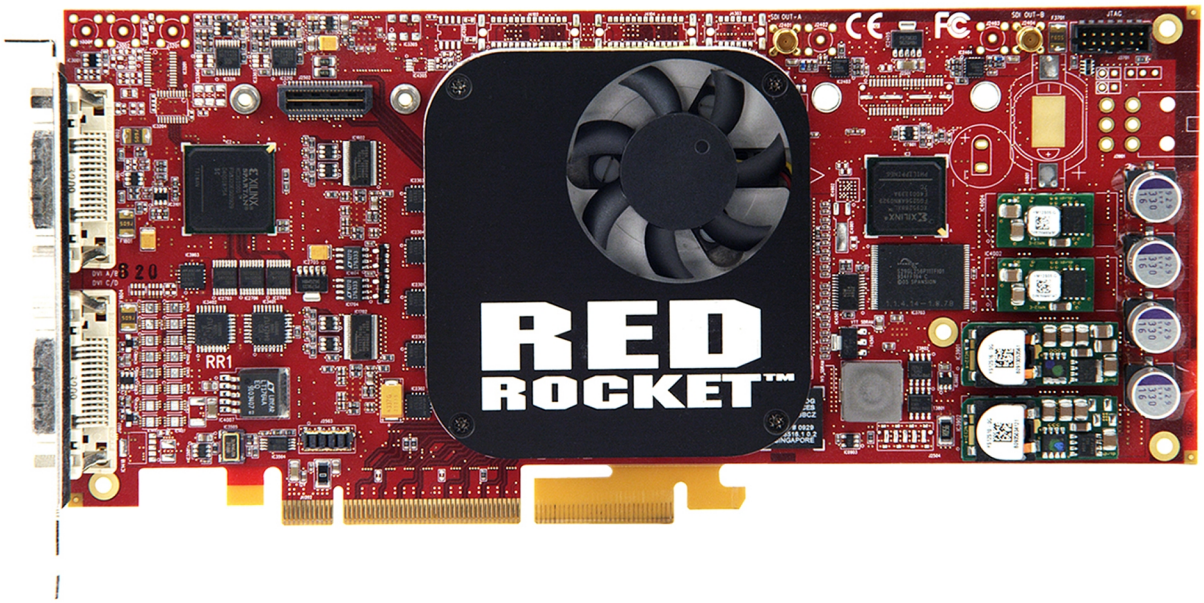
RED ROCKET
INSTALLATION INSTRUCTIONS



RED ROCKET

RED.COM

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COMPLIANCE STATEMENTS

FEDERAL COMMUNICATIONS COMMISSION (FCC) STATEMENTS

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

NOTE: Connecting this device to peripheral devices that do not comply with Class A requirements or using an unshielded peripheral data cable could also result in harmful interference to radio or television reception. The user is cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. To ensure that the use of this product does not contribute to interference, it is necessary to use shielded I/O cables.

CAUTION: If the device is changed or modified without permission from RED, the user may void his or her authority to operate the equipment.

EUROPEAN UNION COMPLIANCE STATEMENTS

RED herewith declares that the following product(s) according to the provisions of the mentioned EC Directives— including their relevant revisions at the time of this declaration— is (are) in conformity with the detailed standards or other normative documents.

- EMC Directive 2004/108/EC
- Low-Voltage Directive 2006/95/EC
- IEC 61000-4-2
- IEC 61000-4-3
- IEC 61000-4-4
- IEC 61000-4-5
- IEC 61000-4-6
- IEC 61000-4-8

INFORMATION

Products with the CE marking comply with the EMC Directive (2004/108/EC) and the Low Voltage Directive (2006/95/EC) issued by the Commission of the European Community. Compliance with these directives implies conformity to the following European Product Family Standards.

- EN 55022 (CISPR 22) – Electromagnetic Interference
- EN 55024-1 (CISPR 24) – Electromagnetic Immunity
- EN 61000-3-2 (IEC610000-3-2) – Power Line Harmonics
- EN 61000-3-3 (IEC610000) – Power Line Flicker
- EN 60065 (IEC60065) – Product Safety

ROHS COMPLIANCE

The EU directive 2002/95/EC 'Restriction of Hazardous Substances (RoHS)' prohibits the use of certain substances in electrical and electronic equipment.

RESPONSIBLE PARTY

RED Digital Cinema

34 Parker

Irvine, CA 92618

USA

SAFETY INSTRUCTIONS

Read the following safety instructions very carefully before attempting any installation and/or performing any work on the RED ROCKET®.

If the RED ROCKET is not used in compliance with the safety instructions, the warranty and all resulting liability claims will be void.

- DO NOT use the RED ROCKET near water. Avoid exposing your RED ROCKET to moisture. The unit is not waterproof, so contact with water could cause permanent damage to the unit as well as electric shock and serious injury to the user. DO NOT use the RED ROCKET in the rain or under other conditions with high moisture, and immediately remove power source if the RED ROCKET is exposed to moisture.

WARNING: To reduce the risk of fire or electric shock, do not expose the RED ROCKET to rain or moisture.

- DO NOT expose your RED ROCKET to excessive vibration or impact (shock). Be careful not to drop your RED ROCKET. Internal mechanisms may be damaged by severe shock.
- DO NOT operate or store near any heat sources such as radiators, heat registers, stoves, or any other apparatus that produce heat. Store in a protected, level and ventilated place. Avoid exposure to temperature extremes, damp, severe vibration, strong magnetic fields, direct sunlight or local heat sources during storage. Recommended storage and usage temperatures for your RED ROCKET are:
  - Operating range: 5°C to 40°C (41°F to 104°F)
  - Storage range: –20°C to 50°C (–4°F to 122°F)

  If there are any performance issues with your RED ROCKET when operating within this temperature range, submit a Support ticket at https://support.red.com.
- Only use the RED ROCKET when it is in good working order.
- The system in which you are trying to install the RED ROCKET usually works with voltages that can be hazardous to your health. Never work on the system or access its interior with any power cable attached and plugged into a power source. Make sure the power supply is disconnected from the components you intend to work on.
- Computer hardware contains components that are sensitive to electrostatic discharge. If you touch them without precautionary measures, they can be destroyed. Use a wrist strap connected to ground when accessing electronic parts and take care of grounding the video system. Avoid touching the components of the computer system and the RED ROCKET whenever possible.
- Computer hardware contains components that are sensitive to changing voltages. Connecting or disconnecting the RED ROCKET to or from peripheral hardware while any system component is powered on may damage the hardware. Power off all peripheral hardware before connecting or disconnecting any component, including the RED ROCKET.
- The RED ROCKET may not be misused, abused, physically damaged, neglected, exposed to fire, water or excessive changes in the climate or temperature, or operated outside maximum rating.
- Do not perform any changes or extensions to the RED ROCKET whatsoever.

CAUTION: Refer all service and repair to qualified RED service personnel. To reduce the risk of electric shock, and damage to the RED ROCKET, DO NOT attempt to perform any servicing other than the procedures that are recommended in the operating instructions.

CHAPTER 1:
RED ROCKET INTRODUCTION

The RED ROCKET® enhances transcode and playback abilities of R3D® files in various resolutions in real time speeds. The RED ROCKET drastically accelerates transcode times for still image sequences and video formats (such as QuickTime® and DPX) in all applications that support RED ROCKET.

RED ROCKET provides real time, full quality playback onto a 1080/2K/4K monitor or projector via DVI and HD-SDI through REDCINE-X PRO® (4K requires the RED ROCKET Breakout Box available at www.red.com/store).

Up to six (6) RED ROCKET cards may be used in one system to boost system performance when working with R3D files.

NOTE: The RED ROCKET supports all MYSTERIUM®, MYSTERIUM-X®, and Monochrome R3D files.

NOTE: The RED ROCKET does not support RED DRAGON®, RED DRAGON Monochrome R3D files, and HELIUM® R3D files.

