Netra™ CP2500 Rear Transition Module Installation and Technical Reference Manual

Sun Microsystems, Inc.
www.sun.com

Part No. 819-1753-11
March 2007, Revision A

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

Contents

Figures

Tables

Preface

The *Netra CP2500 RTM Card Installation and Technical Reference Manual* describes the functions, specifications, connectors, and installation procedure for both the Netra™ CP2500 RTM host module (RTM-H) and the Netra CP2500 RTM satellite module (RTM-S).

Who Should Use This Book

This document is written for computer hardware engineers, system programmers, computer technicians, and others involved in the integration of the Netra CP2500 boards. For further details, refer to "Related References" on page xii.

How This Document Is Organized

Chapter 1 describes the Netra 2500 Rear Transition Module.

Chapter 2 describes installation procedures for the Netra 2500 Rear Transition Module.

Appendix A provides the specifications and connector pin-outs for the Netra CP2500 Rear Transition Module.

Using UNIX Commands

This document might not contain information about basic UNIX® commands and procedures such as shutting down the system, booting the system, and configuring devices. Refer to the following for this information:

- Software documentation that you received with your system
- Solaris™ Operating System documentation, which is at:

  http://docs.sun.com

Shell Prompts

Shell	Prompt
C shell	*machine-name*%
C shell superuser	*machine-name*#
Bourne shell and Korn shell	$
Bourne shell and Korn shell superuser	#

Typographic Conventions

Typeface[1]	Meaning	Examples
AaBbCc123	The names of commands, files, and directories; on-screen computer output	Edit your .login file. Use ls -a to list all files. % You have mail.
AaBbCc123	What you type, when contrasted with on-screen computer output	% **su** Password:
AaBbCc123	Book titles, new words or terms, words to be emphasized. Replace command-line variables with real names or values.	Read Chapter 6 in the *User's Guide*. These are called *class* options. You *must* be superuser to do this. To delete a file, type rm *filename*.

1 The settings on your browser might differ from these settings.

Related Documentation

The documents listed as online are available at:

http://www.sun.com/documentation

Application	Title	Part Number	Format	Location
Board installation and reference	*Netra CP2500 Board Installation and Techincal Reference*	819-1747	PDF HTML	Online
Board news andupdates	*Netra CP2500 Board Release Notes*	819-1748	PDF HTML	Online
Programming	*Netra CP2500 Board Programming Guide*	819-1749	PDF HTML	Online
Safety Information	*Important Safety Information for Sun Hardware Systems*	816-7190	Printed	Shipping kit
Safety and compliance	*Netra CP2500 Board Safety and Compliance Manual*	819-1750	PDF HTML	Online
RTM news and updates	*Netra CP2500 Rear Transition Module Release Notes*	819-1752	PDF HTML	Online

Related References

This section provides a list of related references and documentation.

- *CompactPCI Packet Switching Backplane Specification, PICMG 2.16 Revision 1.0, September 2001*, PCI Industrial Computers Manufacturers Group
- *CompactPCI Core Specification, Release Note for PICMG 2.0 Revision 3.0, October 1999*, PCI Industrial Computers Manufacturers Group
- *IEEE Standard 1101.11-1998, Standard For Mechanical Rear Plug-in Units Specifications for Microcomputers Using IEEE 1101.1 and IEEE 1101.10 Equipment Practice*
- *VITA 36, PMC I/O Module Draft Standard*
- *Ethernet IEEE 802.3 Standard*
- *Universal Serial Bus Specification Rev. 1.1*
- *I²C-Bus Specification Version 2.1*

Documentation, Support, and Training

Sun Function	URL
Documentation	http://www.sun.com/documentation/
Support	http://www.sun.com/support/
Training	http://www.sun.com/training/

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:

Netra CP2500 RTM Card Installation and Technical Reference Manual, part number 819-1753-11

CHAPTER 1

Netra CP2500 Rear Transition Module Overview

This chapter provides a description of the Netra CP2500 RTM card.

This chapter contains the following sections:

Netra CP2500 RTM Description

The Netra CP2500 rear transition module (RTM) is a fully compatible carrier-grade I/O rear module for the Netra CP2500 board. However, the Netra CP2500 RTM card is *not* compatible with other CompactPCI or cPSB boards.

Two versions of the RTM meet the functional requirements of the Netra CT 410/810 system. The Netra CP2500 RTM host module (RTM-H) (Sun part no. 501-7032-*xx*) provides SCSI access to the internal hard drives and RMM module of the Netra CT 410/810. The Netra CP2500 RTM satellite module (RTM-S) (Sun part no. 510-7064-*xx)* provides functionality for the Netra CT 410/810 satellite slots and cPSB node slots.

The system designer must integrate peripheral devices with the connectors on the backplane in a cPSB chassis configuration. A designer can either connect directly to the backplane signals or use a Netra CP2500 RTM card. This document provides information only for the integration of the Netra CP2500 RTM card in a supported chassis.

Features

The Netra CP2500 RTM card requires a chassis with a backplane that accommodates front and rear board installations. The primary purpose of this board is to provide the connection to Netra CP2500 board I/O devices.

The 6U form factor, single-slot transition module supplies the rear I/O connection with simplified system cabling to support additional peripherals for use with compatible cPSB node boards. The rear I/O access also enables the Netra CP2500 boards to be replaced without disconnecting cables. Industry-standard connectors and pin assignments ensure ease of use and flexible design. The Netra CP2500 RTM card permits the creation of high-density systems by enabling easy I/O access.

I/O Interfaces

The Netra CP2500 RTM card provides additional I/O features through the CompactPCI RJ3 (labeled as J0201 on the RTM) and the RJ5 (J0401) connector interfaces to the Netra CP2500 board. Many I/O functions are provided on the rear transition module's own faceplate, as well as from headers mounted on the card. FIGURE 1-1 shows the faceplate of the Netra CP2500 RTM host module (RTM-H). FIGURE 1-2 shows the faceplate of the Netra CP2500 RTM satellite module (RTM-S).

These I/O functions include:

- Two 10/100/1000 Ethernet (RJ45) ports available, switch selectable between packet switch backplane and RJ45 ports (ENET0 and ENET1).
- Two 10/100/1000 Ethernet (RJ45) ports available (ENET2 and ENET3).
- Two serial (mini-DB9) ports, COM-A and COM-B. COM-A is the system console port.

Note – Use shielded cables for the serial and Ethernet ports on the rear transition module.

Note – Sun does not support installing a PMC interface module (PIM) on either the Netra CP2500 RTM-H or RTM-S.

The Netra CP2500 RTM card has two types of modules – a host RTM and a satellite/node RTM. The RTM-H provides SCSI access to the internal hard drives and RIMM module of the Netra CT 410/810. The RTM-S provides funtionallity for the Netra CT 410/810 satellite slots and cPSB node slots. Following are the features of each module.

Netra CP2500 RTM-H Features

Following are the features of the RTM-H.

