USB3.1 Gen 1 cooled scientific 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

Supported operating systems

Windows

Linux

macOS

Language support

C

C#

python

Standards

Supported vision libraries

MATLAB

LabVIEW

HALCON

OpenCV

and many more …
## Sensors and models

<table>
<thead>
<tr>
<th>Model</th>
<th>Sensor</th>
<th>Resolution</th>
<th>Pix. size / diagonal [µm]</th>
<th>DR [dB]</th>
<th>FWC [ke-]</th>
<th>QE [%]</th>
<th>Sensor size / diagonal [mm]</th>
<th>Optical size</th>
<th>Fps</th>
<th>Min sensor temp °C 1</th>
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</thead>
<tbody>
<tr>
<td>MJ042MC-TS-TC</td>
<td>b/w OnSemi KA04070</td>
<td>2048 x 2048 4.2 Mpix</td>
<td>7.4</td>
<td>16</td>
<td>70</td>
<td>45</td>
<td>TBD</td>
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<td>9.9</td>
<td>-10</td>
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<td>87</td>
<td>45</td>
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</table>

**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.
2. 10°C is achievable with standard configuration.

### Further information

Please visit us at [www.ximea.com](http://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!