

# Western Digital FireWire® PCI Adapter





# **Western Digital FireWire® PCI Adapter**

## *Installation Guide*

Information furnished by Western Digital is believed to be accurate and reliable. However, no responsibility is assumed by Western Digital for its use; nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Western Digital. Western Digital reserves the right to change specifications at any time without notice.

© 2002 Western Digital Technologies, Inc. All rights reserved.

Western Digital and the Western Digital logo are registered trademarks of Western Digital Technologies, Inc. Other marks may be mentioned herein that belong to other companies.

2079-001012-002 04/02

# Table of Contents

---

## **1 Getting Started**

What is FireWire? .....	1
Kit Contents .....	2
System Requirements .....	2
Recommended System Requirements for DV Editing .....	3
Handling Precautions .....	3
Record Your FireWire PCI Adapter Information .....	3
Gather These Items .....	3

---

## **4 Installation and Setup**

PCI Adapter Setup for Windows® .....	4
Windows Installation .....	4
Hardware Installation—Windows and Macintosh .....	6
PCI Adapter Setup for Macintosh® .....	7
Macintosh Installation .....	7

---

## **9 Multiple Device Connection**

FireWire Connection Instructions & Limitations .....	9
FireWire Connection Guidelines .....	9

---

## **10 Appendix A: Regulatory Compliance**

---

## **11 Appendix B: Warranty Information**

---

## **12 Appendix C: Technical Support Services**

# 1

## Getting Started

### What is FireWire?

Defined by the Institute of Electrical and Electronics Engineers (IEEE), the 1394 High Performance Serial Bus (commonly known as FireWire) is a standard for connecting devices to your personal computer.

FireWire is one of the fastest peripheral standards ever developed. With a capability of operating at up to 400 Mbps, FireWire interface communicates fast enough to transfer digital video and audio in real time.

#### Additional benefits of FireWire:

- IEEE 1394 and i.LINK™ compatible
- Hot plug capability that allows you to easily connect a new peripheral without turning off the computer
- Automatic configuration, no device IDs or terminators, easy connection, and thinner, simple to use cables
- Allows connection of up to 63 devices

FireWire products currently available include the latest hard drives, CD-RW drives, Digital Video (DV) camcorders, scanners, and printers. Western Digital's FireWire PCI Adapter and our FireWire CardBus PC Card enable you to connect devices like these directly to your computer.

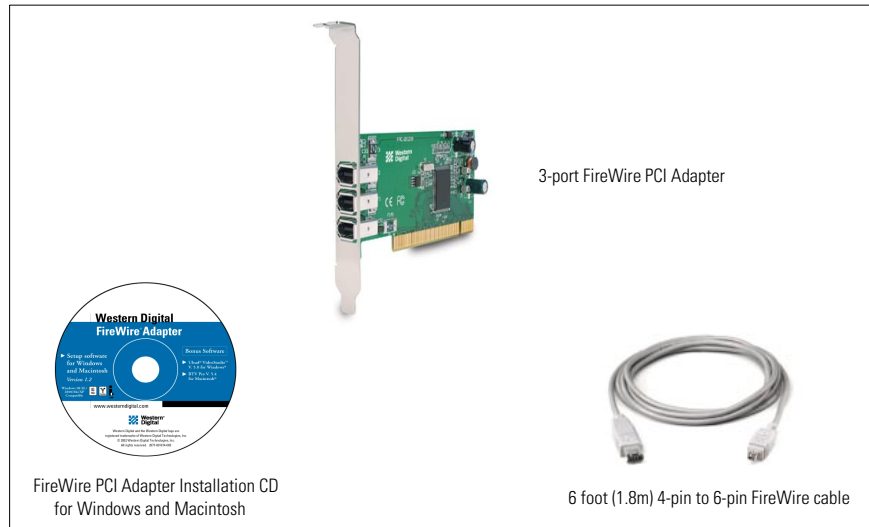
Look for Western Digital's FireWire External Hard Drives, which provides quick and easy large-capacity external data storage.

