AcceleRAID 352

Quick Installation Guide

DB11-000027-00 First Edition
08P5516

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 AcceleRAID 352 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.

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラス B 情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。
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

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): AcceleRAID 352

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): AcceleRAID 352 Fab. 550157-01 Rev. A

conforms to the following specifications

Standards: EN 50081-1:1992, Emissions
EN 55022 Class B (Radiated), Class B (Conducted)

EN 50082-1:1992, Immunity
EN 61000-4-2:1995 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 AceleRAID 352 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.

Underwriters Laboratories Statement and Warning

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MYLEX CORP.

I. T. E. : 32JK File: E178007

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Document Description

Document DB11-000027-00 First Edition. November 2002
This document describes the LSI Logic Corporation's Mylex AcceleRAID 352 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 AcceleRAID 352 is a versatile PCI to a dual channel Ultra 160 SCSI, Low Voltage Differential (LVD) RAID controller. 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 *AcceleRAID 352 PCI to Ultra 160 SCSI RAID Controller Installation Guide* for instructions on how to use the PCI Hot Plug feature.

Connectors, Jumpers, and LEDs

There are two Ultra 160 SCSI external channels and two Ultra 160 SCSI internal channels supported on the controller. The SCSI connector locations are shown in Figure 1.

All the jumpers should normally be set to their default settings. See Table 1 for default jumper settings. Jumper locations are shown in Figure 2.

The front side of the controller has one LED that is described in Figure 3 and in Table 2. The back side of the controller has four LEDs that are mode indicators while the controller is running. These LEDs indicate single-ended mode and LVD mode and are described in Figure 4 and in Table 3.

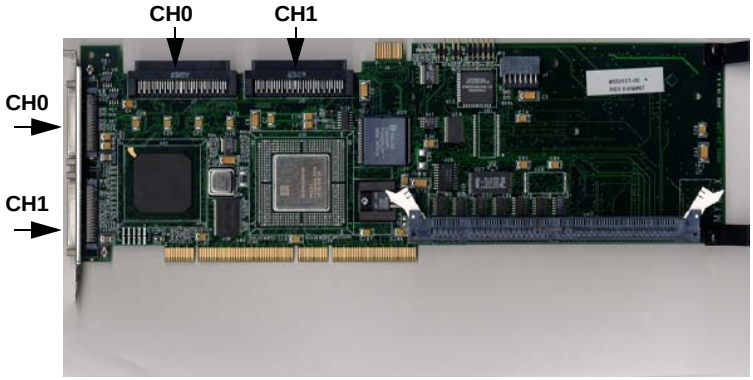

Figure 1. AcceleRAID 352 Controller with Channel Connectors

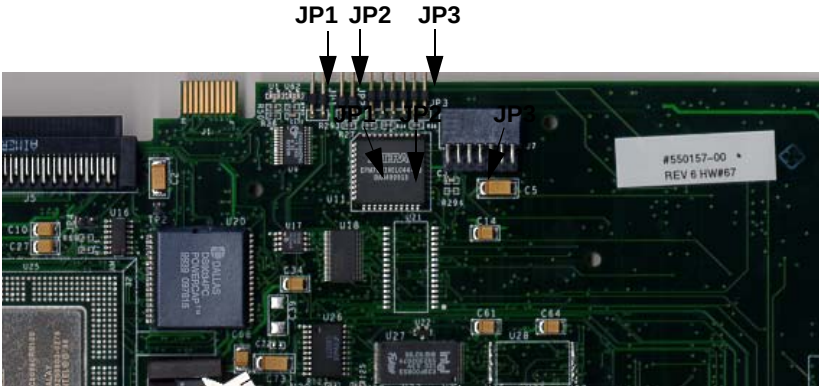

Figure 2. AcceleRAID 352 Default Jumper Identification (front)

Table 1. AcceleRAID 352 Default Jumper Descriptions

JP1	Blank ROM mode; do not use
JP2	Maintenance mode; do not use
JP3	6-pin header

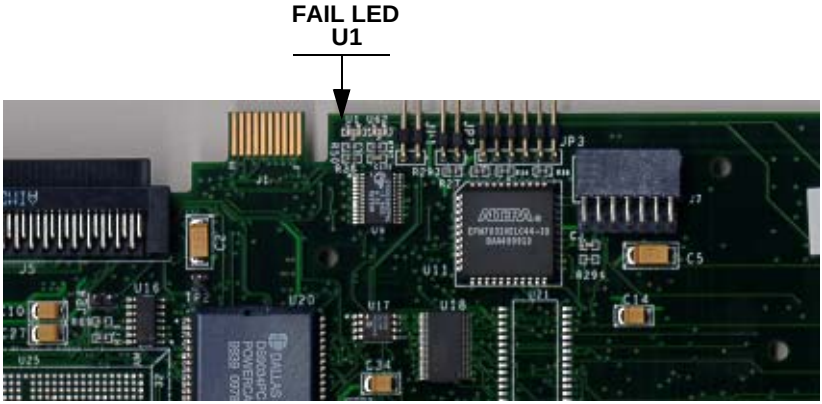

Figure 3. AcceleRAID 352 Controller with LED (front)

Table 2. LED Description (front)

