeface*	Meaning	Examples
AaBbCc123	The names of commands, files, and directories; on-screen computer output	Edit your <code>.login</code> file. Use <code>ls -a</code> to list all files. <code>% You have mail.</code>
<b>AaBbCc123</b>	What you type, when contrasted with on-screen computer output	<code>% <b>su</b></code> Password:
<i>AaBbCc123</i>	Book titles, new words or terms, words to be emphasized. Replace command-line variables with real names or values.	Read Chapter 6 in the <i>User's Guide</i> . These are called <i>class</i> options. You <i>must</i> be superuser to do this. To delete a file, type <code>rm filename</code> .

\* The settings on your browser might differ from these settings.

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# Related Documentation

The documents listed as online are available at:

<http://www.sun.com/documentation/>

<b>Application</b>	<b>Title</b>	<b>Part Number</b>	<b>Format</b>	<b>Location</b>
Late breaking news	<i>Sun Blade T6300 Server Module Product Notes</i>	820-0278	HTML and PDF	Online
Administration	<i>Sun Blade T6300 Server Module Administration Guide</i>	820-0277	HTML and PDF	Online
Service	<i>Sun Blade T6300 Server Module Service Manual</i>	820-0276	HTML and PDF	Online
Safety and compliance	<i>Sun Blade T6300 Server Module Safety and Compliance Manual</i>	820-0279	HTML and PDF	Online
ALOM	<i>Advanced Lights Out Management (ALOM) CMT v1.3 Guide</i>	819-7981	HTML and PDF	Online

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# Documentation, Support, and Training

Sun Function	URL
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*Sun Blade T6300 Server Module Installation Guide*, part number 820-0275-10



## Before You Begin the Installation

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This chapter includes general information to help you become familiar with the hardware and software features of the Sun Blade T6300 server module.

This chapter contains the following topics:

- [“Hardware Overview” on page 1](#)
- [“Physical Specifications” on page 2](#)
- [“Environmental Requirements” on page 2](#)
- [“Front Panel Features” on page 3](#)
- [“Dongle Cable” on page 4](#)
- [“Remote Manageability With ALOM CMT” on page 5](#)

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## Hardware Overview

The Sun Blade T6300 server module includes the following hardware features:

- One 6- or 8-core, 32-thread CPU, up to 1.4 GHz
- Eight DIMM slots that support up to 32 Gbytes of memory
- One dual gigabit Ethernet controller
- One SAS/SATA controller
- One to four SAS/SATA drives (optional)
- Two USB ports connected to dongle cable (the dongle cable is optional)
- One DB9 port connected to the dongle cable
- One RJ-45 serial virtual console port connected to the dongle cable

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# Physical Specifications

The Sun Blade T6300 server module is approximately 12.6 x 19.5 inches in a 1U form factor. The server module plugs in to a 10U chassis. The chassis provides cooling through six redundant fans and 12V power to each module. In addition to 12V power, the chassis provides 3.3 VAUX to each module to power the local FRU ID EEPROM. This power enables the chassis management module (CMM) to query each module slot prior to 12V and fan application to validate that there is sufficient power and cooling to support the number and type of modules installed in the chassis.

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# Environmental Requirements

[TABLE 1-1](#) includes the environmental requirements that are specific to the Sun Blade T6300 server module.

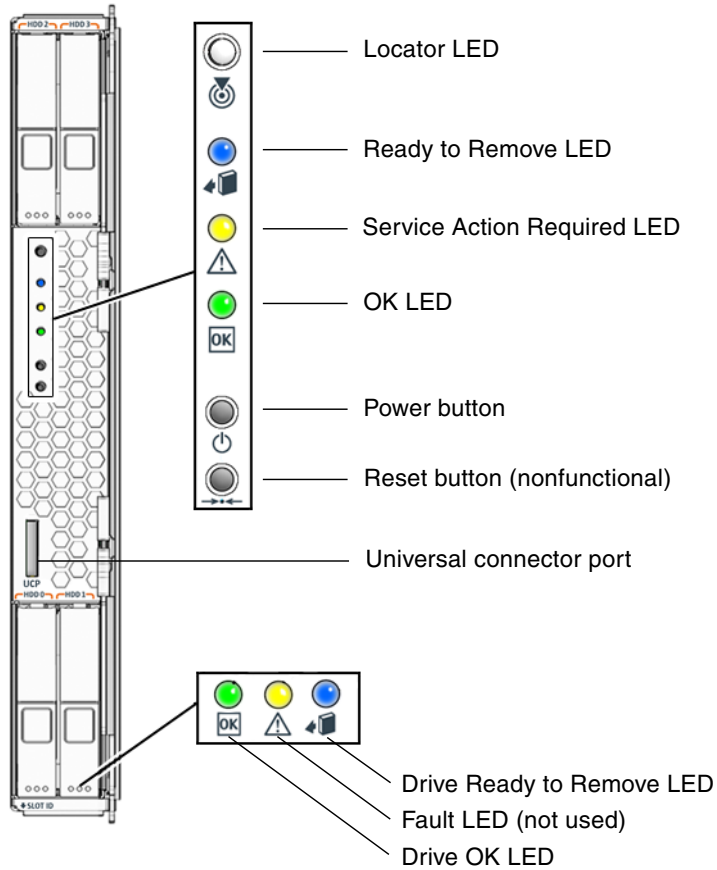
**TABLE 1-1** Sun Blade T6300 Server Module Environmental Requirements