- Two Gigabit Ethernet ports
- Two 10/100/1000 Ethernet ports provided by PCI to Ethernet controllers on the RTM
- Two internal SCSI connections on RJ4/RJ5 provided by dual PCI to SCSI controller on the RTM (not accessible from the RTM panel)
- FRU ID
- Non-hot-pluggable
- Two serial ports, one mutually exclusive with the Netra CP2500 board front panel

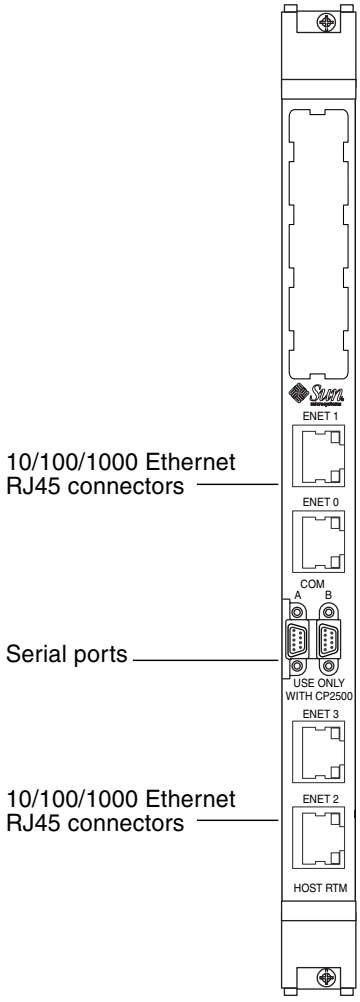

FIGURE 1-1 Netra CP2500 RTM-H Faceplate

Netra CP2500 RTM-S Features

Following are the features of the RTM-S.

- Two Gigabit Ethernet ports
- Two 10/100/1000 Ethernet ports provided by PCI to Ethernet controllers on the RTM.
- Mechanically switched Ethernet—cPSB or RTM selection
- FRU ID

- Non-hot-pluggable
- Two serial ports, one mutually exclusive with the Netra CP2500 board front panel

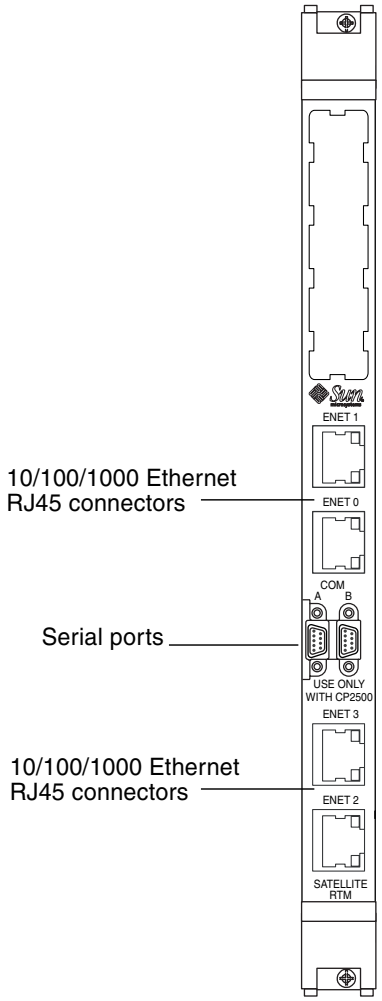

FIGURE 1-2 Netra CP2500 RTM-S Faceplate

On-Board Components

The Netra CP2500 RTM contains the following on-board components:

- I^2C serial EEPROM (FRU ID) – This component contains board identification and some manufacturing information, such as the part number and date code of the Netra CP2500 RTM card. The SMC on the Netra CP2500 board monitors and identifies the I^2C interface. The serial EEPROM is accessed through the local Netra CP2500 I^2C bus on the CompactPCI RJ5 connector.
- I^2C bus access header – The 4-pin connector header provides access to the I^2C bus. See the Netra CP2500 board specifications for more information.
- The active components on the Netra CP2500 RTM-H are an Ethernet controller and a SCSI controller. The active component on the Netra CP2500 RTM-S is the Ethernet controller.

FIGURE 1-3 shows the location of these on-board components and other connectors on the RTM-H. FIGURE 1-4 shows the location of these on-board components and other connectors on the RTM-S.

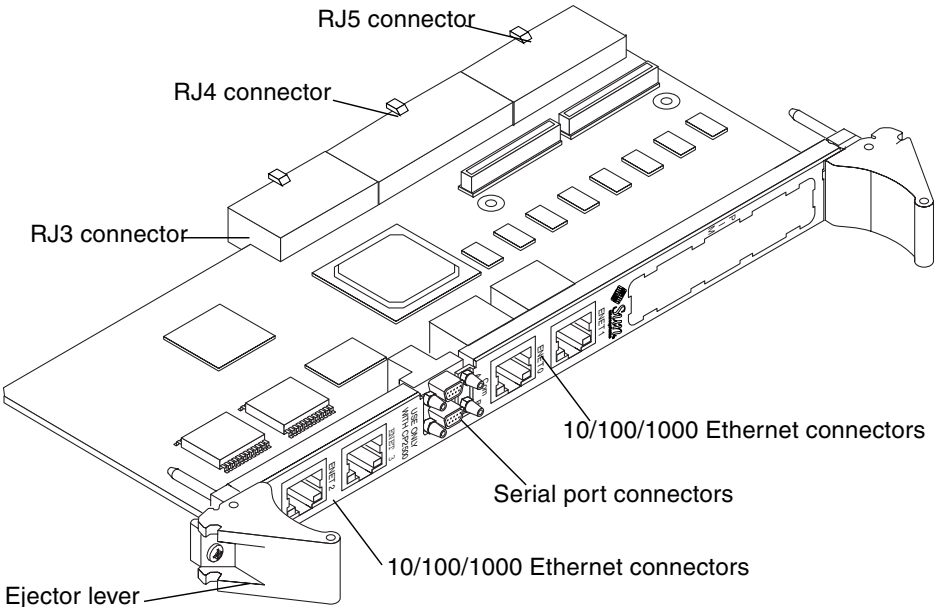

FIGURE 1-3 Netra CP2500 RTM-H On-Board Components

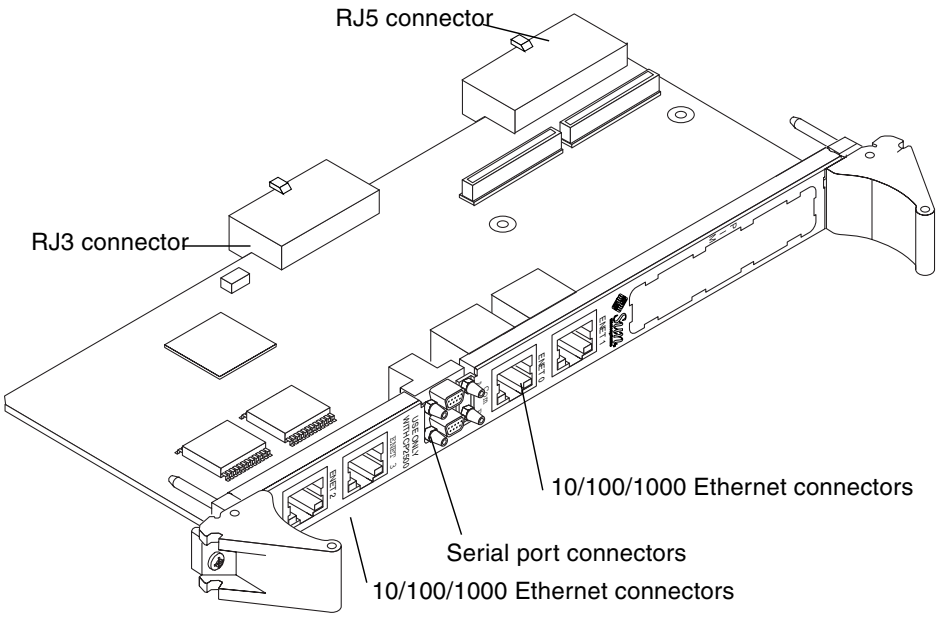

FIGURE 1-4 Netra CP2500 RTM-S On-Board Components

Software Support

The Netra CP2500 RTM card supports the Netra CP2500 board, and therefore, supports the software supported by that board. Refer to the *Netra CP2500 Board Release Notes* (819-1748-xx) and the *Netra CP2500 Board Installation and Technical Reference Manual* (819-1747-xx) for the software support information.

