



Sun StorEdge™ PCI/PCI-X Dual Ultra320 SCSI Host Adapter Release Notes

Sun Microsystems, Inc.
www.sun.com

Part No. 817-5828-12
November 2004, Revision A

Submit comments about this document at: <http://www.sun.com/hwdocs/feedback>

Copyright 2004 Sun Microsystems, Inc., 4150 Network Circle, Santa Clara, California 95054, U.S.A. All rights reserved.

Sun Microsystems, Inc. has intellectual property rights relating to technology that is described in this document. In particular, and without limitation, these intellectual property rights may include one or more of the U.S. patents listed at <http://www.sun.com/patents> and one or more additional patents or pending patent applications in the U.S. and in other countries.

This document and the product to which it pertains are distributed under licenses restricting their use, copying, distribution, and decompilation. No part of the product or of this document may be reproduced in any form by any means without prior written authorization of Sun and its licensors, if any.

Third-party software, including font technology, is copyrighted and licensed from Sun suppliers.

Parts of the product may be derived from Berkeley BSD systems, licensed from the University of California. UNIX is a registered trademark in the U.S. and in other countries, exclusively licensed through X/Open Company, Ltd.

Sun, Sun Microsystems, the Sun logo, AnswerBook2, docs.sun.com, OpenBoot, Sun StorEdge, and Solaris are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and in other countries.

All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. in the U.S. and in other countries. Products bearing SPARC trademarks are based upon an architecture developed by Sun Microsystems, Inc.

The OPEN LOOK and Sun™ Graphical User Interface was developed by Sun Microsystems, Inc. for its users and licensees. Sun acknowledges the pioneering efforts of Xerox in researching and developing the concept of visual or graphical user interfaces for the computer industry. Sun holds a non-exclusive license from Xerox to the Xerox Graphical User Interface, which license also covers Sun's licensees who implement OPEN LOOK GUIs and otherwise comply with Sun's written license agreements.

U.S. Government Rights—Commercial use. Government users are subject to the Sun Microsystems, Inc. standard license agreement and applicable provisions of the FAR and its supplements.

DOCUMENTATION IS PROVIDED "AS IS" AND ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT, ARE DISCLAIMED, EXCEPT TO THE EXTENT THAT SUCH DISCLAIMERS ARE HELD TO BE LEGALLY INVALID.

Copyright 2004 Sun Microsystems, Inc., 4150 Network Circle, Santa Clara, Californie 95054, Etats-Unis. Tous droits réservés.

Sun Microsystems, Inc. a les droits de propriété intellectuels relatants à la technologie qui est décrit dans ce document. En particulier, et sans la limitation, ces droits de propriété intellectuels peuvent inclure un ou plus des brevets américains énumérés à <http://www.sun.com/patents> et un ou les brevets plus supplémentaires ou les applications de brevet en attente dans les Etats-Unis et dans les autres pays.

Ce produit ou document est protégé par un copyright et distribué avec des licences qui en restreignent l'utilisation, la copie, la distribution, et la décompilation. Aucune partie de ce produit ou document ne peut être reproduite sous aucune forme, par quelque moyen que ce soit, sans l'autorisation préalable et écrite de Sun et de ses bailleurs de licence, s'il y en a.

Le logiciel détenu par des tiers, et qui comprend la technologie relative aux polices de caractères, est protégé par un copyright et licencié par des fournisseurs de Sun.

Des parties de ce produit pourront être dérivées des systèmes Berkeley BSD licenciés par l'Université de Californie. UNIX est une marque déposée aux Etats-Unis et dans d'autres pays et licenciée exclusivement par X/Open Company, Ltd.

Sun, Sun Microsystems, le logo Sun, AnswerBook2, docs.sun.com, OpenBoot, Sun StorEdge, et Solaris sont des marques de fabrique ou des marques déposées de Sun Microsystems, Inc. aux Etats-Unis et dans d'autres pays.

Toutes les marques SPARC sont utilisées sous licence et sont des marques de fabrique ou des marques déposées de SPARC International, Inc. aux Etats-Unis et dans d'autres pays. Les produits portant les marques SPARC sont basés sur une architecture développée par Sun Microsystems, Inc.