NOTE: You can install and use a RED ROCKET and a RED ROCKET-X® in the same system. However, you can only use one (1) of these cards at a time. For example, DaVinci Resolve® can access a RED ROCKET while REDCINE-X PRO accesses a RED ROCKET-X.

NOTE: With the RED ROCKET, you can perform video out in REDCINE-X PRO. At this time, you cannot perform video out with a third-party application.

SCOPE OF THE INSTRUCTIONS

In order to install the RED ROCKET system, you should have experience with installing hardware components in a computer system and be familiar with the hardware structure and interior of such a system. Additionally, you should have general knowledge in the field of digital video and be comfortable working with computer software.

SYSTEM AND HARDWARE REQUIREMENTS

REQUIRED HARDWARE

The computer system must meet the following hardware requirements in order to use the RED ROCKET:

- PCIe slot that accepts a x16 card, and has at least 8 lanes of data
- 2048 MB RAM

SUPPORTED HARDWARE

The RED ROCKET can be installed in any of the following:

- Mac Pro® (Late 2012 model and earlier)
- Thunderbolt™ expansion chassis
- PCIe expansion chassis
- Windows®-based computer

NOTE: RED® does not recommend using a RED ROCKET with a Mac Pro (Late 2013 model or later) because it may interrupt audio playback and slow down data transfer rates for both Ethernet and Thunderbolt. These issues do not occur with earlier models of the Mac Pro.

SUPPORTED OPERATING SYSTEMS

The RED ROCKET can be used with the following operating systems:

- Mac® OS X® 10.5 or later
- Windows® XP SP2 or later
- Linux® (Red Hat)

NOTE: Be sure that you have installed the latest system updates and service packs for your system; otherwise you may encounter software or hardware problems.

NOTE: If you are using a Linux application with RED ROCKET, you need to obtain the appropriate driver from the company providing the application. If you are interested in developing your own tools for Linux you may want to sign up for the R3D SDK. RED DOES NOT provide drivers for Linux.

REQUIRED SOFTWARE

- **RED ROCKET Installer**: Available for download at www.red.com/downloads.
- **REDCINE-X PRO**: Available for download at www.red.com/downloads.

Contact third party software vendors about the availability of other RED ROCKET enabled software.

RED ROCKET COMPONENTS

Each RED ROCKET package contains the following:

- RED ROCKET
- HD-SDI slot filler
- DMS-59 to Dual DVI-I Y Splitter Cable

HOW TO HANDLE THE RED ROCKET

When handling the RED ROCKET, hold the card by the metal of the DVI slot filler and the corners of the card. Avoid touching the connectors and the black fan enclosure.

ADDITIONAL RESOURCES

The following resources offer additional information about RED, the DSMC® system, and the RED community:

- **RED.com**: Check the official RED website for the latest information about RED products.
- **RED Learn Articles**: RED offers in-depth technical articles about RED cameras, post-production, and digital cinematography.
- **RED Downloads**: Go to RED Downloads to download the latest firmware, operation guides, and post-production software.
- **DSMC Toolkit**: Go to RED Downloads to find the DSMC Toolkit, which offers many helpful tools and resources to customize and improve your camera workflow.
- **RED Support**: Check the RED SUPPORT site for FAQs, or to file a support ticket.
- **In-Camera Help**: Select the Help button on an in-camera screen to open up the help for that screen.
- **REDUSER**: Discuss all things RED on the REDUSER third-party forum.

CHAPTER 2:
INSTALL RED ROCKET

This chapter explains how to install a RED ROCKET® and HD-SDI slot filler in a Mac Pro®, Thunderbolt™ expansion chassis, PCIe expansion chassis, and Windows®-based computer. Since each system is different, the instructions in this section are general and cover the essential steps for installing a RED ROCKET and HD-SDI slot filler.

Depending on how your system is set up, you may need to rearrange components in your system or perform actions not described in these instructions in order to successfully install the RED ROCKET. For more information about installing components in your system, refer to the system manufacturer's instructions.

NOTE: Some systems, particularly Thunderbolt expansion chassis, may not have a slot for the HD-SDI slot filler.

THUNDERBOLT CHASSIS CONSIDERATIONS

SELECT A PCIE SLOT

Since the majority of Thunderbolt expansion chassis do not have x8 slots, install the RED ROCKET in the slot that has the highest number of electrical PCIe lanes. Refer to the Thunderbolt expansion chassis' manual to determine which slot has the highest number of electrical PCIe lanes and can accommodate the card.

PCIE LANE SPEEDS

Due to Thunderbolt 1.0 and 2.0 specifications, each slot is limited to x4 lane speeds. Full resolution, real time playback of 4K footage with a recording time base of 23.98 FPS should be unaffected.

REQUIRED TOOLS

Since each system is different, you may need a screwdriver to remove or install screws. Review your system before you install the RED ROCKET to determine if you need any tools.

RED ROCKET

NOTE: Your RED ROCKET may be either green or red. Earlier models are green, and later models are red. However, there is no difference in functionality between the different models.

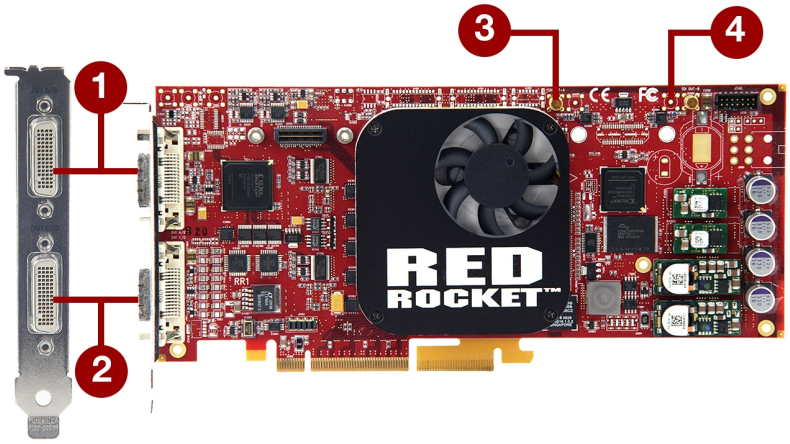

Figure: RED ROCKET Connectors

RED ROCKET CONNECTORS

#	CONNECTOR	DESCRIPTION
1	DVI A/B	DMS-59 connector for an output of digital RGB 8 bit video signals (channel A/B, two single-link connections). This connector can be connected to a DMS-59 to Dual DVI-I Y Splitter Cable (included) to provide two standard DVI connectors.
2	DVI C/D	DMS-59 connector for an output of digital RGB 8 bit video signals (channel C/D, used for two single-link connections in quad display applications). This connector can be connected to a DMS-59 to Dual DVI-I Y Splitter Cable (included) to provide two standard DVI connectors.
3	SDI Out A	MCX connector for an output of digital video signals (serial digital interface, port A); either output of YUV in single-link or first stream of RGB in dual-link mode.
4	SDI Out B	MCX connector for an output of digital video signals (serial digital interface, port B); output of the second stream of RGB in dual-link mode.

HD-SDI SLOT FILLER

The HD-SDI slot filler provides optional high-definition serial digital interface (HD-SDI) connectors for the RED ROCKET. Installing the HD-SDI slot filler is optional. Review your system and project requirements before you decide whether or not to install the HD-SDI slot filler.

