HIPIFY Documentation

Advanced Micro Devices, Inc.

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INSTALL

1 Install HIPIFY **3**
- 1.1 Install the ROCm Core SDK . . . 3
- 1.2 Install the HIPIFY package on Linux . . . 3
- 1.3 Install a nightly build . . . 4

2 Building hipify-clang on Linux **5**
- 2.1 Building LLVM . . . 5
- 2.2 Building HIPIFY . . . 5
- 2.3 Testing hipify-clang . . . 6

3 Building hipify-clang on Windows **11**
- 3.1 Building LLVM >= 10.0.0 (Recommended) . . . 11
- 3.2 Building LLVM < 10.0.0 . . . 12
- 3.3 Building HIPIFY . . . 12
- 3.4 Testing hipify-clang . . . 13

4 Building hipify-perl **17**

5 Using hipify-clang **19**
- 5.1 Release Dependencies . . . 19
- 5.2 Usage . . . 21
- 5.3 Using JSON compilation database . . . 21
- 5.4 Hipification statistics . . . 22

6 Using hipify-perl **25**
- 6.1 Example . . . 25

7 hipify-clang commands **27**
- 7.1 Output: . . . 27

8 hipify-perl commands **31**
- 8.1 Output: . . . 31

9 Supported CUDA APIs **33**

10 CUDA APIs supported by HIP **35**
- 10.1 CUDA Runtime API supported by HIP . . . 35
- 10.2 CUDA Driver API supported by HIP . . . 83
- 10.3 CUCOMPLEX API supported by HIP . . . 145
- 10.4 CUDA DEVICE API supported by HIP . . . 147
- 10.5 CUDA RTC API supported by HIP . . . 168

10.6 CUBLAS API supported by HIP . . . 172
10.7 CUSPARSE API supported by HIP . . . 213
10.8 CUSOLVER API supported by HIP . . . 235
10.9 CURAND API supported by HIP . . . 251
10.10 CUFFT API supported by HIP . . . 258
10.11 CUTENSOR API supported by HIP . . . 264
10.12 CUB API supported by HIP . . . 269
10.13 cuFile API supported by HIP . . . 271

11 CUDA APIs supported by ROC **277**
11.1 CUBLAS API supported by ROC . . . 277
11.2 CUSPARSE API supported by ROC . . . 319
11.3 CURAND API supported by ROC . . . 341
11.4 CUDNN API supported by MIOPEN . . . 348

12 CUDA APIs supported by HIP and ROC **377**
12.1 CUBLAS API supported by HIP and ROC . . . 377
12.2 CUSPARSE API supported by HIP and ROC . . . 419
12.3 CURAND API supported by . . . 441

13 License **449**

14 ==========
The HIPIFY Project is under the Apache License v2.0 with LLVM Exceptions: **451**

15 ==========
Software from third parties included in the HIPIFY Project: **457**

16 ==========
Legacy HIPIFY License **459**

HIPIFY is a ROCm tool to help developers migrate GPU programming from NVIDIA's CUDA language to AMD's HIP C++ programming language for use on AMD GPUs. HIPIFY includes two tools offering different levels of capability:

- `hipify-clang`: A clang-based tool that parses CUDA code and converts it to HIP code. It handles syntax changes, API calls, and kernel launch differences.
- `hipify-perl`: A simpler tool generated from `hipify-clang` that replaces CUDA API calls with HIP equivalents for basic code translation needs. `hipify-perl` is useful for simple CUDA programs, but offers less error detection when running into issues during translation.

Note: hipify_torch is a related tool that also translates CUDA source code into portable HIP C++. It was developed as part of the PyTorch project to cater to the project's unique requirements, was found to be useful for PyTorch-related projects, and released as an independent utility.

HIPIFY does not automatically convert all CUDA code into HIP code seamlessly. While it is a powerful tool for translating CUDA code to HIP, there are some limitations and areas where manual intervention is often required. HIPIFY can automatically convert many CUDA runtime API calls, kernel launch syntax, standard CUDA library functions where there is a HIP library equivalent, specific keywords like `__global__` and `__device__`. However, HIP is not a complete replacement for CUDA, and HIPIFY cannot automatically translate all code. CUDA libraries, or third-party libraries that have no HIP equivalent cannot be translated. In addition, code which is optimized for performance on NVIDIA GPUs might require additional rework to optimize performance on AMD GPUs.

After migrating code through HIPIFY, you should perform a code review to ensure functional correctness, replace any unsupported libraries or constructs with HIP or ROCm features. Debug and test the new HIP program, and optimize the performance on the target AMD GPUs.

HIPIFY is open-source and freely available as part of the ROCm ecosystem. You can find the HIPIFY code on AMD's GitHub HIPIFY repository.

The documentation is structured as follows:

Install

- *Install HIPIFY*

Building

- *Building hipify-clang on Linux*
- *Building hipify-clang on Windows*
- *Building hipify-perl*

How to

- *Use hipify-clang*
- *Use hipify-perl*

API reference

- *hipify-clang commands*
- *hipify-perl commands*
- *Supported APIs*
- *HIP supported APIs*
- *ROC supported APIs*
- *HIP and ROC supported APIs*

To contribute to the documentation, refer to Contributing to ROCm.

You can find licensing information on the Licensing page.

CHAPTER

ONE

INSTALL HIPIFY

Before you begin, verify that your system is supported. For more information, see ROCm Core SDK components.

For advanced workflows, source builds, or custom configurations, see *Building hipify-clang on Linux* or *Building hipify-clang on Windows*.

1.1 Install the ROCm Core SDK

HIPIFY is included with the ROCm Core SDK on Linux and Windows. For the most complete installation, we recommend that developers use the `amdrocm-core-sdk` meta package.

For instructions, see Install AMD ROCm. Use the selector panel on that page to view instructions appropriate for your system environment.

1.2 Install the HIPIFY package on Linux

Alternatively, if you want to install HIPIFY without additional ROCm libraries and tools, install the `amdrocm-hipify` package.

1. Complete the ROCm installation prerequisites to install dependencies and configure GPU access permissions.
2. Install the HIPIFY package that matches your desired ROCm version. Package names use the following format:

   ```
   amdrocm-hipify<rocm_version>
   ```

   `<rocm_version>` represents the ROCm Core SDK version to install. Omit this suffix to install the latest available version.

   For example:

   #### Debian-based distros

   ```
   sudo apt install amdrocm-hipify
   ```

RHEL-based distros

```
sudo dnf install amdrocm-hipify
```

SLES

```
sudo zypper install amdrocm-hipify
```

1.3 Install a nightly build

The TheRock build system also publishes nightly builds for the ROCm Core SDK and its components, including HIPIFY tools. See Nightly release status for details.

CHAPTER

TWO

BUILDING HIPIFY-CLANG ON LINUX

2.1 Building LLVM

```
# Create a root directory for building LLVM, Clang and HIPIFY
export ROOT_DIR=$(pwd)

# If you would like to clone LLVM with the full git history, remove the `--depth 1`␣
↪option.
git clone --depth 1 https://github.com/llvm/llvm-project.git

mkdir build dist
cd build

cmake \
  -DCMAKE_INSTALL_PREFIX=../dist \
  -DLLVM_TARGETS_TO_BUILD="X86" \
  -DLLVM_ENABLE_PROJECTS="clang" \
  -DLLVM_INCLUDE_TESTS=OFF \
  -DCMAKE_BUILD_TYPE=Release \
  ../llvm-project/llvm
make -j install
```

Note: If LLVM and Clang are built in `Debug` mode (with `-DCMAKE_BUILD_TYPE=Debug`), please build `HIPIFY` in `Debug` mode as well.

We support 64-bit build mode (`-Thost=x64`). Please build LLVM and Clang in 64-bit mode.

2.2 Building HIPIFY

```
cd $ROOT_DIR

git clone https://github.com/ROCm/HIPIFY.git

cd build

# To ensure LLVM is found, or in the case of multiple LLVM instances,
# specify the path to the root folder containing the LLVM distribution.
```

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```
cmake \
  -DCMAKE_INSTALL_PREFIX=../dist \
  -DCMAKE_BUILD_TYPE=Release \
  -DCMAKE_PREFIX_PATH=$ROOT_DIR/dist \
  ../hipify

make -j install
```

You can find the binary at `./dist/hipify-clang` or at the folder specified by the `-DCMAKE_INSTALL_PREFIX` option.

2.3 Testing hipify-clang

`hipify-clang` is equipped with unit tests using LLVM lit or FileCheck.

We recommend that you build `LLVM+Clang` from sources, as prebuilt binaries are not exhaustive for testing. Before building, ensure that the software required for building belongs to an appropriate version.

- Install CUDA version 7.0 or greater.

  In case of multiple CUDA installations, specify the particular version using `DCUDA_TOOLKIT_ROOT_DIR` option:

  ```
  -DCUDA_TOOLKIT_ROOT_DIR=/usr/include
  ```

- [Optional] Install cuTensor:

  To specify the path to cuTensor, use the `CUDA_TENSOR_ROOT_DIR` option:

  ```
  -DCUDA_TENSOR_ROOT_DIR=/usr/include
  ```

- [Optional] Install cuDNN belonging to the version corresponding to the CUDA version:

  To specify the path to cuDNN, use the `CUDA_DNN_ROOT_DIR` option:

  ```
  -DCUDA_DNN_ROOT_DIR=/usr/include
  ```

- [Optional] Install CUB 1.9.8 for `CUDA < 11.0` only; for `CUDA >= 11.0`, the CUB shipped with CUDA will be used for testing.

  To specify the path to CUB, use the `CUDA_CUB_ROOT_DIR` option (only for `CUDA < 11.0`):

  ```
  -DCUDA_CUB_ROOT_DIR=/srv/git/CUB
  ```

- Install Python version 3.0 or greater.
- Install `lit` and `FileCheck`; these are distributed with LLVM.

  `lit`:

  ```
  python $(ROOT_DIR)/llvm-project/llvm/utils/lit/setup.py install
  ```

  Starting with LLVM 6.0.1, specify the path to the `llvm-lit` Python script using the `LLVM_EXTERNAL_LIT` option:

  ```
  -DLLVM_EXTERNAL_LIT=$ROOT_DIR/build/bin/llvm-lit
  ```

`FileCheck`:

Copy from `$ROOT_DIR/build/bin/` to `CMAKE_INSTALL_PREFIX/dist/bin`.

- To run OpenGL tests successfully, you need to install OpenGL headers and libraries.

  On Ubuntu, use: `sudo apt-get install mesa-common-dev`

- Set the `HIPIFY_CLANG_TESTS` option to `ON`: `-DHIPIFY_CLANG_TESTS=ON`.
- Build and run tests.

2.3.1 Linux testing

On Linux, the following configurations are tested:

- Ubuntu 22-24: LLVM 13.0.0 - 22.1.8, CUDA 7.0 - 13.2.0, cuDNN 8.0.5 - 9.25.0, cuTensor 1.0.1.0 - 2.7.0.0
- Ubuntu 20-21: LLVM 9.0.0 - 20.1.8, CUDA 7.0 - 12.8.1, cuDNN 5.1.10 - 9.25.0, cuTensor 1.0.1.0 - 2.7.0.0
- Ubuntu 16-19: LLVM 8.0.0 - 14.0.6, CUDA 7.0 - 10.2, cuDNN 5.1.10 - 8.0.5
- Ubuntu 14: LLVM 4.0.0 - 7.1.0, CUDA 7.0 - 9.0, cuDNN 5.0.5 - 7.6.5

Minimum build system requirements for the above configurations:

- CMake 3.16.8, GNU C/C++ 9.2, Python 3.0.

Recommended build system requirements:

- CMake 4.3.3, GNU C/C++ 13.3, Python 3.14.6.

Here's how to build `hipify-clang` with testing support on `Ubuntu 24.04.02`:

```
cd $ROOT_DIR/build

cmake \
  -DHIPIFY_CLANG_TESTS=ON \
  -DCMAKE_BUILD_TYPE=Release \
  -DCMAKE_INSTALL_PREFIX=../dist \
  -DCMAKE_PREFIX_PATH=$ROOT_DIR/dist \
  -DCUDA_TOOLKIT_ROOT_DIR=/usr/local/cuda-12.9.1 \
  -DCUDA_DNN_ROOT_DIR=/usr/local/cudnn-9.25.0 \
  -DCUDA_TENSOR_ROOT_DIR=/usr/local/cutensor-2.7.0.0 \
  -DLLVM_EXTERNAL_LIT=$ROOT_DIR/build/bin/llvm-lit \
  ../hipify
```

The corresponding successful output is (assuming ROOT_DIR is `/usr/llvm/22.1.8`):

```
-- The C compiler identification is GNU 13.3.0
-- The CXX compiler identification is GNU 13.3.0
-- Detecting C compiler ABI info
-- Detecting C compiler ABI info - done
-- Check for working C compiler: /usr/bin/cc - skipped
-- Detecting C compile features
-- Detecting C compile features - done
-- Detecting CXX compiler ABI info
-- Detecting CXX compiler ABI info - done
-- Check for working CXX compiler: /usr/bin/c++ - skipped
-- Detecting CXX compile features
```

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```
-- Detecting CXX compile features - done
-- HIPIFY config:
--    - Build hipify-clang    : ON
--    - Test hipify-clang     : ON
--    - Is part of HIP SDK    : OFF
--    - Install clang headers : ON
-- Found ZLIB: /usr/lib/x86_64-linux-gnu/libz.so (found version "1.3")
-- Found LLVM 22.1.8:
--    - CMake module path     : /usr/llvm/22.1.8/dist/lib/cmake/llvm
--    - Clang include path    : /usr/llvm/22.1.8/dist/include
--    - LLVM Include path     : /usr/llvm/22.1.8/dist/include
--    - Binary path           : /usr/llvm/22.1.8/dist/bin
-- Linker detection: GNU ld
-- ---- The below configuring for hipify-clang testing only ----
-- Found Python: /usr/bin/python3.14 (found suitable version "3.14.6", required range is
↪"3.0...3.15") found components: Interpreter
-- Found lit: /usr/local/bin/lit
-- Found FileCheck: /GIT/LLVM/trunk/dist/FileCheck
-- Initial CUDA to configure:
--    - CUDA Toolkit path     : /usr/local/cuda-12.9.1
--    - CUDA Samples path     :
--    - cuDNN path            : /usr/local/cudnn-9.25.0
--    - cuTENSOR path         : /usr/local/cuTensor/2.7.0.0
--    - CUB path              :
-- Found CUDAToolkit: /usr/local/cuda-12.9.1/targets/x86_64-linux/include (found version
↪"12.9.86")
-- Performing Test CMAKE_HAVE_LIBC_PTHREAD
-- Performing Test CMAKE_HAVE_LIBC_PTHREAD - Success
-- Found Threads: TRUE
-- Found CUDA config:
--    - CUDA Toolkit path     : /usr/local/cuda-12.9.1
--    - CUDA Samples path     : OFF
--    - cuDNN path            : /usr/local/cudnn-9.25.0/include
--    - cuTENSOR path         : /usr/local/cuTensor/2.7.0.0/include
--    - CUB path              : /usr/local/cuda-12.9.1/include/cub
-- Configuring done (0.6s)
-- Generating done (0.0s)
-- Build files have been written to: /usr/hipify/build
```

```
make test-hipify
```

The corresponding successful output is:

```
Running HIPify regression tests
============================================================
CUDA 12.9.86 - will be used for testing
LLVM 22.1.8 - will be used for testing
x86_64 - Platform architecture
Linux 6.5.0-15-generic - Platform OS
64 - hipify-clang binary bitness
64 - python 3.14.6 binary bitness
============================================================
```

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```
-- Testing: 143 tests, 16 threads --
Testing Time: 7.58s

Total Discovered Tests: 143
  Passed: 143 (100.00%)
```

description
Tools to automatically translate CUDA source code into portable HIP C++

keywords
HIPIFY, ROCm, library, tool, CUDA, CUDA2HIP, hipify-clang, hipify-perl, Windows

CHAPTER

THREE

BUILDING HIPIFY-CLANG ON WINDOWS

3.1 Building LLVM >= 10.0.0 (Recommended)

```
# Assuming commands are being run in Windows CMD.
# Use "$env:ROOT_DIR = (Get-Location).Path" to set the environment variable for␣
↪PowerShell and use $env:ROOT_DIR to access it.

set ROOT_DIR=%cd%

# If you would like to clone LLVM with the full git history, remove the `--depth 1`␣
↪option.

git clone --depth 1 https://github.com/llvm/llvm-project.git
mkdir build dist
cd build
```

LLVM < 17.0.0:

```
cmake -G "Visual Studio 17 2022" -A x64 -Thost=x64 -DCMAKE_INSTALL_PREFIX=..\dist -DLLVM_
↪TARGETS_TO_BUILD="" -DLLVM_ENABLE_PROJECTS="clang" -DLLVM_INCLUDE_TESTS=OFF -DCMAKE_
↪BUILD_TYPE=Release ..\llvm-project\llvm

# Run Visual Studio 17 2022, open the generated LLVM.sln, build all, and build project
↪"INSTALL".
# Alternatively, you can build using "msbuild INSTALL.vcxproj /m" using the developer␣
↪command prompt.
```

LLVM >= 17.0.0:

```
cmake -G "Visual Studio 18 2026" -A x64 -Thost=x64 -DCMAKE_INSTALL_PREFIX=..\dist -DLLVM_
↪TARGETS_TO_BUILD="" -DLLVM_ENABLE_PROJECTS="clang" -DLLVM_INCLUDE_TESTS=OFF -DCMAKE_
↪BUILD_TYPE=Release ..\llvm-project\llvm

# Run Visual Studio 18 2026, open the generated LLVM.slnx, build all, and build project
↪"INSTALL".
# Alternatively, you can build using "msbuild INSTALL.vcxproj /m" using the developer␣
↪command prompt.
```

Note: The minimal CMake version, that supports Visual Studio 18 2026, is 4.2.0

Note: If LLVM and Clang are built in `Debug` mode (with `-DCMAKE_BUILD_TYPE=Debug`), please build `HIPIFY` in `Debug` mode as well. We support 64-bit build mode (`-Thost=x64`). Please build LLVM and Clang in 64-bit mode.

3.2 Building LLVM < 10.0.0

Download older LLVM + Clang sources.