Condition	Requirement
Operating temperature	5°C to 35°C noncondensing
Nonoperating temperature	-40°C to 65°C
Operating humidity	10% to 90% noncondensing (27°C max. wet bulb)
Nonoperating humidity	93% noncondensing (38° C max. wet bulb)
Operating altitude	3000 meters at 35°C
Nonoperating altitude	12,000 meters

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# Front Panel Features

This section contains an illustration of the front panel, along with descriptions of the features.

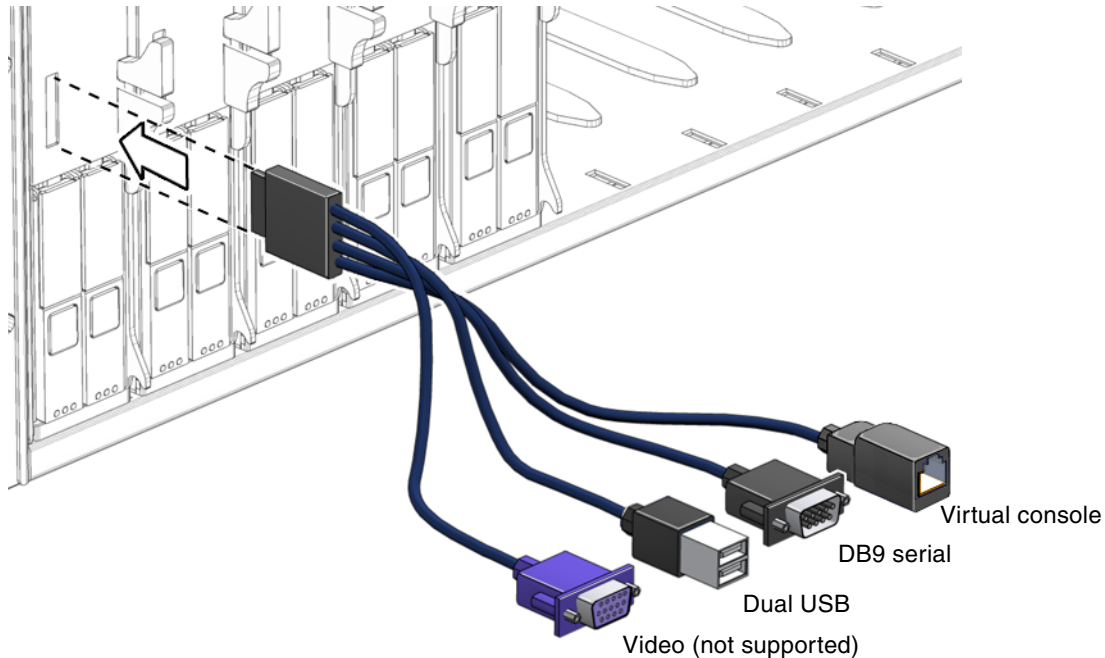


**FIGURE 1-1** Sun Blade T6300 Server Module Front Panel

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# Dongle Cable

You can order a dongle cable with the Sun Blade T6300 server module, or you can use the dongle cable that shipped with the Sun Blade T6000 chassis. [FIGURE 1-2](#) shows the connections on the dongle cable.



**FIGURE 1-2** Dongle Cable Connections

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# Remote Manageability With ALOM CMT

The Sun Advanced Lights Out Management (ALOM CMT) feature is a system controller that enables you to remotely manage and administer the Sun Blade T6300 server module.

