

# *Sun™ QuadFastEthernet™ SBus Adapter Release Notes*



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# Sun QuadFastEthernet SBus Adapter Release Notes

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This document contains the late-breaking news for the Sun™ Quad FastEthernet™ SBus Adapter and the Sun QuadFastEthernet driver software.

## *Installing the Sun QuadFastEthernet Driver Software 1.0*

There have been some major revisions to the installation procedures of the Sun QuadFastEthernet driver software. These revisions occurred after the *Sun QuadFastEthernet SBus Adapter Installation and User's Guide* was printed, so the “Installing the Software Drivers from the CD-ROM” Section, on page 12, is now incorrect. This section describes the correct method of installing the Sun QuadFastEthernet driver software.

For further information about the software installation, refer to the `README.install` file located on the *Sun QuadFastEthernet Driver Software* CD-ROM.

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**Note** – If you did not receive this CD with the adapter, contact your local SunService representative for assistance, or contact your local SunService authorized service provider for information on how to receive this CD-ROM. You can also visit the Sun website <http://www.sun.com> and select the Sales and Service page for more information.

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### ▼ Installing the Driver Software on Solaris 2.4 Systems

Disregard the software and hardware installation instructions found in the user's guide and follow the instructions in this section.

#### **1. Power off your system, using the standard shut down procedures described in *Solaris 2.x Handbook for SMCC Peripherals*.**

The *Solaris 2.x Handbook for SMCC Peripherals* is shipped with the Solaris™ operating environment and is available in the on-line AnswerBook™ documentation.



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**Note** – Refer to your system installation or service manual for detailed instructions for the following SBus adapter installation steps.

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2. **Open the system.**
3. **Install the Sun Quad FastEthernet SBus Adapter in the selected SBus slot.**
4. **Close the system.**
5. **Connect Ethernet cables to the Sun Quad FastEthernet SBus Adapter and to an Ethernet network.**
6. **Verify the SBus adapter installation.**  
Refer to the “Verifying the Installation” section of the *Sun Quad FastEthernet SBus Adapter Installation and User’s Guide*.
7. **Perform a reconfiguration boot on your system.**

```
ok boot -r
```

8. **Install the driver software packages from the Sun QuadFastEthernet Driver Software CD-ROM.**

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**Note** – If you did not receive this CD-ROM with the adapter, please contact your local SunService representative for assistance, or contact your local SunService authorized service provider for information on how to receive these software packages.

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- a. **Insert the CD into a CD-ROM drive that is connected to your system.**
  - If your system is running Volume Manager, it should automatically mount the CD to the `/cdrom/sun_quadfast_1_0` directory.
  - If your system is not running Volume Manager, mount the CD as follows:

```
# mkdir /cdrom
# mount -F hsfs -o ro /dev/dsk/c0t6d0s2 /cdrom
```

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**Note** – If the CD-ROM drive that you are using for software installation is attached to a remote machine, refer to your Solaris installation guide for remote CD-ROM access instructions.

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**b. Install the Solaris 2.4 driver packages.**

- If your system is running Volume Manager, type:

```
# /usr/sbin/pkgadd -d /cdrom/sun_quadfast_1_0/Sol_2.4 SUNWhmd SUNWhmdu
```

- If your system is not running Volume Manager, and you have mounted the CD-ROM using the `mount` command, type:

```
# /usr/sbin/pkgadd -d /cdrom/Sol_2.4 SUNWhmd SUNWhmdu
```

**c. After the software has been installed, unmount and eject the CD-ROM as follows:**

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

**9. Perform a reconfiguration boot on your system.**

**10. Create `hostname.hme#` files and edit the `/etc/hosts` file to reflect the adapter's Ethernet interfaces.**

Refer to the “Host File Configuration” Section of the *Sun Quad FastEthernet SBus Adapter Installation and User's Guide* for instructions.

Refer to the *Sun Quad FastEthernet SBus Adapter Installation and User's Guide* for additional software configuration instructions.

▼ **Installing the Driver Software on Solaris 2.5, 2.5.1, and 2.5.1 Hardware: 4/97 Systems**

The software installation instructions for systems running the Solaris 2.5, 2.5.1, and 2.5.1 Hardware: 4/97 operating systems have changed significantly since the user's guide was printed. Instead of installing software packages of the driver software, you will install a feature patch which will update the existing Solaris FastEthernet driver software.

Disregard the software and hardware installation instructions found in the user's guide and follow the instructions in this section.



