FireWire CardBus PC Card
for Macintosh PowerBookG3

CBFW2

User's Guide

Rev. 4.0

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RATOC Systems, Inc.

CBFW2 User's Guide

1. Introduction

This User's Guide describes how to install,use,and troubleshoot the RATOC CBFW2
FireWire CardBus PC Card.(called CBFW2 in this User Guide)
The information in the README file on the CD-ROM may include the latest information.
Be sure to read the README file as well.

1-1.Before Using the CBFW2

- Never attempt to disassemble the PC Card and the dongle.
- Do not bend, drop or strike the PC Card and the cable, or subject it to heavy pressure.
- Information in this document is subject to change without notice.
- If you have any questions or find errors in this guide, do not hesitate to let us know.

1-2.Package

- CBFW2 FireWire CardBus PC Card
- 4PDV(i-Link) to 6P FireWire cable (6feet)
- Dongle with two FireWire 6P port and Cable Power input jack
- Support software CD-ROM(The version below are subject to change without notice)
  - •REX-CBFW Installer
  - •REX-CBFW Driver 2.0
  - •REX-CBFW Enabler 2.0
  - •FireWire Support 2.2.2
  - •QuickTime 4.0
  - •EditDV unplugged 1.6.1   45 days trial version
- User Guide document(This document)

NOTE:
If any of these items are missing from the CBFW2 Retail package, contact your supplier immediately.

2. Setup

2-1.Setup procedures

1.Install the driver for the CBFW2. (Refer to **2-2**)

2.Verify the installation.(Refer to **2-3**)

3.Check whether there are two drivers below at the **Extensions** folder at the **System Folder**.

   -**QuickTime FireWire DV Enabler**
   -**QuickTime FireWire DV Support**

4.If you was not able to find **QuickTime FireWire DV Enabler, QuickTime FireWire DV Support,** you have to install **QuickTime4.0.**(Refer to **2-4**)

5.Insert the CBFW2. (Refer to **2-5**)

6.Connect a DVCAM. (Refer to **2-6**)

2-2.Installing the driver for the CBFW2.

