

# OpenCL™ Plug-in Sample

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## Overview

**OpenCL™ Plug-in Sample** 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

## Package Contents

**OpenCL™ Plug-in Sample** package contains the following:

\*Other names and brands may be claimed as the property of others.

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

<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.

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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