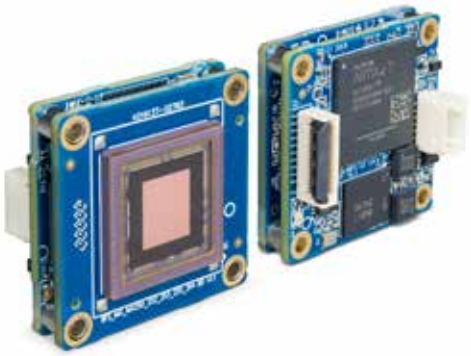

INDUSTRIAL/MACHINE VISION APPLICATIONS

FLIR BLACKFLY® S BOARD-LEVEL

P/N BFS-U3-50S5-BD2

SMALL PACKAGE, POWERFUL RESULTS

The Blackfly S is a compact, high performance machine vision camera that allows designers to easily produce the exact images they need. With both automatic and precise manual control over image capture and on-camera pre-processing, the Blackfly S accelerates application development.

www.flir.com/mv

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.

APPLICATIONS

- BIOMEDICAL APPLICATIONS SUCH AS MICROARRAY READING A FLUORESCENCE MICROSCOPY
- FLAT-PANEL DISPLAY INSPECTION AND ALIGNMENT
- UAS AERIAL IMAGING
- HIGH-RESOLUTION AUTOMATED OPTICAL INSPECTION

SPECIFICATIONS

SPECS	BFS-U3-50S5M-BD2	BFS-U3-50S5C-BD2
Resolution	2448 x 2048	
Frame Rate*	35 FPS	
Megapixels	5.0 MP	
Chroma	Mono	Color
Sensor	Sony IMX264, CMOS, 2/3"	
Readout Method	Global shutter	
Pixel Size	3.45 µm	
Lens Mount	Sold separately	
ADC	12-bit	
Minimum Frame Rate**	1 FPS	
Gain Range**	0 to 47 dB	
Exposure Range**	13 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, saturation, and sharpness
Sequencer	Up to 8 sets using 6 features	
Image Buffer	240 MB	
User Sets	2 user configuration sets for custom camera settings	
Flash Memory	1 MB non-volatile memory	
Non-isolated I/O	4 bi-directional	
Auxiliary Output	3.3 V, 120 mA maximum	
Serial Port	Supported	
Interface	USB 3.1 Gen 1	
Interface Connector	Hirose TF38 FPC connector	
Power Requirements	5 V via USB3 interface	
Power Consumption	3 W maximum	
Dimensions/Mass	29 mm x 29 mm x 10 mm / 10 g	
Machine Vision Standard	USB3 Vision v1.0	
Compliance	CE, FCC, RoHS, REACH / ECCN is EAR099	
Temperature	Operating: 0°C to 50°C / Storage: -30°C to 60°C	
Humidity	Operating: 20% to 80% (no condensation) / Storage: 30% to 95% (no condensation)	
Warranty	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.

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VN: BFS-U3-50S5-BD2-v1

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