eXtremeRAID 3000

Quick Installation Guide

DB11-000034-00 First Edition
08P5526

LSI LOGIC

Electromagnetic Compatibility Notices

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and

2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

•Reorient or relocate the receiving antenna.

•Increase the separation between the equipment and the receiver.

•Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

•Consult the dealer or an experienced radio/TV technician for help.

Shielded cables for SCSI connection external to the cabinet are used in the compliance testing of this Product. LSI Logic is not responsible for any radio or television interference caused by unauthorized modification of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by LSI Logic. The correction of interferences caused by such unauthorized modification, substitution, or attachment will be the responsibility of the user.

The LSI Logic Mylex eXtremeRAID 3000 is tested to comply with FCC standards for home or office use.

This Class B digital apparatus meets all requirements of the Canadian

Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

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取扱説明書に従って正しい取り扱いをして下さい。

This is a Class B product based on the standard of the Voluntary Control Council for Interference from Information Technology Equipment (VCCI). If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

LSI Logic Corporation
North American Headquarters
Milpitas, CA
408.433.8000

FC Declaration of Conformity

Per FCC Part 2, Section 2.1077(a)

Manufacturer's Name: LSI Logic Corporation
Manufacturer's Address: North American Headquarters
Milpitas, CA
USA

Declares that the product:
Product Name: High Performance RAID Controller

Model Number(s): eXtremeRAID 3000

Year of Manufacture: 2000

Conforms to the following Product Specification(s):

FCC: CFR 47 Part 15, Subpart B, Section 15.107(e) and Section 15.109(g) Class B Digital Device tested per ANSI C63.4–1992 procedures

Supplementary Information:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CE Declaration of Conformity

Per 89\336\EEC

Responsible Party

Name: LSI Logic Corporation

Address: North American Headquarters
Milpitas, CA
U.S.A.

hereby declares that the product

Trade Name: High Performance Caching RAID Controller

Model Number(s): eXtremeRAID-3E Fab. 550137-A Rev. A

conforms to the following specifications

Standards: EN 50081-1:1992, Emissions
EN 55022:1998 Class B ITE radiated and conducted emissions

EN 50024:1998, Immunity
EN 61000-4-2:1998 Electrostatic Discharge
EN 61000-4-3:1996 Radiated Susceptibility
EN 61000-4-4:1995 Electrical Fast Transients/Burst

CE Community of Europe

CE mark is rated for the eXtremeRAID 3000 as follows:

CISPR 22 Radiated Emission

EN55022, Generic immunity standard for the following:
IEC 801-2 ESD, IEC 801-3 Radiated, and IEC 801-4 EFT/Burst

Warning!

This is a Class B product. In a residential environment this product may cause radio interference, in which case the user may be required to take adequate measures.

Achtung!

Dieses ist ein Gerät der Funkstörgrenzwertklasse B. In Wohnbereichen können bei Betrieb dieses Gerätes Rundfunkstörungen aufreten, in welchen Fällen der Benutzer für entsprechende Gegenmaßnahmen verantwortlich ist.

Avertissement!

Cet appareil est un appareil de Classe B. Dans un environnement résidentiel cet appareil peut provoquer des brouillages radioélectriques. Dans ce cas, il peut être demandé à l'utilisateur de prendre des mésures appropriées.

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Document Description

Document DB11-000034-00 First Edition. November 2002
This document describes the LSI Logic Corporation's Mylex eXtremeRAID 3000 product for Software Kit 5.20 and will remain the official reference source for all revisions/releases of this product until rescinded by an update.

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Hardware Installation

Introduction

The eXtremeRAID 3000 is a very versatile PCI to Fibre Channel RAID controller with an internal Ultra2 SCSI, LVD channel. There are many possible hardware configurations. This quick installation guide assumes that the user is familiar with controller, disk drive, and RAID terminology.

Performing an Installation

WARNING

To avoid electrical shock, do not attempt to perform this hardware installation with power on. Disconnect the system from the electrical wall outlet.

PCI Hot Plug

Please refer to Appendix D in the *eXtremeRAID 3000 Installation Guide* for instructions on how to use the PCI Hot Plug feature.

Connectors, Jumpers, and LEDs

There are two Fibre external channels supported on the controller. There is one Ultra2 SCSI internal channel that is supported on the controller. The SCSI and Fibre connector locations are shown in Figure 1.

The back side of the controller has eight LEDs that are active indicators while the controller is running. Please see Figure 2 for the complete identification and location of the LEDs.

All the jumpers should normally be set to their default settings. Jumper locations are shown in Figure 3. Please see Table 1 for default jumper descriptions.