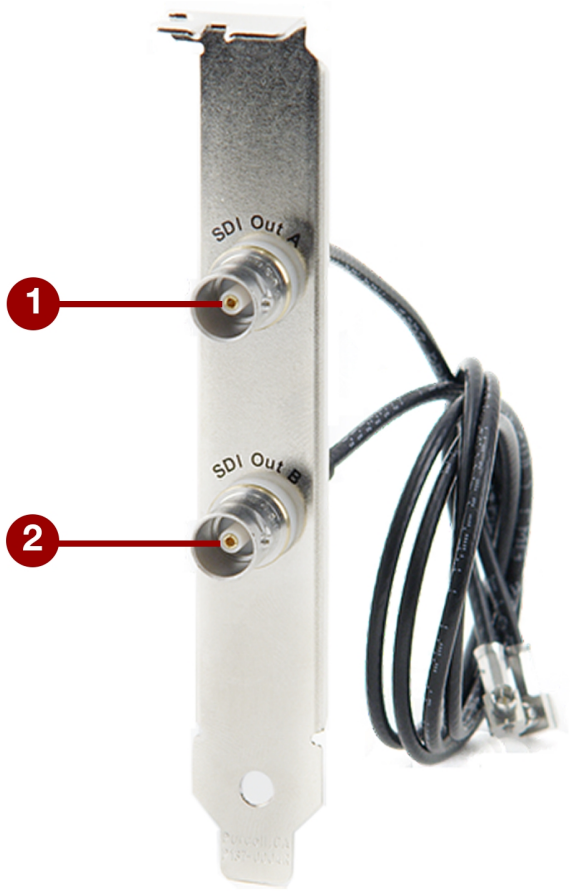

Figure: HD-SDI Slot FIller Connectors

HD-SDI SLOT FILLER CONNECTORS

#	CONNECTOR	DESCRIPTION
1	SDI Out A	BNC connector for an output of digital video signals (serial digital interface, port A); either output of YUV in single-link or first stream of RGB in dual-link mode
2	SDI Out B	BNC connector for an output of digital video signals (serial digital interface, port B); output of the second stream of RGB in dual-link mode

NOTE: When the RED ROCKET Breakout Box is on and connected to the RED ROCKET, the SDI outputs of the RED ROCKET are inoperative.

INSTALL THE RED ROCKET AND HD-SDI SLOT FILLER

WARNING: The computer system that you are installing the RED ROCKET in works with voltages that can be hazardous to your health.

Follow the instructions below to install the RED ROCKET:

1. Ensure that the system is turned off.
2. Wait 5–10 minutes to ensure that the system components cool down.
3. Unplug the power cable and all external cables from the system.

   WARNING: Never work on the system or access its interior while any power cables are plugged in.
4. Touch the metal on the outside of the computer to discharge any static electricity from your body.

   NOTE: To avoid generating static electricity while installing the RED ROCKET, DO NOT walk around the room until you have completed the installation and closed the system.
5. Remove the access panel so that you can access the PCIe slots.
6. Remove the PCI bracket from the PCI slot in the computer where you want to install the RED ROCKET.

   IMPORTANT: On most Mac Pro towers, you should install the RED ROCKET in only one of the two (2) lower slots.

   NOTE: The RED ROCKET must be installed in a slot providing at least eight lanes that are PCIe x8 electrical in a physical x16 slot for power.

   CAUTION: During the next step, use care not to break off any parts of the PCI video board. Apply pressure to the slot panel and/or the printed circuit board only, and NOT to any of its attached parts.
7. Line up the RED ROCKET connectors with the slot, and then gently but firmly press the card into the slot.

Figure: Insert RED ROCKET

   NOTE: To prevent damage to your system and the RED ROCKET, DO NOT rock the card or use excessive force when installing the RED ROCKET.
8. If necessary, fasten the RED ROCKET into the slot.

9. If you are using the HD-SDI slot filler, follow the instructions below to install and connect the HD-SDI slot filler:
   A. Remove one (1) free slot bracket from the system.
   B. Slide the HD-SDI slot filler into the empty slot so that the SDI Out B connector is toward the back.

Figure: Install HD-SDI Slot Filler

CAUTION: Ensure that the HD-SDI slot filler or connectors DO NOT contact other components inside the computer.

   C. If necessary, fasten the HD-SDI slot filler into the slot.
   D. Connect the SDI Out A cable on the HD-SDI slot filler to the SDI Out A connector on the RED ROCKET.
   E. Connect the SDI Out B cable on the HD-SDI slot filler to the SDI Out B connector on the RED ROCKET.

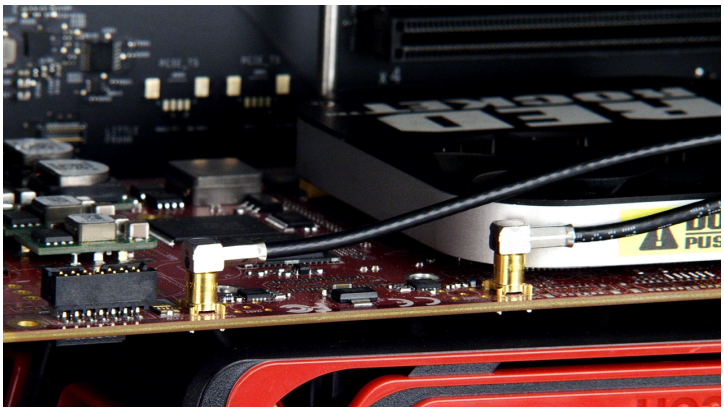

Figure: Connect HD-SDI Slot FIller to RED ROCKET

10. Reinstall the access panel.
11. Reconnect all cables to the system.
12. Power on the system.
13. To install or upgrade the RED ROCKET driver and firmware, go to "Install Driver and Firmware" on page 13.

CHAPTER 3:

INSTALL DRIVER AND FIRMWARE

DOWNLOAD DRIVER AND FIRMWARE

To download the RED ROCKET® driver and firmware, follow the instructions below:

1. Go to www.red.com/downloads and locate the **RED ROCKET Installer**.
2. Download the RED ROCKET **Installer** to your computer. The drivers, firmware, and installation instructions for the RED ROCKET are located inside the installation package.
3. After downloading, a new compressed (zipped) folder dispalys in the location to which you downloaded the Installer (your system may unzip the folder automatically).

   The folder name uses this format: RED_Rocket_Installer_vx.x.x.
4. Open the zipped folder (your system may unzip the folder automatically).
5. Extract the folder specific to your operating system (Mac® or Windows®) to your desktop.

INSTALL RED ROCKET DRIVER

INSTALL RED ROCKET DRIVER (MAC OS X)

On Mac OS X®, the driver must be installed before upgrading the firmware; otherwise the firmware upgrade fails.

To install the RED ROCKET driver on Mac OS X, follow the instructions below:

1. Ensure that you have already downloaded the RED ROCKET Installer. For more information about how to download the RED ROCKET Installer, go to "Download Driver and Firmware" above.
2. Locate and open the **RED_Rocket_Installer_vx.x.x** > **RED_Rocket_MacOSX folder**.
3. Open the **REDrocket_Driver_OSX_vx.x.x.x.pkg** file.

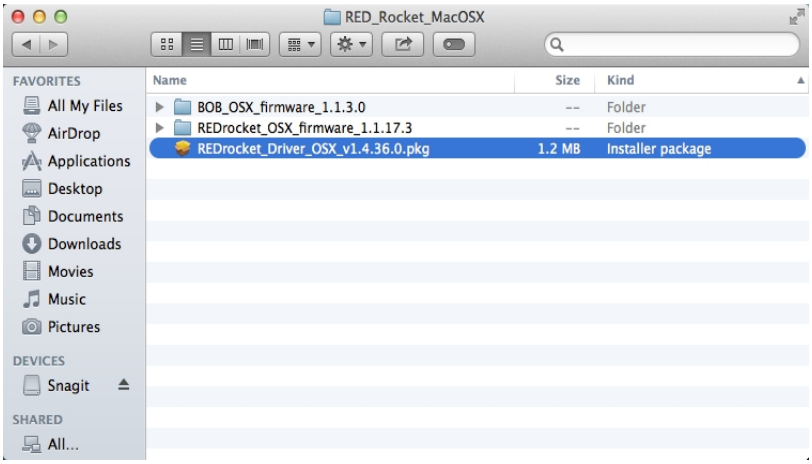

Figure: Open RED ROCKET Driver File

The Install RED Rocket window opens.