L'interface d'utilisation graphique OPEN LOOK et Sun™ a été développée par Sun Microsystems, Inc. pour ses utilisateurs et licenciés. Sun reconnaît les efforts de pionniers de Xerox pour la recherche et le développement du concept des interfaces d'utilisation visuelle ou graphique pour l'industrie de l'informatique. Sun détient une licence non exclusive de Xerox sur l'interface d'utilisation graphique Xerox, cette licence couvrant également les licenciées de Sun qui mettent en place l'interface d'utilisation graphique OPEN LOOK et qui en outre se conforment aux licences écrites de Sun.

LA DOCUMENTATION EST FOURNIE "EN L'ÉTAT" ET TOUTES AUTRES CONDITIONS, DECLARATIONS ET GARANTIES EXPRESSES OU TACITES SONT FORMELLEMENT EXCLUES, DANS LA MESURE AUTORISEE PAR LA LOI APPLICABLE, Y COMPRIS NOTAMMENT TOUTE GARANTIE IMPLICITE RELATIVE A LA QUALITE MARCHANDE, A L'APTITUDE A UNE UTILISATION PARTICULIERE OU A L'ABSENCE DE CONTREFAÇON.



Sun StorEdge PCI/PCI-X Dual Ultra320 SCSI Host Adapter Release Notes

This document contains important information about the Sun StorEdge™ PCI/PCI-X Dual Ultra320 SCSI Host Adapter that was not available at the time the *Sun StorEdge PCI/PCI-X Dual Ultra320 SCSI Host Adapter Installation Guide* was published. Read this document so that you are aware of issues or requirements that can impact the installation and operation of the Sun StorEdge PCI/PCI-X Dual Ultra320 SCSI Host Adapter. The information in these release notes supplements the *Sun StorEdge PCI/PCI-X Dual Ultra320 SCSI Host Adapter Installation Guide*, part number 817-5827.

- “Qualified Platforms” on page 2
- “Required System Firmware” on page 3
- “Qualified Cables” on page 4
- “Downloading and Installing the Patches and Documentation” on page 5
- “Known Issue” on page 8
- “Known Limitations and Bugs” on page 12
- “Service Contact Information” on page 18

Note – Sun is not responsible for the availability of third-party web sites mentioned in this document. Sun does not endorse and is not responsible or liable for any content, advertising, products, or other materials that are available on or through such sites or resources. Sun will not be responsible or liable for any actual or alleged damage or loss caused by or in connection with the use of or reliance on any such content, goods, or services that are available on or through such sites or resources.

Qualified Platforms

The supported host platforms for this product are:

- Netra™ 20 server
- Netra 120 server
- Netra 240, 440, and 1280 servers
- Netra t 1400 and 1405 servers
- Sun Blade™ 1000 and 2000 workstations
- Sun Blade 1500 and 2500 workstations
- Sun Enterprise™ 220R and 420R servers
- Sun Enterprise 250 and 450 servers
- Sun Fire™ V20z and V40z servers
- Sun Fire V60x and V65x servers
- Sun Fire V120 server
- Sun Fire V210 server
- Sun Fire V240 server
- Sun Fire V250 server
- Sun Fire 280R server
- Sun Fire V440 server
- Sun Fire V480 and V490 servers
- Sun Fire V880 and V890 servers
- Sun Fire 12K, 15K, E20K, and E25K servers
- Sun Fire 4800, 4810, and 6800 servers
- Sun Fire E2900, E4900, and E6900 servers
- Sun Fire V1280 server
- Ultra™ 60 workstation
- Ultra 80 workstation

This product supports the following disk storage systems:

- Sun StorEdge 3310 SCSI Array
- Sun StorEdge 3120 SCSI Array
- Sun StorEdge D2 Array
- Sun StorEdge S1 Array

This product supports the following tape backup systems:

- Sun StorEdge L8 tape autoloader with Sun StorEdge LTO1, LTO2, or SDLT 320 drive
- Sun StorEdge L25/L100 Tape Library with Sun StorEdge LTO1 (HP version), LTO2, or SDLT 320 drive
- Sun StorEdge L180/L700 Tape Library with LTO2 drive
- Sun StorEdge DAT 72 desktop tape drive
- Sun StorEdge LTO Gen 2 desktop tape drive
- Sun StorEdge SDLT 320 desktop tape drive

This product supports the following minimum operating systems with the recommended patches:

- Solaris™ 8, 07/03 (PSR3) Operating System (Solaris OS)
- Solaris 9, 12/03 (Update 5) OS
- Solaris 9 x86, 08/03 OS

Required System Firmware

The following minimum system firmware is required with the respective servers with the Sun StorEdge PCI/PCI-X Dual Ultra320 SCSI Host Adapter:

Server	Minimum System Firmware Required
Sun Fire E6900, 6800, 4900, 48x0, 2900, and V1280	5.18.0
Sun Fire V20z	1.27.11
Sun Fire V40z	2.18.11
Sun Fire V60x	1191
Sun Fire V65x	1191

Qualified Cables

TABLE 1 lists the qualified cables for connecting the Sun StorEdge 3310 SCSI array, Sun StorEdge 3120 SCSI array, and Sun StorEdge D2 Array. TABLE 2 lists the qualified cables for connecting the Sun StorEdge S1 array to the Sun StorEdge PCI/PCI-X Dual Ultra320 SCSI host adapter.

You can order cables using the *marketing* part numbers shown in the tables. You can use the *manufacturing* part numbers in the table to determine whether any already-purchased cables are supported. Do this by comparing the provided numbers against the manufacturing part numbers that are stamped on the cables.

TABLE 1 Qualified Cables for the Sun StorEdge 3310, Sun StorEdge 3120, and Sun StorEdge D2 Arrays

Cable Type and Length	Marketing Part Number	Manufacturing Part Number
SCSI, VHDCI/VHDCI, 0.8 m	X1136A	530-2982-01 or later
SCSI, VHDCI/VHDCI, 1.2 m	X1137A	530-2983-01 or later
SCSI, VHDCI/VHDCI, 2 m	X1138A	530-2538-01 or later
SCSI, VHDCI/VHDCI, 4 m	X3830B	530-2984-01 or later
SCSI, VHDCI/VHDCI, 10 m	X3831B	530-2985-01 or later*

* This cable must have a part number ending with -02 to accommodate the maximum Ultra320 speed.

TABLE 2 Qualified Cables for the Sun StorEdge S1 Array

Cable Type and Length	Marketing Part Number	Manufacturing Part Number*
SCSI, HD-68/VHDCI, 0.8 m	X1132A	530-2452-02
SCSI, HD-68/VHDCI, 2 m	X3832A	530-2453-02
SCSI, HD-68/VHDCI, 4 m	X3830A	530-2454-02
SCSI, HD-68/VHDCI, 10 m	X3831A	530-2455-02

* Cables with part numbers ending with -01 are not supported for use with the Sun StorEdge S1 array.

Downloading and Installing the Patches and Documentation

TABLE 3 lists the web sites from which you can download the required patches and documentation.

TABLE 3 Software and Documentation Download Sites

Software	Download Web Site	Notes
Patches	http://www.sun.com/sunsolve	See “Downloading and Installing Driver Packages and Patches.”
Documentation	http://www.sun.com/products-n-solutions/hardware/docs/Network_Storage_Solutions/Adapters/index.html http://docs.sun.com	The <i>Sun StorEdge PCI/PCI-X Dual Ultra320 SCSI Host Adapter Installation Guide</i> is posted at these sites, and the translated versions of these release notes will be posted at these sites when they become available.

TABLE 4 shows the required patches.

