FLIR BLACKFLY® S

P/N BFS-U3-51S5PC

ENABLE NEW APPLICATIONS WITH ON-SENSOR POLARIZATION

See the world in a whole new way with the FLIR Blackfly S. Sony's Pregius sensors with on-sensor polarizing filters adds polarimetry to the FLIR Blackfly S already powerful feature-set. The USB 3.1 Gen 1 interface enables a global shutter readout at 75 FPS in a compact, low power package. This camera is ideal for building the next generation of polarimetry based industrial, traffic and UAS applications.

www.flir.com/mv

FEATURES

ON-SENSOR POLARIZING FILTERS
Enable new imaging possibilities using global shutter CMOS sensors with polarization. The Spinnaker SDK makes interpolation and analysis of polarization data easy.

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

See through transparent and reflective materials including plastic, epoxy and glass by removing unwanted reflections

Inspect difficult-to-image materials such as protective films and clear-coat

Simplify training data for autonomous vehicles by eliminating unwanted glare

Dynamic removal of glare improves UAS and ITS system performance in uncontrolled and unpredictable lighting conditions

POLARIZED · US3 VISION · GEN<i>CAM

SPECIFICATIONS

SPECS	BFS-U3-51S5P	BFS-U3-51S5PC
Resolution	2448 x 2048	
Frame Rate*	75 FPS	
Megapixels	5.0 MP	
Chroma	Polarized	Polarized Color
Sensor	Sony IMX250MZR, CMOS, 2/3"	Sony IMX250MYR, CMOS, 2/3"
Readout Method	Global shutter	
Pixel Size	3.45 µm	
Lens Mount	C-mount	
ADC	10-bit / 12-bit	
Minimum Frame Rate**	1 FPS	
Gain Range**	0 to 47 dB	
Exposure Range**	6 µs to 30 s	20 µs to 30 s
Acquisition Modes	Continuous, Single Frame, Multi Frame	
Partial Image Modes	Pixel binning, ROI	
Image Processing	Gamma	
Sequencer	Up to 8 sets using 6 features, including image size	
Image Buffer	240 MB	
User Sets	2 user configuration sets for custom camera settings	
Flash Memory	1 MB non-volatile memory	
Opto-isolated I/O	1 input, 1 output	
Non-isolated I/O	1 bi-directional	
Auxiliary Output	3.3 V, 150 mA maximum	
Serial Port	Supported	
Interface	USB 3.1 Gen 1	
Power Requirements	5 - 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 500 MBps and Acquisition Frame Rate disabled. Values are rounded down to whole numbers.

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

FIND THE BEST BLACKFLY S
FOR YOUR NEEDS

♦FLIR® | The World's Sixth Sense®