



FireWire PCI Board
FireWire/USB PCI Board
FireWire CardBus PC Card
For Macintosh and PC

Operators Manual

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Introduction

This Operators Manual was designed specifically to provide you with an easy reference for installing the Orange Micro OrangeLink FireWire 1394 series products.

About this manual

The information in this manual is subject to change without notice. We welcome your comments on any area of Orange Micro products or service. Please send your comments to:

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Minimum Macintosh System Requirements

The following hardware and software are required to access devices attached to the OrangeLink products:

PowerPC processor

- One available 7" or 12" PCI slot (PCI Board only)
- PowerBook Users: PowerBook G3 Series Only (M-3553 Family not supported)
- One available CardBus PC Card slot (PC Card only)
- Mac OS 8.6 or newer
- Apple FireWire software (included)
- OrangeLink OHCI Enabler (included)

Minimum PC System Requirements

The following hardware and software are required to access devices attached to the OrangeLink products:

- Intel Pentium MMX compatible processor
- One available 7" or 12" PCI slot (PCI Board only)
- One available CardBus compatible PC Card slot (PC Card only)
- Microsoft Windows 98 Second Edition or Windows 2000

CHAPTER 1: INTRODUCTION

What is OrangeLink?

The OrangeLink FireWire® 1394 host adapters add FireWire support to any PCI or CardBus-based Mac or PC. It is ideal for older Power Macintosh desktop computers or PowerBook G3 Series as well as PCs that need the advanced technology offered by FireWire® (also known as IEEE-1394 or i.LINK).

What is FireWire?

FireWire supports the IEEE 1394 High Performance Serial Bus standard. FireWire high-speed serial I/O technology is particularly great for use with multimedia peripherals such as digital video (DV) camcorders and tape decks. The OrangeLink supports other FireWire peripherals such as disk drives, ultra high-resolution scanners, printers and digital still cameras.

OrangeLink Features

The OrangeLink products function at the maximum IEEE-1394 rated speed of 400 megabits/second (50 megabytes/sec). The OrangeLink allows up to 63 devices to be connected in a chain through its two external standard 6 pin ports. The OrangeLink can be used with third party video editing software to capture and export full size, full motion DV video at 720 by 480 pixels at 30 frames per second.

Benefits of the OrangeLink FireWire

The major benefit for OrangeLink FireWire technology is its ease of use. Imagine automatic configuration, no device IDs or terminators, simple to use cables, and of course, "hot plug" connectivity. Consider a FireWire disk drive for example. You can disconnect it from one computer and connect it to another; no need to power down or restart. You can move whole databases around your workgroup "live"! Or, when the office day is done, pop it into your shirt pocket and hot plug it to your home computer.

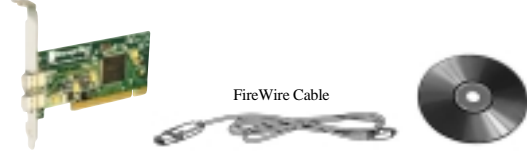
The fastest growing use for FireWire consists of digital video (DV) camcorders. The digital format of these devices provides precise audio and video capabilities in an original digital format that is more directly compatible with a computer than the current analog video cameras. This means that the OrangeLink is ideal for computer based home video editing as well as for more professional applications, e.g. Adobe® Premiere® and Apple Final Cut Pro™.

CHAPTER 2: SOFTWARE DRIVER AND HARDWARE INSTALLATION

It is important to note that the software on the “OrangeLink Manual and Software” CD-ROM must be installed before installing the FireWire adapter.

Unpacking the FireWire PCI Board

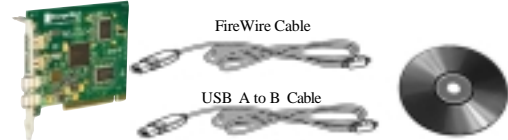
The OrangeLink FireWire PCI Board package contains the following items:



- FireWire PCI board
- Manual and Software CD-ROM
- A 1.82 meter (6 feet) FireWire cable, 4-pin to 6-pin, to connect the OrangeLink to a camcorder or other IEEE 1394 devices that do not require power.

Unpacking the FireWire/USB PCI Board

The OrangeLink FireWire/USB PCI Board package contains the following items:



- FireWire/USB PCI board
- Manual and Software CD-ROM
- A 1.82 meter (6 feet) FireWire cable, 4-pin to 6-pin, to connect the OrangeLink to a camcorder or other IEEE 1394 devices that do not require power.
- A 1.82 meter (6 feet) USB A to B cable to connect the OrangeLink to any USB compliant device.

Unpacking the FireWire CardBus PC Card

The OrangeLink FireWire CardBus PC Card package contains the following items:



- FireWire CardBus PC Card
- Manual and Software CD-ROM
- A 1.82 meter (6 feet) FireWire cable, 4-pin to 6-pin, to connect the OrangeLink to a camcorder or other IEEE 1394 devices that do not require power.

Installing the OrangeLink drivers on a Mac

The OrangeLink Installer will install Apple FireWire software, the FireWire OrangeLink Enabler and USB support. The OrangeLink software can be used on any Power Macintosh computer running Mac OS 8.6 or newer.

