

# Adaptec ASH-1233 ATA Adapter

## **User's Guide**



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- Before contacting Technical Support, you need your unique 12-digit TSID number. The TSID number identifies your product and support status.
- The TSID number is included on a white, bar-coded label, like the example below.



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- Search the Adaptec Support Knowledgebase (ASK) at [ask.adaptec.com](http://ask.adaptec.com) for articles, troubleshooting tips, and frequently asked questions for your product.
- For support via e-mail, submit your question to Adaptec's Technical Support Specialists at [ask.adaptec.com](mailto:ask.adaptec.com).
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## Regulatory Compliance Statements

### Federal Communications Commission Radio Frequency Interference Statement

WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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 instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. However, if this equipment does cause interference to radio or television equipment 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 equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.
- Use a shielded and properly grounded I/O cable and power cable to ensure compliance of this unit to the specified limits of the rules.

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.



### European Union Compliance Statement

This Information Technology Equipment has been tested and found to comply with EMC Directive 89/336/EEC, as amended by 92/31/EEC and 93/68/EEC, in accordance with:

- EN55022 (1998) Emissions
- EN55024 (1998) Immunity:
  - EN61000-4-2 (1998) Electrostatic discharge:  $\pm 4$  kV contact,  $\pm 8$  kV air
  - EN61000-4-3 (1998) Radiated immunity
  - EN61000-4-4 (1995) Electrical fast transients/burst:  $\pm 1$  kV AC,  $\pm 0.5$  kV I/O
  - EN61000-4-5 (1995) Surges  $\pm 1$  kV differential mode,  $\pm 2$  kV common mode
  - EN61000-4-6 (1996) Conducted immunity: 3 V
  - EN61000-4-11 (1994) Supply dips and variation: 30% and 100%

In addition, all equipment requiring U.L. listing has been found to comply with EMC Directive 73/23/EEC as amended by 93/68/EEC in accordance with EN60950 with amendments A1, A2, A3, A4, A11.



### Canadian Compliance Statement

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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The Adaptec ASH-1233 ATA adapter provides increased performance with enhanced ATA technology. The Adaptec ASH-1233 supports ATA/133 hard disk drives with data transfer rates up to 133 MegaBytes (MB) per second, providing maximum disk performance in systems that have a PCI bus.

This *User's Guide* explains how to install the Adaptec ASH-1233 adapter, connect ATA hard disk drives to it, and install the device drivers for your operating system.



## System Requirements

The minimum system requirements for the ASH-1233 adapter are:

- Pentium II-266 MHz Processor or higher
- Microsoft® Windows® 98SE, Windows Me, Windows 2000, or Windows XP
- Available PCI slot with bus-mastering enabled



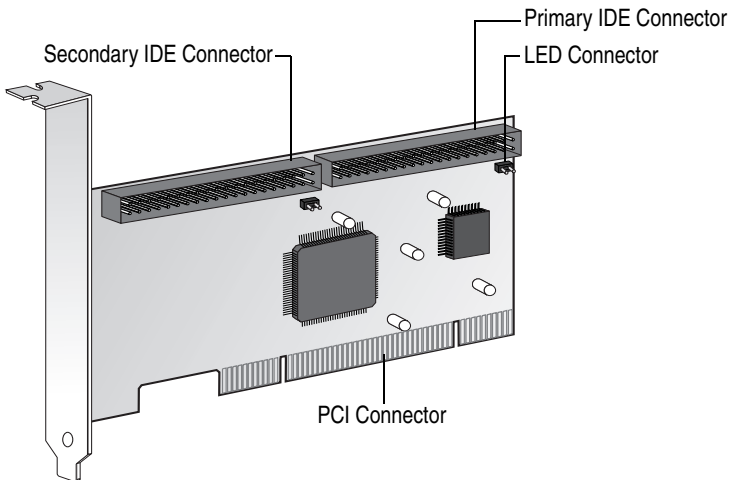
**Note:** Refer to your system or motherboard documentation for information on enabling bus-mastering.

