



Sun StorEdge™ 2 Gb FC PCI Dual Channel Network Adapter Release Notes

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Sun StorEdge 2 Gb FC PCI Dual Channel Network Adapter

Release Notes

This document contains the latest supplementary information for the Sun StorEdge™ 2 Gb FC PCI Dual Channel network adapter. The RoHS compliant part number for this product is SG-XPCI2FC-QF2-Z. The non-RoHS part number is SG-XPCI2FC-QF2, formerly X6768. Use it with the latest version of the *Sun StorEdge 2G FC PCI Dual Channel Network Adapter Installation Guide* (part number 816-5001).

Note – The *Installation Guide* was not updated for this release, and its software installation instructions apply only to systems running the Solaris™ 8 and Solaris 9 Operating Systems (OS). Refer to [“Solaris 8, 9, and 10 Operating Systems” on page 2](#) for operating this HBA on Solaris 10. Refer to [“Diagnostic Support” on page 12](#) for information on testing your installation with Solaris 2.6 and Solaris 7 systems. Refer to [“Diagnostic Support” on page 18](#) for information on testing your installation with Red Hat Enterprise Linux 2.1, 3, and 4 and with SuSE Linux Enterprise Server 8 and 9 systems. Refer to [“Windows 2000 and Windows Server 2003 Systems” on page 20](#) for operating this HBA on the Windows OS.

This document contains the following sections:

- [“Overview” on page 2](#)
- [“Solaris 8, 9, and 10 Operating Systems” on page 2](#)
- [“Solaris 2.6 and Solaris 7 Systems” on page 8](#)
- [“Red Hat Enterprise Linux 2.1, 3, and 4 and SuSE Linux Enterprise Server 8 and 9 Systems” on page 14](#)
- [“Windows 2000 and Windows Server 2003 Systems” on page 20](#)

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Overview

To use the Sun StorEdge 2 Gb FC PCI Dual Channel network adapter with the Solaris 8, Solaris 9 or Solaris 10 Operating Systems, you must use the Sun driver as described in the following section:

- [“Solaris 8, 9, and 10 Operating Systems” on page 2](#)

To use the adapter with systems running the Solaris 2.6 or Solaris 7 Operating Systems, you must use the QLogic driver as described in the following section:

- [“Solaris 2.6 and Solaris 7 Systems” on page 8](#)

To use the adapter with the Red Hat Enterprise Linux 2.1, 3, 4 and SuSE Linux Enterprise Server 8 and 9 Operating Systems, you must use the QLogic driver as described in the following section:

- [“Red Hat Enterprise Linux 2.1, 3, and 4 and SuSE Linux Enterprise Server 8 and 9 Systems” on page 14](#)

To use the adapter with Windows 2000 and Windows Server 2003 Operating Systems, you must use the QLogic driver as described in the following section:

- [“Windows 2000 and Windows Server 2003 Systems” on page 20](#)
-

Solaris 8, 9, and 10 Operating Systems

This section contains the following information about using the Sun StorEdge 2 Gb FC PCI Dual Channel network adapter in Solaris Operating Environments:

- [“System Requirements” on page 3](#)
- [“Software Component Patches and Packages” on page 4](#)
- [“Known Issues” on page 7](#)
- [“Diagnostic Support” on page 7](#)

System Requirements

The following hardware and software are qualified with the Solaris 8, Solaris 9 and Solaris 10 systems.

Minimum Operating System (OS) Levels

- Solaris 8 SPARC OS Update 4/01 with the Solaris 8 recommended patch cluster
- Solaris 9 SPARC OS with the Solaris 9 recommended patch cluster
- Solaris 10 SPARC or x64/x86 OS

