

# xiQ

## USB3 Vision Cameras

easy on you  
easy on your application  
easy on your customer  
easy on your budget



ximea

USB<sup>3</sup>  
VISION

# xiQ USB3 Vision cameras

## Highlights

- Size:** The smallest and the lightest USB3 Vision camera  
**Power:** The lowest power consumption 1 to 1.8 Watts  
**Speed:** Extremely low latency: all data are being transferred directly to the RAM of the PC  
**Sensors:** Most recent generation of CMOS sensors with Global shutter.  
**Cable length:** Cable length up to 8m without active repeaters, 100 meters with active repeater  
**Others:** Sealed body, easily user convertible between C-Mount, CS-Mount and S-mount  
Filter glass easily removable or replaceable by other 1" filters  
Modular bracket system for industry most versatile mounting options

## Compatibility

**Software:** Single SDK/API for all camera models. **Windows, Linux and OS X** drivers available. Support for over 30 libraries:

- HALCON ● LabVIEW ● MATLAB ● OpenCV ●
- Matrox Imaging Library ● VisionPro ● Common Vision Blox ●
- 3DExpress ● ActiveGen<i> ● Adaptive Vision Studio ● Aforge.NET ● AQSENSE SAL3D ● Astroart ● Digital Optics V++ ●
- EyeVision ● ImageWarp ● Integrating Vision Toolkit ● Pinta ● Keyetech ● libdmtx ● μManager ● NeuroCheck ●
- SentiSight ● StreamPix ● RoboRealm ● Modular-X ● ThirdSight ● Scorpion ● VisionLab ● Voyant Vision ●

USB3 Vision™ Standard compliant  
USB 3.0 SuperSpeed compliant  
Downward compatible with USB2.0

## Software, tools & support

Efficient on-site customer support framework  
Mainstream interface - USB3.0 interface available on each PC  
Extensive diagnostics tools for installation and performance troubleshooting

## Models table

B/W sensor models	Color sensor models	Extended infrared sensors	Resolution	Frames/sec
MQ003MG-CM	MQ003CG-CM		648 x 488	600
MQ013MG-E2	MQ013CG-E2	MQ013RG-E2	1280 x 1024	60
MQ013MG-ON	MQ013CG-ON		1280 x 1024	150
MQ020MG-E2	MQ020CG-E2		1600 x 1200	60
MQ022MG-CM	MQ022CG-CM	MQ022RG-CM	2048 x 1088	180
MQ042MG-CM	MQ042CG-CM	MQ042RG-CM	2048 x 2048	90

Please visit [ximea.com](http://ximea.com) for complete product information. E-mail [sales@ximea.com](mailto:sales@ximea.com) for price and availability.

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# USB3 VISION

**EASY** | on you  
on your budget  
on your application



**USB<sup>TM</sup>**  
VISION

**xiQ**

USB3 Vision cameras for the widest range of machine vision applications

ximea

USB3 Vision Cameras

# EASY

easy on you  
easy on your application  
easy on your customer  
easy on your budget



**USB**<sup>TM</sup>  
VISION

# xiQ

USB3 Vision cameras for the widest range of machine vision applications

ximea

The brand NEW G model

**CURRERA**

# THE FIRST VISION SYSTEM:

won't break your budget  
has Dual Core CPU + GPU  
is USB3 Vision compliant  
has 4 USB3 camera heads



ximea

**CURRERA**  
**G**

**USB<sup>TM</sup>**  
**VISION**



# CURRERA-G All-in-one intelligent PC camera with up to 5 image sensors: 1 internal plus 4 external

## Highlights

- Dual Core AMD Fusion processor • Combination of the power of x86 CPU and GPU (integrated on a single die)
- Heterogeneous platform: dual core x86/x64 1.6Ghz, 80 GPGPU cores running at 500 MHz, 90Gflops combined performance
- 2GB DDR3 / LVDDR3-1066 soldered on-board (2 Gbyte of 64-bit DDR3-1333 memory), up to 32 GB SSD
- GPGPU programmable via OpenCL • Full support for zero-copy transfers paradigm
- Wide variety of Global Shutter CMOS sensors ranging from VGA up to 4MPix with framerates up to 600fps and HDR models
- 1x LED illuminator controller, with isolated input and up to 1A,80V(20W) output + analog/PWM control through PLC
- 1x Embedded fast micro PLC • 4x USB3.0 ports on two independent host controllers • 1x USB2.0
- 1x HDMI Port with 1920x1200 resolution • 4x Isolated Inputs • 4x Isolated Outputs
- 1x microSD card slot for additional storage • 1x Gigabit Ethernet with PoE IEEE 802.3at Type 2 support