We are working on support for all our products on Mac OS X, and concurrent with a Mac OS X FireWire support release by Apple, Orange Micro will have the necessary upgrade support available.

- Insert the OrangeLink FireWire Manual and Software CD.
- Double-click on the OrangeLink Installer icon.
- Follow the onscreen instructions.
- Restart your computer.

NOTE: A file called FireWire Support may be in a folder titled FireWire in the Apple Extras folder on your Macintosh. Do not move this older extension to your Extensions folder; it may interfere with the operation of the new Apple FireWire software.

Installing the OrangeLink drivers on a PC

The OrangeLink FireWire product can be used on any Intel Pentium compatible system running Microsoft Windows 98 Second Edition or Windows 2000. The OrangeLink/HotLink products are not compatible with any previous Windows version.

NOTE: Microsoft refers to FireWire as IEEE-1394; the two are synonymous.

- Insert the OrangeLink FireWire Manual and Software CD.
- The installer will Auto Start.
- Follow the onscreen instructions.
- Restart your computer.

Installing the OrangeLink FireWire PCI Board or FireWire/USB Board

The OrangeLink software must be installed before installing the OrangeLink PCI board.

The OrangeLink PCI board must be installed in one of your computer's PCI slots.

NOTES:

1. Refer to your computer's manual for instructions on how to open your computer and install a PCI card.
2. The OrangeLink PCI board gets the power it supplies to the FireWire bus from the PCI slot

Locate the OrangeLink PCI board. With your computer shut down, open your computer and install the OrangeLink PCI board.

Installing the OrangeLink CardBus PC Card

The OrangeLink CardBus PC Card is compatible with any PC laptop with at least one CardBus compatible PC card slot or an Apple PowerBook G3 Series (the PowerBook G3 Family M-3553 PC Card slot is not CardBus compatible).

Insert the OrangeLink CardBus PC Card into the CardBus slot in your computer.

Mac: Removing the CardBus PC Card

Click on the “OrangeLink FireWire CardBus” icon and type ⌘+ Y.

PC Laptop: Removing the CardBus PC Card

Click on the Windows “PC Card Status” icon. Then click on “Stop Orange Micro OrangeLink OHCI IEEE 1394 Host Controller”.

- NOTES:**
1. The OrangeLink FireWire CardBus PC Card does not supply power to the FireWire Bus. Devices that require power must be connected to a powered FireWire Hub. Refer to the “Optional Hardware” section below.
 2. When a portable is not powered, including sleep mode, data will not be passed from one FireWire port to another.

Optional Hardware

The following optional OrangeLink hardware accessories are available from Orange Micro:

- FireWire 1394 cable Part# 90CAB1342 – 4.5 meter (15 feet) 6-pin to 6-pin
- FireWire 1394 cable Part# 90CAB1343 – 4.5 meter (15 feet) 6-pin to 4-pin
- FireWire 1394 Repeater Part# 70HTL00020 – A FireWire repeater allows an additional 4.5 meter extension for FireWire devices. Includes a 4.5 meter (15 feet) 6-pin to 6-pin cable.
- FireWire 1394 Hub Part# 70HTL00030 – Each hub connects up to 8 devices, provides an additional 4.5 meter extension, and provides enhanced 12 volt power for the FireWire peripherals.
- FireWire 1394 PCI Board Part# 70HTL13941 – Add FireWire support to your PCI based Mac or PC.
- FireWire 1394/USB PCI Board Part# 70HTL00060 – Add FireWire 1394 and USB support to your PCI based Mac or PC.
- FireWire 1394 PC Card Part# 70HTL00040 – Add FireWire support to your PowerBook.
- FireWire 1394/SCSI Adapter 70HTL00010 – External adapter allowing users to connect Fast SCSI device through a FireWire 1394 Port.

Information about the IEEE 1394 Trade Association and many other FireWire products can be found at these addresses:

<http://www.1394ta.org>
<http://www.1394showcase.com>
<http://www.apple.com/firewire/firewireproducts.html>

CHAPTER 3: MACINTOSH DESKTOP VIDEO SOFTWARE

Installing Adobe Premiere LE for the Macintosh

Adobe Premiere 5.1 Limited Edition software brings the world of digital movie making to the desktop. Premiere LE lets you record, create, and play video programs using video, sound, animations, photographs, drawings, text, and other material on your Macintosh computer.

You can play movies created in Premiere LE in any application that supports the Apple QuickTime™ format. You can also output video programs to videotape or create video files for publishing on the Web.

IMPORTANT: *INSTALL THE FOLLOWING SOFTWARE IN THE ORDER LISTED!*

* Install QuickTime™ 4.1

To install QuickTime, double-click on the "QuickTime Installer" icon in the QuickTime folder located on the "Manual and Software" CD-ROM. Inside the QuickTime 4 installer choose the "Full" option as your installation type. **Do not** install the QuickDraw 3D components unless you also install the ATI Video Software Update 1.0 (currently this will result in display problems within Premiere). Make sure you are not working with a beta version of QuickTime!

* Install accelerator card or ATI RAGE Pro graphic accelerator chip.