Technical Support

Should you have any technical questions or support issues that are not addressed in the Netra CP2500 documentation set or on the web site, contact your local Sun Services representative. Find the World Wide Solution Center nearest you by visiting our web site:

http://www.sun.com/service/contacting/solution.html

When you call Sun Services, be sure to indicate if the Netra CP2500 board was purchased separately and is not associated with a system.

have your Sun support contract number and the board identification information ready when you call. For proper identification of the board be prepared to give the representative the board part number, serial number, and board revision level (see FIGURE 1-8).

Part Number, Serial Number, and Revision Number Identification

The Netra CP2500 RTM part number, serial number, and revision can be found on labels located on the module. For proper identification of the rear transition module, find the Sun Microsystems barcode labels on the board. The barcode labels provide the following information:

- Board part number (for example, 5017032), which is the first seven digits on the barcode label. The next six digits are the board serial number (for example, 000316).
- Product part number including dash level (for example, 501-7032-02), and revision number (for example REV 50).
- Board date code (for example, 17/2005, which represents the seventeenth week of year 2005).
- Country of origin (for example, Assembled in Thailand).

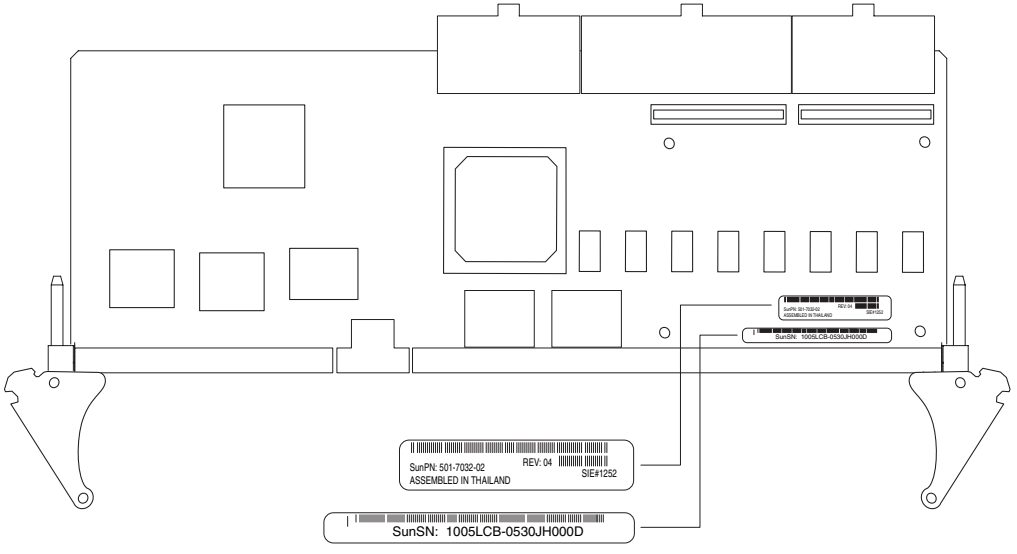

FIGURE 1-5 Netra CP2500 RTM Identification Labels

CHAPTER 2

Installing the Netra CP2500 Rear Transition Module

This chapter describes how to install the Netra CP2500 RTM card.

This chapter contains the following sections:

Installing the Netra CP2500 Rear Transition Module

The RTM-H is designed to be operated solely in the host slot of the Netra CT 410 and 810 servers. The RTM-H will not operate in a cPSB chassis, and it is not supported in any other CompactPCI server.

The RTM-S card can operate in either a Netra CT 410 or 810 server satellite slot or in a node slot of cPSB chassis. When installing a Netra CP2500 board into a cPSB chassis, you must use either this RTM-S or a custom-designed RTM.

Note – Before installing the RTM card, verify the card's part number to ensure that you are installing the correct RTM in the correct slot. For information on identifying the RTM, see "Part Number, Serial Number, and Revision Number Identification" on page 8.

Note – This chapter does not describe how to install the board in a Netra CT 410 or 810 server. It only describes how to install the board in a cPSB chassis. If you are installing the board in a Netra CT server, refer to the server's documentation.

RTM-S DIP Switch Settings

The Netra CP2500 RTM-S module has two DIP switch banks (S1301 and S1302) that control the Ethernet network traffic through the RTM-S module. By default, the switches on these banks are all set to the ON position. In the ON position, all network traffic gets routed out through the module's RJ-45 connectors. When these switches are set to the Off position, all network traffic is routed to the cPSB backplane network. Before installing the RTM-S into a cPSB chassis, set the switches in S1301 and S1302 to the Off position.

FIGURE 2-1 shows the location of the S1301 DIP switch bank, which is located on the component side of the RTM-S, and TABLE 2-1 describes the S1301 DIP switch settings. The S1301 DIP switch bank controls the network traffic of the ENET0 ports.

FIGURE 2-2 shows the location of the S1302 DIP switch bank, which is located on the solder side of the RTM-S, and TABLE 2-2 describes the S1302 DIP switch settings. The S1302 DIP switch bank controls the network traffic of the ENET1 ports.

Caution – *Never* set the DIP switches on the Netra CP2500 RTM-H module. Sun does not support changing the RTM-H DIP switches from their default settings.

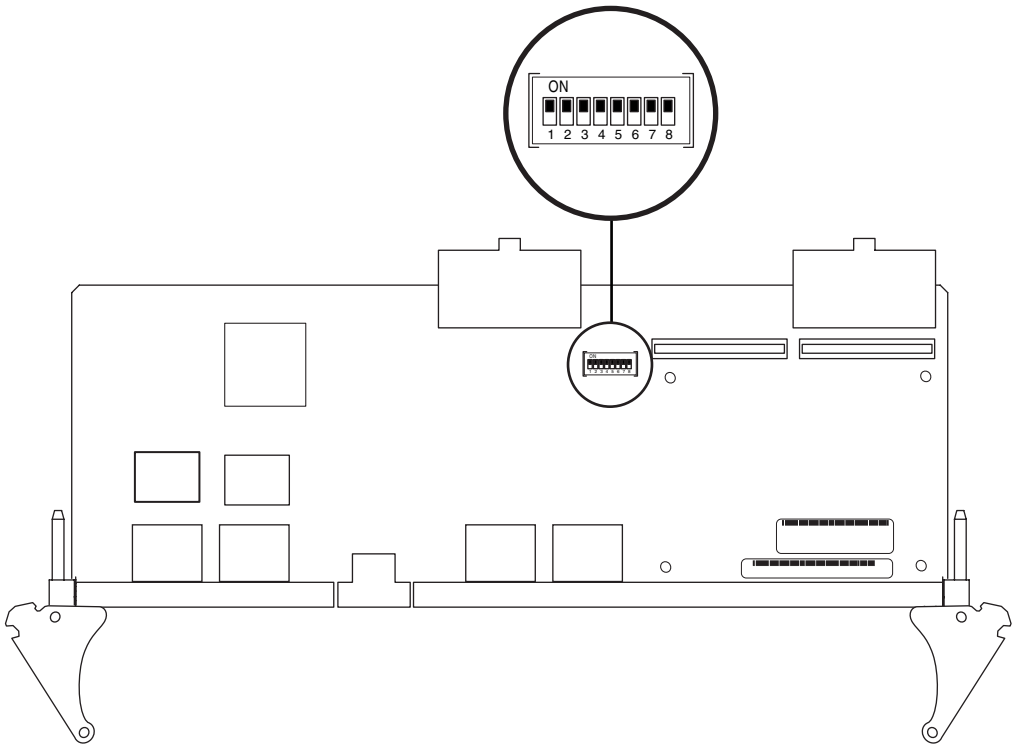

FIGURE 2-1 S1301 DIP Switch Bank Location on the RTM-S (Component Side)

