



Sun Fire™ Midrange Systems Firmware 5.20.1 Release Notes

Sun Microsystems, Inc.
www.sun.com

Part No. 819-6577-10
June 2006, Revision A

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

Copyright 2006 Sun Microsystems, Inc., 4150 Network Circle, Santa Clara, California 95054, U.S.A. All rights reserved.

Sun Microsystems, Inc. has intellectual property rights relating to technology that is described in this document. In particular, and without limitation, these intellectual property rights may include one or more of the U.S. patents listed at <http://www.sun.com/patents> and one or more additional patents or pending patent applications in the U.S. and in other countries.

This document and the product to which it pertains are distributed under licenses restricting their use, copying, distribution, and decompilation. No part of the product or of this document may be reproduced in any form by any means without prior written authorization of Sun and its licensors, if any.

Third-party software, including font technology, is copyrighted and licensed from Sun suppliers.

Parts of the product may be derived from Berkeley BSD systems, licensed from the University of California. UNIX is a registered trademark in the U.S. and in other countries, exclusively licensed through X/Open Company, Ltd.

Sun, Sun Microsystems, the Sun logo, docs.sun.com, Java, OpenBoot, Sun Fire, SunStorEdge, and Solaris, are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and in other countries.

All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. in the U.S. and in other countries. Products bearing SPARC trademarks are based upon an architecture developed by Sun Microsystems, Inc.

The OPEN LOOK and Sun™ Graphical User Interface was developed by Sun Microsystems, Inc. for its users and licensees. Sun acknowledges the pioneering efforts of Xerox in researching and developing the concept of visual or graphical user interfaces for the computer industry. Sun holds a non-exclusive license from Xerox to the Xerox Graphical User Interface, which license also covers Sun's licensees who implement OPEN LOOK GUIs and otherwise comply with Sun's written license agreements.

U.S. Government Rights—Commercial use. Government users are subject to the Sun Microsystems, Inc. standard license agreement and applicable provisions of the FAR and its supplements.

DOCUMENTATION IS PROVIDED "AS IS" AND ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT, ARE DISCLAIMED, EXCEPT TO THE EXTENT THAT SUCH DISCLAIMERS ARE HELD TO BE LEGALLY INVALID.

Copyright 2006 Sun Microsystems, Inc., 4150 Network Circle, Santa Clara, California 95054, Etats-Unis. Tous droits réservés.

Sun Microsystems, Inc. a les droits de propriété intellectuels relatants à la technologie qui est décrit dans ce document. En particulier, et sans la limitation, ces droits de propriété intellectuels peuvent inclure un ou plus des brevets américains énumérés à <http://www.sun.com/patents> et un ou les brevets plus supplémentaires ou les applications de brevet en attente dans les Etats-Unis et dans les autres pays.

Ce produit ou document est protégé par un copyright et distribué avec des licences qui en restreignent l'utilisation, la copie, la distribution, et la décompilation. Aucune partie de ce produit ou document ne peut être reproduite sous aucune forme, par quelque moyen que ce soit, sans l'autorisation préalable et écrite de Sun et de ses bailleurs de licence, s'il y en a.

Le logiciel détenu par des tiers, et qui comprend la technologie relative aux polices de caractères, est protégé par un copyright et licencié par des fournisseurs de Sun.

Des parties de ce produit pourront être dérivées des systèmes Berkeley BSD licenciés par l'Université de Californie. UNIX est une marque déposée aux Etats-Unis et dans d'autres pays et licenciée exclusivement par X/Open Company, Ltd.

Sun, Sun Microsystems, le logo Sun, docs.sun.com, Java, OpenBoot, Sun Fire, SunStorEdge, et Solaris sont des marques de fabrique ou des marques déposées de Sun Microsystems, Inc. aux Etats-Unis et dans d'autres pays.

