



INDUSTRIAL/MACHINE VISION APPLICATIONS

FLIR FIREFLY® DL

P/N: FFY-U3-16S2-DL

ON-CAMERA INFERENCE

Deep learning is a powerful tool for system designers to quickly automate complex and subjective decision making and deliver higher quality products and improved productivity. Deploy your trained neural network to the FLIR Firefly DL camera with Neuro technology and reduce system cost and complexity by making decisions on-camera without host PC. With its very small size, low weight and power consumption, the Firefly DL camera is ideal for embedding into mobile, desktop, and handheld systems.

www.flir.com/firefly-dl

FEATURES

DEEP LEARNING FOR FASTER DEPLOYMENT & NEW POSSIBILITIES

Quickly develop and deploy AI solutions to challenging automation tasks

DEEP LEARNING INFERENCE ON-CAMERA

Reduce system cost and complexity by deploying your trained network to a Firefly DL camera, eliminating the need for a host system for classification tasks

IDEAL FOR EMBEDDING INTO COMPACT, PORTABLE DEVICES

Tiny package of 27 mm × 27 mm × 14 mm, only 2 W power consumption and 20 gram mass

APPLICATIONS

INFERENCE ON THE EDGE

ON-CAMERA QUALITY INSPECTION

OBJECT DETECTION AND TRACKING

DRONE AND ROBOT COLLISION AVOIDANCE



NEURO
ON-CAMERA
INFERENCE

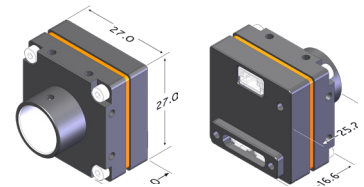
USB VISION GEN*i*CAM

SPECIFICATIONS

SPECS	FFY-U3-16S2M-DL	FFY-U3-16S2C-DL
Resolution	1440 x 1080	
Frame Rate*	60 FPS	
Megapixels	1.6 MP	
Chroma	Mono	Color
Sensor	Sony IMX296, CMOS, 1/2.9"	
Readout Method	Global shutter	
Pixel Size	3.45 µm	
Lens Mount	S-mount / C-mount / CS-mount	
ADC	10-bit	
Minimum Frame Rate**	1 FPS	
Gain Range**	0 to 48 dB	
Exposure Range**	29 µs to 30 s	
Acquisition Modes	Continuous, Single Frame, Multi Frame	
Partial Image Modes	Pixel binning, ROI	
Image Processing	Gamma, lookup table, denoise, and sharpness	Gamma, lookup table, saturation, denoise, and sharpness
Image Buffer	32 MB	
User Sets	2 user configuration sets for custom camera settings	
Flash Memory	24 MB non-volatile memory	
Opto-isolated I/O	N/A	
Non-isolated I/O	4 bi-directional	
Serial Port	1 (over non-isolated I/O)	
Auxiliary Output	3.3 V, 120 mA maximum	
Interface	USB 3.1 Gen 1	
Power Requirements	5 V via USB3 interface	
Power Consumption	2.2 W maximum	
Dimensions/Mass	27 mm x 27 mm x 14.5 mm / 20 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 85°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	

*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.



FLIR Integrated Imaging Solutions

CANADA

12051 Riverside Way
Richmond, BC, Canada
V6W 1K7
T: +1 866.765.0827 (toll free)
T: +1 604.242.9937
F: +1 604.242.9938
E: mv-sales@flir.com

USA

T: +1 866.765.0827 (toll free)
E: mv-na-sales@flir.com

www.flir.com/mv

EUROPE

T: +49 7141 488817-0
F: +49 7141 488817-99
E: mv-eusales@flir.com

CHINA

T: +86 10 8215 9938
F: +86 10 8215 9936
E: mv-chinasales@flir.com

ASIA

E: mv-asiasales@flir.com

www.flir.com
NASDAQ: FLIR

©2020 FLIR® Integrated Imaging Solutions Inc. All rights reserved.
Names and marks appearing on the products herein are either registered trademarks or trademarks of FLIR® Systems, Inc. and/or its subsidiaries. Specifications are subject to change without notice.
Rev. 06/12/20

VN: 20-0694-OEM-FFY-U3-16S2-DL-LET

FIND THE BEST FIREFLY
FOR YOUR NEEDS



The World's Sixth Sense®