TABLE 4 Patches for Solaris 8 and Solaris 9 Operating Systems (Task Map)

Patch ID	Description	Installation Procedure
various	The appropriate Solaris Recommended Patch Cluster for the version being used	“To Download and Install the Solaris OS Recommended Patch Cluster” on page 6
<ul style="list-style-type: none"> • 115275-04 or later • 115274-04 or later 	<ul style="list-style-type: none"> • The latest Solaris 8 SPARC MPT driver patch • The latest Solaris 8 SPARC <code>raidctl</code> utility patch 	<ul style="list-style-type: none"> • “To Download and Install the Driver Patch” on page 7 • Same
<ul style="list-style-type: none"> • 115665-07 or later • 115667-03 or later 	<ul style="list-style-type: none"> • The latest Solaris 9 SPARC MPT driver patch • The latest Solaris 9 SPARC <code>raidctl</code> utility patch 	<ul style="list-style-type: none"> • “To Download and Install the Driver Patch” on page 7 • Same
<ul style="list-style-type: none"> • 116481-09 or later • 116667-02 or later 	<ul style="list-style-type: none"> • The latest Solaris 9 x86 MPT driver patch • The latest Solaris 9 x86 <code>raidctl</code> utility patch 	<ul style="list-style-type: none"> • “To Download and Install the Driver Patch” on page 7 • Same

▼ To Download and Install the Solaris OS Recommended Patch Cluster

1. Log into the host to connect to the array.
2. In a browser, go to www.sun.com/sunsolve.
3. Under SunSolveSM Patch Contents, click Patch Portal.
4. Under Downloads and under Recommended and Security Patches, click Recommended and Security Patches.
5. Read the SOFTWARE LICENSE AGREEMENT and click the Agree button.
6. In the Recommended & Security Patch Clusters for Solaris table, find Solaris 8 or Solaris 9 in the OS column, and click the appropriate View Readme in the Clusters column.
7. Print or save the # CLUSTER_README from the browser window.
8. Click the browser’s Back button to return to the previous page.

9. In the Solaris 8 or Solaris 9 OS row, click HTTP or FTP (as desired) in the Clusters column.
10. In the Save As dialog box, enter a destination directory for the patch cluster, and click the OK button.
11. Follow the procedure in the # CLUSTER_README to install the patches.

▼ To Download and Install the Driver Patch

1. Log into the host to connect to the array.
2. In a browser, go to www.sun.com/sunsolve.
3. Under SunSolve Patch Contents, click Patch Portal.
4. Under PatchFinder, enter one of the patch numbers given below, and press the Find Patch button.
 - 115274-xx and 115275-xx for Solaris 8 SPARC OS
 - 115667-xx SPARC and 115665-xx SPARC for Solaris 9 SPARC OS
 - 116667-xx and 116481-xx for Solaris 9 x86 OS
5. Print or save the patch instructions from the browser window.
6. Click either the HTTP or FTP link in [Download Patch (*nnn,nnn* bytes) HTTP FTP].
7. In the Save As dialog box, enter a destination directory for the patch, and click the OK button.

Known Issue

In the *Sun StorEdge PCI/PCI-X Dual Ultra320 SCSI Host Adapter Installation Guide*, 817-5827-10, the following sections are not valid for a Solaris x86 environment:

- “To Test the Installation Using the `probe-scsi-all` Command” on page 8
- “To Test the Installation With the SunVTS Software” on page 9

You must use the `format` command to verify the installation of the Sun StorEdge PCI/PCI-X Dual Ultra320 SCSI Host Adapter before attempting to use it in a Solaris x86 environment.

▼ To Verify the Installation of the Sun StorEdge PCI/PCI-X Dual Ultra320 SCSI Host Adapter