Toutes les marques SPARC sont utilisées sous licence et sont des marques de fabrique ou des marques déposées de SPARC International, Inc. aux Etats-Unis et dans d'autres pays. Les produits portant les marques SPARC sont basés sur une architecture développée par Sun Microsystems, Inc.

L'interface d'utilisation graphique OPEN LOOK et Sun™ a été développée par Sun Microsystems, Inc. pour ses utilisateurs et licenciés. Sun reconnaît les efforts de pionniers de Xerox pour la recherche et le développement du concept des interfaces d'utilisation visuelle ou graphique pour l'industrie de l'informatique. Sun détient une licence non exclusive de Xerox sur l'interface d'utilisation graphique Xerox, cette licence couvrant également les licenciées de Sun qui mettent en place l'interface d'utilisation graphique OPEN LOOK et qui en outre se conforment aux licences écrites de Sun.

LA DOCUMENTATION EST FOURNIE "EN L'ÉTAT" ET TOUTES AUTRES CONDITIONS, DECLARATIONS ET GARANTIES EXPRESSES OU TACITES SONT FORMELLEMENT EXCLUES, DANS LA MESURE AUTORISEE PAR LA LOI APPLICABLE, Y COMPRIS NOTAMMENT TOUTE GARANTIE IMPLICITE RELATIVE A LA QUALITE MARCHANDE, A L'APTITUDE A UNE UTILISATION PARTICULIERE OU A L'ABSENCE DE CONTREFAÇON.



Contents

Firmware Documentation for Sun Fire Midrange and Entry-Level Midrange Systems	1
Features Introduced in 5.20.1	2
Support for Limited Dual Domain Operation With UltraSPARC IV+ CPU/Memory Boards	2
Commands Added or Modified for 5.20.1	3
General Information	3
Requirements for Certain Midrange Systems	3
Using UltraSPARC IV+ System Boards in Domains	3
▼ To Configure UltraSPARC IV+ Domain Support	4
▼ To Display the Status of UltraSPARC IV+ Domain Support	5
Known Limitations for Sun Fire Midrange Systems	8
prtdiag Still Shows the System Board After the Board Was DR'ed Out of the Domain (CR ID 6298989)	9
Memory Page Retirement Support Should be Enabled by Default (CR ID 6411108)	9
setupplatform should ask for Partition Mode first (CR ID 6429408)	10

Sun Fire™ Midrange Systems Firmware 5.20.1 Release Notes

This document provides general information and system limitations for firmware release 5.20.1 on Sun Fire E6900/E4900/6800/4810/4800/3800 systems. This document supplements, and does not replace, the *Sun Fire Midrange Systems Firmware 5.20.0 Release Notes* (part number 819-5087-10).

This document contains the following topics:

- [Firmware Documentation for Sun Fire Midrange and Entry-Level Midrange Systems](#)
- [Features Introduced in 5.20.1](#)
- [General Information](#)
- [Known Limitations for Sun Fire Midrange Systems](#)

Firmware Documentation for Sun Fire Midrange and Entry-Level Midrange Systems

The following documentation sets are relevant to the 5.20.1 firmware:

- Sun Fire midrange (E6900/E4900/6800/4810/4800/3800) systems
 - *Sun Fire Midrange Systems Platform Administration Manual* (part number 819-5088-10)
 - *Sun Fire Midrange System Controller Command Reference Manual* (part number 819-5089-10)
 - *Sun Fire Midrange Systems Firmware 5.20.0 Release Notes* (part number 819-5087-10)

- `Install.info` – A text file included with the firmware that describes the firmware upgrade and downgrade procedures for Sun Fire midrange systems.

For firmware upgrade and downgrade information on entry-level midrange (E2900/V1280/Netra 1280/Netra 1290) systems, refer to the *Sun Fire Entry-Level Midrange System Administration Guide*.