Please download and install ATI Video Software Update 1.0 from:

<<http://asu.info.apple.com/swupdates.nsf/artnum/n1147>>

* G3 Firmware Update 1.1

If you have a blue and white G3, Apple Computer recommends that you confirm your Firmware/ROM is up to date. Please see the following read-me's at <http://til.info.apple.com/> for specific instructions. (Choose the pop-up under step 1 to "Find Article #"):

- "5/7/99 60351 Power Macintosh G3 (blue & white), Determining ROM revision Read-Me."

- "6/7/99 58374 Power Macintosh G3 (blue & white) Firmware Update 1.1 Read-Me."

* Install Adobe Premiere on your Macintosh

Double-click the "Install Adobe Premiere 5.1 LE" icon on the "Manual and Software" CD-ROM in the English folder. You may use the Easy Install or Custom Install option. You will be prompted to enter your name, company name (if applicable).

Type in Serial Number: MSM510B7100120-119 Click OK .

* Install the OrangeLink Plug-Ins

Double-click the "OrangeLink Plug-In Installer" icon on the "Manual and Software" CD-ROM. A Select Folder dialog will appear, choose "Adobe Premiere® 5.1 LE f".

* The Acrobat® Reader

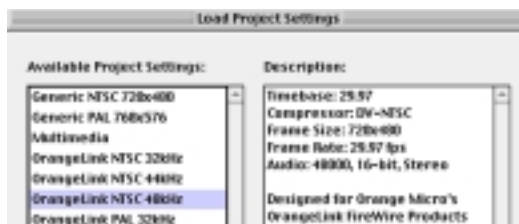
You can install the Adobe Acrobat Reader software by double-clicking the "Reader Installer" icon on the "Manual and Software" CD-ROM in the Acrobat Reader 4.05 folder. Much of the documentation included on this CD-ROM is provided in the Adobe Acrobat portable document format (PDF). You may view and print these PDF files with the Adobe Acrobat Reader.

The "Premiere LE User Guide.pdf" is in Acrobat PDF format. It is installed in the "Adobe Premiere® 5.1 LE f" folder with your Adobe Premiere application.

Adobe Premiere QuickStart - Capturing Video

At this point you should have already installed the OrangeLink software and Adobe Premiere LE software. Most camcorders will not be recognized by the FireWire drivers. If the camcorder, Macintosh, and Premiere software is not started in the right order. Performing the following procedures in order will quickly get you started capturing DV video.

1. Be sure that the Macintosh is OFF, the camcorder power is OFF and the FireWire cable is connected securely to the camcorder DV port and the OrangeLink or HotLink FireWire port.
2. Start your Macintosh.
3. When the Macintosh has completely started, configure the camcorder to Camera mode (some camcorder manufacturers refer to this as Recording mode) and turn ON the power to the camcorder.



4. Listen to your Macintosh hard disk. When the camcorder is detected, the FireWire software will load and you will hear a burst of disk access while the FireWire drivers load.
5. Double-click the Adobe Premiere icon in the new Adobe Premiere 5.1 LE folder on your disk drive. The "Load Project Settings" window will appear. Select the desired Project Setting and click OK. Select your Project Setting based on the standard format (i.e., NTSC or PAL) and the audio rate (i.e.,

32kHz, 44.1kHz, or 48kHz) used when you shot your video footage. If you're not sure, check your DV camera or documentation. DV resolution is 720 x 480 pixels and audio is usually 16-bit Stereo. Camcorders purchased for use in the United States are NTSC.

6. Pull down the File menu. Select Preferences>Scratch Disk/ Device Control... to set which hard drive is your capture drive. Drives that are too slow, fragmented or full will not work well.



7. Pull down the File menu. Select Capture>Movie Capture menu items. An "AppleTalk is Active" dialog may appear, click on the Deactivate button.



The Movie Capture window will appear streaming video from the camcorder.



If the "Movie Capture" window does not appear with streaming video, repeat the above QuickStart steps faithfully.

Adobe Premiere LE QuickStart - Exporting Video to FireWire

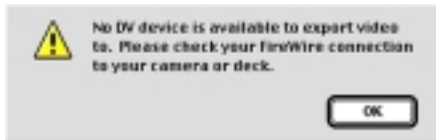
To output your edited movie from Adobe Premiere LE back to your DV Camera or Deck you will need to do the following steps.

1. From Premiere's timeline window set your work area bar over the area you wish to export (for help on doing this search on "Work Area" in the Premiere LE User Guide.pdf or in the online help).
2. Make sure the timeline window is the active window and choose File>Export to FireWire.
3. Make sure your DV device is in VTR/VCR mode and hit the VTR/VCR record button to capture the video Premiere is sending it.

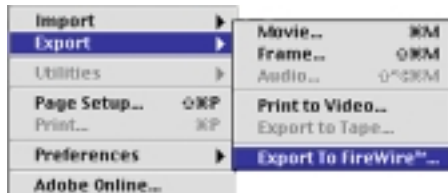
Note: DV cameras have two kinds of record buttons (one for VTR/VCR and one for live camera mode).

