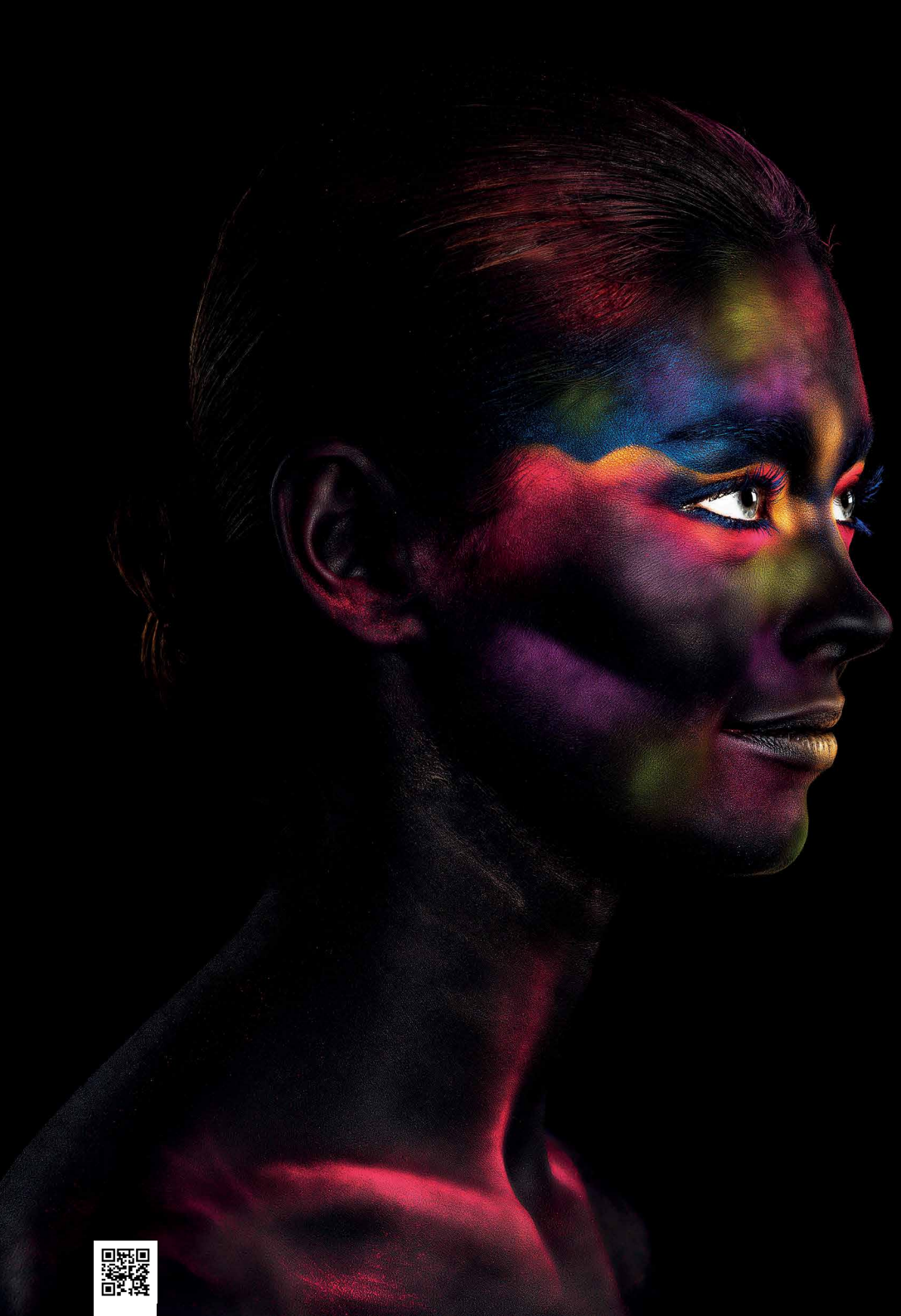
ximea



xiSPEC

Compact hyperspectral cameras
with USB3 and PCIe interfaces

xiSPEC hyperspectral cameras

The smallest USB3 and PCIe hyperspectral cameras.

Facts

- Cameras with 10 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
- Each camera is spectrally calibrated

Features

- Small - fast - flexible
- Snapshot with global shutter
  - 4x4 with 15 spectral bands in the red and NIR 600-860 nm range
  - 4x4 with 10 spectral bands in the visible 480-625 nm range
  - 5x5 with 24 spectral bands in the NIR 665-960 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

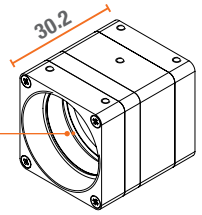
Simply the most compact method of retrieving hyperspectral imagery of a subject. Being small and light as well as having low power consumption makes the cameras ideal for mobile applications such as UAVs or handheld devices.

Fast

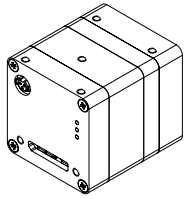
USB3.1 or PCIe interfaces allow extreme data acquisition rates. For either option, the data can be processed on the fly or saved for later analysis.

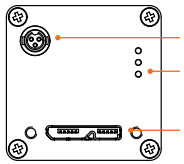
Housing examples

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



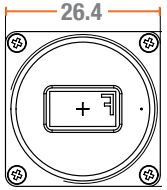
Housed cameras with Micro-B connector

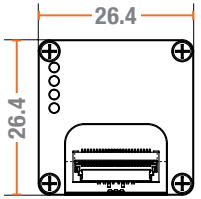




1 * fast opto-isolated input
1 * fast opto-isolated output
LED indicators
SuperSpeed USB3.0 image data port

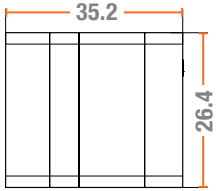
Semi housed cameras with 'FL' ribbon cable connector

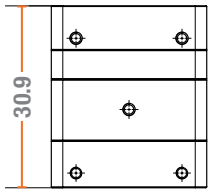


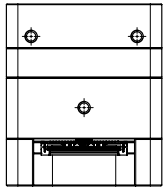


PCI Express Options

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

C C++ C# python™

Standards

GEN<i>CAM TRANSPORT LAYER

USB3 VISION

PCI EXPRESS

Supported vision libraries

MATLAB

LabVIEW

HALCON a product of MVTec

OpenCV

and many more …

Sensors and models

Model (USB3 microB)	Sensor	Resolution	Pix. size [µm]	ADC [bits]	Sensor size / diagonal [mm]	Optical size	Fps [1]	Power typ.[W]	Spectral Bands	Spectral Range
MQ022HG-IM-LS150-VN2	IMEC CMV2K LS150	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-RN2	IMEC CMV2K-SSM4x4-RNIR	2048 x 1088 2.2 Mpix	5.5	10	11.3 x 6.0 12.7	2/3"	170	1.6	15	600-860
MQ022HG-IM-SM4X4-VIS2	IMEC CMV2K-SSM4x4-VIS	2048 x 1088 2.2 Mpix	5.5	10	11.3 x 6.0 12.7	2/3"	170	1.6	10	480-625
MQ022HG-IM-SM5X5-NIR2	IMEC CMV2K-SSM5x5-NIR	2048 x 1088 2.2 Mpix	5.5	10	11.3 x 6.0 12.7	2/3"	170	1.6	24	665-960

Notes
[1] Full resolution. RAW8 format

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!

ximea

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