



Netra™ CP30X0 Rear Transition Module User's Guide

Sun Microsystems, Inc.
www.sun.com

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Preface

The *Netra CP30X0 Rear Transition Module User's Guide* describes the Netra™ CP30X0 rear transition module and provides installation instructions and hardware specifications.

This manual is written for system integration engineers, field applications and service engineers, and others involved in the integration of this module into Netra Advanced Telecommunications Computing Architecture (ATCA) systems.

How This Document Is Organized

[Chapter 1](#) provides an overview of the Netra CP30X0 rear transition module.

[Chapter 2](#) provides instructions on hardware installation.

[Chapter 3](#) provides hardware specifications and connector pinouts.

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	<i>machine-name%</i>
C shell superuser	<i>machine-name#</i>
Bourne shell and Korn shell	\$
Bourne shell and Korn shell superuser	#

Typographic Conventions

Typeface*	Meaning	Examples
<i>AaBbCc123</i>	The names of commands, files, and directories; on-screen computer output	Edit your <code>.login</code> file. Use <code>ls -a</code> to list all files. <code>% You have mail.</code>
AaBbCc123	What you type, when contrasted with on-screen computer output	<code>% su</code> 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 class options. You must be superuser to do this. To delete a file, type <code>rm filename</code> .

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

Related Documentation

For additional information about the Netra CP30X0 rear transition module and Netra node boards, refer to the following documents.

Title	Part Number
<i>Netra CP30X0 Board Getting Started Guide</i>	819-1186
<i>Netra CP30X0 Rear Transition Module User's Guide (this manual)</i>	819-1187
<i>Netra CP3010 Board Product Notes</i>	819-1181
<i>Netra CP3010 Board User's Guide</i>	819-1183
<i>Netra CP3010 Board Programming Guide</i>	819-1185
<i>Netra CP3020 Board User's Guide</i>	819-4962
<i>Netra CP3020 Board Getting Started Guide</i>	819-4876
<i>Netra CP3020 Board Product Notes</i>	819-4961
<i>Netra CP3020 Board Safety and Compliance Guide</i>	819-4960
<i>Important Safety Information for Sun Hardware Systems (Printed version only)</i>	816-7190

Except for the *Important Safety Information for Sun Hardware Systems*, all the documents listed are available online at:

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

Netra CP30X0 Rear Transition Module User's Guide, part number 819-1187-11

Overview of the Netra CP30X0 Rear Transition Module

This chapter contains the following sections:

- [Section 1.1, “Features of the Rear Transition Module” on page 1-2](#)
- [Section 1.2, “PICMG Standards Compliance” on page 1-2](#)
- [Section 1.3, “I/O Interfaces” on page 1-4](#)
- [Section 1.4, “EEPROM” on page 1-6](#)
- [Section 1.5, “Software Support” on page 1-6](#)
- [Section 1.6, “Part Number, Serial Number, and Revision Number” on page 1-6](#)
- [Section 1.7, “On-Board PIM Card Interfaces” on page 1-7](#)

The Netra™ CP30X0 rear transition module is a fully compatible, carrier-grade Advanced Telecom Computing Architecture® (ATCA) I/O rear transition module for the Netra ATCA node boards. The Netra CP30X0 rear transition module is designed to be used with the Netra ATCA node boards and is fully compliant with the PICMG® 2.0 Revision 3.0 specification. However, the Netra CP30X0 rear transition module is not compatible with other ATCA cards.

The Netra CP30X0 rear transition module requires an ATCA shelf (chassis) with a midplane that accommodates front and rear board installations. The primary purpose of this module is to provide rear access connections to the Netra ATCA node board’s I/O devices.

The system designer is responsible for integrating peripheral devices with the connectors on the midplane in an ATCA shelf configuration. A designer can either connect directly to the midplane signals or use a Netra CP30X0 rear transition module. This document provides information only for the integration of the Netra CP30X0 rear transition module in a supported ATCA shelf.

1.1 Features of the Rear Transition Module

The 6 rack unit (6U) form factor, single-slot rear transition module supplies rear I/O connections that support additional peripherals for use with compatible Netra ATCA node boards. The rear I/O access enables you to replace the Netra ATCA node boards without disconnecting cables. Industry-standard connectors and pin assignments ensure ease of use and flexible design. The Netra CP30X0 rear transition module permits the creation of high-density systems by enabling easy access to I/O (FIGURE 1-1).

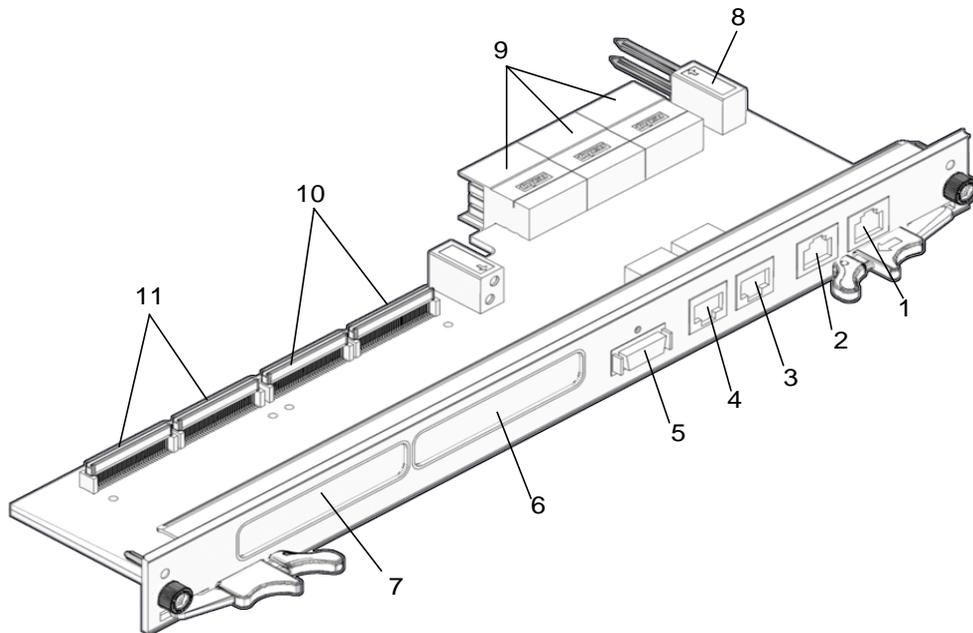
Features of the Netra CP30X0 rear transition module include:

- Two PCI Mezzanine cards (PMC), 16-bit, user-defined PCI Interface Module (PIM) connectors with faceplate I/O cutouts.
- Dual Gigabit Ethernet ports with two RJ-45 connectors available at the rear I/O faceplate.
- Two asynchronous serial ports (DB-9) available at the rear I/O faceplate.
- Field-replaceable unit ID (FRU ID) EEPROM to hold board identification and manufacturing information. The EEPROM can be accessed through the Intelligent Platform Management Controller (IPMC) interface.
- The Netra CP30X0 rear transition module draws power from the Zone 3 connector: 5V, 3.3V, +12V, and -12V.

1.2 PICMG Standards Compliance

The Netra CP30X0 rear transition module is fully compliant with the following PCI Industrial Computer Manufacturers Group (PICMG) specifications:

- PICMG 2.0 Revision 3.0
- PICMG 2.1 Revision 2.0
- PICMG 2.9 Revision 1.0
- PICMG 2.11 Revision 1.0
- PICMG 2.16 Draft 0.92



- | | |
|-----------------------------|-----------------------|
| 1 - Serial port A (RJ-45) | 7 - PIM A cutout |
| 2 - Serial port B (RJ-45) | 8 - Alignment pin |
| 3 - Ethernet port A (RJ-45) | 9 - Zone 3 connectors |
| 4 - Ethernet port B (RJ-45) | 10 - PIM B connectors |
| 5 - SAS port (2x) | 11 - PIM A connectors |
| 6 - PIM B cutout | |

FIGURE 1-1 Netra CP30X0 Rear Transition Module

1.3 I/O Interfaces

The Netra CP30X0 rear transition module installs into the rear of the ATCA enclosure, opposite a Netra ATCA node board. The rear transition module connects to the node board's Zone 3 rear I/O connectors through the midplane. The rear transition module carries two serial ports, two Dual Gigabit Ethernet (GbE) ports with RJ-45 connectors, and a two-channel SAS port to its faceplate (FIGURE 1-1).

FIGURE 1-2 shows the physical relationship between the node board, rear transition module, and the midplane in a typical ATCA system.

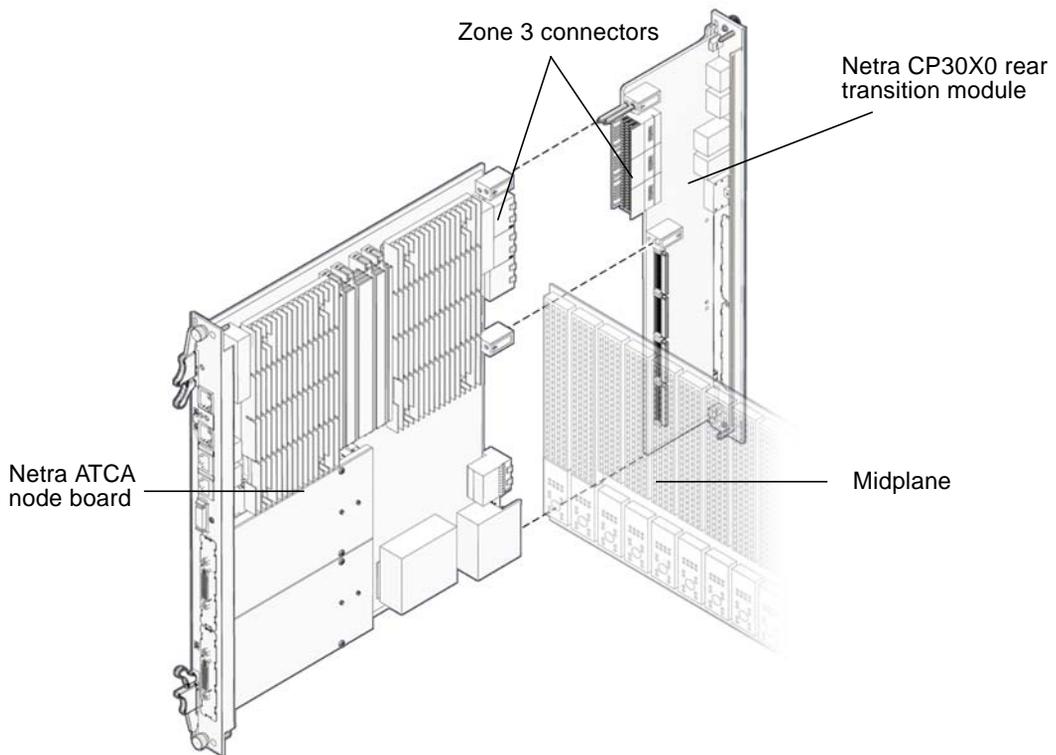


FIGURE 1-2 Relationship of the Node Board, ATCA Midplane, and Rear Transition Module

Note – When the rear transition module is used with a Netra ATCA node board, shielded cables are required for serial I/O ports. Unshielded cables can be used on Ethernet ports to satisfy EMI compliance standards. The shields for all shielded cables must be terminated on both ends.

