



# Sun StorEdge™ SBus Dual Fibre Channel Network Adapter Release Notes

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Sun Microsystems, Inc.  
[www.sun.com](http://www.sun.com)

Part No. 816-2490-14  
January 2004, Revision A

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# Sun StorEdge SBus Dual Fibre Channel Network Adapter Release Notes

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This document contains the latest supplementary information for the Sun StorEdge™ SBus Dual Fibre Channel (FC) network adapter (X6757A). Use it with the latest version of the *Sun StorEdge SBus Dual Fibre Channel Network Adapter Installation Guide* (part number 816-2489).

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**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 “Diagnostic Support” on page 7 for information on testing your installation with Solaris 2.6 and Solaris 7 systems.

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This document contains the following sections:

- Introduction
- Solaris 2.6 and Solaris 7 Systems
- Solaris 8 and Solaris 9 Systems

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# Introduction

To use the Sun StorEdge SBus Dual FC network 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 2

To use the adapter with the Solaris 8 or Solaris 9 environments, you must use the Sun driver as described in the following section:

- “Solaris 8 and Solaris 9 Systems” on page 8
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## Solaris 2.6 and Solaris 7 Systems

This section contains the following information about using the Sun StorEdge SBus Dual FC network adapter with Solaris 2.6 and Solaris 7 systems:

- “Qualified Platforms for Solaris 2.6 and Solaris 7 Systems” on page 2
- “Unsupported Software” on page 4
- “Software Component Patches and Packages” on page 5
- “Known Issues and Bugs” on page 6
- “Diagnostic Support” on page 7

## Qualified Platforms for Solaris 2.6 and Solaris 7 Systems

### **Minimum Operating System levels:**

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

### **Host platform support:**

- Sun Enterprise™ 3500, 4500, 5500, 6500, and 10000<sup>1</sup> servers

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

**Storage system support:**

- Sun StorEdge 6120 array
- Sun StorEdge 6320 system
- Sun StorEdge T3+ array
- Sun StorEdge 9900 series
- Sun StorEdge 3510 FC array, RAID
- The Sun StorEdge 3510 FC array, JBOD (RAID expansion)

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**Note** – The Sun StorEdge 3510 FC array is only supported with Solaris 2.6.

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**Note** – The Sun StorEdge 3510 FC array, JBOD (Standalone) is *not* supported.

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**Switch support:**

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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 SW 3200, 3800	v3.1
Brocade 3900, 12000	v4.1
McDATA Sphereon 4500, 6064, 6140	4.01.00

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**Third-party software support:**

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Third-Party Software Application	Minimum Version
QLogic SANblade Command Line Interface (CLI)	1.06.13
VERITAS Software	
Volume Manager VxVM with DMP <sup>1</sup> <sup>2</sup>	v3.2
Cluster Server VCS <sup>3</sup>	v2.0
File System VxFS	v3.4
Or	
Volume Manager VxVM with DMP <sup>1</sup>	v3.5 (Solaris 7 only)
Cluster Server VCS	v3.5 (Solaris 7 only)
File System VxFS	v3.5 (Solaris 7 only)
VERITAS NetBackup	v4.5

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1 To use the failover feature with VERITAS DMP, run the 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 patches 111912-01 or higher.

## Sun software product support:

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

## 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
- Sun StorEdge Enterprise Storage Manager
- Sun StorEdge SAN Foundation software
- Sun Storage Automated Diagnostic Environment

# Software Component Patches and Packages

Before installing the Sun StorEdge SBus Dual FC network adapter on a Solaris 2.6 or Solaris 7 system, ensure that the host has both the minimum required Solaris OE release with the recommended patch cluster, and it must also have the required driver for the Sun StorEdge SBus Dual FC 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<sup>®</sup> driver. Therefore, these HBAs must not be in the boot path.

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**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 8 or Solaris 9 systems.

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This section contains the following topics:

- “Required Packages for Solaris 2.6 and Solaris 7 Systems” on page 5
- “Required Patches for Solaris 2.6 and Solaris 7 Systems” on page 6
- “Migration Path” on page 6

## Required Packages for Solaris 2.6 and Solaris 7 Systems

TABLE 1 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 1 Packages

Packages	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/drivers\\_software.asp](http://www.qlogic.com/support/drivers_software.asp).
2. **In the OEM approved/recommended drivers and firmware section, click SUN.**
3. **In the table, “Sun Supported Drivers for Solaris 2.6 and Solaris 7,” locate the appropriate Solaris SPARC driver package and click Download. Also download the README file.**
4. **Select the SANblade CLI utility and click Download. Also download the README file.**

## ▼ To Install the Packages

- **Use the `pkgadd` command to install the packages in TABLE 2.**  
Read 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 systems. For future updates, check [http://www.qlogic.com/support/drivers\\_software.asp](http://www.qlogic.com/support/drivers_software.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/drivers\\_software.asp](http://www.qlogic.com/support/drivers_software.asp).

## Known Issues and Bugs

Review the QLogic Solaris SPARC driver package Release Notes for the latest information on bugs affecting Solaris 2.6 and Solaris 7 systems.



# Diagnostic Support

Sun Storage Automated Diagnostic Environment does not support the Sun StorEdge SBus Dual FC 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/drivers\\_software.asp](http://www.qlogic.com/support/drivers_software.asp), and in the OEM approved/recommended drivers and firmware section, click SUN.

## QLogic SANblade CLI

The QLogic SANblade 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 CLI 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 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 with the adapter you are going to test.

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**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+ and 6120/6320 fail the SANblade CLI 8-byte Read/Write Buffer Test.

