

PART **III** Troubleshooting and Maintenance

Troubleshooting

This chapter lists some problems that you might encounter when setting up or using the Netra T1 server and tells you how to solve them. It also explains how to interpret the LEDs on the server's front and back panels.

The chapter contains the following sections:

- Section 10.1, "Solutions to Problems You Might Encounter" on page 10-2
- Section 10.2, "Interpreting the Front and Back Panel LEDs" on page 10-4

10.1 Solutions to Problems You Might Encounter

Problem: Cannot Set Up a Console Connection to the Server

The Netra t1 server's serial port pinouts are listed in Chapter 6. Check that they are correct for the device (that is, the terminal or terminal server) that you are connecting to the Netra t1.

Problem: Cannot Display the lom> Prompt Using the “#.” Escape Sequence

Check whether the first character of the “#.” escape sequence has been changed (this is a user-configurable value). To check the current value, type the following from the Solaris prompt:

```
# lom -c
```

The information that this command displays includes the “serial escape character”. If this is not “#”, then type the character that is currently specified and follow it immediately with a dot.

Problem: Cannot Turn Serial Event Reporting On and Off

Problem: Cannot Receive Clearly Formatted LOMlite2 Output

Problem: Cannot Reprogram the LOMlite2 Device

If you have reinstalled the Solaris 8 operating environment onto your server and have also reinstalled the LOMlite2 software from the support CD supplied with Solaris 8 (entitled *Software Supplement for the Solaris 8 Operating Environment*), you need to apply patch 110208-xx. This patch is available on SunSolveSM.

Problem: Cannot Display the lom> Prompt or the Solaris Prompt
Problem: Receiving Corrupted Text at the Console on Serial A/LOM
Problem: Cannot Access the Server From the Console

First try resetting the LOMlite2 device. To do this, connect remotely (using the `rlogin host name` or `telnet host name` command), and type:

```
# lom -G resetlom
```

If resetting the LOMlite2 device does not fix the problem, reprogram the LOMlite2 device by using the firmware supplied in patch 110208-xx. Apply the patch first, then download the new firmware by typing:

```
# lom -G filename
```

where *filename* is the name of the file containing the new firmware.

Problem: OpenBoot PROM Initialization Aborts and the Server Will Not Boot

If the OpenBoot PROM initialization sequence aborts and the message 'NO IDPROM' is displayed when the operating system is attempting to read the serial number and MAC address, then you are attempting to boot without a valid System Configuration Card inserted. The System Configuration Card contains the serial number, MAC address, and NVRAM settings for the Netra T1 server.

Problem: Card Not Recognised During Installation or Bootup

The Netra T1 AC200 and DC200 servers are fitted with a System Configuration Card. If the card moves during transit then the server will not be able to read the card, and as a result will not boot.

If the System Configuration Card has moved during transit, follow the steps below to make sure it is seated in the server correctly.

Note – The presence of the tie-wrap does not necessarily mean that the card is correctly located in the reader.

1. Remove the front bezel by pushing on the clips at both ends until they release.

2. Press the System Configuration Card in as far as it will go.
3. Replace the bezel and continue installation.

For more information about the System Configuration Card, see Section 11.1, “Replacing a Server” on page 11-2.

10.2 Interpreting the Front and Back Panel LEDs

The Netra T1 server contains two front panel LEDs:

- **A Power LED** (see FIGURE 10-1)
This LED is lit when the server is powered on. It is unlit when the server is in standby mode.
- **A Fault LED** (see FIGURE 10-1)
When the Fault LED is lit (but not flashing), this indicates a problem that is not fatal to the server but that you should attend to as soon as possible. Circumstances that cause the Fault LED to light up include the following:
 - The temperature inside the server’s enclosure is unusually high.
 - The voltage on one of the server’s output supply rails is unusually high.
 - One of the server’s internal circuit breakers has tripped, indicating a problem with a device connected to the SCSI or USB ports.
 - The System Configuration Card, containing the server’s serial number, MAC address and NVRAM settings, has been removed.
 - One of the DC power inlets has failed.
 - The LOMlite2 watchdog has timed out, indicating that the server has locked up. You can configure the server to restart automatically after a lockup (see Section 9.2, “Configuring Automatic Server Restart (ASR)” on page 9-8).

When the Fault LED flashes on and off, a problem has occurred that is fatal to the server. Circumstances that cause the Fault LED to flash include the following:

- The speed of one of the fans inside the server is too low.
- The temperature inside the server’s enclosure is too high. (By default, this causes the server to shut down. For information about configuring the server not to shut down in this condition, see Appendix A.)
- The voltage on one of the server’s output supply rails is too high. (By default, this causes the server to shut down. For information about configuring the server not to shut down in this condition, see Appendix A.)

- The temperature inside the CPU is too high. (This causes the server to shut down.)

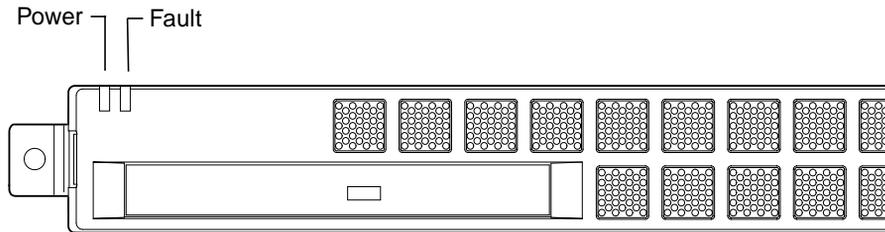


FIGURE 10-1 Front Panel Power and Fault LEDs

The Netra T1 contains four rear panel LEDs (see FIGURE 10-2):

- **A Power LED**
This replicates the Power LED on the front panel.
- **A Fault LED**
This replicates the Fault LED on the front panel.
- **A Link LED for each Ethernet port**
The light comes on to indicate that a connection has been established to the hub.

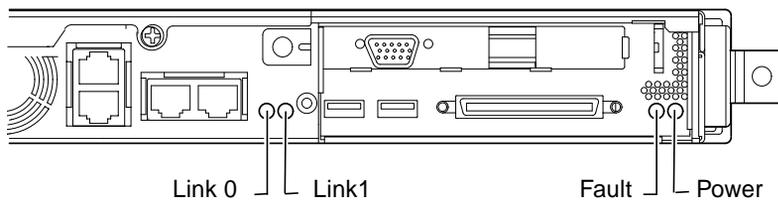


FIGURE 10-2 Back Panel Ethernet Link, Fault and Power LEDs

Replacing a Server or Replacing Individual Components

If you ever need to replace an entire Netra T1 server, this chapter describes how to transfer the old server's configuration information (including its MAC address, serial number and NVRAM settings) to a new server by using the old server's configuration card.

The chapter also lists the field replaceable units (FRUs) that you might need to order for the Netra T1 server during its life-time.

Finally, this chapter describes how to install the main FRUs, for example, the system board, power supply, and fans.