The ALOM CMT software is preinstalled as firmware, and initializes as soon as you apply power to the system. You can customize ALOM CMT to work with your particular installation.

ALOM CMT enables you to monitor and control your server over a network, or by using a dedicated serial port for connection to a terminal or terminal server. ALOM CMT provides a command-line interface that you can use to remotely administer geographically distributed or physically inaccessible machines. In addition, ALOM CMT enables you to run diagnostics (such as POST) remotely that would otherwise require physical proximity to the server's serial port.

You can configure ALOM CMT to send email alerts of hardware failures, hardware warnings, and other events related to the server or to ALOM CMT. The ALOM CMT circuitry runs independently of the server, using the server's standby power. Therefore, ALOM CMT firmware and software continue to function when the server operating system goes offline or when the server is powered off. ALOM CMT monitors the following Sun Blade T6300 server module components:

- CPU temperature conditions
- Disk drive status
- Fan speed and status
- Voltage conditions

For information about configuring and using the ALOM system controller, refer to the *Advanced Lights Out Management (ALOM) CMT v1.3 Guide* (819-7981).



# Installation and Configuration

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After you have familiarized yourself with the features and components of the Sun Blade T6300 server module, use the instructions in this chapter to install the server into the chassis.

This chapter contains the following topics:

- [“Handling the Module” on page 7](#)
- [“Installing the Module Into the Chassis” on page 8](#)
- [“Powering On the Server Module” on page 10](#)
- [“Installing an Operating System on a Hard Drive” on page 10](#)

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## Handling the Module

Electronic equipment is susceptible to damage by static electricity. Use a grounded antistatic wriststrap, footstrap, or equivalent safety equipment to prevent electrostatic damage (ESD) when you install the Sun Blade T6300 server module.



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**Caution** – To protect electronic components from electrostatic damage, which can permanently disable the system or require repair by Sun service technicians, place components on an antistatic surface, such as an antistatic discharge mat, an antistatic bag, or a disposable antistatic mat. Wear an antistatic grounding strap connected to a metal surface on the chassis when you work on system components.

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# Installing the Module Into the Chassis

This section contains instructions for installing the module into the chassis.

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**Note** – The following instructions assume that you have connected a terminal to a terminal server, connected the terminal server to the chassis, and set up the network management port on the chassis. If not, refer to the *Sun Blade T6000 Chassis Installation Guide* for instructions on how to set up the network management port.

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## ▼ To Install the Module

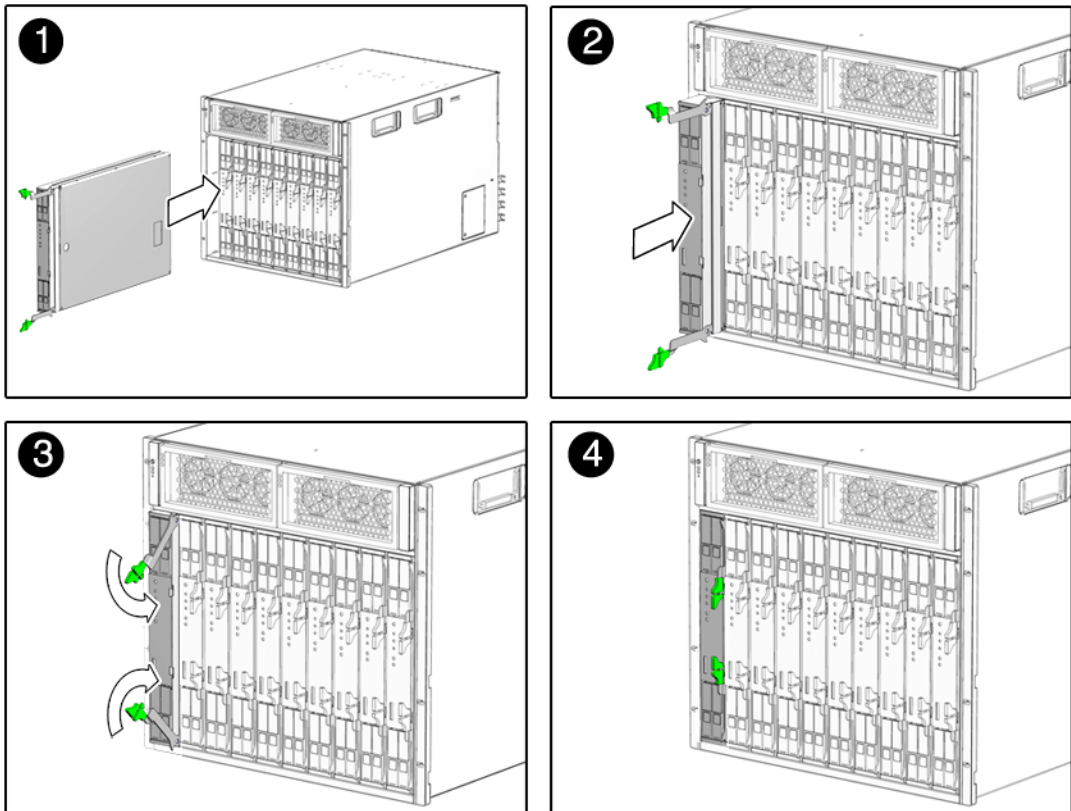
1. **Ensure that you have the MAC address and serial number from the labels on the shipping container and server module.**
2. **Locate the desired slot in the chassis.**
3. **Remove the filler panel if applicable.**
4. **Attach the dongle cable to the server module.**
5. **Attach an serial cable from the terminal server to the virtual console connector on the dongle cable.**