TABLE 2-1 S1301 DIP Switch Settings

Switch Position	Setting	Description
1	On	Non-cPSB network mode (default)
	Off	cPSB network mode
2	On	Non-cPSB network mode (default)
	Off	cPSB network mode
3	On	Non-cPSB network mode (default)
	Off	cPSB network mode
4	On	Non-cPSB network mode (default)
	Off	cPSB network mode
5	On	Non-cPSB network mode (default)
	Off	cPSB network mode

TABLE 2-1 S1301 DIP Switch Settings *(Continued)*

Switch Position	Setting	Description
6	On	Non-cPSB network mode (default)
	Off	cPSB network mode
7	On	Non-cPSB network mode (default)
	Off	cPSB network mode
8	On	Non-cPSB network mode (default)
	Off	cPSB network mode

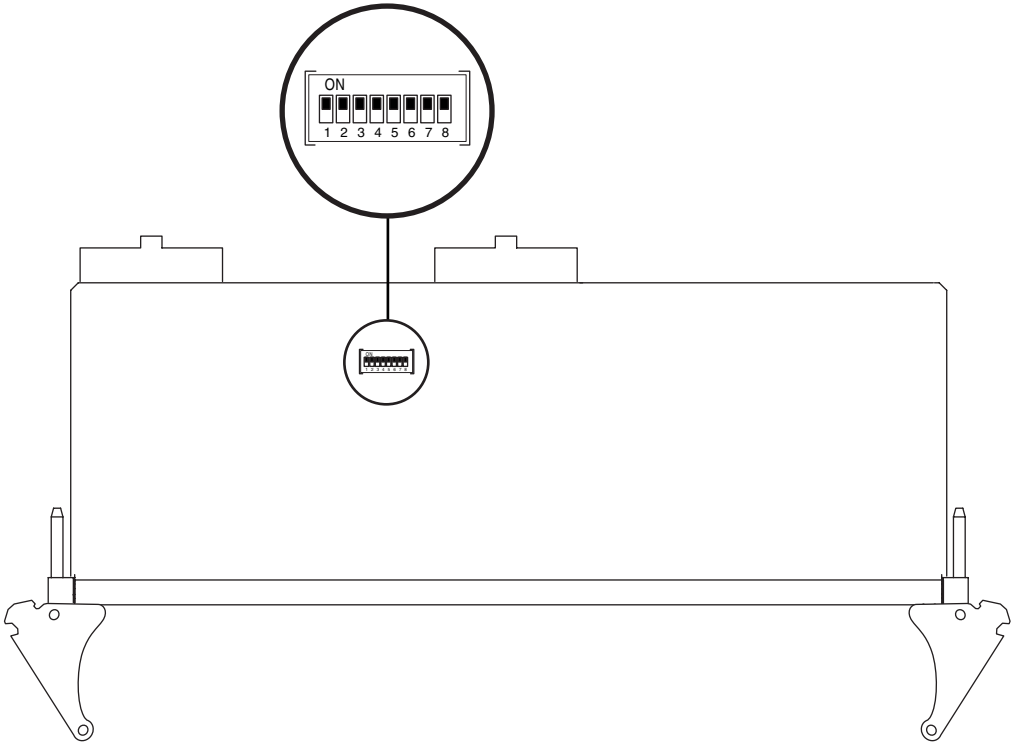

FIGURE 2-2 S1302 DIP Switch Bank Location on the RTM-S (Solder Side)

TABLE 2-2 S1302 DIP Switch Settings

Switch Position	Setting	Description
1	On	Non-cPSB network mode (default)
	Off	cPSB network mode
2	On	Non-cPSB network mode (default)
	Off	cPSB network mode
3	On	Non-cPSB network mode (default)
	Off	cPSB network mode
4	On	Non-cPSB network mode (default)
	Off	cPSB network mode
5	On	Non-cPSB network mode (default)
	Off	cPSB network mode
6	On	Non-cPSB network mode (default)
	Off	cPSB network mode
7	On	Non-cPSB network mode (default)
	Off	cPSB network mode
8	On	Non-cPSB network mode (default)
	Off	cPSB network mode

The RTM-S can be installed into a cPSB chassis with a backplane made for front and rear board installation (FIGURE 2-3). It must be installed in the slot directly behind the Netra CP2500 board for proper operation. These back-to-back slots have common pins to enable passing of signals.

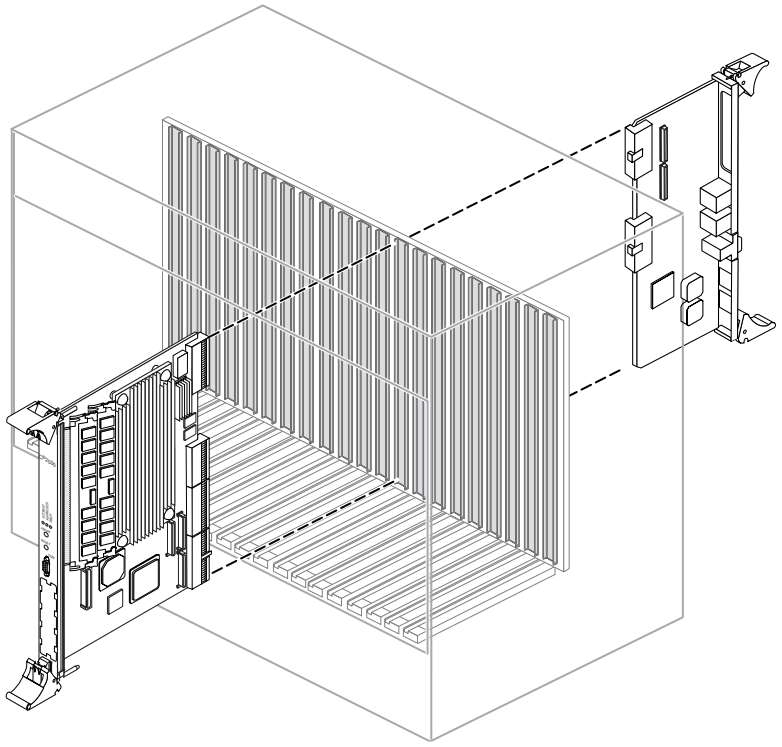

FIGURE 2-3 Installing the Netra CP2500 board and RTM-S in a cPSB Chassis

Installing the RTM-S in a cPSB Chassis

The placement and order of installation for the Netra CP2500 RTM-S depends on system conditions:

- When possible, install the Netra CP2500 RTM into a powered off system.
- If you are installing into a powered backplane, ensure that no Netra CP2500 cPSB board is installed in front of the rear backplane slot
- When a cPSB system is on and running, insert the Netra RTM *first*, followed by its associated CPU board.
- If the CPU board is already inserted and the system is on, the transition card *must not* be inserted into the cPSB system.
- Ensure that no Netra CP2500 cPSB board is installed in front of the rear backplane slot. This precaution is very important if you are installing into a powered backplane.