4. Click **Continue**.

Figure: Click Continue

The license agreement displays.

5. Read the license agreement and click **Continue**.

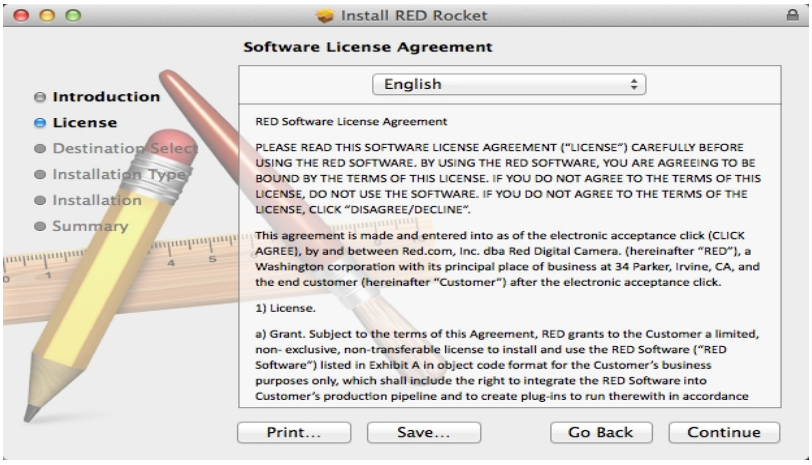

Figure: Click Continue

An additional confirmation window opens.

6. Click **Agree**.

7. Click **Install**.

   NOTE: Depending on your system, you may be required to enter your user name and password to begin installation.

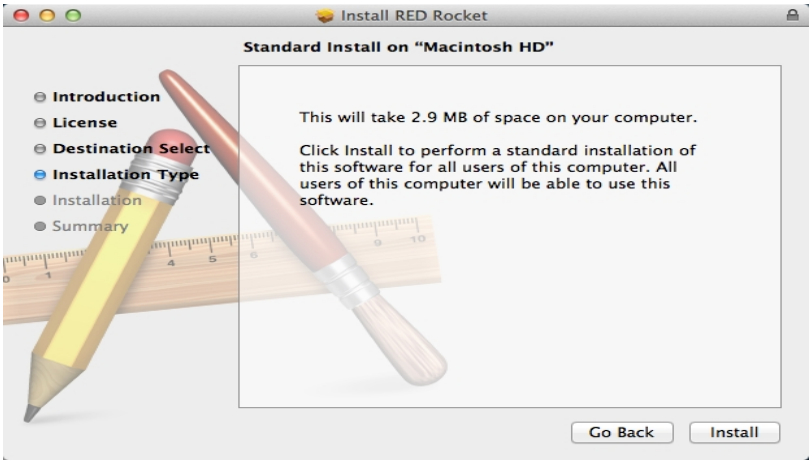

Figure: Click Install

A window opens, notifying you that you must shut down your computer after the software finishes installing.

8. Click **Continue Installation**.

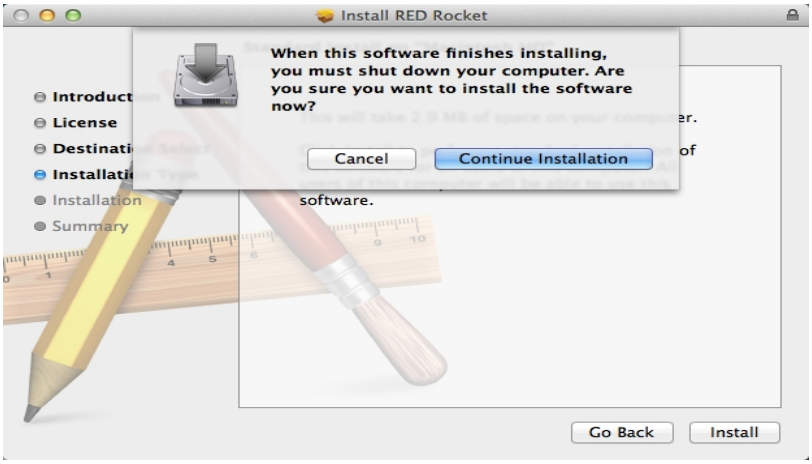

Figure: Click Continue Installation

A progress bar displays during the installation.

The message “Install Succeeded” displays when installation is complete.

9. Click **Shut Down** to finish installing the software.

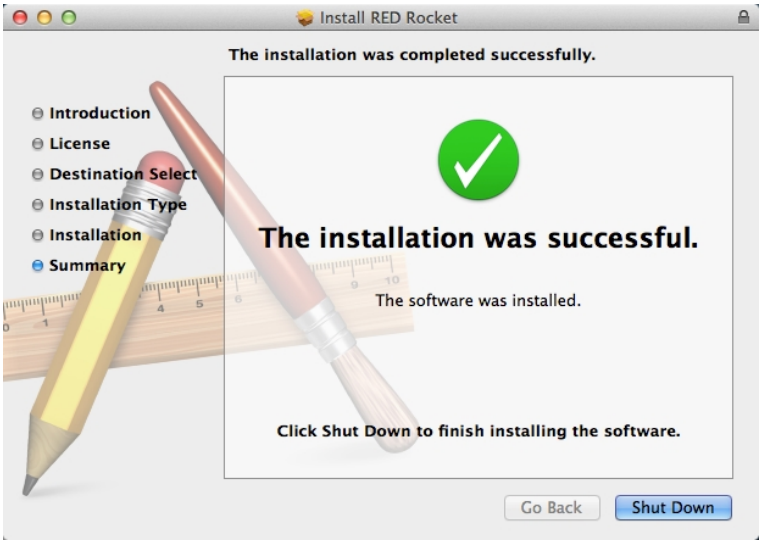

Figure: Click Shut Down

Your computer shuts down.

10. If the RED ROCKET is in a Thunderbolt™ chassis, disconnect power from the Thunderbolt chassis after the computer fully shuts down.
11. Wait a minimum of 60 seconds.
12. If the RED ROCKET is in a Thunderbolt chassis, power up the Thunderbolt chassis.
13. Start the computer.
14. To upgrade RED ROCKET firmware, go to "Upgrade RED ROCKET Firmware" on page 22.

INSTALL RED ROCKET DRIVER (WINDOWS)

To install the RED ROCKET driver for Windows operating systems, follow the instructions below:

1. Ensure that you have already downloaded the RED ROCKET Installer. For more information about how to download the RED ROCKET Installer, go to "Download Driver and Firmware" on page 13.
2. Ensure that you have already installed the RED ROCKET.
3. Click **Start**, right-click **Computer**, and select **Properties**.

   The System window opens.
4. Click **Device Manager**.