---

TIP: If you need to connect your high-speed digital equipment directly to your laptop computer, look for our FireWire CardBus PC Card at your favorite retailer or WD's online store at: [store.westerndigital.com](http://store.westerndigital.com).

---

## Kit Contents



*Western Digital FireWire PCI Adapter Kit Contents*

*Also included:* warranty card, quick install guide

## System Requirements

### PC Users

1. Minimum 200 MHz processor
2. Minimum 64 MB RAM
3. Open PCI card slot
4. Windows 98 SE (Second Edition) or higher
5. CD-ROM drive

If you are using Windows 98, make sure you have Windows 98 SE installed on your system by right-clicking on **My Computer** and selecting **Properties**. The **General** tab in **System Properties** should show "Windows 98 Second Edition."

### Mac Users

1. Power Mac G3 or higher
2. Minimum 64 MB RAM
3. Open PCI card slot
4. Mac OS 8.6 or higher
5. CD-ROM drive

Make sure you have Mac OS 8.6 or higher installed on your system by clicking on the Apple symbol in the menu bar and selecting **About this computer**. The window will display your version of Mac OS.

## Recommended System Requirements for DV Editing

### PC Users

- Intel® Pentium® III 450 Mhz or higher (700+ Mhz recommended)
- 128 MB RAM
- 500 MB of available hard drive space for program files
- 4 GB+ hard drive space for video capture and editing
- Windows-compatible display with at least 800x600 resolution

### Mac Users

- 1.5 MB hard drive space for program files
- Minimum 12 MB of *available* RAM
- 4 GB+ hard drive space for video capture and editing
- Macintosh compatible video input hardware

---

TIP: Handle your new Western Digital FireWire PCI Adapter with care—do not drop the adapter.

---

## Handling Precautions

Western Digital FireWire PCI Adapters may be damaged by improper handling, electrostatic discharge (ESD) or abuse. Be aware of the following precautions when unpacking and installing the product:


- Do not unpack your FireWire PCI Adapter until ready for install.
- Save all the packing materials in case you need to return your FireWire PCI Adapter. Your warranty will be voided if your returned adapter is shipped in anything other than the original packaging or Western Digital supplied or approved materials.
- To avoid ESD problems, ground yourself by touching the metal chassis of the computer before handling the adapter. Articles of clothing generate static electricity. Do not allow clothing to come in direct contact with the adapter or circuit board components.
- Handle the adapter by the sides only. Avoid touching the circuit board components.

## Record Your FireWire PCI Adapter Information

In the table that follows, enter the serial number and model number listed on your new FireWire PCI Adapter. The complete serial number and model number are on the back of the adapter. You will need this information for technical support purposes.

Serial Number:
Model Number:

---

 **CAUTION**  
Do not remove any labels from the adapter; this action voids the warranty.

---

## Gather These Items

- Western Digital FireWire PCI Adapter
- Western Digital FireWire PCI Adapter Installation CD
- Small Phillips and flat-blade screwdriver
- Computer system manual

# 2

## Installation and Setup

### PCI Adapter Setup for Windows

*Note:* The proper device drivers must be loaded on your system before installing your Western Digital FireWire PCI adapter. By doing so, your adapter will properly display its information under the Windows Device Manager. Follow the steps in “Windows Installation” below *before* installing the FireWire PCI adapter.

#### Windows Installation

1. Insert the Western Digital FireWire Adapter Installation CD into your CD-ROM drive. The program will start automatically.
2. The main menu displays, showing the following options:



Click on **Set Up FireWire Adapter**.