The chapter contains the following sections:

- Section 11.1, "Replacing a Server" on page 11-2
- Section 11.2, "Field Replaceable Units" on page 11-4
- Section 11.3, "Replacing the Memory Card Reader for the System Configuration Card" on page 11-5
- Section 11.4, "Replacing the CD-ROM Drive, Cable, and Paddleboard" on page 11-7
- Section 11.5, "Replacing the NVRAM Chip" on page 11-9
- Section 11.6, "Replacing the System Board" on page 11-12
- Section 11.7, "Replacing the Power Supply Unit" on page 11-15
- Section 11.8, "Replacing the Rear Fan Subassembly (Fans 1 and 2)" on page 11-17
- Section 11.9, "Replacing Fan 3 (CPU Fan)" on page 11-19

11.1 Replacing a Server

The Netra T1 AC200 and DC200 servers contain a memory card (accessible by removing the unit's front bezel) called the System Configuration Card. This card contains the values for the system's IDPROM (Host ID, MAC address, date and Cyclic Redundancy Check value) and NVRAM variables. It is designed to be removable so that, if you ever need to replace an entire server, you can transfer the host ID and configuration data onto the new server. This makes the replacement of the server transparent to your network.

To transfer the configuration to a new server:

1. **Power down both the old and the new Netra T1 servers.**
2. **Remove the front bezel from both the old and the new servers.**
3. **Remove the system configuration card from the old server and insert it into the new one.**
4. **Replace the front bezel on the new server.**

You can secure the new system configuration card by fixing a tie-wrap through the hole in the front mounting of the memory card reader (see FIGURE 11-1).

Note – If you swap the System Configuration Card into a new Netra T1 server, transfer the hard disk(s) from the old server into the corresponding bay(s) on the new server. Otherwise, when you boot the new server, the operating system will prompt you for some of the information that you first configured the old system with, including the language, locale, and root password.



Caution – Never remove the System Configuration Card when the server is booting or running the Solaris operating environment. Power the server off or down to standby mode before removing or inserting the System Configuration Card.



Caution – Do not handle the System Configuration Card unless you need to transfer it to another system. If you need to handle it for this reason, avoid contact with the gold terminals on the underside of the card.

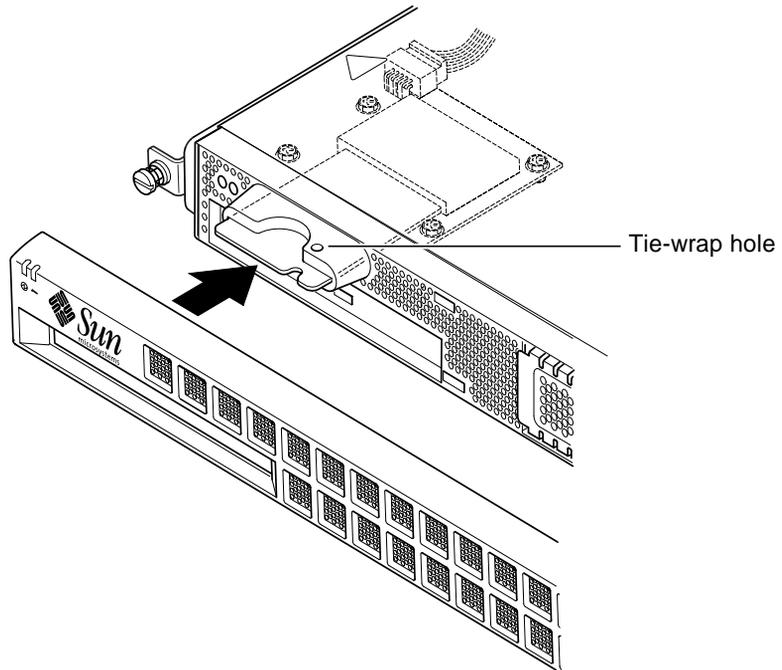


FIGURE 11-1 Replacing the System Configuration Card

11.2 Field Replaceable Units

Note – The procedures in this chapter for replacing faulty components are for the attention of qualified service engineers only. If you need to replace a component, contact your local Sun sales representative who will put you in touch with the Sun Enterprise Service branch for your area. You can then arrange to return the system to Sun for repair under the terms of your warranty. Or alternatively you can order the components and have them installed by your own qualified service engineers.

TABLE 11-1 lists the field replaceable units (FRUs) available for the Netra T1 server. FRUs are hardware components that are normally installed by Sun engineers and not by users.

TABLE 11-1 FRUs Available for the Netra T1 AC200 and DC200 Servers

Component	Part Number
Internal CD-ROM (including cabling and paddle board)	F370-4278
18 Gbyte hard disk drive	F540-4177
256 Mbyte DIMM	F370-4237
512 Mbyte DIMM	F370-4281
System board (including CPU and fan)	F375-0132
Memory card reader (for the system configuration card)	F370-4290
AC power supply	F300-1488
DC power supply	F300-1489
Rear fan subassembly (containing Fans 1 and 2)	F370-4284
System configuration card	F370-4285
Fan 3 (CPU fan)	F370-4352
NVRAM chip (including carrier)	F100-6889

Note – Except for the 18 Gbyte hard disk, you can only use the FRUs in this list in Netra T1 AC200 and DC200 servers. They are not for use in the earlier Netra t1 Model 100 or Model 105 servers.

For instructions about how to install DIMMs, see Chapter 4.

11.3 Replacing the Memory Card Reader for the System Configuration Card



Caution – The procedure below is for the attention of qualified service engineers only. Before touching or replacing any components inside the Netra T1 server, disconnect all cables and follow the instructions in Section 4.2, “Opening the Netra T1 Server” on page 4-4 which tell you how to open the system. Always place the server on a grounded ESD pad and wear a properly grounded antistatic wrist strap.

1. **Open the Netra T1 server by following the instructions in Chapter 4 (“Opening the Netra T1 Server” on page 4-4).**

Make sure all external cables are disconnected and pay particular attention to the information about how to prevent electrostatic discharge from your body from damaging the components of the server.

2. **With the server open and seated on top of an ESD pad, and with a properly grounded antistatic wrist strap on your wrist, remove the power cable from the connector on the memory card reader board (see FIGURE 11-2).**
3. **Unscrew the screws fixing the memory card reader board into the top of the CD-ROM drive bay (see FIGURE 11-2).**
Do not discard the screws.
4. **Remove the old system configuration card reader.**
5. **Position the new memory card reader board by lining up its fixing holes with the holes in the top of the CD-ROM drive enclosure.**
6. **Insert and tighten the fixing screws.**
7. **Attach the power cable to the memory card reader board.**

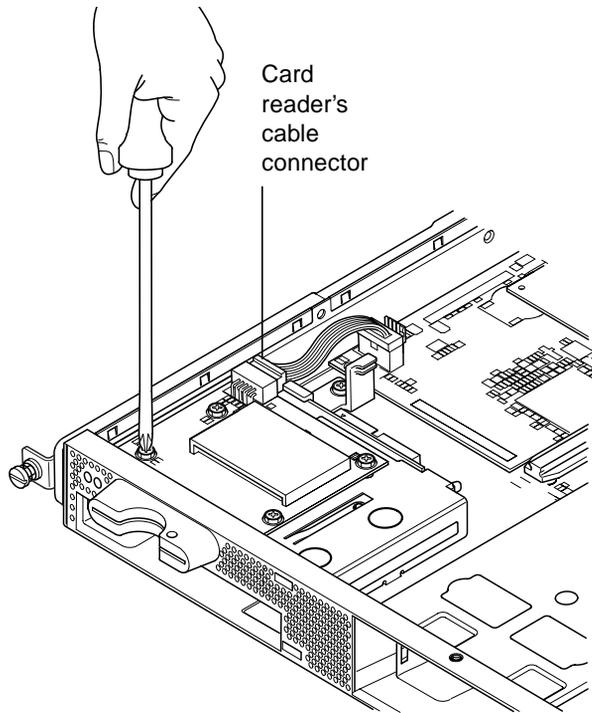


FIGURE 11-2 Removing the System Configuration Card Reader

11.4 Replacing the CD-ROM Drive, Cable, and Paddleboard



Caution – The procedure below is for the attention of qualified service engineers only. Before touching or replacing any components inside the Netra T1 server, disconnect all cables and follow the instructions in Section 4.2, “Opening the Netra T1 Server” on page 4-4 which tell you how to open the server. Always place the server on a grounded ESD pad and wear a properly grounded antistatic wrist strap.

