



NVAPI SDK – Public for Driver Release 435

Release Notes



Document History

RN-06118-435-001

Version	Date	Authors	Description of Change
01	08/28/2019	CC	Initial release

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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.

The following files are provided by NVIDIA:

- ▶ 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

These release notes describe the changes made in the NVAPI NDA SDK for the Release 435 driver.

Changes in NVAPI for Driver Release 435

New/Updated Functions

- ▶ `NvAPI_D3D9_Present`
- ▶ `NvAPI_D3D9_QueryFrameCount`
- ▶ `NvAPI_D3D9_ResetFrameCount`
- ▶ `NvAPI_D3D9_QueryMaxSwapGroup`
- ▶ `NvAPI_D3D9_JoinSwapGroup`
- ▶ `NvAPI_D3D9_BindSwapBarrier`
- ▶ `NvAPI_D3D1x_Present`
- ▶ `NvAPI_D3D1x_QueryFrameCount`
- ▶ `NvAPI_D3D1x_ResetFrameCount`
- ▶ `NvAPI_D3D1x_QueryMaxSwapGroup`
- ▶ `NvAPI_D3D1x_QuerySwapGroup`
- ▶ `NvAPI_D3D1x_JoinSwapGroup`
- ▶ `NvAPI_D3D1x_BindSwapBarrier`
- ▶ `NvAPI_D3D12_CreateImplicitMSAATexture2D`
- ▶ `NvAPI_D3D12_ResolveSubresourceRegion`

TCC Support added to the following functions:

- ▶ None

New/Updated Structures

- ▶ `NV_D3D1x_GRAPHICS_CAPS_V2` modified
- ▶ `NvAPI_D3D11_ResolveSubresourceRegion` modified

New Enums

- ▶ None

New Unions

- ▶ None

New Defines

- ▶ None

Deprecated NVAPI Functions

The following functions will be deprecated in coming releases:

Deprecated	Replaced By
NVAPI has removed support for Windows XP.	N/A

NVAPIDriverSettings Additions/Removals

- ▶ Removed setting BATTERY_BOOST
- ▶ Added enum EValues_EXTERNAL_QUIET_MODE
- ▶ Added setting EXTERNAL_QUIET_MODE

HLSL Extension Additions/Changes

- ▶ Added function NvGetSpecial
- ▶ Added constant NV_SPECIALOP_GLOBAL_TIMER_LO
- ▶ Added constant NV_SPECIALOP_GLOBAL_TIMER_HI

NVAPI Security Information

User administrator privilege is required to access certain driver features, as per NVIDIA's overall security vision. This helps mitigate the impact of malware.

Each API that requires the administrator access, will return NVAPI_INVALID_USER_PRIVILEGE error, when run with standard user privilege. The application will require Administrator privileges to access this API, which can be elevated to a higher permission level by selecting "Run as Administrator" in Admin approval mode.

APIs that Require Administrator Privileges:

- ▶ NvAPI_GPU_ResetECCErrorInfo
- ▶ NvAPI_GPU_SetECCConfiguration

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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