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# BFLY-PGE-20E4M-CS 1/1.8" Blackfly® PoE GigE Monochrome Camera

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Teledyne FLIR IIS Blackfly® GigE Cameras (Front)



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## SPECIFICATIONS

**Spectrum:**

Monochrome

**General**

Monochrome Camera **Type:**

BFLY-PGE-20E4M-CS **Model Number:**

FLIR **Manufacturer:**

Blackfly® **Camera Series:**

## Physical & Mechanical Properties

29 x 29 x 30 (excludes connectors and lens mount) **Dimensions (mm):**

36 **Weight (g):**

Full **Housing:**

## Sensor

16MB **Image Buffer:**

1/1.8" **Sensor Format:**

2.00 **Resolution (Megapixels):**

47.00 **Frame Rate (fps):**

1,600 x 1,200 **Pixels (H x V):**

4.5 x 4.5 **Pixel Size, H x V (µm):**

7.2 x 5.4 **Sensing Area, H x V (mm):**

e2v EV76C570 **Imaging Sensor:**

Progressive Scan CMOS **Type of Sensor:**

Global **Shutter Type:**

10 bit **Pixel Depth:**

16µs - 1s **Exposure Time:**

51.38 **Dynamic Range (dB):**

GigE Vision v1.2 **Machine Vision Standard:**

## Electrical

2.5 **Power Consumption (W):**

## Hardware & Interface Connectivity

GigE (PoE) **Interface:**

GigE, RJ45 with Screw Locks **Connector:**

Power Supply Required and Sold Separately.  
USA: [#88-063](#)  
Europe: [#88-063](#)  
Japan: [#88-063](#)  
Korea: Not Available  
China: [#88-063](#) **Power Supply:**

1 opto-isolated input, 1 opto-isolated output **GPIOs:**

Hardware Trigger (GPIO) or Software Trigger **Synchronization:**

Back Panel **Interface Port Orientation:**

6-pin Hirose (HR10) **GPIO Connector Type:**

## Threading & Mounting

CS-Mount **Mount:**

¼-20 with Tripod Mount Adapter [#88-210](#) **Mounting Threads:**

## Environmental & Durability Factors

0 to +45 **Operating Temperature (°C):**

-30 to +60 **Storage Temperature (°C):**

## Regulatory Compliance

[View](#) **Certificate of Conformance:**

## PRODUCT DETAILS

Two GigE cables are required if using the PoE injector. Use (#03-618) 5mm Spacer to convert CS-Mount Cameras to C-Mount. Software available for [download](#).

- Ultra-Compact Design
- Power over Ethernet (PoE) for Maximum Flexibility
- Includes Image Capture Software and FlyCapture2 SDK
- [USB3](#) Versions Also Available



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### Teledyne FLIR IIS Blackfly®: Legacy series Machine Vision Cameras that fit anywhere

The Blackfly® camera line combines Sony, Aptina, and e2v sensors with a host of unique features.

The **Blackfly®** machine vision camera line combines the high throughput of USB 3.0 or GigE, offering a number of highly sensitive sensors. The camera combines a comprehensive list of unique features, offering industry-leading capabilities, affordability, and uncompromising value. The ultra-compact Blackfly camera measures 29 x 29 x 30mm, weighs just 36 grams, uses 3 watts of power, and includes a 3-year warranty.

The **Blackfly®** is available with either color or monochrome sensors, providing a versatile imaging solution to easily obtain the exact images required to accelerate application development. A range of camera accessories and a common form factor provide a consistent platform for integration across the range of available sensor formats, resolution, and frame rates.

**Note:** Two GigE cables are required if using the PoE injector. Use (#03-618) 5mm Spacer to convert CS-Mount Cameras to C-Mount. Software available for download.

### Blackfly® GigE color / monochrome

- Models are available with various image sensors in a range of resolutions: 1.2 MP, 1.3 MP, 2.0 MP, 2.3 MP, 3.2 MP, and 5.0 MP

#### Features

- Perfect analog camera replacement
- Data interface options: either GigE or [USB3](#)
- CS-mount
- Ultra-compact form factor, measuring 29 x 29 x 30mm, weighs only 36g
- On-camera image processing includes color interpolation, gamma, and LUT
- 16 MByte frame buffer
- LED status indicator
- Supports partial readout via ROI, binning, decimation
- Triggering modes include standard, bulb, overlapped, multi-shot (not all sensors support all modes)
- 2 user configuration sets for custom camera settings
- Bit depth: 10 or 12-bit
- Advanced auto-algorithms or precise manual control over image capture and on-camera pre-processing
- Windows or Linux platforms (32 or 64-bit)
- Camera control via FlyCapture SDK or 3rd-party USB3 Vision software

#### Applications

- Life science instrumentation
- Factory automation
- Biometrics kiosk solutions
- Ophthalmoscopy
- 3D scanning
- Automated optical inspection
- Food & Beverage industry