3. The **Western Digital FireWire Adapter Setup** welcome screen appears. Click **Next**.
4. In the **Driver Update** dialog box, click **Next** to continue. This will prepare your system for FireWire support.
5. Next, you will be prompted to register your FireWire PCI Adapter online at Western Digital's Web site. You must register your FireWire PCI Adapter to receive 90 days of free Western Digital technical support. After entering your product information in each field, click **Submit** and close your browser to complete registration.
6. Click **Restart** to complete installation.
7. *Windows 98 SE only:* Your Western Digital FireWire Adapter software is ready to finalize your setup. Click **Finish** when you see the Congratulations screen to update your FireWire drivers and install a safe removal utility that allows you to safely remove any of your Plug and Play devices.

---

★ **IMPORTANT**  
The latest FireWire storage driver from Microsoft must be installed on your PC *before* installing the FireWire PCI Adapter.

---

---

 **NOTE**  
Autorun may take up to 30 seconds to launch. If the program does not start automatically, open Windows Explorer, click on the CD-ROM drive icon, then double-click on the Setup.exe file.

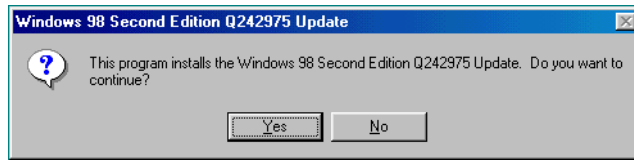
---

---

**TIP:** To register your Western Digital product at a later time, visit:  
[wdc.com/products/registration](http://wdc.com/products/registration)

---

The **Windows 98 SE Update** dialog box displays. Click **Yes** to continue and load the update.



The Microsoft license agreement for the Windows 98 SE Update displays. Click **Yes** to continue.

Click **Yes** to accept the license agreement. You must restart your computer for the new settings to take effect. When prompted to restart, click **Yes**

*Windows Me/2000/XP:* Your version of Windows already has the required FireWire driver support. Click **Next**. When the Congratulations dialog box appears, click **Finish**. You must restart your computer for the new settings to take effect. When you have finished installing all software, click **Exit** in the Main Menu, then click **Close**.

*Windows 98 and earlier:* Your version of Windows does not support FireWire Plug and Play devices. Click **Exit**, upgrade to Windows 98 SE or higher, and reinstall your FireWire PCI Adapter.

### **Ulead® VideoStudio™ Software Installation for PC**

1. Insert the Western Digital FireWire Adapter Installation CD into your CD-ROM drive. The program will start automatically.
2. Click on the **Ulead VideoStudio** button on the main menu.
3. Follow the on-screen directions to complete software installation.

### **Recommended System Requirements for DV Editing**

#### **PC Users**

- Intel® Pentium® III 450 Mhz or higher (700+ Mhz recommended)
- 128 MB RAM
- 500 MB of available hard drive space for program files
- 4 GB+ hard drive space for video capture and editing
- Windows-compatible display with at least 800x600 resolution

## Hardware Installation—Windows and Macintosh

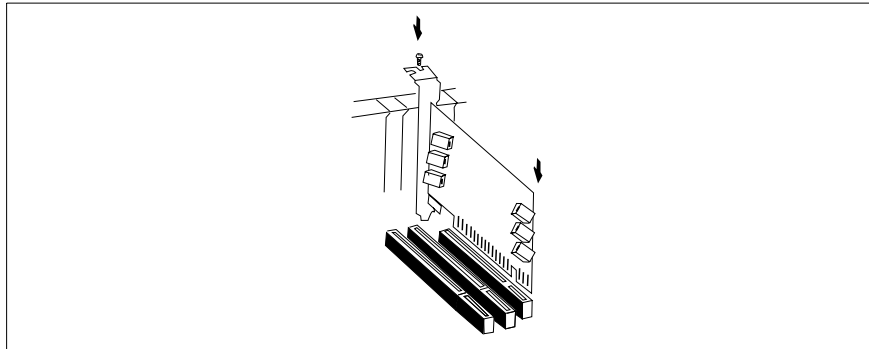
The Western Digital FireWire PCI Adapter must be installed in one of your computer's PCI slots.

