Netra™ CP2040 CompactPCI Board Product Note

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Part No. 816-4143-10
January 2002, Revision A

Send comments about this document to: docfeedback@sun.com

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Declaration of Conformity

Compliance Model Number: CP2040
Product Family Name: Netra CP2040 CompactPCI board

EMC

USA—FCC Class B

This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This equipment may not cause harmful interference.
2. This equipment must accept any interference that may cause undesired operation.

European Union

This equipment complies with the following requirements of the EMC Directive 89/336/EEC:

As Telecommunication Network Equipment (TNE) in both Telecom and Telecom Centers per:

EN300-386:2000 Required Limits (as applicable):

EN55022/CISPR22	Class B
ETS300-386:2000	Subclause 6.2 (DC Port Conducted Emissions 20 kHz - 30MHz)
EN61000-3-2	Pass
EN61000-3-3	Pass
EN61000-4-2	Criteria B: 6 kV (Direct), 8 kV (Air), Criteria R: 8 kV (Direct), 15 kV (Air)
EN61000-4-3	3 V/m
EN61000-4-4	1 kV AC and DC Power Lines, 0.5 kV Signal Lines
EN61000-4-5	Criteria B: 2 kV AC Line-Gnd, 0.5 kV Indoor Signal Lines, 1 kV AC Line-Line and Outdoor Signal Lines Criteria R: 2 kV AC Line-Line, 4 kV AC Line-Gnd and Outdoor Signal Lines as applicable
EN61000-4-6	3 V
EN61000-4-11	Pass

As Information Technology Equipment (ITE) Class B per:

EN55022:1998/CISPR22:1997 Class B

EN55024:1998 Required Limits (as applicable):

EN61000-4-2	4 kV (Direct), 8 kV (Air)
EN61000-4-3	3 V/m
EN61000-4-4	1 kV AC Power Lines, 0.5 kV Signal and DC Power Lines
EN61000-4-5	1 kV AC Line-Line and Outdoor Signal Lines, 2 kV AC Line-Gnd, 0.5 kV DC Power Lines
EN61000-4-6	3 V
EN61000-4-8	1 A/m
EN61000-4-11	Pass

EN61000-3-2:1995 + A1, A2, A14 Pass

EN61000-3-3:1995 Pass

Safety

This equipment complies with the following requirements of the Low Voltage Directive 73/23/EEC:

EC Type Examination Certificates:

EN60950:1992, 2nd Edition, Amendments 1, 2, 3, 4, 11	TÜV Rheinland Certificate No. R 2172589
UL 1950, 3rd Edition, CSA C22.2 No. 950-95	File: E138989 Vol. 21 Sec. 2

Supplementary Information: This product was tested and complies with all the requirements for the CE Mark.

/S/

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Declaration of Conformity

Compliance Model Number: TRN2040
Product Family Name: XCP2040-TRN (Universal CompactPCI Board)

EMC

USA—FCC Class B

This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This equipment may not cause harmful interference.
2. This equipment must accept any interference that may cause undesired operation.

European Union

This equipment complies with the following requirements of the EMC Directive 89/336/EEC:

As Telecommunication Network Equipment (TNE) in both Telecom and Telecom Centers per:

EN300-386:2000 Required Limits (as applicable):

EN55022/CISPR22	Class B
ETS300-386:2000	Subclause 6.2 (DC Port Conducted Emissions 20 kHz - 30MHz)
EN61000-3-2	Pass
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EN61000-4-6	3 V
EN61000-4-11	Pass

As Information Technology Equipment (ITE) Class B per:

EN55022:1998/CISPR22:1997 Class B

EN55024:1998 Required Limits (as applicable):

EN61000-4-2	4 kV (Direct), 8 kV (Air)
EN61000-4-3	3 V/m
EN61000-4-4	1 kV AC Power Lines, 0.5 kV Signal and DC Power Lines
EN61000-4-5	1 kV AC Line-Line and Outdoor Signal Lines, 2 kV AC Line-Gnd, 0.5 kV DC Power Lines
EN61000-4-6	3 V
EN61000-4-8	1 A/m
EN61000-4-11	Pass
EN61000-3-2:1995 + A1, A2, A14	Pass
EN61000-3-3:1995	Pass

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Netra CP2040 CompactPCI Board Product Note

This document contains important information about the Netra™ CP2040 CompactPCI board and includes the following sections:

- "Locating the FCC Label" on page 1
- "Powering on Your System With External SCSI Peripherals" on page 1
- "Booting the Solaris Operating Environment from a User Flash PROM Device is Not Supported" on page 2
- "Adjusting the ASM Warning and Shut Down Parameter Settings" on page 2

Locating the FCC Label

The board passed the required FCC tests after the *Netra CP2040 Technical Reference and Installation Manual* (806-4994-xx) was completed, so the FCC label was not included in the manual. You can find the FCC label on the board near the Subcon label.