3

1. Insert the Support software CD-ROM into CD-ROM drive.

2. After you see the icon of the CD-ROM mounted on the desktop,

open the CD-ROM icon.You will see a screen below.Click "**CBFW2 Driver Installer**"
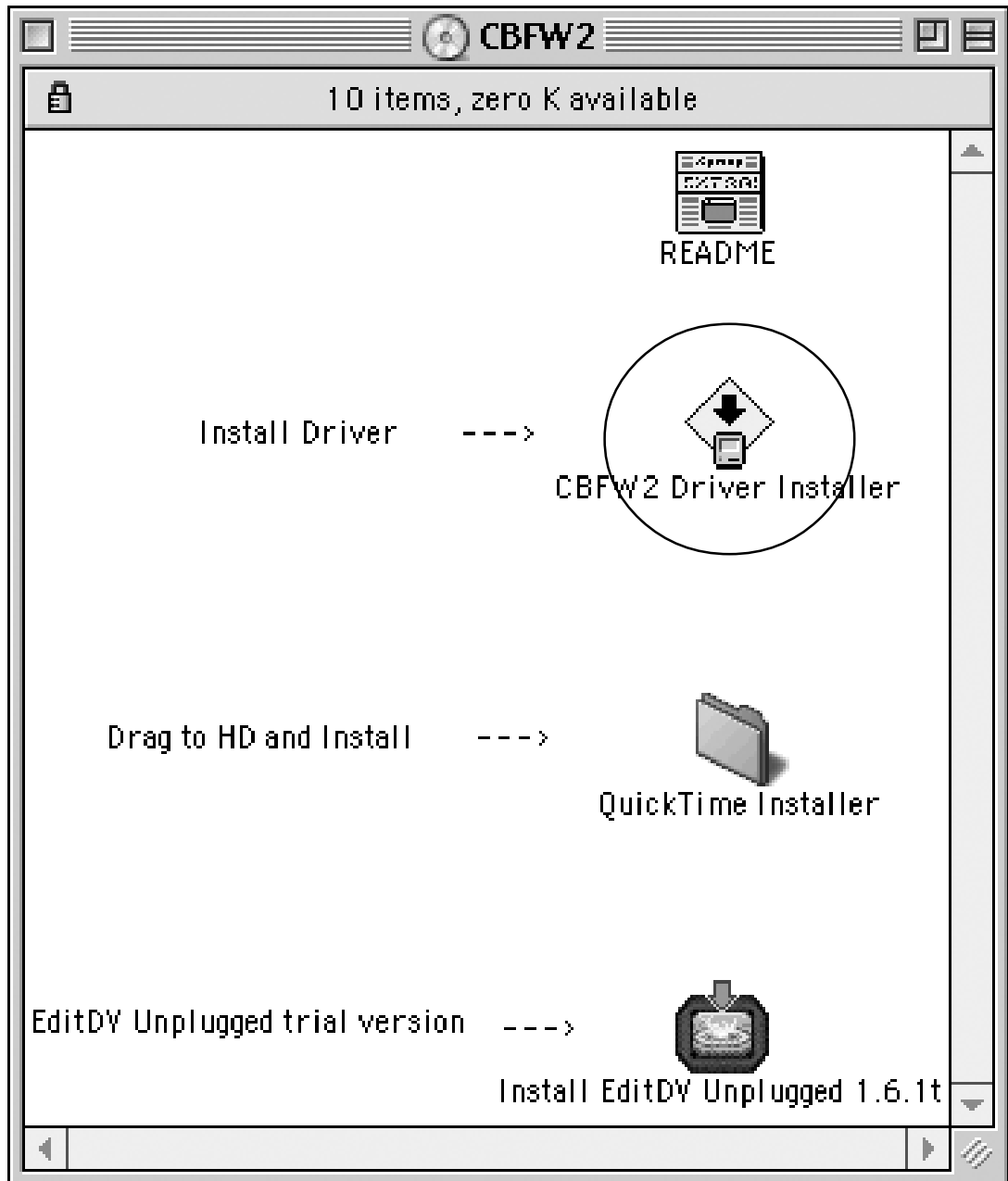
3. License Agreement window will appear. Click **[Accept]**. You will see the screen below.
Click **[Install]**.
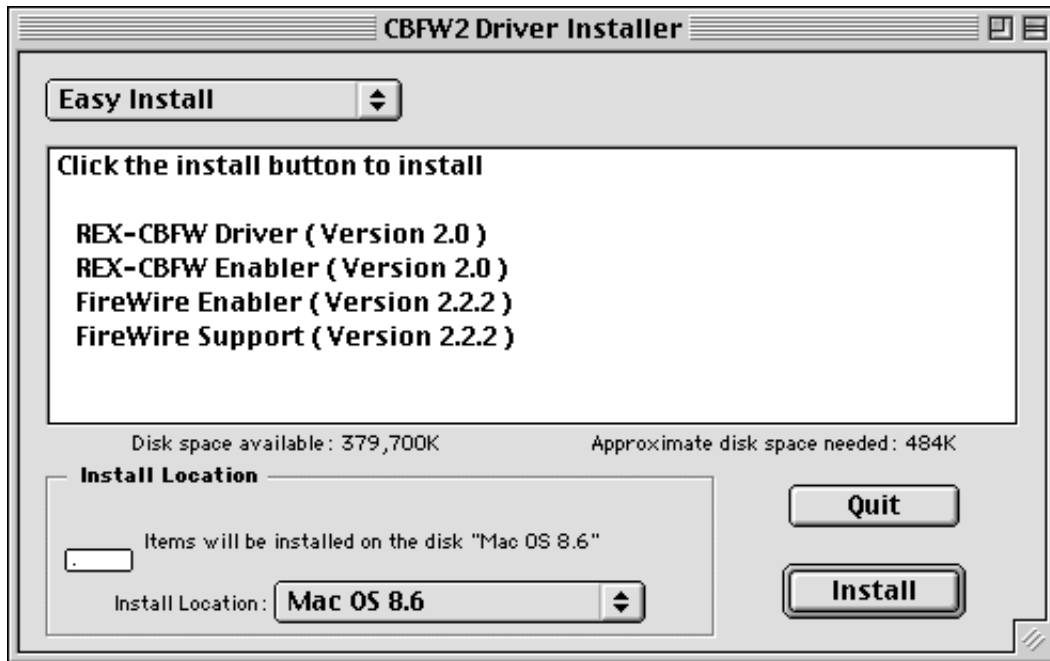
4. You will see the screen below.Click **[Continue]**.

5. You will see the screen below. Click **[Restart]**.

2-3. Verifying the installation.

1)To make sure you have succeeded to install **the driver for the CBFW2,** following the steps below:

1-1)Open **Extensions** folder at the **System Folder**.
1-2)If you can find **the files below** at the **Extensions** folder,
you have succeeded to install **the driver for the CBFW2.**

-REX-CBFW Driver (Version 2.0)
-REX-CBFW Enabler(Version 2.0)
-FireWire Support 2.2.2

NOTE: The version number is subject to change without notice for software updates.

2)Check whether there are two drivers below at the **Extensions** folder at the **System Folder**.

-**QuickTime FireWire DV Enabler**
-**QuickTime FireWire DV Support**

If you was not able to find the two drivers above, proceed to the next step **2-4.Install QuickTime4.0.**
If you can find the two drivers above, ignore the step **2-4.Install QuickTime4.0**
and proceed to the step **2-5.Insert the CBFW2.**

2-4. Installing QuickTime 4.0.