U1	FAIL LED

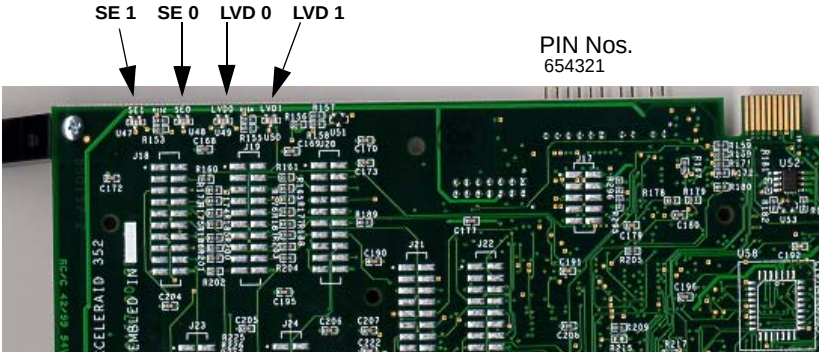

Figure 4. AcceleRAID 352 with LEDs and PIN Numbers (back)

Table 3. LED Descriptions (back)

SE 1	Single-ended LED, Channel 1
SE 0	Single-ended LED, Channel 0
LVD 0	LVD LED, Channel 0
LVD 1	LVD LED, Channel 1

Table 4. Six-Pin Header Identification (JP3)

Pin 1	3.3V power
Pin 2	Channel 0 SCSI activity
Pin 3	Channel 1 SCSI activity
Pin 4	Not used, not connected
Pin 5	Cache Dirty and SCSI activity
Pin 6	Ground pin

Installing the AcceleRAID 352 into the System Board

1. With the power off, plug the AcceleRAID 352 controller into an available 32-bit or 64-bit PCI slot on the system board (refer to Figure 5). The 32-bit slot is short, the 64-bit slot is longer.

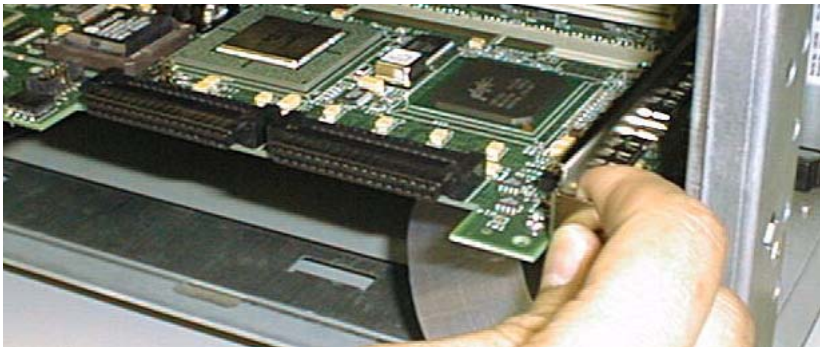

Figure 5. Plugging the AcceleRAID 352 into a PCI Slot

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***

   If internal and external drives are used, be sure that no drive addresses are duplicated. External SCSI cabinets usually automatically assign drive addresses according to the drives' location in the cabinet.

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. (Termination must be enabled on the last device, if applicable.)

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.

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

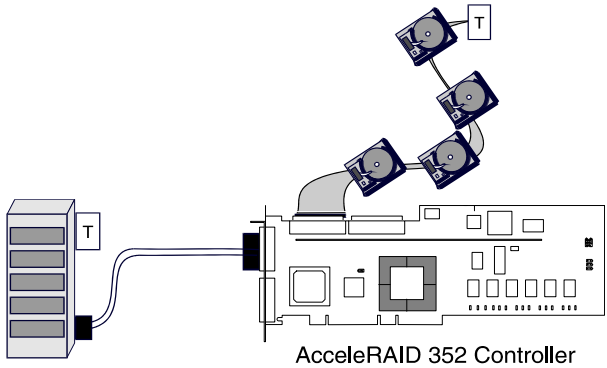

Figure 6. Connecting Internal and External Drives

6. Connect a wide, high-density, 68-pin SCSI ribbon cable to the internal SCSI connector on the AcceleRAID 352 controller and connect the other cable connectors to any SCSI devices as required (see Figure 6). Termination is automatic on the AcceleRAID 352.
7. Connect an active terminator to the end of the SCSI ribbon cable at the end farthest from the controller (see Figure 6).

   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.
8. Connect a cable(s), with the 68 pin VHDCI, to either one or both of the external connector(s) on the AcceleRAID 352 controller. Connect the other end of the cable connector, to other devices or to a SAF-TE external drive cabinet, as required (see Figure 6).

Note

The AcceleRAID 352 terminator is ON by default. It is automatically terminated and will be disabled automatically if necessary.

An example of a typical, completed installation of the AcceleRAID 352 is shown in Figure 7.

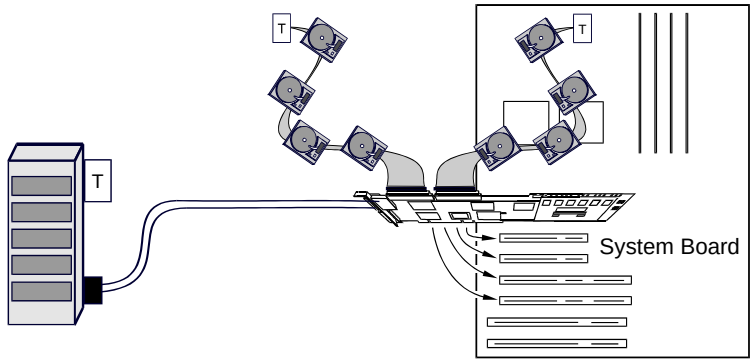

Figure 7. AcceleRAID 352 in a Typical Installation and SCSI Connectors

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 AcceleRAID 352 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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