- Sun Fire entry-level midrange (E2900/V1280/Netra 1280/Netra 1290) systems
 - *Sun Fire Entry-Level Midrange System Administration Guide* (part number 819-5086-10)
 - *Sun Fire Entry-Level Midrange System Controller Command Reference Manual* (part number 819-5085-10)
 - *Sun Fire Entry-Level Midrange System Firmware 5.20.0 Release Notes* (part number 819-5084-10)

Features Introduced in 5.20.1

This section provides a brief description of the new features in 5.20.1 for Sun Fire midrange systems.

Support for Limited Dual Domain Operation With UltraSPARC IV+ CPU/Memory Boards

The 5.20.1 release supports dual domain operation in Sun Fire E6900/E4900/6800/4800/4810 systems that contain both UltraSPARC IV+ CPU/Memory boards and Version 2 Repeater Boards.

Applications running within dual-domain partitions can encounter reduced performance. Performance reduction is more likely in memory-intensive applications. The reduced performance can be visible even on single-board domains and on very lightly loaded domains—regardless of the attributes of the load.

Configuring dual-domain partitions where the partitions contain a mix of UltraSPARC III or UltraSPARC IV CPU/Memory boards along with UltraSPARC IV+ CPU/Memory boards result in performance reductions for all CPU/Memory boards in those partitions, not merely the UltraSPARC IV+ CPU/Memory boards.

For maximum performance from UltraSPARC IV+ CPU/Memory boards, use single domain configurations within each partition. If you need to use dual-domain partitions with UltraSPARC IV+ CPU/Memory boards, configure the partitions to contain *only* UltraSPARC IV+ CPU/Memory boards.

Commands Added or Modified for 5.20.1

The following SC commands were modified in 5.20.1:

- `setupplatform` – Added `dual` option, and changed `usiv+` option.
- `showplatform` – Added `dual` option, and changed `usiv+` option.
- `setupdomain` – Changed the default setting of the `mpr-support-enable` option: now enabled by default.
- `showdomain` – Changed the default setting of the `mpr-support-enable` option: now enabled by default.

General Information

Requirements for Certain Midrange Systems

E6900/E4900 systems and midrange systems with UltraSPARC IV+ CPU/Memory boards and Version 2 Repeater Boards require 5.20.1 firmware as the minimum firmware release and compatible releases of the Solaris 10 or Solaris 9 operating system (when available) as the minimum Solaris releases.

Using UltraSPARC IV+ System Boards in Domains

You can mix system boards in your Sun Fire E6900 or 6800 system configurations. The combinations of system boards affect the domain configurations that you can create. However, if a partition includes any UltraSPARC IV+ system boards, the performance of that domain is governed by the variables that configure support for the UltraSPARC IV+ system boards within that partition. If dual domains are enabled with UltraSPARC IV+ system boards in the same partition, the performance of some applications running within those domains can decrease. Single domain performance is not affected. The supported configurations are described in [TABLE 1](#), [TABLE 2](#), and [TABLE 3](#).

The variables that configure support for UltraSPARC IV+ system boards within partitions are `usiv+` and `dual-domains`.

▼ To Configure UltraSPARC IV+ Domain Support

- Use the `setupplatform` command to change `usiv+` support for Domains A or C

For example,

```
schostname:A> setupplatform -p usiv+

UltraSPARC IV+ Configuration
-----
Is UltraSPARC IV+ going to be deployed in partition0? [false]: true
Is UltraSPARC IV+ going to be deployed in partition1? [false]: true
```

- Use the `setupplatform` command to change `dual-domains` support for Domains B or D

```
schostname:A> setupplatform -p dual-domains

Dual Domain Configuration
-----
Will you deploy both domains A and B in partition0? [false]: true
Will you deploy both domains C and D in partition1? [false]: true
```

For further information about the `setupplatform` command, see the *Sun Fire Midrange System Controller Command Reference Manual*.

Note – The `usiv+` and `dual-domains` options can be changed *only* while all domains in the affected partitions are off. For information about using the `setkeyswitch` command to power domains on and off, see the *Sun Fire Midrange System Controller Command Reference Manual*.