## Compatibility

Standard **Windows & Linux** operating systems • USB3 Vision • GenICam/GenTL • Single SDK/API for all XIMEA camera models  
Compatible with over 30 image processing libraries:

- HALCON • LabVIEW • MATLAB • OpenCV •
- Matrox Imaging Library • VisionPro • Common Vision Blox •
- 3DExpress • ActiveGen<i> • Adaptive Vision Studio • Aforge.NET • AQSENSE SAL3D • Astroart • Digital Optics V++ •
- EyeVision • ImageWarp • Integrating Vision Toolkit • Pinta • Keyetech • libdmtx • µManager • NeuroCheck •
- SentiSight • StreamPix • RoboRealm • Modular-X • ThirdSight • Scorpion • VisionLab • Voyant Vision •

## Software, tools & support

Efficient on-site customer support framework  
Sample applications and projects  
Extensive diagnostics tools for installation and performance troubleshooting

## Models table

B/W sensors	Color sensors	Extended infrared sensors	Sensor resolution	Frames/sec
CG003MG-CM	CG003CG-CM		648 x 488	600
CG013MG-E2	CG013CG-E2	CG013RG-E2	1280 x 1024	60
CG013MG-ON	CG013CG-ON		1280 x 1024	150
CG020MG-E2	CG020CG-E2		1600 x 1200	60
CG022MG-CM	CG022CG-CM	CG022RG-CM	2048 x 1088	180
CG042MG-CM	CG042CG-CM	CG042RG-CM	2048 x 2048	90

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Advance information, please contact sales for availability information.

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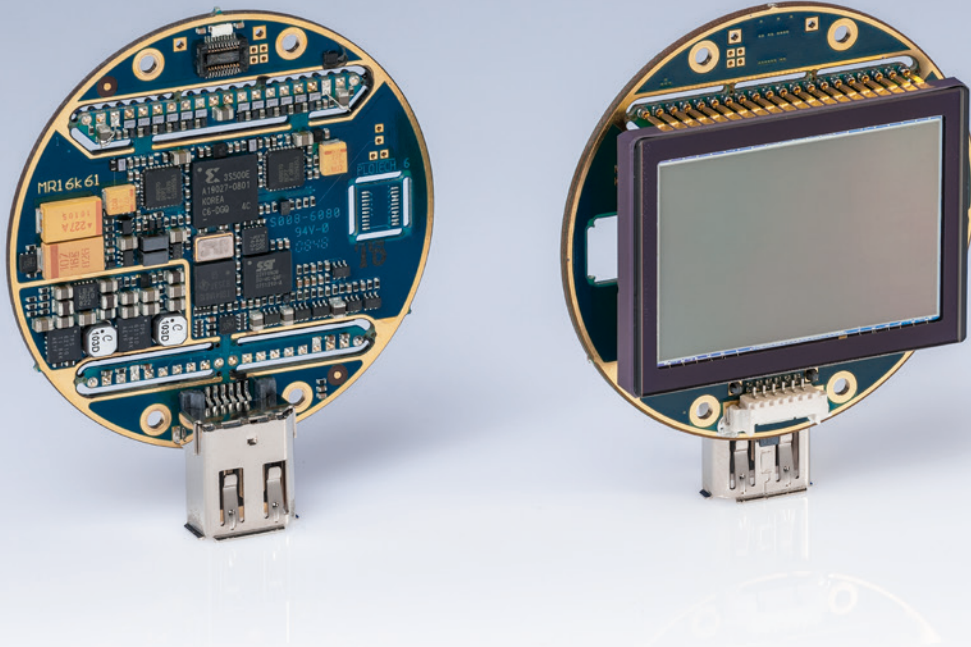
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**OEM cameras  
& Custom  
engineering**

**Agile  
Reliable  
Competitive**



**OEM Cameras & Custom Engineering**

When mainstream is not enough.

# OEM & Custom engineering

When mainstream is not enough.

## Key Ingredients

- Highly motivated, able and flexible engineering team.
- Efficient design methodologies and agile development processes.
- Zero defect paradigm Quality management.
- 20+ years of custom engineering experiences, working for major fortune 500 customers.
- Assortment of state of the art CAE and CAD tools on regular maintenance.
- Leading edge measuring and test instruments.
- Ultra-High Vacuum equipment and technologies.
- High speed SMT assembly line and Vapor reflow soldering line.
- Ultra precision machining on our new high-speed Swiss and Japanese CNC machining centers.
- End-to-end surface finishing, coating and ultra-fine laser marking
- Multi-platform software development, maintenance and support
- FPGA and firmware development
- Design for Manufacturability (DFM) and Design for Test (DFT)

## Technologies

- Proprietary technology for CCD sensor handling provides low noise readout and reduced power consumption
- Variety of communication technologies: USB 2.0, USB 3.0, FireWire IEEE1394, Gigabit Ethernet
- Low noise signal conditioning and acquisition
- Highly efficient power converters
- Hardware, firmware and software co-development

## Guaranteed success

- Multiple completed projects with hundreds of thousand installations.
- Starting from scratch or any existing XIMEA product as a seed all the way up to the full custom development and manufacturing.
- Complete PLM, design data maintenance and tracking of component obsolescence.