1. Become a root user and type the `format` command.

```
# format
Searching for disks...done
AVAILABLE DISK SELECTIONS:
   0. c1t0d0 <DEFAULT cyl 24611 alt 2 hd 27 sec 107>
      /pci@0,0/pci1022,7450a/pci17c2,10@4/sd@0,0
   1. c1t1d0 <DEFAULT cyl 24810 alt 2 hd 27 sec 107>
      /pci@0,0/pci1022,7450a/pci17c2,10@4/sd@1,0
   2. c3t8d0 <DEFAULT cyl 24619 alt 2 hd 27 sec 107>
      /pci@0,0/pci1022,7450b/pci1000,10c0@1,1/sd@8,0
   3. c3t9d0 <DEFAULT cyl 24619 alt 2 hd 27 sec 107>
      /pci@0,0/pci1022,7450b/pci1000,10c0@1,1/sd@9,0
   4. c3t10d0 <DEFAULT cyl 24619 alt 2 hd 27 sec 107>
      /pci@0,0/pci1022,7450b/pci1000,10c0@1,1/sd@a,0
   5. c3t11d0 <DEFAULT cyl 24619 alt 2 hd 27 sec 107>
      /pci@0,0/pci1022,7450b/pci1000,10c0@1,1/sd@b,0
   6. c3t12d0 <DEFAULT cyl 24619 alt 2 hd 27 sec 107>
      /pci@0,0/pci1022,7450b/pci1000,10c0@1,1/sd@c,0
   7. c3t13d0 <DEFAULT cyl 24619 alt 2 hd 27 sec 107>
      /pci@0,0/pci1022,7450b/pci1000,10c0@1,1/sd@d,0
Specify disk (enter its number):
```

2. On the same screen, type the number of the disk drive that is attached to the host adapter card you just installed and press Enter.

```
# format
Searching for disks...done
AVAILABLE DISK SELECTIONS:
  0. clt0d0 <DEFAULT cyl 24611 alt 2 hd 27 sec 107>
    /pci@0,0/pci1022,7450a/pci17c2,10@4/sd@0,0
  1. clt1d0 <DEFAULT cyl 24810 alt 2 hd 27 sec 107>
    /pci@0,0/pci1022,7450a/pci17c2,10@4/sd@1,0
  2. c3t8d0 <DEFAULT cyl 24619 alt 2 hd 27 sec 107>
    /pci@0,0/pci1022,7450b/pci1000,10c0@1,1/sd@8,0
  3. c3t9d0 <DEFAULT cyl 24619 alt 2 hd 27 sec 107>
    /pci@0,0/pci1022,7450b/pci1000,10c0@1,1/sd@9,0
  4. c3t10d0 <DEFAULT cyl 24619 alt 2 hd 27 sec 107>
    /pci@0,0/pci1022,7450b/pci1000,10c0@1,1/sd@a,0
  5. c3t11d0 <DEFAULT cyl 24619 alt 2 hd 27 sec 107>
    /pci@0,0/pci1022,7450b/pci1000,10c0@1,1/sd@b,0
  6. c3t12d0 <DEFAULT cyl 24619 alt 2 hd 27 sec 107>
    /pci@0,0/pci1022,7450b/pci1000,10c0@1,1/sd@c,0
  7. c3t13d0 <DEFAULT cyl 24619 alt 2 hd 27 sec 107>
    /pci@0,0/pci1022,7450b/pci1000,10c0@1,1/sd@d,0
Specify disk (enter its number): 2
selecting c3t8d0
[disk formatted]
```

The Format menu is displayed.

3. Type analyze to select the type of test.

```
FORMAT MENU:
  disk      - select a disk
  type      - select (define) a disk type
  partition - select (define) a partition table
  current   - describe the current disk
  format    - format and analyze the disk
  fdisk     - run the fdisk program
  repair    - repair a defective sector
  label     - write label to the disk
  analyze   - surface analysis
  defect    - defect list management
  backup    - search for backup labels
  verify    - read and display labels
  save      - save new disk/partition definitions
  inquiry   - show vendor, product and revision
  scsi      - independent SCSI mode selects
  cache     - enable, disable or query SCSI disk cache
  volname   - set 8-character volume name
  !<cmd>    - execute <cmd>, then return
  quit
format> analyze
```

4. Type read to further define the type of test, and then yes to continue.

```
ANALYZE MENU:
  read      - read only test (doesn't harm SunOS)
  refresh   - read then write (doesn't harm data)
  test      - pattern testing (doesn't harm data)
  write     - write then read (corrupts data)
  compare   - write, read, compare (corrupts data)
  purge     - write, read, write (corrupts data)
  verify    - write entire disk, then verify (corrupts data)
  print     - display data buffer
  setup     - set analysis parameters
  config    - show analysis parameters
  !<cmd>    - execute <cmd> , then return
  quit
analyze> read
Ready to analyze (won't harm SunOS). This takes a long time,
but is interruptable with CTRL-C. Continue? y
pass 1

Total of 0 defective blocks repaired.
analyze>
```