The rear transition module can also be fitted with independent hardware vendor (IHV) PIM modules that are configured to bring I/O channels to the shelf rear panel. A PIM hardware kit includes a card for the PMC slot and a card for the PIM slot on the rear transition module. A PIM is a rear-panel extension added to a PMC module. When the PIM I/O is configured, the front PMC I/O output is not accessible.

The customer can order the Netra CP30X0 rear transition module, build a custom module, or buy a module from an IHV. A minimum set of I/O is required to provide a boot path for the host board and for console I/O to issue commands and read board and system status.

Possible boot and console configurations are described in [TABLE 1-1](#). Sun Microsystems provides the Netra ATCA node boards and compatible Netra CP30X0 rear transition module. This module provides two 10/100BASE-T Ethernet RJ-45 ports from the host to the back of the system, and can optionally be used for network booting as a diskless client. The other configurations require IHV hardware.

TABLE 1-1 Netra CP30X0 Rear Transition Module I/O Configurations

I/O	Hardware Required	Description
Ethernet	Netra CP30X0 rear transition module—supplied as an option for rear access	Default boot path uses an Ethernet port; the board runs in a diskless client configuration.
SCSI	Netra CP30X0 rear transition module; PMC SCSI I/O	Can be used for local boot; requires the optional rear transition module with PMC SCSI I/O.
Serial data	Netra CP30X0 rear transition module	Serial port A on the front panel provides the path of the default console I/O. When the optional rear transition module is installed, the module's serial port A becomes the path of the default console I/O (see FIGURE 1-1 for location).

1.4 EEPROM

The only active component on the Netra CP30X0 rear transition module is the I²C EEPROM. The board is fully passive, but some power is provided to PIM carriers A and B, and to the I²C EEPROM.

The I²C serial EEPROM (FRU ID) component contains board identification and some manufacturing information, such as the part number and date code of the Netra CP30X0 rear transition module. The IPMC on the Netra CP3010 board or the Netra CP3020 board monitors and identifies the I²C interface. The serial EEPROM is accessed through the local Netra CP3010 or CP3020 I²C bus.

1.5 Software Support

The Netra CP30X0 rear transition module supports the Netra ATCA node boards and the software supported by those boards. Refer to the following documentation for software support information:

- *Netra CP3010 Board Product Notes* (819-1181)
- *Netra CP3010 Board User's Guide* (819-1183)
- *Netra CP3020 Board User's Guide* (819-4962)
- *Netra CP3020 Board Product Notes* (819-4961)

1.6 Part Number, Serial Number, and Revision Number

The Netra CP30X0 rear transition module part number, serial number, and revision number are labeled on the module. For proper identification of the rear transition module, find the Sun Microsystems barcode labels on the module. The barcode labels provide the following information:

- Module part number (for example, 3753134), which is the first seven digits on the barcode label. The next six digits are the module serial number (for example, 000316).
- Product part number, including dash level (for example, 575-3134-03) and revision number (for example, REV 50).

- Module date code (for example, 17/2006, which represents the seventeenth week of the year 2006).
- Country of origin (for example, Assembled in Taiwan).

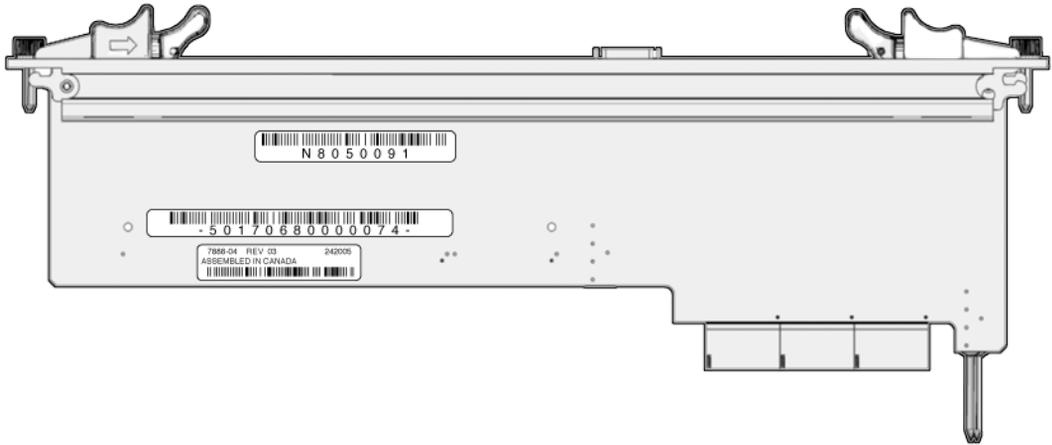


FIGURE 1-3 Rear Transition Module Identification Labels

1.7 On-Board PIM Card Interfaces

The Netra CP30X0 rear transition module supports two PCI Interface Modules (PIMs). PIMs enable rear I/O access from the CompactPCI (cPCI) bus chassis. Custom PIMs can also provide additional I/O interfaces that do not fit on the rear transition module faceplate. (For more information on PIM slot mechanics and electrical and logical information, see *VITA 36 - PMC I/O Module Standard*, available at <http://www.vita.com>, and the *IEEE P1386 Standard*).



Caution – The PIM modules are available in two sizes (single-size and double-size). The Netra CP30X0 rear transition module supports only single-size PIMs, which measure 74 mm (2.92 inches) wide and 69 mm (2.72 inches) deep. A PIM card must be used with its matching PMC card; any other card combination could damage the PIM and PMC card combination.