4. Press the VTR/VCR stop button once Premiere is done exporting your movie.

If you get an Alert dialog that displays "No DV device is available to export video to. Please check your FireWire connection to your camera or deck" perform the following procedure:



1. Quit Adobe Premiere.
2. Turn OFF the camcorder and disconnect the FireWire cable from the camcorder for 10 seconds.
3. When the Macintosh has completely started, configure the camcorder to VTR mode (some camcorder manufacturers refer to this as VCR mode) and turn ON the power to the camcorder. Turn the camcorder ON and reconnect the FireWire cable to the camcorder.
4. Listen to your Macintosh hard disk. When the camcorder is detected, the FireWire software will load and you will hear a burst of disk access while the FireWire drivers load.
5. Launch Adobe Premiere, open your project then, pull down the Adobe Premiere File menu. Then select Export> "Export to FireWire...."



If after choosing File> "Export to FireWire..." you get the error message "There are no clips to build or view". You have the wrong Premiere LE window active. Please click on the timeline window to make it is the active window, set your work area bar, and try again.

If your audio plays clipped during a File> "Export to FireWire..." you may not have a fast enough hard drive for DV output. Set Premiere's preferences (File>Preferences>Scratch Disks) to an AV/DV rated drive (DV is a sustained 3.6 Mbs second). You will get better performance if your movies are on a separate drive from your Mac System drive. G3's with SCSI

drives should be capable of handling DV. Macs with IDE drives may require a faster drive to output to DV. You can check what kind of hard drive you have by using the Apple System Profiler under the Apple Menu. You should use disk defragment utilities like Norton Utilities' Speed Disk to optimize AV/DV rated drives for best performance.

Adobe Premiere Information

After you have successfully completed the above Adobe Premiere LE QuickStart, you should open the Read Me file contained in the new Adobe Premiere 5.1 LE folder on your disk drive. This file contains last-minute information. You may want to print it and keep it for reference.

There are Technical Notes in the Adobe Technical Info folder on the "Manual and Software" CD-ROM in the "English" folder. Many common problems and issues are covered in the Technical Notes or at Adobe's Support web site (<http://www.adobe.com/supportservice/custsupport/main.html>), and consulting them first can frequently save you a call to Technical Support. Orange Micro is your frontline for technical support ((714) 779-2772 support@orangemicro.com).

For additional information on the operation of Adobe Premiere, refer to the Adobe Premiere LE User Guide in pdf format located on the "Manual and Software" CD-ROM. Check with Adobe's Support web site for additional pay support options.

Upgrade Information

Adobe Premiere 5.1 LE users can upgrade to the full version of Premiere at substantial savings.

For more information on upgrading, visit <http://www.orangemicro.com/> or call Orange Micro, Inc. (714) 779-2772

The full version of Premiere 5.1c includes the following powerful features not found in the LE version:

- * 77 transition effects, including wipes, zooms, and spins, each with a variety of different settings for unlimited possibilities.
- * 67 video filters, including color correction, sharpen, lens flares, and more; many with keyframes you can use to control and vary the filter's settings over the clip's duration.
- * 21 audio filters, including reverb, noise gate, parametric EQ, and more; many with keyframes you can use to control and vary the filter's settings over the clip's duration.
- * 14 transparency settings, including Blue Screen, Alpha Channel, and Track Matte, for use when superimposing clips on top of one another.
- * Automatic saves and up to 32 levels of undo on the Timeline.
- * Commands palette for automating frequently accessed menu items.
- * Navigator palette for moving quickly through the Timeline.
- * Motion control, including spinning, zooming, rotating, and more.
- * Plug-ins for producing Web video, including Animated GIF, RealPlayer, Microsoft NetShow ASF, and MPEG formats.
- * Comprehensive online help and a printed user guide manual.
- * Support for high-end offline editing through EDLs (Edit Decision Lists), batch capture, and batch processing.
- * Device control of your DV camera and DV playback from the timeline
- * RAM-based preview option for quick viewing of visual effects.
- * Timeline, Monitor, and Project Window Options, which let you customize your windows to fit your working style.

NOTE: The "Export To FireWire™" Plug-In installed into your Adobe Premiere Plug-Ins folder is not necessary if you are using the full version of Adobe Premiere 5.1c.

Using the full version of Adobe Premiere

If you are using the full version of Adobe Premiere 5.1c or later, you can take advantage of the full DV features that the Orange Micro OrangeLink/HotLink board offers. Some of these features include:

1. You can directly playback to your DV device from the timeline without having to use "Export to FireWire." You should use one of the default DV NTSC or DV PAL presets. You can also use the OrangeLink presets and change the editing mode from "QuickTime" to "QuickTime DV Output" and change the "Playback Settings" to output to either the desktop or the DV Device.
2. You can control your DV device directly in Premiere. Choose File>Preferences>Scratch Disk/Device Control and change the Device Control from None to "FireWire DV Device." This will enhance your movie capture window and allow you to directly control your DV device and build batch capture lists of your DV tapes.

To be sure you have the latest version of Adobe Premiere check <http://www.adobe.com/premiere>. There are free downloadable updates from 5.0 to 5.1c that will update your full version of Adobe Premiere.

The full version of Premiere 5.1c requires FireWire DV Device Control 1.2 Beta Plug-in for OS 9 and G4 (<http://www.adobe.com/support/downloads/prmac.htm>).

Troubleshooting Premiere LE

Captured DV movies look blocky or grainy.

Solution: Attach an NTSC/PAL video monitor and view them on this monitor.