- 1. Open the Netra T1 server by following the instructions in Chapter 4 (“Opening the Netra T1 Server” on page 4-4).**

Make sure all external cables are disconnected and pay particular attention to the information about how to prevent electro-static discharge from your body from damaging the components of the server.
- 2. With the system open and seated on top of an ESD pad, and with a properly grounded antistatic wrist strap on your wrist, do the following:**
 - a. Remove the old CD-ROM drive from the CD-ROM enclosure (see Section 4.4.2, “Removing a CD-ROM Drive” on page 4-9).**
 - b. If you have a full-length PCI card installed, remove it (see Section 4.6.2, “Removing a PCI Card” on page 4-14).**
- 3. Disconnect the memory card reader board’s power cable from the system board (see FIGURE 11-3).**
- 4. From the chassis base, unscrew the plastic bracket that secures the paddleboard (and that also provides support for a full-length PCI card).**
- 5. Lift the paddleboard (with its ribbon cable) out of its guides at the back of the CD-ROM enclosure and discard it.**
- 6. Connect the new IDE ribbon cable to the system board with the cable extending away from the system board and towards the CD-ROM drive (see FIGURE 11-3).**
- 7. Now connect the ribbon cable to the connector on the paddleboard.**
- 8. Insert the paddleboard into the guides at the back of the CD-ROM drive enclosure.**

Do not replace the plastic bracket yet.
- 9. Reconnect the memory card reader board’s power cable to its connector on the system board.**

10. Insert the new CD-ROM drive (see Section 4.4.1, "Installing a CD-ROM Drive" on page 4-7).
11. Now replace the plastic bracket that secures the paddleboard, and screw it into the chassis base (see FIGURE 11-3).
12. Replace the full-length PCI card if you removed it earlier (see Section 4.6.1, "Installing a PCI Card" on page 4-11).
13. Replace the system cover and tighten the captive screw (see FIGURE 4-9 in Section 4.7, "Replacing the Server's Top Cover" on page 4-15).

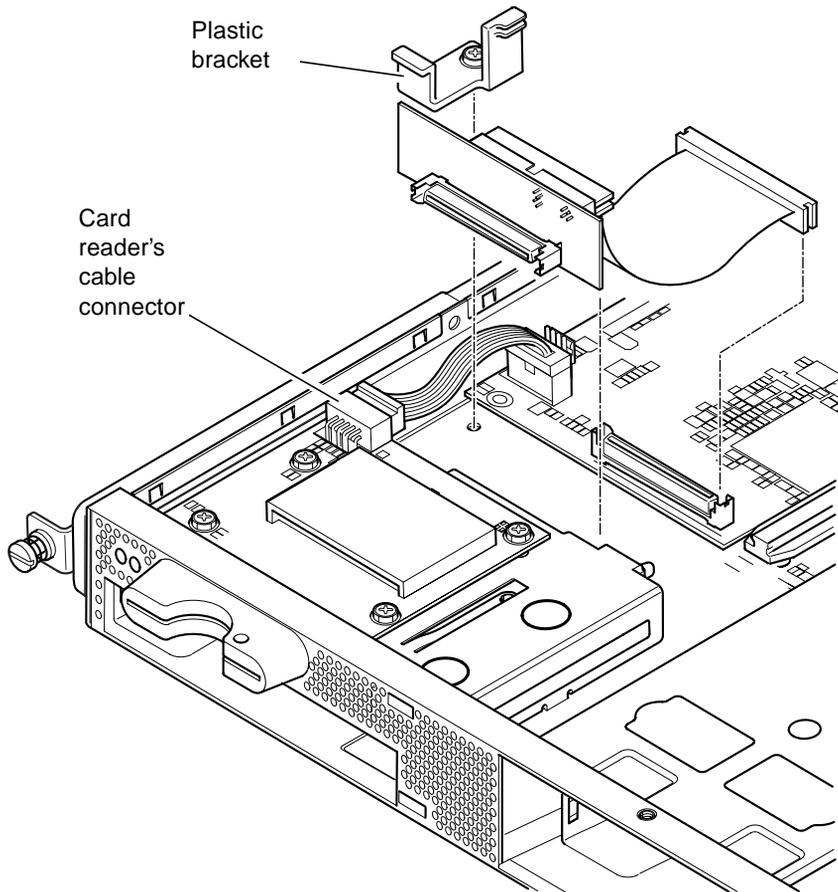


FIGURE 11-3 Replacing the CD-ROM Paddleboard

11.5 Replacing the NVRAM Chip



Caution – The procedure below is for the attention of qualified service engineers only. Before touching or replacing any components inside the Netra T1 server, disconnect all cables and follow the instructions in Section 4.2, “Opening the Netra T1 Server” on page 4-4 which tell you how to open the system. Always place the system on a grounded ESD pad and wear a properly grounded antistatic wrist strap.

The NVRAM chip on the Netra T1 server’s system board contains a lithium battery that in time may need replacing. If you see the following message on your console when you boot the server:

```
Warning -- Real-Time-Clock (and NVRAM) battery is low
```

order a new NVRAM chip (part number: F100-6889) from your local Sun sales representative. Take note of the caution below.



Caution – There is a danger of explosion if the NVRAM chip is incorrectly replaced. Replace it only with a component of the same type as the used one (part number F100-6889). To replace the chip, follow any instructions supplied with the new component. Dispose of the used component according to the manufacturer’s instructions.

The NVRAM chip is located in a carrier between the rear fan subassembly and the DIMM sockets on the system board (see FIGURE 11-4). To replace it:

1. **Make a note of the current settings of the environment parameters `diag-switch?` and `diag-level`. You will need these values to carry out Step 5.**

To check the setting for `diag-switch?`, type:

```
ok printenv diag-switch?
```

To check the setting for `diag-level`, type:

```
ok printenv diag-level
```

2. Open the Netra T1 server by following the instructions in Section 4.2, "Opening the Netra T1 Server" on page 4-4).

Make sure all external cables are disconnected and pay particular attention to the information about how to prevent electrostatic discharge from your body from damaging the components of the server.