The Zone 3 connector on the Netra CP30X0 rear transition module provides matching I/O interfaces on the enclosure back panel through the PIM cards installed on the Netra CP30X0 rear transition module. The PMC I/O signals are routed through the transition module Zone 3 connectors. See [FIGURE 1-1](#) for the location of these connectors.

An IHV-supplied PMC card kit might include a PIM card hardware package. After the PIM card is installed on the Netra CP30X0 rear transition module, the PIM card provides rear I/O interfaces to the PMC card installed on the Netra CP3010 board or the Netra CP3020 board.

Note – Mount the PIM cards on the Netra CP30X0 rear transition module before inserting the Netra CP30X0 rear transition module into the shelf.

Refer to the PMC and PIM card documentation for complete hardware and software installation instructions. [FIGURE 1-4](#) shows a typical installation of PIM cards in use with the Netra CP30X0 rear transition module.

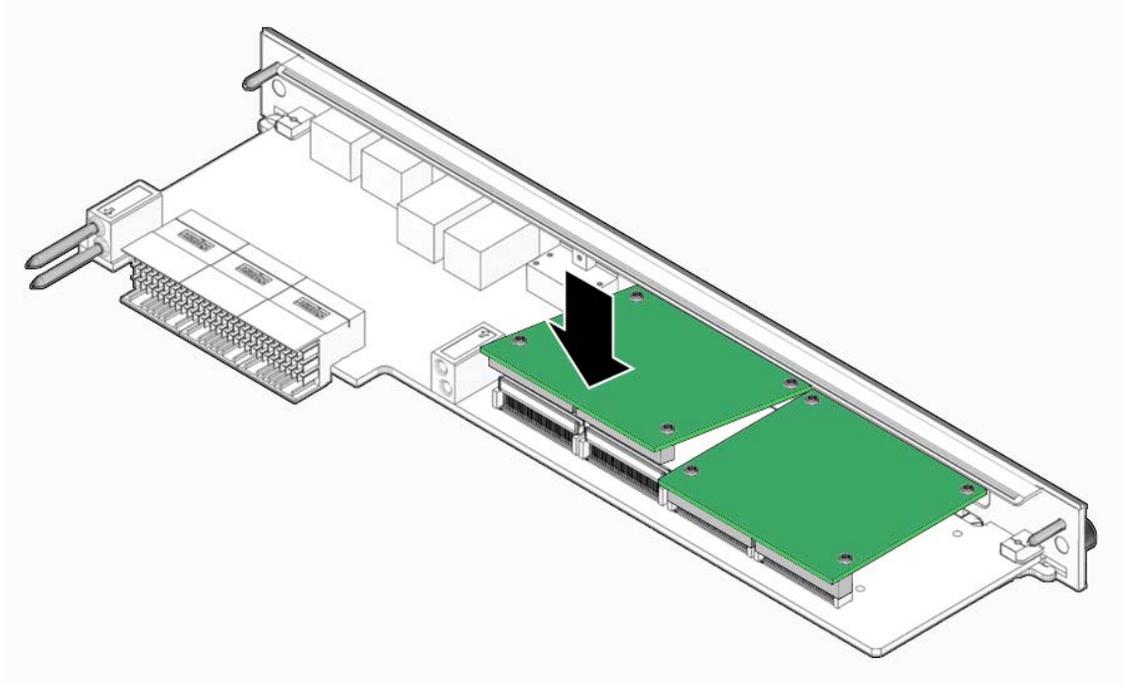


FIGURE 1-4 Typical PIM Board Installation on the Rear Transition Module

Note – The PIM card shown in [FIGURE 1-4](#) is not included with the Netra CP30X0 rear transition module shipment.

Installation of the Netra CP30X0 Rear Transition Module

This chapter contains the procedures for installing and removing the Netra CP30X0 rear transition module. The chapter contains the following sections:

- [Section 2.1, “Installation and Removal of the Rear Transition Module” on page 2-1](#)
- [Section 2.1.1, “Installing the Rear Transition Module” on page 2-2](#)
- [Section 2.1.2, “Removing the Rear Transition Module” on page 2-5](#)

2.1 Installation and Removal of the Rear Transition Module

The Netra CP30X0 rear transition module can be installed into an ATCA shelf (chassis) with a midplane made for front and rear board installations ([FIGURE 2-1](#)). The module must be installed in the slot directly behind the Netra ATCA node board. These back-to-back slots have common pins to enable passing of signals.

Before installing the rear transition module, verify the module’s part number to ensure that the correct rear transition module is being installed into the system. For information on identifying the rear transition module, see “Part Number, Serial Number, and Revision Number” on page 1-6.



Caution – Rear transition modules built for use with other node boards are not compatible with the Netra ATCA node boards. If installed, they might cause damage to themselves, the node board, and the midplane.

