xiB-64

High-performance cameras
with PCIe X8G3 interface

·XIMEA

xiB-64 cameras with 64 Gbps PCIe interface

Fastest streaming cameras with lowest latency

Facts

- High-speed interface with a bandwidth of 64 Gbps
- Latest CMOS high-performance sensors AMS CMV12000, Luxima LUX13HS, LUX19HS, LUX160, and Gpixel GMAX0505, GMAX3265
- Resolutions from 1 to 65 Mpix
- Frame rates of 3,600+ fps
- Fast PCIe Generation 3, 8 lane interface
- Over 7 GB/s stream to storage with selected PC & SSD configurations
- Fiber-optic up to 100 m and copper connectivity
- Active EF-mount with support for motorized aperture and focus
- C-mount option for smaller sensors
- Compact housing 60 x 70 x 40 mm

Features

- No frame grabber required, DMA transfer, no CPU load
- Direct GPU transfer with selected NVIDIA boards under Linux
- Data transmissions with near to zero latency
- Ideal for applications that require real-time data transmission
- No constraints on recording time by camera memory
- Flexible GPIO with optoisolated and TTL options
- Versatile cooling options
- Industry standard iPass connector
- Rugged and lightweight, aluminum alloy CNC machined housing

Super-high frame rates

Modern CMOS and sCMOS sensors are getting faster and faster, outstripping the capability of most interfaces to keep up. Enter PCIe: The xiB-64 cameras use PCIe Generation 3 with 8 lanes for a mind-boggling 64 Gbps! Enough to transmit 1 Mpix resolution uncompressed with more than 3,500 fps or equivalent to over 18 USB3 real world data streams.
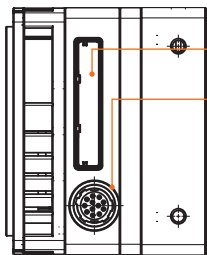
Next generation of high-speed imaging

xiB-64 cameras do not suffer memory limitations in the same manner as traditional high-speed cameras, whose memory is internal to the camera. The camera is merely an endpoint in the PCIe architecture of the host computer, which has virtually no memory limitations. Data arrival is nearly instantaneous and available to the CPU/GPU for processing or storage with little overhead.
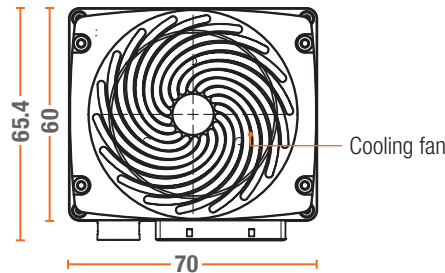
Stretching the distance

The use of optical fiber cables allows distances between cameras and host computers up to 100 m without performance penalty and even 300 m with reductions in frame rate. Put your camera where the action is: monitor and record from a distance.
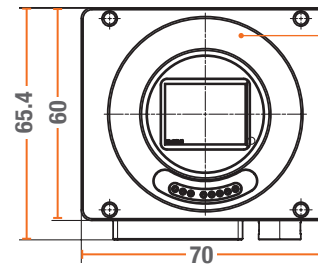
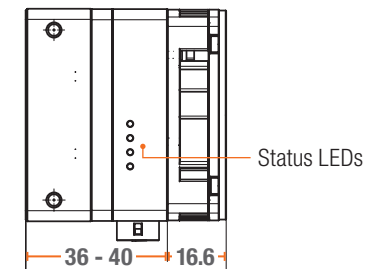**xiB-64 - PCIe X8G3 housing**

- iPass external PCIe x8 connector
- 12 pin Hirose connector for AUX power and GPIOs:
  - 2 * opto-isolated inputs
  - 2 * opto-isolated outputs
  - 4 * fast non-isolated bidirectional IOs

Cooling fan

- 4 * M4 mounting threads for custom lens mounts
- Extendable with active Canon EF-mount adapter or C-mount adapter

Status LEDs

65.4 60 70

65.4 60 70

36 - 40 16.6

Supported operating systems

Windows   Linux

macOS

Language support

C   C++   C#

python ™

Standards

GEN <i> CAM
TRANSPORT LAYER

PCI EXPRESS®

Supported vision libraries

MATLAB

POWERED BY
NATIONAL INSTRUMENTS
LabVIEW ™

HALCON
a product of MVTec

OpenCV

and many more …

Sensors and models

Model		Sensor	Resolution	Pix. size [μm]	ADC [bits]	DR [dB]	FWC [ke-]	QE [%]	Sensor size Diagonal [mm]	Optical size	Fps
CB013MG-LX-X8G3	b/w	LUXIMA LUX13HS	1280 x 864 1.1 Mpix	13.7	10	60	20	45	17.5 x 11.8 21.1	4/3"	3675 [1]
CB013CG-LX-X8G3	color	LUXIMA LUX13HS	1280 x 864 1.1 Mpix	13.7	10	60	20	45	17.5 x 11.8 21.1	4/3"	3675 [1]
CB019MG-LX-X8G3	b/w	LUXIMA LUX19HS	1920 x 1080 2 Mpix	10	10	60	15	45	19.2 x 10.8 22	4/3"	2263 [1]
CB019CG-LX-X8G3	color	LUXIMA LUX19HS	1920 x 1080 2 Mpix	10	10	60	15	45	19.2 x 10.8 22	4/3"	2263 [1]
CB120MG-CM-X8G3	b/w	CMOSIS CMV12000	4096 x 3072 12.5 Mpix	5.5	8, 10, 12	60	13.5	46	22.5 x 16.9 28.1	APS-C	330 / 300 / 132 [2]
CB120RG-CM-X8G3	b/w NIR	CMOSIS CMV12000	4096 x 3072 12.5 Mpix	5.5	8, 10, 12	60	13.5	50	22.5 x 16.9 28.1	APS-C	330 / 300 / 132 [2]
CB120CG-CM-X8G3	color	CMOSIS CMV12000	4096 x 3072 12.5 Mpix	5.5	8, 10, 12	60	13.5	41	22.5 x 16.9 28.1	APS-C	330 / 300 / 132 [2]
CB160MG-LX-X8G3	b/w	LUXIMA LUX160	4704 x 3424 16.1 Mpix	3.9	10	60	10	TBD	18.3 x 13.3 22.6	4/3"	311 [1]
CB160CG-LX-X8G3	color	LUXIMA LUX160	4704 x 3424 16.1 Mpix	3.9	10	60	10	TBD	18.3 x 13.3 22.6	4/3"	311 [1]
CB262MG-GP-X8G3	b/w	GPixel GMAX0505	5120 x 5120 26.2 Mpix	2.5	10, 12	70	6.5	TBD	12.8 x 12.8 18.1	1.2"	150 / 40 [3]
CB262CG-GP-X8G3	color	GPixel GMAX0505	5120 x 5120 26.2 Mpix	2.5	10, 12	70	6.5	TBD	12.8 x 12.8 18.1	1.2"	150 / 40 [3]
CB654MG-GP-X8G3	b/w	GPixel GMAX3265	9344 x 7000 65.4 Mpix	3.2	10, 12	70	12.5	67	29.9 x 22.4 37.4	2.3"	76 / 47 [3]
CB654CG-GP-X8G3	color	GPixel GMAX3265	9344 x 7000 65.4 Mpix	3.2	10, 12	70	12.5	TBD	29.9 x 22.4 37.4	2.3"	76 / 47 [3]

Note
[1] Full resolution, RAW 8 bits
[2] Full resolution, RAW 8 bits, 10 bits and 12 bits
[3] Full resolution, RAW 10 bits and 12 bits

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!

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