5. Verify that no error occurred (Total of 0 defective blocks repaired).

6. Issue two quit commands to exit the test and the Format menu.

```
analyze> q
FORMAT MENU:
    disk           - select a disk
    type           - select (define) a disk type
    partition      - select (define) a partition table
    current        - describe the current disk
    format         - format and analyze the disk
    fdisk          - run the fdisk program
    repair         - repair a defective sector
    label          - write label to the disk
    analyze        - surface analysis
    defect         - defect list management
    backup         - search for backup labels
    verify         - read and display labels
    save           - save new disk/partition definitions
    inquiry        - show vendor, product and revision
    scsi           - independent SCSI mode selects
    cache          - enable, disable or query SCSI disk cache
    volname        - set 8-character volume name
    !<cmd>        - execute <cmd>, then return
    quit
format> q
#
```

Your Sun StorEdge PCI/PCI-X Dual Ultra320 SCSI Host Adapter is ready for use.

Known Limitations and Bugs



Caution – Upgrading some older disk drive firmware in a Sun StorEdge 3120 SCSI Array connected to a Sun StorEdge PCI/PCI-X Dual Ultra320 SCSI Host Adapter might fail if the older disk firmware does not correctly handle the Ultra320 SCSI protocol. If this happens, create a `/kernel/drv/mpt.conf` configuration file and insert the following line into it. This limits the Sun StorEdge PCI/PCI-X Dual Ultra320 SCSI Host Adapter to the Ultra160 SCSI protocol.

```
scsi-options=0x1ff8;
```

Then reboot the system and perform the disk firmware upgrade. After completing the upgrade, remove the inserted line from the `/kernel/drv/mpt.conf` file and reboot the system.



Caution – The Sun StorEdge 3310 SCSI array is only capable of running at the Ultra160 SCSI speed. To limit the 3310 SCSI array to the Ultra160 SCSI speed and to support up to 32 LUNS, create a file called `/kernel/drv/mpt.conf` with the following lines in it:

```
device-type-scsi-options-list =  
    "SUN      StorEdge 3310", "SE3310-scsi-options";  
SE3310-scsi-options = 0x41ff8;
```

Then reboot the system.

Bugs

- **Bug 5010772:** The Sun StorEdge PCI/PCI-X Dual Ultra320 SCSI Host Adapter does not initialize properly in the 5-volt PCI cassette of the Hot Swap PCI+ I/O board (hsPCI+, Option X4576A) of the Sun Fire 12K, 15K, E20K, and E25K servers with system firmware version 5.18.0 and earlier.

Workaround: Ensure that the Sun StorEdge PCI/PCI-X Dual Ultra320 SCSI Host Adapter is installed in the 3.3-volt PCI cassette of the hsPCI+ board.

- **Bug 5033252:** The information on the `raidctl` utility program in the Solaris Man page might be outdated. If so, it would read as follows:

DESCRIPTION

The `raidctl` utility creates, deletes, or displays RAID volumes of the LSI1030 HW Raid controller.

It should read:

DESCRIPTION

The `raidctl` utility creates, deletes, or displays RAID volumes of the LSI1030 controllers that include RAID support. The utility also updates firmware/FCODE/BIOS for both RAID and non-RAID controllers.

- **Bug 4994818:** With OpenBoot™ PROM (OBP) commands, the Sun StorEdge PCI/PCI-X Dual Ultra320 SCSI Host Adapter does not recognize any RAID LUN number greater than seven.

Workaround: Do not create a boot volume with a LUN number greater than seven.

- **Bug 5053348:** If more than eight LUNs are created in an array during system booting, the BIOS only displays eight LUNs (LUN 0 through 7).

Workaround: Do not create a boot volume with a LUN number greater than seven.

- **Bug 5053340:** With the Sun StorEdge PCI/PCI-X Dual Ultra320 SCSI Host Adapter installed in a Sun Fire V60x or V65x server, if 17 or more internal and external disk drives are connected to the server, the boot process can fail.

