

## Will your system support the camera?

Recommended System Configuration:

- **OS**—Windows XP SP1
- **CPU**—2.0 GHz or equivalent
- **RAM**—512 MB
- **Video**—AGP128 MB
- **Ports**—USB 2.0
- **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
- USB 2.0 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	<a href="#">Knowledge Base Article 35</a>
Selecting a lens	<a href="#">Knowledge Base Article 345</a>
Troublesome Hardware Configurations	<a href="#">Knowledge Base Article 21</a>
Camera Not Recognized/Not Listed in Device Manager	<a href="#">Knowledge Base Article 91</a>

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.

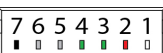
## Camera Interface

### USB 2.0 Connector

The camera has a standard USB 2.0 connector that is used for data transmission, camera control and power. The maximum USB 2.0 cable length between any USB node (e.g. camera to PCI card, card to hub, etc.) is 5.0 m, as specified by the USB 2.0 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 <sub>EXT</sub>	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)
	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](mailto:info@ptgrey.com).

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

### Main Office:

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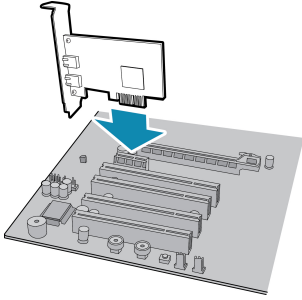
Toll Free +1 (866) 765-0827  
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Fax: +1 (604) 242-9938

Email: [sales@ptgrey.com](mailto:sales@ptgrey.com)

## 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.

Open the Windows Device Manager. Ensure the card is properly installed under **Universal Serial Bus 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.*

- Login to the [Point Grey downloads](#) page.
- Select your **Camera** and **Operating System** from the drop-down lists and click the **Search** button.
- Click on the **Software** search results to expand the list.
- 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

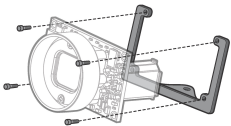
During the FlyCapture installation, you are prompted to select your interface driver.

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

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.

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