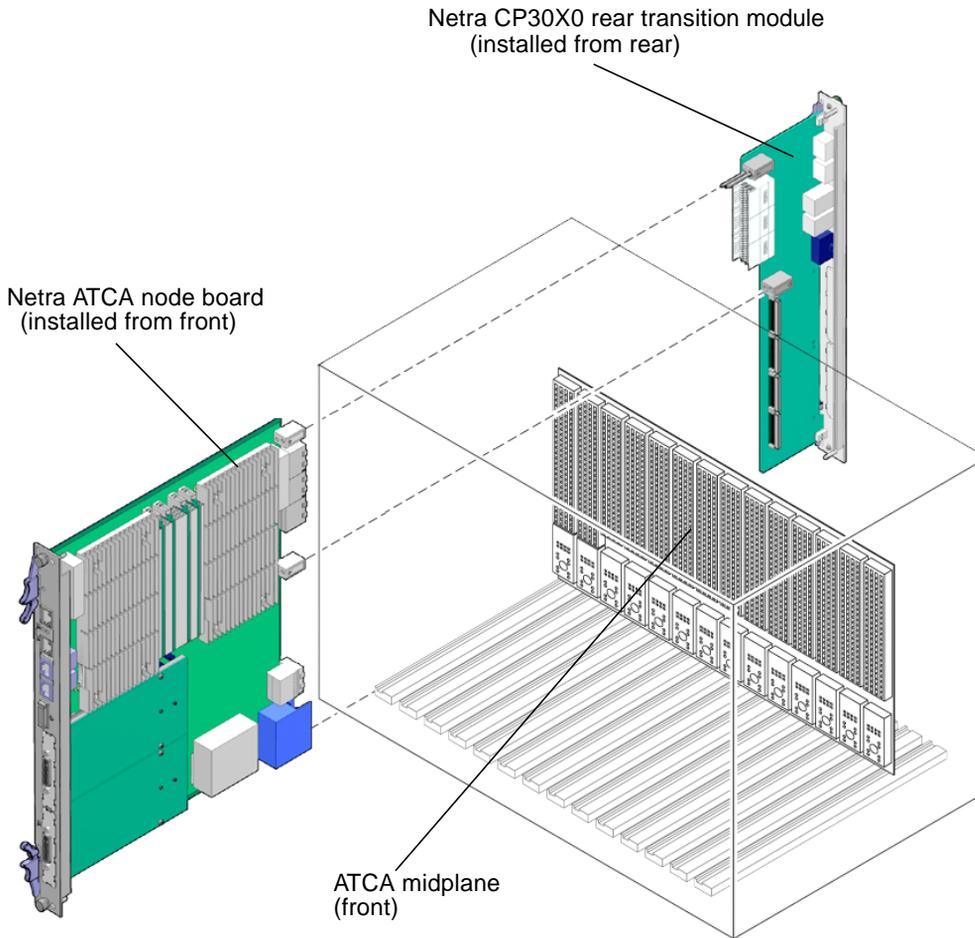


FIGURE 2-1 Installing the Node Board and Rear Transition Module Into the ATCA Shelf

2.1.1 Installing the Rear Transition Module

The Netra CP30X0 rear transition module must be used with a Netra ATCA node board for rear I/O access. The rear transition module enables access to the network, to a boot device, and to a console terminal.

Note – The Netra CP30X0 rear transition module and the corresponding Netra ATCA node board can be installed while the shelf is powered—however, start with a powered shelf only if you must do so. The rear transition module must be installed before the node board.



Caution – Ensure that no node board is installed in front of the rear midplane slot. This precaution is very important if you are installing into a powered midplane.

1. **Verify that you have taken the necessary antistatic precautions.**
2. **Install the PIM cards on the rear transition module before installing the rear transition module into the ATCA shelf.**

Refer to the PMC and PIM card documentation for complete hardware and software installation instructions.

3. **Go to the back of the system and choose an appropriate slot for the rear transition module.**
Rear transition modules must be installed inline behind the accompanying node board. For example, if the accompanying node board is going to be installed in slot 3, its rear transition module must be installed at the back of the system in slot 3.
4. **Remove the slot filler panel from the selected node board slot, if necessary.**
5. **Prepare the module by loosening the locking screws and opening the injector/ejector latches at the top and bottom of the module (FIGURE 2-2).**

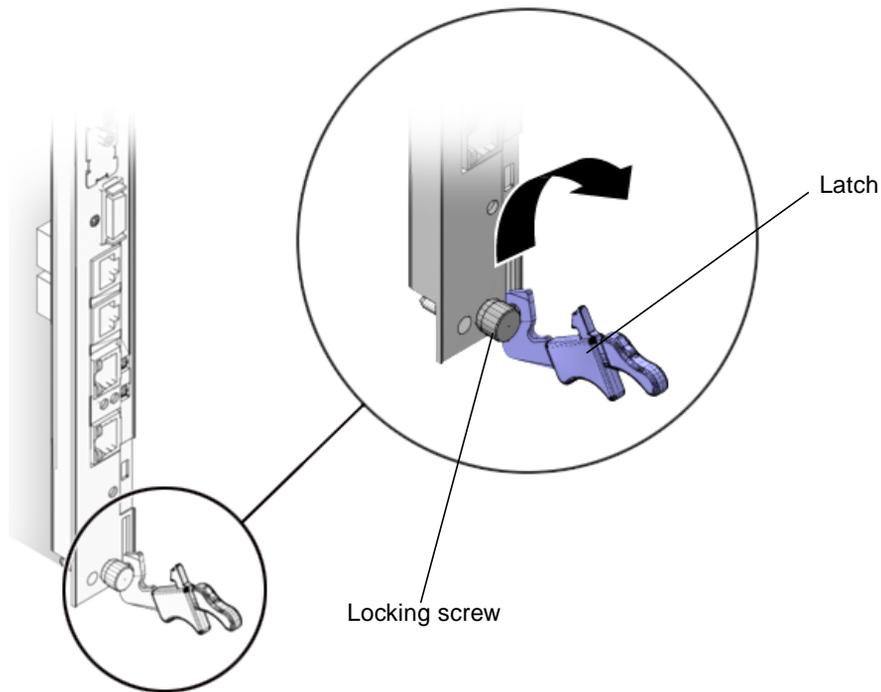


FIGURE 2-2 Injector/Ejector Latch and Locking Screw

6. **Carefully align the edges of the module with the guides in the appropriate slot.**
It might be helpful to look into the enclosure to verify correct alignment of the rails in the guides.
7. **Taking care to keep the module aligned in the guides, slide the module in until the injector/ejector mechanisms engage the retention bars.**
8. **Simultaneously push in the module and rotate the injector/ejector mechanisms inward to their closed positions to seat the midplane connectors.**
9. **Tighten the module retention screws to ensure that the module is secured into the shelf.**
10. **Install the node board into the front of the shelf (FIGURE 2-1) and push the board toward the midplane. Ensure that it is seated properly and that the connectors make good contact with the rear transition module.**

For further details on installation of the board, refer to the *Netra CP3010 Board User's Guide* (819-1183) or the *Netra CP3020 Board User's Guide* (819-4962).