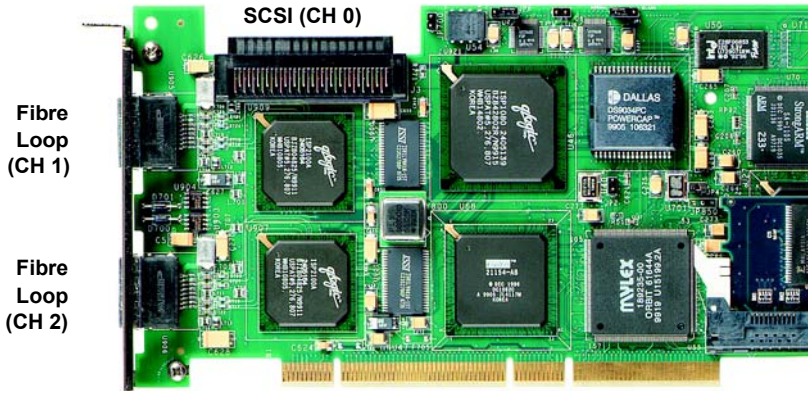

Figure 1. eXtremeRAID 3000 Controller with Channel Connectors

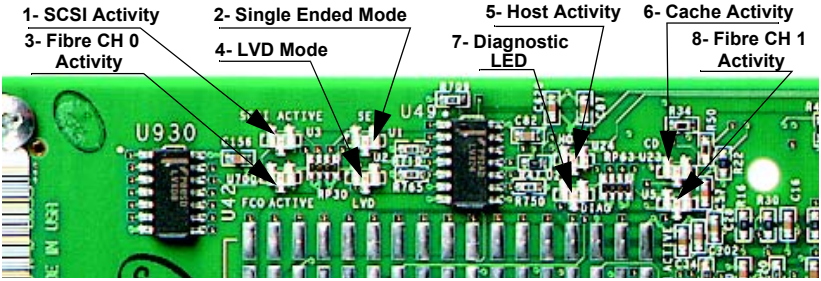

Figure 2. eXtremeRAID 3000 with LEDs (back)

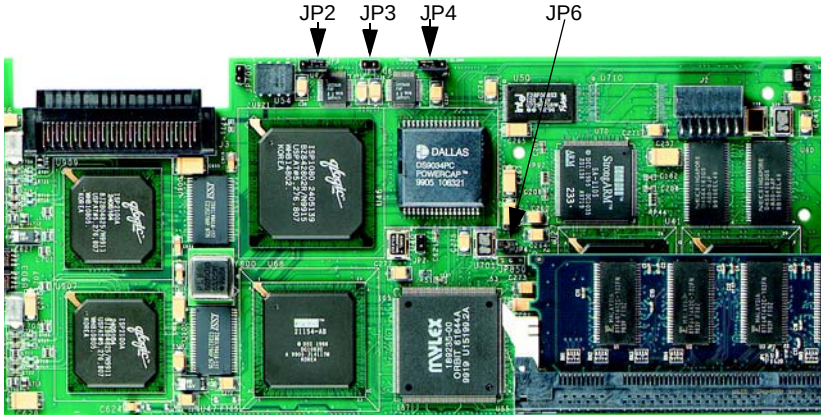

Figure 3. eXtremeRAID 3000 Controller with Jumpers (front)

Table 1. Jumper Descriptions

Jumper	Description	Default Setting
JP2	pins 1–2 for Arm Proc, pins 2–3 for I2O	1–2
JP3	Mylex manufacturing diagnostics – do not use	off
JP4	pins 1–2 normal , pins 2–3 normal mode	1–2
JP6	maintenance – do not use	off

Installing the eXtremeRAID 3000 into the System Board

1. With the power off, plug (install) the controller firmly into any 32 bit or 64 bit PCI slot, and wear a ground wrist strap as shown in Figure 4. Notice that the black handle must fit into the side slot for a proper fit. (refer to Figure 4).

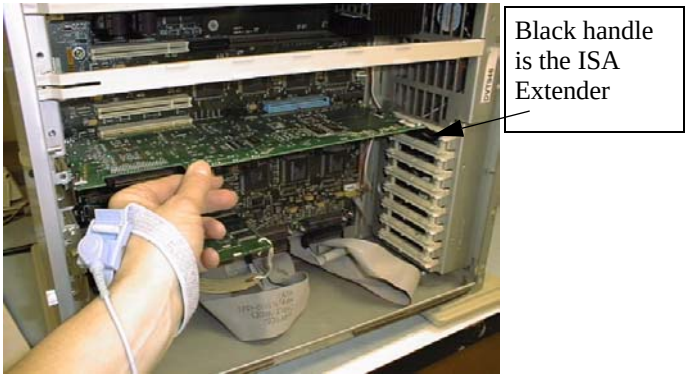

Figure 4. Plugging the eXtremeRAID 3000 into a PCI Slot

2. Set the SCSI ID on each internal drive to a unique address between 0 and 15, but do not use address 7, as it is reserved for the controller. See the documentation that comes with your drives for instructions on how to do this.

