



INDUSTRIAL/MACHINE VISION APPLICATIONS

FLIR BLACKFLY S

P/N BFS-U3-31S4

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

THE LATEST CMOS SENSORS

Switch between high sensitivity and low noise, and high saturation capacity and dynamic range with selectable conversion gain.

IMPROVE CYCLE TIMES

Automate more with advanced camera controls, event notifications, chunk data, counters and timers.

ACCELERATE YOUR TIME TO MARKET

FLIR's GenICam3 API with GUI library, and detailed event logging is supported by comprehensive documentation.

APPLICATIONS

AUTOMATED OPTICAL INSPECTION

MICROSCOPY ROBOT GUIDANCE

LASER BEAM PROFILING

AUTONOMOUS VEHICLE GUIDANCE



GEN*i*CAM

Pregius

| SPECS | BFS-U3-31S4M-C | BFS-U3-31S4C-C |
|-------------------------|--|--|
| Resolution | 2048 x 1536 | |
| Frame Rate* | 55 FPS | |
| Megapixels | 3.1 MP | |
| Chroma | Mono | Color |
| Sensor | Sony IMX265, CMOS, 1/1.8" | |
| Readout Method | Global shutter | |
| Pixel Size | 3.45 μ m | |
| Lens Mount | C-mount | |
| ADC | 12-bit | |
| Minimum Frame Rate** | 1 FPS | |
| Gain Range** | 0 to 47 dB | |
| Exposure Range** | 11 μ s 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 | |
| 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 | 3 W maximum | |
| Dimensions/Mass | 29 mm x 29 mm x 30 mm / 36 g | |
| Machine Vision Standard | USB3 Vision v1.0 | |
| Compliance | CE, FCC, KCC, RoHS, REACH. The ECCN for this product 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-U3-31S4-v2

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FOR YOUR NEEDS



The World's Sixth Sense®