If there aren't **QucikTime FireWire DV Enabler** and **QucikTime FireWire DV Support**
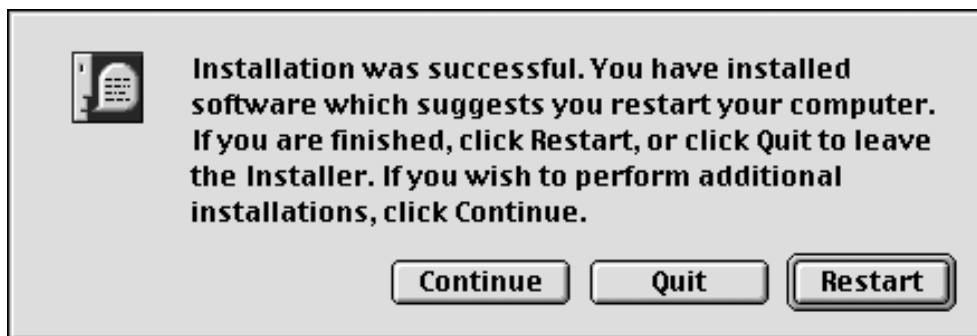at the **Extensions** folder at the **System Folder**, you have to install **QucikTime 4.0**.

Follow the steps below:

1. Insert the CD-ROM into CD-ROM drive.

2. After you see the icon of the CD-ROM mounted on the desktop,
   Open the CD-ROM icon. You will see a screen below.
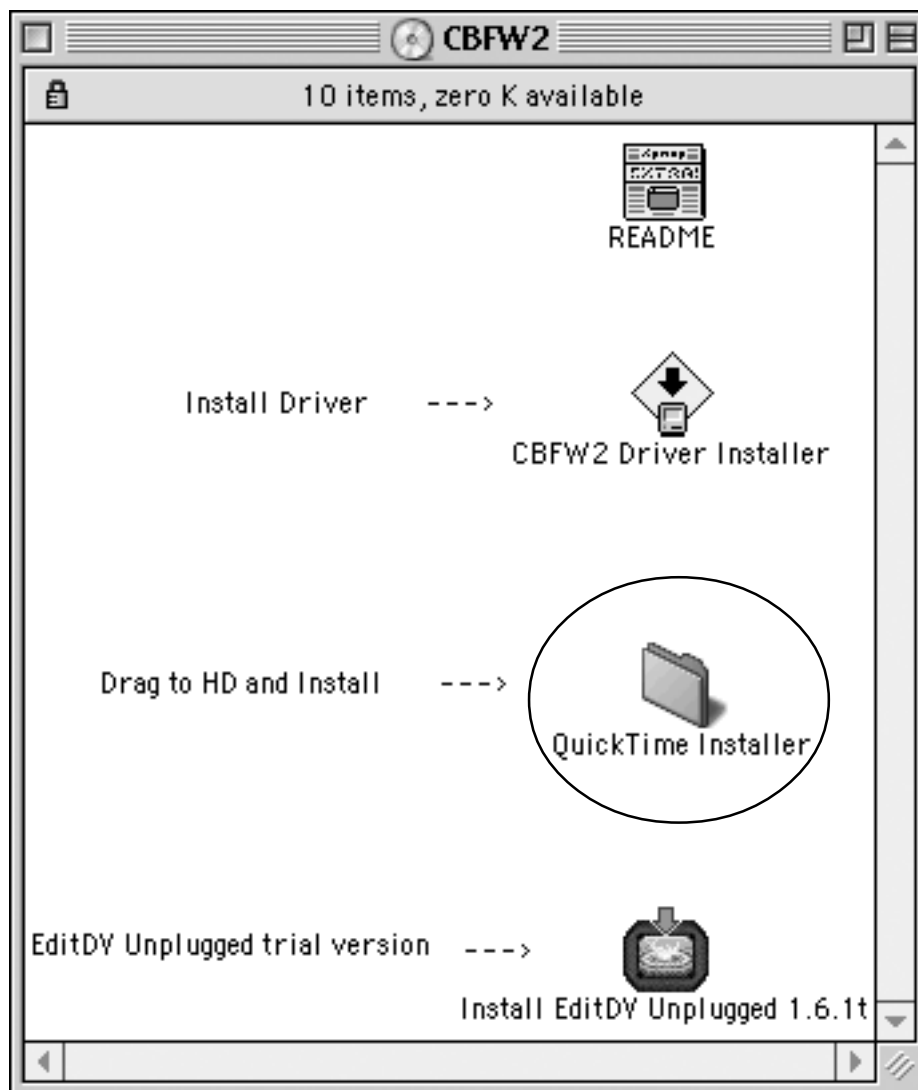
3. Double-click the **QuickTime Installer** folder. You will see the screen below. Double-click the **QuickTime Installer** icon.

