GETTING STARTED

FLIR ZEBRA®2
GigE Vision

The Zebra2 is designed for use with both an HD-SDI interface and a GigE interface.
Each interface can be installed and used independently.

Connecting with HD-SDI

The Zebra2 HD-SDI interface provides low latency video for applications such as surveillance where no computer or control of the camera is required.

Preparing for HD-SDI

Before installation ensure you have the following:

- HD-SDI coaxial cable
- HD-SDI converter box
- HD-SDI interface, such as a monitor or TV (HD-SDI ready devices do not require a converter box)
- 4-pin Phoenix power terminal block
- CS-mount (or C-mount with adaptor) Lens
- 6-pin Phoenix GPIO connector for external device control (optional—requires GigE connection for configuration)
- Downloads account to access firmware updates and documentation

FLIR sells a number of the additional parts required for installation.
To purchase, visit our Accessories page.

Installing Your Camera with HD-SDI

1. Install the Tripod Mounting Bracket (optional)

The ASA and ISO-compliant tripod mounting bracket attaches to the camera using the included screws.

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 and the back focus can be adjusted manually.

3. Connect the power

The 4-pin Phoenix power terminal block is used to power the camera.

4. Connect the HD-SDI cable

Plug the HD-SDI cable into the camera and the HD-SDI interface. HD-SDI is always streaming and is available without user input after the camera is started.

Continue to Next Page for GPIO pin functions, mechanical properties, and where to find more information.

Connecting with GigE

The Zebra2 GigE interface also allows for viewing video but also offers camera control, image processing, and streaming to disk for applications such as license plate recognition.

Preparing for GigE

Before installation ensure you have the following:

- Ethernet cable
- Network adaptor card
- Computer: IntelCore 2 Duo, 2 GB RAM, PCIe 128 MB, Windows Vista/7 or Linux Ubuntu 11.10 (or equivalent)
- Powered Ethernet switch or injector (if using PoE) or 4-pin Phoenix power terminal block
- CS-mount (or C-mount with adaptor) lens
- 6-pin Phoenix GPIO connector for external device control (optional)
- Downloads account to access software, firmware updates, and documentation
- Microsoft Visual Studio 2005 or 2010 (to compile and run example code with FlyCapture SDK)

FLIR sells a number of the additional parts required for installation.
To purchase, visit our Accessories page.

Installing Your Camera with GigE

1. Install the Tripod Mounting Bracket (optional)

The ASA and ISO-compliant tripod mounting bracket attaches to the camera using the included screws.

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 and the back focus can be adjusted manually.

3. Connect the power

If using PoE, connect a powered Ethernet switch or Ethernet power injector in between the card and the camera. If not using PoE, plug in a 4-pin Phoenix power terminal block.

4. Connect the Ethernet Cable

Plug the Ethernet cable into the camera. The cable jack screws can be used for a secure connection.

Continue to Next Page for instructions on installing your network adaptor card and software, GPIO pin functions, mechanical properties, as well as where to find more information.

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Connecting the GPIO

The camera is equipped with a 6-pin GPIO connector on the back of the case and comes with a contact terminal for external device control. The GPIO can be used for trigger, pulse width modulation, RS 485 serial input output, and strobe.

GPIO functions can be used with either HD-SDI or GigE, however a GigE connection is required for configuration.

Diagram	Pin	Function	Description
	1	OPTO IN (IO0)	Opto-isolated input
	2	OPTO GND	Ground (opto-isolated pins)
	3	OPTO OUT (IO2)	Opto-isolated output
	4	GND	Ground
	5	RS485B	RS-485 Signal (inverting)
	6	RS485A	RS-485 Signal (non-inverting)
	To configure the GPIO pins, consult the General Purpose Input/Output section of the *Technical Reference Manual*.		

Zebra2 Mechanical Properties
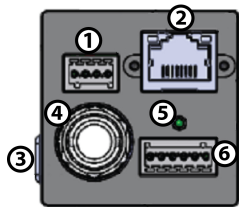
1. **GPIO 4-pin connector**

   Phoenix 4-pin power terminal block.

2. **GigE connector**

   10/100/1000 BASE-T Ethernet.

3. **Auto Iris connector**

   DC Drive Auto Iris.

4. **HD-SDI connector**

5. **Status LED**

   Indicates the current state of the camera operation. (GigE only)

6. **GPIO 6-pin connector**

   Phoenix GPIO for Alarm/Event trigger.

Installing Your Network Adapter Card and Software (GigE only)

1. Install your Interface Card

Ensure the card is installed per the manufacturer's instructions.

Open the Windows Device Manager. Ensure the card is properly installed under **Network Adaptors**.

An exclamation point (!) next to the card indicates the driver has not yet been installed.

2. Install the FlyCapture® Software

> **Note:** We recommend having the latest FlyCapture version installed.

a. Login to the downloads page.

b. Select **Zebra2** from the drop-down list 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 GigE cameras**.

This selection installs and enables the optional Image Filter driver.

> **Note:** GigE Vision cameras on Linux systems use native Ubuntu drivers.

After installation is complete, the GigE Configurator opens. This tool allows you to configure the IP settings of the camera and network adaptor.

Need More Information?

The *Zebra2 Technical Reference* is available from the Downloads site.

The Knowledge Base is available to answer many questions.

See also: *Setting Up Multiple GigE Cameras* TAN 10351 and *Zebra2 and Compression* TAN 10348

FlyCapture SDK help is in the **All Programs>Point Grey FlyCapture2 SDK>Documentation** directory.

Contacting Us

For all general questions please contact us at mv-sales@flir.com.

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

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