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- At least one ATA drive and IDE cable
- CD-ROM or DVD-ROM drive

## This is Your Adaptec ASH-1233 Adapter

The Adaptec ASH-1233 adapter has the following features:



## Installation Checklist

To successfully install your Adaptec ASH-1233 adapter and ATA disk drives, perform these tasks, in order:

- 1 Install the ASH-1233 adapter. (See the next section below.)
- 2 Prepare your disk drives. (See [page 5](#).)
- 3 Connect your disk drives to the ASH-1233 adapter. (See [page 6](#).)
- 4 Mount your disk drives and connect power and LED cables. (See [page 8](#).)
- 5 Install the device drivers. (See [page 9](#).)

## Installing Your Adaptec ASH-1233 Adapter

You can install your Adaptec ASH-1233 adapter into a 32-bit or 64-bit PCI expansion slot.



**Note:** If you are installing the adapter into an existing system, back up all data before continuing.

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To install the ASH-1233 adapter:

- 1 Discharge any static electricity build-up before handling the ASH-1233 adapter by touching a grounded metal object (such as the exposed metal parts on the back of your computer).

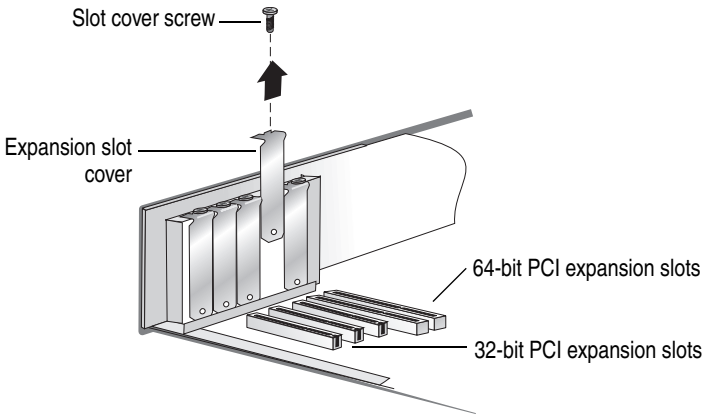


**Caution:** *Always* handle the adapter by its edges or metal bracket. Do not touch the gold PCI connector or any components on the adapter.

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- 2 Turn off power to the computer and disconnect the power cord. Open the computer cabinet, following the manufacturer's instructions.

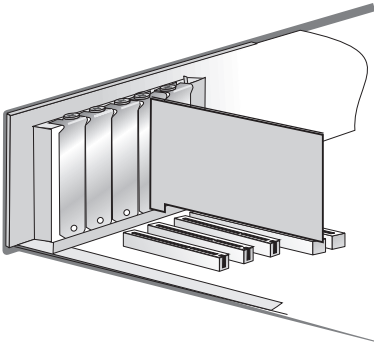
- 3 Locate an unused expansion slot and remove the slot cover. Save the slot cover screw for use in [Step 5](#).



- 4 Insert the ASH-1233 adapter in the PCI expansion slot. Press down firmly until the adapter clicks into place. When installed properly, the adapter should appear level with the expansion slot.



**Note:** Depending on the tightness of the PCI slot, gentle but firm force may be required to insert the adapter.



- 5 Secure the adapter bracket with the slot cover screw you removed in [Step 3](#).

*Do not* close the computer cabinet, reattach the power cord, or power on your computer yet. Continue with *Preparing Your ATA Disk Drives* on [page 5](#).

## Preparing Your ATA Disk Drives

Because setup can vary from device to device or computer to computer, always refer to your ATA disk drive and computer documentation for specific instructions.



**Note:** If you refer to the ATA drive's documentation for installation instructions, return to this document to continue with installation of the software included in your kit.

