Will your system support the camera?

Recommended System Configuration:

- **OS**—Windows XP SP1
- **CPU**—2.0 GHz or equivalent
- **RAM**—512 MB
- **Video**—AGP 128 MB
- **Ports**—IEEE 1394a
- **Software**—Microsoft Visual Studio 2005 SP1 and SP1 Update for Vista (to compile and run example code using FlyCapture)

Do you have a downloads account?

The Point Grey downloads page has many resources to help you operate your camera effectively, including:

- Software (required for installation)
- Drivers (required for installation)
- Firmware updates and release notes
- Dimensional drawings and CAD models
- Documentation

To access the downloads resources you must have a downloads account.

1. Go to the Point Grey downloads page.
2. Under **Register (New Users)**, complete the form, then click **Submit**.

After you submit your registration, you will receive an email with instructions on how to activate your account.

Do you have all the parts you need?

To install your camera you will need the following components:

- Interface card
- FireWire cable
- 7-pin GPIO connector
- CS-mount (or C-mount with adaptor) Lens

Point Grey sells a number of the additional parts required for installation. To purchase, visit the Point Grey Webstore or the Products Accessories page.

A Development Kit of components is available for the FireflyMV.

For More Information

For more information about...	See...
Your camera's settings and capabilities	Technical Reference Manual
Using the FlyCap demo program	the Online Help included with the tool
Accessing customer downloads	Knowledge Base Article 35
Selecting a lens	Knowledge Base Article 345
Troublesome Hardware Configurations	Knowledge Base Article 21
Camera Not Recognized/Not Listed in Device Manager	Knowledge Base Article 91
Laptop doesn't supply power to my FireWire camera	Knowledge Base Article 93
Decrease in performance after Windows upgrade	Knowledge Base Article 171

The FlyCapture SDK help and other technical references can be found in the **Programs>Point Grey Research>PGR FlyCapture>Documentation** directory. Our online Knowledge Base also addresses many problems.
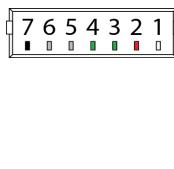
Camera Interface

IEEE-1394 Connector

The camera has a standard 6-pin IEEE-1394 connector that is used for data transmission, camera control and power. The maximum 1394 cable length between any 1394 node (e.g. camera to PCI card, card to hub, etc.) is 4.5m, as specified by the IEEE-1394 standard. Use standard, shielded twisted pair copper cables.

General Purpose I/O Connector

The camera has a 7-pin GPIO connector on the back of the board; refer to the diagram for wire color-coding.

Diagram	Pin	Function	Description
	1	V_{EXT}	Allows the camera to be powered externally
	2	+3.3V	Power external circuitry up to a total of 150 mA
	3	IO0	Input/Output (Default Trigger_Scr)
7 6 5 4 3 2 1	4	IO1	Input/Output
	5	IO2	Input/Output/RS232 Transmit (TX)
	6	IO3	Input/Output/RS232 Receive (RX)
	7	GND	Ground
To configure the GPIO pins, consult the General Purpose Input/Output section of your camera's Technical Reference Manual.			

Status Indicator LED

LED Status	Description
Off	Not receiving power
Steady on	Receiving power and successful camera initialization
Steady on and very bright	Acquiring/transmitting images
Flashing bright, then brighter	Camera registers being accessed (no image acquisition)
Steady or slow flashing on and off	Indicates possible camera problem

Camera Care

To clean the imaging surface of your camera, follow the steps outlined in Knowledge Base Article 66.

Extended exposure to bright sunlight, rain, dusty environments, etc. may cause problems with the electronics and optics of the system.

Avoid excessive shaking, dropping, or mishandling of the device.

Do not open the camera housing. Doing so voids the Hardware Warranty. Avoid electrostatic charging. For more details, consult Knowledge Base Article 42.

Contacting Point Grey Research

For all general questions please contact us at info@ptgrey.com.

For technical support (existing customers only) contact us at www.ptgrey.com/support/contact/.

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Installing Your Interface Card and Software

1. Install your Interface Card
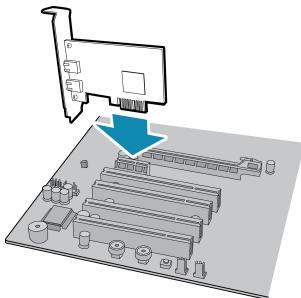
Ensure the card is installed per the manufacturer's instructions.

Alternatively, use your PC's built-in host controller, if equipped.

In most cases, the Windows IEEE-1394 drivers will be automatically installed for the card, with no user input required. However, in some cases the **Found New Hardware Wizard** will appear. Follow the prompts given by the Wizard to install the card.

Open the Windows Device Manager. Ensure the card is properly installed under **IEEE 1394 Bus host controllers**. An exclamation point (!) next to the card indicates the driver has not yet been installed.

2. Install the FlyCapture® Software

For existing users who already have FlyCapture installed, we recommend ensuring you have the latest version for optimal performance of your camera. If you do not need to install FlyCapture, use the DriverControlGUI to install and enable drivers for your card.

a. Login to the Point Grey downloads page.

b. Select your **Camera** and **Operating System** from the drop-down lists and click the **Search** button.

c. Click on the **Software** search results to expand the list.

d. Under **FlyCapture v2x**, click the appropriate link to begin the download and installation.

After the download is complete, the FlyCapture setup wizard begins. If the wizard does not start automatically, double-click the .exe file to open it. Follow the steps in each setup dialog.

3. Enable the Drivers for the card

During the FlyCapture installation, you are prompted to select your interface driver.

In the **Interface Driver Selection** dialog, select the **I will use FireWire cameras**.

This selection ensures the Point Grey pgrcam and FirePRO drivers are installed and enabled.

To uninstall or reconfigure the driver at any time after setup is complete, use the DriverControlGUI .

Installing Your Camera

1. Install the Tripod Mounting Bracket
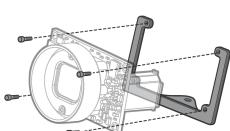
The ASA and ISO-compliant tripod mounting bracket attaches to the camera using the included plastic screws.

Cameras with metal cases should use metal screws; cameras with plastic cases should use plastic screws. Using improper screws may cause damage to the camera.

2. Attach a Lens

Unscrew the dust cap from the CS-mount lens holder to install a lens. Note: the camera can be used with a removable 5 mm C- mount adapter.

3. Plug in the GPIO connector

GPIO can be used for power, trigger, and strobe.

4. Connect the interface Card and Cable to the Camera

Plug the interface cable into the host controller card and the camera. The cable jack screws can be used for a secure connection.

5. Confirm Successful Installation

Check Device Manager to confirm that installation was successful.

a. Go to the **Start menu**, select **Run**, and enter **devmgmt.msc**.
Verify the camera is listed under "**Point Grey Research Devices**."

b. Run the FlyCap2 program: **Start-> Point Grey Research->FlyCapture2-> FlyCap2**
The FlyCap2 program can be used to test the camera's image acquisition capabilities.

Changes to your camera's installation configuration can be made using utilities available in the FlyCapture2 SDK.

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