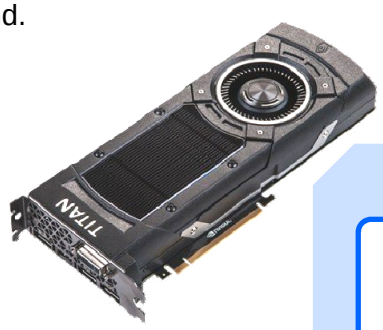
OptoRes

OGOP | Optores GPU OCT Processing

OGOP is an ultra-fast and highly reliable processing library for optical coherence tomography (OCT) data, enabling a sustained real-time throughput of several gigabytes per second.



Blazing speed

- Massive parallel GPU powered OCT processing
- Typical throughput over 3.5 GB/s of sampling data on a NVidia GTX 680 GPU

Scalability

- Multi-GPU support for multi-GVoxel/s applications

Cross-platform API

- Easy to use C interface for Windows and Linux

OCT processing pipeline

- Full Fourier-domain processing chain, from raw data to OCT image
- Background subtraction, apodization, iFFT, dynamic range compression, *k*-space linearization

OpenGL integration

- Fully integrated with OpenGL

Flexible I/O formats

- Unsigned / signed integer
- Single precision (complex) floating point

Specifications

SYSTEM REQUIREMENTS

Parameter	Requirement
CPU architecture	i686 or x86_64
RAM	Minimum 256MB of RAM available for exclusive use by library (for each process instance of the library)
Operating system	Windows 7 or later versions Linux (Kernel version 3.10 or later, GLIBC-6)[1]
Computing environment[2]	NVidia CUDA-6 with GPU supporting compute capability 3.x (On request: OpenCL-2)
OpenGL integration (optional)[3]	Windows (requires OpenGL-3 compliant ICD installed with API interoperation support for CUDA-6 or OpenCL-2) Linux[1] (requires X.org X11R7.7 X11 server and client runtime and OpenGL-3 compliant GLX runtime with API interoperation support for CUDA or OpenCL)

1. An up-to-date list of tested Linux distributions with their respect versions and release numbers can be obtained on request.
2. An up-to-date list of supported compute environments can be obtained on request.
3. Support of OpenCL interoperation with OpenGL is an optional extension to OpenCL and may not be available on all systems. Features depending on OpenCL – OpenGL interoperation may be disabled if the required functionality is not supported by the host system.

DEVELOPMENT ENVIRONMENT SUPPORT

Operating System	Compilers / Toolchains
Windows	Microsoft Visual C++ 2010 or later versions GNU MinGW-4.6 or later versions
Linux	GNU GCC-4.6 or later versions LLVM/Clang-3.5 or later versions

Operating System	Build System Integration
Windows / Linux	CMake-2.8 or later versions Microsoft Visual Studio 2012 and 2013

OptoRes

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