

# Sun™ Enterprise™ 250 Server Product Notes

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# Sun Enterprise 250 Server Product Notes

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These Product Notes contain late-breaking product information that is not included in the system or the multimedia documentation for Sun Enterprise™ 250 servers. Included in these Product Notes are the following topics:

- “About UltraSPARC II CPU Modules” on page 2
- “CPU Module Configuration Rules” on page 2
- “Removing and Installing a CPU Module” on page 2
- “System Software Requirements” on page 3
- “Main Logic Board Jumpers” on page 3
- “Remote System Control (RSC) Software” on page 5
- “FCC Class B Regulatory Compliance” on page 5
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- “Power Interlock” on page 6
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# About UltraSPARC II CPU Modules

The Sun Enterprise 250 server supports up to two 250-, 300-, or 400-MHz UltraSPARC™ II CPU modules. The new 400-MHz UltraSPARC II CPU module has 2 Mbytes of integrated cache memory.

## Identifying Your CPU Module

Before installing your CPU module, verify that the module is one of the following UltraSPARC II modules for Sun Enterprise 250 server systems. The following table identifies CPU module speeds and part numbers.

Module Speed (MHz)	Part Number
250 MHz	501-4857 or 501-4278
300 MHz	501-4849 or 501-4196
400 MHz	501-5237

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## CPU Module Configuration Rules

Configure your UltraSPARC II CPU modules in your server according to the rules in the section “About CPU Modules” in the *Sun Enterprise 250 Server Owner’s Guide*.



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**Caution** – All CPUs installed in a system must operate at identical clock speeds.

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## Removing and Installing a CPU Module

Before removing or installing CPU modules, read the section “About CPU Modules” in the *Sun Enterprise 250 Server Owner’s Guide*.



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**Caution** – Before you install any CPU module, read the section “Main Logic Board Jumpers” on page 3, and verify that the jumper setting is correct for the speed of the CPU module you are installing. Serious system damage can result if your main logic board clock mode jumper is set incorrectly.

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To remove or install CPU modules in the Sun Enterprise 250 server, follow the instructions in the sections “How to Remove a CPU Module” and “How to Install a CPU Module” in the *Sun Enterprise 250 Server Owner’s Guide*.

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## System Software Requirements

The Sun Enterprise 250 server requires the Solaris™ 2.6 Hardware: 5/98 operating environment. The 400-MHz UltraSPARC II CPU module is supported by the Solaris 2.5.1 Hardware: 11/97, Solaris 2.6 Hardware: 5/98, and Solaris 2.7 operating systems, or a subsequent compatible Solaris release.

To check which version of the operating environment is installed on your Enterprise 250 server, examine the file `/etc/release`. The file should contain the text “Solaris 2.6 Hardware: 5/98” or identify a subsequent compatible Solaris release.

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**Note** – Support for the Solaris 2.5.1 operating environment is provided through the Sun Enterprise 250 Supplement CD (included with your Sun Enterprise 250 server). For additional details, please see the documentation included with the Sun Enterprise 250 Supplement CD.

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## Main Logic Board Jumpers

The following information supersedes the information presented in the *Sun Enterprise 250 Server Owner’s Guide* concerning main logic board jumpers:

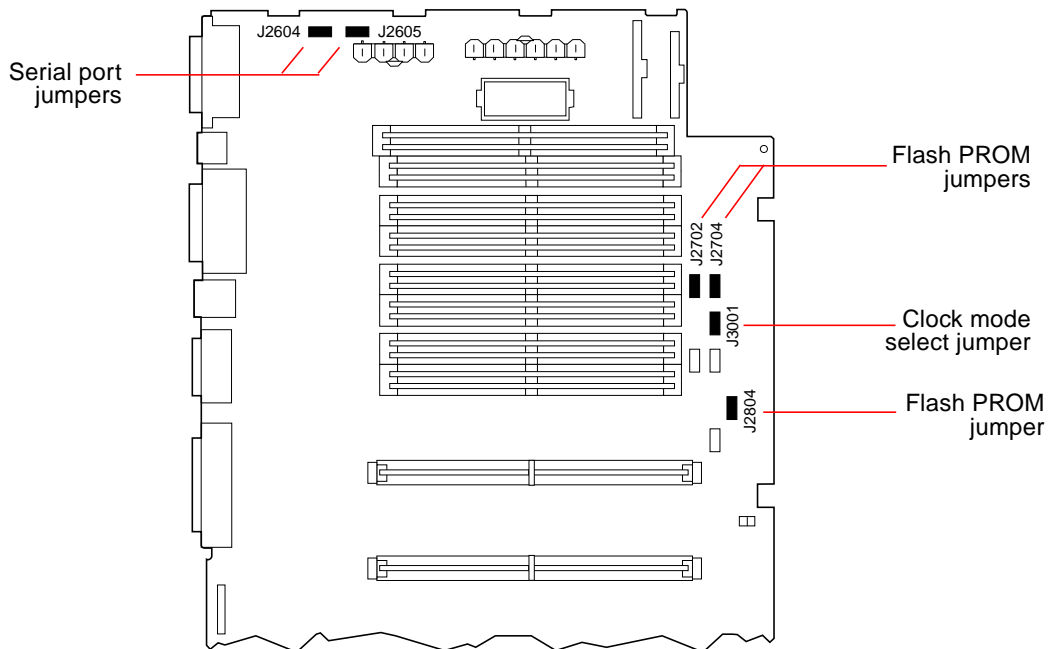
- Information about the clock mode select jumpers (J3001) have been added to the section “About the Clock Mode Select Jumper.”

Set the clock mode jumper shunt at address J3001 to correspond to the speed of your UltraSPARC II CPU module. Verify that the jumper setting is correct before starting the system.

Jumper	Shunt on Pins 1 + 2 Selects	Shunt on Pins 2 + 3 Selects	Default Shunt <sup>1</sup> on Pins	Signal Controlled
J3001	Correct clock mode for UltraSPARC II 250- and 300-MHz CPU modules	Correct clock mode for UltraSPARC II 400-MHz CPU modules	1 + 2	UPA_RATIO2

1. Factory setting for main logic boards shipped without CPU modules installed.

The illustration below shows the jumper locations for the main logic board.



Jumpers are marked on the main logic board with identification numbers. For example, the UPA clock divide jumper is marked J3001.





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**Caution** – Connecting headphones to the headphone jack of the Ultra Enterprise 250 CD-ROM drive can result in radio frequency emissions that exceed Class B limits. Please read the sections that apply to Class A equipment in the “Regulatory Compliance Statements” at the beginning of the *Sun Enterprise 250 Server Owner’s Guide*. There are several measures you can take to correct interference problems. For additional correction details, see the FCC Class B Notice in the “Regulatory Compliance Statements.”

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## SPARCstorage MultiPack Units

A compatibility issue exists between the Sun Enterprise 250 server’s embedded or expansion PCI SCSI host bus adapters (HBAs) and the use of newer SPARCstorage MultiPack (SMP) units that may contain UltraSCSI (Fast-20) capable drives. The HBAs available on the Sun Enterprise 250 servers default to use UltraSCSI operation when UltraSCSI devices are present. However, SPARCstorage MultiPack units (both 6- and 12-drive versions) do not support UltraSCSI operation. Attempting to use such a configuration can lead to reduced SCSI bus performance and potential system panic.

**Workaround:** Prior to using this configuration, disable the UltraSCSI mode for each controller instance to which a SMP is attached. Refer to the `pci(4)`, `glm(7D)`, and `isp(7D)` man pages for details.

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**Note** – An alternative workaround method involving a global SCSI option change through `/etc/system` would result in loss of UltraSCSI mode on internal system disk backplanes.

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This issue does not exist with SPARCstorage MultiPack 2 systems, which are UltraSCSI capable.

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## Power Interlock

The Sun Enterprise 250 server features a power interlock safety mechanism. Removing the side access panel or the removable media assembly activates the system power interlock switches. This safety mechanism prevents all DC voltages (except 5V standby power) from reaching any internal component when the side panel or removable media assembly is removed and the front panel keyswitch is left



in the Power-On position. Do not remove the side access panel or the removable media assembly while the system is running. Doing so will cause the system to power off abruptly.

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## prtdiag Utility

The `prtdiag` utility reports an incorrect value for the keyswitch position on a Sun Enterprise 250 server running the Solaris 2.6 Hardware: 5/98 operating environment. When the keyswitch is in the Power-On position, `prtdiag -v` outputs the following:

```
"Keyswitch position is in the OFF mode."
```

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**Note** – The diagnostic and locked keyswitch positions are detected correctly.