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Before you begin, ensure that you have the correct cables for the ATA disk drives you are installing. Refer to the disk drives' documentation for more information on cables.

### Setting Jumpers on ATA Disk Drives

If you are installing two hard disk drives, set up each drive as a *master*. This is typically done by changing jumper settings on the drive. The *master* setting is the factory default setting on most ATA drives. Refer to your hard disk drive documentation to determine the correct jumper setting for *master* operation.

If you are installing four hard disk drives, set up two drives as *master* and the other two as *slave*. Mark the *master* and *slave* drives so you remember which are which when you are connecting the cables.

## Connecting Your ATA Disk Drives

The ASH-1233 adapter supports up to four ATA disk drives in a master/slave configuration. (See *Setting Jumpers on ATA Disk Drives on page 5* for more information.)

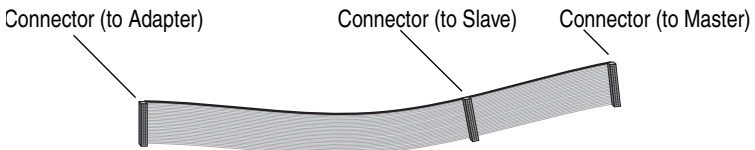
Connect each ATA disk drive to the ASH-1233 adapter using the proper 40-pin IDE cable.



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**Note:** The Adaptec ASH-1233 adapter does not support Cable Select (CSEL) settings. You must change the jumper settings to set drives as master or slave.

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To connect your ATA disk drives, follow the instructions for your specific drive configuration:

- To install an ATA disk drive as the only device on a cable, see [page 7](#).
- To install two ATA disk drives on the same cable, see [page 8](#).

## Connecting One ATA Disk Drive on a Cable

When you connect only one ATA disk drive to a cable, that disk drive must be set as a *master* drive. (See *Setting Jumpers on ATA Disk Drives* on page 5 for more information.)

To connect one ATA drive to the ASH-1233 adapter:

- 1 Connect the IDE cable to an IDE connector on the ASH-1233 adapter, being careful to match pin 1 of the cable to pin 1 of the connector.

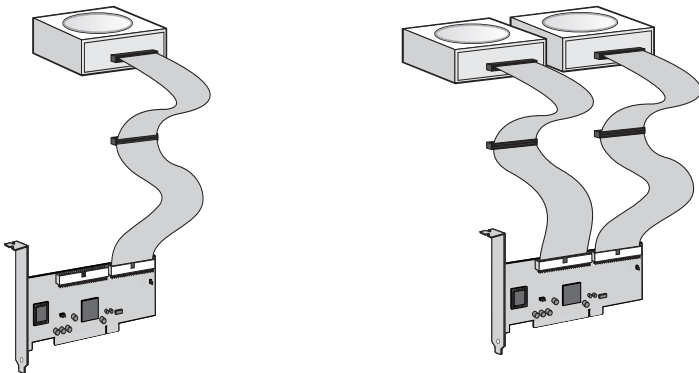
The cables and connectors are keyed. If the cable does not slide easily into the connector, *do not* force it. Instead, reverse the cable.



**Note:** The stripe along the edge of the cable indicates Pin #1. If the cable does not slide easily into the connector, reverse the cable.

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- 2 Connect the other end of the IDE cable to a master drive, as shown below on the left.



- 3 Repeat [Step 1](#) and [2](#) to connect a second ATA disk drive to the second IDE connector on the ASH-1233 adapter, as shown above on the right. Both disk drives must be set as master drives.

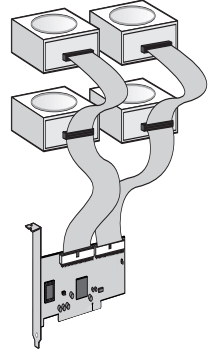
Continue with *Mounting ATA Disk Drives and Connecting Power Cables* on page 8.

