

OpenCL™ Plug-in Sample

[Overview](#)

[Features](#)

[Software Requirements](#)

[Package Contents](#)

[How to Build the Application](#)

[Running the Software](#)

[Known Limitations](#)

[Legal Information](#)

Overview

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

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

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

OpenCL and the OpenCL logo are trademarks of Apple Inc. used by permission by Khronos.

Copyright © 2011-2016, Intel Corporation

Page 1 of 5

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.

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

Page 2 of 5

OpenCL and the OpenCL logo are trademarks of Apple Inc. used by permission by Khronos.

Copyright © 2011-2016, Intel Corporation

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.

Legal Information

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH INTEL PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN INTEL'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, INTEL ASSUMES NO LIABILITY WHATSOEVER AND INTEL DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF INTEL PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

UNLESS OTHERWISE AGREED IN WRITING BY INTEL, THE INTEL PRODUCTS ARE NOT DESIGNED NOR INTENDED FOR ANY APPLICATION IN WHICH THE FAILURE OF THE INTEL PRODUCT COULD CREATE A SITUATION WHERE PERSONAL INJURY OR DEATH MAY OCCUR.

Intel may make changes to specifications and product descriptions at any time, without notice. Designers must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined." Intel reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The information here is subject to change without notice. Do not finalize a design with this information.

The products described in this document may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request.

Contact your local Intel sales office or your distributor to obtain the latest specifications and before placing your product order.

Copies of documents which have an order number and are referenced in this document, or other Intel literature, may be obtained by calling 1-800-548-4725, or by visiting [Intel's Web Site](#).

MPEG is an international standard for video compression/decompression promoted by ISO. Implementations of MPEG CODECs, or MPEG enabled platforms may require licenses from various entities, including Intel Corporation.

Intel and the Intel logo are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

Optimization Notice

Intel's compilers may or may not optimize to the same degree for non-Intel microprocessors for optimizations that are not unique to Intel microprocessors. These optimizations include SSE2, SSE3, and SSE3 instruction sets and other optimizations. Intel does not guarantee the availability, functionality, or effectiveness of any optimization on microprocessors not manufactured by Intel.

Microprocessor-dependent optimizations in this product are intended for use with Intel microprocessors. Certain optimizations not specific to Intel microarchitecture are reserved for

Intel microprocessors. Please refer to the applicable product User and Reference Guides for more information regarding the specific instruction sets covered by this notice.

Notice revision #20110804