Additional Information: When grabbing movies, Premiere displays DV movies at lower quality on the computer monitor, in order to increase the decompression speed. These movies are actually stored at their full quality and always play that way on a video monitor.

Only “Desktop” is available in Playback Settings window.

Solution: No output device is available. Connect and/or turn on your DV device.

No video image appears in the Movie Capture window.

Solution 1: If a device is available, click Play and click within the Capture area and it should update. Always verify Device Control and Capture settings!

Solution 2: Quit out of Premiere, and with the video source already turned on restart Premiere.

Some filters and transitions render blocky.

Solution 1: Transcode the clip with a codec other than your DV codec, such as Component Video, apply the effect to the rendered clip, and Recompress with DV.

Additional Information: Occasionally, DV frames are not decompressed at the highest quality when applying a filter or effect, so that the clip needs to be transcoded before applying the effect and then transcoded again back to DV.

Audio and video are not in sync in captured movies.

Solution: Do not record any portion of the videotape that contains blank portions of tape. Do not record through scene changes, which may contain blank footage.

Additional Information: Blank areas in a tape causes interruptions of the camera time mode so the camera doesn't transmit valid frames during the blank transition, but QuickTime is still marking time. To help avoid these and other issues, it is recommended that you black/stripe your entire tape before use. This can be done by simply placing the lens cap on and clicking the camcorder's record button.

DV device has gone into sleep mode.

Solution 1: Close and open the Movie Capture window.

Solution 2: Close the Movie Capture window, turn off the camera, power it back on, and then reopen the Movie Capture window.

Black frames or small duplicate video image in upper left corner of monitor

Solution 1: Install ATI Video Software Update 1.0.

Solution 2: Create a custom extension set for working with Premiere and turn off QuickDraw 3D extensions.

Disabling QuickDraw 3D may hamper games or some 3D applications; consult the game or application documentation for QuickDraw 3D requirements.

Additional Workflow Recommendations and Known Issues :

- * Editing DV is a CPU and hard drive intensive task. You may need to minimize your extension sets (via the Extensions Manager and optimize your hard drives (using a Mac disk defragmentation utility like Norton Speed Disk) to get the best possible performance out of your computer.

- * For best performance, scale the Premiere's monitor window to 240x180. Do not expect full screen overlay of video to play well on the computer monitor since the CPU is handling it. Use Adobe Premiere LE to edit the video, then export back to your DV camcorder which is capable of playing the movie back to the TV monitor full screen.

- * There is a QuickDraw 3D compatibility problem which causes ATI overlay problems. You may experience your markers being overdrawn by the clip overlay. To avoid this, you may disable QuickDraw 3D by creating a custom extension set.

- * It is recommended that no other operations are attempted while the Capture window is open. Certain other windows may not play or display frames properly while the Capture window is open, as it has primary focus.

- * The current Apple FireWire 2.1 extensions allow for multiple devices, but they share the same FireWire channel for sending/receiving DV data. This might lead to difficulties selecting between multiple devices during output (such as Print to Video and Export to FireWire). It is recommended that you only work with one device at a time and turn off the other devices when not in use.

- * It is not recommended to use the Loop or Play to Out buttons in the Capture window.

- * Since DV transfers video and audio across a single stream, it is not recommended to attempt audio- or video-only captures.

- * With the current ATI Video Software Update 1.0, you will experience a frame redraw artifact during Play Edit in Trim Mode.

- * Stop Motion capture is not currently supported. It will only capture in low-res mode.

- * Always save your newly captured clips to your designated scratch disk drive. If you do not, you may receive an error, stating "no such volume". Once saved, the clips may be moved to any other drive.

- * If for any reason Premiere gets into a state where functionality is not correct, it is recommended you Quit Premiere, trash your Premiere preference file ("Adobe Premiere® 5.1 Prefs located in the System folder/Preferences folder) and restart your computer. It is always a good idea to back up a clean copy of your preference file.

What Extensions and Control Panels are needed for working with DV in Premiere?

When working with DV and Premiere, it is recommended that you set up a custom extension set. The following extension set includes the required Premiere and System file

ATI 3D Accelerator 4.6.2 (Note 1)
ATI Driver Update 1.4.8 (Note 1)
ATI Graphics Accelerator 3.9.7 (Note 1)
ATI MPP Manager 1.1.2f1 (Note 1)
ATI Rage 128 3D Accelerator 5.3.3 (Note 1)
ATI Resource Manager 1.2.4 (Note 1)
ATI Video Accelerator 4.2.2 (Note 1)
ATI Video Accelerator Update 1.0.2 (Note 1)
FireWire Enabler 2.2.2
FireWire Lynx Enabler 1.0
FireWire OrangeLink Enabler 1.1.2
FireWire OrangeLink PCCard 1.1.2
FireWire Support 2.2.2
Open TransportLib 2.0.3
OpenTptInternetLib 2.0.3
OpenTptAppleTalkLib 2.0.3
Open Transport Library 2.0.3
Open Tpt Internet Library 2.0.3
Open Tpt AppleTalk Library 2.0.3
QuickTime Extensions folder
- QuickTime Authoring 4.1
- QuickTime Capture 4.1
- QuickTime Effects 4.1
- QuickTime Image 4.1
- QuickTime Internal Extras 4.1
- QuickTime Music 4.1
- QuickTime Player Extras 4.1
- QuickTime Streaming 4.1
- QuickTime Streaming Authoring 4.1
- QuickTime Streaming Extras 4.1
- QuickTime Web Helper 4.1
QuickTime FireWire DV Enabler 2.1.2
QuickTime FireWire DV Support 2.1.2
QuickTime™ 4.1
QuickTime™ MPEG Extension 1.1.2
QuickTime™ Musical Instruments 4.1
QuickTime™ PowerPlug 4.1
QuickTime™ VR 2.3
Shared Library Manager PPC 2.0.1
Shared Library Manager 2.0.1
Sound Manager 3.4

Note 1- G3 models with an ATI RAGE 128 graphic accelerator card or ATI RAGE Pro graphic accelerator chip.

