FLIR *FIREFLY®MV*

USB 2.0 OR 1394A
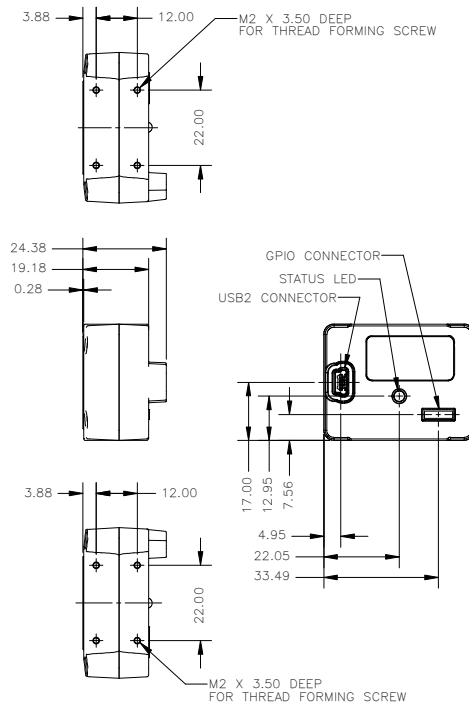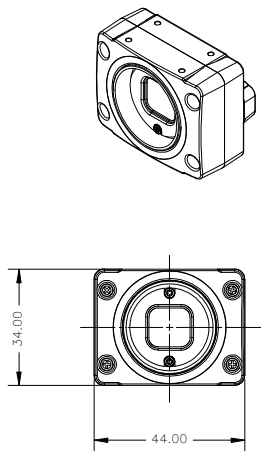

1394a (FireWire) Model

SMALL + INEXPENSIVE + USB OR 1394

The Firefly MV line offers a total of 14 different combinations of form factor and interface that are designed to address a wide variety of applications in industrial and non-industrial imaging, such as object and gesture tracking, optical character recognition (OCR), augmented reality, and multitouch interface technology.

KEY FEATURES

- 14 different combinations of form factor and interface
- USB 2.0 or 1394a digital interface
- Ultra compact at 44 x 34 x 24.4 mm

USB 2.0   **FireWire**

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Specifications - 1394a models

MODEL	VERSION	MP	IMAGING SENSOR
FMVU-03MTC-CS	Color	0.3 MP	■ Micron MT9V022 CMOS, 1/3", 6.0 µm
FMVU-03MTM-CS	Mono		■ Global Shutter ■ 752x480 at 60 FPS
FMVU-13S2C-CS	Color	1.3 MP	■ Sony IMX035 CMOS, 1/3", 3.63 µm ■ Rolling Shutter ■ 1328x1048 at 23 FPS

A/D Converter	On chip 10-bit/12-bit
Image Data Output	8, 16-bit digital data
Image Data Formats	Y8, Y16 (mono), 8-bit and 16-bit raw Bayer data (color)
Partial Image Modes	Pixel binning and region of interest (ROI) modes
Image Processing	Gamma, lookup table, hue, saturation, and sharpness
Gain	Automatic/Manual Gain modes 0 dB to 12 dB (FMVU-03MT)/0 dB to 24 dB (FMVU-13S2)
Gamma	0 to 1 (FMVU-03MT)/0.50 to 4.00 (FMVU-13S2)
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	5-pin Mini-B USB2.0 for camera control, video data, and power
Transfer Rates	480 Mb/s
GPIO	7-pin JST GPIO connector, 4 pins for trigger and strobe, 1 pin +3.3 V, 1 VEXT pin for external power
External Trigger Modes	IIDC Trigger Modes 0, and 3
Synchronization	Via external trigger
Shutter	Global Shutter (FMVU-03MT)/Rolling Shutter (FMVU-13S2) Automatic/Manual modes 0.12 ms to 512 ms (FMVU-03MT)/0.03 ms to 8000 ms (FMVU-13S2)
Memory Channels	2 memory channels for custom camera settings
Flash Memory	N/A
Dimensions	24.4 x 44 x 34 mm (excluding lens holder and connectors)
Mass	37 g (without optics or tripod mounting bracket)
Power Consumption	4.75 to 5.25 V via GPIO or USB 2.0 interface, less than 1 W
Camera Specification	IIDC v1.31
Camera Control	via FlyCapture SDK, CSRs, or third party software
Camera Updates	In-field firmware updates
Lens Mount	CS-mount
Temperature	Operating: 0° to 45°C; Storage: -30° to 60°C
Emissions Compliance	CE, FCC, RoHS
Operating System	Windows XP SP1
Warranty	One year

Specifications - USB 2.0 models

MODEL	VERSION	MP	IMAGING SENSOR
FFMV-03M2C-CS	Color	0.3 MP	■ Micron MT9V022 CMOS, 1/3", 6.0 µm
FFMV-03M2M-CS	Mono		■ Global Shutter ■ 752x480 at 60 FPS

A/D Converter	On chip 10-bit
Image Data Output	8, 16-bit digital data
Image Data Formats	Y8, Y16 (mono), 8-bit and 16-bit raw Bayer data (color)
Partial Image Modes	Pixel binning and region of interest (ROI) modes
Image Processing	Gamma, lookup table, hue, saturation, and sharpness
Gain	Automatic/Manual Gain modes 0 dB to 12 dB
Gamma	0 to 1
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	6-pin IEEE 1394a for camera control, video data, and power
Transfer Rates	400 Mb/s
GPIO	7-pin JST GPIO connector, 4 pins for trigger and strobe, 1 pin +3.3 V, 1 VEXT pin for external power
External Trigger Modes	IIDC Trigger Modes 0 and 3
Synchronization	Via external trigger or software trigger (on same bus only), or free-running (using standard video formats/modes operating at 30 FPS and 60 FPS only)
Shutter	Global Shutter Automatic/Manual/Extended Shutter modes 0.03 ms to 512 ms (extended shutter mode)
Memory Channels	3 memory channels for custom camera settings
Flash Memory	N/A
Dimensions	44 x 34 x 24.4 mm (excluding lens holder and connectors)
Mass	37 g (without optics or tripod mounting bracket)
Power Consumption	8 to 30 V, 1 W at 12 V via 1394a interface
Camera Specification	IIDC v1.31
Camera Control	via FlyCapture SDK, CSRs, or third party software
Camera Updates	In-field firmware updates
Lens Mount	CS-mount
Temperature	Operating: 0° to 40°C; Storage: -30° to 60°C
Emissions Compliance	CE, FCC, RoHS
Operating System	Windows XP SP1
Warranty	One year

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