You must connect the terminal server to the dongle cable before you insert the server module so that you can see the boot messages for the ALOM CMT software.

6. **Position the server module vertically so that the ejectors are on the right.**

The following illustration shows the server module being inserted into the chassis.





**FIGURE 2-1** Inserting the Sun Blade T6300 Server Module Into the Chassis

- 7. Push the server module into the slot until the module is about two inches from the chassis front.**
- 8. Push the ejectors down until they snap into place.**

The server module goes into standby mode and the ALOM CMT system controller initializes as soon as you insert the server module into the chassis.

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# Powering On the Server Module

After the system controller boots, the system controller login prompt is displayed on the serial console. Use the instructions in this section to log in to the system controller and to power on the server module.

## ▼ To Power On the Server Module

1. **Log in to the system controller as the default `admin` user.**

2. **Press Enter at the password prompt.**

By default, the server module is shipped with no password for the `admin` account. Before you power on the server module, you should set the password with the `password` command.

3. **Use the `password` command to set the `admin` password.**

```
sc> password new-password
```

4. **Issue the `poweron -c` command.**

You see an `sc>` alert message on the system console. This indicates that the system has reset. After you issue the `poweron` command, the CPU and memory controllers initialize, and eventually the OpenBoot™ PROM firmware initializes. After a number of system messages, you will see the `ok` prompt.

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# Installing an Operating System on a Hard Drive

The basic configuration of the Sun Blade T6300 server module ships with or without empty hard drives. If you ordered an optional hard drive and want to install the Solaris OS on the hard drive in slot 0, you must install the operating system from your network.

For instructions on how to install the operating system from the network, refer to the *Solaris 10 6/06 Installation Guide: Network-Based Installations*. You can obtain this guide at:

<http://docs.sun.com/>

## JumpStart Server Installation

You can use a JumpStart™ server to install the OS. A JumpStart server consists of several components:

- Install client – The target system to be installed or upgraded.
- Boot server – The network providing a failsafe operating system to the installing client.

The boot image is architecture independent, providing basic operating system services to all hardware supported by that operating system release. The Boot Server provides RARP, TFTP and bootparam services.

- Configuration server – A system that helps client systems determine unique profile information.  
Partition sizes, lists of software components to install, begin and finish scripts, and more are specified in a profile served by the configuration server.
- Install server – The source of the software packages to be installed on the client.

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**Note** – The boot server, configuration server, and install server can be one server. They do not need to be physically separate servers.

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## JumpStart Server Configuration

Specific instructions on how to configure a JumpStart server are out of the scope of this document. However, configuring the JumpStart server consists of the following tasks:

1. Load the Solaris OS
2. Create the configuration server
3. Create the configuration files
4. Verify the configuration file syntax
5. Share the installation directory

6. Start the NFS server
7. Configure the client access

The configuration and use of the JumpStart server depends on the configuration of your network. For a full explanation of these steps and instructions on how to configure the JumpStart server, refer to the following documents:

- *Configuring JumpStart Servers to Provision Sun x86-64 Systems* by Pierre Reynes, Network Systems Group, Sun BluePrints™ OnLine, February 2005
- *Building a JumpStart Infrastructure* by Alex Noordergraaf, Enterprise Engineering, Sun BluePrints OnLine, April 2001

You can obtain these documents from the following site:

<http://www.sun.com/blueprints>