xiJ

ximea

xiJ
USB3.1 Gen 1
cooled scietific cameras

xiJ USB 3.1 Gen1 cooled scientific cameras

Strong performance in scientific and low-light applications.

Facts

- Built with the latest sCMOS and CCDs from Gpixel & ON Semiconductor
- Resolutions from 4.2 to 29 Mpix
- Fast USB 3.1 Gen1 interface
- 16-bit A/D conversion for CCD sensors
- Up to 18 bits per pixel by combining low and high gain readout for sCMOS
- All sensors are active Peltier TEC cooled
- Sensor cooling down to -10°C depending on model

Features

- Low noise & high dynamic range
- Compact housings with C-mount, M42-mount and custom M58 thread with various mount adapters
- Multiple sensor choices
- Available also with backside illuminated 4.2 Mpix sensors with >90% quantum efficiency
- Long life, sealed sensor chamber
- Multiple GPIO options for synchronization
- Ultra-precision, aluminum alloy, CNC machined, rugged housing

Designed for scientific and low-light applications

Made for results, the xiJ camera line provides super sensitive, linear and accurate data for your precise measurements. The sCMOS sensors from Gpixel provide CCD image quality and performance with CMOS speed. 4.2 to 29 Mpix CCD options provide the quality you expect, combining high resolution and accuracy.
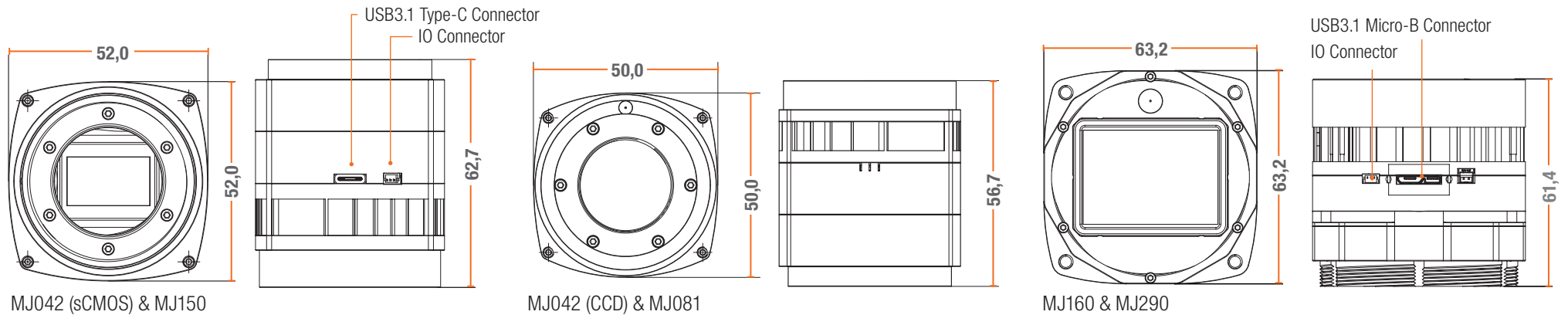
Cool

Photon starved applications will love the simplicity of getting a cooled camera up and running with little fuss. Imaging the very large (astronomy) to the very small (microscopy), the xiJ camera line has you covered.
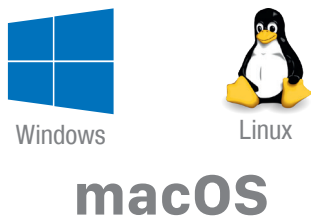
Versatile

The sensors in the xiJ camera line aren't just for scientific imaging. If sharp, high dynamic range images from a low light situation are needed, these cameras fit the bill. Our acclaimed API and available tools will get you up and running in no time.

