

The background of the entire page is a light gray, stylized circuit board pattern. It features a complex network of lines representing traces, with various circular and rectangular shapes representing components and vias. The pattern is dense and covers the entire area.

ATA-133 IDE RAID Card

Version 1.1

User Manual

CE FC



Contents

1.0 Features	P.3
2.0 Package Content.....	P.3
3.0 System Requirement	P.3
4.0 Installing the ATA/133 IDE Controller Card	P.4
5.0 Driver Installation	P.5
6.0 RAID Explained.....	P.8

Introduction

The PCI Ultra ATA/133 IDE RAID Controller Card provides an inexpensive way for users to increase the speed or fault-tolerance of their PC. RAID levels 0 (striping), 1 (mirroring) and 0+1 (mirroring a stripe set) are supported on up to 4 IDE drives. The card supports Ultra ATA/133 hard drives for maximum performance, but is also compatible with older drives. This card is the perfect solution for adding the redundancy of mirroring to small business file servers, or improving the drive speed on workstations with striping.

1.0 Features

The PCI is a true 32-bit PCI-Bus card. It supports the following I/O features:

- PCI "Plug and Play" compatibility
- Fully Ultra ATA/133 compatible
- Supports bus master DMA at 133Mbytes/sec PCI burst rate
- Supports maximum IDE/ATA data transfer rate of 133 MB/sec
- Supports to 4 IDE/ATA devices
- Fully backward compatible with Ultra ATA/66, Ultra ATA/33, EIDE/Fast ATA-2, IDE and ATAPI devices
- Compliant to ATA/ATAPI-5 specification and PCI specification version 2.1
- Auto identifies and configures drive type
- Auto detects and supports Ultra Mode (ATA/EIDE) transfers

2.0 Package Content

Check if the following items are present and in good condition upon opening your package. Contact your retailer if any of the items is damaged or missing.

1. Hardware:

 PCI Card:

 IDE ATA-133 PCI Host Controller x 1

 Cable:

 IDE Cable x 1

2. CD Driver

3. User's Manual

3.0 System Requirements

- The device must support Ultra ATA/133 mode.
- The motherboard and system BIOS or an add-on IDE controller card must support Ultra ATA/133 mode.
- The operating system must support Direct Memory Access (DMA) such as Windows 98.
- The IDE cable must be 80 wires/40-pin and the length of the cable should not exceed 18 inches (44.1 cm).
- Driver support Windows 98/ME, Windows NT4.0, Windows 2000 and Windows XP.

4.0 Installing the ATA-133 IDE Controller Card

1. Turn off your computer and all external devices connected to it.
2. Disconnect your computer from the power sources.
3. Open the computer case.
4. Find an available PCI slot (these are usually the white slots found on the motherboard) and remove the slot bracket. Save the bracket screw for later.
5. Align the ATA/133 IDE controller card horizontally with respect to the PCI slot and insert it into the slot firmly and evenly. Take care not to force it into the slot. Once you have properly positioned the ATA/133 IDE controller card into the slot, fasten it to the computer case with the bracket screw you have saved.
6. Connect the HDD LED connector of the computer case to the HDD Busy LED (J4) connector on the ATA/133 IDE controller card.
7. Connect any Ultra DMA/133 device to the connector(s) of the ATA/133 IDE controller card with the 80 wires/40-pin IDE cable. The BLUE connector of the 80 wires/40-pin IDE cable must be connected to the IDE connector on the ATA/133 IDE controller card.

(Adjusting your IDE HDD(s) Master or Slave properly and connect to the Primary or Secondary IDE in proper connector on the ATA-133 IDE PCI card with attached IDE cables)
8. Replace the computer case. Make sure to reconnect all external devices to your computer.

5.0 Driver Installation

◆ Windows NT4.0 / 2000 / XP Fresh Installation Instructions

1. The first please copy all files from CD-ROM driver into the diskette(floppy).

: \IDE\3710(ATA133)\driver

3. Set up BIOS booting from the CD-ROM. Put your Windows NT/2000/XP CD into the CD/DVD -ROM drive, and plug driver diskette into the floppy device.

4. After rebooting, the system will detect the ATA-133 IDE card automatically.
“**Sil 0680 ATA-133 Medley RAID Controller**” Press “**F3**” to setup RAID.
(About RAID setting, you could read the section 6.0 RAID Explain on page 8)

After setting RAID, the system will go through the windows installation process.

5. Press “**F6**” for third party SCSI or RAID installation at the beginning of text mode installation. The system will scan the hardware automatically.
6. Press “**S**” (Specify Additional Device) when setup asks if you want to specify an additional device, and insert the diskette which you had copied.
Press “**Enter**” and select “**Silicon Image Sil 0680 Ultra133 RAID Controller**”.
7. Press “Enter” again when prompted to continue on with text mode setup.
8. Follow the setup instructions to select your choice for partition and file system.
9. After setup examines your disks, it will copy files from the CD to the hard drive selected above and restart the system. After restart the setup process will resume to finish the installation.
10. After installing OS, please set BIOS booting form SCSI booting Drive.
11. To install **CMD Medley GUI**, use Windows InstallShield by performing the following:

- a. After computer restarting, insert the Driver CD into the CD-ROM drive.
- b. Double-click the **SilConfig.exe** icon from the CD driver to install CMD Medly GUI.

: \IDE\3710(ATA133)\ SilConfig.exe



- c. Follow on-screen instructions to complete installation.

◆ Windows 98SE / ME Fresh Installation Instructions

You may start up the Windows 98SE/ME installation from CD. If either your Windows 98SE/ME CD or CD-ROM drive is not bootable, you can start up with floppy diskettes.