Note 2- Remove any other DV or FireWire files except those underlined above.

CHAPTER 4: PC DESKTOP VIDEO SOFTWARE

Install Ulead VideoStudio DV SE on your PC

VideoStudio DV Second Edition software places the power of digital movie making at the tip of your fingers. VideoStudio DV SE features a simple to follow Wizard that can get you up and sharing videos in no time at all. Tutorials are provided on the “Manual and Software” CD-ROM. Simply insert the CD-ROM, the Auto Start application will run, click on the box next to Install Ulead VideoStudio then select Tutorial from the VideoStudio menu.

The software boasts an impressive 109 different transition effects as well as 99 steps of undo.

If you are interested in making home videos, business presentation videos, streaming videos, or even hobbyist videos, then VideoStudio DV SE is definitely the right tool for you!

The Ulead VideoStudio software installation instructions are on the “Manual and Software” CD in the Adobe Acrobat portable document format (PDF). Click on the box next to “Browse This CD” double click on vstudio.pdf. If Acrobat Reader is installed on your system, Acrobat Reader should automatically open vstudio.pdf.

If you are unable to view this file this file, try reinstalling Adobe Acrobat Reader using the following instructions:

You can install Acrobat Reader from the OrangeLink “Manual and Software” CD-ROM. From the OrangeLink Setup screen, click on the box next to “Install Adobe Acrobat”.

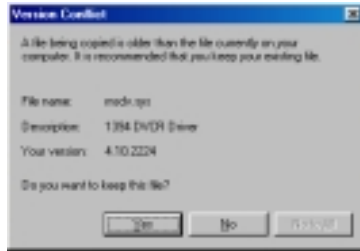
Once the file is open, scroll down to the contents page (3). There you will see 7: Installation. Click on 7 and you will see the installation instructions for VideoStudio DV SE. Follow these instructions and install the Ulead software.

VideoStudio DV SE QuickStart – Capturing Video

At this point you should have already installed the OrangeLink/HotLink software and VideoStudio DV SE software. Most camcorders will not be recognized by the FireWire drivers if the camcorder, the PC, and the VideoStudio software are not started in the right order. Performing the following procedures in order will quickly get you started capturing DV video.

1. Be sure that the PC is OFF, the camcorder power is OFF and the FireWire cable is connected securely to the camcorder DV port and the OrangeLink or HotLink FireWire port.
2. Start your PC.

3. When the PC has completely booted, configure the camcorder to Camera mode (Some camcorder manufacturers refer to this as Recording mode.) and turn ON the power to the camcorder. Listen to your PC hard disk. When the camcorder is detected the FireWire Software will load and you will hear a burst of disk access while the FireWire drivers load. If you are presented with the following dialog, click Yes.



4. Check the Windows System/Device Manager for the following devices:
1394 Bus Controller
Orange Micro OrangeLink OHCI IEEE 1394 Host Controller
Imaging Device
Microsoft DV Camera and VCR



Note: The Imaging Device will only appear if Windows detects the camera. If the above devices do not appear as shown, highlight the device that appears under 1394 Bus Controller and click on the Remove button at the bottom of the Device Manager Window. Then insert the “OrangeLink Manual and Software CD” and select the “Install OrangeLink Drivers” option. Restart Windows then compare the above devices to ensure they appear as shown.

5. Double-click the Ulead VideoStudio icon on your desktop. Follow the onscreen instructions to begin capturing video. For any help on capturing video with VideoStudio, insert the “OrangeLink Manual and Software CD”. It should Auto Start. Click on the box next to “Browse This CD” double click on

vstudio.pdf. You are now ready to start capturing video!

- 6 Verify VideoStudio settings. Point and click on the G (Global Menu). The following menu will appear:



Verify the following Settings:

Select Device Control... = MS 1394 Device Control

Change Capture Plug-in... = Ulead DirectShow Capture plug-in

Additional Workflow Recommendations and Known Issues:

Optimize your System

If you do not optimize your system you may get dropped audio or video frames. This can cause choppy sound or video that does not appear smooth.

- Run Disk Defragmenter on your hard disk. With all applications closed, click on the Windows Start menu and select Program/Accessories/System Tools/Disk Defragmenter.
- Enable DMA for IDE hard disks. In the Windows System/Device Manager double click on Disk Drives. Then double click on the icon labeled Generic IDE Disk. Select the Settings tab and click on the DMA box. Close all windows and restart the Windows operating system. Not all hard drives support DMA. If any problems result due to this procedure, restart Windows in safe mode and remove the check on the DMA box.



