

INDUSTRIAL/MACHINE VISION APPLICATIONS

BLACKFLY® S

P/N BFS-U3-120S6

SMALL PACKAGE, POWERFUL RESULTS

The Blackfly® S leverages the industry's most advanced sensors in an ice-cube form factor. It is packed with powerful features enabling you to easily produce the exact images you need and accelerate your application development. This includes both automatic and precise manual control over image capture and on-camera pre-processing. The Blackfly S is available in GigE, USB3, cased, and board-level versions.

Learn more:

<https://www.flir.com/products/blackfly-s-usb3/?model=BFS-U3-120S6C-C>

FEATURES

THE EXACT IMAGES YOU NEED

Choice of CMOS global shutter, polarization, and high-sensitivity BSI sensors. Color transformation tools ensure true-to-life color. Advanced auto-algorithms or precise manual control.

DEVELOP ONCE, DEPLOY ANYWHERE

Support for a wide range of operating systems and host system hardware architectures. Easily switch to board level models for embedded systems. Simplified product iteration with consistent form factor across sensor sizes

ACCELERATE APPLICATION DEVELOPMENT

Compatible with third party software and hardware. Less code-writing required using powerful on-camera features. Quickly build custom applications with rich sample code and descriptive API logging.

APPLICATIONS

Microscopy, Imaging and 2D Measurements

Non-contact Metrology

Product Inspection

... & More

| SPECS | BFS-U3-120S6M-C | BFS-U3-120S6C-C |
|-------------------------|----------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Resolution | 4096 x 3000 | |
| Frame Rate | 30 FPS | |
| Megapixels | 12.3 MP | |
| Chroma | Mono | Color |
| Sensor | Sony IMX545, CMOS, 1/1.1" | |
| Readout Method | Global shutter | |
| Pixel Size | 2.74 µm | |
| Lens Mount | C-mount | |
| ADC | 8-bit / 10-bit / 12-bit | |
| Minimum Frame Rate* | 1 FPS | |
| Gain Range* | 0 to 47 dB | |
| Exposure Range* | 14 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 | |
| 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 | |
| Serial Port | 1 (over non-isolated I/O) | |
| 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 | 4.2 W maximum | |
| Dimensions/Mass | 29 mm x 29 mm x 39 mm / 53 g | |
| Machine Vision Standard | USB3 Vision v1.0 | |
| Compliance | CE, FCC, 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 | |

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

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VN: BFS-PGE-51S5P-v2

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Teledyne FLIR
Machine Vision