1. With your computer shut down and unplugged, remove the computer's outside cover.
2. Install the adapter in an open PCI slot in your computer by carefully pushing the adapter into the PCI slot, holding the card by the external edges only (see illustration below).

---

★ **IMPORTANT**  
Your system must be turned off and unplugged before installation. Refer to your computer system's manual for specific instructions on opening your computer and installing a PCI card.

---

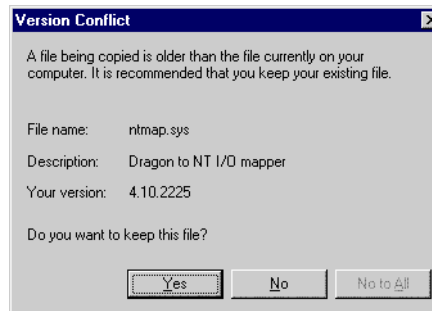


FireWire PCI Adapter Installation

3. *Macintosh:* Close your computer, restart, and follow the setup instructions for “Macintosh Installation” on page 7.

*Windows Me/2000/XP:* Windows 2000 automatically detects and configures your FireWire PCI Adapter. Close your computer and restart.

*Windows 98 SE only:* Close your computer and restart. After your computer has finished rebooting, you will see a series of five **Version Conflict** dialog boxes, each informing you that the file being copied is older than the file currently on your computer.



Click **Yes** in each dialog box to keep your existing file (clicking **No** will prevent the drivers from loading properly). These dialog boxes will only display the first time you install your FireWire PCI Adapter.

## PCI Adapter Setup for Macintosh

Be sure to install the FireWire PCI adapter *before* installing FireWire software. See “Hardware Installation—Windows and Macintosh” on page 6 for details.

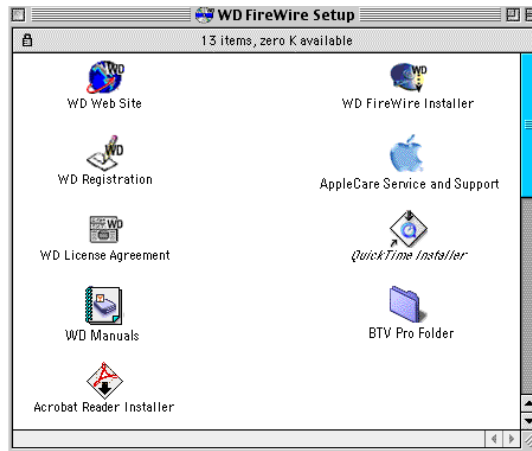
---

★ **IMPORTANT**  
Install the PCI adapter in your Macintosh *before* installing the FireWire software.

---

### Macintosh Installation

1. Insert the Western Digital FireWire Adapter Installation CD. The following window displays:



2. Double-click on the **WD FireWire Installer** icon.
3. The Welcome screen displays. Click **Continue**.
4. The FireWire license agreement displays. Click **Accept**.
5. The **WD FireWire Installer** dialog displays. Click **Install**.



6. Click **Restart** to complete installation.
7. After restart, you will be prompted to register your FireWire PCI Adapter online at Western Digital’s Web site. You must register your WD FireWire PCI Adapter to receive 90 days of free technical support. After entering your product information in each field, click **Submit** and close your browser to complete registration.

---

TIP: To register your Western Digital product at a later time, visit:  
[wdc.com/products/registration](http://wdc.com/products/registration)

---

### **BTV Pro Software Installation for Macintosh**

1. Insert the Western Digital FireWire Adapter installation CD into your CD-ROM drive. The program will start automatically.
2. Double-click on the WD FireWire Setup icon on your desktop.
3. Double-click on the BTV Pro folder located in the WD FireWire Setup window.
4. Double-click on the BTV Pro icon to begin installation.
5. Follow the on-screen instructions to complete software installation.