Caution – You can install the The Netra CP2500 RTM card and the corresponding Netra board while the chassis is powered – however *only start with a powered chassis if you must do so*.

▼ To Install the RTM-S in a cPSB Chassis

The following procedure lists the general steps required for installing the Netra CP2500 rear transition module into a generic cPSB chassis. *Always* refer to the cPSB chassis documentation for chassis-specific cPSB card installation instructions.

1. **Ensure that power is disconnected from the chassis.**

   When the cPSB system is off, the Netra CP2500 RTM card can be inserted either before or after installing the mating Netra CP2500 board.

   The Netra CP2500 RTM card is not hot-swappable. The transition card's entire power comes from its associated Netra CP2500 board (see also "Power Requirements" on page 22 and "Electrical Requirements" on page 22).

2. **Check the positioning of the Netra CP2500 RTM card extraction levers.**

   Ensure that the Netra CP2500 RTM card extraction levers are aligned perpendicular to the card flange.

3. **Install the Netra CP2500 RTM card into the chassis rear connector slot that lines up directly with the Netra CP2500 board (**FIGURE 2-3**).**

   a. **Position the card with its CompactPCI RJ5 connector (labeled J0401 on the transition card) on top.**

   b. **Engage the board edges with the chassis card guides and slide it into the chassis (**FIGURE 2-4**).**

   c. **Using the ejector handles, gently push the card into alignment with the edges of the backplane pins, without touching the pins.**

      At this point, the card rear flange should project approximately 6 mm (1/4 inch) back from the seated position.

   d. **Gently apply pressure to engage the pins and seat the board.**

Caution – Ensure that the transition module is perpendicular to the backplane when it connects with the backplane pins. Careless vertical or angular positioning during board insertion can result in damage to the backplane, and in subsequent electrical destruction of the RTM and the corresponding Netra CP2500 board.

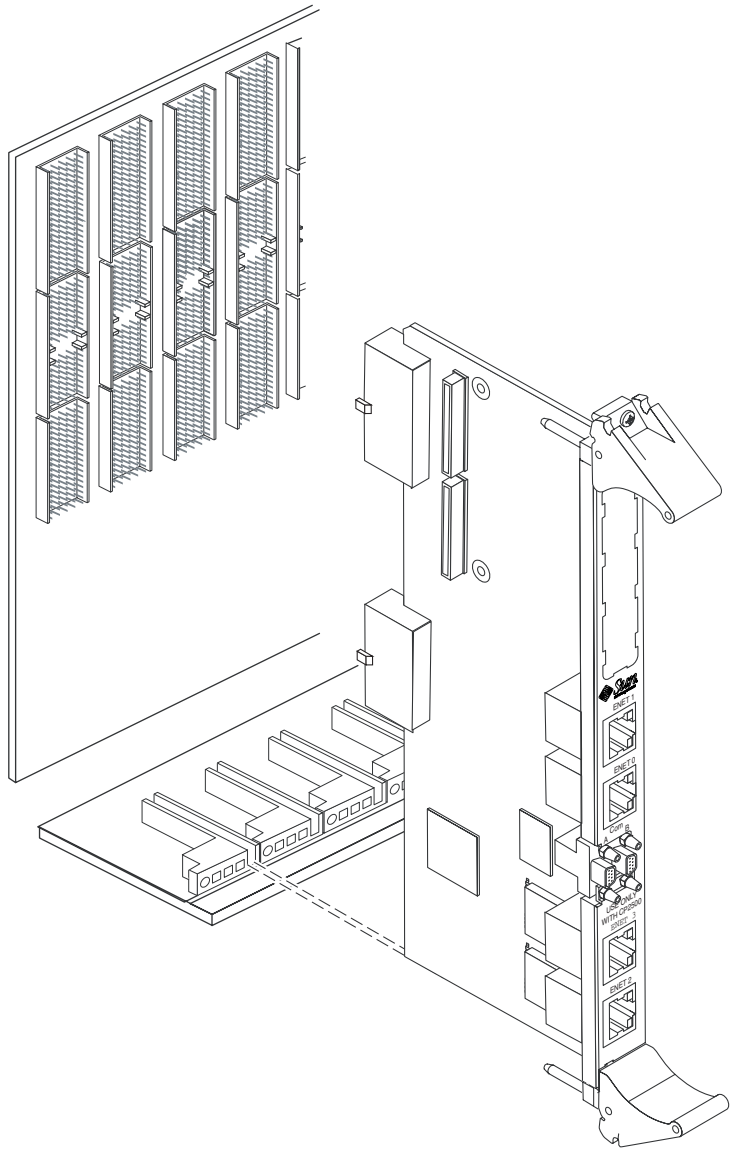

FIGURE 2-4 Aligning the RTM-S During Installation in the Backplane

4. **Install the Netra CP2500 board into the front of the chassis (**FIGURE 2-3**) and push the board toward the backplane.**

   Ensure that the board is seated properly and that the connectors make good contact with the Netra CP2500 RTM card.

5. **Install the supported peripheral devices at the transition module connector ports as required.**

   Use shielded cables for the ports on the transition module. The shield should be grounded at both ends. For further details on installation of the board, refer to the *Netra CP2500 cPSB Board Installation and Technical Reference Manual* (816-7186).

6. **Power on the system.**

   Refer to your system manual for instructions on correctly powering on the system.

APPENDIX **A**

Specification and Connectors

This appendix provides the specifications and connector pin-outs for the Netra CP2500 RTMs.

This appendix contains the following sections:

Specifications

This section provides mechanical, electrical, environmental, and other relevant specifications for the Netra CP2500 RTM cards.

Physical Dimensions

TABLE A-1 shows the physical dimensions for the Netra CP2500 RTM card.

TABLE A-1 Physical Dimensions

Board Specifications	Dimensions
Form Factor	6U
Height	233.35 mm (9.19 inches)
Depth	80 mm (3.15 inches)

Power Requirements

The Netra CP2500 RTM card has both active and passive components. However, some power from the backplane is provided to the I^2C EEPROM.

Electrical Requirements

The Netra CP2500 RTM card is powered through the Netra CP2500 board. The Netra CP2500 board provides the following voltages: 3.3V/5V/12V/-12V. For more information, see the *Netra CP2500 Board Installation and Technical Reference Manual* (819-1747).

Environmental Specifications and Compliance

For details on the environmental specifications and compliance, please refer to the *Important Safety Information for Sun Hardware Systems* (816-7190-10) and the *Netra CP2500 Board Installation and Technical Reference Manual* (819-1747) documents.

You can download and view these documents from the following web site:

`http://www.sun.com/documentation`

Connectors

Transition Module I/O Face Plate Connectors

This section lists the pins and signal names of the I/O faceplate connectors on the transition module.

Serial Ports

Two serial ports from the Netra CP2500 transition module are available through the rear panel with single-stacked, 9-pin connectors. One connector is assigned to Port A and the other connector to Port B (FIGURE A-1).

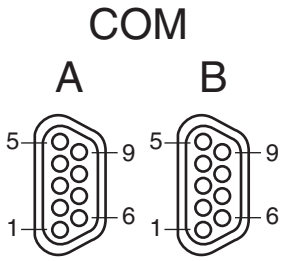

FIGURE A-1 Serial Port Connector Pins

The signal interface of the connectors are described in the following two tables.