1. **At the command line, use the `grep` command to search the `/etc/path_to_inst` file for lines containing hme devices.**

```
# grep hme /etc/path_to_inst
"/sbus@1f,0/SUNW,hme@e,8c00000" 0 "hme"
```

If you do not find any lines containing hme devices in the `/etc/path_to_inst` file, you can skip to Step 4. Otherwise, follow the steps below to remove these lines from the file.



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**Caution** – If you do not remove these lines, the system will encounter problems when you reboot your system after the adapter installation.

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2. **As superuser (root), add write permissions to the `/etc/path_to_inst` file.**

```
# chmod 644 /etc/path_to_inst
```

3. **Using a text editor, remove any line in the `/etc/path_to_inst` file that contains a reference to an hme device.**  
Make sure that you save the file.
4. **Install the Sun QuadFastEthernet feature patch associated with the Solaris release your system is running.**  
The feature patches are included on the *Sun QuadFastEthernet Driver Software* CD-ROM.

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**Note** – If you did not receive this CD-ROM with the adapter, please contact your local SunService representative for assistance.

For information on how to get the latest patches and patch revisions, visit the SunSolve website at <http://sunsolve.sun.com/>. Otherwise, contact your local SunService representative for assistance, or contact your local SunService authorized service provider for more information.

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- a. **Insert the CD into a CD-ROM drive that is connected to your system.**
  - If your system is running Volume Manager, it should automatically mount the CD to the `/cdrom/sun_quadfast_1_0` directory.
  - If your system is not running Volume Manager, mount the CD as follows:

```
# mkdir /cdrom
# mount -F hsfs -o ro /dev/dsk/c0t6d0s2 /cdrom
```

---

**Note** – If the CD-ROM drive that you are using for software installation is attached to a remote machine, refer to your Solaris installation guide for remote CD-ROM access instructions.

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- b. Install the Sun QuadFastEthernet feature patch.**

Refer to the `README.install` file for information about the feature patch's location on the CD-ROM. This file lists the feature patch identification numbers for each supported Solaris operating system version.

Select and install the feature patch which corresponds to your system's operating environment. Refer to the `README.install` file for the patch installation instructions.

- c. After the patch has been installed, unmount and eject the CD-ROM as follows:**

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

- 5. Power off your system, using the standard shut down procedures described in *Solaris 2.x Handbook for SMCC Peripherals*.**

The *Solaris 2.x Handbook for SMCC Peripherals* is shipped with the Solaris™ operating environment and is available in the on-line AnswerBook™ documentation.

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**Note** – Refer to your system installation or service manual for detailed instructions for the following SBus adapter installation steps.

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6. **Open the system.**
7. **Install the Sun Quad FastEthernet SBus Adapter in the selected SBus slot.**
8. **Close the system.**
9. **Connect Ethernet cables to the Sun Quad FastEthernet SBus Adapter and to an Ethernet network.**
10. **Verify the SBus adapter installation.**  
Refer to the “Verifying the Installation” section of the *Sun Quad FastEthernet SBus Adapter Installation and User’s Guide*.
11. **Perform a reconfiguration boot on your system.**

```
ok boot -r
```

12. **Create `hostname.hme#` files and edit the `/etc/hosts` file to reflect the adapter’s Ethernet interfaces.**  
Refer to the “Host File Configuration” Section of the *Sun Quad FastEthernet SBus Adapter Installation and User’s Guide* for instructions.  
  
Refer to the *Sun Quad FastEthernet SBus Adapter Installation and User’s Guide* for additional software configuration instructions.

## *Last Minute Changes to the User's Guide*

Besides the software installation, other procedures documented in the *Sun Quad FastEthernet SBus Adapter Installation and User's Guide* have changed since the manual was printed.

### *Booting From the Network on Solaris 2.4 Systems*

On page 24 of the user's guide, Step 3 of the "Booting From the Network on Solaris 2.4 Systems" section gives an incorrect sequence of `nvedit` line number prompts. Instead of the prompts being numbered like 0, 1, 2, 3, 1, 2, etc., the prompts should be numbered sequentially like 0, 1, 2, 3, 4, 5, etc. The following Step 3 description corrects this numbering mistake.