4. You will see the screen below. Click **[Continue]**.

5. You will see the screen below. Click **[Agree]**.

6. You will see the screen below. Select the **Full** option and click **[Continue]**.
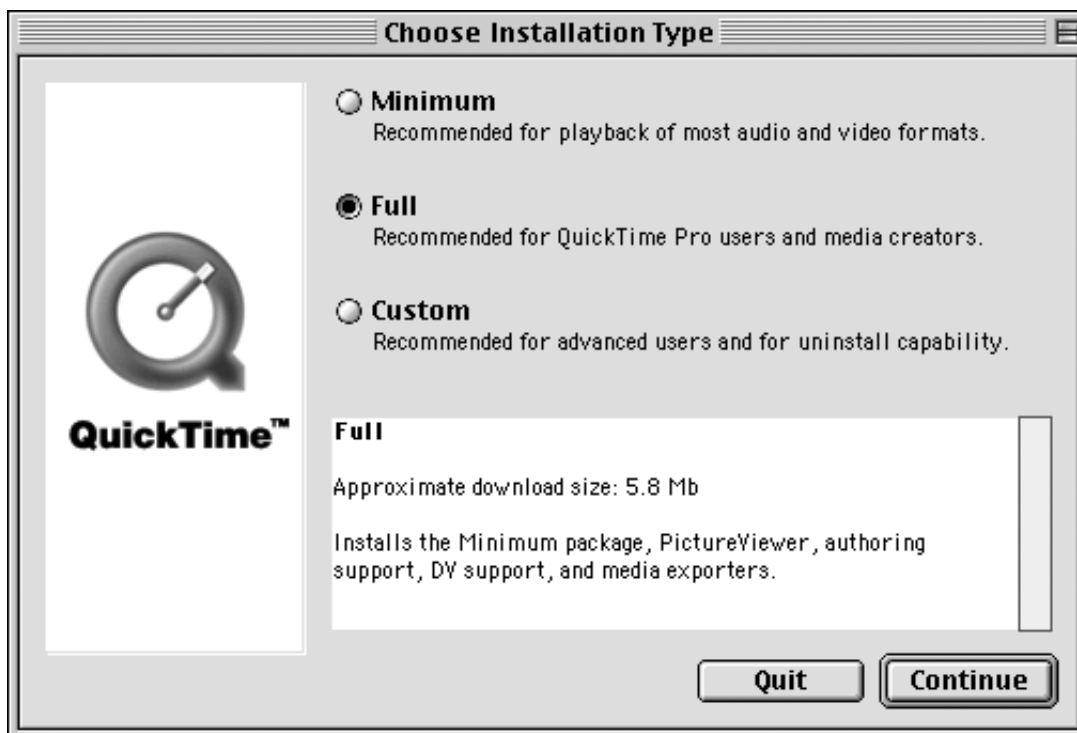
7.You will see the screen below.Click **[Continue]**.

8.You will see the screen below.Click **[Restart]**.
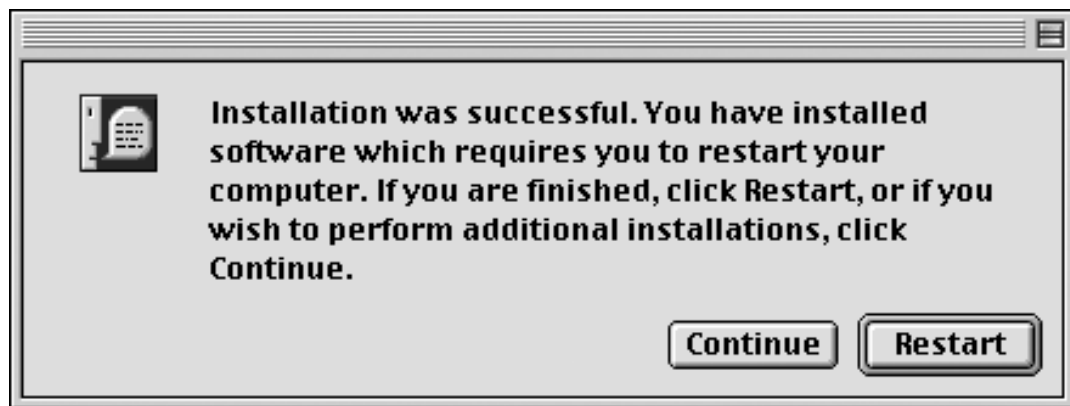
9.To verify the installation,open the **Extention** folder in the **Control Panel** and find the five
   drivers below.If you can find the five drivers,you can proceed to the step **2-5.Insert the

   CBFW2**.

   -REX-CBFW Driver (Version 2.0)
   -REX-CBFW Enabler(Version 2.0)
   -FireWire Support 2.2.2

   -**QuickTime FireWire DV Enabler**
   -**QuickTime FireWire DV Support**

2-5.Inserting the CBFW2

1.Turn off your PowerBookG3.

2.Grasp the CBFW2 by the edges with the label facing upward.
　Insert the CBFW2 into the slot and push it in until it is firmly seated.