CHAPTER 5: GENERAL FIREWIRE BUS INFORMATION

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.

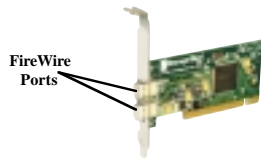
The OrangeLink FireWire PCI products are designed to keep the FireWire network operating even if the computer is shut down. Loss of power to the computer will not affect the operation of a FireWire board as long as it can draw power from other devices on the FireWire bus. The OrangeLink FireWire PCI board draws its power from the PCI bus.

The OrangeLink FireWire CardBus PC Card is not designed to keep the FireWire network operating when the computer is shut down. The OrangeLink FireWire CardBus PC Card does not supply power to the FireWire bus. FireWire devices that require power must get it from a FireWire hub. Contact Orange Micro sales to acquire a FireWire Hub.

To connect a DV camera, plug the 6-pin connector on the supplied FireWire cable to the OrangeLink PCI FireWire Board and the 4-pin connector to the camera's IEEE 1394 (DV IN/OUT, i.LINK) port. Both connectors snap into place when properly engaged. If you wish to connect two computers together (or if your device has a 6-pin FireWire port), you can obtain 6-pin to 6-pin cables through an AV equipment retailer, electronics store or directly from Orange Micro.

The OrangeLink FireWire PCI Board has two FireWire ports, as shown in the following illustration. OrangeLink FireWire CardBus PC Card also has two FireWire ports.

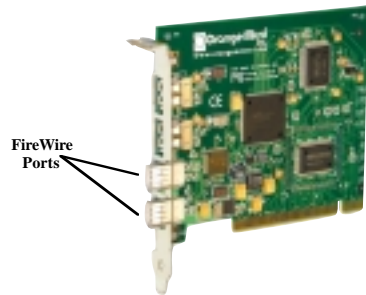
OrangeLink FireWire PCI Board



OrangeLink FireWire CardBus PC Card



OrangeLink FireWire/USB PCI Board



Guidelines for connecting FireWire devices

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

CHAPTER 6: THE USB BUS (OrangeLink FireWire/USB PCI Board Only)

The OrangeLink FireWire/USB PCI board also provides two easy-to-use USB ports. Hundreds of new USB devices are available including printers, digital cameras, game pads, joysticks, keyboards, mice, storage devices, modems and scanners. Just plug them in when you need them. It's that simple. No configuration necessary.

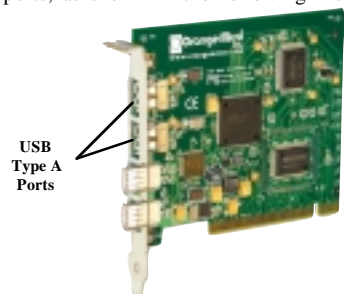
The OrangeLink USB supports up to 127 devices simultaneously. Peripheral connections may be up to five meters in length.

Built-in +5-volt power distribution eliminates the need for AC power supplies for low/bus-powered devices. Much like FireWire, there are no SCSI-style ID numbers to set, and no termination requirements make installation quick and easy.

The OrangeLink USB performance operates at up to 12 Megabits per second – over 1,200 times faster than the Apple Desktop Bus (ADB), over 50 times faster than Macintosh serial ports, and over 100 times faster than a standard PC serial or parallel port.

Simply “hot-plug” or “hot-unplug” any USB printer, scanner, modem, camera or any other USB compliant device and it is ready to use.

The OrangeLink FireWire/USB PCI Board has two USB ports, as shown in the following illustration.



Guidelines for connecting USB devices

The maximum length for USB is five meters. Cables with shielding and two twisted-pair connectors are considered “fully rated” to transfer data at the maximum 12 megabits per second. Non-shielded cables with non-twisted conductors are allowed, but are used when they are soldered to a device that will transmit only at the lower 1.5-megabit-per-second transfer rate. Low-speed cables can be a maximum of 3 meters in length.

USB cables are called “A to B” cables, because they have two standard USB connectors, known as Type A and Type B. The Type A connectors are small and rectangular, and are used to plug into the back of your computer. Type B connectors are square, and are used to attach a USB cable to a USB device (printer, modem, hub, etc.). Having two dissimilar connector types prevents wrong connections.

The OrangeLink FireWire/USB PCI board has two USB Type A ports. USB hubs are used to extend these ports without adding additional OrangeLink FireWire/PCI USB boards to your computer in order to add USB Type A ports. A typical USB hub will have four Type A downstream USB ports and one Type B upstream port.

The USB specification requires that power be provided on the bus for use by low-power devices. Hubs can use this power for operation, and are thus referred to as “bus-powered” hubs.

Hubs may also include an AC adapter that provides external power to the hub. Such hubs are referred to as “self-powered” hubs. No two bus-powered hubs can be connected directly together. The downstream hub must be farthest from the OrangeLink USB port.

OrangeLink USB support gives you access to many easy-to-use plug and play devices designed to make your computing experience as simple as possible.

APPENDICES:

Appendix A: Macintosh Troubleshooting

Problem – My OrangeLink appears to be dead

Suggestion:

1. Go to the Mac System/Extensions Folder and trash all FireWire extensions.
2. Reinstall OrangeLink Software. Refer to Chapter 3
3. Ensure the OrangeLink is secure in its socket.