### **Recommended System Requirements for Digital Video Editing**

#### ***Macintosh Users***

- 1.5 MB available hard drive space for program files
- Minimum 12 MB *available* RAM
- 4 GB+ hard drive space for video capture and editing
- Macintosh compatible video input software

# 3

## Multiple Device Connection

### FireWire Connection Instructions & Limitations

FireWire devices can be connected in any combination of branching and chaining, as long as no loops are formed. A FireWire bus can support up to 16 consecutive cable hops of 4.5 meters (14.76 feet) each. There are no SCSI-style ID numbers to set and no termination requirements.


To connect a Digital Video (DV) camcorder, digital still camera, scanner, printer, or other FireWire peripheral, plug the 6-pin connector on the supplied FireWire cable to the Western Digital FireWire PCI Adapter and the 4-pin connector to the device's IEEE FireWire port. Both connectors snap into place when properly engaged. If you wish to connect two devices together (or if your device has a 6-pin FireWire port), you can obtain 6-pin to 6-pin cables at your favorite retailer.

### FireWire Connection Guidelines

Follow these guidelines for connecting FireWire devices to the computer:

- Do not connect more than 63 devices at one time (including computers).
- Do not connect devices in such a way that any two devices have more than 16 cables directly connected between them.
- Do not connect FireWire cables in a way that forms a loop of devices.
- Unused FireWire connections should be left empty. There are no terminators for FireWire connections.
- Connect devices that require power from FireWire directly to the computer.
- Do not unplug a FireWire device while it is being used. For example, do not unplug a FireWire hard drive while copying files onto it.
- If you have problems with digital video transfers, make certain that no other FireWire devices are being used at the same time.

---

 **CAUTION**  
If these guidelines are not followed, your computer and other FireWire devices may not operate correctly.

---

# Appendix A: Regulatory Compliance

## **FCC Class B Information**

This equipment has been tested and found to comply with the limits of 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 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 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.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio/TV Interference Problems". This booklet is available from the US Government Printing Office, Washington, DC 20402. Stock No. 004-000-00345-4.

## **CSA Notice**

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe B prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

This digital apparatus does not exceed the Class B limits for radio noise for digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

## **CE Compliance For Europe**

Verified to comply with EN55022 for RF Emissions and EN50082-1 for Generic Immunity, as applicable.

# Appendix B: Warranty Information

## **Obtaining Service**

Western Digital (WD) values your business and always attempts to provide you the very best of service. If this Product ever requires maintenance, either contact the dealer from whom you originally purchased the Product or telephone WD's Technical Support Department. No Product may be returned directly to WD without first contacting our Technical Support Department at 800.275.4932 or +31.20.446.7651 in Europe. If it is determined that the Product may be defective, you will be given a Return Material Authorization (RMA) number and instructions for Product return. An unauthorized return, i.e. one, for which an RMA number has not been issued, will be returned to you at your expense. Authorized returns are to be shipped prepaid and insured to the address on the RMA in an approved shipping container. Your original box and packaging materials should be kept for storing or shipping your WD FireWire PCI Adapter. In order to conclusively establish the period of warranty, a copy of the purchase receipt must accompany the returned Product. If the purchase receipt is not available, the period of warranty will be measured from the date of manufacture. WD shall have no liability for lost data, regardless of the cause, recovery of lost data, or data contained in any Product placed in its possession.

## **1 Year Limited Warranty**

WD warrants that the Product, in the course of its normal use, will be free from defects in material and workmanship for a period of one (1) year and will conform to WD's specification therefor. This limited warranty period shall commence on the purchase date appearing on your purchase receipt.

