

# FLIR BLACKFLY<sup>®</sup>S

P/N: BFS-U3-04S2, USB3 VISION



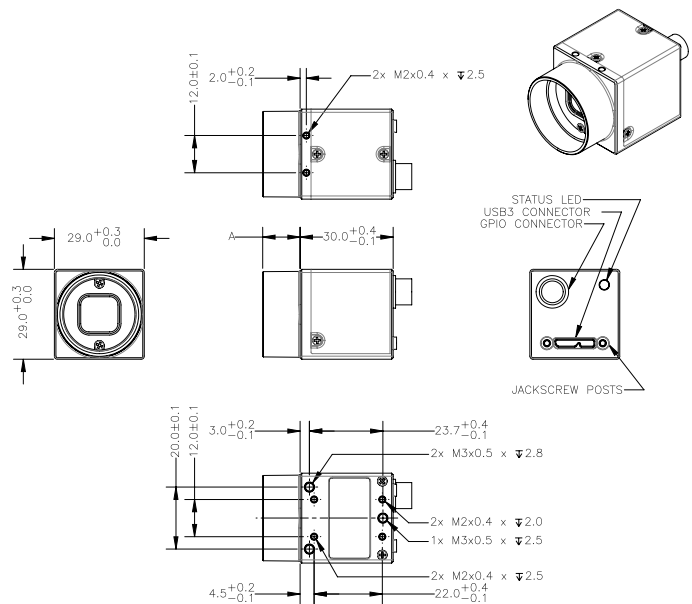
## SMALL PACKAGE, POWERFUL RESULTS

The Blackfly S combines the newest CMOS image sensors with our new and intuitive Spinnaker software development kit. The many new advanced camera features are designed to meet your complex imaging needs and speed up development time.

## KEY FEATURES

- Leverage the latest **CMOS sensors** and new on-camera image processing features. Harness increased **binning** flexibility, powerful **auto-exposure** controls and robust **color transformation** tools.
- Improve cycle time using advanced camera controls and programmable logic. Utilize **sequencer**, **chunk data**, **event notification**, **counters**, **timers** and **logic blocks**.
- Accelerate your time to market using our **GenICam3 API**, **GUI API library**, detailed **API logging** and comprehensive **documentation**.

**USB3 VISION GEN<i>CAM**



## Specifications

	BFS-U3-04S2M-CS	BFS-U3-04S2C-CS
<b>Resolution</b>	720 x 540	
<b>Frame Rate*</b>	522 FPS	
<b>Megapixels</b>	0.4 MP	
<b>Chroma</b>	Mono	Color
<b>Sensor</b>	Sony IMX287, CMOS, 1/2.9"	
<b>Readout Method</b>	Global shutter	
<b>Pixel Size</b>	6.9 µm	
<b>Lens Mount</b>	CS-mount	
<b>ADC</b>	8-bit, 10-bit, and 12-bit	
<b>Minimum Frame Rate**</b>	1 FPS	
<b>Gain Range**</b>	0 to 47 dB	
<b>Exposure Range**</b>	4 µs to 30 s	
<b>Acquisition Modes</b>	Continuous, Single Frame, Multi Frame	
<b>Partial Image Modes</b>	Pixel binning, decimation, ROI	
<b>Image Processing</b>	Gamma, lookup table, and sharpness	Color correction matrix, gamma, lookup table, saturation, and sharpness
<b>Sequencer</b>	Up to 8 sets using 2 features	
<b>Image Buffer</b>	240 MB	
<b>User Sets</b>	2 user configuration sets for custom camera settings	
<b>Flash Memory</b>	6 MB non-volatile memory	
<b>Opto-isolated I/O</b>	1 input, 1 output	
<b>Non-isolated I/O</b>	1 bi-directional, 1 input	
<b>Auxiliary Output</b>	3.3 V, 120 mA maximum	
<b>Interface</b>	USB 3.1 Gen 1	
<b>Power Requirements</b>	8 - 24 V via GPIO or 5 V via USB3 interface	
<b>Power Consumption</b>	3 W maximum	
<b>Dimensions/Mass</b>	29 mm x 29 mm x 30 mm / 36 g	
<b>Machine Vision Standard</b>	USB3 Vision v1.0	
<b>Compliance</b>	CE, FCC, KCC, RoHS, REACH. The ECCN for this product is: EAR099.	
<b>Temperature</b>	Operating: 0°C to 50°C Storage: -30°C to 60°C	
<b>Humidity</b>	Operating: 20% to 80% (no condensation) Storage: 30% to 95% (no condensation)	
<b>Warranty</b>	3 years	

\*Frame rates are measured with Device Link Throughput Limit of 380 MBps and Acquisition Frame Rate disabled. Values are rounded down to whole numbers.

\*\*Values are the same in binning and no binning modes.

### FLIR Integrated Imaging Solutions

#### CANADA

12051 Riverside Way  
Richmond, BC, Canada  
V6W 1K7  
T: +1 866.765.0827 (toll free)  
T: +1 604.242.9937  
F: +1 604.242.9938  
E: mv-sales@flir.com  
www.flir.com/mv

#### EUROPE

T: +49 7141 488817-0  
F: +49 7141 488817-99  
E: mv-eusales@flir.com

#### CHINA

T: +86 10 8215 9938  
F: +86 10 8215 9936  
E: mv-chinasales@flir.com

#### USA

T: +1 866.765.0827 (toll free)  
E: mv-na-sales@flir.com

#### ASIA

E: mv-asiasales@flir.com

For a full list of international distributors and offices visit [www.flir.com/contact-us](http://www.flir.com/contact-us)

©2018 FLIR® Integrated Imaging Solutions Inc. All rights reserved. Names and marks appearing on the products herein are either registered trademarks or trademarks of FLIR® Systems, Inc. and/or its subsidiaries.