



Sun Integrated Lights Out Manager Supplement for the Sun Fire™ X4250 Server

Sun Microsystems, Inc.
www.sun.com

Part No. 820-4978-10
June 2008, Revision A

Submit comments about this document at: <http://www.sun.com/hwdocs/feedback>

Copyright © 2008 Sun Microsystems, Inc., 4150 Network Circle, Santa Clara, California 95054, U.S.A. All rights reserved.

THIS PRODUCT CONTAINS CONFIDENTIAL INFORMATION AND TRADE SECRETS OF SUN MICROSYSTEMS, INC. USE, DISCLOSURE OR REPRODUCTION IS PROHIBITED WITHOUT THE PRIOR EXPRESS WRITTEN PERMISSION OF SUN MICROSYSTEMS, INC.

This distribution may include materials developed by third parties. Sun, Sun Microsystems, the Sun logo, Java, Solaris, and Sun Fire are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and other countries. Intel is a trademark or registered trademark of Intel Corporation or its subsidiaries in the United States and other countries. Intel Inside is a trademark or registered trademark of Intel Corporation or its subsidiaries in the United States and other countries.

This product is covered and controlled by U.S. Export Control laws and may be subject to the export or import laws in other countries. Nuclear, missile, chemical biological weapons or nuclear maritime end uses or end users, whether direct or indirect, are strictly prohibited. Export or reexport to countries subject to U.S. embargo or to entities identified on U.S. export exclusion lists, including, but not limited to, the denied persons and specially designated nationals lists is strictly prohibited.

Use of any spare or replacement CPUs is limited to repair or one-for-one replacement of CPUs in products exported in compliance with U.S. export laws. Use of CPUs as product upgrades unless authorized by the U.S. Government is strictly prohibited.

Copyright © 2008 Sun Microsystems, Inc., 4150 Network Circle, Santa Clara, California 95054, Etats-Unis. Tous droits réservés.

CE PRODUIT CONTIENT DES INFORMATIONS CONFIDENTIELLES ET DES SECRETS COMMERCIAUX DE SUN MICROSYSTEMS, INC. SON UTILISATION, SA DIVULGATION ET SA REPRODUCTION SONT INTERDITES SANS L'AUTORISATION EXPRESSE, ECRITE ET PREALABLE DE SUN MICROSYSTEMS, INC.

Cette distribution peut des éléments développés par des tiers. Sun, Sun Microsystems, le logo Sun, Java, Solaris, et Sun Fire sont des marques de fabrique ou des marques déposées de Sun Microsystems, Inc. aux Etats-Unis et dans d'autres pays. Intel est une marque de fabrique ou une marque déposée de Intel Corporation ou de sa filiale aux Etats-Unis et dans d'autres pays. Intel Inside est une marque de fabrique ou une marque déposée de Intel Corporation ou de sa filiale aux Etats-Unis et dans d'autres pays.

Ce produit est soumis à la législation américaine sur le contrôle des exportations et peut être soumis à la réglementation en vigueur dans d'autres pays dans le domaine des exportations et importations. Les utilisations finales, ou utilisateurs finaux, pour des armes nucléaires, des missiles, des armes biologiques et chimiques ou du nucléaire maritime, directement ou indirectement, sont strictement interdites. Les exportations ou reexportations vers les pays sous embargo américain, ou vers des entités figurant sur les listes d'exclusion d'exportation américaines, y compris, mais de manière non exhaustive, la liste de personnes qui font objet d'un ordre de ne pas participer, d'une façon directe ou indirecte, aux exportations des produits ou des services qui sont régis par la législation américaine sur le contrôle des exportations et la liste de ressortissants spécifiquement désignés, sont rigoureusement interdites.

L'utilisation de pièces détachées ou d'unités centrales de remplacement est limitée aux réparations ou à l'échange standard d'unités centrales pour les produits exportés, conformément à la législation américaine en matière d'exportation. Sauf autorisation par les autorités des Etats-Unis, l'utilisation d'unités centrales pour procéder à des mises à jour de produits est rigoureusement interdite.



Adobe PostScript

Contents

Preface v

Sun Fire X4250 ILOM 2.0 Supplement 1

ILOM 2.0 Features Supported 1

Sensors Reference Information 1

Power Supply Sensors 2

Temperature Sensors 3

Voltage Sensors 3

Fan Sensors 5

Disk Drive (HDD) Sensors 6

Fault LEDs 6

Preface

The *Sun Integrated Lights Out Manager Supplement for the Sun Fire X4250 Server* contains information about Integrated Lights Out Manager (ILOM) 2.0 that is specific to the Sun Fire™ X4250 server.