```
set ROOT_DIR=%cd%

mkdir build dist
cd build

cmake -G "Visual Studio 16 2019" -A x64 -Thost=x64 -DCMAKE_INSTALL_PREFIX=..\dist -DLLVM_
↪TARGETS_TO_BUILD="" -DLLVM_ENABLE_PROJECTS="clang" -DLLVM_INCLUDE_TESTS=OFF -DCMAKE_
↪BUILD_TYPE=Release ..\llvm-project\llvm

# Run Visual Studio 16 2019, open the generated "LLVM.sln", build all, and build the
↪"INSTALL" project.
```

3.3 Building HIPIFY

```
cd %ROOT_DIR%

git clone https://github.com/ROCm/HIPIFY.git

cd build

# To ensure LLVM is found, or in the case of multiple LLVM instances, specify the path␣
↪to the root folder containing the LLVM distribution.

cmake -G "Visual Studio 18 2026 " -A x64 -Thost=x64 -DCMAKE_PREFIX_PATH="..\dist" -
↪DCMAKE_INSTALL_PREFIX="..\dist" -DCMAKE_BUILD_TYPE=Release ..\hipify

# Run Visual Studio 18 2026, open the generated LLVM.sln, build all, and build project
↪"INSTALL".
# Alternatively, you can build using "msbuild INSTALL.vcxproj /m" using the developer␣
↪command prompt.
```

You can find the binary at `.\dist\bin\hipify-clang` or at the folder specified by the `-DCMAKE_INSTALL_PREFIX` option.

3.4 Testing hipify-clang

`hipify-clang` is equipped with unit tests using LLVM lit or FileCheck.

We recommend that you build `LLVM+Clang` from sources, as prebuilt binaries are not exhaustive for testing.

- Install CUDA version 7.0 or greater.

  In case of multiple CUDA installations, specify the particular version using `DCUDA_TOOLKIT_ROOT_DIR` option:

```
-DCUDA_TOOLKIT_ROOT_DIR="C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v12.9"
-DCUDA_SDK_ROOT_DIR="C:\ProgramData\NVIDIA Corporation\CUDA Samples\v12.9"
```

- [Optional] Install cuTensor:

  To specify the path to cuTensor, use the `CUDA_TENSOR_ROOT_DIR` option:

```
-DCUDA_TENSOR_ROOT_DIR=D:\CUDA\cuTensor\2.7.0.0
```

- [Optional] Install cuDNN belonging to the version corresponding to the CUDA version:

  To specify the path to cuDNN, use the `CUDA_DNN_ROOT_DIR` option:

```
-DCUDA_DNN_ROOT_DIR=D:\CUDA\cuDNN\9.25.0
```

- [Optional] Install CUB 1.9.8 for `CUDA < 11.0` only; for `CUDA >= 11.0`, the CUB shipped with CUDA will be used for testing. To specify the path to CUB, use the `CUDA_CUB_ROOT_DIR` option (only for `CUDA < 11.0`):

```
-DCUDA_CUB_ROOT_DIR=D:\CUDA\CUB
```

- [Optional] Download cuFile for `CUDA >= 11.4` only. Then, extract the downloaded archive, extract it with `tar`:

```
tar -xf libcufile-linux-x86_64-1.18.1.6-archive.tar.xz
```

  Copy the extracted folder to a desired location, for example, `D:\CUDA\cuFile\1.18.1`. To specify the path to cuFile, use the `CUDA_FILE_ROOT_DIR` option:

```
-DCUDA_FILE_ROOT_DIR=D:\CUDA\cuFile\1.18.1
```

- Install Python version 3.0 or greater.
- Install `lit`, which is distributed with LLVM:

```
python %ROOT_DIR%\llvm-project\llvm\utils\lit\setup.py install
```

  Starting with LLVM 6.0.1, specify the path to the `llvm-lit` Python script using the `LLVM_EXTERNAL_LIT` option:

```
-DLLVM_EXTERNAL_LIT=%ROOT_DIR%\llvm-project\llvm\utils\lit\llvm-lit.py
```

- Install `FileCheck`, which is distributed with LLVM:

```
copy \y \v "%ROOT_DIR%\llvm-project\llvm\utils\FileCheck" "%CMAKE_INSTALL_PREFIX%\
↪dist\bin\"
```

- To run OpenGL tests successfully, you need to install OpenGL headers and libraries. No installation required. All the required headers are shipped with the Windows SDK.
- Set the `HIPIFY_CLANG_TESTS` option to `ON`: `-DHIPIFY_CLANG_TESTS=ON`.

- Build and run tests. Run `Visual Studio 18 2026`, open the generated `hipify-clang.slnx`, to build the project `test-hipify`.

3.4.1 Windows testing

Tested configurations:

LLVM	CUDA	cuDNN	Visual Studio	CMake	Python
4.0.0 - 5.0.2	7.0 - 8.0	5.1.10 - 7.1.4	2015.14.0, 2017.15.5.2	3.5.1 - 3.18.0	3.6.4 - 3.8.5
6.0.0 - 6.0.1	7.0 - 9.0	7.0.5 - 7.6.5	2015.14.0, 2017.15.5.5	3.6.0 - 3.18.0	3.7.2 - 3.8.5
7.0.0 - 7.1.0	7.0 - 9.2	7.0.5 - 7.6.5	2017.15.9.11	3.13.3 - 3.18.0	3.7.3 - 3.8.5
8.0.0 - 8.0.1	7.0 - 10.0	7.6.5	2017.15.9.15	3.14.2 - 3.18.0	3.7.4 - 3.8.5
9.0.0 - 9.0.1	7.0 - 10.1	7.6.5	2017.15.9.20, 2019.16.4.5	3.16.4 - 3.18.0	3.8.0 - 3.8.5
10.0.0 - 11.0.0	7.0 - 11.1	7.6.5 - 8.0.5	2017.15.9.30, 2019.16.8.3	3.19.2	3.9.1
11.0.1 - 11.1.0	7.0 - 11.2.2	7.6.5 - 8.0.5	2017.15.9.31, 2019.16.8.4	3.19.3	3.9.2
12.0.0 - 13.0.1	7.0 - 11.5.1	7.6.5 - 8.3.2	2017.15.9.43, 2019.16.11.9	3.22.2	3.10.2
14.0.0 - 14.0.6	7.0 - 11.7.1	8.0.5 - 8.4.1	2017.15.9.78, [5] 2019.16.11.17, 2022.17.2.6	3.24.0	3.10.6
15.0.0 - 15.0.7	7.0 - 11.8.0	8.0.5 - 8.8.1	2019.16.11.25, 2022.17.5.2	3.26.0	3.11.2
16.0.0 - 16.0.6	7.0 - 12.2.2	8.0.5 - 8.9.5	2019.16.11.29, 2022.17.7.1	3.27.3	3.11.4
17.0.1 [6] - 18.1.8 [7]	7.0 - 12.3.2	8.0.5 - 9.25.0	2019.16.11.57, 2022.17.14.35, 2026.18.7.3	4.3.3	3.14.6
19.1.0 - 20.1.8	7.0 - 12.8.1	8.0.5 - 9.25.0	2019.16.11.57, 2022.17.14.35, 2026.18.7.3	4.3.3	3.14.6
21.1.0 - 22.1.8	7.0 - 12.9.1	8.0.5 - 9.25.0	2019.16.11.57, 2022.17.14.35, 2026.18.7.3	4.3.3	3.14.6
23.0.0git	7.0 - 13.2.0	8.0.5 - 9.25.0	2019.16.11.57, 2022.17.14.35, 2026.18.7.3	4.3.3	3.14.6

[5] LLVM 14.x.x is the latest major release supporting Visual Studio 15 2017.

To build LLVM 14.x.x correctly using Visual Studio 15 2017, add `-DLLVM_FORCE_USE_OLD_TOOLCHAIN=ON` to corresponding CMake command line.

You can also build LLVM < 14.x.x correctly using Visual Studio 15 2017 without the `LLVM_FORCE_USE_OLD_TOOLCHAIN` option.

[6] Note that LLVM 17.0.0 was withdrawn due to an issue; use 17.0.1 or newer instead.

[7] Note that LLVM 18.0.0 has never been released; use 18.1.0 or newer instead.

Building with testing support using `Visual Studio 18 2026` on `Windows 11`:

```
cmake \
-G "Visual Studio 18 2026" \
-A x64 \
-Thost=x64 \
-DHIPIFY_CLANG_TESTS=ON \
-DCMAKE_BUILD_TYPE=Release \
-DCMAKE_INSTALL_PREFIX=..\dist \
-DCMAKE_PREFIX_PATH=%ROOT_DIR%\dist \
-DCUDA_TOOLKIT_ROOT_DIR="C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v12.9" \
-DCUDA_SDK_ROOT_DIR="C:\ProgramData\NVIDIA Corporation\CUDA Samples\v12.9" \
-DCUDA_DNN_ROOT_DIR=D:\CUDA\cuDNN\9.25.0 \
-DCUDA_TENSOR_ROOT_DIR=D:\CUDA\cuTensor\2.7.0.0 \
-DLLVM_EXTERNAL_LIT=%ROOT_DIR%\build\Release\bin\llvm-lit.py \
..\hipify
```

The corresponding successful output is (assuming %ROOT_DIR% is `D:\LLVM\22.1.8`):

```
-- Selecting Windows SDK version 10.0.26100.0 to target Windows 10.0.26200.
-- The C compiler identification is MSVC 19.50.35729.0
-- The CXX compiler identification is MSVC 19.50.35729.0
-- Detecting C compiler ABI info
-- Detecting C compiler ABI info - done
-- Check for working C compiler: C:\Program Files\Microsoft Visual Studio\18\Community\
↪VC\Tools\MSVC\14.50.35717\bin\Hostx64\x64\cl.exe - skipped
-- Detecting C compile features
-- Detecting C compile features - done
-- Detecting CXX compiler ABI info
-- Detecting CXX compiler ABI info - done
-- Check for working CXX compiler: C:\Program Files\Microsoft Visual Studio\18\Community\
↪VC\Tools\MSVC\14.50.35717\bin\Hostx64\x64\cl.exe - skipped
-- Detecting CXX compile features
-- Detecting CXX compile features - done
-- HIPIFY config:
--    - Build hipify-clang    : ON
--    - Test hipify-clang     : ON
--    - Is part of HIP SDK    : OFF
--    - Install clang headers : ON
-- Found LLVM 22.1.8:
--    - CMake module path     : D:\LLVM\22.1.8\dist\lib\cmake\llvm
--    - Clang include path    : D:\LLVM\22.1.8\dist\include
--    - LLVM Include path     : D:\LLVM\22.1.8\dist\include
--    - Binary path           : D:\LLVM\22.1.8\dist\bin
-- Performing Test LLVM_LINKER_SUPPORTS_B_SYMBOLIC_FUNCTIONS
-- Performing Test LLVM_LINKER_SUPPORTS_B_SYMBOLIC_FUNCTIONS - Failed
-- ---- The below configuring for hipify-clang testing only ----
-- Found Python: C:\Users\TT\AppData\Local\Programs\Python\Python314\python.exe (found␣
↪suitable version "3.14.6", required range is "3.0...3.15") found components:␣
↪Interpreter
-- Found lit: C:\Users\TT\AppData\Local\Programs\Python\Python314\Scripts\lit.exe
-- Found FileCheck: D:\LLVM\22.1.8\dist\bin\FileCheck.exe
-- Initial CUDA to configure:
--    - CUDA Toolkit path     : C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v12.9
--    - CUDA Samples path     : C:\ProgramData\NVIDIA Corporation\CUDA Samples\v12.9
```

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```
--    - cuDNN path            : D:\CUDA\cuDNN\9.25.0
--    - cuTENSOR path         : D:\CUDA\cuTensor\2.7.0.0
--    - CUB path              :
--    - cuFile path           : D:\CUDA\cuFile\1.18.1
-- Found CUDAToolkit: C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v12.9\include␣
↪(found version "12.9.86")
-- Found CUDA config:
--    - CUDA Toolkit path     : C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v12.9
--    - CUDA Samples path     : C:\ProgramData\NVIDIA Corporation\CUDA Samples\v12.9
--    - cuDNN path            : D:\CUDA\cuDNN\9.25.0\include
--    - cuTENSOR path         : D:\CUDA\cuTensor\2.7.0.0\include
--    - CUB path              : C:\Program Files\NVIDIA GPU Computing Toolkit\CUDA\v12.9\
↪include
--    - cuFile path           : D:\CUDA\cuFile\1.18.1\include
-- Configuring done (4.2s)
-- Generating done (0.1s)
-- Build files have been written to: D:\HIPIFY\build
```

CHAPTER

FOUR

BUILDING HIPIFY-PERL

`hipify-perl` is a perl-based script that heavily uses regular expressions, which is automatically generated from `hipify-clang`. To generate `hipify-perl`, run:

```
hipify-clang --perl
```

You can choose to specify the output directory for the generated `hipify-perl` file using `--o-hipify-perl-dir` option.

CHAPTER

FIVE

USING HIPIFY-CLANG

`hipify-clang` is a Clang-based tool for translating NVIDIA CUDA sources into HIP sources.

It translates CUDA source into an Abstract Syntax Tree (AST), which is traversed by transformation matchers. After applying all the matchers, the output HIP source is produced.

Advantages:

- `hipify-clang` is a translator. It parses complex constructs successfully or reports an error.
- It supports Clang options such as -I, -D, and –cuda-path.
- The support for new CUDA versions is seamless, as the Clang front-end is statically linked into `hipify-clang` and does all the syntactical parsing of a CUDA source to HIPIFY.
- It is very well supported as a compiler extension.

Disadvantages:

- You must ensure that the input CUDA code is correct as incorrect code can't be translated to HIP.
- You must install CUDA, and in case of multiple installations specify the needed version using `--cuda-path` option.
- You must provide all the `includes` and `defines` to successfully translate the code.

5.1 Release Dependencies

`hipify-clang` requires:

- CUDA, the latest supported version is 13.2.0, but requires at least version 7.0.
- LLVM+Clang version is determined at least partially by the CUDA version you are using, as shown in the table below. The recommended Clang release is the latest stable release 22.1.8, or at least version 4.0.0.

CUDA version	supported LLVM release versions	Windows	Linux
13.2.0	23.0.0git		
12.9.1[1]	21.1.0, 21.1.1, 21.1.2, 21.1.3, 21.1.4, 21.1.5, 21.1.6, 21.1.7, 21.1.8, 22.1.0, 22.1.1, 22.1.2, 22.1.3, 22.1.4, 22.1.5, 22.1.6, 22.1.7, 22.1.8[1]		
12.8.1	20.1.0, 20.1.1, 20.1.2, 20.1.3, 20.1.4, 20.1.5, 20.1.6, 20.1.7, 20.1.8		
12.6.3	19.1.0, 19.1.1, 19.1.2, 19.1.3, 19.1.4, 19.1.5, 19.1.6, 19.1.7		
12.3.2	17.0.1, 17.0.2, 17.0.3, 17.0.4, 17.0.5, 17.0.6, 18.1.0, 18.1.1, 18.1.2, 18.1.3, 18.1.4, 18.1.5, 18.1.6, 18.1.7, 18.1.8		
12.2.2	16.0.0, 16.0.1, 16.0.2, 16.0.3, 16.0.4, 16.0.5, 16.0.6		
11.8.0	14.0.5, 14.0.6, 15.0.0, 15.0.1, 15.0.2, 15.0.3, 15.0.4, 15.0.5, 15.0.6, 15.0.7		
11.7.1	14.0.0, 14.0.1, 14.0.2, 14.0.3, 14.0.4	Works only with patch due to Clang bug 54609 `patch for 14.0.0` [2] `patch for 14.0.1` [2] `patch for 14.0.2` [2] `patch for 14.0.3` [2] `patch for 14.0.4` [2]	
11.5.1	12.0.0, 12.0.1, 13.0.0, 13.0.1		
11.2.2	11.0.1, 11.1.0		
11.0.1, 11.1.0, 11.1.1	11.0.0	Works only with patch due to Clang bug 47332 `patch for 11.0.0` [3]	Works only with patch due to Clang bug 47332 `patch for 11.0.0` [3]
11.0.0	11.0.0		
11.0.1, 11.1.0, 11.1.1	10.0.0, 10.0.1	Works only with patch due to Clang bug 47332 `patch for 10.0.0` [3] `patch for 10.0.1` [3]	Works only with patch due to Clang bug 47332 `patch for 10.0.0` [3] `patch for 10.0.1` [3]
11.0.0	10.0.0, 10.0.1		
10.1	9.0.0, 9.0.1		
10.0	8.0.0, 8.0.1	Works only with patch due to Clang bug 38811 `patch for 8.0.0` [2] `patch for 8.0.1` [2]	
9.2	7.0.0, 7.0.1, 7.1.0	Works only with patch due to Clang bug 38811 `patch for 7.0.0` [2] `patch for 7.0.1` [2] `patch for 7.1.0` [2]	due to Clang bug 36384
9.0	6.0.0, 6.0.1		
8.0	4.0.0, 4.0.1, 5.0.0, 5.0.1, 5.0.2		
7.5	3.8.0 [4], 3.8.1 [4], 3.9.0 [4], 3.9.1 [4]		

[1] Represents the latest supported and recommended configuration.

[2] Download the patch and unpack it into your `LLVM distributive directory`. This overwrites a few header files. You don't need to rebuild `LLVM`.

[3] Download the patch and unpack it into your `LLVM source directory`. This overwrites the `Cuda.cpp` file. You need to rebuild `LLVM`.

[4] `LLVM 3.x` is no longer supported (but might still work).

In most cases, you can get a suitable version of `LLVM+Clang` with your package manager. However, you can also download a release archive and build or install it. In case of multiple versions of `LLVM` installed, set CMAKE_PREFIX_PATH so that `CMake` can find the desired version of `LLVM`. For example, `-DCMAKE_PREFIX_PATH=D:\LLVM\22.1.8\dist`.

5.2 Usage

Note: For additional details on the following `hipify-clang` command options, see *hipify-clang commands*

To process a file, `hipify-clang` needs access to the same headers that are required to compile it with `Clang`:

```
./hipify-clang square.cu --cuda-path=/usr/local/cuda-12.9 -I /usr/local/cuda-12.9/
↪samples/common/inc
```

`hipify-clang` arguments are supplied first, followed by a separator `--` and the arguments to be passed to Clang for compiling the input file:

```
./hipify-clang cpp17.cu --cuda-path=/usr/local/cuda-12.9 -- -std=c++17
```

`hipify-clang` also supports the hipification of multiple files that can be specified in a single command with absolute or relative paths:

```
./hipify-clang cpp17.cu ../../square.cu /home/user/cuda/intro.cu --cuda-path=/usr/local/
↪cuda-12.9 -- -std=c++17
```

To use a specific version of LLVM during hipification, specify the `hipify-clang` option `--clang-resource-directory=` to point to the Clang resource directory, which is the parent directory for the `include` folder that contains `__clang_cuda_runtime_wrapper.h` and other header files used during the hipification process:

```
./hipify-clang square.cu --cuda-path=/usr/local/cuda-12.9 --clang-resource-directory=/
↪usr/llvm/22.1.8/dist/lib/clang/22
```

For more information, refer to the Clang manual for compiling CUDA.

5.3 Using JSON compilation database

For some hipification automation (starting from Clang 8.0.0), you can provide a Compilation Database in JSON format in the `compile_commands.json` file:

```
-p <folder containing compile_commands.json>
- or -
-p=<folder containing compile_commands.json>
```

You can provide the compilation database in the `compile_commands.json` file or generate using Clang based on CMake. You can specify multiple source files as well.

To provide Clang options, use `compile_commands.json` file, whereas to provide `hipify-clang` options, use the `hipify-clang` command line.

Note: Don't use the options separator `--` to avoid compilation error caused due to the `hipify-clang` options being provided before the separator.

Here's an example demonstrating the `compile_commands.json` usage:

```
[
  {
    "directory": "<test dir>",
    "command": "hipify-clang \"<CUDA dir>\" -I./include -v",
    "file": "cd_intro.cu"
  }
]
```

5.4 Hipification statistics

The options `--print-stats` and `--print-stats-csv` provide an overview of what is hipified and what is not, as well as the hipification statistics. Use the `--print-stats` command to return the statistics as text to the terminal, or the `--print-stats-csv` command to create a CSV file to open in a spreadsheet.

Note: When multiple source files are specified on the command-line, the statistics are provided per file and in total.

5.4.1 Print statistics

```
hipify-clang intro.cu -cuda-path="C:/Program Files/NVIDIA GPU Computing Toolkit/CUDA/v12.
↪9" --print-stats
```

```
[HIPIFY] info: file 'intro.cu' statistics:
CONVERTED refs count: 40
UNCONVERTED refs count: 0
CONVERSION %: 100.0
REPLACED bytes: 604
[HIPIFY] info: file 'intro.cu' statistics:
  CONVERTED refs count: 40
  UNCONVERTED refs count: 0
  CONVERSION %: 100.0
  REPLACED bytes: 604
  TOTAL bytes: 5794
  CHANGED lines of code: 34
  TOTAL lines of code: 174
  CODE CHANGED (in bytes) %: 10.4
  CODE CHANGED (in lines) %: 19.5
  TIME ELAPSED s: 0.41
[HIPIFY] info: CONVERTED refs by type:
  error: 2
```

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```
  device: 2
  memory: 16
  event: 9
  thread: 1
  include_cuda_main_header: 1
  type: 2
  numeric_literal: 7
[HIPIFY] info: CONVERTED refs by API:
  CUDA Driver API: 1
  CUDA RT API: 39
[HIPIFY] info: CONVERTED refs by names:
  cuda.h: 1
  cudaDeviceReset: 1
  cudaError_t: 1
  cudaEventCreate: 2
  cudaEventElapsedTime: 1
  cudaEventRecord: 3
  cudaEventSynchronize: 3
  cudaEvent_t: 1
  cudaFree: 4
  cudaFreeHost: 3
  cudaGetDeviceCount: 1
  cudaGetErrorString: 1
  cudaGetLastError: 1
  cudaMalloc: 3
  cudaMemcpy: 6
  cudaMemcpyDeviceToHost: 3
  cudaMemcpyHostToDevice: 3
  cudaSuccess: 1
  cudaThreadSynchronize: 1
```

5.4.2 Print CSV statistics

```
hipify-clang intro.cu -cuda-path="C:/Program Files/NVIDIA GPU Computing Toolkit/CUDA/v12.
↪9" --print-stats-csv
```

This generates `intro.cu.csv` file with statistics:

file 'intro.cu' statistics:	
CONVERTED refs count	40
UNCONVERTED refs count	0
CONVERSION %	100.0
REPLACED bytes	604
TOTAL bytes	5794
CHANGED lines of code	34
TOTAL lines of code	174
CODE CHANGED (in bytes) %	10.4
CODE CHANGED (in lines) %	19.5
TIME ELAPSED s	0.41
CUDA ref type	Count
error	2
device	2
memory	16
event	9
thread	1
include_cuda_main_header	1
type	2
numeric_literal	7
CUDA API	Count
CUDA Driver API	1
CUDA RT API	39
CUDA ref name	Count
cuda.h	1
cudaDeviceReset	1
cudaError_t	1
cudaEventCreate	2
cudaEventElapsedTime	1
cudaEventRecord	3
cudaEventSynchronize	3
cudaEvent_t	1
cudaFree	4
cudaFreeHost	3
cudaGetDeviceCount	1
cudaGetErrorString	1
cudaGetLastError	1
cudaMalloc	3
cudaMemcpy	6
cudaMemcpyDeviceToHost	3
cudaMemcpyHostToDevice	3
cudaSuccess	1
cudaThreadSynchronize	1

CHAPTER

SIX

USING HIPIFY-PERL

`hipify-perl` is perl-based script that heavily uses regular expressions, that is automatically generated from `hipify-clang`.

Advantages:

- Ease of use
- No checks for input source NVIDIA CUDA code for correctness required
- No dependency on third party tools, including CUDA

Disadvantages:

- Inability or difficulty in implementing the following constructs:
  - Macros expansion
  - Namespaces:
    - Redefinition of CUDA entities in user namespaces
    - Using directive
  - Templates (some cases)
  - Device or host function calls differentiation
  - Correct injection of header files
  - Parsing complicated argument lists

6.1 Example

For additional details on the following `hipify-perl` command options, see *hipify-perl commands*. For more advanced translation needs use `hipify-clang` as it is more comprehensive and accurate.

Convert a simple CUDA file (`square.cu`) to HIP using `hipify-perl`:

```
hipify-perl square.cu -o square.cu.hip
```

This command translates the input file and writes the result to `square.cu.hip`.

CHAPTER

SEVEN

HIPIFY-CLANG COMMANDS

For a list of `hipify-clang` options, run:

```
hipify-clang --help
```

7.1 Output:

7.1.1 Usage

```
hipify-clang [options] <source0> [... <sourceN>]
```

7.1.2 Options

Options	Description
`--`	Separator between `hipify-clang` and `clang` options. Don't specify if there are no `clang` options. Not all `clang` options are supported by `hipify-clang`
`-D <macro>=<value>`	Define `<macro>` to `<value>` or 1 if `<value>` is omitted
`-I <directory>`	Add directory to include search path
`--amap`	Try to hipify as much as possible; ignores `default-preprocessor`
`--clang-resource-directo`	Defines the path to the parent folder for the `include` folder, containing `__clang_cuda_runtime_wrapper.h` and other header files used on runtime
`--csv`	Generate documentation in CSV format
`--cuda-gpu-arch=<value>`	CUDA GPU architecture (e.g. sm_35); may be specified more than once
`--cuda-kernel-execution-s`	Keep CUDA kernel launch syntax (default)
`--cuda-path=<directory>`	CUDA installation path. The CUDA path is required for `hipify-clang`
`--default-preprocessor`	Enable default preprocessor behavior (synonymous with `--skip-excluded-preprocessor-conditional-blocks`)
`--doc-format=<value>`	Documentation format: `full` (default), `strict`, or `compact`. Either the `--md` or `--csv` option must also be specified to generate the documentation.
`--doc-roc=<value>`	ROC documentation generation: `skip` (default), `separate`, or `joint`. Either the `--md` or `--csv` option must also be specified to generate the documentation.
`--examine`	Combine the `--no-output` and `--print-stats` options
`--experimental`	Hipify HIP APIs that are experimentally supported, otherwise, the corresponding warnings will be emitted
`--extra-arg=<string>`	Additional argument to append to the compiler command line
`--extra-arg-before=<strin`	Additional argument to prepend to the compiler command line

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Table 1 – continued from previous page

--help	Display available options (Use --help-hidden to include hidden options)
--help-list	Display list of available options (Use --help-list-hidden to include hidden options)
--hip-kernel-execution-sy	Transform CUDA kernel launch syntax to a regular HIP function call (overrides --cuda-kernel-execution-syntax)
--inplace	Modify input file in-place. This will overwrite the input file with the hipify output
--md	Generate documentation in Markdown format
--miopen	Translate to miopen libraries instead of hip libraries where it is possible. Cannot be used with --roc
--no-backup	Don't create a backup file for the hipified source
--no-output	Don't write any translated output to stdout
--no-undocumented-feature	Don't rely on undocumented features in code transformation
--no-warnings-on-undocume	Suppress warnings on undocumented features in code transformation
-o <filename>	Output filename
--o-dir=<directory>	Output directory
--o-hipify-perl-dir=<dire	Output directory for hipify-perl script
--o-python-map-dir=<direc	Output directory for Python map
--o-stats=<filename>	Output filename for statistics
-p <build-path>	Used to read a compile command database as described in *Using JSON compilation database*. For example, it can be a CMake build directory in which a file named compile_commands.json exists (use -DCMAKE_EXPORT_COMPILE_COMMANDS=ON CMake option to get this output). When no build path is specified, a search for compile_commands.json will be attempted through all parent paths of the first input file . See: https://clang.llvm.org/docs/HowToSetupToolingForLLVM.html for an example of setting up Clang Tooling on a source tree
--perl	Generate hipify-perl script. See *Building hipify-perl* for more information.
--print-stats	Print translation statistics. See *Hipification statistics* for more information
--print-stats-csv	Print translation statistics in a CSV file. See *Hipification statistics* for more information
--python	Generate hipify-python command
--roc	Translate to roc libraries instead of hip libraries where possible. Cannot be used with --miopen
--save-temps	Save temporary files
--skip-excluded-preproces conditional-blocks	Enable default preprocessor behavior by skipping undefined conditional blocks. This has the same effect as --default-preprocessor
--temp-dir=<directory>	Temporary directory
-v	Show commands to run and use verbose output
--version	Display the version of this program
--versions	Display the versions of the supported 3rd-party software
<source0> ...	Specify the file paths and names of one or more source files. These paths are looked up in the compile command database. If the path of a file is absolute, it needs to point into CMake's source tree. If the path is relative, the current working directory needs to be in the CMake source tree and the file must be in a subdirectory of the current working directory. ./ prefixes in the relative files will be automatically removed, but the rest of a relative path must be a suffix of a path in the compile command database

7.1.3 Option uses:

1. Common Options:

- `--help`: Displays the help message
- `-o <file>`: Specifies the output file for the converted source
- `-I <dir>`: Adds the specified directory to the include search paths
- `--cuda-path=<path>`: Specifies the path to the CUDA installation. Required
- `--hip-path=<path>`: Specifies the path to the HIP installation (optional; defaults to the ROCm installation path)

2. Preprocessor and Compilation Options:

- `-D<macro>`: Defines macros for the preprocessor
- `-U<macro>`: Undefines macros
- `--save-temps`: Keeps intermediate files generated during processing

3. Diagnostics and Debugging:

- `-v`: Enables verbose output to provide detailed diagnostic information
- `--version`: Displays the version of HIPIFY-Clang
- `--show-progress`: Displays progress during the translation process
- `--print-stats | --print-stats-csv`: Prints statistics about the translation process (e.g., the number of functions or API calls converted) into either text or CSV form

4. Include and Exclude Rules:

- `--exclude-path=<path>`: Specifies paths to exclude from translation
- `--include-path=<path>`: Specifies paths to explicitly include during translation

CHAPTER

EIGHT

HIPIFY-PERL COMMANDS

For a list of `hipify-perl` options, run:

```
hipify-perl --help
```

8.1 Output:

8.1.1 Usage

```
hipify-perl [options] <source0> [... <sourceN>]
```

8.1.2 Options

Options	Description
`-cuda-kernel-execution-sy`	Keep CUDA kernel launch syntax (default)
`-examine`	Combines `-no-output` and `-print-stats` options
`-exclude-dirs=<string>`	Exclude directories
`-exclude-files=<string>`	Exclude files
`-experimental`	HIPIFY experimentally supported APIs
`-help`	Display available options
`-hip-kernel-execution-syn`	Transform CUDA kernel launch syntax to a regular HIP function call (overrides `--cuda-kernel-execution-syntax`)
`-inplace`	Backs up the input file in `.prehip` file, and modifies the input file in-place
`-no-output`	Don't write any translated output to stdout
`-o=<string>`	Output filename
`-print-stats`	Print translation statistics as described in *Hipification statistics*
`-quiet-warnings`	Don't print warnings on unknown CUDA identifiers
`-roc`	Translate to `roc` libraries instead of `hip` libraries where possible
`-version`	The supported HIP version
`-whitelist=<string>`	Whitelist of identifiers

CHAPTER

NINE

SUPPORTED CUDA APIS

CUDA	HIP	ROC	HIP & ROC
CUDA Runtime API	*HIP API*		
CUDA Driver API	*HIP API*		
CUComplex API	*HIP API*		
CUDA Device API	*HIP Device API*		
CUDA RTC API	*HIP RTC API*		
CUFile API*	*HIP FILE API*		
CUBLAS API	*HIP BLAS API*	*ROC BLAS API*	*HIP + ROC BLAS API*
CUSPARSE API	*HIP SPARSE API*	*ROC SPARSE API*	*HIP + ROC SPARSE API*
CUSOLVER API	*HIP SOLVER API*		
CURAND API	*HIP RAND API*	*ROC RAND API*	*HIP + ROC RAND API*
CUFFT API	*HIP FFT API*		
CUDNN API		*MIOPEN API*	
CUTENSOR API	*HIP TENSOR API*		
CUB API	*HIP CUB API*		

- The CUFile API and HIP FILE API are supported only on Linux.

To generate the above documentation with the information about all supported CUDA APIs in Markdown format, run `hipify-clang --md --doc-format=full --doc-roc=joint` with or without specifying the output directory (`-o`). By running `hipify-clang --csv --doc-format=full --doc-roc=joint`, the documentation will be generated in CSV format.

CHAPTER

TEN

CUDA APIS SUPPORTED BY HIP

CUDA	HIP
CUDA Runtime API	*HIP API*
CUDA Driver API	*HIP API*
CUComplex API	*HIP API*
CUDA Device API	*HIP Device API*
CUDA RTC API	*HIP RTC API*
CUFile API*	*HIP FILE API*
CUBLAS API	*HIP BLAS API*
CUSPARSE API	*HIP SPARSE API*
CUSOLVER API	*HIP SOLVER API*
CURAND API	*HIP RAND API*
CUFFT API	*HIP FFT API*
CUTENSOR API	*HIP TENSOR API*
CUB API	*HIP CUB API*

- The CUFile API and HIP FILE API are supported only on Linux.

To generate the above documentation with the information about all supported CUDA APIs in Markdown format, run `hipify-clang --md --doc-format=full --doc-roc=separate` with or without specifying the output directory (`-o`). By running `hipify-clang --csv --doc-format=full --doc-roc=separate`, the documentation will be generated in CSV format.

10.1 CUDA Runtime API supported by HIP

Note: In the tables that follow the columns marked `A`, `D`, `C`, `R`, `U`, and `E` mean the following: **A** - Added; **D** - Deprecated; **C** - Changed; **R** - Removed; **U** - Unsupported for CUDA version(s); **E** - Experimental

10.1.1 1. Device Management

CUDA	A	D	C	R	HIP	A	D
`cudaChooseDevice`					`hipChooseDevice`	1.6.0	
`cudaDeviceFlushGPUDirectRDMAWrites`	11.3						
`cudaDeviceGetAttribute`					`hipDeviceGetAttribute`	1.6.0	
`cudaDeviceGetByPCIBusId`					`hipDeviceGetByPCIBusId`	1.6.0	
`cudaDeviceGetCacheConfig`					`hipDeviceGetCacheConfig`	1.6.0	

contin

Table 1 – continued from previous page

CUDA	A	D	C	R	HIP	A	D
cudaDeviceGetDefaultMemPool	11.2				hipDeviceGetDefaultMemPool	5.2.0	
cudaDeviceGetHostAtomicCapabilities	13.0						
cudaDeviceGetLimit					hipDeviceGetLimit	1.6.0	
cudaDeviceGetMemPool	11.2				hipDeviceGetMemPool	5.2.0	
cudaDeviceGetNvSciSyncAttributes	10.2						
cudaDeviceGetP2PAtomicCapabilities	13.0						
cudaDeviceGetP2PAttribute	8.0				hipDeviceGetP2PAttribute	3.8.0	
cudaDeviceGetPCIBusId					hipDeviceGetPCIBusId	1.6.0	
cudaDeviceGetStreamPriorityRange					hipDeviceGetStreamPriorityRange	2.0.0	
cudaDeviceGetTexture1DLinearMaxWidth	11.1				hipDeviceGetTexture1DLinearMaxWidth	6.4.0	
cudaDeviceReset					hipDeviceReset	1.6.0	
cudaDeviceSetCacheConfig					hipDeviceSetCacheConfig	1.6.0	
cudaDeviceSetLimit					hipDeviceSetLimit	5.3.0	
cudaDeviceSetMemPool	11.2				hipDeviceSetMemPool	5.2.0	
cudaDeviceSynchronize					hipDeviceSynchronize	1.6.0	
cudaGetDevice					hipGetDevice	1.6.0	
cudaGetDeviceCount					hipGetDeviceCount	1.6.0	
cudaGetDeviceFlags					hipGetDeviceFlags	3.6.0	
cudaGetDeviceProperties					hipGetDeviceProperties	1.6.0	
cudaInitDevice	12.0						
cudaIpcCloseMemHandle					hipIpcCloseMemHandle	1.6.0	
cudaIpcGetEventHandle					hipIpcGetEventHandle	1.6.0	
cudaIpcGetMemHandle					hipIpcGetMemHandle	1.6.0	
cudaIpcOpenEventHandle					hipIpcOpenEventHandle	1.6.0	
cudaIpcOpenMemHandle					hipIpcOpenMemHandle	1.6.0	
cudaSetDevice					hipSetDevice	1.6.0	
cudaSetDeviceFlags					hipSetDeviceFlags	1.6.0	
cudaSetValidDevices					hipSetValidDevices	6.2.0	

10.1.2 2. Device Management [DEPRECATED]

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaDeviceGetSharedMemCo		12.4			hipDeviceGetSharedMemCo	1.6.0					
cudaDeviceSetSharedMemCo		12.4			hipDeviceSetSharedMemCo	1.6.0					

10.1.3 3. Error Handling

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaGetErrorName					hipGetErrorName	1.6.0					
cudaGetErrorString					hipGetErrorString	1.6.0					
cudaGetLastError					hipGetLastError	1.6.0					
cudaPeekAtLastError					hipPeekAtLastError	1.6.0					

10.1.4 4. Stream Management

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaCtxResetPersistingL2	11.0										
cudaStreamAddCallback					hipStreamAddCallback	1.6.0					
cudaStreamAttachMemAsync					hipStreamAttachMemAsy	3.7.0					
cudaStreamBeginCapture	10.0				hipStreamBeginCapture	4.3.0					
cudaStreamBeginCaptureTo	12.3				hipStreamBeginCapture'	6.2.0					
cudaStreamCopyAttributes	11.0				hipStreamCopyAttribut	7.2.0					
cudaStreamCreate					hipStreamCreate	1.6.0					
cudaStreamCreateWithFlag					hipStreamCreateWithFl	1.6.0					
cudaStreamCreateWithPrio					hipStreamCreateWithPr	2.0.0					
cudaStreamDestroy					hipStreamDestroy	1.6.0					
cudaStreamEndCapture	10.0				hipStreamEndCapture	4.3.0					
cudaStreamGetAttribute	11.0				hipStreamGetAttribute	7.1.0					
cudaStreamGetCaptureInfo	10.1		13.0		hipStreamGetCaptureIn	5.0.0				13.0	
cudaStreamGetCaptureInfo	12.3										
cudaStreamGetDevice	12.8										
cudaStreamGetFlags					hipStreamGetFlags	1.6.0					
cudaStreamGetId	12.0				hipStreamGetId	7.1.0					
cudaStreamGetPriority					hipStreamGetPriority	2.0.0					
cudaStreamIsCapturing	10.0				hipStreamIsCapturing	5.0.0					
cudaStreamQuery					hipStreamQuery	1.6.0					
cudaStreamSetAttribute	11.0				hipStreamSetAttribute	7.1.0					
cudaStreamSynchronize					hipStreamSynchronize	1.6.0					
cudaStreamUpdateCaptureD	11.3		13.0		hipStreamUpdateCaptur	5.0.0				13.0	
cudaStreamUpdateCaptureD	12.3										
cudaStreamWaitEvent					hipStreamWaitEvent	1.6.0					
cudaThreadExchangeStream	10.1				hipThreadExchangeStre	5.2.0					

10.1.5 5. Event Management

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaEventCreate					hipEventCreate	1.6.0					
cudaEventCreateWithFlags					hipEventCreateWithFlags	1.6.0					
cudaEventDestroy					hipEventDestroy	1.6.0					
cudaEventElapsedTime					hipEventElapsedTime	1.6.0					
cudaEventElapsedTime_v2	12.8										
cudaEventQuery					hipEventQuery	1.6.0					
cudaEventRecord					hipEventRecord	1.6.0					
cudaEventRecordWithFlags	11.1				hipEventRecordWithFlags	6.4.0					
cudaEventSynchronize					hipEventSynchronize	1.6.0					

10.1.6 6. External Resource Interoperability

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaDestroyExternalMemory	10.0				hipDestroyExternalMem	4.3.0					
cudaDestroyExternalSemaphor	10.0				hipDestroyExternalSem	4.4.0					
cudaExternalMemoryGetMapped	10.0				hipExternalMemoryGetM	4.3.0					
cudaExternalMemoryGetMapped	10.0										
cudaImportExternalMemory	10.0				hipImportExternalMemo	4.3.0					
cudaImportExternalSemaphore	10.0				hipImportExternalSema	4.4.0					
cudaSignalExternalSemaphore	10.0				hipSignalExternalSema	4.4.0					
cudaWaitExternalSemaphoresA	10.0				hipWaitExternalSemaph	4.4.0					

10.1.7 7. Execution Control

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaFuncGetAttributes					hipFuncGetAttributes	1.9.0					
cudaFuncGetName	12.3										
cudaFuncGetParamCount	13.2										
cudaFuncGetParamInfo	12.4										
cudaFuncSetAttribute	9.0				hipFuncSetAttribute	3.9.0					
cudaFuncSetCacheConfig					hipFuncSetCacheConfig	1.6.0					
cudaGetParameterBuffer											
cudaGetParameterBufferV											
cudaLaunchCooperativeKe	9.0				hipLaunchCooperativeKe	2.6.0					
cudaLaunchCooperativeKe	9.0	11.3		13.0	hipLaunchCooperativeKe	2.6.0					
cudaLaunchHostFunc	10.0				hipLaunchHostFunc	5.2.0					
cudaLaunchHostFunc_v2	13.2										
cudaLaunchKernel					hipLaunchKernel	1.6.0					
cudaLaunchKernelExC	11.8				hipLaunchKernelExC	7.0.0					
cudaSetDoubleForDevice		10.0		13.0							
cudaSetDoubleForHost		10.0		13.0							

10.1.8 8. Execution Control [DEPRECATED]

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaFuncSetSharedMemConf		12.4			hipFuncSetSharedMemConf	3.9.0					

10.1.9 9. Occupancy

CUDA	A	D	C	R	HIP	A	D	C	R	U	E	
cudaGraphNodeGetParams	13.2											
cudaOccupancyAvailableD	11.0				hipOccupancyAvailableDy	7.2.0						
cudaOccupancyMaxActiveB					hipOccupancyMaxActiveBl	1.6.0						
cudaOccupancyMaxActiveB					hipOccupancyMaxActiveBl	2.6.0						Flags
cudaOccupancyMaxActiveC	11.8											
cudaOccupancyMaxPotenti					hipOccupancyMaxPotentia	1.6.0						
cudaOccupancyMaxPotenti					hipOccupancyMaxPotentia	5.5.0						
cudaOccupancyMaxPotenti					hipOccupancyMaxPotentia	5.5.0						hFlags
cudaOccupancyMaxPotenti					hipOccupancyMaxPotentia	3.5.0						
cudaOccupancyMaxPotenti	11.8				hipOccupancyMaxPotentia	7.13.(					7.13.0	

10.1.10 10. Memory Management

CUDA	A	D	C	R	HIP	A
cudaArrayGetInfo					hipArrayGetInfo	5.6
cudaArrayGetMemoryRequirements	11.6					
cudaArrayGetPlane	11.2					
cudaArrayGetSparseProperties	11.1					
cudaDeviceRegisterAsyncNotification	12.4					
cudaDeviceUnregisterAsyncNotification	12.4					
cudaFree					hipFree	1.5
cudaFreeArray					hipFreeArray	1.6
cudaFreeHost					hipHostFree	1.6
cudaFreeMipmappedArray					hipFreeMipmappedArray	3.5
cudaGetMipmappedArrayLevel					hipGetMipmappedArrayLevel	3.5
cudaGetSymbolAddress					hipGetSymbolAddress	2.0
cudaGetSymbolSize					hipGetSymbolSize	2.0
cudaHostAlloc					hipHostAlloc	1.6
cudaHostGetDevicePointer					hipHostGetDevicePointer	1.6
cudaHostGetFlags					hipHostGetFlags	1.6
cudaHostRegister					hipHostRegister	1.6
cudaHostUnregister					hipHostUnregister	1.6
cudaMalloc					hipMalloc	1.5
cudaMalloc3D					hipMalloc3D	1.9
cudaMalloc3DArray					hipMalloc3DArray	1.7
cudaMallocArray					hipMallocArray	1.6

Table 2 – continued from previous page

CUDA	A	D	C	R	HIP	A
cudaMallocHost					hipHostMalloc	1.6
cudaMallocManaged					hipMallocManaged	2.5
cudaMallocMipmappedArray					hipMallocMipmappedArray	3.5
cudaMallocPitch					hipMallocPitch	1.6
cudaMemAdvise	8.0		13.0		hipMemAdvise	3.7
cudaMemAdvise_v2	12.2					
cudaMemDiscardAndPrefetchBatchAsync	13.0					
cudaMemDiscardBatchAsync	13.0					
cudaMemGetInfo					hipMemGetInfo	1.6
cudaMemPrefetchAsync	8.0		13.0		hipMemPrefetchAsync	3.7
cudaMemPrefetchAsync_v2	12.2					
cudaMemPrefetchBatchAsync	13.0				hipMemPrefetchBatchAsync	7.1
cudaMemRangeGetAttribute	8.0				hipMemRangeGetAttribute	3.7
cudaMemRangeGetAttributes	8.0				hipMemRangeGetAttributes	3.7
cudaMemcpy					hipMemcpy	1.5
cudaMemcpy2D					hipMemcpy2D	1.6
cudaMemcpy2DArrayToArray					hipMemcpy2DArrayToArray	6.2
cudaMemcpy2DAsync					hipMemcpy2DAsync	1.6
cudaMemcpy2DFromArray					hipMemcpy2DFromArray	3.0
cudaMemcpy2DFromArrayAsync					hipMemcpy2DFromArrayAsync	3.0
cudaMemcpy2DToArray					hipMemcpy2DToArray	1.6
cudaMemcpy2DToArrayAsync					hipMemcpy2DToArrayAsync	4.3
cudaMemcpy3D					hipMemcpy3D	1.6
cudaMemcpy3DAsync					hipMemcpy3DAsync	2.8
cudaMemcpy3DBatchAsync	12.8		13.0		hipMemcpy3DBatchAsync	7.1
cudaMemcpy3DPeer					hipMemcpy3DPeer	7.1
cudaMemcpy3DPeerAsync					hipMemcpy3DPeerAsync	7.1
cudaMemcpy3DWithAttributesAsync	13.2					
cudaMemcpyAsync					hipMemcpyAsync	1.6
cudaMemcpyBatchAsync	12.8		13.0		hipMemcpyBatchAsync	7.1
cudaMemcpyFromSymbol					hipMemcpyFromSymbol	1.6
cudaMemcpyFromSymbolAsync					hipMemcpyFromSymbolAsync	1.6
cudaMemcpyPeer					hipMemcpyPeer	1.6
cudaMemcpyPeerAsync					hipMemcpyPeerAsync	1.6
cudaMemcpyToSymbol					hipMemcpyToSymbol	1.6
cudaMemcpyToSymbolAsync					hipMemcpyToSymbolAsync	1.6
cudaMemcpyWithAttributesAsync	13.2					
cudaMemset					hipMemset	1.6
cudaMemset2D					hipMemset2D	1.7
cudaMemset2DAsync					hipMemset2DAsync	1.9
cudaMemset3D					hipMemset3D	1.9
cudaMemset3DAsync					hipMemset3DAsync	1.9
cudaMemsetAsync					hipMemsetAsync	1.6
cudaMipmappedArrayGetMemoryRequirements	11.6				hipMipmappedArrayGetMemoryRequirements	7.1
make_cudaExtent					make_hipExtent	1.7
make_cudaPitchedPtr					make_hipPitchedPtr	1.7
make_cudaPos					make_hipPos	1.7

10.1.11 11. Memory Management [DEPRECATED]

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaMemcpyArrayToArray		10.1									
cudaMemcpyFromArray		10.1			hipMemcpyFromArray	1.9.0	3.8.0				
cudaMemcpyFromArrayAsync		10.1									
cudaMemcpyToArray		10.1			hipMemcpyToArray	1.6.0	3.8.0				
cudaMemcpyToArrayAsync		10.1									

10.1.12 12. Stream Ordered Memory Allocator

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaFreeAsync	11.2				hipFreeAsync	5.2.0					
cudaMallocAsync	11.2				hipMallocAsync	5.2.0					
cudaMallocFromPoolAsync	11.2				hipMallocFromPoolAsync	5.2.0					
cudaMemGetDefaultMemPool	13.0										
cudaMemGetMemPool	13.0				hipMemGetMemPool	7.12.(					
cudaMemPoolCreate	11.2				hipMemPoolCreate	5.2.0					
cudaMemPoolDestroy	11.2				hipMemPoolDestroy	5.2.0					
cudaMemPoolExportPointer	11.2				hipMemPoolExportPointer	5.2.0					
cudaMemPoolExportToShare	11.2				hipMemPoolExportToSharea	5.2.0					
cudaMemPoolGetAccess	11.2				hipMemPoolGetAccess	5.2.0					
cudaMemPoolGetAttribute	11.2				hipMemPoolGetAttribute	5.2.0					
cudaMemPoolImportFromSha	11.2				hipMemPoolImportFromSha	5.2.0					
cudaMemPoolImportPointer	11.2				hipMemPoolImportPointer	5.2.0					
cudaMemPoolSetAccess	11.2				hipMemPoolSetAccess	5.2.0					
cudaMemPoolSetAttribute	11.2				hipMemPoolSetAttribute	5.2.0					
cudaMemPoolTrimTo	11.2				hipMemPoolTrimTo	5.2.0					
cudaMemSetMemPool	13.0				hipMemSetMemPool	7.12.(					

10.1.13 13. Unified Addressing

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaPointerGetAttributes					hipPointerGetAttributes	1.6.0					

10.1.14 14. Peer Device Memory Access

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaDeviceCanAccessPeer					hipDeviceCanAccessPeer	1.9.0					
cudaDeviceDisablePeerAcce					hipDeviceDisablePeerAcce	1.9.0					
cudaDeviceEnablePeerAcces					hipDeviceEnablePeerAcces	1.9.0					

10.1.15 15. OpenGL Interoperability

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaGLGetDevices					hipGLGetDevices	4.5.0					
cudaGraphicsGLRegisterBuf					hipGraphicsGLRegisterBuf	4.5.0					
cudaGraphicsGLRegisterIma					hipGraphicsGLRegisterIma	5.1.0					
cudaWGLGetDevice											

10.1.16 16. OpenGL Interoperability [DEPRECATED]

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaGLMapBufferObject		10.0									
cudaGLMapBufferObjectAsync		10.0									
cudaGLRegisterBufferObject		10.0									
cudaGLSetBufferObjectMapFlags		10.0									
cudaGLSetGLDevice		10.0									
cudaGLUnmapBufferObject		10.0									
cudaGLUnmapBufferObjectAsync		10.0									
cudaGLUnregisterBufferObject		10.0									

10.1.17 17. Direct3D 9 Interoperability

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaD3D9GetDevice											
cudaD3D9GetDevices											
cudaD3D9GetDirect3DDevice											
cudaD3D9SetDirect3DDevice											
cudaGraphicsD3D9RegisterResource											

10.1.18 18. Direct3D 9 Interoperability [DEPRECATED]

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaD3D9MapResources		10.0									
cudaD3D9RegisterResource											
cudaD3D9ResourceGetMappedArray		10.0									
cudaD3D9ResourceGetMappedPitch		10.0									
cudaD3D9ResourceGetMappedPointer		10.0									
cudaD3D9ResourceGetMappedSize		10.0									
cudaD3D9ResourceGetSurfaceDimensions		10.0									
cudaD3D9ResourceSetMapFlags		10.0									
cudaD3D9UnmapResources		10.0									
cudaD3D9UnregisterResource		10.0									

10.1.19 19. Direct3D 10 Interoperability

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaD3D10GetDevice											
cudaD3D10GetDevices											
cudaGraphicsD3D10RegisterResource											

10.1.20 20. Direct3D 10 Interoperability [DEPRECATED]

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaD3D10GetDirect3DDevice		10.0									
cudaD3D10MapResources		10.0									
cudaD3D10RegisterResource		10.0									
cudaD3D10ResourceGetMappedArray		10.0									
cudaD3D10ResourceGetMappedPitch		10.0									
cudaD3D10ResourceGetMappedPointer		10.0									
cudaD3D10ResourceGetMappedSize		10.0									
cudaD3D10ResourceGetSurfaceDimensions		10.0									
cudaD3D10ResourceSetMapFlags		10.0									
cudaD3D10SetDirect3DDevice		10.0									
cudaD3D10UnmapResources		10.0									
