

OpenCL™ Plug-in Sample

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Overview

OpenCL™ Plug-in Sample works with **Intel® Media SDK 2016** and **Intel® Media Server Studio 2017**.

It demonstrates how to use the **Media SDK for Windows* and Media Server Studio – SDK** (hereinafter referred to as "**SDK**") API to implement a video-processing filter through Intel® OpenCL™ technology and make the filter available to participate in an **SDK** pipeline.

Features

- The **OpenCL™ Plug-in Sample** implements 180-degree picture rotation using Intel OpenCL technology.
- Sample supports both CPU and GPU OpenCL devices.
- Sample demonstrates usage of `cl_intel_dx9_media_sharing` OpenCL extension to achieve efficient data sharing between **SDK** and Intel OpenCL.

Software Requirements

- Intel® SDK for OpenCL™ Applications
<http://software.intel.com/en-us/vcsource/tools/opencl-sdk>
- See <install-folder>\Media Samples Guide.pdf

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Package Contents

OpenCL™ Plug-in Sample package contains the following:

| <install-folder>\sample_user_modules\rotate_opengl\ | |
|---|---|
| readme-openssl-rotate-plugin.rtf | This file |
| sample_plugin_opengl.sln | Solution file for the OpenCL™ Plug-in Sample |
| sample_plugin_opengl.vcproj | Project file for the OpenCL™ Plug-in Sample |

| <install-folder>\sample_user_modules\plugin_api\ | |
|--|--|
| rotate_plugin_api.h | Header file for the rotation interface (defines rotation parameters structure) |
| mfx_plugin.def | Module definition file for the plugin DLL |

| <install-folder>\sample_user_modules\rotate_opengl\include | |
|--|---|
| sample_plugin_opengl.h | Header file for the rotation plugin class |

| <install-folder>\sample_user_modules\rotate_cpu\src\ | |
|--|---|
| sample_plugin_opengl.cpp | Source file for the rotation plugin class |
| ocl_rotate.cl | OpenCL kernel file |

How to Build the Application

Refer to <install-folder>\doc\Media Samples Guide.rtf for general build instructions.

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Make sure to install Intel® SDK for OpenCL™ Applications prior to building this sample.

Running the Software

OpenCL™ Plug-in Sample is a Dynamic Link Library (DLL) which is invoked from the **Encoding Sample** by running `sample_encode.exe` or `sample_multi_transcode.exe` with options `-opencl -angle 180`.

While running `sample_encode.exe` or `sample_multi_transcode.exe` with options `-opencl -angle 180` the file `sample_plugin_opencl.dll` must be available via standard DLL search mechanism, additionally the file `cl_rotate.cl` must reside either in the current folder or in the `sample_*.exe` folder.

See `<install-folder>\sample_encode\readme-encode.rtf` or `<install-folder>\sample_multi_transcode\readme-multi-transcode.rtf` for details.

Known Limitations

- This sample supports only picture width aligned at 4.

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