For a complete discussion of ILOM 2.0 and its capabilities along with user procedures, see the *Sun Integrated Lights Out Manager 2.0 User's Guide*, the *Addendum to the Sun Integrated Lights Out Manager 2.0 User's Guide*, and the *Sun Fire X4250 Server Product Notes*.

Related Documentation

The document set for the Sun Fire X4250 server is described in the *Where To Find Sun Fire X4250 Server Documentation* sheet that is packed with your system. You can also find the documentation at <http://docs.sun.com>.

Translated versions of some of these documents are available at <http://docs.sun.com>. Select a language from the drop-down list and navigate to the Sun Fire X4250 server document collection using the Product category link. Available translations include Simplified Chinese, French, and Japanese.

English documentation is revised more frequently and might be more up-to-date than the translated documentation. For all Sun documentation, go to <http://docs.sun.com>.

Typographic Conventions

Typeface*	Meaning	Examples
AaBbCc123	The names of commands, files, and directories; onscreen computer output	Edit your <code>.login</code> file. Use <code>ls -a</code> to list all files. % You have mail.
AaBbCc123	What you type, when contrasted with onscreen computer output	% su 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.

Third-Party Web Sites

Sun is not responsible for the availability of third-party web sites mentioned in this document. Sun does not endorse and is not responsible or liable for any content, advertising, products, or other materials that are available on or through such sites or resources. Sun will not be responsible or liable for any actual or alleged damage or loss caused by or in connection with the use of or reliance on any such content, goods, or services that are available on or through such sites or resources.

Sun Welcomes Your Comments

Sun is interested in improving its documentation and welcomes your comments and suggestions. You can submit your comments by going to <http://www.sun.com/hwdocs/feedback>.

Please include the title and part number of your document with your feedback:

Sun Integrated Lights Out Manager Supplement for the Sun Fire X4250 Server, part number 820-4978-10.

Sun Fire X4250 Server ILOM 2.0 Supplement

This supplement provides platform-specific information related to ILOM 2.0 running on a Sun Fire X4250 server.

The following topics are covered in this supplement:

- [“ILOM 2.0 Features Supported” on page 1](#)
- [“Sensors Reference Information” on page 1](#)

ILOM 2.0 Features Supported

The Sun Fire X4250 server supports the entire ILOM 2.0 feature set except for the delayed BIOS upgrade.

Sensors Reference Information

The server includes a number of sensors that generate entries in the system event log (SEL) when they cross a threshold. Many of the sensor readings are used to adjust the fan speeds and perform other actions, such as illuminating LEDs and powering off the server.

This sections describes the following sensors:

- [“Power Supply Sensors” on page 2](#)
- [“Temperature Sensors” on page 3](#)
- [“Voltage Sensors” on page 3](#)

- “Fan Sensors” on page 5
- “Disk Drive (HDD) Sensors” on page 6
- “Fault LEDs” on page 6

Power Supply Sensors

TABLE 1 lists the power supply sensors.

The system normally has two power supply modules, PS0 and PS1. All sensors are located under /SYS/PSN except for /SYS/VPS.

For example, /SYS/PS0/PRSNT is the power supply 0 presence indicator.

TABLE 1 Power Supply Sensors

Sensor Name	Description
VPS	Power supply output (watts). • upper_nonrecov_threshold - 1350 Watts • upper_critical_threshold - 1220 Watts • upper_noncritical_threshold - 1080 Watts
PRSNT	Power supply 0 present or not present.
VINOK	Asserted when input voltage is OK.
PWROK	Asserted when power level is OK.
V_IN	Input voltage level. • upper_nonrecov_threshold - 280.00 Volts • upper_critical_threshold - 270.00 Volts • upper_noncritical_threshold - 260.00 Volts • lower_noncritical_threshold - 90.00 Volts • lower_critical_threshold - 80.00 Volts • lower_nonrecov_threshold - 70.00 Volts
I_IN	Input current (amps).
V_OUT	Output voltage level. • upper_nonrecov_threshold - 16.00 Volts • upper_critical_threshold - 14.96 Volts • upper_noncritical_threshold - 14.00 Volts • lower_noncritical_threshold - 10.00 Volts • lower_critical_threshold - 8.96 Volts • lower_nonrecov_threshold - 8.00 Volts

TABLE 1 Power Supply Sensors *(Continued)*

Sensor Name	Description
I_OUT	Output current (amps).
INPUT_POWER	Input power (watts).
OUTPUT_POWER	Output power (watts).

Temperature Sensors

[TABLE 1](#) lists the temperature sensors.

Temperature sensors report on temperature conditions in the motherboard and the chassis.