Host Platform Support

- Ultra™ 60 and 80 workstations
- Sun Blade™ 1000, 2000 and 2500 workstations
- Sun Enterprise 220R, 250, 420R, and 450 servers, with the Solaris 10 (SPARC or x64/x86) recommended patch cluster
- Sun Enterprise 10000 server
- Sun Enterprise 3x00–6x00 servers
- Sun Enterprise V120
- Sun Fire T2000 server
- Sun Fire™ V120 server
- Sun Fire V210, V240 and V250 servers
- Sun Fire 280R server
- Sun Fire V440 server
- Sun Fire V480, V490, V880 and V890 servers
- Sun Fire V1280 and E2900 servers
- Sun Fire 4800, 4810 and E4900 servers
- Sun Fire 6800 and E6900 servers
- Sun Fire 12K and E20K servers
- Sun Fire 15K and E25K servers
- Netra™ 20, 240, 440, 1125, 1280 and 140x servers
- Sun Fire V60x and V65x servers
- Sun Fire V20z and V40z servers
- Sun Fire X4100 and X4200 servers

Storage System Support

- Sun StorEdge 39x0 series
- Sun StorEdge 3510 and 3511 FC Arrays
- Sun StorEdge 6120 Array
- Sun StorEdge 6130 Array
- Sun StorEdge 6320 system
- Sun StorEdge 6910/6960, 6920 systems

- Sun StorEdge 99x0 series
- Sun StorEdge T3/T3+ Array
- Sun StorEdge A5200 Array
- Sun StorEdge FC tape drives 9840B¹, 9940B, and FC LTO 2 with the Sun StorEdge L180, L700, L5500, L6000 and L8500 tape libraries

Software Component Patches and Packages

Before installing the Sun StorEdge 2 Gb FC PCI Dual Channel network adapter card, ensure that the host has both the minimum required Solaris Operating System release with the recommended patch cluster and the software packages and patches listed in this section.

This section contains the following topics:

- [“Required Drivers for Solaris 10 Systems” on page 4](#)
- [“Required Packages for Solaris 8 and Solaris 9 Systems” on page 5](#)
- [“Required Patches for Solaris 8 and Solaris 9 Systems” on page 6](#)

Required Drivers for Solaris 10 Systems

Driver patch # 119131-03 or later is required for Solaris 10 x86 systems. Driver patch # 119130-03 or later is required for Solaris SPARC systems. Install the appropriate patch after you have installed your Solaris OS from the Sun Download site or from the CDRoms or DVDROMs provided with your system. These patches can be found at <http://sunsolve.sun.com>

Visit <http://sunsolve.sun.com> periodically for patches that are subsequently released.

1. FC-AL mode for the Sun StorEdge 9840B

Required Packages for Solaris 8 and Solaris 9 Systems

TABLE 1 lists the packages and their location. You need to install the packages before you install the patches. If the packages are already on the system from a previous installation, you do not need to install them again.

TABLE 1 Required Packages for Solaris 8 and Solaris 9 Systems

Packages	Location
SUNWsan	http://www.sun.com/storage/san
SUNWcfpl	same
SUNWcfplx	same

▼ To Download the Packages

- 1. Go to <http://www.sun.com/storage/san>**
The Storage Area Networks (SAN) page is displayed.
- 2. Navigate to the bottom of the page and click the “Sun StorEdge SAN 4.4 release Software/Firmware Upgrades and Documentation” link.**
If you are not already logged in, the Please Login page is displayed.
- 3. Enter your Username and Password and click Login.**
If you have not already registered, click the Register Now button before proceeding.
- 4. Accept the License Agreement and click Continue.**
The Download page is displayed.
- 5. Download either:**
 - **Solaris 8 SFS Base Packages, English**
(`SFS_base_packages.S8.tar.Z`, 290.93 KB)
 - **Solaris 9 SFS Base Packages, English**
(`SFS_base_packages.S8.tar.Z`, 316.71 KB)You will be prompted for a download directory. It is suggested that you download the packages to your `/tmp` directory.
- 6. Unzip the packages listed in [TABLE 1](#).**
It is recommended that you unzip the packages to your `/tmp` directory.

▼ To Install the Packages

- **Use the `pkgadd` command to install the packages listed in [TABLE 1](#).**
Read the README file for the packages and follow the instructions.

Required Patches for Solaris 8 and Solaris 9 Systems

TABLE 2 lists the patches necessary to use the Sun StorEdge 2 Gb FC PCI Dual Channel network adapter for the Solaris 8 and Solaris 9 Operating Systems. Check <http://sunsolve.sun.com> for updates.

