



ximea



xiSPEC

Compact hyperspectral cameras
with USB3 and PCIe interfaces



xiSPEC hyperspectral cameras

The smallest USB3 and PCIe hyperspectral cameras.

Facts

- Cameras with 16 up to 150 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 red and NIR range 600-850nm
 - 4x4 for 16 bands in the visible 470-630 nm range
 - 5x5 for 25 bands in the NIR 665-975 nm range
- Multi-linescan with global shutter
 - 150 spectral bands 470-900 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

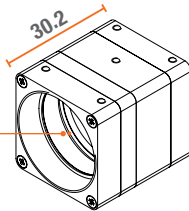
Simply the most compact method of retrieving hyperspectral imagery of a subject. Being small and light as well having low power consumption makes the cameras ideal for mobile applications such as UAVs or handheld devices.

Fast

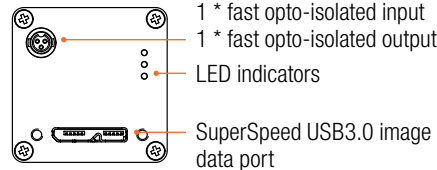
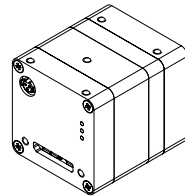
USB3.1 or PCIe interfaces allow extreme data acquisition rates. For either option, the data can be processed on the fly or saved for later analysis.

Housing examples

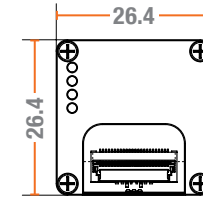
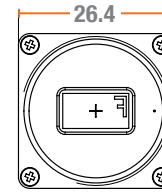
Standard C/CS-mount with model-specific, customized filter glass



Housed cameras with Micro-B connector

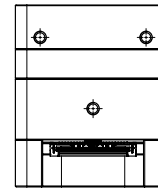
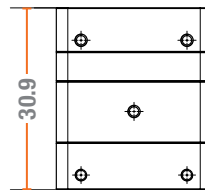
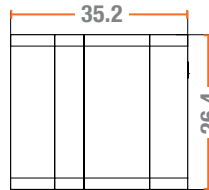


Semi housed cameras with 'FL' ribbon cable connector



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



Windows



Linux

macOS

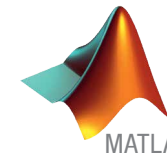
Language support



Standards



Supported vision libraries



MATLAB



and many more ...

Sensors and models

Model	Sensor	Resolution	Pix. size [µm]	ADC [bits]	Sensor size / diagonal [mm]	Optical size	Fps ¹	Power typ. [W]	Bands	Spectral range
MQ022HG-IM-LS150-VISNIR	IMEC CMV2K-LS150-470-900	2048 x 1088 2.2 Mpix	5.5	10	11.3 x 6.0 12.7	2/3"	170	1.6	150	470-900
MQ022HG-IM-SM4X4-REDNIR	IMEC CMV2K-SSM4X4-600-850	2048 x 1088 2.2 Mpix	5.5	10	11.3 x 6.0 12.7	2/3"	170	1.6	16	600-850
MQ022HG-IM-SM4X4-VIS	IMEC CMV2K-SSM4X4-470-620	2048 x 1088 2.2 Mpix	5.5	10	11.3 x 6.0 12.7	2/3"	170	1.6	16	470-630
MQ022HG-IM-SM5X5-NIR	IMEC CMV2K-SSM5X5-665-975	2048 x 1088 2.2 Mpix	5.5	10	11.3 x 6.0 12.7	2/3"	170	1.6	25	665-975

Notes

¹ Full resolution. RAW8 format

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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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