WD shall have no liability for any Product returned if WD determines that the Product was stolen from WD or that the asserted defect a) is not present, b) cannot reasonably be rectified because of damage occurring before WD receives the Product, or c) is attributable to misuse, improper installation, alteration (including removing or obliterating labels), accident or mishandling while in your possession. Subject to the limitations specified above, your sole and exclusive warranty shall be, during the period of warranty specified above and at WD's option, the repair or replacement of the Product. The foregoing warranty of WD shall extend to repaired or replaced Products for the balance of the applicable period of the original warranty or ninety (90) days from the date of shipment of a repaired or replaced Product, whichever is longer.

The foregoing limited warranty is WD's sole warranty and is applicable only to products sold as new. The remedies provided herein are in lieu of a) any and all other remedies and warranties, whether expressed, implied or statutory, including but not limited to, any implied warranty of merchantability or fitness for a particular purpose, and b) any and all obligations and liabilities of WD for damages including, but not limited to accidental, consequential, or special damages, or any financial loss, lost profits or expenses, or lost data arising out of or in connection with the purchase, use or performance of the Product, even if WD has been advised of the possibility of such damages.

In the United States, some states do not allow exclusion or limitations of incidental or consequential damages, so the limitations above may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

# Appendix C: Technical Support Services

Your new Western Digital FireWire PCI Adapter includes 90 days of free technical support from the date of purchase. To be eligible for the free technical support, you must register your product with Western Digital. Should you require additional technical support after the 90-day time period, Western Digital offers extended support services for your FireWire PCI Adapter at a rate of \$15.00 per incident after the free period.

## Online Service

*Email:* [customer.service@wdc.com](mailto:customer.service@wdc.com)

*Internet:* [www.westerndigital.com/service](http://www.westerndigital.com/service)

*Product Registration:* [www.wdc.com/products/registration](http://www.wdc.com/products/registration)

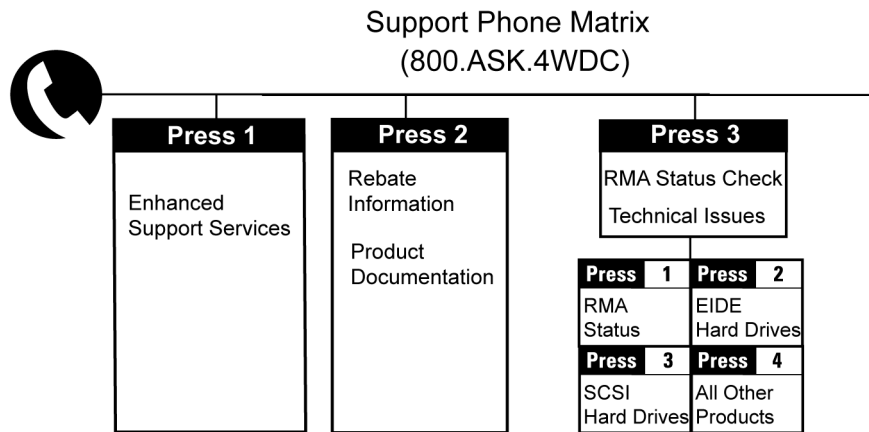
## Telephone Assistance

800.ASK.4WDC (800.275.4932) and +31.20.446.7651 (Europe)

If you need additional information or help during installation or normal use of this product, contact Western Digital Technical Support. When calling for support, please have your Western Digital FireWire PCI Adapter serial number and system hardware and software versions available.

	USA / Canada /Outside USA (Central Time)	Europe (Central European Time)
Telephone Numbers	800.ASK.4WDC or 800.275.4932	+31 20 446-7651
Monday - Thursday	9:00 am - 7:00 pm	8:00 am - 12 noon 1:00 pm - 5:30 pm
Friday	9:00 am - 5:00 pm	8:00 am - 12 noon 1:00 pm - 5:30 pm
Saturday	8:00 am - 11:45 am 1:00 pm - 5:00 pm	

## Technical Support Phone Matrix



Western Digital  
20511 Lake Forest Drive  
Lake Forest, CA 92630

2079-001012-002 04/02