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**Workaround:** Contact your Sun authorized service provider for a patch.

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## Rackmount Conversion Kits

Rackmount conversion kits are available for converting a Sun Enterprise 250 server from a rackmount configuration to a desktop configuration, or from a desktop configuration to a rackmount configuration. For additional details, contact your Sun authorized sales representative.

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# Environmental Monitoring Subsystem

The temperature thresholds at which the Sun Enterprise 250 server reports and responds to system over-temperature conditions have changed. The threshold values published in the *Sun Enterprise 250 Server Owner's Guide* are no longer valid. The new over-temperature thresholds are provided below.

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Measurement Source	Temperature Threshold (degrees C)
Ambient temperature	Warning: 55
	Critical: 60
CPU module temperature	Warning: 63
	Critical: 68

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The system indicates an over-temperature condition if the ambient temperature inside the system, or a temperature measured at a CPU module, reaches a warning threshold. Should the ambient or CPU temperature reach a critical threshold, the system is automatically shut down.

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**Note** – The Sun Enterprise 250 server also issues a warning if the system temperature reaches a low temperature threshold. The low temperature thresholds for ambient and CPU module temperatures are 5 and 0 degrees C, respectively. Note that there is no automatic system shutdown in response to a low temperature condition.

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For additional details, see “Environmental Monitoring and Control” in Chapter 4 of the *Sun Enterprise 250 Server Owner's Guide*.

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## Replacing the NVRAM Module



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**Caution** – Before removing or installing the NVRAM module on the main logic board, be sure to disconnect all four power cables from the main logic board. When the power switch is in Standby mode, DC voltage (5 Volt Standby) is still present on the main logic board. Removing or installing the NVRAM under these conditions could corrupt the information stored in the NVRAM module and adversely affect operation of the system. To avoid this problem, make sure that you disconnect all power cables from the main logic board before handling the NVRAM module.

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## Security Lock Block Installation

If you have difficulty installing the security lock block, it is likely that the screw holes are misaligned. This sometimes happens when the side access cover is removed and reinstalled incorrectly. To realign the screw holes, remove and reinstall the side access panel. Push the access panel against the chassis until the screw holes for the lock block are properly aligned. Then tighten the two captive screws at the rear of the chassis to secure the panel in place.

For more information, see the following sections in the *Sun Enterprise 250 Server Owner's Guide*:

- “How to Remove the Side Access Panel”
- “How to Install the Side Access Panel”
- “How to Install the Security Lock Block”

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## Power Supply Memory Latch Function

The Sun Enterprise 250 power supply has a memory latch function that allows the power supply to “remember” its last power on/off state in response to a power outage or removal of the AC power cord. This feature allows the power supply to resume operation automatically once power is restored. It also enables hot-swapping of power supplies.

Under some circumstances, this feature can be misdiagnosed as a power supply failure. If you remove a power supply from a system that is powered off and attempt a hot-plug installation into a system that is powered on, the power supply will remain in the Off state. This should not be interpreted as a power supply failure. To activate the power supply, simply turn the front panel keyswitch from the Power-On position to the Diagnostics position, and then back to the Power-On position. Alternatively, you may press the Power-On key on a Sun Type-5 keyboard attached to the system.

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## Illustrated Parts Breakdown

The following information is an addition to the table in the *Sun Enterprise 250 Server Owner's Guide*.

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**Note** – Part numbers listed in this section are correct as of the publication date of these Product Notes but are subject to change without notice. Consult your authorized Sun sales representative or service provider to confirm a part number prior to ordering a replacement part.

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Category	Replacement Part	Part Number
Main Logic Board and Components	Main Logic Board	501-4681
	UltraSPARC II CPU (250 MHz, 1 MB Ecache)	501-4857
	UltraSPARC II CPU (300 MHz, 2 MB Ecache)	501-4849
	UltraSPARC II CPU (400 MHz, 2 MB Ecache)	501-5237
Storage Devices	9 GB UltraSCSI Disk Drive, 10,000 rpm	540-3881

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## Open Issues

An online web page is available that provides additional support for any open issues that may arrive too late to be included in this document. To access this web page, enter the following URL in your web browser:

<http://sunsolve.sun.com>

If you require further information, please contact your Sun authorized service provider.