NVAPI SDK - PUBLIC FOR DRIVER RELEASE 410

RN-06118-410-v01 | October 2018

Release Notes

DOCUMENT CHANGE HISTORY

RN-06118-410-v01

Version	Date	Authors	Description of Change
01	10/02/2018	AP/CC	Initial release

NVAPI RELEASE NOTES

INTRODUCTION

NVAPI is NVIDIA's core software development kit that allows direct access to NVIDIA GPUs and drivers on all windows platforms. NVAPI provides support for categories of operations that range beyond the scope of those found in familiar graphics APIs such as DirectX and OpenGL. These release notes describe the changes made in the NVAPI public SDK for the Release 410 driver. The following are the provided files:

- nvapi.h
- nvapi_lite_common.h
- nvapi_lite_d3dext.h
- nvapi_lite_salend.h
- nvapi_lite_salstart.h
- nvapi_lite_sli.h
- nvapi_lite_stereo.h
- nvapi_lite_surround.h
- NvApiDriverSettings.c
- NvApiDriverSettings.h
- nvHLSLExtns.h
- nvHLSLExtnsInternal.h
- nvShaderExtnEnums.h
- \x86\nvapi.lib
- \amd64\nvapi64.lib
- \doc\NVAPI_Reference_Developer.chm
- \doc\NVAPI SDKs Samples and Tools License Agreement (Public).pdf

CHANGES IN NVAPI FOR DRIVER RELEASE 410

Functions

- NvAPI_GPU_ClientIllumDevicesGetInfo
- NvAPI_GPU_ClientIllumDevicesGetControl
- NvAPI_GPU_ClientIllumDevicesSetControl
- NvAPI_GPU_ClientIllumZonesGetInfo
- NvAPI_GPU_ClientIllumZonesGetControl
- NvAPI_GPU_ClientIllumZonesSetControl
- NvAPI_D3D11_CreatePixelShaderEx_2
- NvAPI_D3D_QueryMultiViewSupport
- NvAPI_D3D_SetMultiViewMode
- NvAPI_D3D1x_GetGraphicsCapabilities
- NvAPI_D3D11_RSSetExclusiveScissorRects
- NvAPI_D3D11_RSSetViewportsPixelShadingRates
- NvAPI_D3D11_CreateShadingRateResourceView
- NvAPI_D3D11_RSSetShadingRateResourceView
- NvAPI_D3D11_RSGetPixelShadingRateSampleOrder
- NvAPI_D3D11_RSSetPixelShadingRateSampleOrder

TCC support added to the following functions:

- N/A

Structures

- NV_GPU_CLIENT_ILLUM_DEVICE_INFO_DATA_MCUV10
- NV_GPU_CLIENT_ILLUM_DEVICE_INFO_V1
- NV_GPU_CLIENT_ILLUM_DEVICE_INFO_PARAMS_V1
- NV_GPU_CLIENT_ILLUM_DEVICE_SYNC_V1
- NV_GPU_CLIENT_ILLUM_DEVICE_CONTROL_V1
- NV_GPU_CLIENT_ILLUM_DEVICE_CONTROL_PARAMS_V1
- NV_GPU_CLIENT_ILLUM_ZONE_INFO_DATA_RGB
- NV_GPU_CLIENT_ILLUM_ZONE_INFO_V1
- NV_GPU_CLIENT_ILLUM_ZONE_INFO_PARAMS_V1
- NV_GPU_CLIENT_ILLUM_ZONE_CONTROL_DATA_MANUAL_RGB_PARAMS
- NV_GPU_CLIENT_ILLUM_ZONE_CONTROL_DATA_MANUAL_RGB
- NV_GPU_CLIENT_ILLUM_ZONE_CONTROL_DATA_PIECEWISE_LINEAR
- NV_GPU_CLIENT_ILLUM_ZONE_CONTROL_DATA_PIECEWISE_LINEAR_RGB
- NV_GPU_CLIENT_ILLUM_ZONE_CONTROL_DATA_RGB

