

FORGE[®] GIGE IP

GigE Vision

Will your system support the camera?

Recommended System Configuration:

- **OS, CPU, RAM**—dependent on SDK requirements
- **Ports**—GigE network adapter
- **Software**—Microsoft Visual Studio to run/compile example code

Do you have all the parts you need?

To install your camera you need the following components:

- Ethernet cable
- Powered Ethernet switch or Ethernet power injector (if using PoE)
- GPIO cable
- Lens
- Interface card
- Tripod adapter (optional)

Teledyne FLIR sells a number of the additional parts required for installation. Visit the [Teledyne FLIR Accessories page](#).

Have you visited our website?

A downloads account is required to download software and firmware.

1. Go to <https://www.flir.com/account>.
2. Enter your email address and click Continue.
3. Complete the Create an account form and click Continue.
4. You will receive an email with a link to activate your account.
5. Once activated, you can login using your credentials.

The [Forge camera resources page](#) has many links to help you operate your camera effectively, including:

- Spinnaker[®] SDK software, including drivers (login required)
- Firmware updates and release notes (login required)
- Dimensional drawings and CAD models
- Documentation
- Knowledge Base articles

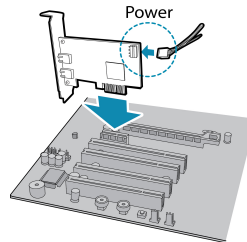
Contacting Teledyne FLIR

For any questions, concerns or comments please contact us:

| | |
|-----------------------|--|
| Email | General questions |
| Support Ticket | Technical support |
| Support Forum | Teledyne FLIR Community |
| Website | Find specifications, support articles, downloads on the website Teledyne FLIR machine vision |

Installing your Interface Card and Software

1. Install your Interface Card



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

Connect the internal IDE or SATA power connector on the card to the computer power supply.

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

Open the Windows Device Manager. Ensure the card is properly installed. Ethernet cards appear under **Network Adapters**. An exclamation point (!) next to the card indicates the driver has not yet been installed.

2. Install the Spinnaker[®] SDK Software

Note: For existing users who already have Spinnaker installed, we recommend ensuring you have the latest version for optimal performance of your camera. If you do not need to install Spinnaker, use SpinView to install and enable drivers for your card. The Forge GigE IP camera requires Spinnaker version 4.0 or later.

- Go to the [Spinnaker SDK Download](#) page. If you are not already logged in, you are prompted to login.
- Click the Download Now button.
- Select your operating system and version.
- After download is complete, open the file to start the Spinnaker setup wizard.
- Follow the steps in each setup dialog.

3. Optimize the settings of your Ethernet card

- In **Start** → **Teledyne Spinnaker SDK** → **SpinView**, right click on the Network Adapter and select Adapter Configuration. The Adapter Config Utility lists your network adapters and allows you to access the following:
 - Adapter IP address
 - Subnet mask
 - Default gateway
 - Receive buffers
 - Transmit buffers
 - Jumbo packets
 - RSS
 - Media optimization
 - CPU affinity

Note: See [How to Optimize GigE Network Adapter Settings](#) for more information on configuring for best performance.

Using the Spinnaker[®] SDK

You can monitor or control features of the camera through Spinnaker API examples provided in the Spinnaker SDK, or through the SpinView camera evaluation application. A *Programmer's Guide and API Reference* is included in the installation.

Installing your Forge GigE IP Camera

1. Attach a Lens

Unscrew the dust cap from the lens holder to install a lens.

2. Connect the interface Card and Cable to the Camera

Plug the interface cable into the host adapter and screw the cable to the camera's Ethernet connector.

Note: The cable must be secured to retain the IP rating of the camera.

If using PoE, your host adapter must provide power, or connect a powered Ethernet switch or Ethernet power injector in between the card and the camera.

When the camera is first connected, the operating system automatically installs the camera driver. Camera drivers are available with the Spinnaker SDK installation.

3. Unscrew the sealing cap and plug in the GPIO connector

GPIO is used for power, trigger, and strobe.

Note: If not using GPIO, the sealing cap must remain in place to retain the IP rating of the camera.

4. Confirm Successful Installation

Run the SpinView application: **Start**→**Teledyne Spinnaker SDK**→**SpinView**
The SpinView application can be used to test the camera's image acquisition capabilities and make changes to the camera's installation configuration.

5. Configure IP Settings if necessary

By default, a dynamic IP address is assigned to the camera according to the DHCP protocol. If DHCP addressing fails, a link-local address is assigned. If necessary, in SpinView change the IP address of the camera to be on the same subnet as the host adapter.

Camera Interface

Ethernet Connector

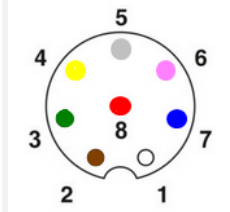
The M12 X-coded Ethernet jack is equipped with a metric screw connector for secure connection. Pin assignments conform to the Ethernet standard.

Note: The Ethernet cable must be securely attached to the connector to retain the IP rating of the camera.

General Purpose I/O Connector

The camera is equipped with an 8-pin GPIO connector. The connector is a standard IEC Metric Screw Sized connector with an M8, 8-position, A-Coded socket.

Note: To retain the IP rating of the camera, an IP-rated cable or sealing plug must be used.

| | Color | Pin | Line | Function | Description |
|---|--------|-----|------|----------|---|
|  | White | 1 | N/A | VExt | Camera Input Power |
| | Brown | 2 | 0 | OPTOIN | Opto-isolated Input |
| | Green | 3 | N/A | Opto GND | Opto Ground |
| | Yellow | 4 | 2 | GPIO | Non-isolated Input/Output |
| | Grey | 5 | N/A | VAux | Firmware-enabled +3.3 V Aux Output 120 mA nominal |
| | Pink | 6 | 1 | OPTOOUT | Opto-isolated Output |
| | Blue | 7 | N/A | GND | Camera Power Ground |
| | Red | 8 | N/A | N/A | NC |

Camera Care

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

Warning! Avoid electrostatic charging.