3.Make sure the CBFW2 icon is mounted on the desktop.
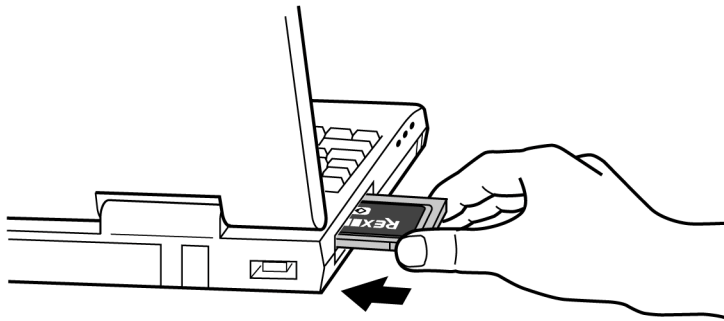
2-6. Connecting a DVCAM

1)Connect a DVCAM to the CBFW2 with the FireWire cable.

You can connect the DVCAM without turning off the DVCAM or the PowerBookG3.

You can hot plug the DVCAM.

Refer to the manual that accompanied your DVCAM for the location of the FireWire connector.

4p DV to 6p FireWire cable
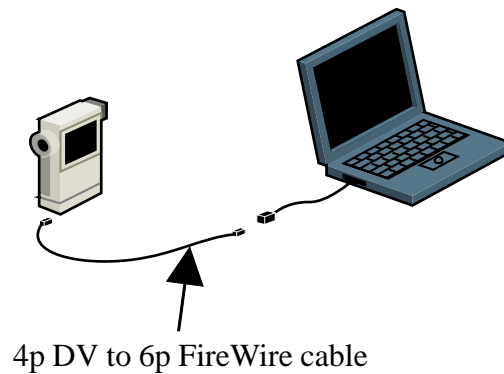
2)Check if the DVCAM is recognized.

Follow the steps below:

2-1)Set the DVCAM in Camera Mode and turn on the DVCAM.

2-2)Start **Apple Video Player** in your system.

2-3)If you can preview with **Apple Video Player,** the DVCAM is recognized.

But note the **Apple Video Player** can not capture sound and

recording function does not work.

You can now do a video editing.

To install EditDV trial version,open EditDV folder and follow the installer and

readme instructions.

3. Compatibility with Video Editing Software

3-1. Adobe Premire.

CBFW2 is fully compatible with *Premire5.1c*. If you have not it, you have to update your *Premire* to *5.1c*. Adobe original package contains **Premire5.1** CD-ROM. You have to download **Premire5.1c updater** from www.adobe.com and install it. If you are using **MacOS9**, you have to download **FireWire DV Device control 1.2** (This version may be subject to change.) from www.adobe.com and install it.

Premire5.1 full version bundled model(*CBFW2PF*) is available from us.

To install *Premire5.1* and update to *5.1c*, follow these steps.

(1) Check your *CBFW2* installation.
   You need following *CBFW2* drivers in your *Extensions* folder.
   - *REX-CBFW Driver 1.6 or 1.7 or later*
   - *REX-CBFW Enabler 1.0 or later*
   - *FireWire Support 2.2.2*
   - *QuickTime FireWire DV Enabler*
   - *QuickTime FireWire DV Support*

   These drivers are included in *CBFW2* CD and MacOS9.0.
   REX-CBFW Driver , Enabler and FireWire Support 2.2.2 are installed by *REX-CBFW* installer.
   If you are using *MacOS9.0* or later, you don't need to install *QuickTime FireWire DV Enabler* and *Support* because *QuickTime 4.x* is already included in the OS. If you are using *MacOS8.6*, you have to install *QuickTime4.x*. *QuickTime FireWire DV Enabler* and *Support* are installed by *QuickTime4.x* installer.

(2) *CBFW2* is working ?
   Check "REX-CBFW" FireWire PC Card i-con on your desktop.
(3) Connect DVCAM and turn it on with setting camera mode.

(4) Run **Apple Video Player**. You will see the footage from DVCAM.

(5) If you can not see any picture from DVCAM, check your **CBFW2** installation, DVCAM connection and cable again.

(6) Install *Premire5.1* and update *to 5.1c*.

(a)Put **Adobe Premire** application CD-ROM into the CD-ROM drive.

(b)Double click **Adode Premire** CD-ROM I-con and open the folder.

(c)Double click **Installer Adobe Premire 5.1**. The installation will be started and done automatically.

　You should not install **QuickTime 3.0.2**. FireWire requires **QuickTime4.0**.

(d)Download **5.1c updater**.

- Start Internet browser and access to Adobe web site <u>www.adobe.com</u>.

- Go to **Support** page and select **Downloads**.

- Select **Premire machintosh**.

- Select **Version 5.1c** and download **Adobe Premire 5.1C updater for MacOS**.

(e)If you are using **MacOS9**, you have to download **FireWire DV Device control 1.2 beta plug-in for MacOS9** continuously.

(f)Expand **Premire5.1c updater for Mac.sit** and refer to **GettingStarted.pdf**.

(g)**Run Premire5.1c Update**.

(h)If you are using **MacOS9**, expand **FireWire DV Device 1.2 Beta.sit**.