- NV_GPU_CLIENT_ILLUM_ZONE_CONTROL_DATA_MANUAL_COLOR_FIXED_PARAMS
- NV_GPU_CLIENT_ILLUM_ZONE_CONTROL_DATA_MANUAL_COLOR_FIXED
- NV_GPU_CLIENT_ILLUM_ZONE_CONTROL_DATA_PIECEWISE_LINEAR_COLOR_FIXED
- NV_GPU_CLIENT_ILLUM_ZONE_CONTROL_DATA_COLOR_FIXED
- NV_GPU_CLIENT_ILLUM_ZONE_CONTROL_V1
- NV_GPU_CLIENT_ILLUM_ZONE_CONTROL_PARAMS_V1
- supports_backlight_control added in NV_HDR_CAPABILITIES_V2
- backlt_min_luma added in NV_HDR_CAPABILITIES_V2
- interface_supported_by_sink added in NV_HDR_CAPABILITIES_V2
- supports_10b_12b_444 added in NV_HDR_CAPABILITIES_V2
- NvAPI_D3D11_CREATE_PIXEL_SHADER_EX_V1
- NvAPI_D3D11_CREATE_PIXEL_SHADER_EX_V2
- NV_MULTIGPU_CAPS_V2
- NV_QUERY_SINGLE_PASS_STEREO_SUPPORT_PARAMS_V2
- NV_QUERY_MULTIVIEW_SUPPORT_PARAMS_V1
- NV_MULTIVIEW_PARAMS_V1
- NV_D3D1x_GRAPHICS_CAPS_V1
- NV_D3D1x_GRAPHICS_CAPS_V2
- NV_D3D11_EXCLUSIVE_SCISSOR_RECT_DESC_V1
- NV_D3D11_EXCLUSIVE_SCISSOR_RECTS_DESC_V1
- NV_D3D11_VIEWPORT_SHADING_RATE_DESC_V1
- NV_D3D11_VIEWPORTS_SHADING_RATE_DESC_V1
- NV_TEX2D_SRRV
- NV_TEX2D_ARRAY_SRRV
- NV_D3D11_SHADING_RATE_RESOURCE_VIEW_DESC_V1
- NV_PIXEL_SRSO_1x2
- NV_PIXEL_SRSO_2x1
- NV_PIXEL_SRSO_2x2
- NV_PIXEL_SRSO_2x4
- NV_PIXEL_SRSO_4x2
- NV_PIXEL_SRSO_4x4
- NV_PIXEL_SHADING_RATE_SAMPLE_ORDER_TABLE_V1

Enums

- NV_GPU_CLIENT_ILLUM_CTRL_MODE
- NV_GPU_CLIENT_ILLUM_ZONE_LOCATION
- NV_GPU_CLIENT_ILLUM_DEVICE_TYPE
- NV_GPU_CLIENT_ILLUM_ZONE_TYPE

- NV_GPU_CLIENT_ILLUM_PIECEWISE_LINEAR_CYCLE_TYPE
- NV_XYZW_RIGHT_SEMANTIC added to NV_CUSTOM_SEMANTIC_TYPE
- NV_VIEWPORT_MASK_2_SEMANTIC added to NV_CUSTOM_SEMANTIC_TYPE
- NV_POSITION_SEMANTIC added to NV_CUSTOM_SEMANTIC_TYPE
- NV_CLIP_DISTANCE_0_SEMANTIC added to NV_CUSTOM_SEMANTIC_TYPE
- NV_CLIP_DISTANCE_1_SEMANTIC added to NV_CUSTOM_SEMANTIC_TYPE
- NV_CULL_DISTANCE_0_SEMANTIC added to NV_CUSTOM_SEMANTIC_TYPE
- NV_CULL_DISTANCE_1_SEMANTIC added to NV_CUSTOM_SEMANTIC_TYPE
- NV_GENERIC_ATTRIBUTE_SEMANTIC added to NV_CUSTOM_SEMANTIC_TYPE
- NV_PIXEL_SHADING_RATE
- NV_SRRV_DIMENSION
- NVAPI_GPU_NOT_POWERED added to NvAPI_Status

Deprecated NVAPI Functions

The following functions will be deprecated in coming releases:

Deprecated	Replaced By
None	N/A

NVAPIDriverSettings Additions/Removals

- PS_FRAMERATE_LIMITER_2_CONTROL_DELAY_FLIP_BY_FLIPMETERING removed from EValues_PS_FRAMERATE_LIMITER_2_CONTROL

HLSL Extension Additions

- NvGetShadingRate
- NvEvaluateAttributeAtSampleForVPRS
- NvEvaluateAttributeSnappedForVPRS

About the Sample Code

Sample code is provided with the SDK package that demonstrates the following features:

- Custom Timing
- Display Color Control
- Display Configuration
- I2C
- Quadro Sync_Configuration

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