TABLE 2 Required Patches for Solaris 8 and Solaris 9 Systems

Name	Solaris 8 Operating System Patches	Solaris 9 Operating System Patches
fcip	not applicable	113046-xx
luxadm, liba5k.so.2	not applicable	113049-xx
Sun StorEdge Traffic Manager patch	111412-xx	113039-xx
fcntl/fp/fcp/usoc driver	111095-xx	113040-xx
fcip driver	111096-xx	113041-xx
qlc driver	111097-xx	113042-xx
luxadm/liba5k and libg_fc patch	111413-xx	113043-xx
cfgadm fp plug-in library patch	111846-xx	113044-xx
SAN Foundation Software patch	111847-xx	111847-xx

▼ To Download the Patches

1. **Go to** <http://www.sun.com/storage>
The *Storage* page is displayed.
2. **Click PatchPro in the right-hand navigation area.**
The PatchPro information page is displayed.
3. **Scroll down to the section “How do I use PatchPro Interactive” and click the PatchPro Interactive link.**
The PatchPro Hub page is displayed.
4. **Click Network Storage Products.**
The PatchPro Interactive page is displayed.
5. **Select the appropriate operating system release and platform.**
6. **In the SAN Products group, select version 4.2 or later for the StorEdge SAN Release.**
7. **Scroll down and click Generate Patch List.**

8. Click Download Selected Patches.

You will be prompted for a download directory. It is suggested that you download the patches to your `/tmp` directory.

▼ To Install the Patches

1. Ensure that you have installed all the packages listed in [TABLE 1](#) before you install the patches.
2. Use the `patchadd` command to install the patches in the order in which they are listed in [TABLE 2](#).

Known Issues

Booting from a disk attached via this network adapter in Solaris x64/x86 operating environment is not supported.

Bug 6204858: Fabric boot on J1 (9990) device hang at `ok>` prompt

Workaround: Use the net install method to build the Solaris 10 OS on the boot drive. Do not use the `ufs dump/restore` method.

Refer to *Sun StorEdge SAN 4.x Foundation Software Release Notes* (part number 819-0610) for information on other known issues and bugs.

Diagnostic Support

Full support for the Sun StorEdge 2 Gb FC PCI Dual Channel network adapter is available as shown in the table below.

Operating System	Minimum Version
SPARC Solaris 8 and 9	Sun Storage Automated Diagnostic Environment (StorADE) version 2.1 or Sun Validation Test Suite (SunVTS) 5.1 Patch Set 10 (119475-08)
SPARC Solaris 10	SunVTS 6.0

For diagnostics support in Solaris 10 x86 systems, use SunVTS 6.0 and `qlctest` patch # 119275-01. This patch can be downloaded from <http://sunsolve.sun.com>

Solaris 2.6 and Solaris 7 Systems

This section contains the following information about using the Sun StorEdge 2 Gb FC PCI Dual Channel network adapter in Solaris 2.6 and Solaris 7 systems:

- [“System Requirements” on page 8](#)
- [“Unsupported Software” on page 10](#)
- [“Software Component Patches and Packages” on page 10](#)
- [“Known Issues” on page 12](#)
- [“Diagnostic Support” on page 12](#)

System Requirements

The following hardware and software are qualified with the Solaris 2.6 and Solaris 7 systems.

Minimum Operating System Levels

- Solaris 2.6 SPARC Update 5/98 with the latest Sun-recommended patch cluster
- Solaris 7 SPARC Update 11/99 with the latest Sun-recommended patch cluster

Host Platform Support

- Ultra 60 and 80 workstations
- Netra 1120/1125/1400/1405 servers
- Sun Enterprise 220R, 420R servers
- Sun Enterprise 250, 450, 3500, 4500, 5500, 6500, and 10000¹ servers

Storage System Support

- Sun StorEdge 3510 FC array (Solaris 2.6 OS only)
- Sun StorEdge 6120 array
- Sun StorEdge 6320 system
- Sun StorEdge T3+ array
- Sun StorEdge 9900 series