- 11. Install the supported peripheral devices at the rear transition module connector ports, as required.**

Use shielded cables for the ports on the rear transition module; the shield should be grounded at both ends. For further details on installation of the board, refer to the *Netra CP3010 Board User's Guide* (819-1183) or the *Netra CP3020 Board User's Guide* (819-4962).

- 12. Power on the system, if necessary.**

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

2.1.2 Removing the Rear Transition Module

Power to the rear transition module must be off before the module can be safely removed. Therefore, the attached node board, which provides power to the rear transition module, must be powered off before the module can be removed.

- 1. Power off the attached node board either by turning off the system or by pulling the node board out of the midplane.**
- 2. Remove the PIM I/O cables, if necessary.**
- 3. Loosen the locking screws on the rear transition module.**
- 4. Unlatch the top and bottom latches and pull the module out far enough to disconnect any internal cables that might be attached to an installed PIM card.**
- 5. Pull the rear transition module out of the card slot.**
- 6. If the card slot is to remain empty, install a filler panel in the slot.**
- 7. Reinstall the node board, if necessary.**

Hardware Descriptions and Connectors

This chapter provides the specifications and connector pinouts for the Netra CP30X0 rear transition module. The chapter contains the following sections:

- [Section 3.1, “Specifications for the Rear Transition Module” on page 3-1](#)
- [Section 3.2, “Hardware Descriptions” on page 3-2](#)
- [Section 3.3, “Connectors and Pin Assignments” on page 3-3](#)
- [Section 3.4, “Jumper Settings” on page 3-9](#)

3.1 Specifications for the Rear Transition Module

This section provides mechanical, electrical, environmental, and other relevant specifications for the Netra CP30X0 rear transition module.

3.1.1 Physical Dimensions

The Netra CP30X0 rear transition module is a 6U (233.35 mm) height board with 80 mm in depth for standard applications. It complies with IEEE 1101.11 mechanical standards, as required by the PICMG 2.0 Revision 3.0 specification. The Netra CP30X0 rear transition module is keyed to conform to the PICMG 2.10, Keying of ATCA Boards and Backplanes specification.

3.1.2 Power Requirements

Most components of the Netra CP30X0 rear transition module are passive. However, some power from the midplane is provided to PIM carriers A and B and to the I²C EEPROM.

For information on PIM allowable dissipation and limits on PIM power consumption, refer to the *VITA 36, PMC I/O Module Standard*.

3.1.3 Electrical Requirements

The Netra CP30X0 rear transition module is powered through the Netra ATCA node board. The node board provides the following voltages: 3.3V/5V/+12V/-12V (total combined maximum voltage is 2.5 W).

Some power is provided from the shelf midplane to the I²C EEPROM and PIM carriers. For more information, see the *Netra CP3010 User's Guide* (819-1183) or the *Netra CP3020 Board User's Guide* (819-4962).

3.1.4 Environmental Specifications and Compliance

For details on the environmental specifications and compliance, see *Important Safety Information for Sun Hardware Systems* (816-7190-10), the *Netra CP3010 Board User's Guide* (819-1183) and the *Netra CP3020 Board User's Guide* (819-4962).

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

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

3.2 Hardware Descriptions

3.2.1 PIM Interface

The Netra CP30X0 rear transition module features two PIM connectors for 16-bit, 33-MHz PMC interfaces and supports +5V.

3.2.2 Dual Gigabit Ethernet Ports

The Netra CP30X0 rear transition module provides a Dual Gigabit Ethernet (GbE) interface by using Broadcom BCM5704C integrated MAC/PHY. The BCM5704C chip resides on the PCI-A bus at 64 bits, 66 MHz. The Netra CP30X0 rear transition module features two RJ-45 connectors implemented at the rear I/O faceplate. These ports include the following features:

- IEEE 802.3 compliant
- 10/100BASE-TX modes
- Autonegotiating

3.2.3 SAS Interface

The Netra CP30X0 rear transition module includes a LSI 53C896 SCSI controller that uses the PCI interface through an RJ-3 connector.

3.2.4 Asynchronous Serial Interface

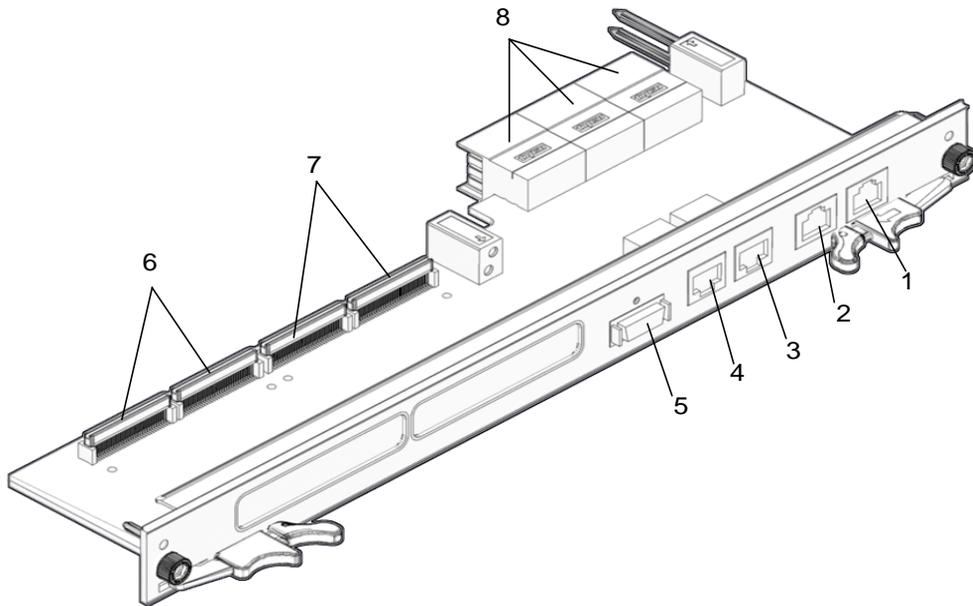
Two serial ports with RJ-45 serial connectors are included on the Netra CP30X0 rear transition module I/O faceplate.