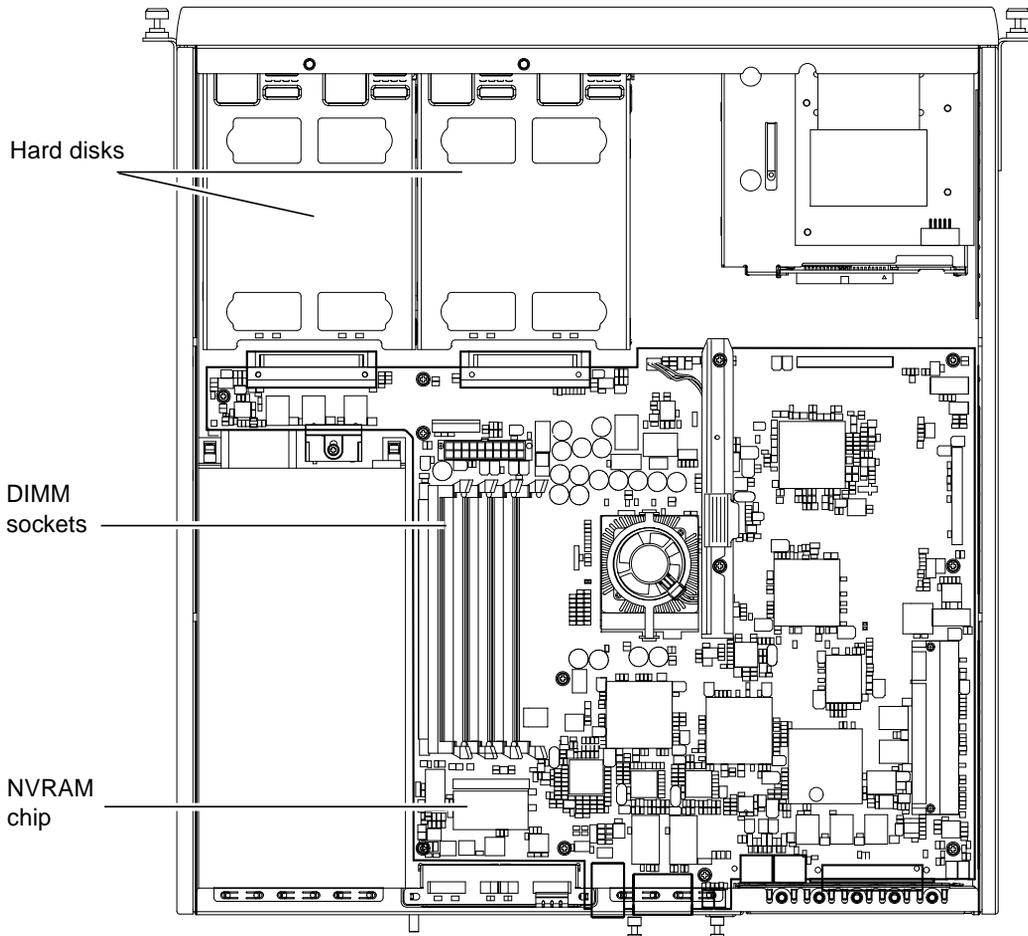


FIGURE 11-4 The Location of the NVRAM Chip

3. Carefully take the NVRAM chip carrier lengthwise between your thumb and forefinger and pull it out of its socket (see FIGURE 11-5).
4. Holding the new NVRAM chip carrier in a similar fashion between your thumb and forefinger, position it over the socket and press firmly until the connectors engage.

5. When you have reconnected the cables and powered the server on, type the following at the `ok` prompt, using the values you noted in Step 1:

```
ok reset-all
ok setenv diag-switch? noted_value
ok setenv diag-level noted_value
ok reset-all
```

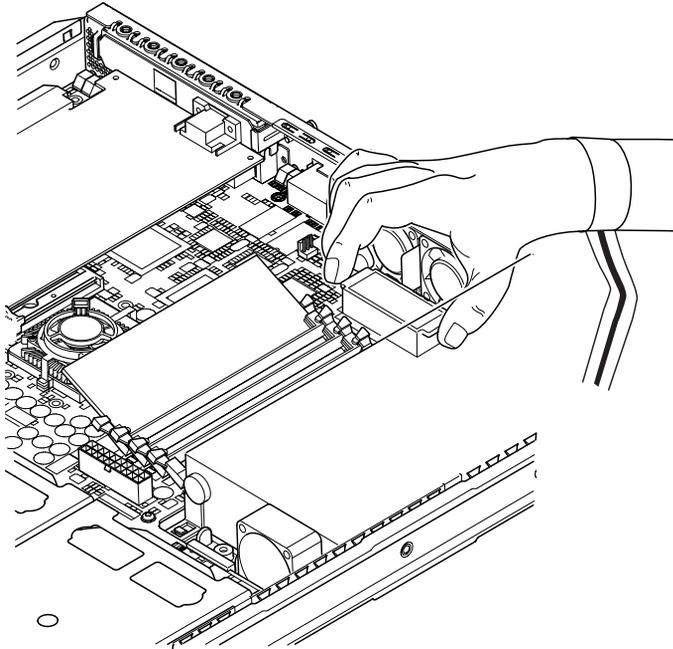


FIGURE 11-5 Replacing the NVRAM Chip

6. Replace the system cover and tighten the captive screw (see FIGURE 4-9 in Section 4.7, “Replacing the Server’s Top Cover” on page 4-15).

11.6 Replacing the System Board



Caution – The procedure below is for the attention of qualified service engineers only. Before touching or replacing any components inside the Netra T1 server, disconnect all cables and follow the instructions in Section 4.2, “Opening the Netra T1 Server” on page 4-4 which tell you how to open the server. Always place the server on a grounded ESD pad and wear a properly grounded antistatic wrist strap.

To perform the steps in this section, you need a 5mm nut-spinner to remove and replace the SCSI pillars on the rear of the chassis.

11.6.1 Removing the Old System Board

1. **Open the Netra T1 server by following the instructions in Section 4.2, “Opening the Netra T1 Server” on page 4-4.**

Make sure all external cables are disconnected and pay particular attention to the information about how to prevent electro-static discharge from your body from damaging the components of the server.
2. **With the server open and seated on top of an ESD pad, and with a properly grounded antistatic wrist strap on your wrist, do the following:**
 - a. **Disconnect all power supply cables from the system board.**
 - b. **Disconnect the CD-ROM ribbon cable from the system board.**
 - c. **Disconnect the memory card reader cable from the system board.**
3. **Remove the server’s front bezel.**
4. **Remove the hard disk drives in the server (see Section 4.1, “Installing and Removing Hot-Pluggable Hard Disk Drives” on page 4-2).**
5. **Remove the PCI card if you have one installed (see Section 4.6.2, “Removing a PCI Card” on page 4-14).**
6. **Remove the DIMMs from their slots (see Section 4.5, “Installing and Removing Memory” on page 4-9).**
7. **Remove the rear fan subassembly (see Section 11.8, “Replacing the Rear Fan Subassembly (Fans 1 and 2)” on page 11-17).**

8. Unscrew the system board protection/support block (between the PSU and hard disk drive bay 1) and slide it back as far as the PSU (see FIGURE 11-6).
9. Unscrew and remove the PCI card slide retainer (see FIGURE 11-6).
10. Unscrew all system board fixing screws (see FIGURE 11-6).
11. Unscrew the SCSI pillars on the back panel (see FIGURE 11-6).
12. Slide the system board towards the front of the chassis so that the SCSI, Ethernet and Serial connectors come free from the chassis.
13. Carefully lift out the system board.