## Connecting Two ATA Disk Drives to the Same Cable

When you connect two ATA disk drives to a cable, one disk drive must be set as the *master*, the other must be set as the *slave*. (See *Setting Jumpers on ATA Disk Drives* on [page 5](#) for more information.)

To connect two disk drives to the same cable:

- 1 Connect one end of an IDE cable to an IDE connector on the ASH-1233 adapter.
- 2 Connect the *middle* connector on the IDE cable to the ATA disk drive that is set as the *slave*.
- 3 Connect the other end of the IDE cable to the ATA disk drive that is set as the *master*.



You can connect a maximum of four ATA disk drives to your ASH-1233 adapter, as shown at right.

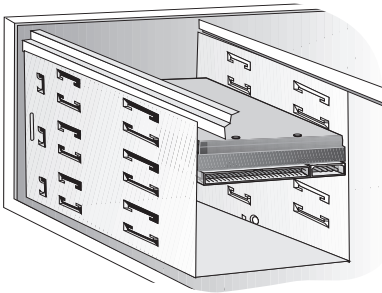
Continue with *Mounting ATA Disk Drives and Connecting Power Cables* on [page 8](#).

## Mounting ATA Disk Drives and Connecting Power Cables

To complete the hardware installation:

- 1 Mount each ATA disk drive in an available drive bay inside your computer (as shown below).

Refer to your computer and device documentation for instructions on installing devices inside your computer.



- 2 Connect an LED cable from your computer's motherboard to the primary LED connector on your ASH-1233 adapter (shown in the Figure on [page 2](#)).
- 3 Connect a power cable from your computer's power supply to each ATA disk drive.
- 4 Close your computer cabinet, reattach the power cord, then power on your computer.

Continue with *Installing the Device Driver* on [page 9](#).

## Installing the Device Driver

Before you can begin using your ASH-1233 adapter and ATA drives, you must install the device driver.

Follow the instructions provided for your operating system:

- For Windows XP, see [page 10](#).
- For Windows 2000, see [page 12](#).
- For Windows Me, see [page 15](#).
- For Windows 98SE, see [page 17](#).



**Note:** If you are installing your ASH-1233 adapter and ATA drives as part of a fresh operating system installation, refer to the Readme file on the CD for instructions.

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## Windows XP

When you power on your computer, Windows automatically detects the new adapter and opens the New Hardware Installation Wizard.

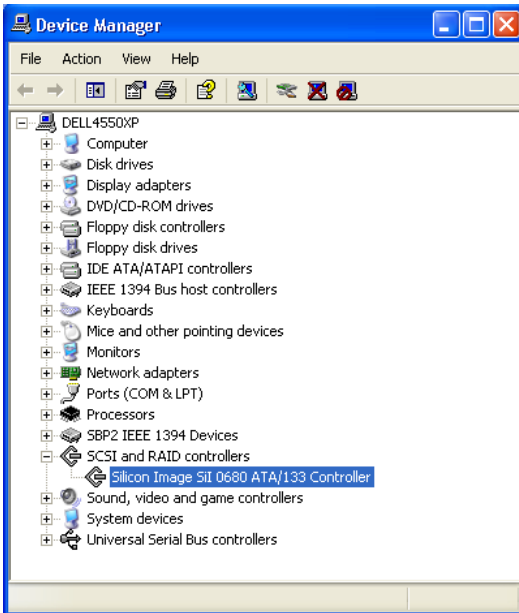
To complete the device driver installation:

- 1 Insert the Adaptec ASH-1233 CD into your CD-ROM drive.
- 2 In the Wizard, click **Install the software automatically...**, then click **Next**.



- 3 If a message appears indicating that the driver is not digitally signed, click **Continue Anyway**.
- 4 When the installation is complete, click **Finish**.

- 5 To verify that the adapter is installed correctly, right-click the **My Computer** desktop icon, select **Properties**, click the **Hardware** tab, then click the **Device Manager** button. Expand **SCSI and RAID Controllers** and ensure that the controller is listed, as shown below.