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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 with 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”.
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## Solaris 8 and Solaris 9 Systems

This section contains the following information about using the Sun StorEdge SBus Dual FC network adapter in the Solaris 8 and Solaris 9 Operating Systems:

- “Qualified Platforms for Solaris 8 and Solaris 9 Systems” on page 8
- “Software Component Patches and Packages” on page 9
- “Known Issues and Bugs” on page 12

## Qualified Platforms for Solaris 8 and Solaris 9 Systems

### Minimum Operating System levels:

- Solaris 8 4/01 release with the Solaris 8 recommended patch cluster
- Solaris 9 with the Solaris 9 recommended patch cluster

### Host platform support:

- Sun Enterprise 3x00-6x00 servers
- Sun Enterprise 10000 server

### Storage system support:

- Sun StorEdge 39x0 series
- Sun StorEdge 69x0 series
- Sun StorEdge 99x0 series
- Sun StorEdge T3/T3+ array
- Sun StorEdge A3500FC array
- Sun StorEdge A5200 array
- Sun StorEdge FC tape drives 9840B and 9940B with the Sun StorEdge L180, L700, L5500, and L6000 tape libraries

# Software Component Patches and Packages

Before installing the Sun StorEdge SBus Dual FC 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 Packages for Solaris 8 and Solaris 9 Systems” on page 9
- “Required Patches for Solaris 8 and Solaris 9 Systems” on page 10

## Required Packages for Solaris 8 and Solaris 9 Systems

TABLE 2 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 2 Packages

Packages	Location
SUNWsan	<a href="http://www.sun.com/storage/san">http://www.sun.com/storage/san</a>
SUNWcfpl	
SUNWcfplx	

### ▼ To Download the Packages

1. **Go to** <http://www.sun.com/storage/san>.

The Products & Services SAN page is displayed.

2. **Click Downloads in the right-hand navigation area, under Get.**

If you are not already logged in, the Please Login page is displayed.

3. **Login to the Download Center.**

- If you are a registered user, enter your user name and password.
- If you are not a registered user, click **Register Now**.

The registration page is displayed. Enter the requested information and click **Register**.

After logging in or registering, the Terms of Use page is displayed.

4. **Read the terms of use. If you accept the terms, click Accept and then click Continue.**

The Download page is displayed.

## 5. Download either:

- **Solaris 8 SUNWcfpl/x and SUNWsan packages, English**  
(Solaris\_8\_SFS\_packages.tar.Z, 47.25.KB)
- **Solaris 9 SUNWcfpl/x and SUNWsan packages, English**  
(Solaris\_9\_SFS\_packages.tar.Z, 47.21.KB)

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

## 6. Unzip the packages listed in TABLE 2. 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 under TABLE 2.**  
Read the README file for the packages and follow the instructions.

## Required Patches for Solaris 8 and Solaris 9 Systems

TABLE 3 lists the patches necessary to use the Sun StorEdge SBus Dual FC network adapter for the Solaris 8 and Solaris 9 Operating Systems. Check <http://sunsolve.sun.com> for updates.

TABLE 3 Patches

Name	Solaris 8 Operating System Patches	Solaris 9 Operating System Patches
fcpl	not applicable	113046-xx
luxadm, liba5k.so.2	not applicable	113049-xx
Sun StorEdge Traffic Manager patch	111412-xx	113039-xx
fcntl/fp/fcpl/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
SBus Dual FC network adapter firmware	112244-xx <sup>1</sup>	112244-xx <sup>1</sup>

<sup>1</sup> Install patch 112244-xx if the FCode revision is 1.13.06 or lower. See the patch README file for details.

## ▼ To Download the Patches

1. **Go to `http://sunsolve.sun.com`.**  
The SunSolve page is displayed.
2. **Click Patches in the left-hand navigation area.**  
The SunSolve Patch Portal page is displayed.
3. **Click PatchPro in the left-hand navigation area.**  
The PatchPro Hub page is displayed.
4. **Click Network Storage Products.**  
The PatchPro Interactive page is displayed.
5. **Select the appropriate OS Release and Platform.**
6. **In the SAN Products group, select 4.2 (or higher) 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 recommended 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 2 before you install the patches.**
2. **Use the `patchadd` command to install the patches in the order in which they are listed in TABLE 3.**

## ▼ To Upgrade Adapter Firmware

Use this procedure only if you are installing the Solaris OE patch 112244-xx.

### 1. Determine the firmware level.

```
# luxadm qlgc_s_download

Opening Device: /devices/sbus@6,0/SUNW,qlc@2,30000/fp@0,0:devctl
Detected FCode Version:      ISP2200 Sbus FC-AL Host Adapter Driver: 1.13.06
10/31/01

Opening Device: /devices/sbus@6,0/SUNW,qlc@2,30400/fp@0,0:devctl
Detected FCode Version:      ISP2200 Sbus FC-AL Host Adapter Driver: 1.13.06
10/31/01

....

Complete
```

If you have a firmware version earlier than 1.13.07, you will need to upgrade it.

### 2. Upgrade the Sun StorEdge SBus Dual FC network adapter firmware.

a. Get firmware patch 112244-02 from <http://sunsolve.sun.com>

b. Follow the instructions in the patch README file.

### 3. Reboot your system.

Newly updated firmware will not be displayed with the `luxadm (1M)` command until you reboot your system.

## Known Issues and Bugs

- **Bug 4529423:** Error Message while the system is configured with CD0 setting.

#### Work around:

Ignore the following message when using CD0:

```
Could not open device: :Error: No such file or directory
```

- Refer to *Sun StorEdge SAN 4.x Foundation Software Release Notes* for more information on known issues and bugs.