## Support

- Unique on-site customer support framework
- Sample applications and projects
- Extensive set of application troubleshooting tools
- Hand-out engineering training
- Integration support and consultations

Please contact [sales@ximea.com](mailto:sales@ximea.com) for more information on your specific project.

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# Scientific & high-end cameras

extreme performance  
excellent value  
exceeds expectations



# Engineered for Extreme Performance

## Highlights

- Ultra-low readout noise
- Crystal clear 14 bit/pixel images in all modes
- Partial readout and several binning modes with enhanced sensitivity and higher frame rates
- Compact mechanical housings and single board designs facilitate OEM integrations
- External triggering

## Compatibility

- Software Windows and Linux
- Compatible with over 30 image processing libraries
- GenICam/GenTL
- Single SDK/API for all XIMEA camera models
- Interfaces FireWire IEEE1394 and USB 3.0 (introduction in 2013)

## Support

- Unique on-site customer support framework
- Sample applications and projects
- Extensive set of installation troubleshooting tools

## Models

### xiRAY 11 Mpix and 16 Mpix fiber optics coupled x-Ray cameras

Model	Sensor	Resolution	Fiber optic plate
xiRAY11	KAI-11002	4008 x 2672	MH110XC-KK
xiRAY16	KAI-16000	4872 x 3248	MH160XC-KK

### xiC 11 Mpix and 16 Mpix Peltier cooled cameras

Model	Sensor	Resolution	B/W cooled	Color cooled
xiC11	KAI-11002	4008 x 2672	MH110MC-KK	MH110CC-KK
xiC16	KAI-16000	4872 x 3248	MH160MC-KK	MH160CC-KK

### MR 1.4 to 16 Mpix, optional Peltier cooling

Model	Sensor	Resolution	B/W	B/W cooled	Color	Color cooled
MR285	ICX285	1376 x 1032	MR285MU-BH	MR285MC-BH	MR285CU-BH	MR285CC-BH
MR4021	KAI-4021	2048 x 2048	MR4021MU-BH	MR4021MC-BH	MR4021CU-BH	MR4021CC-BH
MR4022	KAI-04022	2048 x 2048	MR4022MU-BH	MR4022MC-BH	MR4022CU-BH	MR4022CC-BH
MR11002	KAI-11002	4008 x 2672	MR11002MU-BH	MR11002MC-BH	MR11002CU-BH	MR11002CC-BH
MR16000	KAI-16000	4872 x 3248	MR16000MU-BH	MR16000MC-BH	MR16000CU-BH	MR16000CC-BH

### MD 2.0 to 29 Mpix, Peltier cooling, USB 3.0 interface (Introduction in 2013)

New generation of cameras based on Sony 4 taps sensors: ICX674, ICX694, ICX814, Kodak 7.4µm family: KAI-02170, KAI-04070, KAI-16070, and 5.0µm family: KAI-02050, KAI-04050, KAI-08050, KAI-29050

Please request availability and pricing information at [sales@ximea.com](mailto:sales@ximea.com)