cudaD3D10UnregisterResource		10.0									

10.1.21 21. Direct3D 11 Interoperability

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaD3D11GetDevice											
cudaD3D11GetDevices											
cudaGraphicsD3D11RegisterResource											

10.1.22 22. Direct3D 11 Interoperability [DEPRECATED]

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaD3D11GetDirect3DDevice		10.0									
cudaD3D11SetDirect3DDevice		10.0									

10.1.23 23. VDPAU Interoperability

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaGraphicsVDPAURegisterOutputSurface											
cudaGraphicsVDPAURegisterVideoSurface											
cudaVDPAUGetDevice											
cudaVDPAUSetVDPAUDevice											

10.1.24 24. EGL Interoperability

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaEGLStreamConsumerAcquireFrame	9.1										
cudaEGLStreamConsumerConnect	9.1										
cudaEGLStreamConsumerConnectWithFlags	9.1										
cudaEGLStreamConsumerDisconnect	9.1										
cudaEGLStreamConsumerReleaseFrame	9.1										
cudaEGLStreamProducerConnect	9.1										
cudaEGLStreamProducerDisconnect	9.1										
cudaEGLStreamProducerPresentFrame	9.1										
cudaEGLStreamProducerReturnFrame	9.1										
cudaEventCreateFromEGLSync	9.1										
cudaGraphicsEGLRegisterImage	9.1										
cudaGraphicsResourceGetMappedEglFrame	9.1										

10.1.25 25. Graphics Interoperability

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaGraphicsMapResources					hipGraphicsMapResources	4.5.0					
cudaGraphicsResourceGetMapp											
cudaGraphicsResourceGetMapp					hipGraphicsResourceGetM	4.5.0					
cudaGraphicsResourceSetMapF											
cudaGraphicsSubResourceGetM					hipGraphicsSubResourceG	5.1.0					
cudaGraphicsUnmapResources					hipGraphicsUnmapResourc	4.5.0					
cudaGraphicsUnregisterResou					hipGraphicsUnregisterRe	4.5.0					

10.1.26 26. Texture Object Management

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaCreateChannelDesc					hipCreateChannelDesc	1.6.0					
cudaCreateTextureObject					hipCreateTextureObject	1.7.0					
cudaCreateTextureObject_	11.8			12.0							
cudaDestroyTextureObject					hipDestroyTextureObject	1.7.0					
cudaGetChannelDesc					hipGetChannelDesc	1.7.0					
cudaGetTextureObjectResc					hipGetTextureObjectReso	1.7.0					
cudaGetTextureObjectResc					hipGetTextureObjectReso	1.7.0					
cudaGetTextureObjectText					hipGetTextureObjectText	1.7.0					
cudaGetTextureObjectText	11.8			12.0							

10.1.27 27. Surface Object Management

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaCreateSurfaceObject					hipCreateSurfaceObjec	1.9.0					
cudaDestroySurfaceObject					hipDestroySurfaceObje	1.9.0					
cudaGetSurfaceObjectResource											

10.1.28 28. Version Management

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaDriverGetVersion					hipDriverGetVersion	1.6.0					
cudaRuntimeGetVersion					hipRuntimeGetVersion	1.6.0					

10.1.29 29. Error Log Management

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaLogsCurrent	13.0										
cudaLogsDumpToFile	13.0										
cudaLogsDumpToMemory	13.0										
cudaLogsRegisterCallback	13.0										
cudaLogsUnregisterCallback	13.0										

10.1.30 30. Graph Management

CUDA	A	D	C	R	HIP
cudaDeviceGetGraphMemAttribute	11.4				hipDeviceGetGraphMemAttribute
cudaDeviceGraphMemTrim	11.4				hipDeviceGraphMemTrim
cudaDeviceSetGraphMemAttribute	11.4				hipDeviceSetGraphMemAttribute
cudaGraphAddChildGraphNode	10.0				hipGraphAddChildGraphNode
cudaGraphAddDependencies	10.0		13.0		hipGraphAddDependencies
cudaGraphAddDependencies_v2	12.3				
cudaGraphAddEmptyNode	10.0				hipGraphAddEmptyNode
cudaGraphAddEventRecordNode	11.1				hipGraphAddEventRecordNode

Table 3 – continued from previous page

CUDA	A	D	C	R	HIP
cudaGraphAddEventWaitNode	11.1				hipGraphAddEventWaitNode
cudaGraphAddExternalSemaphoresSignalNode	11.2				hipGraphAddExternalSemaphoresSig
cudaGraphAddExternalSemaphoresWaitNode	11.2				hipGraphAddExternalSemaphoresWa
cudaGraphAddHostNode	10.0				hipGraphAddHostNode
cudaGraphAddKernelNode	10.0				hipGraphAddKernelNode
cudaGraphAddMemAllocNode	11.4				hipGraphAddMemAllocNode
cudaGraphAddMemFreeNode	11.4				hipGraphAddMemFreeNode
cudaGraphAddMemcpyNode	10.0				hipGraphAddMemcpyNode
cudaGraphAddMemcpyNode1D	11.1				hipGraphAddMemcpyNode1D
cudaGraphAddMemcpyNodeFromSymbol	11.1				hipGraphAddMemcpyNodeFromSymbol
cudaGraphAddMemcpyNodeToSymbol	11.1				hipGraphAddMemcpyNodeToSymbol
cudaGraphAddMemsetNode	10.0				hipGraphAddMemsetNode
cudaGraphAddNode	12.2		13.0		hipGraphAddNode
cudaGraphAddNode_v2	12.3				
cudaGraphChildGraphNodeGetGraph	10.0				hipGraphChildGraphNodeGetGraph
cudaGraphClone	10.0				hipGraphClone
cudaGraphConditionalHandleCreate	12.3				
cudaGraphConditionalHandleCreate_v2	13.1				
cudaGraphCreate	10.0				hipGraphCreate
cudaGraphDebugDotPrint	11.3				hipGraphDebugDotPrint
cudaGraphDestroy	10.0				hipGraphDestroy
cudaGraphDestroyNode	10.0				hipGraphDestroyNode
cudaGraphEventRecordNodeGetEvent	11.1				hipGraphEventRecordNodeGetEvent
cudaGraphEventRecordNodeSetEvent	11.1				hipGraphEventRecordNodeSetEvent
cudaGraphEventWaitNodeGetEvent	11.1				hipGraphEventWaitNodeGetEvent
cudaGraphEventWaitNodeSetEvent	11.1				hipGraphEventWaitNodeSetEvent
cudaGraphExecChildGraphNodeSetParams	11.1				hipGraphExecChildGraphNodeSetPa
cudaGraphExecDestroy	10.0				hipGraphExecDestroy
cudaGraphExecEventRecordNodeSetEvent	11.1				hipGraphExecEventRecordNodeSetE
cudaGraphExecEventWaitNodeSetEvent	11.1				hipGraphExecEventWaitNodeSetEve
cudaGraphExecExternalSemaphoresSignalNodeSetParams	11.2				hipGraphExecExternalSemaphoresS
cudaGraphExecExternalSemaphoresWaitNodeSetParams	11.2				hipGraphExecExternalSemaphoresW
cudaGraphExecGetFlags	12.0				hipGraphExecGetFlags
cudaGraphExecGetId	13.1				
cudaGraphExecHostNodeSetParams	11.0				hipGraphExecHostNodeSetParams
cudaGraphExecKernelNodeSetParams	11.0				hipGraphExecKernelNodeSetParams
cudaGraphExecMemcpyNodeSetParams	11.0				hipGraphExecMemcpyNodeSetParams
cudaGraphExecMemcpyNodeSetParams1D	11.1				hipGraphExecMemcpyNodeSetParams
cudaGraphExecMemcpyNodeSetParamsFromSymbol	11.1				hipGraphExecMemcpyNodeSetParams
cudaGraphExecMemcpyNodeSetParamsToSymbol	11.1				hipGraphExecMemcpyNodeSetParams
cudaGraphExecMemsetNodeSetParams	11.0				hipGraphExecMemsetNodeSetParams
cudaGraphExecNodeSetParams	12.2				hipGraphExecNodeSetParams
cudaGraphExecUpdate	11.0				hipGraphExecUpdate
cudaGraphExternalSemaphoresSignalNodeGetParams	11.2				hipGraphExternalSemaphoresSignal
cudaGraphExternalSemaphoresSignalNodeSetParams	11.2				hipGraphExternalSemaphoresSignal
cudaGraphExternalSemaphoresWaitNodeGetParams	11.2				hipGraphExternalSemaphoresWaitN
cudaGraphExternalSemaphoresWaitNodeSetParams	11.2				hipGraphExternalSemaphoresWaitN
cudaGraphGetEdges	10.0		13.0		hipGraphGetEdges
cudaGraphGetEdges_v2	12.3				
cudaGraphGetId	13.1				

Table 3 – continued from previous page

CUDA	A	D	C	R	HIP
cudaGraphGetNodes	10.0				hipGraphGetNodes
cudaGraphGetRootNodes	10.0				hipGraphGetRootNodes
cudaGraphHostNodeGetParams	10.0				hipGraphHostNodeGetParams
cudaGraphHostNodeSetParams	10.0				hipGraphHostNodeSetParams
cudaGraphInstantiate	10.0				hipGraphInstantiate
cudaGraphInstantiateWithFlags	11.4				hipGraphInstantiateWithFlags
cudaGraphInstantiateWithParams	12.0				hipGraphInstantiateWithParams
cudaGraphKernelNodeCopyAttributes	11.0		13.0		hipGraphKernelNodeCopyAttribute
cudaGraphKernelNodeGetAttribute	11.0				hipGraphKernelNodeGetAttribute
cudaGraphKernelNodeGetParams	11.0				hipGraphKernelNodeGetParams
cudaGraphKernelNodeSetAttribute	11.0				hipGraphKernelNodeSetAttribute
cudaGraphKernelNodeSetParams	11.0				hipGraphKernelNodeSetParams
cudaGraphLaunch	11.0				hipGraphLaunch
cudaGraphMemAllocNodeGetParams	11.4				hipGraphMemAllocNodeGetParams
cudaGraphMemFreeNodeGetParams	11.4				hipGraphMemFreeNodeGetParams
cudaGraphMemcpyNodeGetParams	11.0				hipGraphMemcpyNodeGetParams
cudaGraphMemcpyNodeSetParams	11.0				hipGraphMemcpyNodeSetParams
cudaGraphMemcpyNodeSetParams1D	11.1				hipGraphMemcpyNodeSetParams1D
cudaGraphMemcpyNodeSetParamsFromSymbol	11.1				hipGraphMemcpyNodeSetParamsFrom
cudaGraphMemcpyNodeSetParamsToSymbol	11.1				hipGraphMemcpyNodeSetParamsToSy
cudaGraphMemsetNodeGetParams	11.0				hipGraphMemsetNodeGetParams
cudaGraphMemsetNodeSetParams	11.0				hipGraphMemsetNodeSetParams
cudaGraphNodeFindInClone	11.0				hipGraphNodeFindInClone
cudaGraphNodeGetContainingGraph	13.1				
cudaGraphNodeGetDependencies	11.0		13.0		hipGraphNodeGetDependencies
cudaGraphNodeGetDependencies_v2	12.3				
cudaGraphNodeGetDependentNodes	11.0		13.0		hipGraphNodeGetDependentNodes
cudaGraphNodeGetDependentNodes_v2	12.3				
cudaGraphNodeGetEnabled	11.6				hipGraphNodeGetEnabled
cudaGraphNodeGetLocalId	13.1				
cudaGraphNodeGetToolsId	13.1				
cudaGraphNodeGetType	11.0				hipGraphNodeGetType
cudaGraphNodeSetEnabled	11.6				hipGraphNodeSetEnabled
cudaGraphNodeSetParams	12.2				hipGraphNodeSetParams
cudaGraphReleaseUserObject	11.3				hipGraphReleaseUserObject
cudaGraphRemoveDependencies	11.0		13.0		hipGraphRemoveDependencies
cudaGraphRemoveDependencies_v2	12.3				
cudaGraphRetainUserObject	11.3				hipGraphRetainUserObject
cudaGraphUpload	11.1				hipGraphUpload
cudaUserObjectCreate	11.3				hipUserObjectCreate
cudaUserObjectRelease	11.3				hipUserObjectRelease
cudaUserObjectRetain	11.3				hipUserObjectRetain

10.1.31 31. Driver Entry Point Access

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaGetDriverEntryP(	11.3	13.0	12.0		hipGetDriverEn	7.1.0				11.3 11.4 11.5 11.6 11.7 11.8	
cudaGetDriverEntryP(	12.5										

10.1.32 32. Library Management

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaKernelSetAttributeForD	12.8										
cudaLibraryEnumerateKernel	12.8				hipLibraryEnumerateKer	7.2.0					
cudaLibraryGetGlobal	12.8										
cudaLibraryGetKernel	12.8				hipLibraryGetKernel	7.1.0					
cudaLibraryGetKernelCount	12.8				hipLibraryGetKernelCou	7.1.0					
cudaLibraryGetManaged	12.8										
cudaLibraryGetUnifiedFunct	12.8										
cudaLibraryLoadData	12.8				hipLibraryLoadData	7.1.0					
cudaLibraryLoadFromFile	12.8				hipLibraryLoadFromFile	7.1.0					
cudaLibraryUnload	12.8				hipLibraryUnload	7.1.0					

10.1.33 33. Execution Context Management

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaDevResourceGenerateDesc	13.1										
cudaDevSmResourceSplit	13.1										
cudaDevSmResourceSplitByCount	13.1										
cudaDeviceGetDevResource	13.1										
cudaDeviceGetExecutionCtx	13.1										
cudaExecutionCtxDestroy	13.1										
cudaExecutionCtxGetDevResource	13.1										
cudaExecutionCtxGetDevice	13.1										
cudaExecutionCtxGetId	13.1										
cudaExecutionCtxRecordEvent	13.1										
cudaExecutionCtxStreamCreate	13.1										
cudaExecutionCtxSynchronize	13.1										
cudaExecutionCtxWaitEvent	13.1										
cudaGreenCtxCreate	13.1										
cudaStreamGetDevResource	13.1										

10.1.34 34. C++ API Routines

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaGetKernel	12.1										

10.1.35 35. Interactions with the CUDA Driver API

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaGetFuncBySymbol	11.0				hipGetFuncBySymbol	6.2.0					

10.1.36 36. Profiler Control

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaProfilerStart					hipProfilerStart	1.6.0	3.0.0				
cudaProfilerStop					hipProfilerStop	1.6.0	3.0.0				

10.1.37 37. Data types used by CUDA Runtime

CUDA	A	D	C	R	HIP
CUDART_2_OVER_PI					HIP_2_OVER_PI
CUDART_2_OVER_PI_F					HIP_2_OVER_PI_F
CUDART_3PIO4					HIP_3PIO4
CUDART_3PIO4_F					HIP_3PIO4_F
CUDART_DBL2INT_CVT					HIP_DBL2INT_CVT
CUDART_INF					HIP_INF
CUDART_INF_F					HIP_INF_F
CUDART_L2E					HIP_L2E
CUDART_L2E_F					HIP_L2E_F
CUDART_L2E_HI					HIP_L2E_HI
CUDART_L2E_LO					HIP_L2E_LO
CUDART_L2T					HIP_L2T
CUDART_L2T_F					HIP_L2T_F
CUDART_LG2					HIP_LG2
CUDART_LG2_F					HIP_LG2_F
CUDART_LG2_HI					HIP_LG2_HI
CUDART_LG2_LO					HIP_LG2_LO
CUDART_LG2_X_1024					HIP_LG2_X_1024
CUDART_LG2_X_1075					HIP_LG2_X_1075
CUDART_LGE					HIP_LGE
CUDART_LGE_F					HIP_LGE_F
CUDART_LGE_HI					HIP_LGE_HI
CUDART_LGE_LO					HIP_LGE_LO
CUDART_LN2					HIP_LN2
CUDART_LN2_F					HIP_LN2_F
CUDART_LN2_HI					HIP_LN2_HI
CUDART_LN2_LO					HIP_LN2_LO
CUDART_LN2_X_1024					HIP_LN2_X_1024
CUDART_LN2_X_1025					HIP_LN2_X_1025

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
CUDART_LN2_X_1075					HIP_LN2_X_1075
CUDART_LNPI					HIP_LNPI
CUDART_LNPI_F					HIP_LNPI_F
CUDART_LNT					HIP_LNT
CUDART_LNT_F					HIP_LNT_F
CUDART_LNT_HI					HIP_LNT_HI
CUDART_LNT_LO					HIP_LNT_LO
CUDART_MAX_NORMAL_F					HIP_MAX_NORMAL_F
CUDART_MIN_DENORM					HIP_MIN_DENORM
CUDART_MIN_DENORM_F					HIP_MIN_DENORM_F
CUDART_NAN					HIP_NAN
CUDART_NAN_F					HIP_NAN_F
CUDART_NEG_ZERO					HIP_NEG_ZERO
CUDART_NEG_ZERO_F					HIP_NEG_ZERO_F
CUDART_NORM_HUGE_F					HIP_NORM_HUGE_F
CUDART_ONE					HIP_ONE
CUDART_ONE_F					HIP_ONE_F
CUDART_PI					HIP_PI
CUDART_PIO2					HIP_PIO2
CUDART_PIO2_F					HIP_PIO2_F
CUDART_PIO2_HI					HIP_PIO2_HI
CUDART_PIO2_LO					HIP_PIO2_LO
CUDART_PIO4					HIP_PIO4
CUDART_PIO4_F					HIP_PIO4_F
CUDART_PIO4_HI					HIP_PIO4_HI
CUDART_PIO4_LO					HIP_PIO4_LO
CUDART_PI_F					HIP_PI_F
CUDART_PI_HI					HIP_PI_HI
CUDART_PI_LO					HIP_PI_LO
CUDART_REMQUO_BITS_F					HIP_REMQUO_BITS_F
CUDART_REMQUO_MASK_F					HIP_REMQUO_MASK_F
CUDART_SQRT_2OPI					HIP_SQRT_2OPI
CUDART_SQRT_2PI					HIP_SQRT_2PI
CUDART_SQRT_2PI_HI					HIP_SQRT_2PI_HI
CUDART_SQRT_2PI_LO					HIP_SQRT_2PI_LO
CUDART_SQRT_2_OVER_PI_F					HIP_SQRT_2_OVER_P
CUDART_SQRT_HALF					HIP_SQRT_HALF
CUDART_SQRT_HALF_F					HIP_SQRT_HALF_F
CUDART_SQRT_HALF_HI					HIP_SQRT_HALF_HI
CUDART_SQRT_HALF_HI_F					HIP_SQRT_HALF_HI_
CUDART_SQRT_HALF_LO					HIP_SQRT_HALF_LO
CUDART_SQRT_HALF_LO_F					HIP_SQRT_HALF_LO_
CUDART_SQRT_PIO2					HIP_SQRT_PIO2
CUDART_SQRT_PIO2_HI					HIP_SQRT_PIO2_HI
CUDART_SQRT_PIO2_LO					HIP_SQRT_PIO2_LO
CUDART_SQRT_TWO					HIP_SQRT_TWO
CUDART_SQRT_TWO_F					HIP_SQRT_TWO_F
CUDART_THIRD					HIP_THIRD
CUDART_THIRD_F					HIP_THIRD_F
CUDART_TRIG_PLOSS					HIP_TRIG_PLOSS

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
CUDART_TRIG_PLOSS_F					HIP_TRIG_PLOSS_F
CUDART_TWOTHIRD					HIP_TWOTHIRD
CUDART_TWO_TO_126_F					HIP_TWO_TO_126_F
CUDART_TWO_TO_23					HIP_TWO_TO_23
CUDART_TWO_TO_23_F					HIP_TWO_TO_23_F
CUDART_TWO_TO_24_F					HIP_TWO_TO_24_F
CUDART_TWO_TO_31_F					HIP_TWO_TO_31_F
CUDART_TWO_TO_32_F					HIP_TWO_TO_32_F
CUDART_TWO_TO_52					HIP_TWO_TO_52
CUDART_TWO_TO_53					HIP_TWO_TO_53
CUDART_TWO_TO_54					HIP_TWO_TO_54
CUDART_TWO_TO_M1022					HIP_TWO_TO_M1022
CUDART_TWO_TO_M126_F					HIP_TWO_TO_M126_F
CUDART_TWO_TO_M54					HIP_TWO_TO_M54
CUDART_ZERO					HIP_ZERO
CUDART_ZERO_F					HIP_ZERO_F
CUDA_EGL_MAX_PLANES	9.1				
CUDA_EMULATION_MANTISSA_CONTROL_DYNAMIC	13.0				
CUDA_EMULATION_MANTISSA_CONTROL_FIXED	13.0				
CUDA_EMULATION_SPECIAL_VALUES_SUPPORT_DEFAULT	13.0				
CUDA_EMULATION_SPECIAL_VALUES_SUPPORT_INFINITY	13.0				
CUDA_EMULATION_SPECIAL_VALUES_SUPPORT_NAN	13.0				
CUDA_EMULATION_SPECIAL_VALUES_SUPPORT_NONE	13.0				
CUDA_EMULATION_STRATEGY_DEFAULT	13.0				
CUDA_EMULATION_STRATEGY_EAGER	13.0				
CUDA_EMULATION_STRATEGY_PERFORMANT	13.0				
CUDA_IPC_HANDLE_SIZE					HIP_IPC_HANDLE_SI
CUDAlogLevel	13.0				
CUDAlogLevel_enum	13.0				
CUdevResourceDesc_st					
CUeglStreamConnection_st	9.1				
CUevent_st					ihipEvent_t
CUexternalMemory_st	10.0				
CUexternalSemaphore_st	10.0				
CUgraphExec_st	10.0				hipGraphExec
CUgraphNode_st	10.0				hipGraphNode
CUgraph_st	10.0				ihipGraph
CUlogsCallbackEntry_st	13.0				
CUstream_st					ihipStream_t
CUuuid_st					hipUUID_t
RESOURCE_ABI_BYTES	13.1				
cudaAccessPolicyWindow	11.0				hipAccessPolicyWi
cudaAccessProperty	11.0				hipAccessProperty
cudaAccessPropertyNormal	11.0				hipAccessProperty
cudaAccessPropertyPersisting	11.0				hipAccessProperty
cudaAccessPropertyStreaming	11.0				hipAccessProperty
cudaAddressModeBorder					hipAddressModeBor
cudaAddressModeClamp					hipAddressModeCla
cudaAddressModeMirror					hipAddressModeMir
cudaAddressModeWrap					hipAddressModeWra

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaArray					hipArray
cudaArrayColorAttachment	10.0				
cudaArrayCubemap					hipArrayCubemap
cudaArrayDefault					hipArrayDefault
cudaArrayDeferredMapping	11.6				
cudaArrayLayered					hipArrayLayered
cudaArrayMemoryRequirements	11.6				hipArrayMemoryReq
cudaArraySparse	11.1				
cudaArraySparseProperties	11.1				
cudaArraySparsePropertiesSingleMipTail	11.1				
cudaArraySurfaceLoadStore					hipArraySurfaceLo
cudaArrayTextureGather					hipArrayTextureGa
cudaArray_const_t					hipArray_const_t
cudaArray_t					hipArray_t
cudaAsyncCallback	12.4				
cudaAsyncCallbackEntry	12.4				
cudaAsyncCallbackHandle_t	12.4				
cudaAsyncNotificationInfo	12.4				
cudaAsyncNotificationInfo_t	12.4				
cudaAtomicCapabilityReduction	13.0				
cudaAtomicCapabilityScalar128	13.0				
cudaAtomicCapabilityScalar32	13.0				
cudaAtomicCapabilityScalar64	13.0				
cudaAtomicCapabilitySigned	13.0				
cudaAtomicCapabilityUnsigned	13.0				
cudaAtomicCapabilityVector32x4	13.0				
cudaAtomicOperation	13.0				
cudaAtomicOperationAnd	13.0				
cudaAtomicOperationCAS	13.0				
cudaAtomicOperationCapability	13.0				
cudaAtomicOperationExchange	13.0				
cudaAtomicOperationFloatAdd	13.0				
cudaAtomicOperationFloatMax	13.0				
cudaAtomicOperationFloatMin	13.0				
cudaAtomicOperationIntegerAdd	13.0				
