

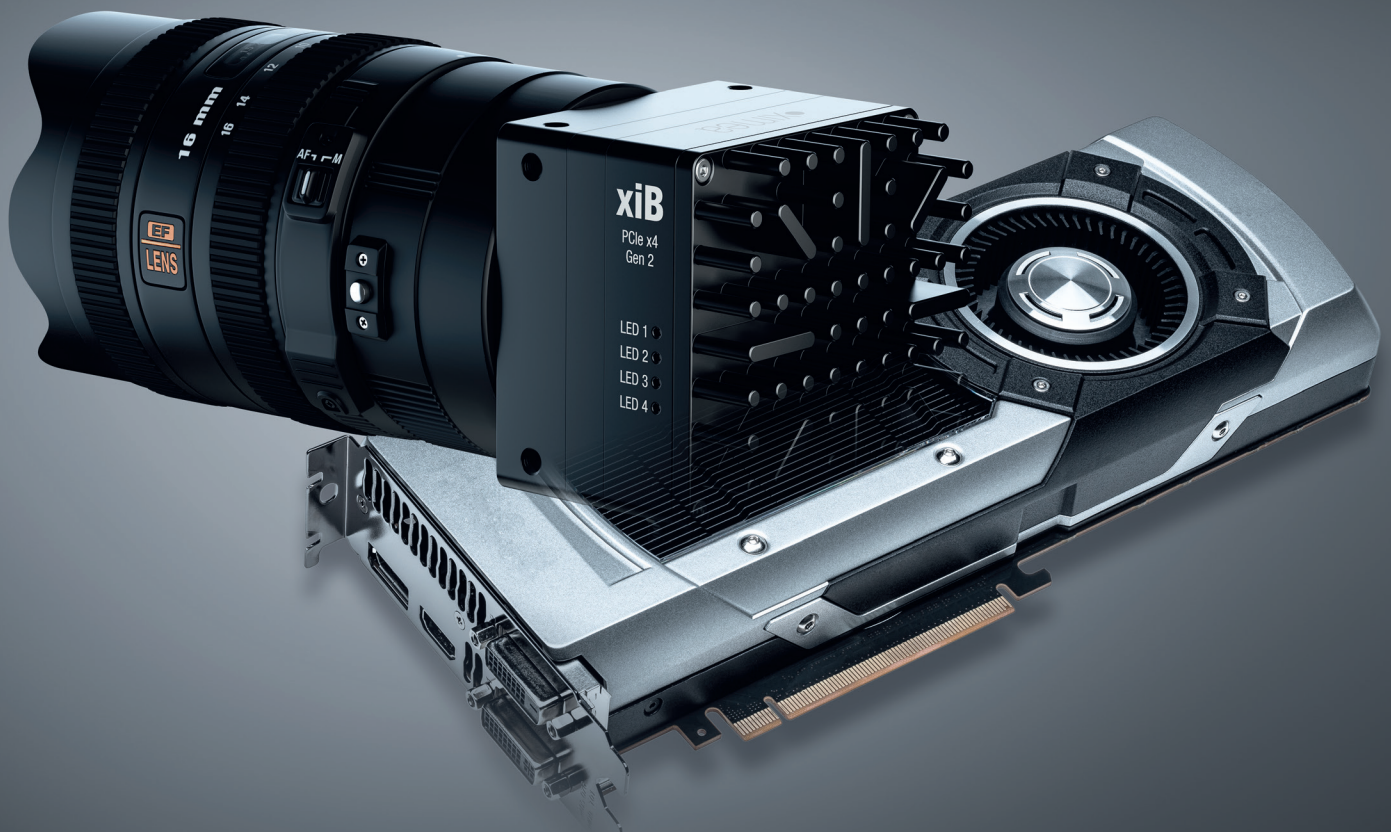
# GPU image processing



high performance SDK • realtime applications

in partnership with

**Fastvideo**



# 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 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 and DFPD
- Raw Bayer Compression/Decompression
- Output LUT
- Crop
- Rotate
- Resize (downsampling)
- Sharp
- OpenGL output
- JPEG Codec, MJPEG integration with FFMPEG
- JPEG2000 codec
- H.264 codec

## Hardware and Software Requirements:

<b>Operating System</b>	Windows-7/8 (32/64), Linux (32/64)
<b>NVIDIA GPU</b>	Server (Tesla, Quadro), Desktop (GeForce GTX) , Laptop (GeForce GT), Mobile (Tegra K1)
<b>CUDA Version</b>	6.0 and 6.5

## Performance Issues:

- All image processing is done on GPU
- Performance more than 1 GPix/s on GeForce GTX Titan GPU for full image processing pipeline

## Realtime Applications for PC with one GPU:

- JPEG compression for 3 cameras 8-bit, 500 fps, 1280x1024
- Debayer and JPEG compression from 10 USB3.0 cameras, 8-bit, 30 fps, 3 Mpix
- Debayer and JPEG compression from 2 PCI-Express cameras, 12-bit, 30 fps, 20 MPix



## Partner Contact:

[info@fastcompression.com](mailto:info@fastcompression.com)  
[www.fastcompression.com](http://www.fastcompression.com)

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

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### XIMEA GmbH, Germany

Hansestraße 81  
48165 Münster  
Germany  
[info@ximea.com](mailto:info@ximea.com)  
Tel: +49 2501 964 555-0  
Fax: +49 2501 964 555-99

### XIMEA s.r.o., Slovakia

Lesna 52  
900 33 Marianka  
Slovakia  
[info@ximea.com](mailto:info@ximea.com)  
Tel: +421 (2) 205 104 26  
Fax: +421 (2) 205 104 27

### XIMEA Corp., USA

2102 Beech Court  
Golden, CO 80401  
USA  
[info@ximea.com](mailto:info@ximea.com)  
Tel: +1 (303) 389-9838  
Fax: +1 (303) 202-6350