3.2.5 FRU ID EEPROM

A FRU ID EEPROM on the Netra CP30X0 rear transition module provides FRU ID functionality as needed. The EEPROM contains both IPMI and SUN FRU information.

3.3 Connectors and Pin Assignments

FIGURE 3-1 shows the location of the connectors.



- | | |
|-----------------------------|-----------------------|
| 1 - Serial port A (RJ-45) | 5 - SAS port (2x) |
| 2 - Serial port B (RJ-45) | 6 - PIM A connectors |
| 3 - Ethernet port A (RJ-45) | 7 - PIM B connectors |
| 4 - Ethernet port B (RJ-45) | 8 - Zone 3 connectors |

FIGURE 3-1 Netra CP30X0 Rear Transition Module Connectors

3.3.1 I/O Connectors

This section lists the pins and signal names of the I/O faceplate connectors on the rear transition module. The faceplate has the following connectors:

- Two 10/100BASE-T Ethernet ports (RJ-45)
- Two serial ports (SubDB-9)
- One 4x SAS port (supports two SAS channels)

3.3.1.1 Ethernet Ports

The Ethernet connectors are RJ-45 connectors. The controller autonegotiates to either 10BASE-T or 100BASE-T. [FIGURE 3-2](#) shows an Ethernet RJ-45 connector.

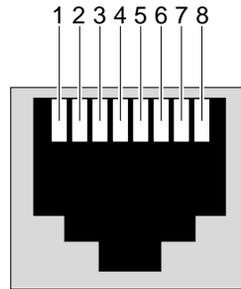


FIGURE 3-2 Ethernet RJ-45 Connector

[TABLE 3-1](#) gives the pin assignments for the Ethernet ports.

TABLE 3-1 Ethernet Port Connector Pin Assignments

Pin	Signal Name	Pin	Signal Name
1	TXD+	5	Not Used
2	TXD-	6	RXD-
3	RXD+	7	Not Used
4	Not Used	8	Not Used

3.3.1.2 Serial Ports

The serial port connectors are RJ-45 connectors. [FIGURE 3-3](#) shows a serial port connector.

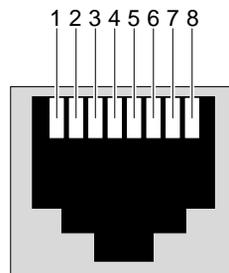


FIGURE 3-3 Serial Port Connector

[TABLE 3-2](#) gives the serial port connector pin assignments.

TABLE 3-2 Serial Port Connector Pin Assignments

Pin	Signal Name	Pin	Signal Name
1	RTS	5	DCD
2	DTR	6	RXD
3	TXD	7	DSR
4	GND	8	CTS

3.3.1.3 SAS Port

The Netra CP30X0 rear transition module provides a Serial Attached SCSI (SAS) port using a standard 4x SAS port connector. Only two SAS channels are routed to the 4x port connector.

3.3.1.4 PMC Connectors

There are four 64-pin connectors that make up the PMC card connection. These connectors and pinouts are defined by the following industry-standard specifications:

- Draft Standard Physical and Environmental Layers for PCI Mezzanine Cards: PMC IEEE (MMSC) P1386.1/Draft 2.3, October 9, 2000
- Draft Standard for a Common Mezzanine Card Family: CMC IEEE (MMSC) P1386/Draft 2.3, October 9, 2000

The PMC slots are available at the front panel. The PMC I/O signals are sent to the rear transition module through the Zone 3 connectors. The supporting I/O cables are connected to a PIM on the rear transition module.

3.3.2 Zone 3 Connectors

All the I/O connections for rear access are provided by the Netra node board through the Zone 3 connectors. The Zone 3 connectors are J6402, J6401, and J6501. The Zone 3 connectors are shown in [FIGURE 3-4](#).

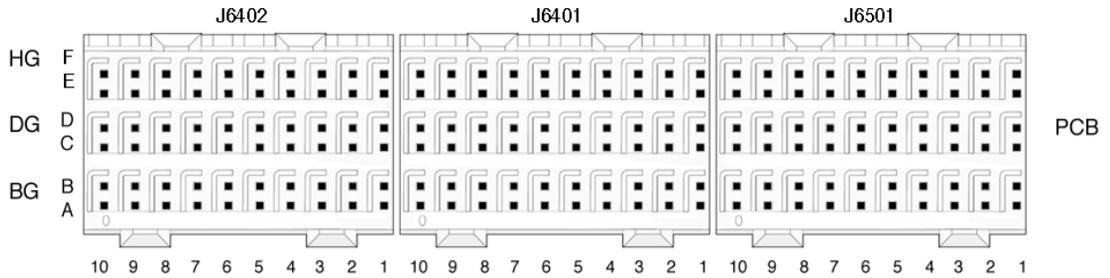


FIGURE 3-4 Zone 3 Connectors

[TABLE 3-3](#) lists the Zone 3, J6402 connector pinouts.

