



NVAPI SDK – Public for Driver Release 440

Release Notes



Document History

RN-06118-440-001

Version	Date	Authors	Description of Change
01	11/19/2019	CC	Initial release

Table of Contents

NVAPI Release Notes.....	4
Introduction.....	4
Changes in NVAPI for Driver Release 440.....	5
New/Updated Functions.....	5
New/Updated Structures.....	5
New Enums.....	5
New Unions.....	5
New Defines	5
Deprecated NVAPI Functions	5
NVAPIDriverSettings Additions/Removals.....	6
HLSL Extension Additions/Changes.....	6
NVAPI Security Information.....	7
APIs that Require Administrator Privileges:.....	7
About the Sample Code	8

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 440 driver.

Changes in NVAPI for Driver Release 440

New/Updated Functions

- ▶ `NvAPI_GPU_QueryWorkstationFeatureSupport`
- ▶ `NvAPI_D3D12_SetNvShaderExtnSlotSpace`
- ▶ `NvAPI_D3D12_SetNvShaderExtnSlotSpaceLocalThread`

TCC Support added to the following functions:

- ▶ `NvAPI_GPU_GetSystemType`

New/Updated Structures

- ▶ None

New Enums

- ▶ Add value `NV_SCALING_GPU_INTEGER_ASPECT_SCALING` in the enum `NV_SCALING`
- ▶ Added enum `NV_GPU_WORKSTATION_FEATURE_TYPE`

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
<code>NvAPI_VIO_GetCapabilities</code> <code>NvAPI_VIO_Open</code> <code>NvAPI_VIO_Close</code> <code>NvAPI_VIO_Status</code> <code>NvAPI_VIO_SyncFormatDetect</code> <code>NvAPI_VIO_GetConfig</code>	N/A

NvAPI_VIO_SetConfig	
NvAPI_VIO_SetCSC	
NvAPI_VIO_GetCSC	
NvAPI_VIO_SetGamma	
NvAPI_VIO_GetGamma	
NvAPI_VIO_SetSyncDelay	
NvAPI_VIO_GetSyncDelay	
NvAPI_VIO_GetPCIInfo	
NvAPI_VIO_IsRunning	
NvAPI_VIO_Start	
NvAPI_VIO_Stop	
NvAPI_VIO_IsFrameLockModeCompatible	
NvAPI_VIO_EnumDevices	
NvAPI_VIO_QueryTopology	
NvAPI_VIO_EnumSignalFormats	
NvAPI_VIO_EnumDataFormats	
NvAPI_VIO_EnumDataFormats	

NVAPIDriverSettings Additions/Removals

- ▶ Added value PS_FRAMERATE_LIMITER_LOW_LATENCY_LOG in enum EValues_PS_FRAMERATE_LIMITER
- ▶ Modified value for PS_FRAMERATE_LIMITER_MASK
- ▶ Added value PS_FRAMERATE_MONITOR_CTRL_LOW_LATENCY_LOG in the enum EValues_PS_FRAMERATE_MONITOR_CTRL
- ▶ Modified value for SHIM_RENDERING_OPTIONS_DEFAULT

HLSL Extension Additions/Changes

- ▶ None

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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