cudaAtomicOperationIntegerDecrement	13.0				
cudaAtomicOperationIntegerIncrement	13.0				
cudaAtomicOperationIntegerMax	13.0				
cudaAtomicOperationIntegerMin	13.0				
cudaAtomicOperationOr	13.0				
cudaAtomicOperationXOR	13.0				
cudaBoundaryModeClamp					hipBoundaryModeCl
cudaBoundaryModeTrap					hipBoundaryModeTr
cudaBoundaryModeZero					hipBoundaryModeZe
cudaCGScope	9.0				
cudaCGScopeGrid	9.0				
cudaCGScopeInvalid	9.0				
cudaCGScopeMultiGrid	9.0				
cudaCSV				12.0	
cudaChannelFormatDesc					hipChannelFormatD

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaChannelFormatKind					hipChannelFormatK
cudaChannelFormatKindFloat					hipChannelFormatK
cudaChannelFormatKindNV12	11.2				
cudaChannelFormatKindNone					hipChannelFormatK
cudaChannelFormatKindSigned					hipChannelFormatK
cudaChannelFormatKindSignedBlockCompressed4	11.5				
cudaChannelFormatKindSignedBlockCompressed5	11.5				
cudaChannelFormatKindSignedBlockCompressed6H	11.5				
cudaChannelFormatKindSignedNormalized16X1	11.5				
cudaChannelFormatKindSignedNormalized16X2	11.5				
cudaChannelFormatKindSignedNormalized16X4	11.5				
cudaChannelFormatKindSignedNormalized8X1	11.5				
cudaChannelFormatKindSignedNormalized8X2	11.5				
cudaChannelFormatKindSignedNormalized8X4	11.5				
cudaChannelFormatKindUnsigned					hipChannelFormatK
cudaChannelFormatKindUnsignedBlockCompressed1	11.5				
cudaChannelFormatKindUnsignedBlockCompressed1SRGB	11.5				
cudaChannelFormatKindUnsignedBlockCompressed2	11.5				
cudaChannelFormatKindUnsignedBlockCompressed2SRGB	11.5				
cudaChannelFormatKindUnsignedBlockCompressed3	11.5				
cudaChannelFormatKindUnsignedBlockCompressed3SRGB	11.5				
cudaChannelFormatKindUnsignedBlockCompressed4	11.5				
cudaChannelFormatKindUnsignedBlockCompressed5	11.5				
cudaChannelFormatKindUnsignedBlockCompressed6H	11.5				
cudaChannelFormatKindUnsignedBlockCompressed7	11.5				
cudaChannelFormatKindUnsignedBlockCompressed7SRGB	11.5				
cudaChannelFormatKindUnsignedNormalized1010102	12.8				
cudaChannelFormatKindUnsignedNormalized16X1	11.5				
cudaChannelFormatKindUnsignedNormalized16X2	11.5				
cudaChannelFormatKindUnsignedNormalized16X4	11.5				
cudaChannelFormatKindUnsignedNormalized8X1	11.5				
cudaChannelFormatKindUnsignedNormalized8X2	11.5				
cudaChannelFormatKindUnsignedNormalized8X4	11.5				
cudaChildGraphNodeParams	12.2				hipChildGraphNode
cudaClusterSchedulingPolicy	11.8				hipClusterSchedul
cudaClusterSchedulingPolicyDefault	11.8				hipClusterSchedul
cudaClusterSchedulingPolicyLoadBalancing	11.8				hipClusterSchedul
cudaClusterSchedulingPolicySpread	11.8				hipClusterSchedul
cudaComputeMode					hipComputeMode
cudaComputeModeDefault					hipComputeModeDef
cudaComputeModeExclusive					hipComputeModeExc
cudaComputeModeExclusiveProcess					hipComputeModeExc
cudaComputeModeProhibited					hipComputeModePro
cudaConditionalNodeParams	12.3		13.1		
cudaCooperativeLaunchMultiDeviceNoPostSync	9.0			13.0	hipCooperativeLau
cudaCooperativeLaunchMultiDeviceNoPreSync	9.0			13.0	hipCooperativeLau
cudaCpuDeviceId	8.0				hipCpuDeviceId
cudaD3D10DeviceList					
cudaD3D10DeviceListAll					
cudaD3D10DeviceListCurrentFrame					

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaD3D10DeviceListNextFrame					
cudaD3D10MapFlags					
cudaD3D10MapFlagsNone					
cudaD3D10MapFlagsReadOnly					
cudaD3D10MapFlagsWriteDiscard					
cudaD3D10RegisterFlags					
cudaD3D10RegisterFlagsArray					
cudaD3D10RegisterFlagsNone					
cudaD3D11DeviceList					
cudaD3D11DeviceListAll					
cudaD3D11DeviceListCurrentFrame					
cudaD3D11DeviceListNextFrame					
cudaD3D9DeviceList					
cudaD3D9DeviceListAll					
cudaD3D9DeviceListCurrentFrame					
cudaD3D9DeviceListNextFrame					
cudaD3D9MapFlags					
cudaD3D9MapFlagsNone					
cudaD3D9MapFlagsReadOnly					
cudaD3D9MapFlagsWriteDiscard					
cudaD3D9RegisterFlags					
cudaD3D9RegisterFlagsArray					
cudaD3D9RegisterFlagsNone					
cudaDevAttrAsyncEngineCount					hipDeviceAttribut
cudaDevAttrCanFlushRemoteWrites	9.2				
cudaDevAttrCanMapHostMemory					hipDeviceAttribut
cudaDevAttrCanUseHostPointerForRegisteredMem	8.0				hipDeviceAttribut
cudaDevAttrClockRate					hipDeviceAttribut
cudaDevAttrClusterLaunch	11.8				
cudaDevAttrComputeCapabilityMajor					hipDeviceAttribut
cudaDevAttrComputeCapabilityMinor					hipDeviceAttribut
cudaDevAttrComputeMode					hipDeviceAttribut
cudaDevAttrComputePreemptionSupported	8.0				hipDeviceAttribut
cudaDevAttrConcurrentKernels					hipDeviceAttribut
cudaDevAttrConcurrentManagedAccess	8.0				hipDeviceAttribut
cudaDevAttrCooperativeLaunch	9.0				hipDeviceAttribut
cudaDevAttrCooperativeMultiDeviceLaunch	9.0	11.4		13.0	hipDeviceAttribut
cudaDevAttrD3D12CigSupported	12.5				
cudaDevAttrDeferredMappingCudaArraySupported	11.6				
cudaDevAttrDirectManagedMemAccessFromHost	9.2				hipDeviceAttribut
cudaDevAttrEccEnabled					hipDeviceAttribut
cudaDevAttrGPUDirectRDMAFlushWritesOptions	11.3				
cudaDevAttrGPUDirectRDMASupported	11.3				
cudaDevAttrGPUDirectRDMAWritesOrdering	11.3				
cudaDevAttrGlobalL1CacheSupported					hipDeviceAttribut
cudaDevAttrGlobalMemoryBusWidth					hipDeviceAttribut
cudaDevAttrGpuOverlap					hipDeviceAttribut
cudaDevAttrGpuPciDeviceId	12.8				
cudaDevAttrGpuPciSubsystemId	12.8				
cudaDevAttrHostMemoryPoolsSupported	13.0				

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaDevAttrHostNativeAtomicSupported	8.0				hipDeviceAttribut
cudaDevAttrHostNumaId	12.2				hipDeviceAttribut
cudaDevAttrHostNumaMemoryPoolsSupported	12.9				
cudaDevAttrHostNumaMultinodeIpcSupported	12.8				
cudaDevAttrHostRegisterReadOnlySupported	11.1				
cudaDevAttrHostRegisterSupported	9.2				hipDeviceAttribut
cudaDevAttrIntegrated					hipDeviceAttribut
cudaDevAttrIpcEventSupport	12.0				
cudaDevAttrIsMultiGpuBoard					hipDeviceAttribut
cudaDevAttrKernelExecTimeout					hipDeviceAttribut
cudaDevAttrL2CacheSize					hipDeviceAttribut
cudaDevAttrLocalL1CacheSupported					hipDeviceAttribut
cudaDevAttrManagedMemory					hipDeviceAttribut
cudaDevAttrMax	11.4				
cudaDevAttrMaxAccessPolicyWindowSize	11.3				
cudaDevAttrMaxBlockDimX					hipDeviceAttribut
cudaDevAttrMaxBlockDimY					hipDeviceAttribut
cudaDevAttrMaxBlockDimZ					hipDeviceAttribut
cudaDevAttrMaxBlocksPerMultiprocessor	11.0				hipDeviceAttribut
cudaDevAttrMaxGridDimX					hipDeviceAttribut
cudaDevAttrMaxGridDimY					hipDeviceAttribut
cudaDevAttrMaxGridDimZ					hipDeviceAttribut
cudaDevAttrMaxPersistingL2CacheSize	11.3				
cudaDevAttrMaxPitch					hipDeviceAttribut
cudaDevAttrMaxRegistersPerBlock					hipDeviceAttribut
cudaDevAttrMaxRegistersPerMultiprocessor					hipDeviceAttribut
cudaDevAttrMaxSharedMemoryPerBlock					hipDeviceAttribut
cudaDevAttrMaxSharedMemoryPerBlockOptin	9.0				hipDeviceAttribut
cudaDevAttrMaxSharedMemoryPerMultiprocessor					hipDeviceAttribut
cudaDevAttrMaxSurface1DLayeredLayers					
cudaDevAttrMaxSurface1DLayeredWidth					hipDeviceAttribut
cudaDevAttrMaxSurface1DWidth					hipDeviceAttribut
cudaDevAttrMaxSurface2DHeight					hipDeviceAttribut
cudaDevAttrMaxSurface2DLayeredHeight					hipDeviceAttribut
cudaDevAttrMaxSurface2DLayeredLayers					
cudaDevAttrMaxSurface2DLayeredWidth					hipDeviceAttribut
cudaDevAttrMaxSurface2DWidth					hipDeviceAttribut
cudaDevAttrMaxSurface3DDepth					hipDeviceAttribut
cudaDevAttrMaxSurface3DHeight					hipDeviceAttribut
cudaDevAttrMaxSurface3DWidth					hipDeviceAttribut
cudaDevAttrMaxSurfaceCubemapLayeredLayers					
cudaDevAttrMaxSurfaceCubemapLayeredWidth					hipDeviceAttribut
cudaDevAttrMaxSurfaceCubemapWidth					hipDeviceAttribut
cudaDevAttrMaxTexture1DLayeredLayers					
cudaDevAttrMaxTexture1DLayeredWidth					hipDeviceAttribut
cudaDevAttrMaxTexture1DLinearWidth					hipDeviceAttribut
cudaDevAttrMaxTexture1DMipmappedWidth					hipDeviceAttribut
cudaDevAttrMaxTexture1DWidth					hipDeviceAttribut
cudaDevAttrMaxTexture2DGatherHeight					hipDeviceAttribut
cudaDevAttrMaxTexture2DGatherWidth					hipDeviceAttribut

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaDevAttrMaxTexture2DHeight					hipDeviceAttribut
cudaDevAttrMaxTexture2DLayeredHeight					hipDeviceAttribut
cudaDevAttrMaxTexture2DLayeredLayers					
cudaDevAttrMaxTexture2DLayeredWidth					hipDeviceAttribut
cudaDevAttrMaxTexture2DLinearHeight					hipDeviceAttribut
cudaDevAttrMaxTexture2DLinearPitch					hipDeviceAttribut
cudaDevAttrMaxTexture2DLinearWidth					hipDeviceAttribut
cudaDevAttrMaxTexture2DMipmappedHeight					hipDeviceAttribut
cudaDevAttrMaxTexture2DMipmappedWidth					hipDeviceAttribut
cudaDevAttrMaxTexture2DWidth					hipDeviceAttribut
cudaDevAttrMaxTexture3DDepth					hipDeviceAttribut
cudaDevAttrMaxTexture3DDepthAlt					hipDeviceAttribut
cudaDevAttrMaxTexture3DHeight					hipDeviceAttribut
cudaDevAttrMaxTexture3DHeightAlt					hipDeviceAttribut
cudaDevAttrMaxTexture3DWidth					hipDeviceAttribut
cudaDevAttrMaxTexture3DWidthAlt					hipDeviceAttribut
cudaDevAttrMaxTextureCubemapLayeredLayers					
cudaDevAttrMaxTextureCubemapLayeredWidth					hipDeviceAttribut
cudaDevAttrMaxTextureCubemapWidth					hipDeviceAttribut
cudaDevAttrMaxThreadsPerBlock					hipDeviceAttribut
cudaDevAttrMaxThreadsPerMultiProcessor					hipDeviceAttribut
cudaDevAttrMaxTimelineSemaphoreInteropSupported	11.2	11.5		13.0	
cudaDevAttrMemSyncDomainCount	12.0				
cudaDevAttrMemoryClockRate					hipDeviceAttribut
cudaDevAttrMemoryPoolSupportedHandleTypes	11.3				
cudaDevAttrMemoryPoolsSupported	11.2				hipDeviceAttribut
cudaDevAttrMpsEnabled	12.3				
cudaDevAttrMultiGpuBoardGroupID					hipDeviceAttribut
cudaDevAttrMultiProcessorCount					hipDeviceAttribut
cudaDevAttrNumaConfig	12.2				
cudaDevAttrNumaId	12.2				
cudaDevAttrOnlyPartialHostNativeAtomicSupported	13.0				
cudaDevAttrPageableMemoryAccess	8.0				hipDeviceAttribut
cudaDevAttrPageableMemoryAccessUsesHostPageTables	9.2				hipDeviceAttribut
cudaDevAttrPciBusId					hipDeviceAttribut
cudaDevAttrPciDeviceId					hipDeviceAttribut
cudaDevAttrPciDomainId					hipDeviceAttribut
cudaDevAttrReserved122	12.0				
cudaDevAttrReserved123	12.0				
cudaDevAttrReserved124	12.0				
cudaDevAttrReserved127	12.1				
cudaDevAttrReserved128	12.1				
cudaDevAttrReserved129	12.1				
cudaDevAttrReserved132	12.1				
cudaDevAttrReserved141	12.9				
cudaDevAttrReserved145	13.0				
cudaDevAttrReserved92	9.0				
cudaDevAttrReserved93	9.0				
cudaDevAttrReserved94	9.0				hipDeviceAttribut
cudaDevAttrReserved96	13.0				hipDeviceAttribut

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaDevAttrReservedSharedMemoryPerBlock	11.0				
cudaDevAttrSingleToDoublePrecisionPerfRatio	8.0				hipDeviceAttribut
cudaDevAttrSparseCudaArraySupported	11.1				
cudaDevAttrStreamPrioritiesSupported					hipDeviceAttribut
cudaDevAttrSurfaceAlignment					hipDeviceAttribut
cudaDevAttrTccDriver					hipDeviceAttribut
cudaDevAttrTextureAlignment					hipDeviceAttribut
cudaDevAttrTexturePitchAlignment					hipDeviceAttribut
cudaDevAttrTimelineSemaphoreInteropSupported	11.5				
cudaDevAttrTotalConstantMemory					hipDeviceAttribut
cudaDevAttrUnifiedAddressing					hipDeviceAttribut
cudaDevAttrVulkanCigSupported	12.9				
cudaDevAttrWarpSize					hipDeviceAttribut
cudaDevP2PAttrAccessSupported	8.0				hipDevP2PAttrAcce
cudaDevP2PAttrCudaArrayAccessSupported	9.2				hipDevP2PAttrHipA
cudaDevP2PAttrNativeAtomicSupported	8.0				hipDevP2PAttrNati
cudaDevP2PAttrOnlyPartialNativeAtomicSupported	13.0				
cudaDevP2PAttrPerformanceRank	8.0				hipDevP2PAttrPerf
cudaDevResource	13.1				
cudaDevResourceDesc_t	13.1				
cudaDevResourceType	13.1				
cudaDevResourceTypeInvalid	13.1				
cudaDevResourceTypeSm	13.1				
cudaDevResourceTypeWorkqueue	13.1				
cudaDevResourceTypeWorkqueueConfig	13.1				
cudaDevResource_st	13.1				
cudaDevSmResource	13.1				
cudaDevSmResourceGroupBackfill	13.1				
cudaDevSmResourceGroupDefault	13.1				
cudaDevSmResourceGroupParams	13.1				
cudaDevSmResourceGroupParams_st	13.1				
cudaDevSmResourceGroup_flags	13.1				
cudaDevSmResourceSplitByCount_flags	13.1				
cudaDevSmResourceSplitIgnoreSmCoscheduling	13.1				
cudaDevSmResourceSplitMaxPotentialClusterSize	13.1				
cudaDevWorkqueueConfigResource	13.1				
cudaDevWorkqueueConfigScope	13.1				
cudaDevWorkqueueConfigScopeDeviceCtx	13.1				
cudaDevWorkqueueConfigScopeGreenCtxBalanced	13.1				
cudaDevWorkqueueResource	13.1				
cudaDeviceAttr					hipDeviceAttribut
cudaDeviceBlockingSync					hipDeviceSchedule
cudaDeviceLmemResizeToMax					hipDeviceLmemResi
cudaDeviceMapHost					hipDeviceMapHost
cudaDeviceMask					
cudaDeviceNumaConfig	12.2				
cudaDeviceNumaConfigNone	12.2				
cudaDeviceNumaConfigNumaNode	12.2				
cudaDeviceP2PAttr	8.0				hipDeviceP2PAttr
cudaDeviceProp					hipDeviceProp_t

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaDevicePropDontCare				12.0	
cudaDeviceScheduleAuto					hipDeviceSchedule
cudaDeviceScheduleBlockingSync					hipDeviceSchedule
cudaDeviceScheduleMask					hipDeviceSchedule
cudaDeviceScheduleSpin					hipDeviceSchedule
cudaDeviceScheduleYield					hipDeviceSchedule
cudaDeviceSyncMemops	12.1				
cudaDriverEntryPointQueryResult	12.0				hipDriverEntryPoi
cudaDriverEntryPointSuccess	12.0				hipDriverEntryPoi
cudaDriverEntryPointSymbolNotFound	12.0				hipDriverEntryPoi
cudaDriverEntryPointVersionNotSufficent	12.0				hipDriverEntryPoi
cudaEglColorFormat	9.1				
cudaEglColorFormatA	9.1				
cudaEglColorFormatABGR	9.1				
cudaEglColorFormatARGB	9.1				
cudaEglColorFormatAYUV	9.1				
cudaEglColorFormatAYUV_ER	9.1				
cudaEglColorFormatBGR	9.1				
cudaEglColorFormatBGRA	9.1				
cudaEglColorFormatBayer10BGGR	9.1				
cudaEglColorFormatBayer10CCCC	11.1				
cudaEglColorFormatBayer10GBRG	9.1				
cudaEglColorFormatBayer10GRBG	9.1				
cudaEglColorFormatBayer10RGGB	9.1				
cudaEglColorFormatBayer12BCCR	11.1				
cudaEglColorFormatBayer12BGGR	9.1				
cudaEglColorFormatBayer12CBRC	11.1				
cudaEglColorFormatBayer12CCCC	11.1				
cudaEglColorFormatBayer12CRBC	11.1				
cudaEglColorFormatBayer12GBRG	9.1				
cudaEglColorFormatBayer12GRBG	9.1				
cudaEglColorFormatBayer12RCCB	11.1				
cudaEglColorFormatBayer12RGGB	9.1				
cudaEglColorFormatBayer14BGGR	9.1				
cudaEglColorFormatBayer14GBRG	9.1				
cudaEglColorFormatBayer14GRBG	9.1				
cudaEglColorFormatBayer14RGGB	9.1				
cudaEglColorFormatBayer20BGGR	9.1				
cudaEglColorFormatBayer20GBRG	9.1				
cudaEglColorFormatBayer20GRBG	9.1				
cudaEglColorFormatBayer20RGGB	9.1				
cudaEglColorFormatBayerBCCR	11.1				
cudaEglColorFormatBayerBGGR	9.1				
cudaEglColorFormatBayerCBRC	11.1				
cudaEglColorFormatBayerCRBC	11.1				
cudaEglColorFormatBayerGBRG	9.1				
cudaEglColorFormatBayerGRBG	9.1				
cudaEglColorFormatBayerIspBGGR	9.2				
cudaEglColorFormatBayerIspGBRG	9.2				
cudaEglColorFormatBayerIspGRBG	9.2				

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaEglColorFormatBayerIspRGGB	9.2				
cudaEglColorFormatBayerRCCB	11.1				
cudaEglColorFormatBayerRGGB	9.1				
cudaEglColorFormatL	9.1				
cudaEglColorFormatR	9.1				
cudaEglColorFormatRG	9.1				
cudaEglColorFormatRGB	9.1				
cudaEglColorFormatRGBA	9.1				
cudaEglColorFormatUYVY2020	12.8				
cudaEglColorFormatUYVY422	9.1				
cudaEglColorFormatUYVY709	12.8				
cudaEglColorFormatUYVY709_ER	12.8				
cudaEglColorFormatUYVY_ER	9.1				
cudaEglColorFormatVYUY	11.4				
cudaEglColorFormatVYUY_ER	9.1				
cudaEglColorFormatY	11.2				
cudaEglColorFormatY10V10U10_420SemiPlanar	9.1				
cudaEglColorFormatY10V10U10_420SemiPlanar_2020	11.4				
cudaEglColorFormatY10V10U10_420SemiPlanar_709	11.4				
cudaEglColorFormatY10V10U10_420SemiPlanar_709_ER	11.4				
cudaEglColorFormatY10V10U10_420SemiPlanar_ER	11.4				
cudaEglColorFormatY10V10U10_422SemiPlanar	11.4				
cudaEglColorFormatY10V10U10_422SemiPlanar_2020	11.4				
cudaEglColorFormatY10V10U10_422SemiPlanar_709	11.4				
cudaEglColorFormatY10V10U10_444SemiPlanar	9.1				
cudaEglColorFormatY10V10U10_444SemiPlanar_709_ER	11.4				
cudaEglColorFormatY10V10U10_444SemiPlanar_ER	11.4				
cudaEglColorFormatY10_709_ER	11.4				
cudaEglColorFormatY10_ER	11.4				
cudaEglColorFormatY12V12U12_420SemiPlanar	9.1				
cudaEglColorFormatY12V12U12_420SemiPlanar_709_ER	11.4				
cudaEglColorFormatY12V12U12_420SemiPlanar_ER	11.4				
cudaEglColorFormatY12V12U12_444SemiPlanar	9.1				
cudaEglColorFormatY12V12U12_444SemiPlanar_709_ER	11.4				
cudaEglColorFormatY12V12U12_444SemiPlanar_ER	11.4				
cudaEglColorFormatY12_709_ER	11.4				
cudaEglColorFormatY12_ER	11.4				
cudaEglColorFormatYUV420Planar	9.1				
cudaEglColorFormatYUV420Planar_2020	11.4				
cudaEglColorFormatYUV420Planar_709	11.4				
cudaEglColorFormatYUV420Planar_ER	9.1				
cudaEglColorFormatYUV420SemiPlanar	9.1				
cudaEglColorFormatYUV420SemiPlanar_2020	11.4				
cudaEglColorFormatYUV420SemiPlanar_709	11.4				
cudaEglColorFormatYUV420SemiPlanar_ER	9.1				
cudaEglColorFormatYUV422Planar	9.1				
cudaEglColorFormatYUV422Planar_ER	9.1				
cudaEglColorFormatYUV422SemiPlanar	9.1				
cudaEglColorFormatYUV422SemiPlanar_ER	9.1				
cudaEglColorFormatYUV444Planar	9.1				

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaEglColorFormatYUV444Planar_ER	9.1				
cudaEglColorFormatYUV444SemiPlanar	9.1				
cudaEglColorFormatYUV444SemiPlanar_ER	9.1				
cudaEglColorFormatYUVA	11.4				
cudaEglColorFormatYUVA_ER	9.1				
cudaEglColorFormatYUV_ER	9.1				
cudaEglColorFormatYUYV422	9.1				
cudaEglColorFormatYUYV_ER	9.1				
cudaEglColorFormatYVU420Planar	9.1				
cudaEglColorFormatYVU420Planar_2020	11.4				
cudaEglColorFormatYVU420Planar_709	11.4				
cudaEglColorFormatYVU420Planar_ER	9.1				
cudaEglColorFormatYVU420SemiPlanar	9.1				
