

# Sun GigabitEthernet/S 2.0 Adapter Release Note

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# Sun GigabitEthernet/S Adapter Release Notes

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This document contains important information about the Sun™ GigabitEthernet/S™ adapter and the Sun GigabitEthernet driver software.

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## Installing the Driver

Beginning with the Solaris 7 3/99 release, Sun GigabitEthernet device drivers were included on the Software Supplement for the Solaris Operating Environment CD. This inclusion ensures that the current driver is compatible with the current operating environment, allowing you to update drivers along with your operating environment. Therefore, if your system is running, or if you are installing Solaris 7 3/99 or a subsequent compatible release, install the Sun GigabitEthernet device driver from the Software Supplement CD. Refer to the Solaris Sun Hardware Platform Guide for more information.

If your system is running a Solaris release earlier than the Solaris 7 3/99 release, install the drivers included on the Sun GigabitEthernet product CD packaged with this card.

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## Errors During Installation Dependency Check

When you perform a package installation, the dependency check may report `SUNWvtsge` errors. If you do not expect to use SunVTS diagnostics, ignore these error messages. Failure to install `SUNWvtsge` doesn't affect the installation or operation of the Sun GigabitEthernet driver. If you do want to use SunVTS diagnostics, install the appropriate SunVTS packages.

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## Using SunVTS `gemtest` Diagnostic

Following is additional information about using `gemtest`.

### `SUNWvtsge` Package

The `SUNWvtsge` package is provided with the driver packages for Solaris 2.5.1 and Solaris 2.6. to be used with SunVTS 2.x. To use `gemtest` on Solaris 2.7, you must install SunVTS 3.0.

### Loopback Connector

`gemtest` requires a loopback connector, therefore, can only be used when intervention mode is enabled. The default setting is disabled. If intervention mode is set to disabled, you can not run `gemtest`.

### Loopback Cable

To run an internal or external loopback test, you must use the appropriate loopback cable. Using the adapter specifications in Appendix A of the *Sun GigabitEthernet/S 2.0 Adapter Installation and User's Guide*, you can make a loopback cable.

## ▼ To Attach A Loopback Cable

1. Split the two halves of a standard fiber optic cable into individual cables.
2. Connect one end of the cables to the TX port on the GigabitEthernet adapter and connect the other end of the SAME cable to the RX port on the GigabitEthernet adapter.

Attaching the same cable to the transmit and receive ports on the adapter creates the loop.

## Running `gemtest` in TTY Mode

The display on your console may become littered with messages when you run `gemtest` in TTY mode. The messages, which are printed by the driver, indicate that the device has auto-negotiated and the link is up. To refresh your console display, type:

```
# Ctrl-L
```

## Using `ifconfig` To Bring Down Network Interface

To avoid getting messages about duplicate hardware addresses during the `gemtest`, use `ifconfig` to bring down the network interface. See the `ifconfig(1M)` man page for more information.

```
# ifconfig <ge interface> down
```

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## Using a Sun Ultra 450

Following are some tips for getting maximum performance out of your Sun GigabitEthernet adapter when used with a Sun Ultra™ 450.

# Installing the Required Kernel Patches

To achieve the best performance from the Sun GigabitEthernet driver software on a Sun Ultra 450, you must install one of the patches described in TABLE 0-1.

Install the patch, listed below, that is appropriate for the Solaris operating environment installed on your system. These patches correct panics that occur during high-traffic periods. Refer to the README files for more information.

TABLE 0-1 Required Patches

Operating Environment	Patch Identification Number
Solaris 2.5.1 Hardware: 11/97	105004-10
Solaris 2.6	105604-05

## Conflicts With Sun GigabitEthernet 1.0

The Sun GigabitEthernet 1.0 adapter may have difficulty interoperating with the Sun GigabitEthernet 2.0 adapter, if they are connected back-to-back. If you notice incompatibility with these cards, disable auto-negotiation and operate in forced mode.

In addition, if you are using vge software Version 1.0, you must upgrade your driver to Version 1.1.

### ▼ To Find the Software Version of vge Driver

- View the software version of the vge device with the `modinfo` or `pkginfo` commands.

```
% modinfo | grep vge
v2.0.24
% pkginfo -x SUNWvge
1.1, REV=2.0.24
```

The output should display a Revision of 2.0.24 or higher. If your output displays a version that begins with 1.1, you must upgrade to 1.1. Contact your Field Service Representative for an upgrade to Revision 1.1.

## Set Forced Mode

After upgrading your software to version 1.1, set forced mode on your Sun GigabitEthernet 1.0 adapter. Use the `-set` option to modify the auto-negotiation parameters.

```
# ndd -set /dev/vge instance <card#>
# ndd -set /dev/vge link_negotiation 0
```

Auto-negotiation for the Sun GigabitEthernet 2.0 adapter should also be set to off.

```
# ndd -set /dev/ge instance <card#>
# ndd -set /dev/ge adv_1000autoneg_cap 0
```

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## Conflicts With SunSwitch 1.0

SunSwitch 1.0 may have difficulty interoperating with the Sun GigabitEthernet 2.0 adapter. If you notice incompatibility, disable auto-negotiation on both devices.

In addition, if you are using the software for SunSwitch 1.0, you must upgrade that software to Version 1.1.

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**Note** – Due to this conflict, the FCode PROM 1.7 does not support booting or net-installing, over a gigabit Ethernet using an Alteon 110 or SunSwitch.

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### ▼ To Find the SunSwitch Software Version

- View the software version of the switch.

```
% telnet <sunswitch>
Password: admin
sunswitch> /info/sys
sunswitch> /boot/cur
```

The output should display a Revision of 2.0.22 or higher. If your output displays a version that begins with 1.0, you must upgrade to software version 1.1.

## ▼ Download The Version 1.1 Upgrade

1. **From an internet browser, go to:**  
**<http://www.sun.com/products-n-solutions/hw/networking/sunswitch>**
2. **Scroll down to the Downloads section and click on: Rel. 1.1.0 Upgrade for SunSwitch.**

## Set Forced Mode

After upgrading your software to version 1.1, set forced mode on the Sun GigabitEthernet adapter and on the SunSwitch. Refer to Chapter 1 of the *Sun GigabitEthernet/S Installation and User's Guide* for instructions.