GPU image processing

ximea

high performance SDK • realtime applications

in partnership with

Fastvideo

xi Lab

xiB
PCIe x4
Gen 2

LED 1
LED 2
LED 3
LED 4
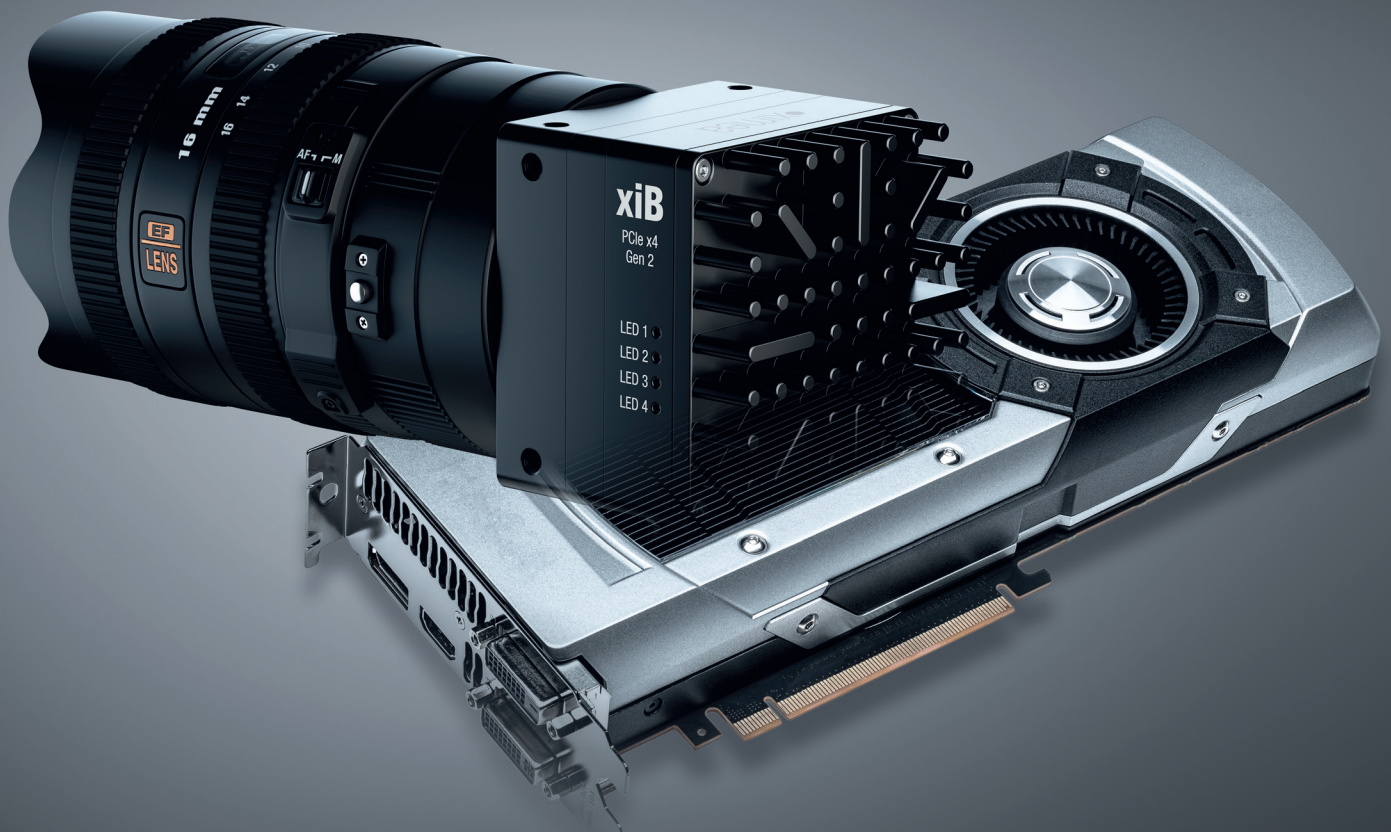
Fastvideo

Fastvideo - GPU image processing

Fastvideo has designed high performance SDK for image processing on GPU. That SDK corresponds to standard image processing pipeline for camera applications. It covers all image processing stages starting from raw image acquisition from a camera to JPEG or JPEG2000 compression with storage to RAM or HDD. All image processing is done on GPU and this leads to exceptionally high performance.

Features of Fastvideo SDK for CUDA:

- Image acquisition
- Unpacking module for specific formats of raw data
- Dark Frame Subtraction
- Shading Correction
- Base Color Correction
- Debayers: HQLI, DFPD, MG
- Raw Bayer Codec
- Wavelet-based Denoiser

- Crop, Rotate, Resize (Downsampling)
- Remap
- Sharpen
- 1D/3D LUT Support
- DCP and LCP Profile Support
- OpenGL Output
- JPEG/JPEG2000 Codec
- H.264/H.265 Codec

Hardware and Software Requirements:

Operating System	Windows-7/8/10 (64-bit), Linux Ubuntu/CentOS (64-bit), L4T
NVIDIA GPU	Server (Tesla, Quadro), Desktop (GeForce GTX) , Laptop (GeForce GT), Mobile (Tegra K1, X1, X2)
CUDA Version	9.2

Performance:

- All image processing is done on GPU
- More than 4 GPix/s on GeForce Quadro P6000 for full image processing pipeline

Realtime Applications for PC with one GPU:

- JPEG compression for PCIe camera 8-bit, 2500 fps, 1920x1080
- Debayer and JPEG compression from 3 PCI-Express cameras, 12-bit, 30 fps, 20 MPix

Partner Contact:

info@fastcompression.com
www.fastcompression.com

Fastvideo LLC, Russia
Phone: +7 (495)-542-04-49

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We are keen to learn the markets reaction to items displayed or exposed under this label.

Contact:

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E-mail our sales team at **sales@ximea.com** for further information and a quotation.

XIMEA GmbH, Germany	**XIMEA s.r.o., Slovakia**	**XIMEA Corp., USA**
Am Mittelhafen 16	Lesna 52	8725 W. 14th Ave. Suite 110
48155 Münster	900 33 Marianka	Lakewood, CO 80215
Germany	Slovakia	USA
info@ximea.com	info@ximea.com	info@ximea.com
Tel: +49 251 202 408-0	Tel: +421 (2) 205 104 26	Tel: +1 (303) 389-9838
Fax: +49 251 202 408-99	Fax: +421 (2) 205 104 27	Fax: +1 (303) 202-6350