xiSPEC hyperspectral cameras
The smallest USB3 hyperspectral cameras.

Facts
• Cameras with 4, 16, 25, 100 & 150 spectral bands
• 170 fps with USB3 interface, 340 fps with PCIe
• Snapshot and linescan versions
• Smallest and lightest hyperspectral cameras available
• Low power consumption
• Rugged, without moving parts

Features
• Small - fast - flexible
• Snapshot with global shutter
  • 4x4 for 16 bands in the visible 470-630 nm range
  • 5x5 for 25 bands in the NIR 600-975 nm range
• Multi-linescan with global shutter
  • 100 spectral bands 600-975 nm range
  • 150 spectral bands 470-900 nm range
• Snapshot RGB-NIR with global shutter
  • 4 spectral bands 400-900 nm range
• Starter kit available for rapid development
• Flexible and programmable GPIO options
Hyperspectral
A Fabry-Perrot interference filter array on top of a fast CMOS sensor creates the basis for a camera design that combines hyperspectral imaging with high frame rates and a compact form factor. The obtained imagery can be interpreted to determine the chemical composition of materials.

Small & light
Simply the most compact method of retrieving hyperspectral imagery of a subject. Being small and light as well having low power consumption makes the cameras ideal for mobile applications such as UAVs or handheld devices.

Fast
USB3.1 or PCIe interfaces allow extreme data acquisition rates. For either option, the data can be processed on the fly or saved for later analysis.

Housing examples
Standard C/CS-mount with model-specific, customized filter glass
Housed cameras with Micro-B connector
Semi housed cameras with ‘FL’ ribbon cable connector

PCI Express Options
All HSI cameras are compatible with xiFLY configurations and are available with PCIe interfaces

Supported operating systems
Windows
Linux
macOS

Language support

Standards

Supported vision libraries
MATLAB
LabVIEW
HALCON
OpenCV
and many more …
## Sensors and models

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MQ022HG-IM-LS100-NIR</td>
<td>IMEC CMV2K-LS100-600-1000</td>
<td>2048 x 1088 2.2 Mpix</td>
<td>5.5</td>
<td>10</td>
<td>11.3 x 6.0 12.8</td>
<td>1/2.5</td>
<td>170</td>
<td>1.5</td>
<td>100</td>
<td>600-975</td>
</tr>
<tr>
<td>MQ022HG-IM-LS150-VISNIR</td>
<td>IMEC CMV2K-LS150-470-900</td>
<td>2048 x 1088 2.2 Mpix</td>
<td>5.5</td>
<td>10</td>
<td>11.3 x 6.0 12.8</td>
<td>1/2.5</td>
<td>170</td>
<td>1.5</td>
<td>150</td>
<td>470-900</td>
</tr>
<tr>
<td>MQ022HG-IM-SM4X4-MS</td>
<td>IMEC CMV2K-SSM4X4-470-620</td>
<td>2048 x 1088 2.2 Mpix</td>
<td>5.5</td>
<td>10</td>
<td>11.3 x 6.0 12.8</td>
<td>1/2.5</td>
<td>170</td>
<td>1.5</td>
<td>16</td>
<td>470-630</td>
</tr>
<tr>
<td>MQ022HG-IM-SM5X5-NIR</td>
<td>IMEC CMV2K-SSM5X5-600-1000</td>
<td>2048 x 1088 2.2 Mpix</td>
<td>5.5</td>
<td>10</td>
<td>11.3 x 6.0 12.8</td>
<td>1/2.5</td>
<td>170</td>
<td>1.5</td>
<td>25</td>
<td>600-975</td>
</tr>
<tr>
<td>MQ022HG-IM-SM2X2-RGBNIR</td>
<td>IMEC CMV2K-SSM2X2-RGBNIR</td>
<td>2048 x 1088 2.2 Mpix</td>
<td>5.5</td>
<td>10</td>
<td>11.3 x 6.0 12.8</td>
<td>1/2.5</td>
<td>170</td>
<td>1.5</td>
<td>4</td>
<td>400-900</td>
</tr>
</tbody>
</table>

Notes

- Full resolution, RAW8 format

---

**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!