TABLE A-2 Serial Port A

Pin	Signal
1	SER_A_DCD
2	SER_A_RXD
3	SER_A_TXD
4	SER_A_DTR
5	GND_A
6	SER_A_DSR
7	SER_A_RTS
8	SER_A_CTS
9	SER_A_RI

TABLE A-3 Serial Port B

Pin	Signal
1	SER_B_DCD
2	SER_B_RXD
3	SER_B_TXD
4	SER_B_DTR
5	GND_B
6	SER_B_DSR

TABLE A-3 Serial Port B *(Continued)*

Pin	Signal
7	SER_B_RTS
8	SER_B_CTS
9	SER_B_RI

Ethernet Connectors

Two single-jack RJ45 XFMRS XFGIB look-CLYGI-4MS Ethernet connectors and two single-jack RJ45 Amphenol RJH55381 Ethernet conectors located on the transition module's back panel, provide two 10/100/1000 Mbps Ethernet ports.

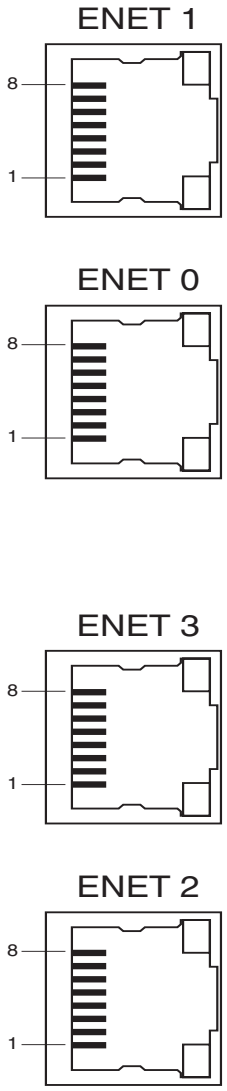

FIGURE A-2 Ethernet Port Connector Pins

Ethernet ports, ENET0 and ENET1 are not available if the Netra CP2500 board is set to use the chassis's packet-switched backplane (PSB) Ethernet network. In order to use the transition module's Ethernet connectors, you must set the S1301 and S1302 switches to the On position (see FIGURE A-4), which is their default position.

TABLE A-4 lists the pin assignments for the two RJ45 XFMRS XFGIB look-CLYGI-4MS Ethernet connectors.

TABLE A-4 ENET0 and ENET1

ENET0		ENET1	
Pin	**Signal**	**Pin**	**Signal**
1	TRDP0	1	TRDP0
2	TRDN0	2	TRDN0
3	TRDP1	3	TRDP1
4	TRDP2	4	TRDP2
5	TRDN2	5	TRDN2
6	TRDN1	6	TRDN1
7	TRDP3	7	TRDP3
8	TRDN3	8	TRDN3

TABLE A-5 lists the pin assignments for the two single-jack RJ45 Amphenol RJH55381 Ethernet conectors.

TABLE A-5 ENET2 and ENET3

ENET3		ENET4	
Pin	**Signal**	**Pin**	**Signal**
1	TRDP0	1	TRDP0
2	TRDN0	2	TRDN0
3	TRDP1	3	TRDP1
4	TRDP2	4	TRDP2
5	TRDN2	5	TRDN2
6	TRDN1	6	TRDN1
7	TRDP3	7	TRDP3
8	TRDN3	8	TRDN3

On-Board Interfaces and Connectors on the Netra CP2500 Transition Module

FIGURE A-3 shows the on-board interfaces and connectors on the RTM-H. FIGURE A-4 shows the on-board interfaces and connectors on the RTM-S. The numbers in parentheses display how the interfaces are labeled on the transition module.

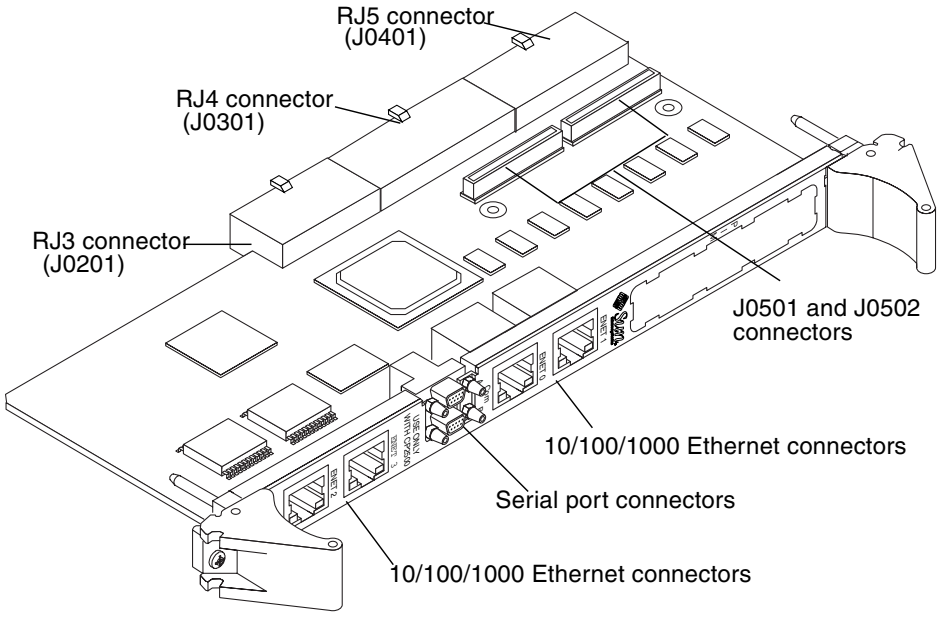

FIGURE A-3 On-Board Connectors and Interfaces for the Netra CP2500 RTM-H

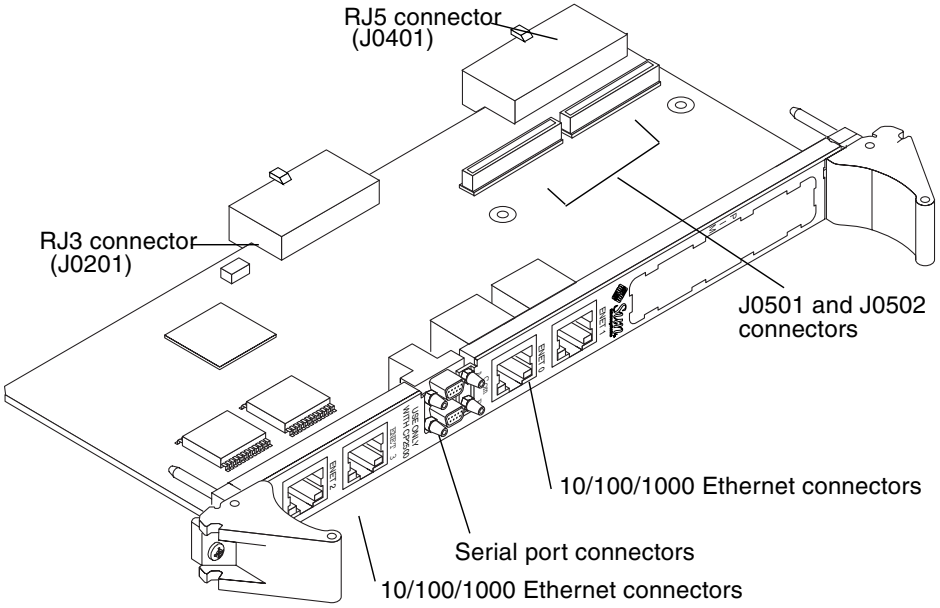

FIGURE A-4 On-Board Connectors and Interfaces for the Netra CP2500 RTM-S

I²C Serial Bus Access Header

The I²C serial bus is routed onto the Netra CP2500 RTM through the RJ5 backplane connector (which is labeled as J0401 on the transition module). The Netra CP2500 transition module I²C bus supports one I²C function–providing information about itself through nonvolatile memory. FIGURE A-5 shows the I²C serial bus access header J1502and TABLE A-6 lists the pin assignments.

