



NVAPI Developer Open-Source Interface for Driver Release 530

Release Notes

Table of Contents

NVAPI Developer Open-Source Interface Release	3
File List	3
NVAPI Runtime	3
Release Notes	4
New Functions	4
New/Updated Structures	4
New/Updated ENUMS	4
NVAPI Security Info	4
New Errors	5
NVAPIDriverSettings additions/removals	5
Notice	6

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_Disp_GetDisplayIdInfo
- Added NvAPI_Disp_GetDisplayIdsFromTarget
- Added NvAPI_Disp_GetVRRInfo
- Added NvAPI_D3D12_QueryWorkstationFeatureProperties
- Added NvAPI_D3D12_CreateCommittedRDMABuffer

New/Updated Structures

- Added currentlyCapableOfVRR to struct NV_MONITOR_CAPS_GENERIC
- Added NV_DISPLAY_ID_INFO_DATA_V1
- Added NV_TARGET_INFO_DATA_V1
- Added NV_GET_VRR_INFO_V1
- Added NV_GSYNC_CAPABILITIES_V3
- Added NV_GSYNC_CONTROL_PARAMS_V1
- Added NV_GSYNC_CONTROL_PARAMS_V2
- Added NV_D3D12_WORKSTATION_FEATURE_RDMA_PROPERTIES
- Added NVAPI_D3D12_WORKSTATION_FEATURE_PROPERTIES_PARAMS_V1

New/Updated ENUMS

- Added NV_MONITOR_CAPS_TYPE_GENERIC to enum NV_MONITOR_CAPS_TYPE
- Added NVAPI_GSYNC_MULTIPLY_DIVIDE_MODE
- Added NV_D3D12_WORKSTATION_FEATURE_TYPE

NVAPI Security Info

- None

New Errors

- N/A

NVAPIDriverSettings additions/removals

- N/A

Notice

The information provided in this specification is believed to be accurate and reliable as of the date provided. However, NVIDIA Corporation (“NVIDIA”) does not give any representations or warranties, expressed or implied, as to the accuracy or completeness of such information. NVIDIA shall have no liability for the consequences or use of such information or for any infringement of patents or other rights of third parties that may result from its use. This publication supersedes and replaces all other specifications for the product that may have been previously supplied.

NVIDIA reserves the right to make corrections, modifications, enhancements, improvements, and other changes to this specification, at any time and/or to discontinue any product or service without notice. Customer should obtain the latest relevant specification before placing orders and should verify that such information is current and complete.

NVIDIA products are sold subject to the NVIDIA standard terms and conditions of sale supplied at the time of order acknowledgement, unless otherwise agreed in an individual sales agreement signed by authorized representatives of NVIDIA and customer. NVIDIA hereby expressly objects to applying any customer general terms and conditions with regards to the purchase of the NVIDIA product referenced in this specification.

NVIDIA products are not designed, authorized or warranted to be suitable for use in medical, military, aircraft, space or life support equipment, nor in applications where failure or malfunction of the NVIDIA product can reasonably be expected to result in personal injury, death or property or environmental damage. NVIDIA accepts no liability for inclusion and/or use of NVIDIA products in such equipment or applications and therefore such inclusion and/or use is at customer’s own risk.

NVIDIA makes no representation or warranty that products based on these specifications will be suitable for any specified use without further testing or modification. Testing of all parameters of each product is not necessarily performed by NVIDIA. It is customer’s sole responsibility to ensure the product is suitable and fit for the application planned by customer and to do the necessary testing for the application in order to avoid a default of the application or the product. Weaknesses in customer’s product designs may affect the quality and reliability of the NVIDIA product and may result in additional or different conditions and/or requirements beyond those contained in this specification. NVIDIA does not accept any liability related to any default, damage, costs or problem which may be based on or attributable to: (i) the use of the NVIDIA product in any manner that is contrary to this specification, or (ii) customer product designs.

No license, either expressed or implied, is granted under any NVIDIA patent right, copyright, or other NVIDIA intellectual property right under this specification. Information published by NVIDIA regarding third-party products or services does not constitute a license from NVIDIA to use such products or services or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property rights of the third party, or a license from NVIDIA under the patents or other intellectual property rights of NVIDIA. Reproduction of information in this specification is permissible only if reproduction is approved by NVIDIA in writing, is reproduced without alteration, and is accompanied by all associated conditions, limitations, and notices.

ALL NVIDIA DESIGN SPECIFICATIONS, REFERENCE BOARDS, FILES, DRAWINGS, DIAGNOSTICS, LISTS, AND OTHER DOCUMENTS (TOGETHER AND SEPARATELY, “MATERIALS”) ARE BEING PROVIDED “AS IS.” NVIDIA MAKES NO WARRANTIES, EXPRESSED, IMPLIED, STATUTORY, OR OTHERWISE WITH RESPECT TO THE MATERIALS, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES OF NONINFRINGEMENT, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE. Notwithstanding any damages that customer might incur for any reason whatsoever, NVIDIA’s aggregate and cumulative liability towards customer for the products described herein shall be limited in accordance with the NVIDIA terms and conditions of sale for the product.

Trademarks

NVIDIA and the NVIDIA logo are trademarks and/or registered trademarks of NVIDIA Corporation in the U.S. and other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Copyright © 2020 - 2022 NVIDIA Corporation & affiliates. All rights reserved.