cudaEglColorFormatYVU420SemiPlanar_2020	11.4				
cudaEglColorFormatYVU420SemiPlanar_709	11.4				
cudaEglColorFormatYVU420SemiPlanar_ER	9.1				
cudaEglColorFormatYVU422Planar	9.1				
cudaEglColorFormatYVU422Planar_ER	9.1				
cudaEglColorFormatYVU422SemiPlanar	9.1				
cudaEglColorFormatYVU422SemiPlanar_ER	9.1				
cudaEglColorFormatYVU444Planar	9.1				
cudaEglColorFormatYVU444Planar_ER	9.1				
cudaEglColorFormatYVU444SemiPlanar	9.1				
cudaEglColorFormatYVU444SemiPlanar_ER					
cudaEglColorFormatYVYU	11.4				
cudaEglColorFormatYVYU_ER	9.1				
cudaEglColorFormatY_709_ER	11.4				
cudaEglColorFormatY_ER	11.4				
cudaEglFrame	9.1				
cudaEglFrameType	9.1				
cudaEglFrameTypeArray	9.1				
cudaEglFrameTypePitch	9.1				
cudaEglFrame_st	9.1				
cudaEglPlaneDesc	9.1				
cudaEglPlaneDesc_st	9.1				
cudaEglResourceLocationFlags	9.1				
cudaEglResourceLocationSysmem	9.1				
cudaEglResourceLocationVidmem	9.1				
cudaEglStreamConnection	9.1				
cudaEmulationMantissaControl	13.0				
cudaEmulationMantissaControl_t	13.0				
cudaEmulationSpecialValuesSupport	13.0				
cudaEmulationSpecialValuesSupport_t	13.0				
cudaEmulationStrategy	13.0				
cudaEmulationStrategy_t	13.0				
cudaEnableDefault	11.3				hipEnableDefault
cudaEnableLegacyStream	11.3				hipEnableLegacySt
cudaEnablePerThreadDefaultStream	11.3				hipEnablePerThrea
cudaError					hipError_t
cudaErrorAddressOfConstant		3.1			

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaErrorAlreadyAcquired	10.1				hipErrorAlreadyAc
cudaErrorAlreadyMapped	10.1				hipErrorAlreadyMa
cudaErrorApiFailureBase		4.1			
cudaErrorArrayIsMapped	10.1				hipErrorArrayIsMa
cudaErrorAssert					hipErrorAssert
cudaErrorCallRequiresNewerDriver	11.1				
cudaErrorCapturedEvent	10.0				hipErrorCapturedE
cudaErrorCdpNotSupported	12.0				
cudaErrorCdpVersionMismatch	12.0				
cudaErrorCompatNotSupportedOnDevice	10.1				
cudaErrorContained	12.8				
cudaErrorContextIsDestroyed	10.1				hipErrorContextIs
cudaErrorCooperativeLaunchTooLarge	9.0				hipErrorCooperati
cudaErrorCudartUnloading					hipErrorDeinitial
cudaErrorDeviceAlreadyInUse					hipErrorContextAl
cudaErrorDeviceNotLicensed	11.1				
cudaErrorDeviceUninitialized	10.2				hipErrorInvalidCo
cudaErrorDevicesUnavailable					
cudaErrorDuplicateSurfaceName					
cudaErrorDuplicateTextureName					
cudaErrorDuplicateVariableName					
cudaErrorECCUncorrectable					hipErrorECCNotCor
cudaErrorExternalDevice					
cudaErrorFileNotFound	10.1				hipErrorFileNotFo
cudaErrorFunctionNotLoaded	12.6				
cudaErrorGraphExecUpdateFailure	10.2				hipErrorGraphExec
cudaErrorHardwareStackError					
cudaErrorHostMemoryAlreadyRegistered					hipErrorHostMemor
cudaErrorHostMemoryNotRegistered					hipErrorHostMemor
cudaErrorIllegalAddress					hipErrorIllegalAd
cudaErrorIllegalInstruction					
cudaErrorIllegalState	10.0				hipErrorIllegalSt
cudaErrorIncompatibleDriverContext					
cudaErrorInitializationError					hipErrorNotInitia
cudaErrorInsufficientDriver					hipErrorInsuffici
cudaErrorInvalidAddressSpace					
cudaErrorInvalidChannelDescriptor					hipErrorInvalidCh
cudaErrorInvalidClusterSize	11.8				hipErrorInvalidCl
cudaErrorInvalidConfiguration					hipErrorInvalidCo
cudaErrorInvalidDevice					hipErrorInvalidDe
cudaErrorInvalidDeviceFunction					hipErrorInvalidDe
cudaErrorInvalidDevicePointer		10.1			hipErrorInvalidDe
cudaErrorInvalidFilterSetting					
cudaErrorInvalidGraphicsContext					hipErrorInvalidGr
cudaErrorInvalidHostPointer		10.1			
cudaErrorInvalidKernelImage					hipErrorInvalidIm
cudaErrorInvalidMemcpyDirection					hipErrorInvalidMe
cudaErrorInvalidNormSetting					
cudaErrorInvalidPc					
cudaErrorInvalidPitchValue					hipErrorInvalidPi

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaErrorInvalidPtx					hipErrorInvalidKe
cudaErrorInvalidResourceConfiguration	12.6				
cudaErrorInvalidResourceHandle					hipErrorInvalidHa
cudaErrorInvalidResourceType	12.6				
cudaErrorInvalidSource	10.1				hipErrorInvalidSo
cudaErrorInvalidSurface					
cudaErrorInvalidSymbol					hipErrorInvalidSy
cudaErrorInvalidTexture					hipErrorInvalidTe
cudaErrorInvalidTextureBinding					
cudaErrorInvalidValue					hipErrorInvalidVa
cudaErrorJitCompilationDisabled	11.2				
cudaErrorJitCompilerNotFound	9.0				
cudaErrorLaunchFailure					hipErrorLaunchFai
cudaErrorLaunchFileScopedSurf					
cudaErrorLaunchFileScopedTex					
cudaErrorLaunchIncompatibleTexturing	10.1				
cudaErrorLaunchMaxDepthExceeded					
cudaErrorLaunchOutOfResources					hipErrorLaunchOut
cudaErrorLaunchPendingCountExceeded					
cudaErrorLaunchTimeout					hipErrorLaunchTim
cudaErrorLossyQuery	12.3				hipErrorLossyQuer
cudaErrorMapBufferObjectFailed					hipErrorMapFailed
cudaErrorMemoryAllocation					hipErrorOutOfMemo
cudaErrorMemoryValueTooLarge		3.1			
cudaErrorMisalignedAddress					
cudaErrorMissingConfiguration					hipErrorMissingCo
cudaErrorMixedDeviceExecution		3.1			
cudaErrorMpsClientTerminated	11.8				
cudaErrorMpsConnectionFailed	11.4				
cudaErrorMpsMaxClientsReached	11.4				
cudaErrorMpsMaxConnectionsReached	11.4				
cudaErrorMpsRpcFailure	11.4				
cudaErrorMpsServerNotReady	11.4				
cudaErrorNoDevice					hipErrorNoDevice
cudaErrorNoKernelImageForDevice					hipErrorNoBinaryF
cudaErrorNotMapped	10.1				hipErrorNotMapped
cudaErrorNotMappedAsArray	10.1				hipErrorNotMapped
cudaErrorNotMappedAsPointer	10.1				hipErrorNotMapped
cudaErrorNotPermitted					
cudaErrorNotReady					hipErrorNotReady
cudaErrorNotSupported					hipErrorNotSuppor
cudaErrorNotYetImplemented		4.1			
cudaErrorNvlinkUncorrectable	8.0				
cudaErrorOperatingSystem					hipErrorOperating
cudaErrorPeerAccessAlreadyEnabled					hipErrorPeerAcces
cudaErrorPeerAccessNotEnabled					hipErrorPeerAcces
cudaErrorPeerAccessUnsupported					hipErrorPeerAcces
cudaErrorPriorLaunchFailure		3.1			hipErrorPriorLaun
cudaErrorProfilerAlreadyStarted		5.0			hipErrorProfilerA
cudaErrorProfilerAlreadyStopped		5.0			hipErrorProfilerA

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaErrorProfilerDisabled					hipErrorProfilerD
cudaErrorProfilerNotInitialized		5.0			hipErrorProfilerN
cudaErrorSetOnActiveProcess					hipErrorSetOnActi
cudaErrorSharedObjectInitFailed					hipErrorSharedObj
cudaErrorSharedObjectSymbolNotFound					hipErrorSharedObj
cudaErrorSoftwareValidityNotEstablished	11.2				
cudaErrorStartupFailure					
cudaErrorStreamCaptureImplicit	10.0				hipErrorStreamCap
cudaErrorStreamCaptureInvalidated	10.0				hipErrorStreamCap
cudaErrorStreamCaptureIsolation	10.0				hipErrorStreamCap
cudaErrorStreamCaptureMerge	10.0				hipErrorStreamCap
cudaErrorStreamCaptureUnjoined	10.0				hipErrorStreamCap
cudaErrorStreamCaptureUnmatched	10.0				hipErrorStreamCap
cudaErrorStreamCaptureUnsupported	10.0				hipErrorStreamCap
cudaErrorStreamCaptureWrongThread	10.1				hipErrorStreamCap
cudaErrorStreamDetached	13.1				
cudaErrorStubLibrary	11.1				
cudaErrorSymbolNotFound	10.1				hipErrorNotFound
cudaErrorSyncDepthExceeded					
cudaErrorSynchronizationError		3.1			
cudaErrorSystemDriverMismatch	10.1				
cudaErrorSystemNotReady	10.0				
cudaErrorTensorMemoryLeak	12.8				
cudaErrorTextureFetchFailed		3.1			
cudaErrorTextureNotBound		3.1			
cudaErrorTimeout	10.2				
cudaErrorTooManyPeers					
cudaErrorUnknown					hipErrorUnknown
cudaErrorUnmapBufferObjectFailed					hipErrorUnmapFail
cudaErrorUnsupportedDevSideSync	12.1				
cudaErrorUnsupportedExecAffinity	11.4				
cudaErrorUnsupportedLimit					hipErrorUnsupport
cudaErrorUnsupportedPtxVersion	11.1				
cudaErrorVersionTranslation	13.2				
cudaError_t					hipError_t
cudaEventBlockingSync					hipEventBlockingS
cudaEventDefault					hipEventDefault
cudaEventDisableTiming					hipEventDisableTi
cudaEventInterprocess					hipEventInterproc
cudaEventRecordDefault	11.1				hipEventRecordDef
cudaEventRecordExternal	11.1				hipEventRecordExt
cudaEventRecordNodeParams	12.2				hipEventRecordNod
cudaEventWaitDefault	11.1				
cudaEventWaitExternal					
cudaEventWaitNodeParams	12.2				hipEventWaitNodeP
cudaEvent_t					hipEvent_t
cudaExecutionContext_st	13.1				
cudaExecutionContext_t	13.1				
cudaExtent					hipExtent
cudaExternalMemoryBufferDesc	10.0				hipExternalMemory

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaExternalMemoryDedicated	10.0				hipExternalMemory
cudaExternalMemoryHandleDesc	10.0				hipExternalMemory
cudaExternalMemoryHandleType	10.0				hipExternalMemory
cudaExternalMemoryHandleTypeD3D11Resource	10.0				hipExternalMemory
cudaExternalMemoryHandleTypeD3D11ResourceKmt	10.2				hipExternalMemory
cudaExternalMemoryHandleTypeD3D12Heap	10.0				hipExternalMemory
cudaExternalMemoryHandleTypeD3D12Resource	10.0				hipExternalMemory
cudaExternalMemoryHandleTypeNvSciBuf	10.2				
cudaExternalMemoryHandleTypeOpaqueFd	10.0				hipExternalMemory
cudaExternalMemoryHandleTypeOpaqueWin32	10.0				hipExternalMemory
cudaExternalMemoryHandleTypeOpaqueWin32Kmt	10.0				hipExternalMemory
cudaExternalMemoryMipmappedArrayDesc	10.0				
cudaExternalMemory_t	10.0				hipExternalMemory
cudaExternalSemaphoreHandleDesc	10.0				hipExternalSemaph
cudaExternalSemaphoreHandleType	10.0				hipExternalSemaph
cudaExternalSemaphoreHandleTypeD3D11Fence	10.2				
cudaExternalSemaphoreHandleTypeD3D12Fence	10.0				hipExternalSemaph
cudaExternalSemaphoreHandleTypeKeyedMutex	10.2				
cudaExternalSemaphoreHandleTypeKeyedMutexKmt	10.2				
cudaExternalSemaphoreHandleTypeNvSciSync	10.2				
cudaExternalSemaphoreHandleTypeOpaqueFd	10.0				hipExternalSemaph
cudaExternalSemaphoreHandleTypeOpaqueWin32	10.0				hipExternalSemaph
cudaExternalSemaphoreHandleTypeOpaqueWin32Kmt	10.0				hipExternalSemaph
cudaExternalSemaphoreHandleTypeTimelineSemaphoreFd	11.2				
cudaExternalSemaphoreHandleTypeTimelineSemaphoreWin32	11.2				
cudaExternalSemaphoreSignalNodeParams	11.2				hipExternalSemaph
cudaExternalSemaphoreSignalNodeParamsV2	12.2				hipExternalSemaph
cudaExternalSemaphoreSignalParams	10.0		13.0		hipExternalSemaph
cudaExternalSemaphoreSignalParams_v1	11.2	11.2		11.3	hipExternalSemaph
cudaExternalSemaphoreSignalSkipNvSciBufMemSync	10.2				
cudaExternalSemaphoreWaitNodeParams	11.2				hipExternalSemaph
cudaExternalSemaphoreWaitNodeParamsV2	12.2				hipExternalSemaph
cudaExternalSemaphoreWaitParams	10.0		13.0		hipExternalSemaph
cudaExternalSemaphoreWaitParams_v1	11.2	11.2		11.3	hipExternalSemaph
cudaExternalSemaphoreWaitSkipNvSciBufMemSync	10.2				
cudaExternalSemaphore_t	10.0				hipExternalSemaph
cudaFilterModeLinear					hipFilterModeLine
cudaFilterModePoint					hipFilterModePoin
cudaFlushGPUDirectRDMAWritesOptionHost	11.3				hipFlushGPUDirect
cudaFlushGPUDirectRDMAWritesOptionMemOps	11.3				hipFlushGPUDirect
cudaFlushGPUDirectRDMAWritesOptions	11.3				hipFlushGPUDirect
cudaFlushGPUDirectRDMAWritesScope	11.3				
cudaFlushGPUDirectRDMAWritesTarget	11.3				
cudaFlushGPUDirectRDMAWritesTargetCurrentDevice	11.3				
cudaFlushGPUDirectRDMAWritesToAllDevices	11.3				
cudaFlushGPUDirectRDMAWritesToOwner	11.3				
cudaFormatModeAuto					
cudaFormatModeForced					
cudaFuncAttribute	9.0				hipFuncAttribute
cudaFuncAttributeClusterDimMustBeSet	11.8				hipFuncAttributeC

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaFuncAttributeClusterSchedulingPolicyPreference	11.8				hipFuncAttributeC
cudaFuncAttributeMax	9.0				hipFuncAttributeM
cudaFuncAttributeMaxDynamicSharedMemorySize	9.0				hipFuncAttributeM
cudaFuncAttributeNonPortableClusterSizeAllowed	11.8				hipFuncAttributeN
cudaFuncAttributePreferredSharedMemoryCarveout	9.0				hipFuncAttributeP
cudaFuncAttributeRequiredClusterDepth	11.8				hipFuncAttributeR
cudaFuncAttributeRequiredClusterHeight	11.8				hipFuncAttributeR
cudaFuncAttributeRequiredClusterWidth	11.8				hipFuncAttributeR
cudaFuncAttributes					hipFuncAttributes
cudaFuncCache					hipFuncCache_t
cudaFuncCachePreferEqual					hipFuncCachePrefe
cudaFuncCachePreferL1					hipFuncCachePrefe
cudaFuncCachePreferNone					hipFuncCachePrefe
cudaFuncCachePreferShared					hipFuncCachePrefe
cudaFunction_t	11.0				hipFunction_t
cudaGLDeviceList					hipGLDeviceList
cudaGLDeviceListAll					hipGLDeviceListAl
cudaGLDeviceListCurrentFrame					hipGLDeviceListCu
cudaGLDeviceListNextFrame					hipGLDeviceListNe
cudaGLMapFlags					
cudaGLMapFlagsNone					
cudaGLMapFlagsReadOnly					
cudaGLMapFlagsWriteDiscard					
cudaGPUDirectRDMAWritesOrdering	11.3				hipGPUDirectRDMAW
cudaGPUDirectRDMAWritesOrderingAllDevices	11.3				hipGPUDirectRDMAW
cudaGPUDirectRDMAWritesOrderingNone	11.3				hipGPUDirectRDMAW
cudaGPUDirectRDMAWritesOrderingOwner	11.3				hipGPUDirectRDMAW
cudaGetDriverEntryPointFlags	11.3				
cudaGraphChildGraphNodeOwnership	12.9				
cudaGraphChildGraphOwnershipClone	12.9				
cudaGraphChildGraphOwnershipInvalid	13.2				
cudaGraphChildGraphOwnershipMove	12.9				
cudaGraphCondAssignDefault	12.3				
cudaGraphCondTypeIf	12.3				
cudaGraphCondTypeSwitch	12.8				
cudaGraphCondTypeWhile	12.3				
cudaGraphConditionalHandle	12.3				
cudaGraphConditionalHandleFlags	12.3				
cudaGraphConditionalNodeType	12.3				
cudaGraphDebugDotFlags	11.3				hipGraphDebugDotF
cudaGraphDebugDotFlagsConditionalNodeParams	12.3				
cudaGraphDebugDotFlagsEventNodeParams	11.3				hipGraphDebugDotF
cudaGraphDebugDotFlagsExtSemasSignalNodeParams	11.3				hipGraphDebugDotF
cudaGraphDebugDotFlagsExtSemasWaitNodeParams	11.3				hipGraphDebugDotF
cudaGraphDebugDotFlagsHandles	11.3				hipGraphDebugDotF
cudaGraphDebugDotFlagsHostNodeParams	11.3				hipGraphDebugDotF
cudaGraphDebugDotFlagsKernelNodeAttributes	11.3				hipGraphDebugDotF
cudaGraphDebugDotFlagsKernelNodeParams	11.3				hipGraphDebugDotF
cudaGraphDebugDotFlagsMemcpyNodeParams	11.3				hipGraphDebugDotF
cudaGraphDebugDotFlagsMemsetNodeParams	11.3				hipGraphDebugDotF

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaGraphDebugDotFlagsVerbose	11.3				hipGraphDebugDotF
cudaGraphDependencyType	12.3				hipGraphDependenc
cudaGraphDependencyTypeDefault	12.3				hipGraphDependenc
cudaGraphDependencyTypeProgrammatic	12.3				hipGraphDependenc
cudaGraphDependencyType_enum	12.3				hipGraphDependenc
cudaGraphDeviceNode_t	12.4				
cudaGraphEdgeData	12.3				hipGraphEdgeData
cudaGraphEdgeData_st	12.3				hipGraphEdgeData
cudaGraphExecUpdateError	10.2				hipGraphExecUpdat
cudaGraphExecUpdateErrorAttributesChanged	11.6				
cudaGraphExecUpdateErrorFunctionChanged	10.2				hipGraphExecUpdat
cudaGraphExecUpdateErrorNodeTypeChanged	10.2				hipGraphExecUpdat
cudaGraphExecUpdateErrorNotSupported	10.2				hipGraphExecUpdat
cudaGraphExecUpdateErrorParametersChanged	10.2				hipGraphExecUpdat
cudaGraphExecUpdateErrorTopologyChanged	10.2				hipGraphExecUpdat
cudaGraphExecUpdateErrorUnsupportedFunctionChange	11.2				hipGraphExecUpdat
cudaGraphExecUpdateResult	10.2				hipGraphExecUpdat
cudaGraphExecUpdateResultInfo	12.0				
cudaGraphExecUpdateResultInfo_st	12.0				
cudaGraphExecUpdateSuccess	10.2				hipGraphExecUpdat
cudaGraphExec_t	10.0				hipGraphExec_t
cudaGraphInstantiateConditionalHandleUnused	12.8				
cudaGraphInstantiateError	12.0				hipGraphInstantia
cudaGraphInstantiateFlagAutoFreeOnLaunch	11.4				hipGraphInstantia
cudaGraphInstantiateFlagDeviceLaunch	12.0				hipGraphInstantia
cudaGraphInstantiateFlagUpload	12.0				hipGraphInstantia
cudaGraphInstantiateFlagUseNodePriority	11.7				hipGraphInstantia
cudaGraphInstantiateFlags	11.4				hipGraphInstantia
cudaGraphInstantiateInvalidStructure	12.0				hipGraphInstantia
cudaGraphInstantiateMultipleDevicesNotSupported	12.0				hipGraphInstantia
cudaGraphInstantiateNodeOperationNotSupported	12.0				hipGraphInstantia
cudaGraphInstantiateParams	12.0				hipGraphInstantia
cudaGraphInstantiateParams_st	12.0				hipGraphInstantia
cudaGraphInstantiateResult	12.0				hipGraphInstantia
cudaGraphInstantiateSuccess	12.0				hipGraphInstantia
cudaGraphKernelNodeField	12.4				
cudaGraphKernelNodeFieldEnabled	12.4				
cudaGraphKernelNodeFieldGridDim	12.4				
cudaGraphKernelNodeFieldInvalid	12.4				
cudaGraphKernelNodeFieldParam	12.4				
cudaGraphKernelNodePortDefault	12.3				hipGraphKernelNod
cudaGraphKernelNodePortLaunchCompletion	12.3				hipGraphKernelNod
cudaGraphKernelNodePortProgrammatic	12.3				hipGraphKernelNod
cudaGraphKernelNodeUpdate	12.4				
cudaGraphMemAttrReservedMemCurrent	11.4				hipGraphMemAttrRe
cudaGraphMemAttrReservedMemHigh	11.4				hipGraphMemAttrRe
cudaGraphMemAttrUsedMemCurrent	11.4				hipGraphMemAttrUs
cudaGraphMemAttrUsedMemHigh	11.4				hipGraphMemAttrUs
cudaGraphMemAttributeType	11.4				hipGraphMemAttrib
cudaGraphNodeParams	12.2				hipGraphNodeParam

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaGraphNodeType	10.0				hipGraphNodeType
cudaGraphNodeTypeConditional	12.3				hipGraphNodeTypeC
cudaGraphNodeTypeCount	10.0				hipGraphNodeTypeC
cudaGraphNodeTypeEmpty	10.0				hipGraphNodeTypeE
cudaGraphNodeTypeEventRecord	11.1				hipGraphNodeTypeE
cudaGraphNodeTypeExtSemaphoreSignal	11.4				hipGraphNodeTypeE
cudaGraphNodeTypeExtSemaphoreWait	11.4				hipGraphNodeTypeE
cudaGraphNodeTypeGraph	10.0				hipGraphNodeTypeG
cudaGraphNodeTypeHost	10.0				hipGraphNodeTypeH
cudaGraphNodeTypeKernel	10.0				hipGraphNodeTypeK
cudaGraphNodeTypeMemAlloc	11.4				hipGraphNodeTypeM
cudaGraphNodeTypeMemFree	11.4				hipGraphNodeTypeM
cudaGraphNodeTypeMemcpy	10.0				hipGraphNodeTypeM
cudaGraphNodeTypeMemset	10.0				hipGraphNodeTypeM
cudaGraphNodeTypeWaitEvent	11.1				hipGraphNodeTypeW
cudaGraphNode_t	10.0				hipGraphNode_t
cudaGraphUserObjectMove	11.3				hipGraphUserObjec
cudaGraph_t	10.0				hipGraph_t
