

Flea3 USB 3.0

ULTRA-COMPACT + DISTANCE + COST EFFECTIVE

- Low-cost, high-speed CMOS image sensors
- USB 3.0, 5 Gbit/s interface
- Ultra-compact 29 x 29 x 30 mm metal case, 52 grams
- IIDC Digital Camera Specification v1.32

The Flea3 FL3-U3 line of the world's smallest and fastest USB 3.0 cameras offers a variety of low-cost, high-speed, CMOS image sensors, ranging from 1.3 to 8 megapixels. The Flea3 also offers a host of new features, including enhanced opto-isolated GPIO; an on-camera frame buffer; non-volatile user data storage; new trigger modes; and improved imaging performance.



Available	Model	Resolution	Image Sensor	Resolution	FPS	Pixel Size
Available	FL3-U3-13S2C/M-CS	1.3 MP	Sony IMX035 CMOS, 1/3", Mono/Color, Rolling Shutter	1328x1048	120 FPS	3.63 μ m
Available	FL3-U3-13Y3M-C	1.3 MP	On Semi VITA1300 CMOS, 1/2", Mono, Global Shutter	1280x1024	150 FPS	4.8 μ m
Available	FL3-U3-32S2C/M-CS	3.2 MP	Sony IMX036 CMOS, 1/2.8", Mono/Color, Rolling Shutter with Global Reset	2080x1552	60 FPS	2.5 μ m
Coming Soon!	FL3-U3-88S2C-C	8.8 MP	Sony IMX121 CMOS, 1/2.5", Color, Rolling Shutter	4096x2160	21 FPS	1.55 μ m

A/D Converter	12-bit; 10-bit FL3-U3-13Y3
Video Data Output	8, 12, 16 and 24-bit digital data
Image Data Formats	Y8, Y16, Mono8, Mono12, Mono16 (all models) RGB, YUV411, YUV422, YUV444, Raw8, Raw12, Raw16 (color models)
Partial Image Modes	Pixel binning and region of interest (ROI) modes
Image Processing	Gamma, lookup table, hue, saturation, and sharpness
Gain	0 dB to 24 dB (0 db to 18 db FL3-U3-13Y3), Automatic*/Manual/One-Push* Gain modes (*Free running only)
Gamma	0.50 to 4.00
White Balance	Automatic/manual modes, programmable via software
Color Processing	On-camera in YUV or RGB format, or on-PC in Raw format
Digital Interface	USB 3.0 interface with screw locks for camera control, data, and power
Transfer Rates	5 Gbit/s
GPIO	8-pin Hirose HR25 GPIO connector for power, trigger, strobe, PWM, and serial I/O: 1 opto-isolated input, 1 opto-isolated output, 2 bi-directional I/O pins
External Trigger Modes	IIDC Trigger Modes 0, 1, and 15
Synchronization	via external trigger or software trigger
Shutter	Rolling Shutter (FL3-U3-13S2) ; Global Reset (FL3-U3-32S2); Global Shutter (FL3-U3-13Y3), 0.008 ms to 1 second (FL3-U3-13S2) / 0.006 ms to 1 second (FL3-U3-13Y3) / 0.01 ms to 32 seconds (FL3-U3-32S2) Automatic*/Manual/One-Push*/Extended Shutter** modes (*Free running only) (**except FL3-U3-13Y3)
Image Buffer/Memory	32 MB frame buffer; Flash Memory 1 MB
Memory Channels	2 memory channels for custom camera settings
Dimensions and Mass	29 x 29 x 30 mm excluding lens holder (metal case), 52 g (58 g FL3-U3-13Y3) without optics
Power Consumption	5 V, <3 W, via GPIO or USB 3.0 interface
Camera Specification	IIDC v1.32
Camera Control	via FlyCapture SDK, CSRs, or third party software
Camera Updates	In-field firmware updates
Lens Mount	CS-mount: FL3-U3-13S2, FL3-U3-32S2 / C-mount: FL3-U3-13Y3
Temperature	Operating: 0° to 45°C; Storage: -30° to 60°C
Emissions Compliance	CE, FCC, RoHS
Operating System	Windows 7 32- or 64-bit
Warranty	Two years