(i)Refer **Readme** and drag **FireWire DV Device control 1.2** to the **Extensions** folder.

　Also you need to remove **FireWire DV Device control 1.0** from **Extensions** folder.

(j)Start **Premire5.1C** and select **File** menu. Select **Preferences** > **Scratch Disks/Device Control**.

　And then choose **FireWire DV Device 1.2** in the pop-up menu.

(k)You will be able to control your DVCAM and capture movie from the DVCAM.

3-2. Final Cut Pro

CBFW2 is fully compatible with this software and qualified officially by Apple, refer to
http://www.apple.com/finalcutpro/techspecs/ 'qualified video capture card' page.
If you are using ***MacOS9.0*** or later, you need ***Final Cut Pro 1.2*** and ***QuickTime 4.0.3***.
Please note, ***Final Cut Pro 1.2*** does not work with ***MacOS8.6*** and ***QuickTime 4.0*** or ***4.0.1***.

To use it, follow these steps.

(1) Check your ***CBFW2*** installation.
You need following ***CBFW2*** drivers in your ***Extensions*** folder.
-***REX-CBFW Driver 1.6 or 1.7 or later***
-***REX-CBFW Enabler 1.0 or later***
-***FireWire Support 2.2.2***
-***QuickTime FireWire DV Enabler***
-***QuickTime FireWire DV Support***

These drivers are included in ***CBFW2*** CD and MacOS9.0.
REX-CBFW Driver , Enabler and FireWire Support 2.2.2 are installed by ***REX-CBFW***
installer.
If you are using ***MacOS9.0*** or later, you don't need to install ***QuickTime FireWire DV***
Enabler and ***Support*** because ***QuickTime 4.x*** is already included in the OS. If you are
using ***MacOS8.6***, you have to install ***QuickTime4.x***. ***QuickTime FireWire DV Enabler***
and ***Support*** are installed by ***QuickTime4.x*** installer.

(2) ***CBFW2*** is working ?
Check "REX-CBFW" FireWire PC Card i-con on your desktop.
(3) Connect DVCAM and turn it on with setting camera mode.
(4) Run **Apple Video Player**. You will see the footage from DVCAM.
(5) If you can not see any picture from DVCAM, check your **CBFW2** installation, DVCAM
connection and cable again.
(6) Install ***Final Cut Pro***. Notice to select "DV mode".
(7) Restart ***MacOS***
(8) Make sure "REX-CBFW" FireWire PC Card i-con. Connect DVCAM to CBFW2 and
turn it on.
(9) Start ***Final Cut Pro***.

3-3. Digital Origin EditDV Unplugged, 1.6.1, 2.0.

CBFW2 is fully compatible with *Digital Origin EditDV*. Also *CBFW2* CD-ROM includes *EditDV unplugged 1.6.1* 45days trial version. If you have older version than *1.6.1*, you have to update to this version.

To use it with *CBBFW2*, follow these stepps.

(1)Check your *CBFW2* installation.
You need following *CBFW2* drivers in your *Extensions* folder.
-*REX-CBFW Driver 1.6 or 1.7 or later*
-*REX-CBFW Enabler 1.0 or later*
-*FireWire Support 2.2.2*

These drivers are included in *CBFW2* CD-ROM. *REX-CBFW Driver* , *Enabler* and *FireWire Support 2.2.2* are installed by *REX-CBFW* installer. If you are using *MacOS8.6* and you can't find *QuickTime 4.0* in your *Extensions* folder, you have to install *QuickTime4.0*. But you have to set *QuickTime FireWire DV Enabler* and *Support* disable state to prevent software confliction with DigitalOrigin original drivers.

If you have already installed following *QuickTime4.0 FireWire DV drivers*, you have to remove from *Extensions* folder or set disable state with *Extensions Manager* because these drivers will conflict with *Digital Origin original drivers* and cause system crush.

-QuickTime FireWire DV Enabler
-QuickTime FireWire DV Support

(2)Install *EditDV unplugged, 1.6.1 or 2.0.*

(3)Check *Digital Origin DV drivers*.

You need following drivers in your *Extensions* folder.

-RadDVCodec

-RadDVDecorder

-RadDVDriverA

-RadDVDriverB

-RadDVFireWireExpert

-RadDVFireWireFamily

-RadDVOutLib

-RadDVPlayerComp

-RadSonyPC7Driver

-RadSonyVXDriver

If the version of these drivers are older than *1.6*, you have to update these *Digital Origin DV drivers.* In this case, you need to download the latest *Digital Origin DV drivers(Drivers for G3 built-in-FireWire)* from http://www.digitalorigin.com and install them into your *Extensions* folder.

(4)Restart *MacOS* and make sure that the "REX-CBFW" FireWire PC Card i-con appears on your desktop.

(5)Connect DVCAM to *CBFW2* and turn it on.

(6)Start *EditDV* .

