



Netra™ CP2140 CompactPCI Board Release Notes

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Contents

Netra CP2140 CompactPCI Board Release Notes	1
Known Issues	2
RoHS Compliance	2
Download System Firmware	2
Download Patches	3
Changing the CPU Memory Bus Speed	5
▼ To Change Memory Bus Speed with OpenBoot PROM Prompt Commands	6
▼ To Display the Memory Bus Speed Setting with OpenBoot PROM Prompt Commands	6
▼ To Display System Current Speeds with OpenBoot PROM Prompt Commands	7
▼ To Change Memory Bus Speed with a Solaris Script	7
▼ To Change Memory Bus Speed with a Keyboard Sequence	8
Switch SW2701	9

Netra CP2140 CompactPCI Board Release Notes

The *Netra CP2140 Board Release Notes* contains important and late-breaking information about the Netra™ CP2140 CompactPCI host/satellite board.

The most recent versions of Netra CP2140 board documentation are available at:

http://www.sun.com/products-n-solutions/hardware/docs/CPU_Boards

This document contains the following topics:

- “Known Issues” on page 2
- “RoHS Compliance” on page 2
- “Download System Firmware” on page 2
- “Download Patches” on page 3
- “Changing the CPU Memory Bus Speed” on page 5
- “Switch SW2701” on page 9

Known Issues

When writing to user flash, the Netra CP2140 board panics. (Bug ID 6399909) Use `/dev/uflash0`, not `/dev/uflash1`.

RoHS Compliance

As of this release, this equipment complies with the Restriction of Hazardous Substances (RoHS) directive 2002/95/EC.

Beginning July 1, 2006, Directive 2002/95/EC, of the European Union (EU), restricts the use of certain hazardous substances in electrical and electronic equipment. Those substances are Lead, Mercury, Cadmium, Hexavalent Chromium, PBBs (polybrominated biphenyls) and PBDEs (polybrominated diphenyl ethers). Netra CP2140 boards are now compliant with the EU RoHS mandate.

For additional information, please contact your Sales Representative or, if appropriate, your OEM.

Download System Firmware

The following versions are for the current release of the Netra CP2140 CPU board:

TABLE 1 CPU Board Firmware Versions

Firmware	Host CPU (Netra CP2140) Version
Firmware (OpenBoot™ PROM)	1.1.19
SMCFW Flash Code	3.6.2

To display the current firmware version, use the `.version` command at the OpenBoot PROM prompt.

If you do not have the correct version of the firmware, go to the SunSolve™ Web site, <http://www.sun.com/sunsolve>, and download the following firmware patch: 116345.

Refer to the Readme file in the patch for any special installation instructions, and to the *Netra CP2140 Technical Reference and Installation Manual* (816-4908-xx) for instructions on upgrading the firmware.

Download Patches

Regular and point patches related to the Netra CP2140 board are available for download. To download the latest software patches, go to the SunSolve Web site and search for CP2140 in the Search SunSolve window:

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

The point patches for the Netra CP2140 boards that are running the Solaris™ 8 Operating Environment are listed in [TABLE 2](#). Install these patches *exactly* in the order they are presented in [TABLE 2](#).

Note – These patches are not needed if you are using a Netra CP2140 board running the Solaris 9 Operating Environment in a Netra CT 810 or 410 server.

TABLE 2 Installation Order of Point Patches for Netra CP2140 Board With the Solaris 8 Operating Environment

Patch ID	Description of Patch	Web Site Location of Patch for Download	How to Search for Patch in the Search Window	Description of User Who Needs the Patch
112877	SunOS 5.8: db21554 driver point patch	http://www.sun.com/sunsolve/point	Type the patch ID in the Point Patch Search window	Netra CP2140 board user
113836	Symbolic link point patch	http://www.sun.com/sunsolve/point	Type the patch ID in the Point Patch Search window	Netra CP2140 board user who installs <i>Netra CP2100 Supplemental 4.0 CD</i>
116087	FRU ID/PICL plug-ins/ prtdiag point patch	http://www.sun.com/sunsolve/point	Type the patch ID in the Point Patch Search window	Netra CP2140 board user who installs <i>Netra CP2100 Supplemental 4.0 CD</i>
116086	FRU ID/PICL plug-ins/ prtdiag point patch	http://www.sun.com/sunsolve/point	Type the patch ID in the Point Patch Search window	Netra CP2140 board user who installs <i>Netra CP2100 Supplemental 4.0 CD</i>

Changing the CPU Memory Bus Speed

On certain Netra CP2140 boards, the CPU memory bus speed can be changed from low (92.57 MHz, the default) to high (108 MHz). Typically, a faster memory bus speed gives better performance than a lower memory bus speed.