Problem – I have a Macintosh and I can't get Adobe Premiere to capture video from my DV camcorder.

Suggestion:

1. Make sure you are using Adobe Premiere 5.1C
2. Launch Adobe Premiere
3. Make sure the Monitor window is in the foreground. Pull down the File menu. Then select Capture/Movie Capture.
4. Pull down the first pop-up menu and select "Source".
5. Set the Digitizer field to: DV Video Click on the OK button to continue.
6. At this point the Movie Capture window should be capturing video.

Problem – I have tried the above suggestions and I still can't capture video.

Suggestion:

1. Quit Adobe Premiere
2. Turn off the camcorder. Unplug FireWire cable from camcorder. Wait 10 seconds. Then, reconnect the FireWire cable and turn the camcorder back on.
3. Launch Adobe Premiere
4. Make sure the Monitor window is in the foreground. Pull down the File menu. Then select Capture/Movie Capture.
5. At this point the Movie Capture window should be capturing video.

Appendix B: PC Troubleshooting

Problem – I get choppy sound or video that does not appear smooth.

Suggestion:

Optimize your system. Refer to Chapter 4: Desktop Video Software for the PC; In the “Additional Workflow Recommendations and Known Issues” section.

Problem – Windows 98 SE does not detect my camcorder

Suggestion:

Many camcorders cannot be detected unless it attached to its power supply.

Appendix C: Specifications

Hardware Features:

- PCI 2.1 Compliant (PCI Board only)

FireWire Ports

- OHCI-Link and PHY: NEC single chip; 100 (12.5 MB/sec) Mbit/s; 200 Mbit/s (25 MB/sec); 400 Mbit/s (50 MB/sec)
- Connect up to 63 devices, internal or external
- All FireWire ports provide up to 12 V of power (PCI board only)
- Supports Plug-and-Play Specification
- Hot Plug
- Complies with Standard for a IEEE-1394 High Performance Serial Bus/ i.LINK
- Up to 16 consecutive cable hops of 4.5 meters
- Support for digital video in full size, full motion video of 720 by 480 pixels at 30 frames per second
- Isochronous and Asynchronous data transfer
- Function Control Protocol (FCP)
- Connection Management Protocol (CMP)

USB Ports (FireWire/USB PCI board only)

- Opti FireLink
- Fully compatible with USB OHCI specification
- USB 1.1 compliant
- Data transfer rate 12 Mbits/second
- 1.5 Mbits/second option supports low-end devices such as keyboard and mouse
- Provides +5 volts for devices Supports Plug-and-Play Specification
- Hot Plug and Hot Un-Plug

Connectors

- Two external 6-pin FireWire ports
- Two external Type A USB ports (FireWire/USB PCI board only)

Hardware Requirements

- Intel Pentium based PC or PowerPC based Macintosh
- Any computer with at least one available 7" or 12" PCI slot
- Any computer with one available CardBus slot (PC Card only)

Operating System Support

- Mac OS 8.6 or newer
- Microsoft Windows 98 Second Edition or Windows 2000

Power Consumption

- Depending upon the number of devices connected, the PCI Board can consume up to 15 watts of power from the internal power supply
- The OrangeLink FireWire CardBus PC Card does not supply power to the FireWire devices.

Appendix D: Warranty Information

LIMITED WARRANTY

Every Orange Micro product is fully tested and checked for quality prior to shipment. It is warranted to be free from defects in materials and workmanship for a period of one (1) year from date of purchase. During that time period, Orange Micro Inc. will, at no charge to the purchaser of record, repair or replace the defective unit returned to the Customer Service Department in accordance with the following instructions:

NOTE: DO NOT return the Orange Micro card to Orange Micro Inc. until you have received a Return Material Authorization (RMA) Number. Customers outside the United States should contact the Orange Micro distributor in that country and request service.

1. Phone the Orange Micro Customer Service Department between 8AM and 4PM PST to obtain a Return Material Authorization (RMA) number. Customer Service lines are closed from 12PM to 1PM PST for lunch.
2. Provide Orange Micro, Inc. with: Model, Serial Number, Proof of Purchase, Return Address, and preferred return shipping method. Enclose a clear description of the problem experienced and any sample printouts showing the problem, if possible.
3. Ship in the original carton or securely packed in a cardboard carton with at least two inches of cushioned packing material on all sides. Mark the package "FRAGILE" and ship via UPS, Parcel Post, or Air Freight, insured and prepaid.

NOTE: DO NOT SEND COLLECT - collect shipments will be refused and returned to sender.

Orange Micro, Inc. disclaims any liability to users of the Orange Micro product for consequential damages of any kind arising from or connected with the use of the Orange Micro product.

This warranty is void in cases of misuse, abuse, abnormal conditions of operations or attempts to alter or modify the function of a part or assembly.

This limited warranty is in lieu of all other warranties expressed or implied, and no representative or other person is authorized to represent or assume for Orange Micro, Inc. any warranty liability beyond that set forth herein.

This warranty gives you specific legal rights, and you may also have additional rights, which vary, from state to state. The warranty expressed herein applies to the Orange Micro product sold and used in the United States of America.

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.



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