Workaround: See “To Boot From an Internal or External Disk Drive” on page 14.

▼ To Boot From an Internal or External Disk Drive

1. 1. Initiate a system boot.

During system booting the BIOS initialization screen is displayed:

```
Press Ctrl-C to start LSI Logic Configuration Utility
```

2. Immediately press Control-C.

The LSI Logic MPT SCSI Setup Utility menu is displayed.

LSI Logic MPT SCSI Setup Utility Version MPTBIOS-5.07.03								<i>Description (Not part of screen)</i>	
<Boot Adapter List>		<Global Properties>							
LSI Logic Host Bus Adapters									
Adapter	PCI Bus	Dev/ Func	Port number	IRQ	NVM	Boot Order	LSI Control	PCI Slot	SCSI Chan
<1020/1030>	3	51	2000	9	Yes	0	Enabled	J3	B
<1020/1030>	3	50	2400	9	Yes	1	Enabled	J3	A
<1020/1030>	3	49	2800	9	Yes	2	Enabled	J2	B
<1020/1030>	3	48	3000	9	Yes	3	Enabled	J2	A
<1020/1030>	3	41	3400	9	Yes		Enabled	J1	B
<1020/1030>	3	40	3800	9	Yes		Enabled	J1	A

Note – In this example there are three Sun StorEdge PCI/PCI-X Dual Ultra320 SCSI Host Adapters installed in PCI slots J1, J2, and J3, and the one in PCI slot J3 uses Channel B (indicated by Dev/Func = 51) to connect to the storage device that contains the external boot disk.

3. Press F2 as required to highlight <Boot Adapter List> in the second line of the menu, then press Enter.

The following information is displayed:

```

Boot Adapter List
Insert = Add an adapter      Delete = Remove an adapter
Adapter      PCI    Dev/   Boot    Current  Next
              Bus    Func   Order  Status   Boot
1020/1030    3     51     [0]     On       [On]
1020/1030    3     50     [1]     On       [On]
1020/1030    3     49     [2]     On       [On]
1020/1030    3     48     [3]     On       [On]

Hit Insert to select an adapter from this list:
<1020/1030    3     51>
<1020/1030    3     50>
<1020/1030    3     49>
<1020/1030    3     48>
<1020/1030    3     41>
<1020/1030    3     40>

```

4. Use the arrow keys to highlight the HBAs in the Next Boot column and disable them (except the selected HBA that has external boot disk attached) by using the -/+ key.

```

Boot Adapter List
Insert = Add an adapter      Delete = Remove an adapter
Adapter      PCI    Dev/   Boot    Current  Next
              Bus    Func   Order  Status   Boot
1020/1030    3     51     [0]     On       [On]
1020/1030    3     50     [1]     On       [Off]
1020/1030    3     49     [2]     On       [Off]
1020/1030    3     48     [3]     On       [Off]

Hit Insert to select an adapter from this list:
<1020/1030    3     51>
<1020/1030    3     50>
<1020/1030    3     49>
<1020/1030    3     48>
<1020/1030    3     41>
<1020/1030    3     40>

```

5. Press the Escape key.

The following information is displayed:

```
Boot property changes have been made
<Cancel Exit>
Exit the Configuration Utility
<Save Changes then exit this menu>
<Discard changes then exit this menu>
```

6. Use the arrow key to highlight <Save Changes then exit this menu> and press Enter.

The LSI Logic MPT SCSI Setup Utility menu is displayed.

```
LSI Logic MPT SCSI Setup Utility Version MPTBIOS-5.07.03
<Boot Adapter List>      <Global Properties>
LSI Logic Host Bus Adapters

Adapter      PCI   Dev/  Port  IRQ  NVM  Boot  LSI
              Bus  Func number  number  Yes  Order Control
<1020/1030>  3    51   2000   9    Yes  0    Enabled
<1020/1030>  3    50   2400   9    Yes  1    Disabled
<1020/1030>  3    49   2800   9    Yes  2    Disabled
<1020/1030>  3    48   3000   9    Yes  3    Disabled
<1020/1030>  3    41   3400   9    Yes           Disabled
<1020/1030>  3    40   3800   9    Yes           Disabled
```

7. To eliminate any disk drives attached to Sun StorEdge PCI/PCI-X Dual Ultra320 SCSI Host Adapter from being used as the boot disk, use the arrow key to highlight the HBA that has the external boot disk attached, then press Enter.