▼ To Display the Status of UltraSPARC IV+ Domain Support

- Use the `showplatform -p usiv+` and `showplatform -p dual-domains` commands

For example,

```
schostname:A> showplatform -p usiv+

UltraSPARC IV+ is supported in partition 0
UltraSPARC IV+ is supported in partition 1

schostname:A> showplatform -p dual-domains

Both domains A and B are enabled in partition 0
Both domains C and D are enabled in partition 1
```

Domain configuration options are illustrated in [TABLE 1](#):

TABLE 1 System Board Combinations in Sun Fire E6900 or 6800 System Domain

dual-domain Variable	usiv+ Variable	Domain A	Domain B	Domain C	Domain D
part0 = true	part0 = true	US III+	US III+	US III+	US III+
part1 = true	part1 = true	US IV US IV+ (reduced performance)	US IV US IV+ (reduced performance)	US IV US IV+ (reduced performance)	US IV US IV+ (reduced performance)
part0 = true	part0 = true	US III+	US III+	US III+	US III+
part1 = true	part1 = false	US IV US IV+ (reduced performance)	US IV US IV+ (reduced performance)	US IV (full performance)	US IV (full performance)
part0 = true	part0 = false	US III+	US III+	US III+	US III+
part1 = true	part1 = true	US IV (full performance)	US IV (full performance)	US IV US IV+ (reduced performance)	US IV US IV+ (reduced performance)
part0 = true	part0 = false	US III+	US III+	US III+	US III+
part1 = true	part1 = false	US IV (full performance)	US IV (full performance)	US IV (full performance)	US IV (full performance)

TABLE 1 System Board Combinations in Sun Fire E6900 or 6800 System Domain (Continued)

dual-domain Variable	usiv+ Variable	Domain A	Domain B	Domain C	Domain D
part0 = true part1 = false	part0 = true part1 = true	US III+ US IV US IV+ (reduced performance)	US III+ US IV US IV+ (reduced performance)	US III+ US IV US IV+ (full performance)	Not Supported
part0 = true part1=false	part0 = true part1 = false	US III+ US IV US IV+ (reduced performance)	US III+ US IV US IV+ (reduced performance)	US III+ US IV US IV+ (full performance)	Not Supported
part0 = true part1 = false	part0 = false part1 = true	US III+ US IV (full performance)	US III+ US IV (full performance)	US III+ US IV US IV+ (full performance)	Not Supported
part0 = true part1 = false	part0 = false part1 = false	US III+ US IV (full performance)	US III+ US IV (full performance)	US III+ US IV (full performance)	Not Supported
part0 = false part1 = true	part0 = true part1 = true	US III+ US IV US IV+ (full performance)	Not Supported	US III+ US IV US IV+ (reduced performance)	US III+ US IV US IV+ (reduced performance)
part0 = false part1 = true	part0 = true part1 = false	US III+ US IV USIV+ (full performance)	Not Supported	US III+ US IV (full performance)	US III+ US IV (full performance)
part0 = false part1 = true	part0 = false part1 = true	US III+ US IV US IV+ (full performance)	Not Supported	US III+ US IV US IV+ (reduced performance)	US III+ US IV US IV+ (reduced performance)
part0 = false part1 = true	part0 = false part1 = false	US III+ US IV (full performance)	Not Supported	US III+ US IV (full performance)	US III+ US IV (full performance)

TABLE 1 System Board Combinations in Sun Fire E6900 or 6800 System Domain (Continued)

dual-domain Variable	usiv+ Variable	Domain A	Domain B	Domain C	Domain D
part0 = false part1 = false	part0 = true part1 = true	US III+ US IV US IV+ (full performance)	Not Supported	US III+ US IV US IV+ (full performance)	Not Supported
part0 = false part1 = false	part0 = true part1 = false	US III+ US IV US IV+ (full performance)	Not Supported	US III+ US IV (full performance)	Not Supported
part0 = false part1 = false	part0 = false part1 = true	US III+ US IV (full performance)	Not Supported	US III+ US IV US IV+ (full performance)	Not Supported
part0 = false part1 = false	part0 = false part1 = false	US III+ US IV (full performance)	Not Supported	US III+ US IV (full performance)	Not Supported

Note that only domains A and B are available in systems configured in a single partition.