## Windows 2000

When you power on your computer, Windows automatically detects the new adapter and opens the New Hardware Installation Wizard.

To complete the device driver installation:

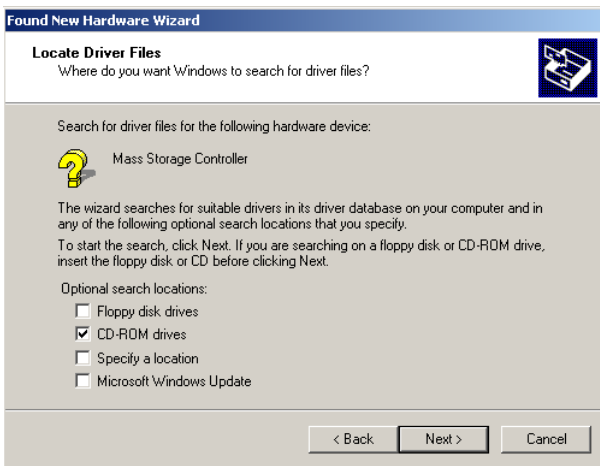
- 1 Insert the Adaptec ASH-1233 CD into your CD-ROM drive.
- 2 In the Wizard, click **Next**.



- 3 Select **Search for a suitable driver...**, then click **Next**.



4 Select **CD-ROM drives**, then click **Next**.



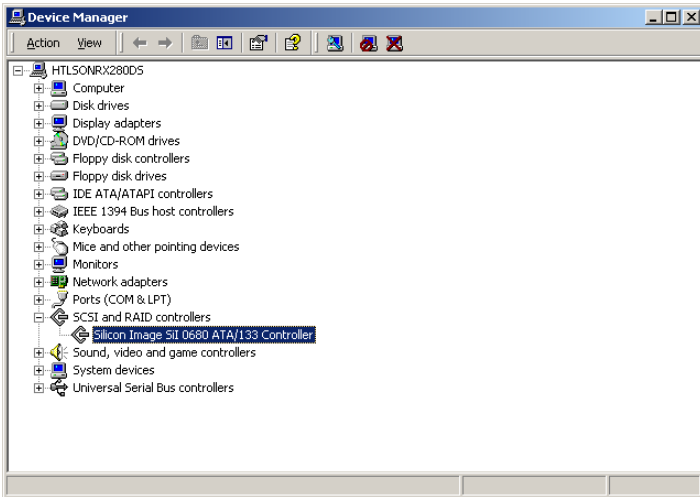
5 Click **Next** again.



6 When the installation is complete, click **Finish**.

7 Restart your computer if you are prompted to do so.

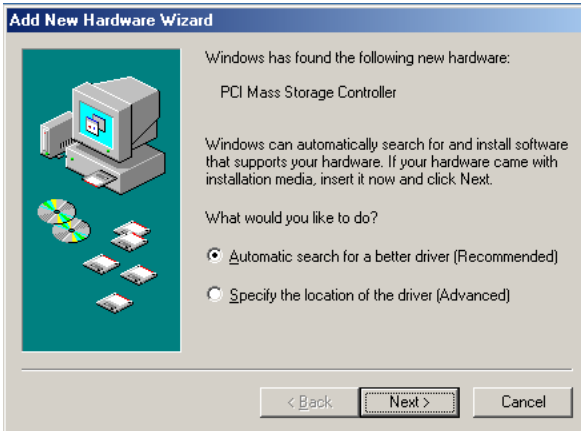
- 8 To verify that the adapter is installed correctly, right-click the **My Computer** desktop icon, select **Properties**, click the **Hardware** tab, then click the **Device Manager** button. Expand **SCSI and RAID Controllers** and ensure that the controller is listed, as shown below.