3-4. Digital Origin MotoDV 1.4

CBFW2 is fully compatible with *Digital Origin MotoDV 1.4*. To use it with *CBFW2*, follow
these steps.

(1) Check your *CBFW2* installation.
 You need following *CBFW2* drivers in your *Extensions* folder.
  -*REX-CBFW Driver 1.6 or 1.7 or later*
  -*REX-CBFW Enabler 1.0 or later*
  -*FireWire Support 2.2.2*

 These drivers are included in *CBFW2* CD-ROM. *REX-CBFW Driver* , *Enabler* and
 FireWire Support 2.2.2 are installed by *REX-CBFW* installer. If you are using
 MacOS8.6 and you can't find *QuickTime 4.0* in your *Extensions* folder, you have to
 install *QuickTime4.0*. But you have to set *QuickTime FireWire DV Enabler* and
 Support disable state to prevent software confliction with DigitalOrigin original drivers.

 If you have already installed following *QuickTime4.0 FireWire DV drivers*, you have
 to remove from *Extensions* folder or set disable state with *Extensions Manager*
 because these drivers will conflict with *Digital Origin original drivers* and cause
 system crush.

  -QuickTime FireWire DV Enabler
  -QuickTime FireWire DV Support

(2) Install *MotoDV 1.4.*

(3) Check *Digital Origin DV drivers*.

You need following drivers in your *Extensions* folder.

-RadDVCodec
-RadDVDecorder
-RadDVDriverA
-RadDVDriverB
-RadDVFireWireExpert
-RadDVFireWireFamily
-RadDVOutLib
-RadDVPlayerComp
-RadSonyPC7Driver
-RadSonyVXDriver

If the version of these drivers are older than *1.6*, you have to update these *Digital Origin DV drivers.* In this case, you need to download the latest *Digital Origin DV drivers(Drivers for Apple built-in-FireWire)* from http://www.digitalorigin.com and install them into your *Extensions* folder.

(4) Restart *MacOS* and make sure that the "REX-CBFW" FireWire PC Card i-con appears on your desktop.

(5) Connect DVCAM to *CBFW2* and turn it on.

(6) Start *MotoDV* .

3-5. Digital Origin PhotoDV 1.4

CBFW2 is fully compatible with this software. To use it, follow these steps.

(1) Check your *CBFW2* installation.

   You need following *CBFW2* drivers in your *Extensions* folder.
   - *REX-CBFW Driver 1.6 or 1.7 or later*
   - *REX-CBFW Enabler 1.0 or later*
   - *FireWire Support 2.2.2*

   These drivers are included in *CBFW2* CD-ROM. *REX-CBFW Driver* , *Enabler* and *FireWire Support 2.2.2* are installed by *REX-CBFW* installer. If you are using *MacOS8.6* and you can't find *QuickTime 4.0* in your *Extensions* folder, you have to install *QuickTime4.0*. But you have to set *QuickTime FireWire DV Enabler* and *Support* disable state to prevent software confliction with DigitalOrigin original drivers.

   If you have already installed following *QuickTime4.0 FireWire DV drivers*, you have to remove from *Extensions* folder or set disable state with *Extensions Manager* because these drivers will conflict with *Digital Origin original drivers* and cause system crush.

   -QuickTime FireWire DV Enabler
   -QuickTime FireWire DV Support

(2) Install *PhotoDV 1.4.*

3. Compatibility and Video Editing Software

(3) Check *Digital Origin DV drivers*.

You need following drivers in your *Extensions* folder.

-RadDVCodec
-RadDVDecorder
-RadDVDriverA
-RadDVDriverB
-RadDVFireWireExpert
-RadDVFireWireFamily
-RadDVOutLib
-RadDVPlayerComp
-RadSonyPC7Driver
-RadSonyVXDriver

If the version of these drivers are older than *1.6*, you have to update these *Digital Origin DV drivers.* In this case, you need to download the latest *Digital Origin DV drivers(Drivers for Apple built-in-FireWire)* from http://www.digitalorigin.com and install them into your *Extensions* folder.

(4) Restart *MacOS* and make sure that the "REX-CBFW" FireWire PC Card i-con appears on your desktop.

(5) Connect DVCAM to *CBFW2* and turn it on.

(6) Start *PhotoShop* and select *import from Digital Origin* .

3-6. STRATA VideoShop Ver.5.0

You need *Version 5.0* to use with *CBFW2* and DVCAM. If you have old version, you have to update it to 5.0 or later.

To use this software with *CBFW2*, follow these steps.

(1) Check your *CBFW2* installation.
   You need following *CBFW2* drivers in your *Extensions* folder.
    -*REX-CBFW Driver 1.6 or 1.7 or later*
    -*REX-CBFW Enabler 1.0 or later*
    -*FireWire Support 2.2.2*
    -*QuickTime FireWire DV Enabler*
    -*QuickTime FireWire DV Support*

   These drivers are included in *CBFW2* CD and MacOS9.0.
   REX-CBFW Driver , Enabler and FireWire Support 2.2.2 are installed by *REX-CBFW* installer.
   If you are using *MacOS9.0* or later, you don't need to install *QuickTime FireWire DV Enabler* and *Support* because *QuickTime 4.x* is already included in the OS. If you are using *MacOS8.6*, you have to install *QuickTime4.x*. *QuickTime FireWire DV Enabler* and *Support* are installed by *QuickTime4.x* installer.

