

## INDUSTRIAL/MACHINE VISION APPLICATIONS

# BLACKFLY® S

P/N BFS-U3-200S7

### 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.

### 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

Automated Optical Inspection

Electronics Inspection

Flat Panel Display Inspection

Microscopy and Imaging

Simultaneous Localization and Mapping (SLAM)

Aerial imaging

... & More

SPECS	BFS-U3-200S7M-C	BFS-U3-200S7C-C
Resolution	4504 x 4504	
Frame Rate	18 FPS	
Megapixels	20.0 MP	
Chroma	Mono	Color
Sensor	Sony IMX541, CMOS, 1.1"	
Readout Method	Global shutter	
Pixel Size	2.74 $\mu$ m	
Lens Mount	C-mount	
ADC	8-bit / 10-bit / 12-bit	
Minimum Frame Rate*	1 FPS	
Gain Range*	0 to 47 dB	
Exposure Range*	15 $\mu$ 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	
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 65°C (case) Storage: -30°C to 60°C (ambient)	
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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FIND THE BEST BLACKFLY S FOR YOUR NEEDS



Teledyne FLIR  
Machine Vision