**INDUSTRIAL/MACHINE VISION APPLICATIONS**

# FLIR BLACKFLY® S

## P/N: BFS-U3-63S4

### 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/products/blackfly-s-usb3

## 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

**US3** VISION   **GEN‹i›CAM**   **Pregius**

| SPECS | BFS-U3-63S4M-C | BFS-U3-63S4C-C |
|---|---|---|
| Resolution | 3072 x 2048 | |
| Frame Rate* | 59.6 FPS | |
| Megapixels | 6.3 MP | |
| Chroma | Mono | Color |
| Sensor | Sony IMX178, CMOS, 1/1.8" | |
| Readout Method | Rolling shutter with global reset | |
| Pixel Size | 2.4 µm | |
| Lens Mount | C-mount | |
| ADC | 10-bit / 14-bit | |
| Minimum Frame Rate** | 1 FPS | |
| Gain Range** | 0 to 47 dB | |
| Exposure Range** | 8 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 5 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 | 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 the same in binning and no binning modes.

FIND THE BEST BLACKFLY S
FOR YOUR NEEDS

**FLIR®** | The World's Sixth Sense®