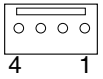

FIGURE A-5 I²C Serial Bus Access Header Pins

TABLE A-6 I²C Serial Bus Access Header Pin Assignments

Pin	Signal
1	12C_PWR (SMC 3.3V)
2	RTM_SDA (Data/Address)
3	RTM_SCL (Clock)
4	GND

J0501 and J0502 Connectors

The PIM slot has two 64-pin connectors, J0501 and J0502. See FIGURE A-3 and FIGURE A-4 for the location of these connectors on the RTMs. See FIGURE A-6 for the connector pin numbering.

Note – PIM cards are not currently supported.

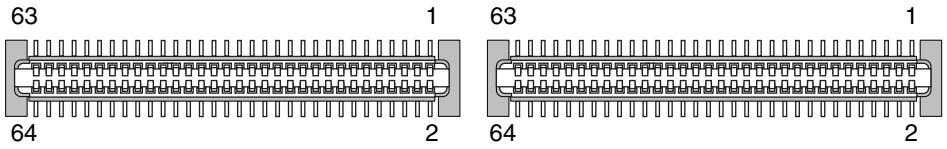

FIGURE A-6 J0501 and J0502 Connector Pins

J0501 and J0502 Connector Pin Assignments

TABLE A-7 lists the pin assignments for the J0501 connector, and TABLE A-8 lists the pin assignments for the J0502 connector.

TABLE A-7 J0501 Pin Assignments

Signal Name	Pin	Pin	Signal Name
None	1	2	None
None	3	4	None
None	5	6	None
None	7	8	None
None	9	10	None
None	11	12	None
None	13	14	None
None	15	16	None
None	17	18	None
None	19	20	None
None	21	22	None
None	23	24	None
None	25	26	None
None	27	28	None

TABLE A-7 J0501 Pin Assignments *(Continued)*

Signal Name	Pin	Pin	Signal Name
None	29	30	None
None	31	32	None
PMCIO<33>	33	34	PMCIO<34>
PMCIO<35>	35	36	PMCIO<36>
PMCIO<37>	37	38	PMCIO<38>
PMCIO<39>	39	40	PMCIO<40>
PMCIO<41>	41	42	PMCIO<42>
PMCIO<43>	43	44	PMCIO<44>
PMCIO<45>	45	46	PMCIO<46>
PMCIO<47>	47	48	PMCIO<48>
None	49	50	None
None	51	52	None
None	53	54	None
None	55	56	None
None	57	58	None
None	59	60	None
None	61	62	None
None	63	64	None

TABLE A-8 J0502 Pin Assignments

Signal Name	Pin	Pin	Signal Name
None	1	2	+12V
None	3	4	None
+5V	5	6	None
None	7	8	None
None	9	10	+3.3V
None	11	12	None
GND	13	14	None
None	15	16	None
None	17	18	GND

TABLE A-8 J0502 Pin Assignments *(Continued)*

Signal Name	Pin	Pin	Signal Name
None	19	20	None
+5V	21	22	None
None	23	24	None
None	25	26	+3.3V
None	27	28	None
GND	29	30	None
None	31	32	None
None	33	34	GND
None	35	36	None
+5V	37	38	None
None	39	40	None
None	41	42	+3.3V
None	43	44	None
GND	45	46	None
None	47	48	None
None	49	50	GND
None	51	52	None
+5V	53	54	None
None	55	56	None
None	57	58	+3.3V
None	59	60	None
+12V	61	62	None
None	63	64	None

Backplane Interfaces

The Netra CP2500 RTM-H interfaces to the bus through the CompactPCI RJ3 (labeled as J0201 on the transition module), RJ4 (J0301), and RJ5 (J0401) backplane connectors. The Netra CP2500 RTM-S interfaces to the bus through the Compact PCI RJ3 (labeled as J0201 on the transition module) and RJ5 (J0401) connectors. The pin assignments for these three sets of connectors are provided in this section.

CompactPCI RJ3 Connector (J0201)

TABLE A-9 shows the pin assignments for the CompactPCI RJ3 connector. This connector is labeled J0201 on the RTM. (See FIGURE A-4 for the location).

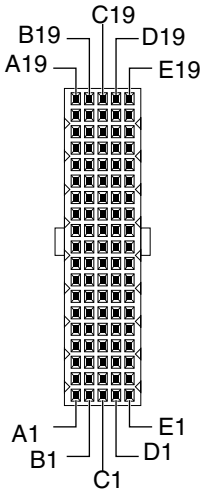

FIGURE A-7 CompactPCI RJ3 Connector (J0201) Pins

TABLE A-9 CompactPCI RJ3 Connector (J0201) Pin Assignments

Pin #	Row A	Row B	Row C	Row D	Row E
19	GND	GND	GND	GND	GND
18	A_TRD_0P	A_TRD_0N	GND	A_TRD_2P	A_TRD_2N
17	A_TRD_1P	A_TRD_1N	GND	A_TRD_3P	A_TRD_3N
16	B_TRD_0P	B_TRD_0N	GND	B_TRD_2P	B_TRD_2N
15	B_TRD_1P	B_TRD_1N	GND	B_TRD_3P	B_TRD_3N
14	+3.3V	+3.3V	+3.3V	+5V	+5V
13	PCI_AD<31>	PCI_AD<30>	PCI_AD<29>	PCI_AD<28>	PCI_AD<27>
12	PCI_AD<26>	PCI_AD<25>	PCI_AD<24>	PCI_AD<23>	PCI_AD<22>
11	PCI_AD<21>	PCI_AD<20>	PCI_AD<19>	PCI_AD<18>	PCI_AD<17>
10	PCI_AD<16>	PCI_AD<15>	PCI_AD<14>	PCI_AD<13>	PCI_AD<12>
9	PCI_AD<11>	PCI_AD<10>	PCI_AD<9>	PCI_AD<8>	PCI_AD<7>
8	PCI_AD<6>	PCI_AD<5>	PCI_AD<4>	PCI_AD<3>	PCI_AD<2>

TABLE A-9 CompactPCI RJ3 Connector (J0201) Pin Assignments *(Continued)*

Pin #	Row A	Row B	Row C	Row D	Row E
7	PCI_AD<1>	PCI_AD<0>	PCI_FRAME_N	PCI_DEVSEL_N	PCI_IRDY_N
6	PCI_CBE<0>	RSV_HLTH<5>	PCI_CBE<1>	PCI_TRDY_N	PCI_STOP_N
5	PCI_SC_INTA_N	RSV_HLTH<4>	PCI_NT_INTB_N	PCI_PAR	PCI_CBE<3>
4	PCI_SC_INTB_N	RSV_HLTH<3>	PCI_NT_INTA_N	PCI_CBE<2>	PCI_RTM_CLKB
3	PCI_GNT__N<1>	RSV_HLTH<2>	PCI_REQ_N<1>	PCI_RST_N	PCI_SERR<N>
2	PCI_GNT__N<2>	RSV_HLTH<1>	PCI_REQ_N<2>	SMC_3.3V	RSV_HLYH<6>
1	+2.5V	RSV_HLTH<0>	PCI_M66EN	PCI_RTM_CLKA	PCI_PERR_N

Note – The pin assignments for every pin in rows F and Z are ground.

