FLIR BLACKFLY S

P/N: BFS-U3-13Y3, USB3 VISION





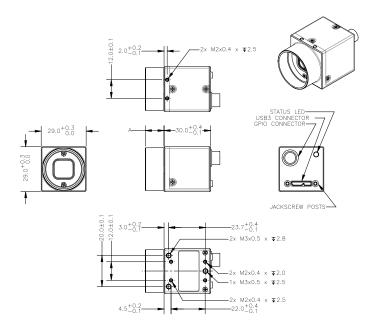
SMALL PACKAGE, POWERFUL RESULTS

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 GenlCam3 API, GUI API library, detailed API logging and comprehensive documentation.







Specifications

Resolution	
Megapixels 1.3 MP Chroma Mono Color Sensor On Semi P1300, CMOS, 1/2* Readout Method Global shutter Pixel Size 4.8 µm Lens Mount C-mount ADC 10-bit Minimum Frame Rate** 1 FPS Gain Range** 0 to 18 dB Exposure Range** 6 µs to 30 s Acquisition Modes Continuous, Single Frame, Multi Frame Partial Image Modes Pixel binning, decimation, ROI Image Processing Gamma, lookup table, and sharpness Color correction matrix, gamma, lookup table, hue, saturation, and sharpness Sequencer Up to 8 sets using 6 features, including image size Image Buffer 240 MB User Sets 2 user configuration sets for custom camera settings Flash Memory 6 MB non-volatile memory Opto-isolated I/O 1 input, 1 output Non-isolated I/O 1 bi-directional, 1 input Auxiliary Output 3.3 V, 120 mA maximum Interface USB 3.1 Gen 1 Power Requirements 8 -24 V via GPIO or 5 V via USB3 interface Power Consumption	Resolution
Chroma Mono Color Sensor On Semi P1300, CMOS, 1/2* Readout Method Global shutter Pixel Size 4.8 µm Lens Mount C-mount ADC 10-bit Minimum Frame Rate** 1 FPS Gain Range** 6 µs to 30 s Acquisition Modes Continuous, Single Frame, Multi Frame Partial Image Modes Pixel binning, decimation, ROI Image Processing Gamma, lookup table, and sharpness Color correction matrix, gamma, lookup table, hue, saturation, and sharpness Sequencer Up to 8 sets using 6 features, including image size Image Buffer 240 MB User Sets 2 user configuration sets for custom camera settings Flash Memory 6 MB non-volatile memory Opto-isolated I/O 1 bi-directional, 1 input Auxiliary Output 3.3 V, 120 mA maximum Interface USB 3.1 Gen 1 Power Requirements Power Consumption 3W maximum	Frame Rate*
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Pixel Size Lens Mount C-mount ADC 10-bit Minimum Frame Rate** 1FPS Gain Range** 0 to 18 dB Exposure Range** 6 µs to 30 s Acquisition Modes Continuous, Single Frame, Multi Frame Partial Image Modes Pixel binning, decimation, ROI Image Processing Gamma, lookup table, and sharpness Color correction matrix, gamma, lookup table, hue, saturation, and sharpness Sequencer Up to 8 sets using 6 features, including image size Image Buffer 240 MB User Sets 2 user configuration sets for custom camera settings Flash Memory Opto-isolated I/O 1 input, 1 output Non-isolated I/O 1 bi-directional, 1 input Auxiliary Output 3.3 V, 120 mA maximum Interface Power Requirements Power Consumption 3 W maximum	Sensor
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Partial Image Modes Pixel binning, decimation, ROI	Exposure Range**
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Flash Memory 6 MB non-volatile memory Opto-isolated I/O 1 input, 1 output Non-isolated I/O 1 bi-directional, 1 input Auxiliary Output 3.3 V, 120 mA maximum Interface USB 3.1 Gen 1 Power Requirements 8-24 V via GPIO or 5 V via USB3 interface Power Consumption 3 W maximum	Image Buffer
Opto-isolated I/O 1 input, 1 output Non-isolated I/O 1 bi-directional, 1 input Auxiliary Output 3.3 V, 120 mA maximum Interface USB 3.1 Gen 1 Power Requirements 8-24 V via GPIO or 5 V via USB3 interface Power Consumption 3 W maximum	User Sets
Non-isolated I/O 1 bi-directional, 1 input Auxiliary Output 3.3 V, 120 mA maximum Interface USB 3.1 Gen 1 Power Requirements 8-24 V via GPIO or 5 V via USB3 interface Power Consumption 3 W maximum	Flash Memory
Auxiliary Output 3.3 V, 120 mA maximum Interface USB 3.1 Gen 1 Power Requirements 8-24 V via GPIO or 5 V via USB3 interface Power Consumption 3 W maximum	Opto-isolated I/O
Interface USB 3.1 Gen 1 Power Requirements 8-24 V via GPIO or 5 V via USB3 interface Power Consumption 3 W maximum	Non-isolated I/O
Power Requirements 8 - 24 V via GPIO or 5 V via USB3 interface Power Consumption 3 W maximum	Auxiliary Output
Power Consumption 3 W maximum	Interface
• • • • • • • • • • • • • • • • • • • •	Power Requirements
Dimensions/Mass 29 mm x 29 mm x 30 mm / 36 g	Power Consumption
2	Dimensions/Mass
Machine Vision Standard USB3 Vision v1.0	Machine Vision Standard
Ce, FCC, KCC, RoHS, REACH. The ECCN for this product is: EAR099.	Compliance
MTBF*** 6,330,000 hours @20°C, GB environment 1,582,000 hours @20°C, GM environment	MTBF***
Temperature Operating: 0°C to 50°C Storage: -30°C to 60°C	Temperature
Humidity Operating: 20% to 80% (no condensation) Storage: 30% to 95% (no condensation)	Humidity
Warranty 3 years	Warranty

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

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^{**}Values are the same in binning and no binning modes.

^{***}Ambient temperature; internal camera temperature is not considered.