1. Dynamic Reconfiguration is not supported on the Sun Enterprise 10000 server.

Switch Support

Switch	Minimum Version
Sun StorEdge Network 1 Gb FC Switch-8, -16	4.02.38
Sun StorEdge Network 2 Gb FC Switch-8, -16, -64	1.5.0.7
Brocade SilkWorm 3200, 3800	3.1
Brocade 3900, 12000	4.1
McDATA Sphereon 4500, 6064, 6140	4.01.00 (not supported on Sun StorEdge T3 array)

Third-Party Software Support

Third-Party Software Application	Minimum Version
QLogic SANblade Command Line Interface (CLI)	1.06.13
VERITAS Software	
Volume Manager VxVM with DMP ^{1 2}	3.2
Cluster Server VCS ³	2.0
File System VxFS	3.4
<i>or</i>	
Volume Manager VxVM with DMP ¹	3.5 (Solaris 7 OS only)
Cluster Server VCS	3.5 (Solaris 7 OS only)
File System VxFS	3.5 (Solaris 7 OS only)
VERITAS NetBackup	4.5

1 To use the failover feature with VERITAS DMP, run the Sun StorEdge T3 array and Sun StorEdge 6120 and 6320 storage systems in read/write mode only, not MPxIO mode.

2 VERITAS Volume Manager VxVM with DMP 3.2 requires VERITAS VxVM patch 113201-04 or higher.

3 VERITAS Cluster Server VCS 2.0 requires VERITAS patch 111912-01 or higher.

Sun Software Product Support

Sun Software Product	Minimum Version
Solstice Backup™	6.1
Sun StorEdge Enterprise Backup	7.0 (Solaris 7 OS only)
Solstice DiskSuite™	4.2.1
SunVTS™ disktest	2.1.3 (Solaris 2.6 OS) 3.4 (Solaris 7 OS)

Unsupported Software

The following software is not supported by this product in the Solaris 2.6 or Solaris 7 Operating System:

- QLogic SANblade Manager
- QLogic SANblade Control FX
- SunVTS qlctest
- Sun™ Cluster
- Sun StorEdge Traffic Manager software
- Sun StorEdge Enterprise Storage Manager software
- Sun StorEdge SAN Foundation software
- Sun Storage Automated Diagnostic Environment (StorADE)

Software Component Patches and Packages

Before installing the Sun StorEdge 2 Gb FC PCI Dual Channel network adapter on a Solaris 2.6 or Solaris 7 system, ensure that the host has both of the following:

- The minimum required Solaris Operating System release with the recommended patch cluster.
- The required driver for the Sun StorEdge 2 Gb FC PCI Dual Channel network adapter. This driver is supplied by QLogic.

Note that in Solaris 2.6 and Solaris 7 systems, you cannot boot with the QLogic Solaris SPARC® driver. Therefore, these host bus adapters (HBAs) must not be in the boot path.

Caution – Modification of the HBA boot firmware (FCode) or HBA parameters stored in non-volatile memory is not supported while running the QLogic Solaris SPARC driver. Such modification, if accomplished using procedures that may be documented elsewhere, can cause functional problems when the HBA is later used with the Sun qlc driver in Solaris systems.

This section contains the following topics:

- [“Required Packages for Solaris 2.6 and Solaris 7 Systems” on page 11](#)
- [“Required Patches for Solaris 2.6 and Solaris 7 Systems” on page 11](#)
- [“Migration Path” on page 11](#)

Required Packages for Solaris 2.6 and Solaris 7 Systems

TABLE 3 lists the packages for Solaris 2.6 and Solaris 7 systems. If the packages are already on the host system from a previous installation, you do not need to install them again.

TABLE 3 Required Packages for Solaris 2.6 and Solaris 7 Systems

Package	Minimum Version
QLogic Solaris SPARC driver package	4.13.01
QLogic SANblade CLI	1.06.13

▼ To Download the Packages

1. Go to http://www.qlogic.com/support/sun_page.asp.
2. In the table “Sun Recommended Software for Solaris 2.6 and Solaris 7,” locate the appropriate Solaris SPARC driver package (SG-XPCI2FC-QF2) and click Download.
3. Also click and print the “Associated QLogic Driver” Readme and Release Notes files.
4. In the same table, locate “SANblade CLI for Solaris” and click Download.
5. Also click and print the Release Notes and User’s Guide files.