(2)*CBFW2* is working ?
   Check "REX-CBFW" FireWire PC Card i-con on your desktop.
(3)Connect DVCAM and turn it on with setting camera mode.
(4)Run **Apple Video Player**. You will see the footage from DVCAM.
(5)If you can not see any picture from DVCAM, check your **CBFW2** installation, DVCAM connection and cable again.
(6)Install *STRATA VideoShop 5.0*.
(7)Restart *MacOS*
(8)Make sure "REX-CBFW" FireWire PC Card i-con. Connect DVCAM to CBFW2 and turn it on.
(9)Start *VideoShop*. You can capture DV data from DVCAM, but you can't control it.

4. Registration and Tech-Support

4-1. How to Register

We highly recommend to register yourself as our customer through our on-line registration.

1.On the Internet, access our site (**http://www.ratocsystems.com/english/**)
2.Follow window menu guide to register.
3.Fill out and submit the registration form.

4-2. Software Update and Support

-**Software Update**-
The latest driver is subject to change for improvement or bug fix.
You can download the latest version from our web site.
(**http://www.ratocsystems.com/english/**)

-**Technical Support**-
You can get a Tech support from RATOC at the following
(Open Monday - Friday,10:00A.M. to 5:00P.M(PST))
RATOC Systems International,Inc. Tech support
  Address: 1933 O'Toole Avenue Suite A109
           SanJose, CA 95131, U.S.A.
  Phone : (408)955-9400
  Fax   : (408)955-9402
  E-mail : int-support@rexpccard.co.jp
  Web   : http://www.ratocsystems.com/english/

NOTE:
Please include the following information to help us to assist you in the event of a problem:
    -Our product name, serial number, and product description
    -Host Computer Name, MacOS version
    -Application software/driver version

4-3. System Requirements

- PowerBookG3/233,G3/250,G3/266,G3/292,G3/300(1998 WallStreet),
    G3/333,G3/400(1999 Lomberd)

- MacOS8.6, 9.0, 9.0.4, 9.1, 9.2, 9.2.1

- QuickTime 4.0

  1.)QuickTime FireWire DV support

  2.)QuickTime FireWire DV Enabler

  If you can not find these software component above,CBFW2 does not work.

- CD-ROM drive

- DV capturing frame rate depends on CPU speed,Memory size,software and

  Hard Disk sustained data write rate.You need more than 7MB/sec. sustained data write

  rate Hard Disk.

- To capture full frame rate and non dropped frame movie file to FireWire HD directly,

  G3/400 or G3/333(Lomberd) is required.

  If you have WallStreet model PowerBook,you may not capture non-dropped frame movie

  file to FireWire HD directly.For WallStreet model,we strongly recommend to use internal HD

  or external Ultra SCSI as a scratch drive, and then save the movie to FireWire HD.

5. Specifications

Bus interface

CardBus (PC Card Standard)

Data transfer rate

100, 200 and 400 Mbps

Power requirements

Voltage +3.3V (Supplied from PC Card slot)
237mA (Suspend)
325mA (MAX)

Operating environment

Temperature from 32F °to 131F°(0 to 55 °C)
Relative humidity 95% maximum (Non-condensing)

Dongle

Two FireWire 6p port
DC Cable Power input jack (DC8 to 30V, 3A max.)
GND $\quad$ ⎯◉⎯ $\quad$ +DC $(5.5\phi - 2.1\phi)$
(Note)
FireWire cable power is available through these ports.Output voltage and current depend on the Power Adapter
which is connected to the Cable Power input jack. We recommend Power Adapter which has Class_1
capability.This adapter is sold separately as optional component from us. Product name is CBFW-CPA.

Features

- Designed for CardBus PC Card slot
- 32-bit Data Bus and 33MHz operation
- Supports Bus-mastering data transfer
- IEEE 1394-1995,IEEE1394.a compliant
- OHCI based architecture link layer chip included
- Data transfer rates up to 400 Mbps
- Provides Two FireWire 6p port(2 x 6p)
- 1394 Cable power is available through add-on DC Power adapter

FCC Statement

Trademarks

- Apple,PowerBook,QuickTime,FireWire,FireWire Logo,MacOS and Macintosh are registered trademarks of Apple Computer Corp.
- EditDV unplugged is a trademark of Digital Origin Co.
- Other tradenames and products names appearing in this guide are the property of their respective owners.

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 instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does 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:

(1) Reorient or relocate the receiving antenna.

(2) Increase the separation between the equipment and receiver.

(3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

(4) Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance may result in this unit not complying with FCC Rules Part 15.