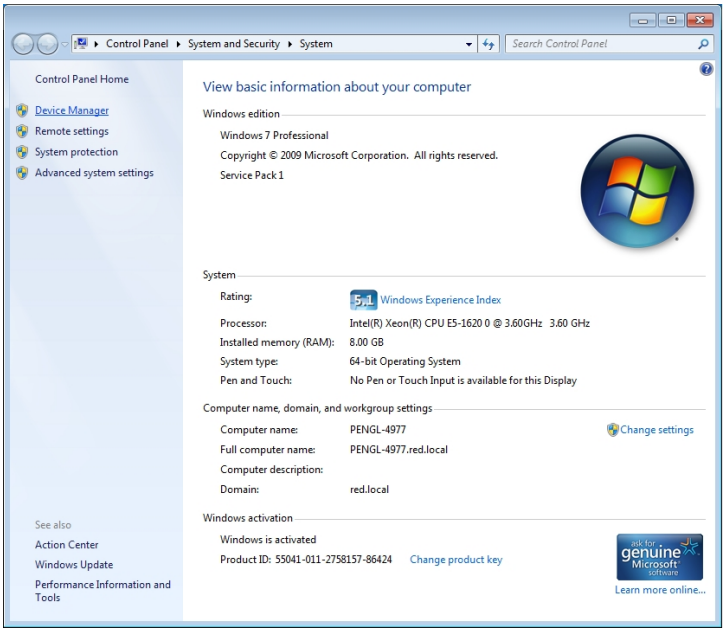

Figure: Click Device Manager

5. Expand **Other devices**.

6. Right-click **Multimedia Video Controller** and select **Properties**.

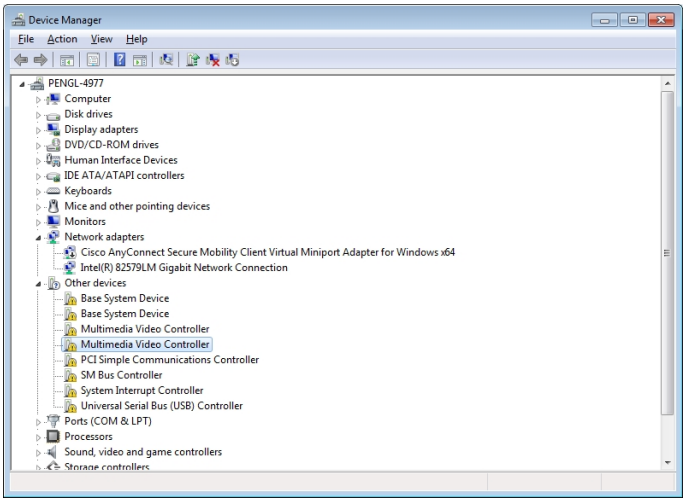

Figure: Select Properties

NOTE: Your Device Manager may display multiple instances of Multimedia Video Controller; you can select any of these instances.

The Multimedia Video Controller Properties window opens.

7. Click **Update Driver**.

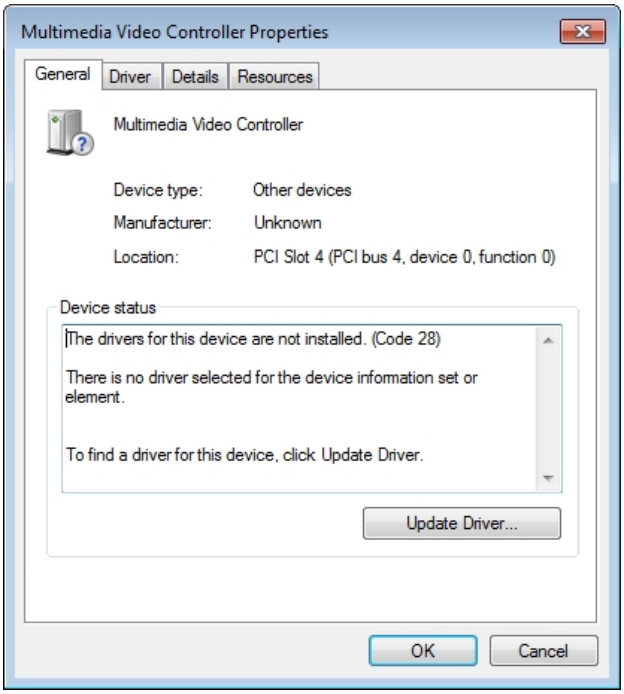

Figure: Click Update Driver

The Update Driver Software - Multimedia Video Controller window opens.

8. Click **Browse my computer for driver software**.

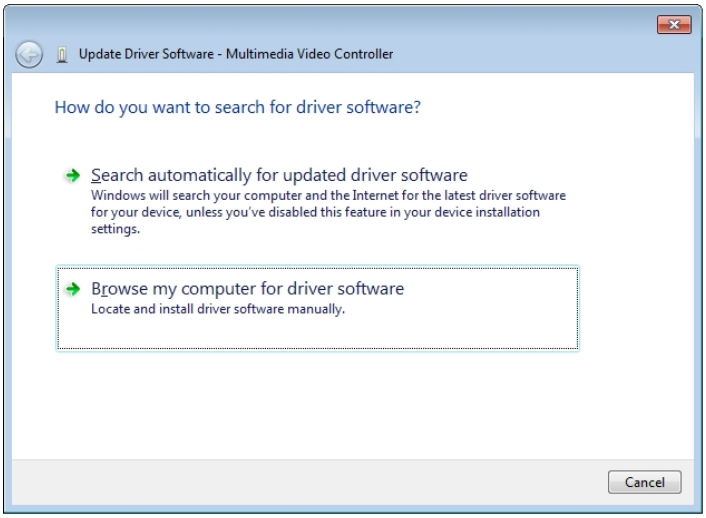

Figure: Click Browse My Computer for Driver Software

9. Click **Browse**.
10. Select the **RED_Rocket_Installer_vx.x.x** > **RED_Rocket_Windows** > **REDrocket_Driver_Win_vx.x.x.x** folder.

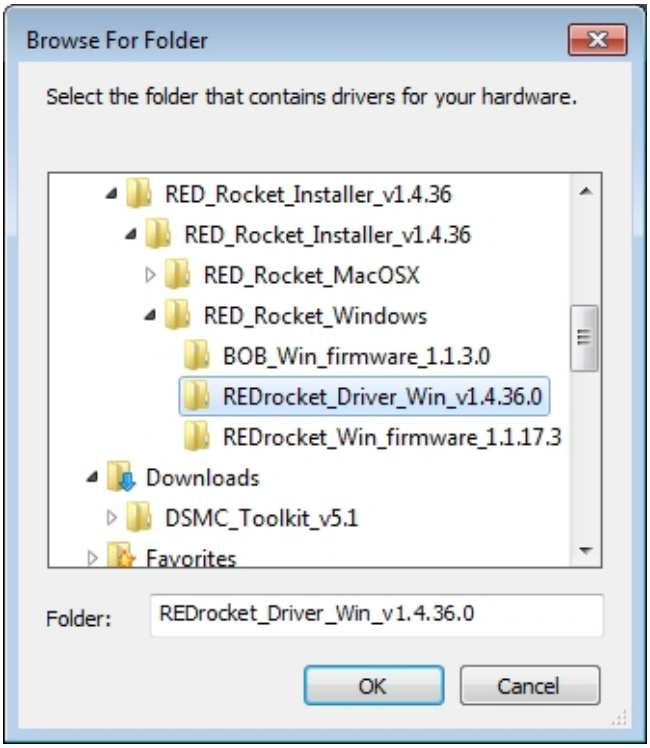

Figure: Select the RED ROCKET Installer Folder

11. Click **OK**.

12. Click **Next**.

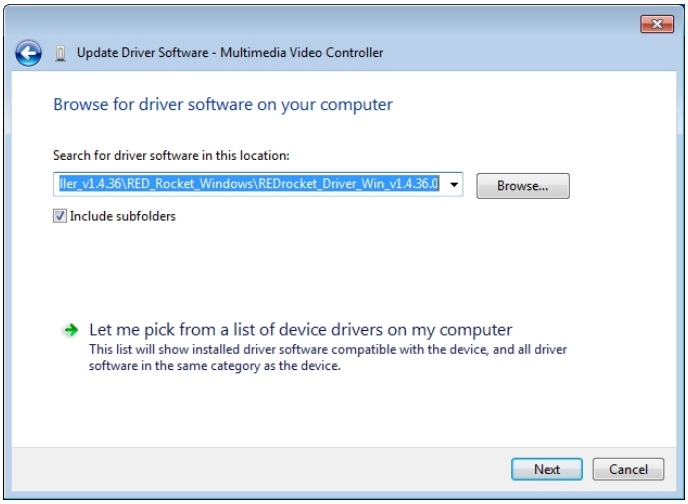

Figure: Click Next

13. If the Windows Security window opens, select the **Always trust software from "RED.COM, Inc."** check box and click **Install**.