▼ To Install the Packages

- Use the `pkgadd` command to install the packages in TABLE 3. Refer to the Readme file for the packages, and follow the instructions.

Required Patches for Solaris 2.6 and Solaris 7 Systems

No QLogic patches are required for Solaris 2.6 and Solaris 7. For future updates, you can check http://www.qlogic.com/support/sun_page.asp.

Migration Path

To later migrate from a Solaris 2.6 or Solaris 7 system, check the document *Migration Path to Solaris 8/9*, available with documentation for the Solaris SPARC driver package at http://www.qlogic.com/support/sun_page.asp.

Known Issues

For the latest information on known issues and bugs affecting Solaris 2.6 and Solaris 7 systems, review the Release Notes for the QLogic Solaris SPARC driver package.

Diagnostic Support

SunVTS qlctest and StorADE do not support the Sun StorEdge 2 Gb FC PCI Dual Channel network adapter running on Solaris 2.6 and Solaris 7 systems.

You can test the installation on Solaris 2.6 and Solaris 7 systems using the QLogic SANblade CLI. For product documentation, go to the QLogic web site at http://www.qlogic.com/support/sun_page.asp.

QLogic SANblade CLI for Solaris

The QLogic SANblade CLI for Solaris is an HBA management utility that can exercise your system to verify the functionality, reliability, and configuration of the Sun HBA. You must install the QLogic SANblade CLI for Solaris utility to perform diagnostics on the Sun HBA with the QLogic Solaris SPARC driver package.

▼ To Verify the Installation

1. To start the QLogic SANblade CLI for Solaris locally, type the following as root:

```
# cd /opt/QLogic_Corporation/SANblade_CLI
# ./scli
```

2. At the QLogic SANblade CLI Main Menu, type the number that corresponds to the Perform Diagnostics option.
3. At the Select Adapter menu, enter the number that corresponds to the adapter you are going to test.

Note – To perform the Read/Write Buffer Test, you must not run an 8-byte operation. As documented in Sun Bug 4903081, the Sun StorEdge T3/T3+ array and Sun StorEdge 6120 or 6320 array fail the SANblade CLI 8-byte Read/Write Buffer Test.

4. If you want to run the loopback test, place a loopback plug into the FC port on the HBA that you want to test.
5. At the Diagnostic Tests Selection menu, type 1 to select Loopback Test.
6. At the Configure Diagnostic Loopback Test Parameters menu, type the number that corresponds to the option to Run Diagnostic Test with Current Configuration.
7. At the Test Proceed menu, type 1 (Yes) to proceed.
8. At the warning message “Do you want to proceed with the test(s)?” enter 1, Yes, if you have no outstanding I/O on the adapter under test.
9. Verify that the test has passed by reviewing the Status column in the Diagnostic Loopback screen output. Each Status entry should read “Success”.

Red Hat Enterprise Linux 2.1, 3, and 4 and SuSE Linux Enterprise Server 8 and 9 Systems

The QLogic Linux driver for this host bus adapter is a software driver for Sun x64/AMD64 and x86/IA32 servers, running the Linux Operating System (RHEL 3/4 or SLES 8/9). This software driver can be downloaded from a Sun designated page at QLogic's web site.

The QLogic Linux driver, the SANblade CLI and the SANsurfer FC HBA CLI for Linux diagnostics are available for download from a QLogic web site dedicated to Sun system users.

This section contains the following information about using the Sun StorEdge 2 Gb FC PCI Dual Channel network adapter in Red Hat Enterprise Linux 2.1, 3, and 4 and in SuSE Linux Enterprise Server 8 and 9 systems:

- [“System Requirements” on page 14](#)
- [“Software Component Patches and Packages” on page 17](#)
- [“Known Issues” on page 18](#)
- [“Diagnostic Support” on page 18](#)

System Requirements

The following hardware and software are qualified with the Red Hat Enterprise Linux 2.1, 3, 4 and with the SuSE Linux Enterprise Server 8 and 9 systems.

