

mvBlueFOX

Industrial USB 2.0 CCD & CMOS cameras

The birth of new visions



www.matrix-vision.de



■ compact industrial CCD & CMOS camera series with Hi-Speed USB

■ high quality sensors

■ monochrome and color versions

■ integrated Bayer color conversion and image preprocessing

■ Hardware Real-Time Controller (HRTC)

mvBlueFOX

more and up-to-date infos see ▼

www.matrix-vision.com/mvBlueFOX

The mvBlueFOX is a compact industrial CCD & CMOS camera solution for any PC with USB ports.

A superior image quality makes it suited for most applications. The driver in combination with the FPGA represent a perfect team which reduces the PC load to a minimum during pre-

processings like Bayer color conversion. The standard Hi-Speed USB interface guarantees an easy integration without any additional interface board.

Hardware

▶ USB interface (up to 480 Mbit/s with Hi-Speed USB)

▶ CCD versions are also USB 1.1 compatible

▶ lossless image transfer and bus bandwidth via USB bulk transfer method

▶ digital I/O opto-isolated:

2 inputs (trigger) logic / PLC level

2 outputs (strobe) 30 V / 100 mA

▶ connectors:

USB type B USB

Binder 4-pin with lock USB

Sub-D 9-pin male digital I/O

▶ Hardware Real-Time Controller (HRTC) for time critical I/O and acquisition control by defining a sequence of operating steps

▶ CCD sensors with full frame shutter

▶ bus powered < 2.5 W

▶ size without C-mount lens (w x h x l): 38.8 x 38.8 x 58.5 mm

▶ C-mount, CS-mount or optional S-mount

▶ back-focus-adjustment

▶ ADC resolution: 10 bits (transfer 8 bits)

▶ progressive scan

▶ partial scan for faster chart acquisition

▶ flexible binning modes to reduce the resolution and increase the sensitivity of the sensors or to increase the frame rate

▶ horizontal and vertical mirroring, sharpening and Bayer color conversion

▶ automatic gain control (AGC)

▶ automatic exposure control (AEC)

▶ expose and image transfer possible at the same time

▶ all parameters adjustable via bus interface

▶ weight without lens: approx. 120 g

Software

▶ Windows® and Linux® drivers (mvIMPACT Acquire)