Cooled USB3.1 Gen1 cameras

USB3.1 Type-C Connector
IO Connector

52,0
52,0
62,7

USB3.1 Micro-B Connector
IO Connector

50,0
50,0
56,7

63,2
63,2
61,4

MJ042 (sCMOS) & MJ150

MJ042 (CCD) & MJ081

MJ160 & MJ290

Supported operating systems

Windows

Linux

macOS

Language support

C

C++

C#

python™

Standards

GEN<i>CAM
TRANSPORT LAYER

USB3
VISION

Supported vision libraries

MATLAB

POWERED BY
NATIONAL INSTRUMENTS
LabVIEW™

HALCON
a product of MVTec

OpenCV

and many more …

Sensors and models

Model		Sensor	Resolution	Pix. size [µm]	ADC [bits]	DR [dB]	FWC [ke-]	QE [%]	Sensor size / diagonal [mm]	Optical size	Fps	Min sensor temp °C [1]
MJ042MC-TS-TC	b/w	OnSemi KAI04070	2048 x 2048 4.2 Mpix	7.4	16	70	45	TBD	15.2 x 15.2 21.4	4/3"	9.9 / 31	-10
MJ042CC-TS-TC	color	OnSemi KAI04070	2048 x 2048 4.2 Mpix	7.4	16	70	45	TBD	15.2 x 15.2 21.4	4/3"	9.9 / 31	-10
MJ042MR-GP-P6	b/w	GPixel GSENSE2020e	2048 x 2048 4.2 Mpix	6.5	2 x 12	87	45	72	13.3 x 13.3 18.8	1.2"	100 STD / 47 HDR	-10
MJ042MR-GP-P6-BSI	b/w	GPixel GSENSE2020BSI	2048 x 2048 4.2 Mpix	6.5	2 x 12	90	54	94	13.3 x 13.3 18.8	1.2"	40	-10
MJ042MR-GP-P11	b/w	GPixel GSENSE400	2048 x 2048 4.1 Mpix	11	2 x 12	96	120	58	22.5 x 22.5 31.8	2.0"	48 STD / 24 HDR	-10
MJ042MR-GP-P11-BSI-TVISB MJ042MR-GP-P11-BSI-UV MJ042MR-GP-P11-BSI-VIS	b/w	GPixel GSENSE400BSI-TVISB GPixel GSENSE400BSI-UV GPixel GSENSE400BSI-VIS	2048 x 2048 4.1 Mpix	11	2 x 12	93	90	95 75 85	22.5 x 22.5 31.8	2.0"	48 STD / 24 HDR	-10
MJ081MC-TS-TC	b/w	OnSemi KAI08052	3296 x 2472 8.1 Mpix	5.5	16	66	25	TBD	18.1 x 13.6 22.3	4/3"	5.3	-10
MJ081CC-TS-TC	color	OnSemi KAI08052	3296 x 2472 8.1 Mpix	5.5	16	66	25	TBD	18.1 x 13.6 22.3	4/3"	5.3	-10
MJ150MR-GP	b/w	GPixel GSENSE5130	5056 x 2968 15 Mpix	4.25	2 x 12	77	18	72	21.5 x 12.6 24.9	APS-C	17	-10
MJ160MC-TS-UB	b/w	OnSemi KAI16070	4864 x 3232 15.7 Mpix	7.4	16	70	69	TBD	36.2 x 24.1 43.5	35 mm	2.7	-10
MJ160CC-TS-UB	color	OnSemi KAI16070	4864 x 3232 15.7 Mpix	7.4	16	70	69	TBD	36.2 x 24.1 43.5	35 mm	2.7	-10
MJ290MC-TS-UB	b/w	OnSemi KAI29052	6576 x 4384 28.8 Mpix	5.5	16	66	68	TBD	36.2 x 24.1 43.5	35 mm	5.3	-10
MJ290CC-TS-UB	color	OnSemi KAI29052	6576 x 4384 28.8 Mpix	5.5	16	66	68	TBD	36.2 x 24.1 43.5	35 mm	5.3	-10

Note

[1] Measurements are valid if additional components are used, such as a power injector. For lower cooling temperatures please inquire with our sales teams.
   10° C is achievable with standard configuration.

Further information
Please visit us at **www.ximea.com** for complete and up-to-date specifications. Get in touch with our teams at **sales@ximea.com.** We will be glad to assist!

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