11.6.2 Installing the New System Board

1. Insert the new system board at an angle, and locate it so that the SCSI, Ethernet, and serial connectors are firmly positioned in their slots at the rear of the chassis.
2. Now position the system board on the alignment stand-off between the PSU fan and hard disk drive bay 1 (see FIGURE 11-6).
3. Insert the SCSI pillars (see FIGURE 11-6) and replace their screws loosely.
4. Insert all system board fixing screws loosely (see FIGURE 11-6). Do not put any screws in the holes for the PCI card slide retainer.
5. Tighten up the SCSI pillars, then tighten all the other screws.
6. Replace the PCI card slide retainer.
7. Replace the DIMMs that you removed from the old system board (see Section 4.5, “Installing and Removing Memory” on page 4-9).
8. Replace the rear fan assembly (see Section 11.8, “Replacing the Rear Fan Subassembly (Fans 1 and 2)” on page 11-17).
9. Replace the PCI card if you removed it (see Section 4.6.1, “Installing a PCI Card” on page 4-11).
10. Slide the system board protection/support block forward until it engages with the the system board (see FIGURE 11-6).
Tighten the screw to fix the block to the chassis.
11. Reconnect all system board cables.
12. Replace the server’s cover and tighten the captive screw (see FIGURE 4-9 in Section 4.7, “Replacing the Server’s Top Cover” on page 4-15).
13. Replace the front bezel.

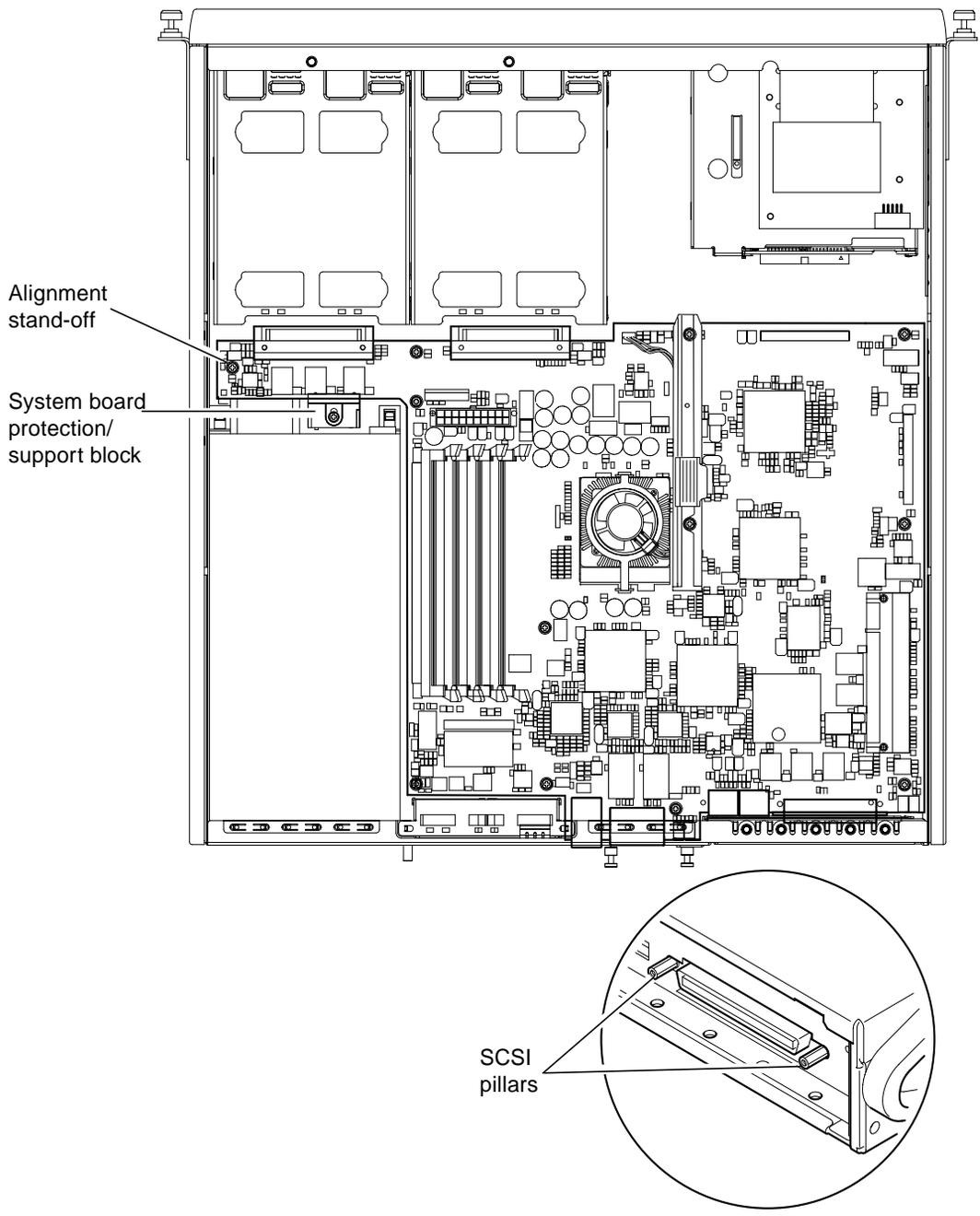


FIGURE 11-6 The System Board

11.7 Replacing the Power Supply Unit



Caution – The procedure below is for the attention of qualified service engineers only. Before touching or replacing any components inside the Netra T1 server, disconnect all cables and follow the instructions in Section 4.2, “Opening the Netra T1 Server” on page 4-4 which tell you how to open the server. Always place the server on a grounded ESD pad and wear a properly grounded antistatic wrist strap.

1. **Open the Netra T1 server by following the instructions in Section 4.2, “Opening the Netra T1 Server” on page 4-4.**

Make sure all external cables are disconnected and pay particular attention to the information about how to prevent electrostatic discharge from your body from damaging the components of the server.