CompactPCI RJ4 Connector (J0301)

TABLE A-10 shows the pin assignments for the CompactPCI RJ4 connector. This connector is labeled J0301 on the RTM. (See FIGURE A-4 for the location).

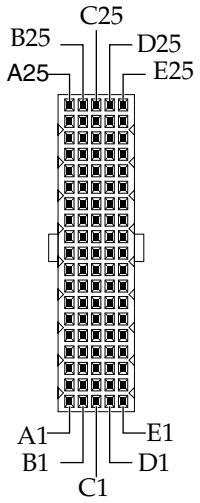

FIGURE A-8 CompactPCI RJ4 Connector (J0301) Pins

TABLE A-10 CompactPCI RJ4 Connector (J0301) Pin Assignments

Pin #	Row A	Row B	Row C	Row D	Row E
25	MII_A_CRS	MII_A_COL	EXT_MII_A_MDIO	MII_A_TX_ER	N/C
24	MII_A_RX_DV	MII_A_RX_ER	MII_A_TX_CLKI	GND	MCA_INT_L
23	MII_A_RXD1	MII_A_RXD2	GND	MII_A_RXD3	MII_A_RX_CLK
22	GND	MII_A_TXD0	MII_A_TX_EN	MII_A_MGT_CLK	MII_A__RXD0
21	MII_A_TXD3	GND	MII_A_TXD2	GND	MII_A_TXD1
20	N/C	N/C	LOCAL_12C_INT_L	GND	RIO_A_PHY_EN
19	MII_B_COL	EXT_MII_B_MDIO	MII_B-TX_ER	N/C	N/C
18	MII_B_RX_CLK	MII_B_RX_DV	MII_B_RX_ER	MII_B_TX_CLKI	MII_B_CRS
17	MII_B_RXD0	GND	MII_B_RXD1	MII_B_RXD2	MII_B_RXD3
16	MII_B_TXD1	MII_B_TXD0	MII_B_TX_EN	MII_B_MGT_CLK	GND
15	GND	N/C	N/C	MII_B_TXD3	MII_B_TXD2
11	TYPE0	TYPE1	J4_12C_SDA	GND	GND
10	SMC_TX	SMC_RX	PWROFF	N/C	N/C
9	GND	GND	J4_12C_SCL	TERMPWR_A	TERMPWR_B
8	A_SCSI_DP<1>	A_SCSI_D<15>	A_SCSI_D<14>	A_SCSI_D<13>	A_SCSI_D<12>
7	A_SCSI_D<4>	A_SCSI_D<3>	A_SCSI_D<2>	A_SCSI_D<1>	A_SCSI_D<0>
6	GND	A_SCSI_DP<0>	A_SCSI_D<7>	A_SCSI_D<6>	A_SCSI_D<5>
5	GND	CRTM_PRES_L	N/C	N/C	N/C
4	A_SCSI_RST_L	A_SCSI_ACK_L	A_SCSI_BSY_L	GND	A_SCSI_ATN_L
3	A_SCSI_IO_L	A_SCSI_REQ_L	A_SCSI_CD_L	A_SCSI_SEL_L	A_SCSI_MSG_L
2	TERMA_DIS_L	A_SCSI_D<11>	A_SCSI_D<10>	A_SCSI_D<9>	A_SCSI_D<8>
1	N/C	N/C	N/C	N/C	GPIO_J431

CompactPCI RJ5 Connector (J0401)

TABLE A-11 shows the pin assignments for the CompactPCI RJ5 connector. This connector is labeled J0401 on the transition module. (See FIGURE A-4 for the location).

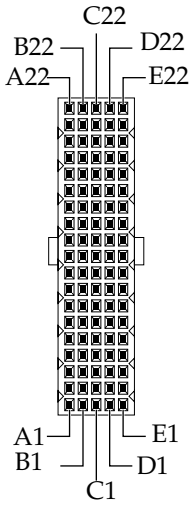

FIGURE A-9 CompactPCI RJ5 Connector (J0401) Pins

TABLE A-11 CompactPCI RJ5 Connector (J0401) Pin Assignments

Pin #	Row A	Row B	Row C	Row D	Row E
22	XBACK_RST_IN_N	GND	DIAG_N_OC	+5V	BP_XIR_N
21	CPSB_A_LNK_N	CPSB_A_ACT_N	CPSB_B_LNK_N	RTM_SCL	CPSB_B_ACT_N
20	+5V			RTM_SDA	+12V
19	RSV_PAR_DS_N	GND	+5V	N/C	-12V
18	RSV_PAR_AUTO_FD_N			GND	+5V
17	RSV_PAR_DATA<2>	RSV_PAR_INIT_N	RSV_PAR_DATA <1>	RSV_PAR_ERROR_N	RSV_PAR_DATA <0>
16	RSV_PAR_DATA<6>	RSV_PAR_DATA <5>	RSV_PAR_DATA <4>	RSV_PAR_DATA <3>	RSV_PAR_SLIN_N
15	RSV_PAR_SEL_N	RSV_PAR_PE	RSV_PAR_BUSY	RSV_PAR_ACK_N	RSV_PAR_DATA <7>
14	A_RTS	A_CTS	A_RI	GND	A_DTR
13	A_DCD	+5V	A_RXD	A_DSR	A_TXD
12	B_RTS	B_CTS	B_RI	+5V	B_DTR
11	B_DCD	GND	B_RXD	B_DSR	B_TXD

TABLE A-11 CompactPCI RJ5 Connector (J0401) Pin Assignments *(Continued)*

Pin #	Row A	Row B	Row C	Row D	Row E
10	PMCIO<36>	PMCIO<45>	PMCIO<47>	PMCIO<46>	PMCIO<48>
9	PMCIO<34>	PMCIO<41>	PMCIO<43>	PMCIO<42>	PMCIO<44>
8	PMCIO<35>	PMCIO<37>	PMCIO<39>	PMCIO<38>	PMCIO<40>
7	PMCIO<33>	B_SCSI_D<2>	B_SCSI_D<1>	B_SCSI_D<0>	PMCIOC
6	B_SCSI_D<6>	GND	B_SCSI_D<5>	B_SCSI_D<4>	B_SCSI_D<3>
5	B_SCSI_D<10>	B_SCSI_D<9>	B_SCSI_D<8>	B_SCSI_DP<0>	B_SCSI_D<7>
4	B_SCSI_D<13>	B_SCSI_D<12>	GND	PMCIOB	B_SCSI_D<11>
3	TERMB_DIS_L	B_SCSI_DP<1>	B_SCSI_D<15>	PMCIOA	B_SCSI_D<14>
2	B_SCSI_IO_L	B_SCSI_REQ_L	B_SCSI_CD_L	B_SCSI_SEL_L	B_SCSI_MSG_L
1	XBACK_RST_OUT_N	B_SCSI_RST_L	B_SCSI_ACK_L	B_SCSI_BSY_L	B_SCSI_ATN_L

Index

R

S

T