**3. Type the following, spaces and quotation marks included, pressing the Return key at the end of all but the last line.**

You should do the same procedure for other `hme` devices on your system (for example, if your system has a SunFastEthernet SBus Adapter 2.0).

```
0: probe-all install-console banner
1: cd <full path to channel 1>
2: " hme" nameprop
3: device-end
4: cd <full path to channel 2>
5: " hme" nameprop
6: device-end
7: cd <full path to channel 3>
8: " hme" nameprop
9: device-end
10: cd <full path to channel 4>
11: " hme" nameprop
12: device-end
```



## *Changes to the Solaris 2.4 Software Package Names*

In the user's guide, the Solaris 2.4 software packages were named SUNWhmdl and SUNWhmdl.u. The packages are now named SUNWhmd and SUNWhmd.u.

In the "Updating the Solaris 2.4 Archive to Use the hme Interface" Section, the command examples in Step 5, on page 16, should be:

```
# cp \  
/cdrom/sun_quadfast_1_0/Sol_2.4/SUNWhmd/reloc/kernel/drv/hme \  
DIR/export/exec/kvm/<archive_of_arch>/kernel/drv
```

```
# cp /cdrom/Sol_2.4/SUNWhmd/reloc/kernel/drv/hme \  
DIR/export/exec/kvm/<archive_of_arch>/kernel/drv
```

Likewise, in the "Booting a Diskless Client Running the Solaris 2.4 Operating Environment" Section, the command examples in Step 5, on page 23, should also be as shown above.

## *Sun Quad FastEthernet SBus Adapter's local-mac-address Property*

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**Note** – The "Sun Quad FastEthernet SBus Adapter's local-mac-address Property" Section, on page 29 of the *Sun Quad FastEthernet SBus Adapter Installation and User's Guide*, contains inaccurate information and should be replaced with the following text.

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Each network interface of the Sun Quad FastEthernet SBus Adapter has been assigned a unique MAC (Media Access Control) address, which represents the 48-bit ethernet address for that channel. The OpenBoot™ firmware reports this MAC address via the local-mac-address property in the device nodes corresponding to the network interfaces.

A system is not obligated to use this assigned MAC address if it has a system-wide MAC address. In such cases, the system-wide MAC address applies to all network interfaces on the system.

The device driver, or any other adapter utility, can use the network device's MAC address (`local-mac-address`) while configuring it. Future releases of the Solaris™ operating system will be able to use a channel's MAC address when booting over the network.


The `mac-address` property of the network device specifies the network address (`system-wide` or `local-mac-address`) used for booting the system. To start using the MAC addresses assigned to the network interfaces of the Sun Quad FastEthernet SBus adapter, set the NVRAM configuration variable `local-mac-address?` to `true`.

```
ok setenv local-mac-address? true
```

## *Known Problems*

The following sections list the known problems and workarounds if they exist.

### *Ultra Enterprise Series*

If you are using a Sun Quad FastEthernet SBus Adapter version -03 or older in an Ultra Enterprise 3000, 4000, 5000, or 6000, you will observe an FCode checksum error message if you boot the machine in the diagnostic position (  ).

If the front panel key switch is set to the diagnostic position, the Ultra Enterprise series OpenBoot firmware will map out the Sun Quad FastEthernet SBus Adapter, making it unusable.

To workaroud this problem, keep the front panel key switch in the normal ( | ) position.



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## *FastEthernet Switches (100BASE-T)*

There are two FastEthernet (100BASE-T) switches that may present difficulties in working with the Sun Quad FastEthernet SBus adapter:

- Bay Networks Model 28115/ADV
- SynOptics Model 28115

### *Bay Networks Model 28115/ADV*

The Bay Networks Model 28115/ADV switch is a non-negotiating switch; therefore, it requires that you configure the driver parameters manually. Because of this limitation, the adapter can only be used as a secondary interface with this switch. Refer to the section, “Configuring Driver Parameters,” on page 26 of the *Sun Quad FastEthernet SBus Adapter Installation and User’s Guide*.

### *SynOptics Model 28115*

If you use the adapter with the SynOptics Model 28115 switch, you will encounter difficulties. When this happens, contact SunSolve for patch information.

## *Auto-Negotiation*

If you are running Solaris 2.5.1, you may encounter auto-negotiation problems in 10BASE-T mode. If this happens, contact SunSolve for Patch 104212, which fixes this problem (Bug Id 4064879).

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**Note** – For information on how to get the latest patches and patch revisions, visit the SunSolve website at <http://sunsolve.sun.com/>. Otherwise, contact your local SunService representative for assistance, or contact your local SunService authorized service provider for more information.

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