2. **With the server open and seated on top of a grounded ESD pad, and with a properly grounded antistatic wrist strap on your wrist, disconnect the power supply cables from the system board.**
3. **Undo the two rear fixing screws (see FIGURE 11-7).**
4. **Move the power supply unit (PSU) towards the front of the system to release it from the location tabs in the base.**
Lift it away from the chassis.
5. **Lift the new PSU over the location tabs and slide it backwards into place (see FIGURE 11-7).**
6. **Secure the two rear fixing screws.**
7. **Connect the power supply cables to the connectors on the system board.**
8. **Replace the server’s cover and tighten the captive screw (see FIGURE 4-9 in Section 4.7, “Replacing the Server’s Top Cover” on page 4-15).**

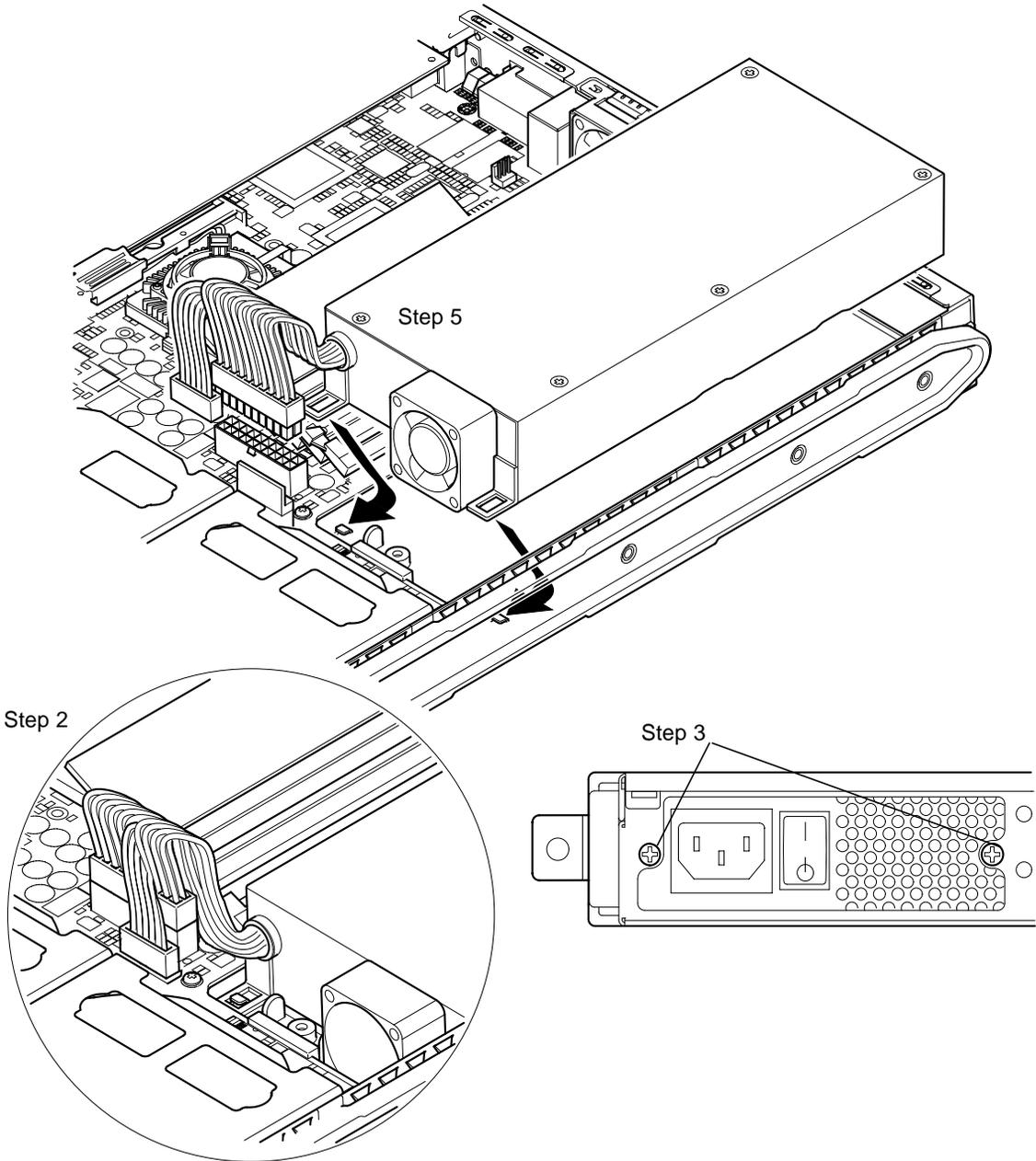


FIGURE 11-7 Replacing the Power Supply Unit

11.8 Replacing the Rear Fan Subassembly (Fans 1 and 2)



Caution – The procedure below is for the attention of qualified service engineers only. Before touching or replacing any components inside the Netra T1 server, disconnect all cables and follow the instructions in Section 4.2, “Opening the Netra T1 Server” on page 4-4 which tell you how to open the server. Always place the server on a grounded ESD pad and wear a properly grounded antistatic wrist strap.

1. **Open the Netra T1 server by following the instructions in Section 4.2, “Opening the Netra T1 Server” on page 4-4.**

Make sure you disconnect all external cables and pay particular attention to the information about how to prevent electro-static discharge from your body from damaging the components of the server.

2. **With the server open and seated on top of an ESD pad, and with a properly grounded antistatic wrist strap on your wrist, disconnect the old subassembly’s power cables from the system board (see FIGURE 11-8).**
3. **Lift out the old subassembly and discard it.**
4. **Insert the new fan subassembly into its bay in the chassis.**
5. **Connect the fan cables to the system board (see FIGURE 11-8).**
6. **Replace the server’s cover and tighten the captive screw (see FIGURE 4-9 in Section 4.7, “Replacing the Server’s Top Cover” on page 4-15).**

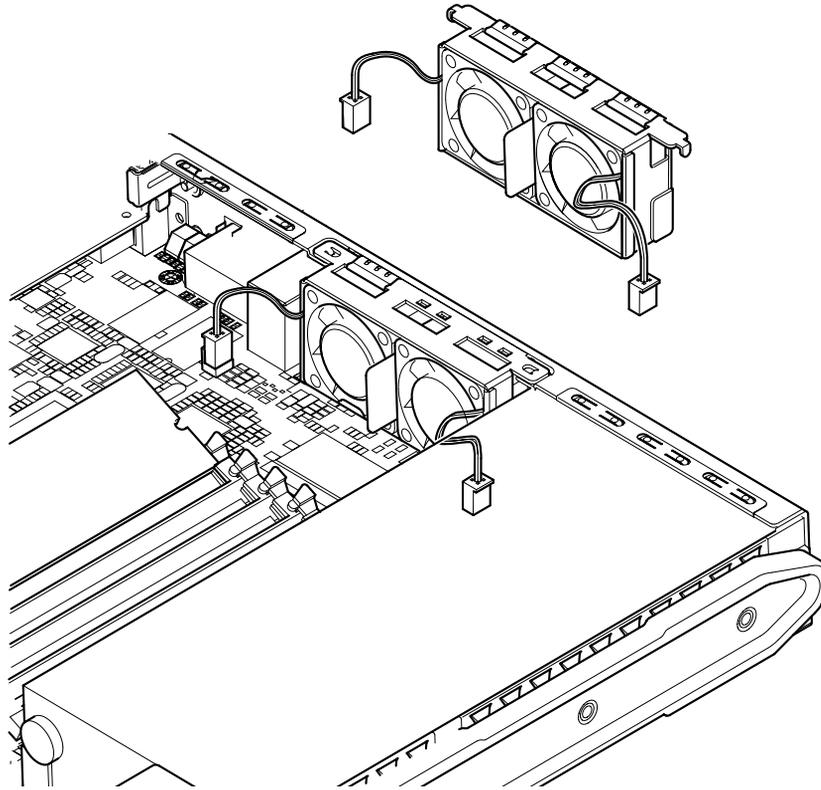


FIGURE 11-8 Replacing the Rear Fan Subassembly (Fans 1 and 2)

11.9 Replacing Fan 3 (CPU Fan)



Caution – The procedure below is for the attention of qualified service engineers only. Before touching or replacing any components inside the Netra T1 server, disconnect all cables and follow the instructions in Section 4.2, “Opening the Netra T1 Server” on page 4-4 which tell you how to open the server. Always place the server on a grounded ESD pad and wear a properly grounded antistatic wrist strap.

