

ITEM OPPORTUNITY SYNOPSIS

Name of the item to be scouted: Monochrome CMOS Cameras and Accessories

NAICS Code, if known:

Opportunities will be posted for 30 days unless another timeframe is given below.

Number of Days: 15

TECHNICAL INFORMATION

Describe the Item:

Please describe the item application/the end use of item. The Oceanic and Atmospheric Research (OAR), National Severe Storms Laboratory's (NSSL) needs to purchase monochrome CMOS cameras and accessories equivalent to Ximea Corp.'s CB120MG-CM-X8G3 (manufactured in Slovakia), CBL-MT-PWR-SYNC-3M0 I/O Sync and AUX power cables (manufactured in Malaysia), CBL-PCI-COP-3M0 PCIe Gen.s copper cables (manufactured in Taiwan), CBL-PCI-COP-5M0 PCIe Gen.2 copper cables (manufactured in Mexico), PEX8-G3-X2-OSS PCIe Gen.3 dual port extender host adapters for copper and fiber optics cables (manufactured in United States), PSU-GSM60B24-P1J desktop power supply kits with power cords (manufactured in Canada), and CBL-PWR-C7-US power cords for BACS and PSU-GSM power supplies (manufactured in Canada). The Ximea Corp. CB120MG-CM-X8G3 monochrome CMOS camera is a 4K, compact, high-speed camera designed to fully capture high velocity objects like hail in complete free-fall without distortion and allow for various measurements to be taken. The cameras are capable of high frames rates (greater than 300 fps), have a high resolution, and allow for very short exposure times in order to properly capture the free-falling objects.

Provide the item number if applicable: (N95 Mask vs Protective Mask).

Supplier Information:

Type of Supplier being sought (select from list below)

Manufacturer

Contract Manufacturer

Distributor

Other (please specify)

Reason for scouting submission (select from list below)

BABA BAA Waiver

2nd Supplier

Price

Re-Shore

Past supplier no longer available

New Product Startup

Other (please specify)

Summary of Technical Specifications and Performance Requirements:

Describe the manufacturing processes (elaborate to provide as much detail as possible)

Electronics Assembly

Provide dimensions / size / tolerances / performance specifications of the item.

• 12 Mpix Monochrome CMOS camera with AMS CMOSIS CMV12000 • PCIe Gen3 speed of 64 Gbit/s allows more than 330 Fps at 8bit Specifications: Resolution 12 MP 4096 x 3072 pixel Frame rates 330 Fps (8 bit) Sensor model equivalent to AMS CMOSIS CMV12000 Sensor type CMOS B/W monochrome Sensor size 28 mm Sensor active area 22.5 x 16.9 mm Readout method Global shutter Pixel size 5.5 μm Digitization 8, 10, 12 Data interface PCI Express (PCIe) Gen3 Dynamic range 60 dB Full Well Capacity 13 500 e- On-chip binning 2x2 (and Skipping) Signal to noise ratio 41,3 dB Exposure range 19 μs - 3.5s I/O Ports 2IN/2OUT Power consumption 17 Watt Lens mount Optional accessory: Active EF-mount Weight 280g Dimensions WxHxD 70 x 60 x 57 mm Cooling Fan Attachments are examples of item(s) needed/requested

List required materials needed to make the product, including materials of product components, if applicable. Exact materials are not specified within the product specification and data sheet, except as listed above and attached.

Are there applicable certification requirements?

Yes

No

Please Explain:

Are there any applicable regulations that apply to the production of this item?

Yes

No

Please Explain:

Are there any other standards, requirements?

Yes

No

Please Explain:

Additional Comments:

Is there other information that would impact the item's performance or usefulness? Please explain.

Any suggested alternative products must be fully compatible with Ximea Corp.'s products, as these are already in use by the National Severe Storms Laboratory (NSSL) and these are replacement cameras and accessories. Other similar products were sent to the program office for technical evaluation including - Baumer's VQXT-120C.HS, Mightex's 1.2MP CMOS, and Pixelink's PL-X9512. I am still waiting on a response.

Business Information

Volume and Pricing:

Estimated Potential Business Volume (i.e. #Units per day, month, year):

One-time purchase • Quantity 12 CB120MG-CM-X8G3 monochrome CMOS cameras • Quantity 12 CBL-MT-PWR-SYNC-3M0 I/O Sync and AUX power cables • Quantity four (4) CBL-PCI-COP-3M0 PCIe Gen.s copper cables • Quantity eight (8) CBL-PCI-COP-5M0 PCIe Gen.2 copper cables • Quantity seven (7) PEX8-G3-X2-OSS PCIe Gen.3 dual port extender host adapters for copper and fiber optics cables • Quantity 12 PSU-GSM60B24-P1J desktop power supply kits with power cords • Quantity 12 CBL-PWR-C7-US power cords for BACS and PSU-GSM power supplies

Estimated Target Price / Unit Cost Information: (flexible and negotiable not accepted)

Aggregate purchase of \$175,670.00 for all products (not including shipping).