Powering on Your System With External SCSI Peripherals

If you have connected SCSI peripherals that receive power from a source separate than the system's power supply to a system containing a Netra CP2040 CompactPCI board, you *must* power on the system prior to powering on SCSI peripherals. After powering on the system, you can safely power on the external SCSI peripherals.

Booting the Solaris Operating Environment from a User Flash PROM Device is Not Supported

The Netra CP2040 CompactPCI board does not support booting the Solaris™ operating environment from a user flash EPROM device. After you attempt to boot the system from a user flash device, the system's OpenBoot™ PROM may show unexpected behavior if you then halt the system. This unexpected behavior is caused by a side effect of the Solaris software. Refer to bug report 4506445 for more information.

Adjusting the ASM Warning and Shut Down Parameter Settings

The Netra CP2040 CompactPCI board uses the Advanced System Monitoring (ASM) detection system to monitor the temperature of the board. The ASM system will display messages if the board temperature exceeds the set warning and shut down settings. Because the on-board sensors may report different temperature readings for different system configurations and airflows, you may want to adjust the warning and shut down temperature parameter settings.

The Netra CP2040 CompactPCI board determines the board temperature by retrieving temperature data from sensors located on the board. Refer to the *Netra CP2040/CP2060/CP2080 CompactPCI Boards Programming Guide* (816-2485-xx) for the location of these temperature sensors.

A board sensor reads the temperature of the immediate area around the sensor. Although the software may appear to report the temperature of a specific hardware component, the software is actually reporting the temperature of the area near the sensor. For example, the CPU heat sink sensor reads the temperature at the location of the sensor and not on the actual CPU heat sink. The board's OpenBoot PROM collects the temperature readings from each board sensor at regular intervals. You can display these temperature readings using the `show-sensors` OpenBoot PROM command. Refer to the programming guide for instructions on using this command.

The temperature read by the CPU heat sink sensor will trigger OpenBoot PROM warning and shut down messages. When the CPU heat sink sensor reads a temperature greater than the warning parameter setting, the OpenBoot PROM will display a warning message. Likewise, when the sensor reads a temperature greater than the shut down setting, the OpenBoot PROM will display a shut down message.

Many factors affect the temperature readings of the sensors, including the airflow through the system, the ambient temperature of the room, and the system configuration. These factors may contribute to the sensors reporting different temperature readings than expected.

TABLE 1 shows the sensor readings of an example Netra CP2040 board operating in a Sun™ server in a room with an ambient temperature of 21˚C. The temperature readings were reported using the `show-sensors` OpenBoot PROM command. Note that the reported temperatures are higher than the ambient room temperature.

TABLE 1 Reported Temperature Readings at an Ambient Room Temperature of 21˚C

Board Sensor Location	Reported Temperatures (in Degrees Celsius)	Difference Between Reported and Ambient Room Temperature (in Degrees Celsius)
CPU heat sink	28	7
PMC	33	12
MB heat sink	29	8
MB memory	37	16
SDRAM module 1	42	21
SDRAM module 2	36	15
Power module	34	13

Since the temperature reported by the CPU heat sink sensor might be different than the actual CPU heat sink temperature, you may want to adjust the settings for both the `warning-temperature` and `shutdown-temperature` OpenBoot PROM parameters. The default values of these parameters have been conservatively set at 60˚C for the warning temperature and 65˚C for the shut down temperature. Refer to the programming guide for instructions on setting these temperature parameters.

Note – If you have developed an application that uses the ASM software to monitor the temperature sensors, you may want to adjust your application's settings accordingly. Refer to the programming guide for more information about using the ASM software to monitor the temperature sensors.