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# BFLY-U3-23S6M-C USB 3.0 Blackfly®, Monochrome Camera

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USB 3.0 FLIR Blackfly Camera



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Monochrome

Spectrum:

**General**

Type:

Monochrome Camera

BFLY-U3-23S6MC **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:**

1/1.2" **Sensor Format:**

2.30 **Resolution (Megapixels):**

41.00 **Frame Rate (fps):**

1,920 x 1,200 **Pixels (H x V):**

5.86 x 5.86 **Pixel Size, H x V (µm):**

11.25 x 7.03 **Sensing Area, H x V (mm):**

Sony IMX249 **Imaging Sensor:**

Progressive Scan CMOS **Type of Sensor:**

Global **Shutter Type:**

10/12 bit **Pixel Depth:**

19µs - 3.9s **Exposure Time:**

67.12 (Mode 0) / 73.08 (Mode 7) **Dynamic Range (dB):**

USB3 Vision v1.0 **Machine Vision Standard:**

## Electrical

Not Specified **Power Consumption (W):**

## Hardware & Interface Connectivity

USB 3.0 **Interface:**

USB 3.1 Gen 1, Micro-B with Screw Locks **Connector:**

Power over USB or via GPIO with [#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

C-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

[Exempt](#) **RoHS 2015:**

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

[Contains SVHC\(s\)](#) **Reach 240:**

## Product Details

- Ultra-Compact Design
- USB 3.0 Connectivity for Increased Image Transfer Rate
- Includes Image Capture Software and FlyCapture2 SDK
- [GigE](#) Versions Also Available



Teledyne  
Authorized  
Distributor

### 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:** USB3 cable sold separately.

### Blackfly® USB3 color / monochrome

- Models feature a 2.3 MP Sony CMOS sensor in color or monochrome

#### 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