Figure: Click Install

A progress bar shows the progress of the driver installation. The message "Windows has successfully updated your driver software" displays when installation is complete.

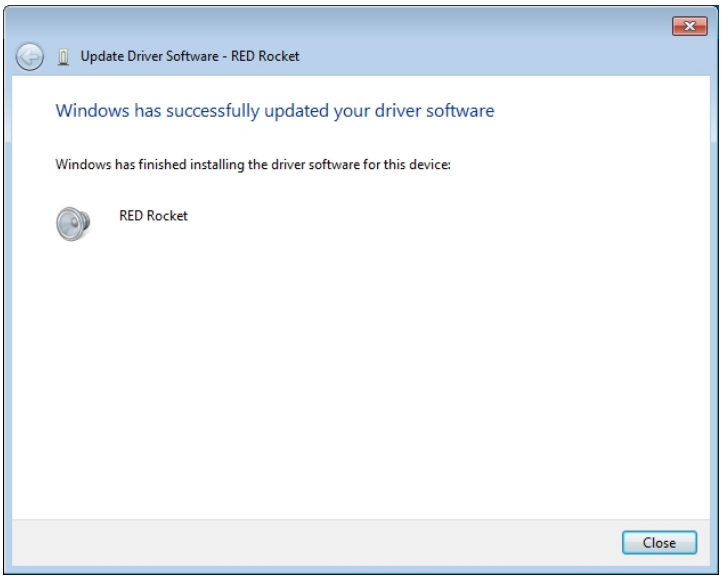

Figure: Successful Installation

14. Start the computer.
15. To upgrade RED ROCKET firmware, go to "Upgrade RED ROCKET Firmware" on the next page.

UPGRADE RED ROCKET FIRMWARE

On Mac OS X, the driver must be installed before upgrading the firmware; otherwise the firmware upgrade fails. To upgrade the RED ROCKET firmware, follow the instructions below:

1. Ensure that you have already downloaded the RED ROCKET Installer. For more information about how to download the RED ROCKET Installer, go to "Download Driver and Firmware" on page 13.
2. Open the folder on your desktop that contains the downloaded firmware.
3. Open the **Install_Firmware** file.

   A terminal window (Mac) or command window (Windows) opens. The following information displays:

   - Your RED ROCKET serial number.
   - Current firmware version.
   - The firmware version to be installed.

4. Respond to the prompt to confirm which boards (cards) to install:
   - To upgrade one RED ROCKET: Type **Y** and press **Enter**.
   - To upgrade all RED ROCKETs: Type **A** and press **Enter**.
   - To cancel the upgrade: Press any other key and press **Enter**.

   The upgrade process begins, and may take several minutes.

Figure: Install Firmware

After the firmware is upgraded, you are prompted to fully shut down the computer and power back up again.

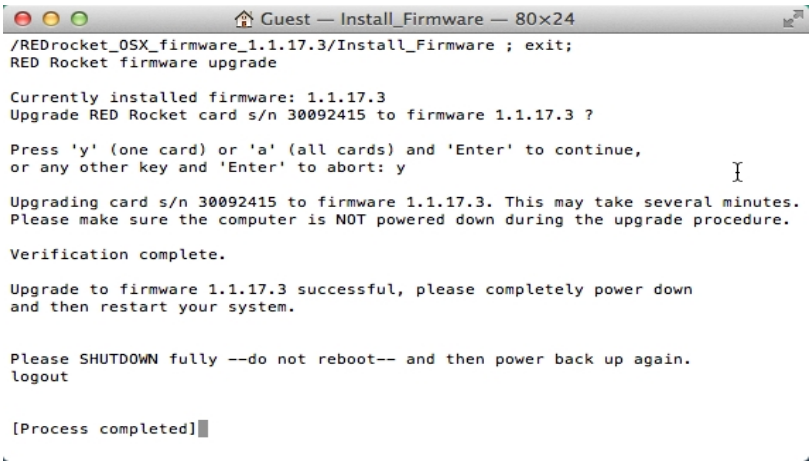

Figure: Install Firmware

5. Close the terminal/command window.
6. Shut down the computer. DO NOT simply restart the computer.
7. If the RED ROCKET is in a Thunderbolt chassis, disconnect power from the Thunderbolt chassis after the computer fully shuts down.
8. Wait a minimum of 60 seconds.
9. If the RED ROCKET is in a Thunderbolt chassis, power up the Thunderbolt chassis.
10. Start the computer.
11. To verify that the system recognizes the RED ROCKET, go to "Validate RED ROCKET Installation" below.

VALIDATE RED ROCKET INSTALLATION

After installation, verify that the computer recognizes the RED ROCKET.

VALIDATE RED ROCKET INSTALLATION (MAC OS X)

Follow the instructions below to ensure that your system's Device Manager recognizes the RED ROCKET:

1. Click the **Apple** icon and select **About This Mac**.
2. Click **More Info...**.

Figure: Click More Info...

3. Click **System Report**.

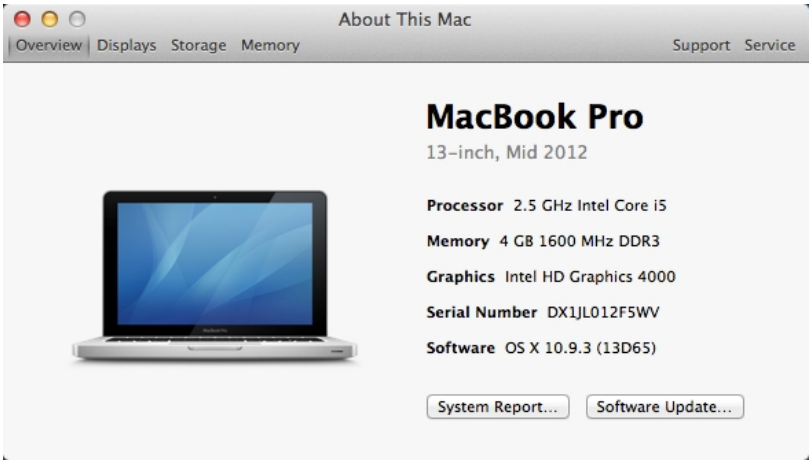

Figure: Click System Report

4. Go to **Hardware** > **PCI Cards**.

   The RED ROCKET is listed as one of the video cards.

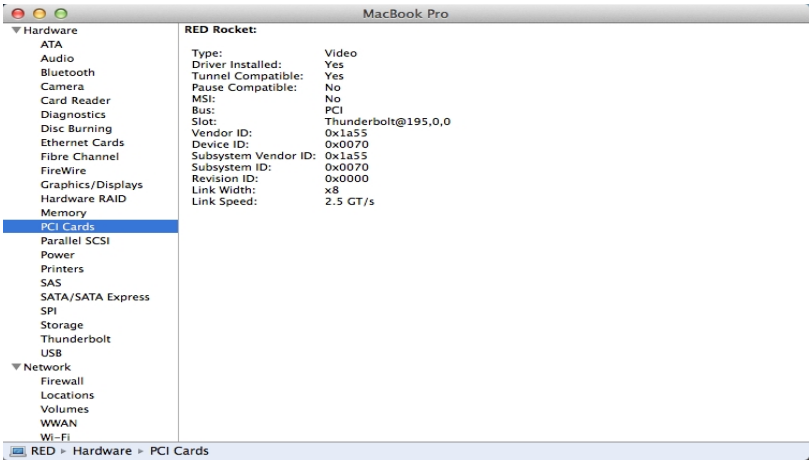

Figure: Go to Hardware > PCI Cards

VALIDATE RED ROCKET INSTALLATION (WINDOWS)

Follow the instructions below to ensure that your system's Device Manager recognizes the RED ROCKET:

1. Click **Start**.
2. Right-click **Computer** and select **Properties**.

   The System window opens.
3. Click **Device Manager**.

