Sun ™ GigabitEthernet PCI Adapter 1.0 Product Notes

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Part No.: 805-1138-10
Revision A, August 1997

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Sun GigabitEthernet PCI Adapter Product Notes

These release notes provide the latest software information about the Sun GigabitEthernet PCI Adapter 1.0. It is a supplement to the *Sun GigabitEthernet PCI Adapter 1.0 User's Guide*.

Quick Installation Instructions

This section provides you an overview of what you must do to install and configure the Sun Gigabit Ethernet PCI Adapter. For more detailed instructions, refer to the *Sun GigabitEthernet PCI Adapter 1.0 User's Guide*.

▼ To Install the Adapter

1. **Shutdown and power off the system that will receive the adapter(s).**
2. **Install Gigabit Ethernet adapter into appropriate slot(s) within your system.**
3. **Power on the system and watch for the Gigabit adapter device information to be displayed on the system console. If you don't see the adapter, you may need to repeat step 1 to ensure that the adapter has been properly seated.**

▼ To Install the Software

1. **Become root.**
2. **Place the CD-ROM into the CD-ROM drive.**
3. **Mount the CD-ROM on a local directory.**

   If the Volume Manager (vold) is running, on your machine, then the CD-ROM is mounted automatically under `/cdrom/sungige_1_0` when it is loaded in the drive
4. **Access the package directory.**

```
# cd /cdrom/sungige_1_0/Product
```

5. **Install the software by entering** `pkgadd -d .` **(don't forget the dot):**

```
# pkgadd -d .
```

   The screen displays a list of packages available for installation:

```
The following packages are available:
1 SUNWvge   Sun GigabitEthernet Adapter 1.0
            (sparc) 1.0.0
2 SUNWvts   Online Validation Test Suite 2.0
            (sparc) 2.1, REV=35.97.05.30

Select package(s) you wish to process (or 'all' to process all
packages). (default: all) [?, ??, q]
```

6. **Press Return.**

   The `pkgadd` command starts the installation script.
7. **Respond to the prompts in the script.**

8. **When you have finished loading the software, unmount the CD-ROM directory:**

```
# cd /
# eject /cdrom
```

If the automounter fails to flush a previous mount point, you may see the following directory:

```
/cdrom/sungige_1_0#1
```

If this should happen, remove the empty directory.

```
# rmdir /cdrom/sungige_1_0#1
```

▼ Configure the Host Files

1. **Enter** `echo` *<interface-name>*`/etc/hostname.vge0`**.**

   The variable *<interface-name>* represents the name to be associated with the first gigabit ethernet adapter (for example, `echo myhostname-ge0 /etc/hostname.vge0`)

2. **Assign the IP address by using** `vi` **or a similar text editor to edit the** `/etc/hosts` **file.**

   For the example in Step 1, to assign the IP address `192.170.87.32` to the interface `myhostname-ge0`, you would add the following entry to your `/etc/hosts` file:

```
192.170.87.32 myhostname-ge0
```

3. **Reboot your system.**

```
# reboot -- -r
```

Documentation Updates

This section corrects or updates the *Sun GigabitEthernet PCI Adaper 1.0 User's Guide*.

Hardware Requirements

The *Sun Gigabit Ethernet PCI Adapter 1.0 User's Guide* incorrectly states that the PCI adapter will be supported on the Sun Ultra2. The PCI adapter will be supported on the Sun Ultra Enterprise 3000 and Sun Ultra Enterprise 4000 and 5000 systems with PCI I/O cards.

The Ultra Enterprise systems will support 2 Gigabit Ethernet cards.

