

GETTING STARTED **Grasshopper²** GigE Digital Camera

I PREPARATION

1. Recommended System Configuration

OS	CPU	RAM	VIDEO	PORTS
Vista or Windows 7	Intel Core 2 dual	2 GB	PCI Express 128mb	GigE

- Windows Vista or Windows 7
- 2 GB of RAM
- Intel Core 2 dual or comparable processor
- NVIDIA GeForce6 or later video card with 128MB RAM or more
- Intel® PRO/1000 Gigabit Ethernet Network Adapter PCI Express
- Microsoft Visual Studio 2005 SP1 and SP1 Update for Vista (to compile and run example code)

2. Electrostatic Precautions and Camera Care

- Users who have purchased a bare board camera should:



- Either handle bare handed or use non-chargeable gloves, clothes or material. Also use conductive shoes.
- Install a conductive mat on the floor or working table to prevent the generation of static electricity.

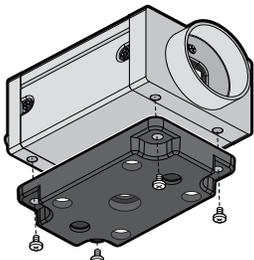


- When handling the camera unit, avoid touching the lenses. To clean the lenses, use a standard camera lens cleaning kit or a clean dry cotton cloth. Do not apply excessive force.
- To clean the imaging surface of your CCD, follow the steps outlined in www.ptgrey.com/support/kb/index.asp?a=4&q=66.
- Extended exposure to bright sunlight, rain, dusty environments, etc. may cause problems with the electronics and the optics of the system.
- Avoid excessive shaking, dropping or mishandling of the device.

2 INSTALLATION

1. Make sure your **GigE Network Interface Card** is installed according to manufacturer instructions. A 1000 Mbps GigE network interface card (NIC) is required. For optimal video streaming and camera control performance, we recommend a PCI Express (PCIe) interface equipped with an Intel PRO 1000 chipset. Point Grey sells a PCIe card for this purpose (Part No. ACC-01-I100). To purchase, visit <http://www.ptgrey.com/products/accessories/index.asp>.

2. Installing the Tripod Mounting Bracket (optional)



- The ASA and ISO-compliant tripod mounting bracket attaches to the camera using the included M2x5 screws. The bracket is included at no extra charge with every Point Grey Grasshopper2.

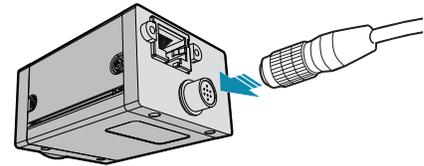
3. Connect a Gigabit Ethernet Network Card and Cable to Camera

- Plug a GigE-compatible Cat5, Cat5e or Cat6 cable into the GigE network interface card and the Grasshopper2. If equipped, the cable jack screws can be used for a secure connection. Cables up to 100 meters can be used.

Point Grey sells a 5-meter high-flex Category 5e cable (Part No. ACC-01-2100) This cable is ideal for GigE Vision systems requiring reliable, high performance flex life and signal transmission. To purchase, visit <http://www.ptgrey.com/products/accessories/index.asp>.

4. Supply Power to the Camera

- Connect a 12-24 V DC power supply to the camera's GPIO port. The power supply wiring harness must be compatible with a Hirose HR25 8-pin female GPIO connector. Point Grey sells a 12 V wall-mount power supply for connecting to the camera (Part No. ACC-01-9006). To purchase, visit <http://www.ptgrey.com/products/accessories/index.asp>.



5. Register for a Customer Downloads Account and Install the FlyCapture[®] Software and Drivers

- Go to the Point Grey downloads page <http://www.ptgrey.com/support/downloads/index.asp>
 - **New customers:** Under Register (New Users), complete the form, then click **Submit**. After you submit your registration, you will receive an e-mail with further instructions on how to activate your account.
 - **Existing customers:** login under **Login with an Existing Account**. You will be taken to the product Downloads page. Scroll to the bottom and complete the form under **Add a new purchased product**.
- After activating your account, login to the Point Grey [downloads page](http://www.ptgrey.com/support/downloads/index.asp) (<http://www.ptgrey.com/support/downloads/index.asp>). After login, you will be taken to the downloads page for the products to which you have access. Expand **Software and Drivers for Imaging Products** for your operating system. Under FlyCapture v2x, click the 32- or 64-bit **Download** link to begin the download and installation.
- After the download is complete, the FlyCapture setup wizard begins. Follow the steps in each setup dialog. In the **Interface Driver Selection** dialog, select the **I will use GigE cameras**. This selection ensures the Point Grey Image Filter driver is installed and enabled. The Image Filter Driver operates as a network service between GigE Vision cameras and the Microsoft built-in UDP stack to filter out GigE vision stream protocol (GVSP) packets. Use of the filter driver is recommended, as it can reduce CPU load and improve image streaming performance. Alternatively, Point Grey GigE Vision cameras can communicate directly with the Microsoft UDP stack. GigE Vision cameras operating on Linux systems communicate directly with native Ubuntu drivers. To uninstall or reconfigure the Image Filter Driver at any time after setup is complete, consult the FlyCapture SDK Help.

Note: For more information about accessing customer downloads, see [Knowledge Base Article 35](http://www.ptgrey.com/support/kb/index.asp?a=4&q=35) (<http://www.ptgrey.com/support/kb/index.asp?a=4&q=35>).