Minimum Operating System Levels

- Red Hat Enterprise Linux (RHEL) 2.1 (IA32) AS, ES, and WS
- Red Hat Enterprise Linux (RHEL) 3 (IA32) AS, ES, and WS
- Red Hat Enterprise Linux (RHEL) 3 (AMD64) AS and WS
- Red Hat Enterprise Linux (RHEL) 4 (x86/IA32) and (x64/AMD64)
- SuSE Linux Enterprise Server (SLES) 8 (x86/IA32) and (x64/AMD64)
- SuSE Linux Enterprise Server (SLES) 9 (x86/IA32) and (x64/AMD64)

Host Platform Support

Please consult the Sun hardware platform document to verify which Linux releases are supported on each specific platform.

- Sun Fire V20z and V40z servers
- Sun Fire V60x and V65x servers
- Sun Fire X4100 and X4200 servers

Storage System Support

- Sun StorEdge 3510 FC Array (RAID)
- Sun StorEdge 3510 FC Array (JBOD)
- Sun StorEdge 3511 FC Array (SATA)
- Sun StorEdge 6120 array (full failover support using Sun StorEdge Traffic Manager software on RHEL 2.1)
- Sun StorEdge 6320 system (full failover support using Sun StorEdge Traffic Manager software on RHEL 2.1)
- Sun StorEdge 6920 system
- Sun StorEdge FC tape drives 9840B¹, 9940B, and FC LTO 2 with the Sun StorEdge L180, L700, L5500, and L6000 tape libraries
- Sun StorEdge 6130 FC Array (RAID)
- Sun StorEdge 9970/9980 system (RAID)
- Sun StorEdge 9990 FC Array (RAID)

1. FC-AL mode for the Sun StorEdge 9840B

Fibre Channel Switch Support

TABLE 4 Fibre Channel Switch Support

Switch	Minimum Firmware Version
Sun StorEdge Network 2 Gb switches	1.5.0.7
Sun StorEdge Network 2 Gb Brocade SilkWorm 3200 switch	3.1
Sun StorEdge Network 2 Gb Brocade SilkWorm 3800 switch	3.1
Sun StorEdge Network 2 Gb Brocade SilkWorm 3900 switch	4.1
Sun StorEdge Network 2 Gb Brocade SilkWorm 12000 Core Fabric switch	4.1
Sun StorEdge Network 2 Gb McDATA Sphereon 4300 switch	4.01.00
Sun StorEdge Network 2 Gb McDATA Sphereon 4500 switch	4.01.00
Sun StorEdge Network 2 Gb McDATA Intrepid 6064 director	4.01.00
Sun StorEdge Network 2 Gb McDATA Intrepid 6140 director	4.01.00

Sun Software Product Support

Sun StorEdge Traffic Manager 4.4 software is supported with the Red Hat Enterprise Linux 2.1 operating system only.

Unsupported Software

The following software is not supported by the Red Hat Enterprise Linux 2.1, 3, and 4 operating systems:

- QLogic SANblade Manager
- QLogic SANblade Control FX
- SunVTS qlctest
- Sun Cluster software
- Sun StorEdge Enterprise Storage Manager software
- Sun StorEdge SAN Foundation software
- Sun Storage Automated Diagnostic Environment (StorADE)

Software Component Patches and Packages

Before installing the Sun StorEdge 2 Gb FC PCI Dual Channel network adapter on a Red Hat Enterprise Linux 2.1, 3, or 4 system, ensure that the host has the required driver for the Sun StorEdge 2 Gb FC PCI Dual Channel network adapter. This driver is supplied by QLogic.

Booting in Linux environment is not supported by this host adapter. Therefore, the adapter must not be used in the boot path.

Caution – Modification of the HBA boot firmware (FCode) or HBA parameters stored in non-volatile memory is not supported while running the QLogic Linux driver. Such modification, if accomplished using procedures that may be documented elsewhere, can cause functional problems when the HBA is later used with the Sun qlc driver in Solaris Operating Environment.

Required Packages for Red Hat Enterprise Linux 2.1, 3, 4 and SuSE Linux Enterprise Server 8 and 9 Operating Systems

TABLE 5 lists the packages and the minimum version required. You need to install the packages before you install any patches. If the packages are already on the system from a previous installation, you do not need to install them again.