1. Set up BIOS booting from the CD-ROM (or Floppy). Put your Windows NT/2000/XP CD into the CD/DVD -ROM drive, or plug booting diskette into the floppy device.
2. After rebooting, the system will detect the ATA-133 IDE card automatically.
“**Sil 0680 ATA-133 Medley RAID Controller**” Press “**F3**” to setup RAID.
(About RAID setting, you could read the section 6.0 RAID Explain on page 8)

After setting RAID, the system will go through the windows installation process.

3. Follow the normal Windows 98SE/ME setup instructions to select your choice for partition and file system.
4. Wait until Windows 98SE/ME finishes installing devices, regional settings, networking settings, components, and final set of tasks, reboot the system.
5. When rebooting, please set BIOS booting from SCSI booting Drive.
6. After the system rebooting, right click on “My Computer” and select “Properties”. From “System Properties”, select “**Device Manager**”, right click on the PCI Mass Storage controller” and select “Properties” from the context menu.
8. Click “Driver” ,”Update Driver” and select “Automatic search for a better driver ”. Insert the driver diskette into floppy drive or specify a location driver from CD-ROM

: \IDE\3710(ATA133)\driver

Click “Next” and complete the driver installation.

9. System will go through the enumeration process and install the driver. At the end of the process, click “Yes” to reboot your system.
10. To install **CMD Medley GUI**, use Windows InstallShield by performing the following:
 - a. After computer restarting, insert the Driver CD into the CD-ROM drive.
 - b. Double-click the **SilConfig.exe** icon from the CD driver to install CMD Medly GUI.

: \IDE\3710(ATA133)\ SilConfig.exe



- c. Follow on-screen instructions to complete installation.

◆ **Adding the Serial-ATA card to an existing Windows NT4.0/2000/XP installation**

1. If your OS system installed in the booting HDD which connected to the ATA-133 IDE PCI card, the HDD will be formatted, no matter setting Raid or not.
2. Please follow the step as **Windows NT4.0/2000/XP Fresh Installation**
3. If you set motherboard BIOS booting from SCSI booting Device instead of CD-ROM, you should setup RAID function. Otherwise the OS can't work properly.

◆ **Adding the Serial-ATA card to an existing Windows 98SE/ME installation**

Please set up motherboard BIOS boot from **SCSI Boot Device**, if you want to connect your Booting IDE HDD with OS to the ATA-133 IDE card instead of motherboard bus.

1. During the system booting up, the Hardware Wizard will display that it found a "PCI Mass Storage Controller", click "Next".
Select "Search for the best driver for your device (Recommended)" and click "Next".
2. Insert the CD-Drive into the CD/DVD-ROM.
Please select "specify a location" and click "browser" change the folder to CD/DVD-ROM drivers as below link. Please click "Next".

:\\IDE\3710(ATA133)\driver

3. System will go through the enumeration process and install the driver. At the end of the process, Click "Finish" to complete the installation.
4. To install **CMD Medley GUI**, use Windows InstallShield by performing the following:
 - a. After computer restarting, insert the Driver CD into the CD-ROM drive.
 - b. Double-click the **SilConfig.exe** icon from the CD driver to install CMD Medly GUI.

:\\IDE\3710(ATA133)\ SilConfig.exe



- c. Follow on-screen instructions to complete installation.

6.0 RAID Explained

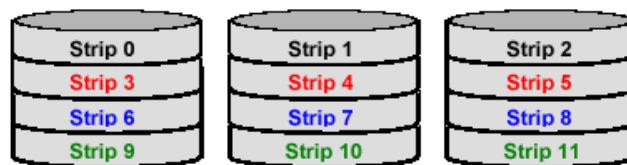
◆ RAID - Redundant Array of Independent Disks

RAID technology manages multiple disk drives to enhance I/O performance and provide redundancy in order to withstand the failure of any individual member, without loss of data. Medley provides three RAID Set types, Striped (RAID 0), Mirrored (RAID 1), and Mirrored-Striped (RAID 0+1).

◆ Disk Striping (RAID 0)

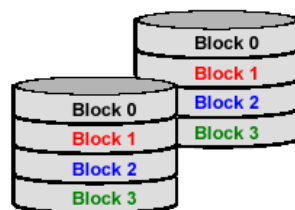
Striping is a performance-oriented, non-redundant data mapping technique. While Striping is discussed as a RAID Set type, it actually does not provide fault tolerance. With modern ATA bus mastering technology, multiple I/O operations can be done in parallel, enhancing performance. Striping arrays use multiple disks to form a larger virtual disk.

This figure shows a stripe set using three disks with stripe one written to disk one, stripe two to disk two, and so forth.



◆ Disk Mirroring (RAID 1)

Disk mirroring creates an identical twin for a selected disk by having the data simultaneously written to two disks. This redundancy provides instantaneous protection from a single disk failure. If a read failure occurs on one drive, the system reads the data from the other drive.



◆ Mirrored-Striping (RAID 0+1 also known as RAID 10)

A Mirrored-Striped Set does just what it says, combining both Striping and Mirroring technologies to provide both the performance enhancements that come from Striping and the data availability and integrity that comes from Mirroring. When data is written to a Mirrored-Striped Set, instead of creating just one “virtual disk” as Striping would do, a second, Mirrored “virtual disk” is created as well.

About creating or deleting RAID step, please see the “Medley Manual” PDF file on the Driver CD: IDE\3710(ATA133)\ Medley Manual.pdf