▶ DirectShow® driver

▶ comes with free mvIMPACT Base

▶ supported third-party software see website

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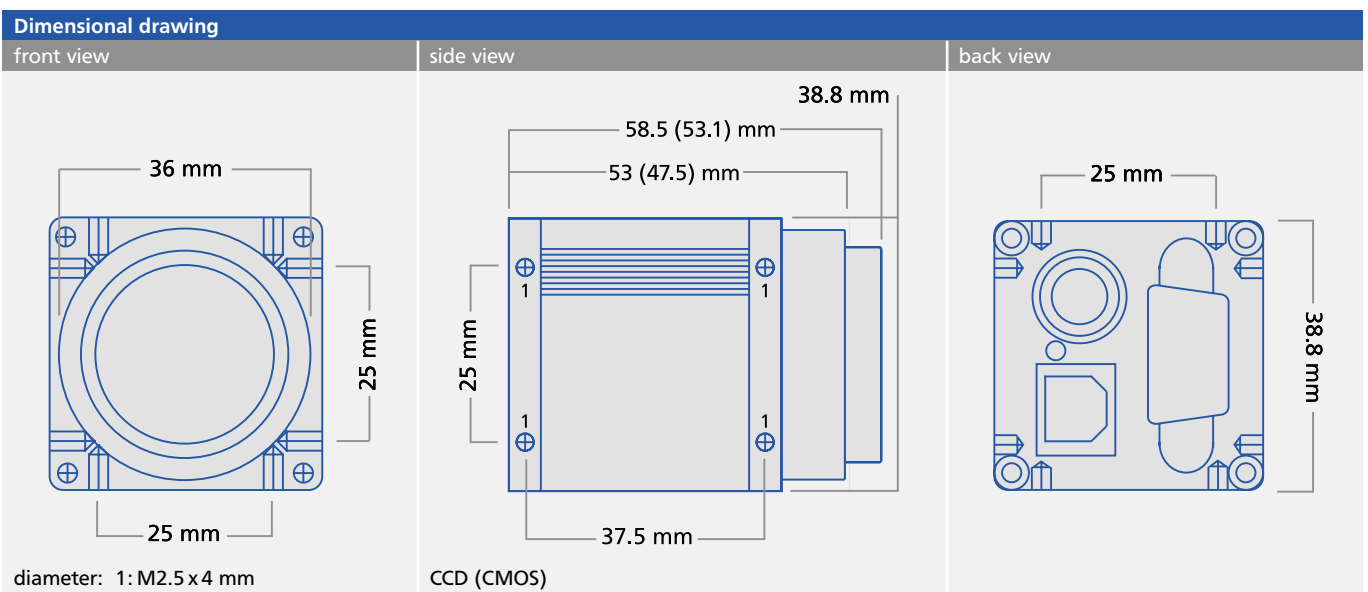
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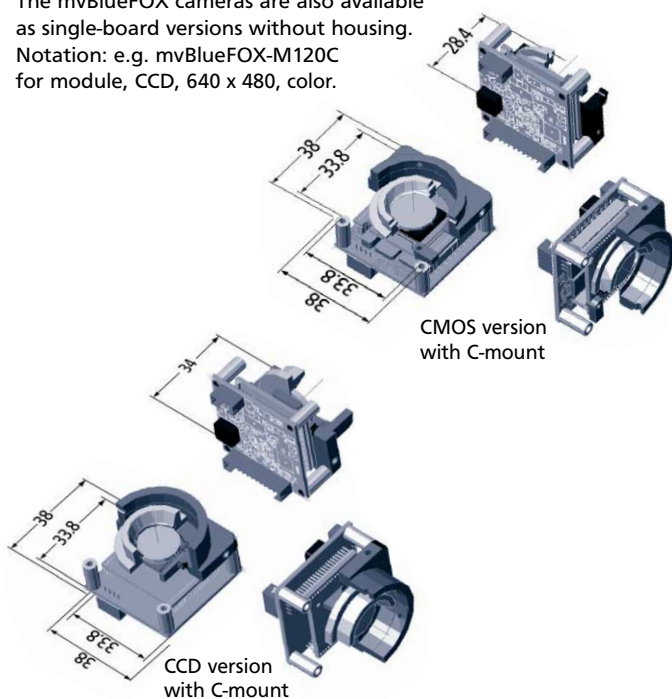
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Available sensors											
Model name	mvBlueFOX-120		mvBlueFOX-120a		mvBlueFOX-121		mvBlueFOX-124		mvBlueFOX-102		
Model variant	G Gray	C Color	G Gray	C Color	G Gray	C Color	G Gray	C Color	G Gray	C Color	
▶ Sensor supplier	Sony		Sony		Sony		Sony		Kodak		
▶ Sensor name	ICX098AL/BL		ICX424AL/AQ		ICX204AL/AQ		ICX274AL/AQ		KAC-9638/48		
▶ Sensor type	CCD		CCD		CCD		CCD		CMOS		
▶ Sensor diagonal in [mm]	4.5		6		6		8.923		8		
▶ Indication of lens category to be used	1/4"		1/3"		1/3"		1/1.8"		1/2"		
▶ Resolution of the sensor's active area (width x height in [pixels])	640 x 480		640 x 480		1024 x 768		1600 x 1200		1280 x 1024		
▶ Pixel size (width x height in [µm])	5.6 x 5.6		7.4 x 7.4		4.65 x 4.65		4.4 x 4.4		6 x 6		
▶ Readout type (CCD only)	Progressive		Progressive		Progressive		Progressive		-		
▶ Transfer type (CCD only)	Full Frame		Full Frame		Full Frame		Full Frame		-		
▶ Shutter type (CMOS only)	-		-		-		-		Rolling		
▶ Overlap capabilities	yes		yes		yes		yes		yes		
▶ Maximum frame rate [Hz]	60		100		39		16		16		
▶ Exposure (step width)	50 µs - 10 s (1 µs)		50 µs - 10 s (1 µs)		50 µs - 10 s (1 µs)		50 µs - 10 s (1 µs)		100 µs - 1 s (50 µs)		
▶ USB type	USB 1.1 / USB 2.0		-		USB 1.1 / USB 2.0		USB 1.1 / USB 2.0		USB 2.0		



mvBlueFOX modules

The mvBlueFOX cameras are also available as single-board versions without housing. Notation: e.g. mvBlueFOX-M120C for module, CCD, 640 x 480, color.



Application areas

- ▶ machine vision
- ▶ robotics
- ▶ surveillance
- ▶ medical imaging
- ▶ microscopy

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