TABLE 5 Required Packages for Linux Systems

Package	Minimum Version
QLogic qla2300 (RHEL 2.1) Linux driver for V60x/V65x	7.00.02
QLogic Linux driver for RHEL 3 and SLES 8 (x64/AMD64 and x86/IA86)	7.07.01
QLogic Linux driver for RHEL 4 and SLES 9 (x64/AMD64 and x86/IA86)	8.01.0.1
QLogic SANblade CLI for Linux	1.06.14
QLogic SANsurfer CLI for RHEL 3/4 (x64/AMD64 and x86/IA86) and SLES 8/9 (x64/AMD64 and x86/IA86)	1.06.16 Build 29

▼ To Download the Packages

1. **Go to** http://www.qlogic.com/support/sun_page.asp.
2. **Do one of the following, depending on your system:**
 - For RHEL 2.1 operating system, go to the table “Sun Recommended Enterprise Fibre Channel HBA Software for Red Hat Linux 2.1,” locate the Red Hat Linux driver `source.tgz` file, and click Download.
 - For all other operating systems, go to the table “Sun Recommended Enterprise Fibre Channel HBA Software” and click the appropriate download.
3. **Also click and print the Readme file.**
4. **In the same table, locate the SANblade CLI for Linux or the SANsurfer CLI for Linux, IA32 and AMD64 and click Download.**
5. **Also click and print the Readme and User’s Guide files.**

▼ To Install the Driver

1. **Extract the source files that reside in the `source.tgz` file by following the instructions in the Readme file that was printed in [Step 3 of “To Download the Packages” on page 18](#).**
2. **After the source files are extracted, compile the driver by following the instructions in the Readme file.**

▼ To Install the SANblade CLI for Linux or the SANsurfer FC HBA CLI for Linux File

- **Follow the instructions in the Readme file that was printed in [Step 5 of “To Download the Packages” on page 18](#).**

Known Issues

None.

Diagnostic Support

SunVTS `qlctest` and `StorADE` do not support the Sun StorEdge 2 Gb FC PCI Dual Channel network adapter running in Linux systems.

You can test the installation on RHEL 2.1, 3, and 4 systems, and on SuSE SLES 8 and 9 systems by using the QLogic SANblade CLI for Linux or SANsurfer FC HBA CLI for Linux. Instructions for running the QLogic SANblade CLI for Linux and SANsurfer FC HBA CLI for Linux are given in the respective User's Guides that were downloaded in [Step 5 of "To Download the Packages" on page 18](#).

QLogic SANblade CLI for Linux/SANsurfer FC HBA CLI for Linux

The QLogic SANblade/SANsurfer CLI is an HBA management utility that can exercise your system to verify the functionality, reliability, and configuration of the Sun HBA. You must install the QLogic SANblade/SANsurfer CLI utility to perform diagnostics on the Sun HBA with the QLogic Linux driver package.

▼ To Verify the Installation

1. To start the QLogic SANblade/SANsurfer CLI locally, type the following as root:

```
# cd /opt/QLogic_Corporation/SANblade_CLI
# ./scli
```

2. At the QLogic SANblade CLI¹ Main Menu, type the number that corresponds to the Perform Diagnostics option.
3. Consult the *SANblade CLI User's Guide* that was downloaded in [Step 5 of "To Download the Packages" on page 18](#).

1. QLogic may use the keywords "SANblade CLI" and "SANsurfer FC HBA CLI" interchangeably in their documentation.

Windows 2000 and Windows Server 2003 Systems

The host adapter device driver for running Windows 2000 and Windows Server 2003 systems is available for download at the QLogic website.

This section contains the following topics:

- [“System Requirements” on page 20](#)
- [“Software Component Patches and Packages” on page 21](#)
- [“Known Issues” on page 23](#)
- [“Diagnostic Support” on page 23](#)

System Requirements

The following hardware and software are qualified with the Windows 2000 and Windows Server 2003 operating systems.

Host Platform Support

- Sun Fire V20z Server
- Sun Fire V40z Server
- Sun Fire X4100 and X4200 server

Storage Systems Support

The storage systems supported for the Windows 2000 and the Windows Server 2003 operating systems are the same as those listed for Red Hat Enterprise Linux/SuSE Linux Enterprise Server in [“Storage System Support” on page 15](#).