1. **Open the Netra T1 server by following the instructions in Section 4.2, “Opening the Netra T1 Server” on page 4-4.**

Make sure you disconnect all external cables and pay particular attention to the information about how to prevent electro-static discharge from your body from damaging the components of the server.

2. **With the server open and seated on top of an ESD pad, and with a properly grounded anti-static wrist strap on your wrist, disconnect the power cable for Fan 3 from the system board.**

Fan 3 is located in the center of the system board on top of the CPU mounting (see FIGURE 11-9).

3. **Press down on the long arm of the fan’s metal fastening clip (see FIGURE 11-9) and then, with a finger of your other hand, unhook the clip from the CPU mounting.**

The long arm is the one that extends towards the rear of the server.

4. **Lift the fan and clip about 60° until it becomes possible to release the second clip which is at the front of the CPU mounting.**

5. **With the fan unclipped from the CPU mounting, lift it away and discard it.**

6. **Put the new fan onto the CPU mounting.**

7. **Push down on the short arm of the new fan’s clip until the clip hooks over the plastic lip at the front of the CPU mounting.**

8. **Push down on the long arm of the clip until the clip hooks over the plastic lip at the back of the CPU mounting.**

9. **Connect the fan power cable to its connector on the system board.**

10. **Replace the system cover and tighten the captive screw (see FIGURE 4-9 in Section 4.7, “Replacing the Server’s Top Cover” on page 4-15).**

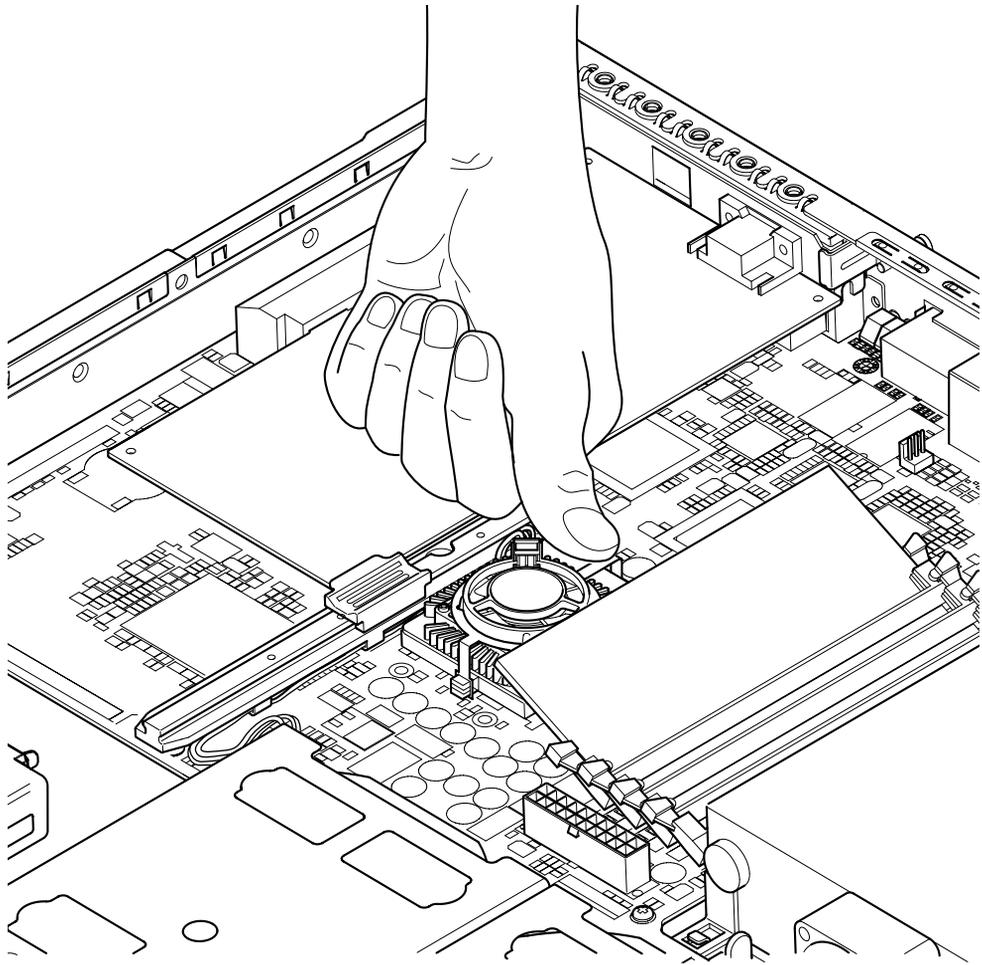


FIGURE 11-9 Pressing Down on the Long Arm of the Clip to Remove Fan 3

PART **IV** Appendixes

Configuring the LOMlite2 Device Driver

This appendix describes the driver parameters you can set in the `lom.conf` configuration file. Some of these parameters are also configurable by means of the LOMlite2-specific Solaris commands described in Chapter 9.

The appendix contains the following sections:

- Section A.1, “The LOMlite2 Device Driver” on page A-2
- Section A.2, “Configuring the LOMlite2 Device Driver” on page A-3

A.1 The LOMlite2 Device Driver

The LOMlite2 driver software included in Solaris 8 (10/00) is as follows:

- `/platform/sun4u/kernel/drv/lom` (the lom driver (32-bit))
- `/platform/sun4u/kernel/drv/sparcv9/lom` (the lom driver (64-bit))
- `/platform/sun4u/kernel/drv/lom.conf` (the driver configuration file)

A.2 Configuring the LOMlite2 Device Driver

The full list of parameters you can set in this file is given in TABLE A-1.

TABLE A-1 LOM Configuration File Parameters

Field	Format	Default	Effect
wdog_reset=	Boolean 0=FALSE 1=TRUE	0	Causes the LOMlite2 to reset the Netra T1 after a watchdog timeout. Setting this to 1 is equivalent to using the <code>lom -R on</code> command described in Chapter 9.
wdog_alarm3=	Boolean 0=FALSE 1=TRUE	0	Turns on software alarm 3 when the LOMlite2 watchdog times out.
serial_events=	0=OFF 1=ON 2=ON WHEN DRIVER NOT LOADED	2	Causes the LOMlite2 to report events over the serial connection. Setting this parameter to 0 means that no events will be reported over the serial connection. Setting it to 1 means that events will be reported over the serial connection as well as to <code>syslogd</code> ; this is equivalent to <code>lom -E on</code> . If you have dedicated the Serial A/LOM port to the LOMlite2 device, you need to set this parameter to 1. It ensures that you receive all event reports at the terminal you have connected to Serial A/LOM. Finally, setting the parameter to 2 means that events will be reported over the serial connection, but only when the driver is not running (when it is running they will be reported to <code>syslogd</code>).
disable_wdog_on_break=	Boolean 0=FALSE 1=TRUE	1	Causes the LOMlite2 to disable its watchdog if it detects a break signal on the Serial A/LOM port.

