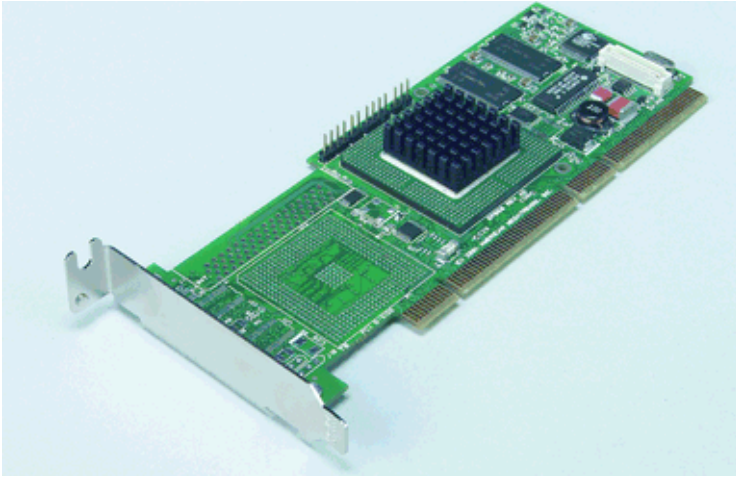


LSI Logic MegaRAID[®] SCSI 320-0 ZCR Controller



Thank you for purchasing the MegaRAID SCSI 320-0 Controller. Please take a few minutes to read this *Quick Hardware Setup Guide* before you install the MegaRAID controller. If you need more information about any topic covered in this guide, please refer to the other documents on your Driver and Documentation CD.

Contents of Driver and Documentation CD

The Driver and Documentation CD is packaged with the MegaRAID SCSI 320-0 Controller. The CD contains utility programs, device drivers for various operating systems, and the following documentation:

- *MegaRAID SCSI 320-0 ZCR Hardware Guide*
- *MegaRAID Configuration Software Guide*
- *MegaRAID Operating System Driver Installation Guide*
- Software license agreement and warranty registration card

Technical Support

If you need help installing, configuring, or running the MegaRAID SCSI 320-0 Controller, contact LSI Logic Technical Support:

Phone Support: 678-728-1250

Web Site: <http://megaraid.lsillogic.com/support/index.html>

Email: MegaRAIDsupport@lsil.com

MegaRAID Controller Installation

Caution: Make a backup of your data before you change your system configuration. Otherwise you may lose data.

You must install this MegaRAID controller in a system with an LSI Logic 53C1030 chip and a specific ZCR (Zero-Channel RAID) slot on the motherboard. Perform the following steps to install the MegaRAID controller. Each step is explained more fully in the following sections.

| Step | Action |
|------|---------------------------------------------------------------------|
| 1 | Unpack the MegaRAID SCSI 320-0 Controller. |
| 2 | Turn off the computer, remove the power cord, and remove the cover. |
| 3 | Check the MegaRAID controller jumper settings. |
| 4 | Install the MegaRAID controller. |
| 5 | Replace the computer cover and turn the power on. |

| Step | Action |
|------|----------------------------------------------|
| 6 | Run the MegaRAID BIOS Configuration Utility. |
| 7 | Install the operating system driver. |

Step 1: Unpack MegaRAID Controller

Unpack and install the MegaRAID SCSI 320-0 Controller in a static-free environment. Remove the MegaRAID controller from the anti-static bag and inspect it for damage. If it appears to be damaged, or if the Driver and Documentation CD is missing, contact LSI Logic or your MegaRAID OEM support representative.

Step 2: Prepare Computer

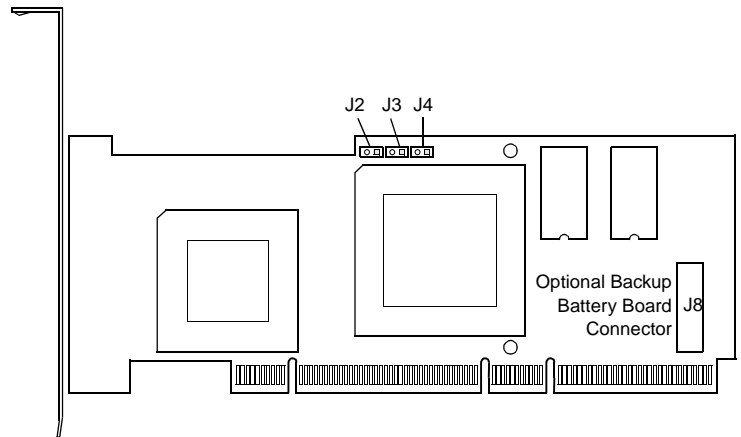
Turn off the computer and remove the power cord from the back of the power supply. Remove the cover from the chassis. *Make sure the computer is disconnected from the power and from any networks before installing the controller card.*

Step 3: Check MegaRAID Controller Jumpers

Make sure the jumper settings on the MegaRAID controller are correct. The jumpers are set at the factory, and you probably do not need to change them. The following table lists the jumpers and connectors on the RAID controller.

| Item | Description | Type |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| J2 | Dirty cache LED: This can be connected to an LED on the computer enclosure. The LED will be lit when data in the cache has not yet been written to the storage device. | 2-pin header |
| J3 | Clears EPROM configuration data. | 2-pin header |
| J4 | Enables or disables the MegaRAID onboard BIOS. Leave the BIOS enabled (no jumper). | 2-pin header |
| J8 | Battery backup board connector. | 40-pin connector |

The following diagram shows the location of the jumpers and connectors on the MegaRAID SCSI 320-0 Controller.