You can change the speed only on a Netra CP2140 board that:

- Has a board part number of:
 - 501-6358-12 or higher dash level
 - 501-6772-5 or higher dash level
 - 501-6529-04 or higher dash level
 - 501-6913-02 or higher dash level

and

- Has a **single-wide** 1 GB memory module. The 512 MB and the double-wide memory modules are *not* supported; if you try to increase the memory bus speed on one of these modules, you could experience memory errors.

If you want to use the higher memory bus speed, and you use real-time applications, you should check whether using a different memory timing affects those applications.

Note – The high-speed memory board is NEBS-compliant in the Netra CT 810/410 server, and as a standalone board in a third-party cPCI chassis.

[TABLE 3](#) summarizes the methods of changing the memory bus speed.

TABLE 3 Methods of Changing the CPU Memory Bus Speed

Method of Changing Speed	Command/Name/Key	Description
OpenBoot PROM prompt command, then reset the board	<code>set-high-mem-speed</code>	Set the memory bus speed to high
	<code>set-low-mem-speed</code>	Set the memory bus speed to low
	<code>read-mem-speed</code>	Display the memory bus speed setting
	<code>.speed</code>	Display current system speeds
Solaris Operating Environment script	<code>MemSpeedUpdt</code>	Run an interactive script to set the memory bus speed to high or low
Keyboard sequence during board power on or reset	Control-H keys	Set the memory bus speed to high
	Control-L keys	Set the memory bus speed to low

▼ To Change Memory Bus Speed with OpenBoot PROM Prompt Commands

1. Go to the OpenBoot PROM prompt.
2. Set the memory bus speed to high with the `set-high-mem-speed` command or set the memory bus speed to low with the `set-low-mem-speed` command, as follows:

```
ok set-high-mem-speed
memory speed is high
ok
```

```
ok set-low-mem-speed
memory speed is low
ok
```

3. Reset the board.

▼ To Display the Memory Bus Speed Setting with OpenBoot PROM Prompt Commands

- Display the board's memory bus speed setting with the `read-mem-speed` command.

Sample output from this command when the memory bus speed is set to high is:

```
ok read-mem-speed
memory speed is high
ok
```

Note that if you have changed the memory bus speed, but have not reset the board for this change to take effect, the `read-mem-speed` command output reflects the memory bus speed setting, which may or may not be the same as the current memory bus speed.

▼ To Display System Current Speeds with OpenBoot PROM Prompt Commands

- Display the system current speeds with the `.speed` command.

Sample output from this command when the memory bus speed is set to high is:

```
ok .speed
CPU speed      : 648 MHz
Primary PCI    : 66 MHz
PCI Bus A      : 33 MHz
PCI Bus B      : 33 MHz
Memory Speed   : 108 MHz      (CPU:SDRAM = 6:1)
ok
```

▼ To Change Memory Bus Speed with a Solaris Script

1. Log in as root.
2. Run the interactive `MemSpeedUpdt` script.

This script is usually installed in the root directory. The script prompts you to select a low (default) or high memory bus speed. Sample output from the `MemSpeedUpdt` script setting the memory bus speed to high is as follows:

```
# ./MemSpeedUpdt

@(#) CP2140 Memory Speed Update Tool (c) 2004 Sun Microsystems,
Inc. v0.1

##### This Tool Will Reboot The System To #####
##### Perform CP2140 Memory Speed Update #####

Do you want to continue [y/n]? y

Checking platform and firmware version information....Done
Start to update the memory speed setting...

0 .... Set default memory speed
1 .... Set high memory speed

Select Memory Setting: 1
```

```
Reboot parameter:  obp:set-high-mem-speed

Dec 27 16:00:25 hostname reboot: rebooted by root
Dec 27 16:00:25 hostname syslogd: going down on signal 15
Dec 27 16:00:25 rpcbind: rpcbind terminating on signal.
Terminated
#
# syncing file systems... done
rebooting...
Reset: Notifying SMC ...

Resetting ...

Starting real time clock...
...
Executing Command : set-high-mem-speed
Resetting ...

Starting real time clock...
...
ok
```

▼ To Change Memory Bus Speed with a Keyboard Sequence

- **During board power on or reset, set the memory bus speed to high with the Control-H key sequence or set the memory bus speed to low with the Control-L key sequence.**

To execute this sequence, press and hold down the Control key and either the h or the l key.

If the OpenBoot PROM `diag-switch?` variable is `off`, there is a very short amount of time when the Control-H or Control-L sequence can be successfully executed. To increase that amount of time, you can use the Control-D sequence to set the `diag-switch?` variable to `on`, and then execute the Control-H or Control-L sequence.

Switch SW2701

Certain Netra CP2140 boards have an additional dip switch, SW2701, near the corner of the board. These include boards with part number 501-6772-xx, 501-6416-xx, 501-6417-xx, 501-6913-xx, or 501-6967-xx. The default for this switch is Open. Do *not* change the setting for this switch.

This switch is solely for use with the Netra CP2140 board in a Sun Fire™ 15K server or Sun Fire 20K server. Refer to the Sun Fire server documentation for information on this switch.