Fibre Channel Switch Support

The FC switches supported for the Windows 2000 and Windows Server 2003 operating systems are the same as those listed for Red Hat Enterprise Linux/SuSE Linux Enterprise Server in [TABLE 4](#) on Page 15.

Software Component Patches and Packages

Before installing the Sun StorEdge 2 Gb FC PCI Dual Channel network adapter on a Windows system, ensure that the host has the required driver for the Sun StorEdge 2 Gb FC PCI Dual Channel network adapter. This driver is supplied by QLogic.

Booting in a Windows environment is not supported by this host adapter. Therefore, the adapter must not be used in the boot path.

Required Packages for Windows 2000 and Windows 2003 Operating System

The software components provided for the Sun StorEdge 2 Gb FC PCI Dual Channel network adapter are listed in [TABLE 6](#).

TABLE 6 Software Components

Package	Minimum Revision
Windows Server 2003 (x64/AMD64) STOR Miniport driver	9.1.0.16
Windows Server 2003 (x64/AMD64) STOR Miniport Boot from SAN Driver Package	9.1.0.16
Windows Server 2003 (x86/IA86) STOR Miniport driver	9.1.0.16
Windows Server 2003 (x86/IA86) STOR Miniport Boot from SAN Driver Package	9.1.0.16
Windows 2000 and Windows Server 2003 (x86/IA86) SCSI Miniport Boot from SAN Driver Packag	9.1.0.11
Windows 2000 and Windows 2003 Server SCSI Miniport drivers	9.0.1.11
SANsurfer FC HBA CLI for Windows	1.06.16

▼ To Download the Packages

- 1. Power down your system.**
- 2. Install the HBA onto a PCI slot.**
- 3. Power up the system and allow Windows to boot.**
- 4. When the “Found new hardware” wizard comes up, click Cancel.**
- 5. Go to QLogic download site for Sun Microsystems,**
http://www.qlogic.com/support/sun_page.asp.
- 6. Locate the “Install Wizard for Windows” download listed under the product title “Sun Recommended Enterprise Fibre Channel HBA Software”**

7. Click **Download**. Save the `qlflzip.exe` file to a directory of your choice.
8. Click **Open** when the download is complete.
The SANsurfer Install Wizard will open.
9. From the SANsurfer HBA Install Wizard, make the following selections:
HBA Configuration Update → Update Driver?
10. A “select Driver” screen will open. Select **Default Driver** and hit **Next**.
11. Click **Next** again on the following two screens.
12. If a caution window with a ! sign shows up, click **Configure Anyway**.

Note – If you have more than one card in the system, or if you have cards with multiple ports, this Caution sign will show up multiple times. If that happens, click **Continue** until all the Caution signs disappear.

13. When the “Driver update successfully” message is displayed, click **Next**.
14. Click **Quit** on the following screen.
15. **Reboot** your system.

▼ To run a quick diagnostics on the HBA

1. Run the file “`qlflzip.exe`”.
2. When the “SANsurfer HBA Install Wizard” starts up,
 - a. Select the **Performance diagnostic**
 - b. Click **Next**
3. Select **HBA** as follows:
 - a. Select the **HBA for diagnostic**
 - b. Click **Next**
4. Click **Next to continue**.
Be sure the adapter you selected for diagnostic is connected to an active fiber link (storage or switch fabric) or to a loop back cable.
5. Click **Next to return to “SANsurfer HBA Install Wizard” window (main)**.

▼ To Install the SANsurfer FC HBA CLI File

- Click the associated **Download** and follow the directions in the **Readme file**.

Known Issues

None

Diagnostic Support

The QLogic SANsurfer FC HBA CLI is an HBA management utility that can exercise your system to verify the functionality, reliability, and configuration of the Sun HBA. You must install the QLogic SANsurfer FC HBA CLI utility to perform diagnostics on the Sun HBA with the QLogic Windows driver package.

Service Contact Information

If you need help installing or using this product in the United States, call 1-800-USA-4SUN, or go to:

<http://www.sun.com/service/contacting/index.html>