TABLE A-1 LOM Configuration File Parameters (*Continued*)

Field	Format	Default	Effect
disable_wdog_on_panic=	Boolean 0=FALSE 1=TRUE	1	Causes the LOMlite2 to try to disable its watchdog after a system panic.
faulty_voltage_shutdown=	Boolean 0=FALSE 1=TRUE	1	Causes the LOMlite2 to attempt first to shut down the system and, if that fails, to power off the system in the event of a fatal problem with the supply rails.
enclosure_warning_temp=	°C	67	Specifies the temperature at which the LOMlite2 generates a temperature warning.
over_temperature_shutdown=	Boolean 0=FALSE 1=TRUE	1	Causes the LOMlite2 to attempt to shut down the system, or to power it off, if the enclosure temperature exceeds the level specified for the enclosure_shutdown_temp parameter.
enclosure_shutdown_temp=	°C	72	Specifies the enclosure temperature above which the LOMlite2 attempts to shut the system down, or, if this fails, to power the system off. (The LOMlite2 device will only attempt to do either of these if over_temperature_shutdown is set to 1.)
serial_security=	Boolean 0=FALSE 1=TRUE	1	Enables and disables the LOMlite2 user security facilities even if user security has been configured. You can use this parameter to set up users again if your users have forgotten their passwords.

TABLE A-1 LOM Configuration File Parameters (*Continued*)

Field	Format	Default	Effect
<code>serial_timeout=</code>	Multiples of 4 secs	0	Specifies the idle period after which the LOMlite2 device gives control of the Serial A/LOM port back to the console when it has finished sending a report. By default, there is no delay at all. If you enable the <code>serial_return=</code> option, the <code>serial_timeout=</code> option specifies the period that the LOMlite2 waits after each LOMlite command before giving control of the Serial A/LOM port back to the console. By default, there is no delay.
<code>serial_return=</code>	Boolean 0=FALSE 1=TRUE	0	Causes the LOMlite2 to return the user to the console from the <code>lom></code> prompt after each LOMlite2 shell command. You can use this option in conjunction with the <code>serial_timeout=</code> option.
<code>reporting_level=</code>	Number between 0 and 4	3	The severity level down to which you want to see LOMlite2 event reports. 0 means no reports. 1 means Fatal event reports only. 2 means Fatal and Warning event reports. 3 means Fatal, Warning and Information event reports. 4 means Fatal, Warning, Information and User event reports. (User event reports concern the user security facility, you will not see any unless you have enabled the security facility and set up users.)

Each parameter must be on a separate line and must be followed by an equals sign (=) and a value, without spaces. Where the format is Boolean, 1 means true and 0 means false.

System Board Jumper Settings

This appendix describes the functions and factory-default settings of the jumpers on the system board of the Netra T1 server.

The Netra T1 server's system board contains several jumpers.

We do not recommend you change the jumper settings. However, for reference, the factory-default settings are listed in TABLE B-1, and the locations of the jumpers are shown in FIGURE B-1 (which also illustrates the default settings).

TABLE B-1 Factory-Default Jumper Settings

Jumper	Default Setting	Description
JP7	1-2 (Fitted) 3-4 (Open) 5-6 (Fitted)	This jumper tells the system that its main processor is a 500 MHz CPU. Do not alter this setting. It is correct for the CPU on your system board.
JP9	1-2 (Fitted)	This jumper is for use by Sun engineers in the development of OBP software. Do not alter its setting.
JP13	1-2 (Open)	This is for use by Sun service engineers. It resets the LOMlite2 device. Do not alter this setting.
JP14	1-2 (Open)	This jumper is for use by Sun service engineers in the event that the LOMlite2 device on the system board is broken. The default setting is Open. If you alter this setting to Fitted, then, if the LOMlite2 is broken, you can use the On/Standby rocker switch to power the system on (or down to standby mode). Note that the power signals from the On/Standby switch pass through the LOMlite2 device, and that setting this jumper to Fitted causes the signals from the rocker switch to bypass the LOMlite2.
JP15	1-2 (Open)	This jumper is for use by Sun service engineers only. It enables and disables emergency recovery of the LOMlite2 firmware. In its default state (Open), recovery of the firmware is not possible. However, service engineers might need to follow a special procedure to recover the firmware for the LOMlite2, and this procedure involves temporarily changing the setting of JP15 to Fitted. Afterwards, it must always be returned to Open.
JP16	1-2 (Fitted)	This jumper write-enables the OBP software to allow you to update it. If you need to protect the OBP software from being over-written, change the jumper setting to Open.
JP17	1-2 (Open)	This jumper tells the CD-ROM drive (if one is installed) that it is a Master ATA device. For the CD-ROM drive currently available for the Netra T1 system, this jumper must be Open.

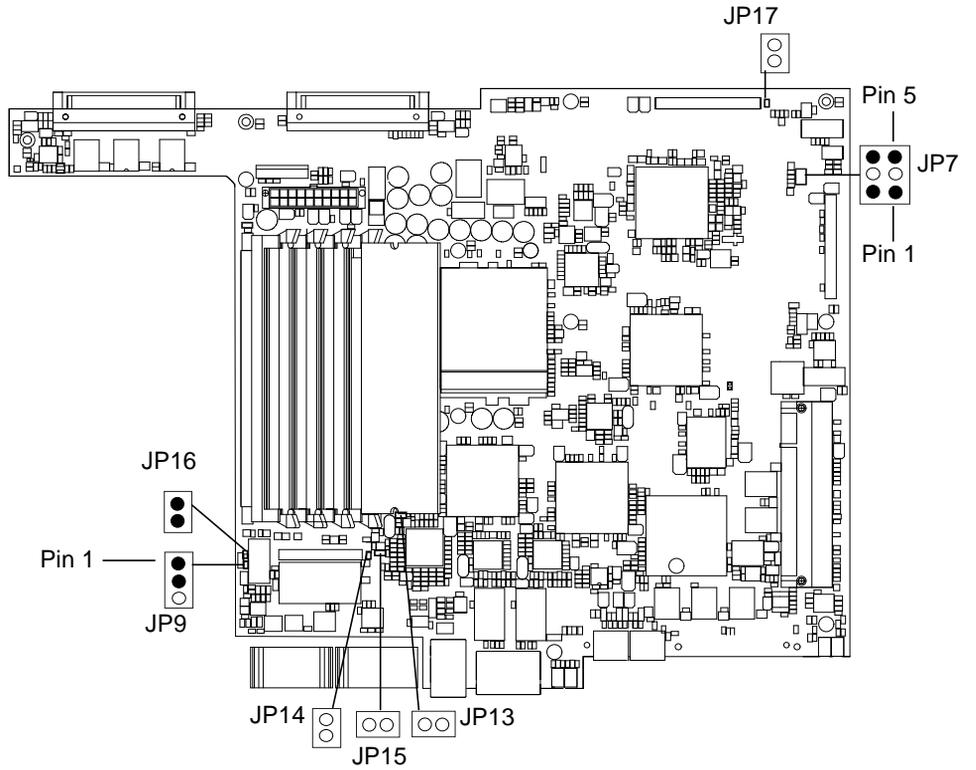


FIGURE B-1 System Board Jumper Locations and Default Settings

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