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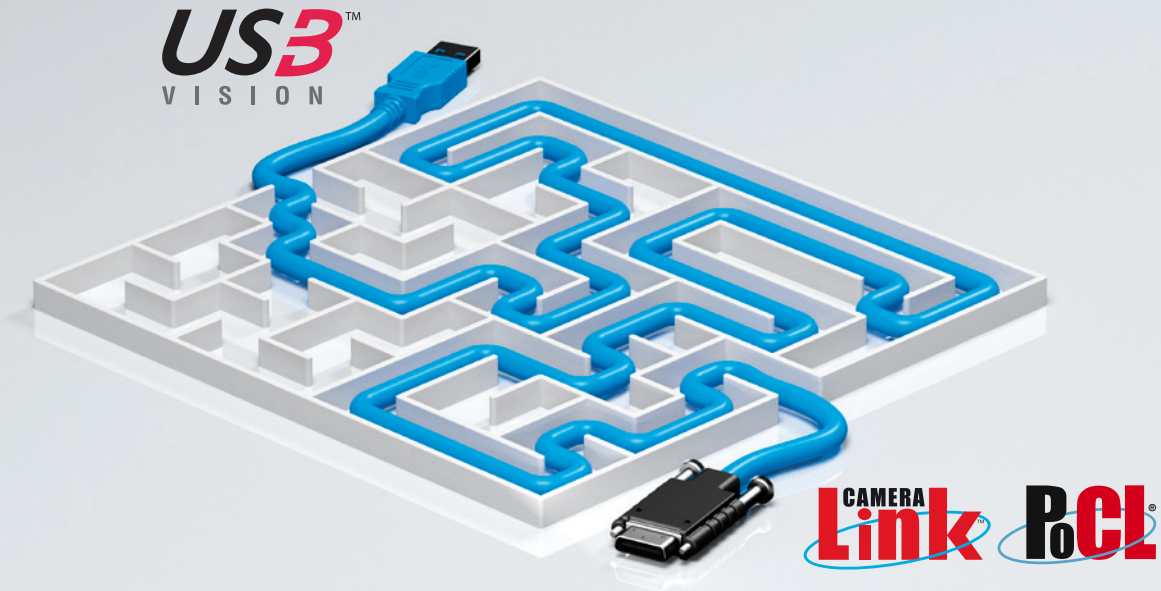
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# HOW?

to connect Camera Link with USB3 Vision?  
to eliminate Camera Link framegrabber?  
to stay smart and competitive?



# EASY with xiLINK



USB3 Vision to Camera Link intelligent cable

**USB3**<sup>TM</sup>  
VISION

ximea

# Hook Camera Link camera to USB3 Vision host

## Highlights

- All-in-one solution
- Integrated Frame Grabber
- SuperSpeed USB 3.0 / USB3 Vision interface
- Compliant with Camera Link 1.2 Specification (Base Configuration)
- Compliant with Power over Camera Link (PoCL) Specification (12V/4W with Safe Power)
- Power PoCL camera directly from USB 3.0 and USB 2.0 ports
- User configurable Opto-isolated Digital Input (trigger), compliant with IEC 61131-2 (5V/15V)
- User configurable Opto-isolated Digital Output (strobe), compliant with IEC 61131-2 (30V/100mA, short circuit proof)
- LED indication (USB enumeration/PoCL/Link)
- Ambient temperature range 0°C to 60°C
- Mechanical dimensions TBD
- Weight TBD

## Compatibility

### Software

Single SDK/API for all camera models  
Windows and Linux drivers available  
Support for over 30 libraries

### Hardware

Extended Cable length 5m  
Single 26pin Mini-Camera Link style (SDR) Male interface with thumbscrews  
Pixel clock from 20MHz to 85MHz  
Maximum data throughput 2.04Gbit/s (24bit data)  
Intelligent active Y-shaped cable

### Interfaces

USB3 Vision™ Standard compliant  
USB 3.0 SuperSpeed compliant  
Camera Link 1.2 Specification (Base Configuration) Compliant  
Power over Camera Link (PoCL) Compliant

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# THE SMALLEST

fits your budget  
fits your space  
fits your application



**xiMU**

Subminiature camera

•ximea



# Fits constrained budgets and applications

## Highlights

**Sensor:** Aptina 5Mpix MT9P031, 2592 x 1944 pixels, rolling shutter with Global Reset Release  
Active image Size 5.7 x 4.3 mm  
12 bit/pixel and 5.8 frames/sec in full resolution  
Multiple binning and skipping modes with higher frame rates  
Excellent image quality and low light sensitivity

## Compatibility

**Windows & Linux** • GenICam/GenTL • Single SDK/API for all XIMEA camera models  
Compatible with over 30 image processing libraries:

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- Matrox Imaging Library • VisionPro • Common Vision Blox •
- 3DExpress • ActiveGen<i></i> • Adaptive Vision Studio • Aforge.NET • AQSENSE SAL3D • Astroart • Digital Optics V++ •
- EyeVision • ImageWarp • Integrating Vision Toolkit • Pinta • Keyetech • libdmtx • µManager • NeuroCheck •
- SentiSight • StreamPix • RoboRealm • Modular-X • ThirdSight • Scorpion • VisionLab • Voyant Vision •

**Hardware:** Different adapters for M12 (S mount) lenses

**Interface:** USB 2.0 High-speed

## Software, tools & support

Unique on-site customer support framework  
Sample applications and projects  
Extensive diagnostics tools for installation and performance troubleshooting

## Models

Housing	B/W sensors	Color sensors
Mini 15x15x10.5mm	MU9PM-MH	MU9PC-MH
Board level 14x13.2 mm	MU9PM-MBRD	MU9PC-MBRD

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