Quick Hardware Setup Guide

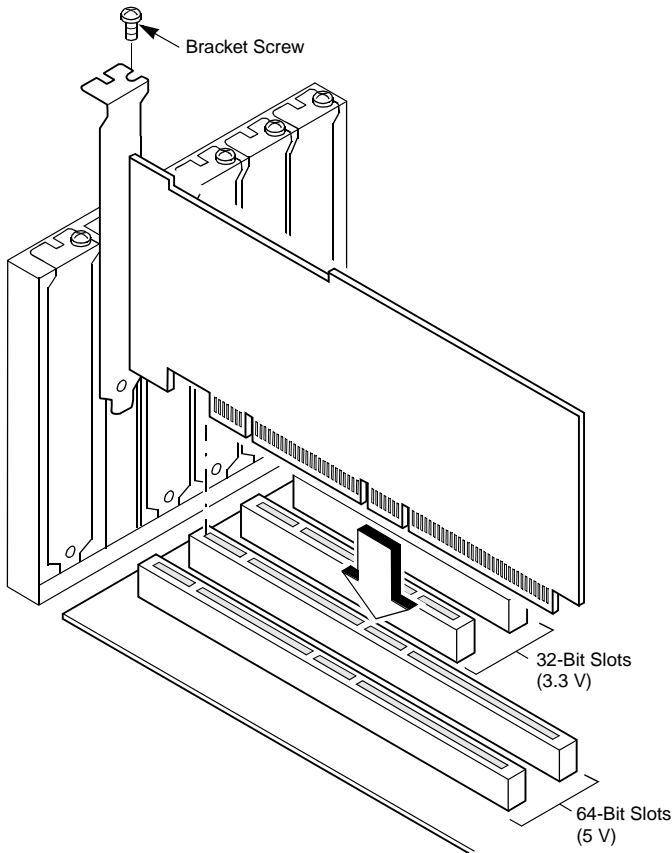
Step 4: Install MegaRAID Controller

Install the MegaRAID SCSI 320-0 Controller in the correct 3.3 V or 5 V PCI slot, as shown below. The MegaRAID controller must be installed in a specific PCI slot so it can enable the motherboard's onboard SCSI controller to operate as a SCSI RAID controller. See the motherboard documentation if you are not sure which PCI slot you should use.

Press down gently, but firmly, to make sure that the card is properly seated in the slot. The bottom edge of the controller card must be flush with the slot. Attach the MegaRAID controller to the computer chassis with the bracket screw.

Connect any SCSI devices to the SCSI connectors controlled by the system's LSI53C1030 controller.

Caution: Any data on your SCSI disk drives will be lost when you upgrade the system to the MegaRAID controller. Back up your data before upgrading.



Step 5: Power Up the Computer

Replace the computer cover and connect the power cord to the computer. Turn on the power and boot the computer.

Observe the messages that appear during the boot process, until you see the message:

Press <Ctrl><M> to run MegaRAID SCSI 320-0 BIOS Configuration Utility

Step 6: Run the MegaRAID BIOS Configuration Utility

When the "Press <Ctrl><M>" message appears on the screen, press <Ctrl><M> immediately to run the MegaRAID BIOS Configuration Utility. See the *MegaRAID Configuration Software Guide* on the Driver and Documentation CD for information about how to run and use this program.

Step 7: Install Operating System Driver

The MegaRAID controller can operate under MS-DOS® or any DOS-compatible operating system using the standard AT BIOS INT 13h Hard Disk Drive interface. To operate with other operating systems, you must install software drivers. The Driver and Documentation CD includes drivers for the following operating systems:

- MS-DOS version 6.xx or later
- Microsoft Windows NT v4.0, Windows 2000, Windows XP, and Windows .NET
- Novell NetWare 5.1 and 6.0
- Red Hat Linux 7.2 and 7.3

Supported RAID Levels

The MegaRAID SCSI 320-0 Controller supports disk arrays using the following RAID levels:

- **RAID 0 (Data striping):** Data is striped across all disks in the array, enabling very fast data throughput. There is no data redundancy. All data is lost if any disk fails. (1-15 disk drives)
- **RAID 1 (Disk mirroring):** Data is written simultaneously to two disks, providing complete data redundancy in case one disk fails. The array capacity is half of total disk space. (2 disk drives)
- **RAID 5 (Disk striping with distributed parity):** Data is striped across all disks in the array. Part of the capacity of each disk is used to store parity information that is used to reconstruct data if a disk fails. Provides good data throughput for applications with high read request rates. (3 to 15 disk drives)
- **RAID 10 (RAID 1 and RAID 0 in spanned arrays):** Uses mirrored pairs of disks to provide complete data redundancy. Provides high data throughput rates. (4 to 14 disk drives)
- **RAID 50 (RAID 5 and RAID 0 in spanned arrays):** Uses both parity and disk striping across multiple disks to provide complete data redundancy. Provides high data throughput rates. (6 to 15 disk drives)



You can find a list of LSI Logic's U.S. distributors, international distributors, sales offices, and design resource centers on the LSI Logic web site at:
http://www.lsillogic.com/contacts/na_salesoffices.html