## Windows Me

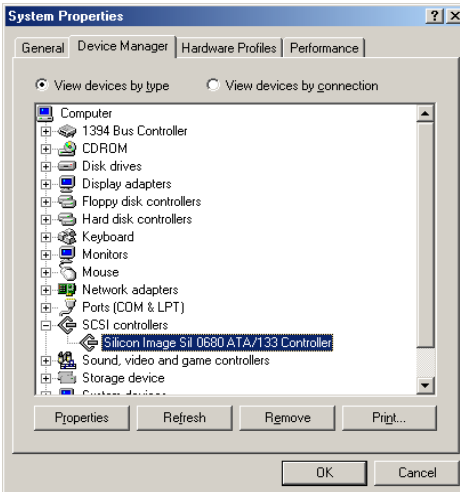
When you power on your computer, Windows automatically detects the new adapter and opens the New Hardware Installation Wizard. To complete the device driver installation:

- 1 Insert the Adaptec ASH-1233 CD into your CD-ROM drive.
- 2 In the Wizard, select **Automatic search for a better driver...**, then click **Next**.



- 3 When the installation is complete, click **Finish**.

- 4 To verify that the adapter is installed correctly, right-click the **My Computer** desktop icon, select **Properties**, then click the **Device Manager** tab. Select **View devices by type**, then expand **SCSI Controllers** and ensure that the controller is listed, as shown below.



## Windows 98SE



**Note:** You may need your Windows 98SE CD during installation.

When you power on your computer, Windows automatically detects the new adapter and opens the New Hardware Installation Wizard. To complete the device driver installation:

- 1 Insert the Adaptec ASH-1233 CD into your CD-ROM drive.
- 2 In the Wizard, click **Next**.



- 3 Click **Search for the best driver...**, then click **Next**.





- 4 Select **CD-ROM drive**, then click **Next**.

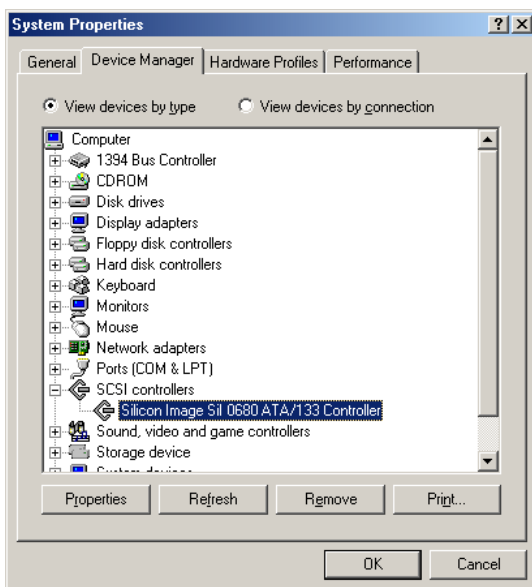


- 5 Click **Next** again.



- 6 When the installation is complete, click **Finish**.

- 7 To verify that the adapter is installed correctly, right-click the **My Computer** desktop icon, select **Properties**, then click the **Device Manager** tab. Select **View devices by type**, then expand **SCSI Controllers** and ensure that the controller is listed, as shown below.



## Registering Your Adaptec ASH-1233 Adapter

To register your ASH-1233 adapter, go to [register.adaptec.com](http://register.adaptec.com).

## **Troubleshooting**

If you have any problems using the Adaptec ASH-1233 adapter, work through these troubleshooting suggestions:

- Ensure that the ASH-1233 adapter is inserted evenly and completely in the PCI slot.
- Ensure that the PCI expansion slot is 5V and compliant with PCI 2.2 or previous version, and supports Bus Mastering.
- Check that the ASH-1233 adapter is detected during boot. If it is not detected, try moving it to another available PCI slot.
- Check that all ATA cables and power cables are connected.
- Check the jumper settings on your ATA disk drives.



**Adaptec, Inc.**  
691 South Milpitas Boulevard  
Milpitas, CA 95035 USA

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