TABLE 3-3 Zone 3 J6402 Connector Pin Assignments

Row	A	B	BG	C	D	DG	E	F	FG
1	PMC1_IO1	PMC1_IO2		PMC1_IO3	PMC1_IO4		PMC1_IO5	PMC1_IO6	GND
2	PMC1_IO7	PMC1_IO8		PMC1_IO9	PMC1_IO10		PMC1_IO11	PMC1_IO12	
3	PMC1_IO13	PMC1_IO14		PMC1_IO15	PMC1_IO16	GND	PMC1_IO17	PMC1_IO18	
4	PMC1_IO19	PMC1_IO20		PMC1_IO21	PMC1_IO22		PMC1_IO23	PMC1_IO24	
5	PMC1_IO25	PMC1_IO26		PMC1_IO27	PMC1_IO28		PMC1_IO29	PMC1_IO30	
6	PMC1_IO31	PMC1_IO32		PMC1_IO33	PMC1_IO34		PMC1_IO35	PMC1_IO36	GND
7	PMC1_IO37	PMC1_IO38		PMC1_IO39	PMC1_IO40		PMC1_IO41	PMC1_IO42	
8	PMC1_IO43	PMC1_IO44		PMC1_IO45	PMC1_IO46	GND	PMC1_IO47	PMC1_IO48	
9	PMC1_IO49	PMC1_IO50		PMC1_IO51	PMC1_IO52		PMC1_IO53	PMC1_IO54	
10	PMC1_IO55	PMC1_IO56		PMC1_IO57	PMC1_IO58		PMC1_IO59	PMC1_IO60	

TABLE 3-4 lists the Zone 3, J6401 connector pinouts.

TABLE 3-4 Zone 3 J6401 Connector Pin Assignments

Row	A	B	BG	C	D	DG	E	F	FG
1	PMC0_IO1	PMC0_IO2		PMC0_IO3	PMC0_IO4		PMC0_IO5	PMC0_IO6	GND
2	PMC0_IO7	PMC0_IO8		PMC0_IO9	PMC0_IO10		PMC0_IO11	PMC0_IO12	
3	PMC0_IO24	PMC0_IO23		PMC0_IO22	PMC0_IO21		PMC0_IO20	PMC0_IO19	
4	PMC0_IO18	PMC0_IO17		PMC0_IO16	PMC0_IO15	GND	PMC0_IO14	PMC0_IO13	
5	PMC0_IO36	PMC0_IO35	GND	PMC0_IO34	PMC0_IO33		PMC0_IO32	PMC0_IO31	
6	PMC0_IO30	PMC0_IO29		PMC0_IO28	PMC0_IO27		PMC0_IO26	PMC0_IO25	
7	PMC0_IO48	PMC0_IO47		PMC0_IO46	PMC0_IO45	GND	PMC0_IO44	PMC0_IO43	
8	PMC0_IO42	PMC0_IO41		PMC0_IO40	PMC0_IO39		PMC0_IO38	PMC0_IO37	
9	PMC0_IO49	PMC0_IO50		PMC0_IO51	PMC0_IO52		PMC0_IO53	PMC0_IO54	
10	PMC0_IO55	PMC0_IO56		PMC0_IO57	PMC0_IO58		PMC0_IO59	PMC0_IO60	

TABLE 3-5 lists the Zone 3, J6501 connector pinouts.

TABLE 3-5 Zone 3 J6501 Connector Pin Assignments

Row A	B	BG	C	D	DG	E	F	FG
1	PMC0_IO61	PMC1_IO2		PMC0_IO63	PMC0_IO64			-12V
2	PMC1_IO61	PMC1_IO8	5V	PMC1_IO63	PMC1_IO64	5V	+12V	+12V 5V
3	RTM_SER1_CTS	PMC1_IO14	3.3V	RTM_SER1_DCD	RTM_SER1_DSR	3.3V	RTM_SER1_RXD	RTM_SER1_TXD 3.3V
4	RTM_SER1_RTS	PMC1_IO20	3.3V	RTM_SER2_CTS	RTM_SER2_DTR	3.3V	RTM_SER2_DCD	RTM_SER2_DSR 3.3V
5	RTM_SER2_RXD	PMC1_IO26	5V	RTM_SER2_RTS		5V		5V
6	RTM_HDD2_RX_P	PMC1_IO32	GND			GND	RTM_HDD2_TX_N	RTM_HDD2_TX_P GND
7	RTM_PRSNT_N	PMC1_IO38	GND	SYS_I2C_SDA	SYS_I2C_SCL	GND	3V_STBY	3V_STBY GND
8	RTM_HDD3_RX_P	PMC1_IO44	GND			GND	RTM_HDD3_TX_N	RTM_HDD3_TX_P GND
9	RTM_TXD_1P	PMC1_IO50	GND	2.5V	2.5V	GND	RTM_RXD_1P	RTM_RXD_1N GND
10	RTM_TXD_0P	PMC1_IO56	GND	2.5V	2.5V	GND	RTM_RXD_0P	RTM_RXD_0N GND

3.4 Jumper Settings

There are two jumper positions on the rear transition module that are configured in the factory and should not be changed. [TABLE 3-6](#) lists the factory settings and purpose.

TABLE 3-6 Jumper Settings

Jumper	Factory Setting	Purpose
J0802	Shorted – jumper installed	Forces the external Ethernet connectivity to the Ethernet ports on the rear transition module.
J0803	Open – no jumper	Protects the SUN FRU ID data in the upper 2 Kbytes of the EEPROM from being overwritten.

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