Subminiature USB2 camera

smallest industrial grade camera • lowest power consumption
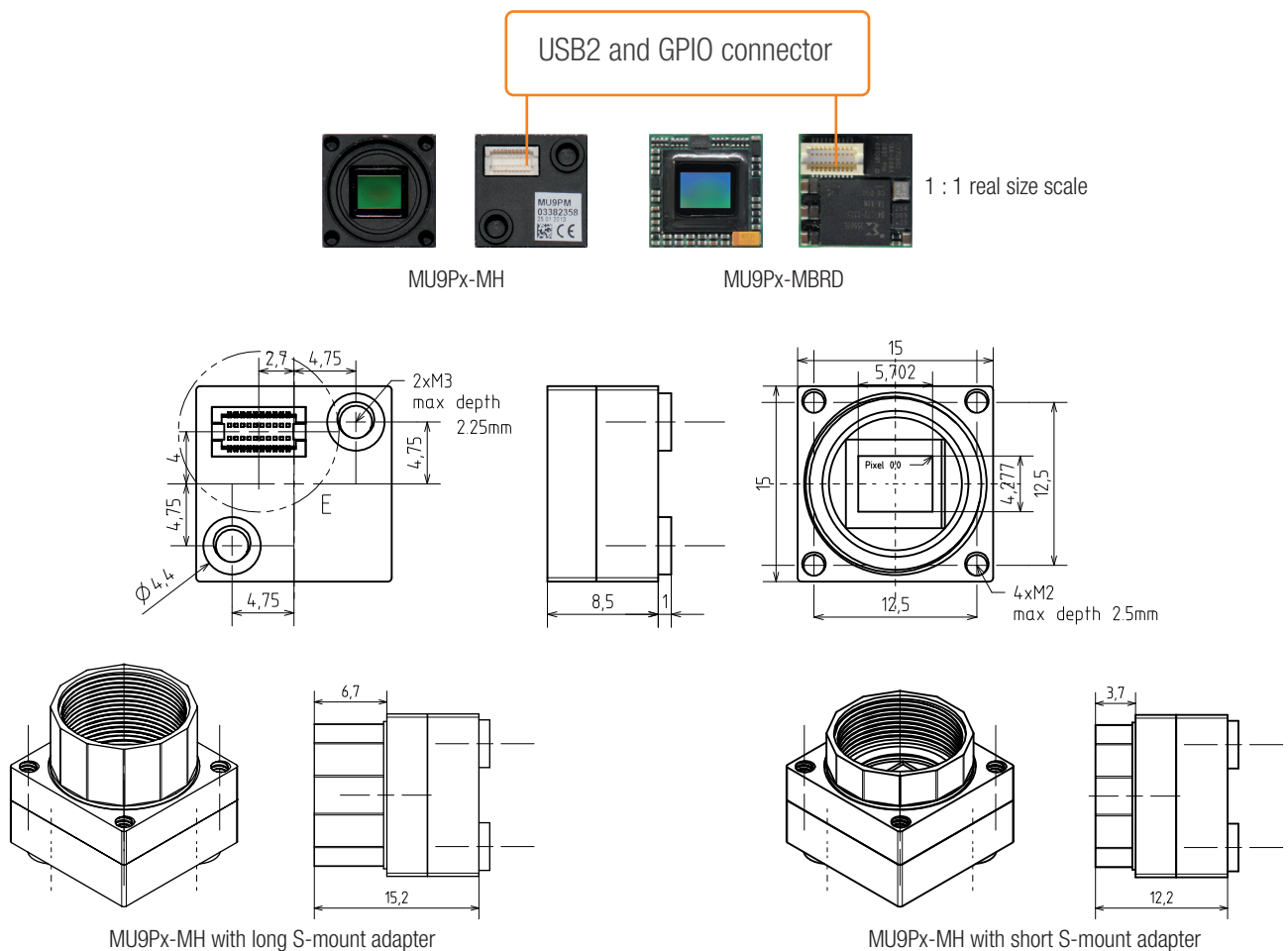

xiMU

board level and housed cameras

xiMU – quick facts

xiMU [ksi-mju: or sai-mju:] is a subminiature USB 2.0, triggerable, fully industrial grade camera family with outstanding features:

- Incredibly small: World smallest USB camera with GenICam/GenTL support.
- Low thermal dissipation
- Single PC board

Sensor Technology	CMOS, rolling shutter with Global Reset Release
Acquisition Modes	Continuous, software trigger, hardware trigger
Partial Image Readout	ROI, Skipping and Binning modes supported
Image data formats	8, 10 or 12 bit RAW pixel data
Color image processing	Host based de-Bayering, sharpening, Gamma, color matrix
Hot/blemish pixels correction	On camera storage of pixel coordinates, host assisted correction
Auto adjustments	Auto white balance, auto gain, auto exposure
Flat field corrections	Host assisted pixel level shading
General Purpose I/O	2x opto-isolated inputs, 2x opto-isolated outputs
Synchronization	Hardware trigger input, software trigger, exposure strobe output, busy output
Housing and lens mount	Standard S-mount (M12). Two lens mount adapters available
Power requirements	Typ. 0.6 W, supplied via USB 2.0 interface
Operating systems	Windows XP, 7 and 8 (x86 and x64), Linux Ubuntu, MacOS 10.8
Software support	xiAPI SDK, adapters and drivers for various image processing packages
USB standard compatible	USB 2.0, Universal Serial Bus Specification Revision 2.0, April 27, 2000

USB2 and GPIO connector

MU9Px-MH

MU9Px-MBRD

1 : 1 real size scale

MU9Px-MH with long S-mount adapter

MU9Px-MH with short S-mount adapter

xiMU – leading vision libraries supported

- Quick integration with third-party software using our easy-to-learn API/SDK and many examples made for AQSENSE SAL3D, Open CV, Aforge.NET, etc.

- All XIMEA cameras are plug-and-play compatible with most of the major image processing libraries on the market, including **MVTec HALCON, National Instruments LabVIEW, MathWorks MATLAB, STEMMER IMAGING Common Vision Blox, Open CV and many others.**

- Support for GenICam/GenTL ensures forward compatibility with emerging image processing libraries, frameworks and packages.

- Just one-stop support of the camera and vision libraries integration.

- Open online community: Share experience, exchange knowledge and solutions at www.ximea.com/community.

Compatible with more than 30 popular machine vision libraries:
Please check website for up-to-date list!

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Sensors and models:

Model		Sensor	Resolution	Pixel size	ADC	DR	optical size	Active area	FPS	max. power consumption
MU9PM-MH [1]	b/w	Aptina MT9P031	2592 x 1944 5MP	2.2 μm	8,10,12 bits	70 dB	1/2.5"	5.7 x 4.3 mm	5.8	0.9 W
MU9PC-MH [1]	color									

Note 1: Please replace „-MH" with „-MBRD" in the model name to address the board level camera

Read out modes:

standard mode	Binning/skipping	pixels	FPS
0	1x1	2592 x 1944	5.8
1	2x2 bin	1296 x 972	17
2	4x4 bin	648 x 486	36
3	2x2 skip	1296 x 972	22
4	4x4 skip	648 x 486	83
5	6x6 skip	430 x 324	163
6	7x7 skip	368 x 376	200
7	7x7 skip/clip	320 x 240	232

Interfaces and connectors:

Description	Value
Optimal ambient temperature operation	+10 to +25 °C
Ambient temperature operation	-10 to +55 °C (non condensing humidity)
Environment	Ingress Protection: IP40
Size, Weight	MU9Px-MH: Height * width * depth : 15 x 15 x 8.5 mm, 3.4 g
	MU9Px-MBRD: Height * width * depth : 14 x 13.2 x 5.5 mm (with connector), 1.2 g
Connector mounted on the PCB	HRS DF12E(3.5)-20DP micro connector with USB 2.0 High-speed and digital I/O

Accessories:

Item-P/N	Description
MU-MINIUSB	Mini-USB Extension Board for MU9Px-MH

Compatibility:

Standard **Windows, Linux & MacOS** operation systems • GenICam / GenTL • Single SDK/API for all XIMEA camera models

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