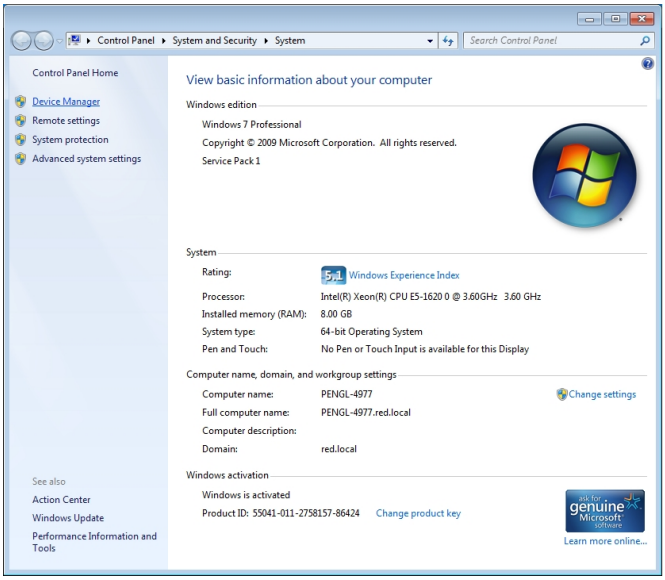

Figure: Click Device Manager

4. Expand **Sound, video and game controllers**.

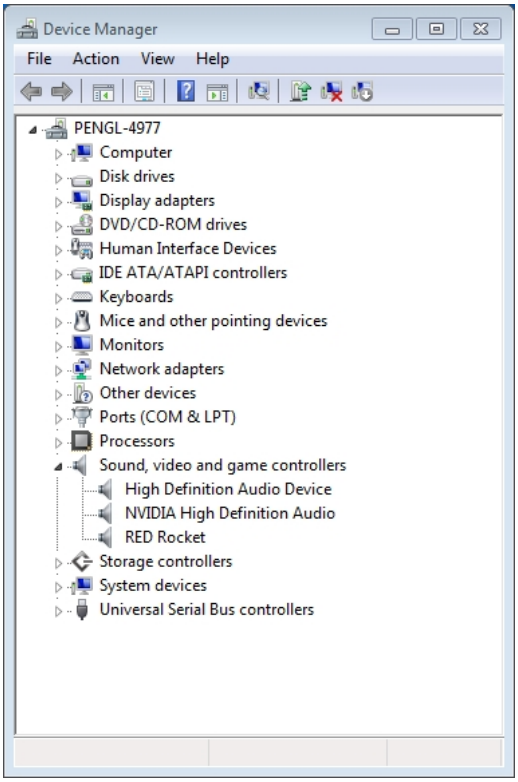

Figure: Select Properties

5. Right-click **RED Rocket** and select **Properties**.
   The RED Rocket Properties window opens.

6. View the properties of the RED ROCKET.

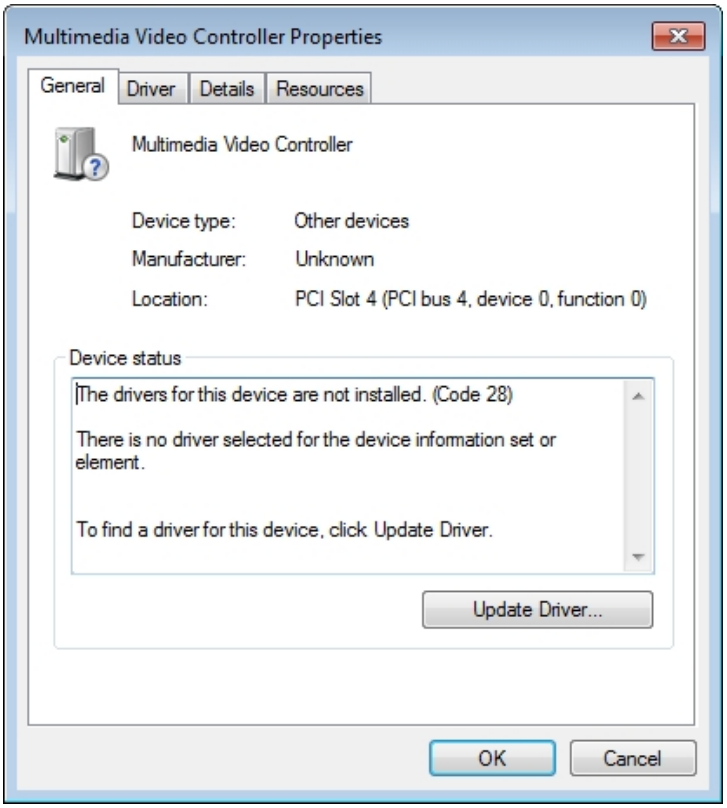

Figure: View Properties

CHAPTER 4:

SET UP RED ROCKET IN REDCINE-X PRO

SET UP DECODING AND ERROR MESSAGE PREFERENCES

1. Open REDCINE-X PRO®.
2. Click the **RED ROCKET** icon.

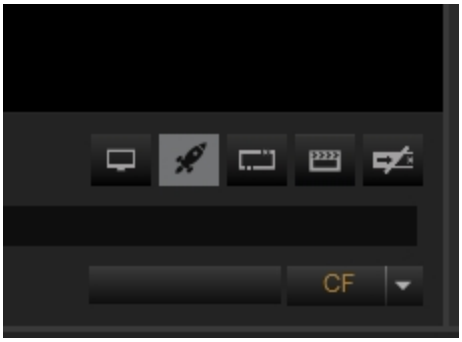

Figure: Click RED ROCKET Icon

The Rocket Setup window opens. If the window does not open, then the RED ROCKET® firmware, and/or driver are not installed.

3. Select the check boxes that apply to how you want to use the RED ROCKET:
   - **Use for decoding**
   - **Show Rocket Error dialog on startup**: Select this to display an error in the Status panel when the RED ROCKET is installed in a lane slower than a x8 slot. For example, if your RED ROCKET is installed in a Thunderbolt™ chassis, this error displays because Thunderbolt is limited to x4 open lane speeds.
4. Click **OK**.

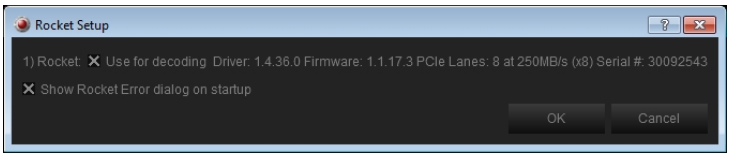

Figure: Click OK

SET UP VIDEO OUT

With the RED ROCKET, you can perform video out in REDCINE-X PRO. At this time, you cannot perform video out with a third party application.

1. Go to the REDCINE-X PRO Preferences window:
   - **Mac**: Click **REDCINE-X PRO** and select **Preferences**.
   - **Windows**: Click **Edit** and select **Preferences**.

   The Preferences window opens.
2. Select **Video Out** in the left panel.
3. Select **RED Rocket #1** from the **Device** drop-down menu.

   The default video out preferences populate the available fields.
4. Update the video out preferences if needed.
5. Click **OK**.

