



NVAPI Developer Open-Source Interface for Driver Release 525

Release Notes

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NVAPI Developer Open-Source Interface Release

NVAPI is NVIDIA Corporation's core software development kit that allows 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.

This release contains a version of `nvapi.h`, provided under MIT license, to enable open-source re-implementations of NVAPI for Windows emulation environments.

For those interested in developing applications using the NVAPI Developer SDK on Windows Platform, NVIDIA recommends using the NVAPI Developer SDK available at <https://developer.nvidia.com/nvapi>.

File List

The following files are provided as a part of the NVAPI Open-Source SDK:

nvapi.h

This file contains the interface constants, structure definitions and function prototypes for NVAPI interface.

nvapi_interface.h

This file is a reference for mapping the NVAPI identifiers to functions (more on this below).

NvApiDriverSettings.h

NvApiDriverSettings.c

These files are used to query and change driver settings. For more details, please see:

http://developer.download.nvidia.com/NVAPI/PG-5116-001_v01_public.pdf

NVAPI Runtime

The NVAPI runtime, `nvapi.dll`, provides the following key functions.

nvapi_QueryInterface() : maps a 32-bit identifier to a function pointer:

```
void *nvapi_QueryInterface(NvU32 id);
```

The NVAPI application will call `nvapi_QueryInterface()` to get individual NVAPI function pointers from `nvapi.dll`.

Please consult `nvapi_interface.h` for a mapping of identifiers to NVAPI function names.

NvAPI_Initialize()

```
NvAPI_Status __cdecl NvAPI_Initialize()  
{  
    return NVAPI_OK;  
}
```

NvAPI_Unload()

```
NvAPI_Status __cdecl NvAPI_Unload()  
{
```

```
    return NVAPI_OK;
}
```

Release Notes

New Functions

- Added `NvAPI_GPU_GetRamBusWidth`
- Added `NvAPI_Disp_SetSourceColorSpace`
- Added `NvAPI_Disp_GetSourceColorSpace`
- Added `NvAPI_Disp_SetSourceHdrMetadata`
- Added `NvAPI_Disp_GetSourceHdrMetadata`
- Added `NvAPI_Disp_SetOutputMode`
- Added `NvAPI_Disp_GetOutputMode`
- Added `NvAPI_Disp_SetHdrToneMapping`
- Added `NvAPI_Disp_GetHdrToneMapping`

New/Updated Structures

- Added `NV_HDR_CAPABILITIES_V3`
- Added `NV_HDR_METADATA_V1`
- Added `NV_DISPLAY_DRIVER_INFO_V2`

New/Updated ENUMS

- Added `NV_LICENSE_FEATURE_COMPUTE` to enum `NV_LICENSE_FEATURE_TYPE`
- Added `NV_COLORSPACE_TYPE`
- Added `NV_DISPLAY_OUTPUT_MODE`
- Added `NV_HDR_TONEMAPPING_METHOD`
- Added `NVAPI_D3D12_PIPELINE_CREATION_STATE_FLAGS_NONE` to enum `NVAPI_D3D12_PIPELINE_CREATION_STATE_FLAGS`

NVAPI Security Info

- None

New Errors

- `NVAPI_CALLBACK_ALREADY_REGISTERED`
- `NVAPI_CALLBACK_NOT_FOUND`

NVAPIDriverSettings additions/removals

- Added `OGL_CPL_GDI_COMPATIBILITY_ID`
- Added `OGL_CPL_PREFER_DXPRESENT_ID`

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