Installation Correction

On page 6 of *Sun Gigabit Ethernet PCI Adapter 1.0 User's Guide*, Step 8 in the section "To Install the Software," should be amended to include the following:

When you have finished loading the software, unmount the CD-ROM director:

```
# cd /
# eject /cdrom
```

If the automounter failed to flush a previous mount point, you may see the following directory:

```
/cdrom/sungige_1_0#1
```

If this should happen, remove the empty directory.

```
# rmdir /cdrom/sungige_1_0#1
```

On pages 6 and 7, a textbox shows the command `boot -- -r`. The correct command in both instances is as follows:

```
# reboot -- -r
```

LED Indicators

An explanation of the LED indicators was omitted from the *Sun GigabitEthernet PCI Adapter 1.0 User's Guide*. TABLE 1 explains the LED indicators on the adapter.

TABLE 1 Sun GigabitEthernet PCI LEDs

Light	State	Description
Yellow	• Off	• Connection is good
	• On	• Fault condition detected on this port, which could be the result of a bad cable or a bad connector; or no cable is connected to this port
	• Blinking	• Data coming in
Green	• Off	• Port not connected to a device
	• Steady	• Link detected, no data
	• Flickering	• Link detected, data detected
	• Blinking	• Port has been disabled by software

GigabitEthernet Link Negotiation

The default configuration for link negotiation is `auto`. With this setting, the PCI adapter will use IEEE 802.3z (draft) link negotiation.

If you are connecting the adapter to GigabitEthernet equipment that does not support link negotiation or if there is a problem establishing a link between the two devices, link negotiation can be turned `off`. See "Configuring Driver Parameters" on page 6 for instructions on how to change the settings. Be sure that both devices are set to the same speed and duplex configuration.

Purchasing Fiber Cables

You can purchase fiber cables directly from Sun Microsystems, Inc. using the following part numbers:

- 2-meter fiber cable X973A
- 15-meter fiber cable X978A

1000BASE-SX Link Characteristics (IEEE P802.3z draft)

TABLE 2 has been updated to reflect changes in the latest draft from IEEE. TABLE 2 replaces Table B-1 in the *Sun GigabitEthernet PCI Adapter User's Guide*

TABLE 2 1000BASE-SX Link Characteristics (IEEE P802.3z draft)

Description	62.5 Micron MMF	50 Micron MMF	Unit
Operating Range	2 to 160 meters	2 to 550 meters	m

Configuring Driver Parameters

Two new capabilities have been added to the parameters you can change using the ndd utility: `nic_tracing` and `link_negotiation`. The following procedure reflects these changes and replaces the section by the same name in the *Sun GigabitEthernet PCI Adaper 1.0 User's Guid*e.

▼ To Temporarily Change a Parameter

Use the ndd(1M) utility to temporarily change a parameter. This change is lost when you reboot the system.

- **To access the parameters you can change using** `ndd` **type the following command**:

```
# ndd /dev/vge '?'
```

The system returns the following:

```
?
stat_ticks                      (read and write)
send_max_coalesced_bds          (read and write)
recv_max_coalesced_bds          (read and write)
nic_tracing                     (read and write)
link_negotiation                (read and write)
instance                        (read and write)
```

TABLE 3 explains the available parameters and shows the default value as well as the minimum and maximum allowed values of each.

TABLE 3 Explanation of ndd Parameters

Parameter	Meaning	Default	Minimum	Maximum
stat_ticks	Minimum number of 100 usec tics between interrupts	100	0	No limit
send_max_coalesced_bds	Number of sends before a send complete event is set.	60	1	127
recv_max-coalesced_bds	Maximum number of receives that can be bundled into an event.	6	1	511
nic_tracing	(not currently used)	0	0	No limit
link_negotiation	Used to set link negotiation to auto or off	1 for auto	0 for off	1 for auto
instance	Used to set the device number from which the previous data is extracted.	0	0	Number of Gigabit Ethernet NICs in the system

- **To change the default settings, use the following format:**

```
# ndd -set /dev/vge parameter_name value
```

Open Issues

This section addresses Sun GigabitEthernet PCI adapter issues that were not resolved at the time the *Sun GigabitEthernet PCI Adapter 1.0 User's Guide* was printed.

Flow Control

Flow control is not supported in this release.