Delivery Requirements:

When is it needed by? (Immediate, 30 days, 6 months, etc) Delivery by 12 weeks after date of award.

Describe packaging requirements (i.e., individually/ group packaging).

Where will this item be shipped? Norman, OK

Additional Comments:

Is there other information you would like to include? This is a Simplified Acquisition, which has a shorter lead time to completion than an action over \$250,000.00. It is expected that this requirement will be awarded within the next 60 days, and any timely scouting (requested completed within 15 days from submission) would be appreciated to align with Simplified Acquisition requirements for posting and the Buy American Act Waiver process.



•ximea

xiB-64

High-performance cameras
with PCIe X8G3 interface



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.

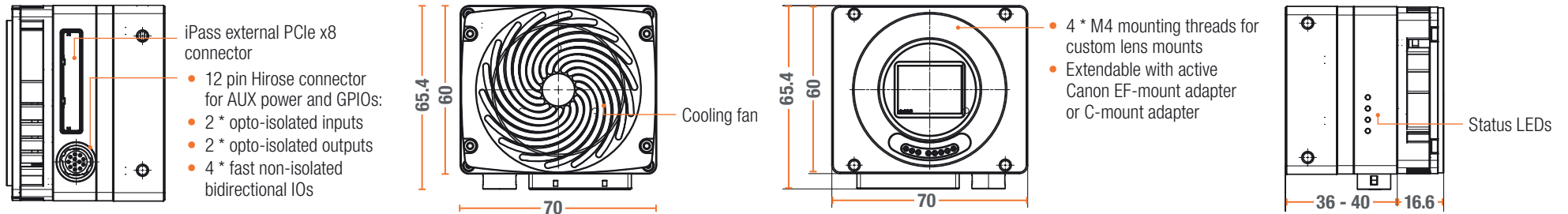
Next generation of high-speed imaging

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.

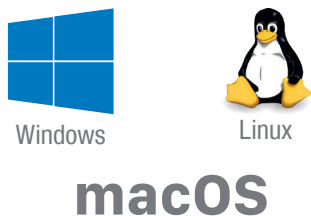
Stretching the distance

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



Supported operating systems



Language support



Standards



Supported vision libraries



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 13.4 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 13.4 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	48	12.8 x 12.8 18.1	1.2"	150 / 41 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 / 41 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 37.3	2.3"	71 / 31 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 37.3	2.3"	71 / 31 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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CB120MG-CM-X8G3

MC050MG-SY



Sony IMX250 USB3 mono board level camera

Assembled to order

- 12 Mpix Monochrome CMOS camera with AMS CMOSIS CMV12000
- PCIe Gen3 speed of **64 Gbit/s** allows more than **330 Fps** at 8bit

4K, compact, high speed camera for: Vehicle Impact, Airbag Deployment and Safety Restraints Testing, Digital Image Correlation (DIC), Projectile, Explosives, Ballistics, Combustion and Missile Launch Tracking, Fluid and Flow Visualization, Sports Broadcasting, Commercial Film, Television and Studio Production, Fluidics and Particle Image Velocimetry (PIV), Flat panel inspection (FPD), printed circuit board (PCB) examination and more.

- Brochure
- Manual
- Accessories
- Camera family
- Support page
- CONTACT SALES

Specifications:

Part Number:	CB120MG-CM-X8G3
Resolution:	12 MP 4096 x 3072 pixel
Frame rates:	330 Fps (8 bit)
Sensor model:	AMS CMOSIS CMV12000
Sensor type:	CMOS B/W monochrome
Sensor size:	28 mm
Sensor active area:	22.5 x 16.9 mm
Readout method:	Global shutter
Pixel size:	5.5 µm
Digitization:	8, 10, 12
Data interface:	PCI Express (PCIe) Gen3
Dynamic range:	60 dB
Full Well Capacity:	13 500 e-
On-chip binning:	2x2 (and Skipping)
Signal to noise ratio:	41,3 dB
Exposure range:	19µs - 3.5s
I/O Ports:	2IN/2OUT
Power consumption:	17 Watt
Lens mount:	Optional accessory: Active EF-mount
Weight:	280g
Dimensions WxHxD:	70 x 60 x 57 mm
Cooling:	Fan

You may also be interested in this/these product(s)

**CB120MG-CM**

- 12 Mpix at 133 Fps
- AMS CMOSIS CMV12000
- 28 mm Black and white CMOS
- PCI Express camera - 20 Gbit/s

**MC124MG-SY**

- 12.4 Mpix
- 17.6mm CMOS, Global Shutter
- **Sony IMX253** Pregius™ Monochrome
- 31 fps

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