The following information is displayed:

```
Adapter Properties
Adapter      PCI   Dev/
              Bus  Func
1020/1030    3    51
<Device Properties>
Host SCSI ID           [7]
SCSI Bus Scan Order   [Low to High (0..Max)]
Removable Media Support [None]
CHS Mapping            [SCSI Plug and Play Mapping]
Spinup Delay (Secs)   [2]
Secondary Cluster Server [No]
Termination Control    [Auto]
<Restore Defaults>
```

8. Ensure that <Device Properties> is highlighted, then and press Enter.

The following information is displayed:

Device Properties							
SCSI ID	Device Identifier	MB/Sec	MT/Sec	Data Width	Scan ID	Scan LUN's	> 0
0	SEAGATE ST336607LSUN36G	320	320	16	Yes	Yes	
1	SEAGATE ST336607LSUN36G	320	320	16	Yes	Yes	
2	SEAGATE ST336607LSUN36G	320	320	16	Yes	Yes	
3	SEAGATE ST336607LSUN36G	320	320	16	Yes	Yes	
4	SEAGATE ST336607LSUN36G	320	320	16	Yes	Yes	
5	SEAGATE ST336607LSUN36G	320	320	16	Yes	Yes	
6	SEAGATE ST336607LSUN36G	320	320	16	Yes	Yes	
7	1020/1030		320	16	Yes	Yes	
8	SEAGATE ST336607LSUN36G	320	320	16	Yes	Yes	
9	SEAGATE ST336607LSUN36G	320	320	16	Yes	Yes	
10	SEAGATE ST336607LSUN36G	320	320	16	Yes	Yes	
11	SEAGATE ST336607LSUN36G	320	320	16	Yes	Yes	
12	SEAGATE ST336607LSUN36G	320	320	16	Yes	Yes	

9. Use the arrow key to highlight the disk drives in the Scan ID column and use the -/+ key to change them from Yes to No. Do not change the boot disk.

Device Properties							
SCSI ID	Device Identifier	MB/Sec	MT/Sec	Data Width	Scan ID	Scan LUN's	> 0
0	SEAGATE ST336607LSUN36G	320	320	16	No	Yes	
1	SEAGATE ST336607LSUN36G	320	320	16	No	Yes	
2	SEAGATE ST336607LSUN36G	320	320	16	No	Yes	
3	SEAGATE ST336607LSUN36G	320	320	16	No	Yes	
4	SEAGATE ST336607LSUN36G	320	320	16	No	Yes	
5	SEAGATE ST336607LSUN36G	320	320	16	No	Yes	
6	SEAGATE ST336607LSUN36G	320	320	16	No	Yes	
7	1020/1030		320	16	Yes	Yes	
8	SEAGATE ST336607LSUN36G	320	320	16	Yes	Yes	
9	SEAGATE ST336607LSUN36G	320	320	16	No	Yes	
10	SEAGATE ST336607LSUN36G	320	320	16	No	Yes	
11	SEAGATE ST336607LSUN36G	320	320	16	No	Yes	
12	SEAGATE ST336607LSUN36G	320	320	16	No	Yes	

Note – In the example above, SCSI ID 7 is the HBA with the external boot disk attached, and SCSI ID 8 is the external boot disk.

10. Press the Escape key twice.

The following information is displayed:

```
Adapter and/or device property changes have been made
<Cancel Exit>
Exit the Configuration Utility
<Save Changes then exit this menu>
<Discard changes then exit this menu>
```

11. Use the arrow key to highlight <Save Changes then exit this menu> and press Enter.

12. Press the Escape key.

13. Use the arrow key to highlight Exit the Configuration Utility and press Enter.

```
Saving global properties...
Global properties saved. Hit any key to reboot.
```

14. Press any key to reboot the system.

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>