



ximea



# xiSPEC

Compact hyperspectral cameras  
with USB3 and PCIe interfaces



# 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

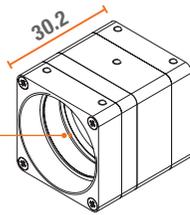
Simply the most compact method of retrieving hyperspectral imagery of a subject. Being small and light as well having low power consumption makes the cameras ideal for mobile applications such as UAVs or handheld devices.

# Fast

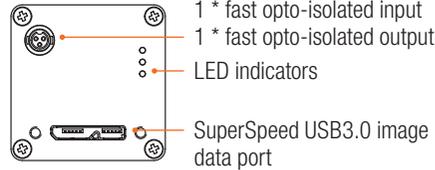
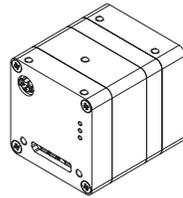
USB3.1 or PCIe interfaces allow extreme data acquisition rates. For either option, the data can be processed on the fly or saved for later analysis.

## Housing examples

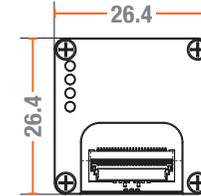
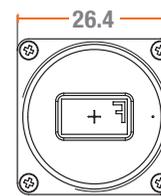
Standard C/CS-mount with model-specific, customized filter glass



Housed cameras with Micro-B connector

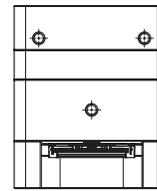
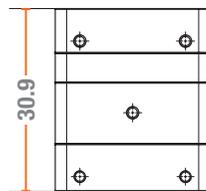
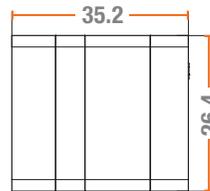


Semi housed cameras with 'FL' ribbon cable connector



## PCI Express Options

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



- High speed interface with compact ribbon cable connection
- Up to 340 fps
- Interface is ideal for embedded/mobile and NVIDIA Jetson installation
- Inquire with your representative for availability

## Supported operating systems



macOS

## Language support



## Standards



## Supported vision libraries



and many more ...

## Sensors and models

Model	Sensor	Resolution	Pix. size [µm]	ADC [bits]	Sensor size / diagonal [mm]	Optical size	Fps <sup>1</sup>	Power typ. [W]	Bands	Spectral range
MQ022HG-IM-LS100-NIR	IMEC CMV2K-LS100-600-1000	2048 x 1088 2.2 Mpix	5.5	10	11.3 x 6.0 12.8	2/3"	170	1.5	100	600-975
MQ022HG-IM-LS150-VISNIR	IMEC CMV2K-LS150-470-900	2048 x 1088 2.2 Mpix	5.5	10	11.3 x 6.0 12.8	2/3"	170	1.5	150	470-900
MQ022HG-IM-SM4X4-VIS	IMEC CMV2K-SSM4X4-470-620	2048 x 1088 2.2 Mpix	5.5	10	11.3 x 6.0 12.8	2/3"	170	1.5	16	470-630
MQ022HG-IM-SM5X5-NIR	IMEC CMV2K-SSM5X5-600-1000	2048 x 1088 2.2 Mpix	5.5	10	11.3 x 6.0 12.8	2/3"	170	1.5	25	600-975
MQ022HG-IM-SM2X2-RGBNIR	IMEC CMV2K-SSM2X2-RGBNIR	2048 x 1088 2.2 Mpix	5.5	10	11.3 x 6.0 12.8	2/3"	170	1.5	4	400-900

### Notes

<sup>1</sup> Full resolution. RAW8 format

## Sales offices

### Worldwide

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## 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](mailto:sales@ximea.com). We will be glad to assist!



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