TABLE 2 Temperature Sensors

Sensor Name	Description
/MB/T_AMB n	Motherboard temperature sensor n ($n = 1$ through 4). • upper_critical_threshold - 65.00 degree C • upper_noncritical_threshold - 60.00 degree C
T_AMB	Chassis temperature sensor. • upper_nonrecov_threshold - 50.00 degree C • upper_critical_threshold - 45.00 degree C

Voltage Sensors

[TABLE 3](#) lists the voltage sensors.

Voltage sensors report various voltage levels within the system. Most include upper and lower critical and non-recoverable thresholds.

TABLE 3 Voltage Sensors

Sensor Name	Description
MB/V_+12V	12V power supply level. • upper_nonrecov_threshold - 14.54 Volts • upper_critical_threshold - 13.91 Volts • lower_critical_threshold - 10.32 Volts • lower_nonrecov_threshold - 9.69 Volts
MB/V_VTT	VTT voltage level. • upper_nonrecov_threshold - 1.45 Volts • upper_critical_threshold - 1.39 Volts • lower_critical_threshold - 1.03 Volts • lower_nonrecov_threshold - 0.96 Volts
MB/V_+1V5	1.5V power supply level. • upper_nonrecov_threshold - 1.79 Volts • upper_critical_threshold - 1.72 Volts • lower_critical_threshold - 1.27 Volts • lower_nonrecov_threshold - 1.19 Volts
MB/V_+3V3	3V power supply level. • upper_nonrecov_threshold - 3.98 Volts • upper_critical_threshold - 3.81 Volts • lower_critical_threshold - 2.82 Volts • lower_nonrecov_threshold - 2.65 Volts
MB/V_+5V	5V power supply level. • upper_nonrecov_threshold - 6.21 Volts • upper_critical_threshold - 5.94 Volts • lower_critical_threshold - 4.40 Volts • lower_nonrecov_threshold - 4.13 Volts
MB/V_NIC	Power level to NIC card. • upper_nonrecov_threshold - 1.43 Volts • upper_critical_threshold - 1.38 Volts • lower_critical_threshold - 1.02 Volts • lower_nonrecov_threshold - 0.96 Volts

TABLE 3 Voltage Sensors *(Continued)*

Sensor Name	Description
MB/V_+3V3STBY	3V standby power level • upper_nonrecov_threshold - 3.96 Volts • upper_critical_threshold - 3.78 Volts • lower_critical_threshold - 2.80 Volts • lower_nonrecov_threshold - 2.63 Volts
MB/V_+2V5STBY	5V standby power level. • upper_nonrecov_threshold - 2.90 Volts • upper_critical_threshold - 2.77 Volts • lower_critical_threshold - 2.05 Volts • lower_nonrecov_threshold - 1.93 Volts
MB/V_+1V8	1.8V voltage level. • upper_nonrecov_threshold - 2.37 Volts • upper_critical_threshold - 2.27 Volts • lower_critical_threshold - 1.68 Volts • lower_nonrecov_threshold - 1.58 Volts

Fan Sensors

[TABLE 4](#) lists the temperature sensors.

Fan sensors report the conditions of the system fans. For all fan sensors:

- FBn is fan board 0 or 1.
- FMn is fan module 0 or 1 on $FB0$.
- F_n is a fan 0 or 1 on the fan module.

For example:

$FP0/FM1/F0/TACH$ is the speed for fan board 0, fan module 1, Fan 0.

TABLE 4 Fan Sensors

Sensor Name	Description
$FBn/FMn/PRSNT$	Fan module 0 or 1 present.
$FBn/FMn/F_n/TACH$	Fan speed for $FBn/FMn/F_n$. • lower_critical_threshold - 2400.00 RPM • lower_nonrecov_threshold - 2000.00 RPM

Disk Drive (HDD) Sensors

TABLE 5 lists the temperature sensors.

Disk drive sensors report the presence or absence of hard disk drives (HDDs) on the disk backplane (DBP).

TABLE 5 Hard Disk Drive (HDD) Sensors

Sensor Name	Description
DBP/PRSNT	Disk backplane is present.
DBP/HDD _n /PRSNT	Hard drive (HDD) is present. $n = 0 - 15$.

Fault LEDs

TABLE 6 lists the temperature sensors.

Fault LEDs indicate problems with the system. They can cause the front panel LEDs to light.

TABLE 6 Fault LEDs.

Sensor Name	Description
CUR_FAULT	Deasserted when input current level is OK.
VOLT_FAULT	Deasserted when voltage levels are OK.
FAN_FAULT	Deasserted when power supply fan is faulty OK.
TEMP_FAULT	Deasserted when power supply temperature is OK.
PS_FAULT	Deasserted when power supply is OK.