> ⚠ ***Caution***
>
> Be sure to use a Fibre Channel Cabinet for the Fibre disk drives. Do not mix SCSI and Fibre disk drives in the same cabinet. There is no termination for Fibre drives.

3. *Disable* termination on all SCSI drives connected to the controller. See the documentation that comes with your drives for instructions on how to do this.

4. *Enable* termination power on all SCSI drives connected to the controller. See the documentation that comes with your drives for instructions on how to do this.

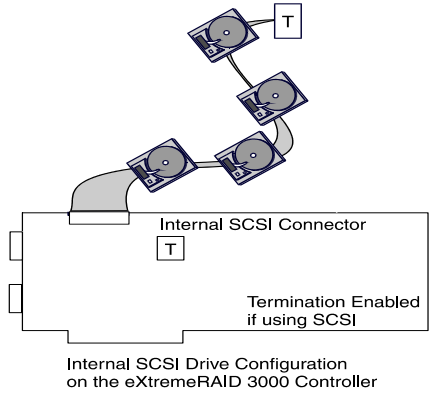

Figure 5. Internal SCSI Configuration and Termination

5. Set the SCSI ID for each external disk drive to a unique address between 0 and 15, but do not use address 7 (reserved for the controller). Do not duplicate SCSI IDs used by internal drives designated for the same channel. For information on how to set SCSI IDs, refer to the disk drive documentation.

   If you are using an external SCSI cabinet, see the ***Caution*** note above.

6. Connect a wide, high-density, 68-pin SCSI ribbon cable to the internal SCSI connector on the eXtremeRAID 3000 controller and connect the other cable connectors to any SCSI devices as required (see Figure 5). eXtremeRAID 3000 always has the on-board SCSI termination enabled.
7. Connect an active terminator to the end of the SCSI ribbon cable at the end farthest from the controller (see Figure 5).

   External drive cabinets usually have termination built into the end of the SCSI bus. Check the documentation that comes with your drive cabinet to be sure this is the case. If not, use an active terminator at the end of the bus.

   ☞ **Note**

   The eXtremeRAID 3000 terminator is set to be ON.

8. Connect a Fibre cable, with the High Speed Serial Data Connector (HSSDC), to either one or both of the external Fibre connectors on the eXtremeRAID 3000 controller. Connect the other end of the Fibre cable, with a 9-Pin DSUB connector, to other devices or to a Fibre Channel Cabinet external drive cabinet, as required (see Figure 6).

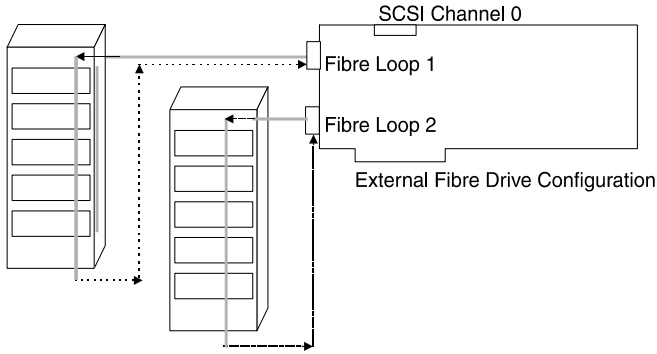

Figure 6. External Fibre Drive Configuration

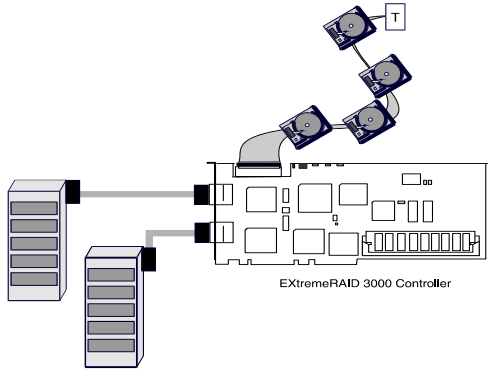

Figure 7. eXtremeRAID 3000 in a Typical Installation Using Fibre and SCSI Connectors

The hardware portion of the installation is complete.

Please see the following section titled “What to Do Next.”

What to Do Next

1. Use RAID EzAssist to create an automatic or a custom RAID Configuration.

   Refer to the *RAID EzAssist Configuration Utility Quick Configuration Guide* or *RAID EzAssist Configuration Utility User Reference Guide.*

2. Install the eXtremeRAID 3000 controller drivers appropriate for your server's network operating system.

   Refer to the *PCI Disk Array Controller Drivers Installation Guide and User Manual.*

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