Similar considerations apply when configuring domains in Sun Fire E4900 or 4800 systems. However, since these systems support a single domain per partition, the dual domain variable is not applicable. See [TABLE 2](#):

TABLE 2 System Board Combinations in Sun Fire E4900 or 4800 System (Dual Partition) Domains

dual-domain Variable	usiv+ Variable	Domain A	Domain C
Not Applicable	Not Applicable	US III+ US IV US IV+ (full performance)	US III+ US IV US IV+ (full performance)

The single-partition case allows for only one active domain containing UltraSPARC IV+ system boards, domain A. See [TABLE 3](#):

TABLE 3 System Board Combinations in a Sun Fire E4900 or 4800 System (Single Partition) Domain

dual-domain Variable	usiv+ Variable	Domain A	Domain B
part0 = true	part0 = true	US III+ US IV US IV+ (reduced performance)	US III+ US IV US IV+ (reduced performance)
part0 = true	part0 = false	US III+ US IV (full performance)	US III+ US IV (full performance)
part0 = false	part0 = true or false	US III+ US IV US IV+ (full performance)	Not Supported

Known Limitations for Sun Fire Midrange Systems

This section describes only those bugs with potentially significant impact that have not been documented in the *Sun Fire Midrange Systems Firmware 5.20.0 Release Notes* (part number 819-5087-10). The README file lists all bugs that have been fixed, including those seen only internally at Sun.

prtdiag Still Shows the System Board After the Board Was DR'ed Out of the Domain (CR ID 6298989)

After a board with an UltraSPARC IV+ processor has been unconfigured out of the domain using DR, `prtdiag` still shows the board as being present in the domain. Issuing the `psrinfo` command correctly shows that the board is no longer present in that domain.

Workaround: This has been fixed in the Solaris 10 1/06 release. If you are running the Solaris 10 3/05 release, Solaris 9, or Solaris 8 on the domain, you must install a patch for your version of the Solaris OS.

- Solaris 10 3/05: Install patch 118822-23 (minimum release)
- Solaris 9: Install patch 117124-11
- Solaris 8: Install patch 111335-32

These patches are available at <http://sunsolve.sun.com>.

Memory Page Retirement Support Should be Enabled by Default (CR ID 6411108)

To ensure that the benefit of this feature is made available to the largest number of customers, this feature is now enabled by default. However, if your system has 5.20.0 firmware installed, the installation of 5.20.1 firmware does not change the current setting of the memory page retirement feature. In that case, if the current setting of the feature is `disabled`, the feature will remain disabled.

To enable this feature, use the `setupdomain` command with the `mpr-support-enable` parameter. For further information, see the *Sun Fire Midrange System Controller Command Reference Manual* (part number 819-5089-10).

Note – The changed `mpr-support-enable` setting takes effect after the next sequence of the `setkeyswitch off` and `setkeyswitch on` commands.

setupplatform should ask for Partition Mode first (CR ID 6429408)

When changing a system's configuration from a single partition to a dual partition with dual domains, it is possible to omit the dual partition step in the `setupplatform` dialog because the dual domain step occurs in the dialog before the dual partition step. If you issue the `setupplatform` command once only, you do not encounter the step in the dialog that allows you to configure domains C and D.

Workaround: Issue the `setupplatform` command twice. After the partition is set to dual (during the first pass through the `setupplatform` dialog) the `setupplatform` dialog asks (during the second pass through the `setupplatform` dialog) about domains C and D.

As an alternative, you can issue the command-line form of the `setupplatform` command, using the `-p` option, in this order:

```
# setupplatform -p partition
# setupplatform -p dual-domains
```