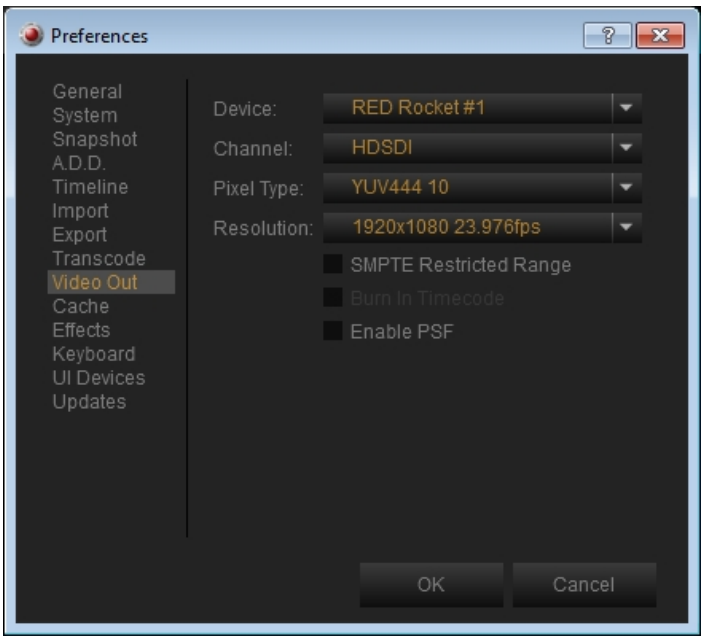

Figure: Click OK

CHAPTER 5:

TROUBLESHOOT YOUR RED ROCKET

WARNING ABOUT X8 LANE REQUIREMENT

SYMPTOM

REDCINE-X PRO® displays the following warning: “RedRocket # is in a PCI-Ex x4 lane. The RedRocket requires an 8 PCIe lane to perform properly.”

EXPLANATION

This warning indicates that the RED ROCKET® is installed in a lane slower than an x8 slot. For example, if your RED ROCKET is installed in a Thunderbolt™ chassis, this error displays because Thunderbolt is limited to x4 open lane speeds.

POTENTIAL RESOLUTION

- If the computer has a x8 slot, install the RED ROCKET in the x8 slot.
- To disable this warning, go to **REDCINE-X PRO** > **RED ROCKET** icon and deselect the **Show Rocket Error dialog on startup** check box.

RED ROCKET OUT OF DATE

SYMPTOM

REDCINE-X PRO displays the following warning: “RedRocket # Driver or firmware is out of date.”

POTENTIAL RESOLUTION

Re-download and re-install REDCINE-X PRO and the RED ROCKET Installer.

THUNDERBOLT CHASSIS INSTALLATIONS

MAC PRO DOES NOT RECOGNIZE RED ROCKET IN THUNDERBOLT CHASSIS

SYMPTOM

You install the RED ROCKET driver and firmware, but the Mac Pro® does not recognize the RED ROCKET.

EXPLANATION

During both the driver install procedure and the firmware install procedure, the installer prompts you to restart the computer. You must disconnect power from the Thunderbolt chassis during the restart process.

POTENTIAL RESOLUTION

When the installer prompts you to restart your computer during both the driver install procedure and the firmware install procedure, disconnect and then reconnect power to the Thunderbolt chassis during the restart process.

REDCINE-X PRO DOES NOT RECOGNIZE RED ROCKET IN THUNDERBOLT CHASSIS

SYMPTOM

A RED ROCKET is installed in a Thunderbolt chassis that is connected to your Mac®. The Mac recognizes the RED ROCKET, but REDCINE-X PRO does not.

POTENTIAL RESOLUTION

1. Turn off your Mac.
2. Disconnect the Thunderbolt expansion chassis from your Mac.
3. Connect the Thunderbolt expansion chassis to your Mac.
4. Restart your Mac.

APPENDIX A:
TECHNICAL SPECIFICATIONS

TECHNICAL DATA

CAUTION: The chassis of the computer system where the RED ROCKET® is installed must be equipped with sufficient ventilation to ensure proper cooling.

SPECIFICATION	DESCRIPTION
PCI Bus Requirements	PCIe x16 physical slot providing at least 8 lanes (x8)
Board Size	Approx. 10" length, single-slot
Electrical Type	3.3/12 volt
Power Consumption	35 W
Conformity	Specification 1.1
Operating Temperature Range	5°C to 40°C (41°F to 104°F)
Storage Temperature Range	–20°C to 50°C (–4°F to 122°F)
Operating Humidity Range	20% to 80% relative humidity, non-condensing
Storage Humidity Range	10% to 80% relative humidity, non-condensing

HARDWARE SPECIFICATIONS

SPECIFICATION	DESCRIPTION
Video Output	DVI (Digital), 4 DVI-I via break-out cables
	Serial Digital 4:2:2 8/10 bit (Single Link), 1 BNC
	Serial Digital 4:4:4 8/10/12 bit (Dual Link), 2 BNC
Timecode	Vertical (VITC), 1 BNC via video out
Color Modes	YCbCr 4:2:2 RGB 4:4:4
Internal Processing	Real-time REDCODE® decoding, debayering, and scaling

APPENDIX B:

DVI-I CABLE PINOUT

DIGITAL VIDEO INTERFACE

This section provides the pinout for the two (2) male DVI-I output connectors on each DMS-59 to Dual DVI-I Y Splitter Cable that is included with the RED ROCKET®.

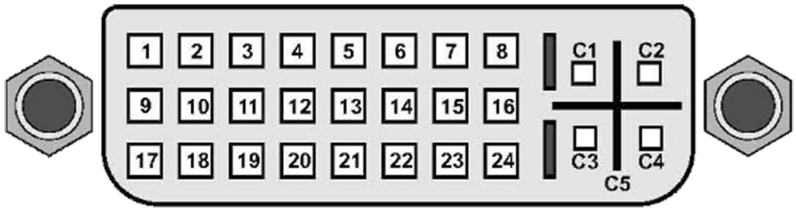

Figure: DVI-I Output Connector

#	SIGNAL	#	SIGNAL	#	SIGNAL
1	/TX_2	11	DVI_CLK_B	21	TX_5
2	TX_2	12	/TX_3	22	GND
3	GND	13	TX_3	23	TX_CLK
4	/TX_4	14	+5V	24	/TX_CLK
5	TX_4	15	GND	C1	ANALOG_RED
6	DDC_CLK	16	HP_DETECT	C2	ANALOG_GREEN
7	DDC_DAT	17	/TX_0	C3	ANALOG_BLUE
8	ANALOG_VSYNC	18	TX_0	C4	ANALOG_HSYNC
9	/TX_1	19	/DVI_CLK_B	C5	GND
10	TX_1	20	/TX_5		

APPENDIX C:

VIDEO RASTERS

SUPPORTED OUTPUT VIDEO RASTERS

The following table shows some of the supported output video rasters. A supported output video raster is a raster that can be directly outputted by the RED ROCKET®.

All frequencies indicate the frame rate.

The "# of …" columns show the number of connectors that are available in the respective raster.

RASTER	TOTAL LINES PER FRAME	X SIZE	Y SIZE	ASPECT RATION	# OF DVI	# OF SDI
720p / 23.976 / 24 / 25 / 29.971 / 301 / 501 /59.941 / 601	750	1280	720	16:9	1	1 / 2
1080p / 23.976 / 24 / 25 / 29.971 / 301	1125	1920	1080	16:9	1	1 / 2
1080psF / 23.976 / 24 / 25 / 29.971 / 301	1125	1920	1080	16:9	1	1 / 2
2048p / 23.976 / 24 / 25	1125	2048	1080	16:9	1	1 / 2
2048psF / 23.976 / 24 / 25	1125	2048	1080	16:9	1	1 / 2
2048p / 23.976 / 24	1600	2048	1556	4:3	1	N/A
2048psF / 23.976 / 24	1600	2048	1556	4:3	1	N/A
3840p2 / 23.976 / 24	2250	3840	2160	16:9	4	4x23
4096p2 / 23.976 / 24	2250	4096	2160	16:9	4	4x23

1. Frames may be repeated for certain input raster sizes.
2. Quad HD-SDI or DVI.
3. Only via RED ROCKET Breakout Box.