cudaGraphicsCubeFace					
cudaGraphicsCubeFaceNegativeX					
cudaGraphicsCubeFaceNegativeY					
cudaGraphicsCubeFaceNegativeZ					
cudaGraphicsCubeFacePositiveX					
cudaGraphicsCubeFacePositiveY					
cudaGraphicsCubeFacePositiveZ					
cudaGraphicsMapFlags					
cudaGraphicsMapFlagsNone					
cudaGraphicsMapFlagsReadOnly					
cudaGraphicsMapFlagsWriteDiscard					
cudaGraphicsRegisterFlags					hipGraphicsRegist
cudaGraphicsRegisterFlagsNone					hipGraphicsRegist
cudaGraphicsRegisterFlagsReadOnly					hipGraphicsRegist
cudaGraphicsRegisterFlagsSurfaceLoadStore					hipGraphicsRegist
cudaGraphicsRegisterFlagsTextureGather					hipGraphicsRegist
cudaGraphicsRegisterFlagsWriteDiscard					hipGraphicsRegist
cudaGraphicsResource					hipGraphicsResour
cudaGraphicsResource_t					hipGraphicsResour
cudaHostAllocDefault					hipHostMallocDefa
cudaHostAllocMapped					hipHostMallocMapp
cudaHostAllocPortable					hipHostMallocPort
cudaHostAllocWriteCombined					hipHostMallocWrit
cudaHostFn_t	10.0				hipHostFn_t
cudaHostNodeParams	10.0				hipHostNodeParams
cudaHostNodeParamsV2	12.2		13.2		
cudaHostRegisterDefault					hipHostRegisterDe
cudaHostRegisterIoMemory	7.5				hipHostRegisterIo
cudaHostRegisterMapped					hipHostRegisterMa
cudaHostRegisterPortable					hipHostRegisterPo
cudaHostRegisterReadOnly	11.1				hipHostRegisterRe
cudaHostTaskBlocking	13.2				

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaHostTaskSpinWait	13.2				
cudaHostTaskSyncMode	13.2				
cudaInitDeviceFlagsAreValid	12.0				
cudaInvalidDeviceId	8.0				hipInvalidDeviceI
cudaIpcEventHandle_st					hipIpcEventHandle
cudaIpcEventHandle_t					hipIpcEventHandle
cudaIpcMemHandle_st					hipIpcMemHandle_s
cudaIpcMemHandle_t					hipIpcMemHandle_t
cudaIpcMemLazyEnablePeerAccess					hipIpcMemLazyEnab
cudaJitCacheMode	12.8				hipJitOptionCache
cudaJitCacheOptionCA	12.8				
cudaJitCacheOptionCG	12.8				
cudaJitCacheOptionNone	12.8				
cudaJitErrorLogBuffer	12.8				hipJitOptionError
cudaJitErrorLogBufferSizeBytes	12.8				hipJitOptionError
cudaJitFallbackStrategy	12.8				hipJitOptionFallb
cudaJitGenerateDebugInfo	12.8				hipJitOptionGener
cudaJitGenerateLineInfo	12.8				hipJitOptionGener
cudaJitInfoLogBuffer	12.8				hipJitOptionInfoL
cudaJitInfoLogBufferSizeBytes	12.8				hipJitOptionInfoL
cudaJitLogVerbose	12.8				hipJitOptionLogVe
cudaJitMaxRegisters	12.8				hipJitOptionMaxRe
cudaJitMaxThreadsPerBlock	12.8				hipJitOptionMaxTh
cudaJitMinCtaPerSm	12.8				hipJitOptionMinCT
cudaJitOptimizationLevel	12.8				hipJitOptionOptim
cudaJitOption	12.8				hipJitOption
cudaJitOverrideDirectiveValues	12.8				hipJitOptionOverr
cudaJitPositionIndependentCode	12.8				hipJitOptionPosit
cudaJitThreadsPerBlock	12.8				hipJitOptionThrea
cudaJitWallTime	12.8				hipJitOptionWallT
cudaJit_CacheMode	12.8				
cudaJit_Fallback	12.8				
cudaKernelFunctionType	13.2				
cudaKernelFunctionTypeDeviceEntry	13.2				
cudaKernelFunctionTypeFunction	13.2				
cudaKernelFunctionTypeKernel	13.2				
cudaKernelFunctionTypeUnspecified	13.2				
cudaKernelNodeAttrID	11.0				hipKernelNodeAttr
cudaKernelNodeAttrValue	11.0				hipKernelNodeAttr
cudaKernelNodeAttributeAccessPolicyWindow	11.0				hipKernelNodeAttr
cudaKernelNodeAttributeClusterDimension	11.8				
cudaKernelNodeAttributeClusterSchedulingPolicyPreference	11.8				
cudaKernelNodeAttributeCooperative	11.0				hipKernelNodeAttr
cudaKernelNodeAttributeDeviceUpdatableKernelNode	12.4				
cudaKernelNodeAttributeMemSyncDomain	12.0				
cudaKernelNodeAttributeMemSyncDomainMap	12.0				
cudaKernelNodeAttributeNvlinkUtilCentricScheduling	13.0				
cudaKernelNodeAttributePreferredSharedMemoryCarveout	12.5				
cudaKernelNodeAttributePriority	11.7				hipKernelNodeAttr
cudaKernelNodeParams	10.0				hipKernelNodePara

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaKernelNodeParamsV2	12.2		13.1, 13.2		
cudaKernel_t	12.1				hipKernel_t
cudaKeyValuePair				12.0	
cudaLaunchAttribute	11.8				hipLaunchAttribut
cudaLaunchAttributeAccessPolicyWindow	11.8				hipLaunchAttribut
cudaLaunchAttributeClusterDimension	11.8				hipLaunchAttribut
cudaLaunchAttributeClusterSchedulingPolicyPreference	11.8				hipLaunchAttribut
cudaLaunchAttributeCooperative	11.8				hipLaunchAttribut
cudaLaunchAttributeDeviceUpdatableKernelNode	12.4				
cudaLaunchAttributeID	11.8				hipLaunchAttribut
cudaLaunchAttributeIgnore	11.8				hipLaunchAttribut
cudaLaunchAttributeLaunchCompletionEvent	12.3				
cudaLaunchAttributeMemSyncDomain	12.0				hipLaunchAttribut
cudaLaunchAttributeMemSyncDomainMap	12.0				hipLaunchAttribut
cudaLaunchAttributeNvlinkUtilCentricScheduling	13.0				
cudaLaunchAttributePortableClusterMode	13.2				
cudaLaunchAttributePortableClusterSizeMode	13.2				
cudaLaunchAttributePreferredClusterDimension	12.8				
cudaLaunchAttributePreferredSharedMemoryCarveout	12.5				
cudaLaunchAttributePriority	11.8				hipLaunchAttribut
cudaLaunchAttributeProgrammaticEvent	11.8				
cudaLaunchAttributeProgrammaticStreamSerialization	11.8				
cudaLaunchAttributeSharedMemoryMode	13.2				
cudaLaunchAttributeSynchronizationPolicy	11.8				hipLaunchAttribut
cudaLaunchAttributeValue	11.8		13.0, 13.2		hipLaunchAttribut
cudaLaunchAttribute_st	11.8				hipLaunchAttribut
cudaLaunchConfig_st	11.8				hipLaunchConfig_s
cudaLaunchConfig_t	11.8				hipLaunchConfig_t
cudaLaunchMemSyncDomain	12.0				hipLaunchMemSyncD
cudaLaunchMemSyncDomainDefault	12.0				hipLaunchMemSyncD
cudaLaunchMemSyncDomainMap	12.0				hipLaunchMemSyncD
cudaLaunchMemSyncDomainMap_st	12.0				hipLaunchMemSyncD
cudaLaunchMemSyncDomainRemote	12.0				hipLaunchMemSyncD
cudaLaunchParams	9.0			13.0	hipLaunchParams
cudaLaunchPortableClusterModeAllowNonPortable	13.2				
cudaLaunchPortableClusterModeDefault	13.2				
cudaLaunchPortableClusterModeRequirePortable	13.2				
cudaLibraryBinaryIsPreserved	12.8				hipLibraryBinaryI
cudaLibraryHostUniversalFunctionAndDataTable	12.8				hipLibraryHostUni
cudaLibraryOption	12.8				hipLibraryOption
cudaLibrary_t	12.8				hipLibrary_t
cudaLimit					hipLimit_t
cudaLimitDevRuntimePendingLaunchCount					
cudaLimitDevRuntimeSyncDepth					
cudaLimitMallocHeapSize					hipLimitMallocHea
cudaLimitMaxL2FetchGranularity	10.0				
cudaLimitPersistingL2CacheSize	11.0				
cudaLimitPrintfFifoSize					hipLimitPrintfFif
cudaLimitStackSize					hipLimitStackSize
cudaLogIterator	13.0				

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaLogLevelError	13.0				
cudaLogLevelWarning	13.0				
cudaLogsCallbackHandle	13.0				
cudaLogsCallback_t	13.0				
cudaMemAccessDesc	11.2				hipMemAccessDesc
cudaMemAccessFlags	11.2				hipMemAccessFlags
cudaMemAccessFlagsProtNone	11.2				hipMemAccessFlags
cudaMemAccessFlagsProtRead	11.2				hipMemAccessFlags
cudaMemAccessFlagsProtReadWrite	11.2				hipMemAccessFlags
cudaMemAdviseSetAccessedBy	8.0				hipMemAdviseSetAc
cudaMemAdviseSetPreferredLocation	8.0				hipMemAdviseSetPr
cudaMemAdviseSetReadMostly	8.0				hipMemAdviseSetRe
cudaMemAdviseUnsetAccessedBy	8.0				hipMemAdviseUnset
cudaMemAdviseUnsetPreferredLocation	8.0				hipMemAdviseUnset
cudaMemAdviseUnsetReadMostly	8.0				hipMemAdviseUnset
cudaMemAllocNodeParams	11.4				hipMemAllocNodePa
cudaMemAllocNodeParamsV2	12.2				
cudaMemAllocationHandleType	11.2				hipMemAllocationH
cudaMemAllocationType	11.2				hipMemAllocationT
cudaMemAllocationTypeInvalid	11.2				hipMemAllocationT
cudaMemAllocationTypeManaged	13.0				hipMemAllocationT
cudaMemAllocationTypeMax	11.2				hipMemAllocationT
cudaMemAllocationTypePinned	11.2				hipMemAllocationT
cudaMemAttachGlobal					hipMemAttachGloba
cudaMemAttachHost					hipMemAttachHost
cudaMemAttachSingle					hipMemAttachSingl
cudaMemFabricHandle_st	12.3				
cudaMemFabricHandle_t	12.3				
cudaMemFreeNodeParams	12.2				hipMemFreeNodePar
cudaMemHandleTypeFabric	12.4				
cudaMemHandleTypeNone	11.2				hipMemHandleTypeN
cudaMemHandleTypePosixFileDescriptor	11.2				hipMemHandleTypeP
cudaMemHandleTypeWin32	11.2				hipMemHandleTypeW
cudaMemHandleTypeWin32Kmt	11.2				hipMemHandleTypeW
cudaMemLocation	11.2				hipMemLocation
cudaMemLocationType	11.2				hipMemLocationTyp
cudaMemLocationTypeDevice	11.2				hipMemLocationTyp
cudaMemLocationTypeHost	12.2				hipMemLocationTyp
cudaMemLocationTypeHostNuma	12.2				hipMemLocationTyp
cudaMemLocationTypeHostNumaCurrent	12.2				hipMemLocationTyp
cudaMemLocationTypeInvalid	11.2				hipMemLocationTyp
cudaMemLocationTypeInvisible	13.2				
cudaMemLocationTypeNone	13.0				hipMemLocationTyp
cudaMemPoolAttr	11.2				hipMemPoolAttr
cudaMemPoolAttrAllocationType	13.2				hipMemPoolAttrAll
cudaMemPoolAttrExportHandleTypes	13.2				hipMemPoolAttrExp
cudaMemPoolAttrHwDecompressEnabled	13.2				hipMemPoolAttrHwD
cudaMemPoolAttrLocationId	13.2				hipMemPoolAttrLoc
cudaMemPoolAttrLocationType	13.2				hipMemPoolAttrLoc
cudaMemPoolAttrMaxPoolSize	13.2				hipMemPoolAttrMax

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaMemPoolAttrReleaseThreshold	11.2				hipMemPoolAttrRel
cudaMemPoolAttrReservedMemCurrent	11.3				hipMemPoolAttrRes
cudaMemPoolAttrReservedMemHigh	11.3				hipMemPoolAttrRes
cudaMemPoolAttrUsedMemCurrent	11.3				hipMemPoolAttrUse
cudaMemPoolAttrUsedMemHigh	11.3				hipMemPoolAttrUse
cudaMemPoolCreateUsageHwDecompress	12.8				
cudaMemPoolProps	11.2				hipMemPoolProps
cudaMemPoolPtrExportData	11.2				hipMemPoolPtrExpo
cudaMemPoolReuseAllowInternalDependencies	11.2				hipMemPoolReuseAl
cudaMemPoolReuseAllowOpportunistic	11.2				hipMemPoolReuseAl
cudaMemPoolReuseFollowEventDependencies	11.2				hipMemPoolReuseFo
cudaMemPool_t	11.2				hipMemPool_t
cudaMemRangeAttribute	8.0				hipMemRangeAttrib
cudaMemRangeAttributeAccessedBy	8.0				hipMemRangeAttrib
cudaMemRangeAttributeLastPrefetchLocation	8.0				hipMemRangeAttrib
cudaMemRangeAttributeLastPrefetchLocationId	12.2				
cudaMemRangeAttributeLastPrefetchLocationType	12.2				
cudaMemRangeAttributePreferredLocation	8.0				hipMemRangeAttrib
cudaMemRangeAttributePreferredLocationId	12.2				
cudaMemRangeAttributePreferredLocationType	12.2				
cudaMemRangeAttributeReadMostly	8.0				hipMemRangeAttrib
cudaMemcpy3DBatchOp	12.8				hipMemcpy3DBatchO
cudaMemcpy3DOperand	12.8				hipMemcpy3DOperan
cudaMemcpy3DOperandType	12.8				hipMemcpy3DOperan
cudaMemcpy3DParms					hipMemcpy3DParms
cudaMemcpy3DPeerParms					hipMemcpy3DPeerPa
cudaMemcpyAttributes	12.8				hipMemcpyAttribut
cudaMemcpyDefault					hipMemcpyDefault
cudaMemcpyDeviceToDevice					hipMemcpyDeviceTo
cudaMemcpyDeviceToHost					hipMemcpyDeviceTo
cudaMemcpyFlagDefault	12.8				hipMemcpyFlagDefa
cudaMemcpyFlagPreferOverlapWithCompute	12.8				hipMemcpyFlagPref
cudaMemcpyFlags	12.8				hipMemcpyFlags
cudaMemcpyHostToDevice					hipMemcpyHostToDe
cudaMemcpyHostToHost					hipMemcpyHostToHo
cudaMemcpyKind					hipMemcpyKind
cudaMemcpyNodeParams	12.2		13.1		hipMemcpyNodePara
cudaMemcpyOperandTypeArray	12.8				hipMemcpyOperandT
cudaMemcpyOperandTypeMax	12.8				hipMemcpyOperandT
cudaMemcpyOperandTypePointer	12.8				hipMemcpyOperandT
cudaMemcpySrcAccessOrder	12.8				hipMemcpySrcAcces
cudaMemcpySrcAccessOrderAny	12.8				hipMemcpySrcAcces
cudaMemcpySrcAccessOrderDuringApiCall	12.8				hipMemcpySrcAcces
cudaMemcpySrcAccessOrderInvalid	12.8				hipMemcpySrcAcces
cudaMemcpySrcAccessOrderMax	12.8				hipMemcpySrcAcces
cudaMemcpySrcAccessOrderStream	12.8				hipMemcpySrcAcces
cudaMemoryAdvise	8.0				hipMemoryAdvise
cudaMemoryType					hipMemoryType
cudaMemoryTypeDevice					hipMemoryTypeDevi
cudaMemoryTypeHost					hipMemoryTypeHost

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaMemoryTypeManaged	10.0				hipMemoryTypeMana
cudaMemoryTypeUnregistered	10.0				hipMemoryTypeUnre
cudaMemsetParams	10.0				hipMemsetParams
cudaMemsetParamsV2	12.2		13.1		
cudaMipmappedArray					hipMipmappedArray
cudaMipmappedArray_const_t					hipMipmappedArray
cudaMipmappedArray_t					hipMipmappedArray
cudaNvSciSyncAttrSignal	10.2				
cudaNvSciSyncAttrWait	10.2				
cudaOccupancyDefault					hipOccupancyDefau
cudaOccupancyDisableCachingOverride					hipOccupancyDisab
cudaOffset3D	12.8				hipOffset3D
cudaOutputMode				12.0	
cudaOutputMode_t				12.0	
cudaPitchedPtr					hipPitchedPtr
cudaPointerAttributes			13.2		hipPointerAttribu
cudaPos					hipPos
cudaPreferBinary	12.8				
cudaPreferPtx	12.8				
cudaReadModeElementType					hipReadModeElemen
cudaReadModeNormalizedFloat					hipReadModeNormal
cudaResViewFormatFloat1					hipResViewFormatF
cudaResViewFormatFloat2					hipResViewFormatF
cudaResViewFormatFloat4					hipResViewFormatF
cudaResViewFormatHalf1					hipResViewFormatH
cudaResViewFormatHalf2					hipResViewFormatH
cudaResViewFormatHalf4					hipResViewFormatH
cudaResViewFormatNone					hipResViewFormatN
cudaResViewFormatSignedBlockCompressed4					hipResViewFormatS
cudaResViewFormatSignedBlockCompressed5					hipResViewFormatS
cudaResViewFormatSignedBlockCompressed6H					hipResViewFormatS
cudaResViewFormatSignedChar1					hipResViewFormatS
cudaResViewFormatSignedChar2					hipResViewFormatS
cudaResViewFormatSignedChar4					hipResViewFormatS
cudaResViewFormatSignedInt1					hipResViewFormatS
cudaResViewFormatSignedInt2					hipResViewFormatS
cudaResViewFormatSignedInt4					hipResViewFormatS
cudaResViewFormatSignedShort1					hipResViewFormatS
cudaResViewFormatSignedShort2					hipResViewFormatS
cudaResViewFormatSignedShort4					hipResViewFormatS
cudaResViewFormatUnsignedBlockCompressed1					hipResViewFormatU
cudaResViewFormatUnsignedBlockCompressed2					hipResViewFormatU
cudaResViewFormatUnsignedBlockCompressed3					hipResViewFormatU
cudaResViewFormatUnsignedBlockCompressed4					hipResViewFormatU
cudaResViewFormatUnsignedBlockCompressed5					hipResViewFormatU
cudaResViewFormatUnsignedBlockCompressed6H					hipResViewFormatU
cudaResViewFormatUnsignedBlockCompressed7					hipResViewFormatU
cudaResViewFormatUnsignedChar1					hipResViewFormatU
cudaResViewFormatUnsignedChar2					hipResViewFormatU
cudaResViewFormatUnsignedChar4					hipResViewFormatU

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaResViewFormatUnsignedInt1					hipResViewFormatU
cudaResViewFormatUnsignedInt2					hipResViewFormatU
cudaResViewFormatUnsignedInt4					hipResViewFormatU
cudaResViewFormatUnsignedShort1					hipResViewFormatU
cudaResViewFormatUnsignedShort2					hipResViewFormatU
cudaResViewFormatUnsignedShort4					hipResViewFormatU
cudaResourceDesc					hipResourceDesc
cudaResourceType					hipResourceType
cudaResourceTypeArray					hipResourceTypeAr
cudaResourceTypeLinear					hipResourceTypeLi
cudaResourceTypeMipmappedArray					hipResourceTypeMi
cudaResourceTypePitch2D					hipResourceTypePi
cudaResourceViewDesc					hipResourceViewDe
cudaResourceViewFormat					hipResourceViewFo
cudaSharedCarveout	9.0				
cudaSharedMemBankSizeDefault					hipSharedMemBankS
cudaSharedMemBankSizeEightByte					hipSharedMemBankS
cudaSharedMemBankSizeFourByte					hipSharedMemBankS
cudaSharedMemConfig		12.4			hipSharedMemConfi
cudaSharedMemoryMode	13.2				
cudaSharedMemoryModeAllowNonPortable	13.2				
cudaSharedMemoryModeDefault	13.2				
cudaSharedMemoryModeRequirePortable	13.2				
cudaSharedmemCarveoutDefault	9.0				
cudaSharedmemCarveoutMaxL1	9.0				
cudaSharedmemCarveoutMaxShared	9.0				
cudaStreamAddCaptureDependencies	11.3				hipStreamAddCaptu
cudaStreamAttrID	11.0				hipLaunchAttribut
cudaStreamAttrValue	11.0				hipLaunchAttribut
cudaStreamAttributeAccessPolicyWindow	11.0				hipLaunchAttribut
cudaStreamAttributeMemSyncDomain	12.0				hipLaunchAttribut
cudaStreamAttributeMemSyncDomainMap	12.0				hipLaunchAttribut
cudaStreamAttributePriority	12.0				hipLaunchAttribut
cudaStreamAttributeSynchronizationPolicy	11.0				hipLaunchAttribut
cudaStreamCallback_t					hipStreamCallback
cudaStreamCaptureMode	10.1				hipStreamCaptureM
cudaStreamCaptureModeGlobal	10.1				hipStreamCaptureM
cudaStreamCaptureModeRelaxed	10.1				hipStreamCaptureM
cudaStreamCaptureModeThreadLocal	10.1				hipStreamCaptureM
cudaStreamCaptureStatus	10.0				hipStreamCaptureS
cudaStreamCaptureStatusActive	10.0				hipStreamCaptureS
cudaStreamCaptureStatusInvalidated	10.0				hipStreamCaptureS
cudaStreamCaptureStatusNone	10.0				hipStreamCaptureS
cudaStreamDefault					hipStreamDefault
cudaStreamLegacy	9.0				hipStreamLegacy
cudaStreamNonBlocking					hipStreamNonBlock
cudaStreamPerThread					hipStreamPerThrea
cudaStreamSetCaptureDependencies	11.3				hipStreamSetCaptu
cudaStreamUpdateCaptureDependenciesFlags	11.3				hipStreamUpdateCa
cudaStream_t					hipStream_t

Table 4 – continued from previous pag

CUDA	A	D	C	R	HIP
cudaSuccess					hipSuccess
cudaSurfaceBoundaryMode					hipSurfaceBoundar
cudaSurfaceFormatMode					
cudaSurfaceObject_t					hipSurfaceObject_
cudaSyncPolicyAuto	11.0				hipSyncPolicyAuto
cudaSyncPolicyBlockingSync	11.0				hipSyncPolicyBloc
cudaSyncPolicySpin	11.0				hipSyncPolicySpin
cudaSyncPolicyYield	11.0				hipSyncPolicyYiel
cudaSynchronizationPolicy	11.0				hipSynchronizatio
cudaTextureAddressMode					hipTextureAddress
cudaTextureDesc					hipTextureDesc
cudaTextureFilterMode					hipTextureFilterM
cudaTextureObject_t					hipTextureObject_
cudaTextureReadMode					hipTextureReadMod
cudaTextureType1D					hipTextureType1D
cudaTextureType1DLayered					hipTextureType1DL
cudaTextureType2D					hipTextureType2D
cudaTextureType2DLayered					hipTextureType2DL
cudaTextureType3D					hipTextureType3D
cudaTextureTypeCubemap					hipTextureTypeCub
cudaTextureTypeCubemapLayered					hipTextureTypeCub
cudaUUID_t					hipUUID
cudaUserObjectFlags	11.3				hipUserObjectFlag
cudaUserObjectNoDestructorSync	11.3				hipUserObjectNoDe
cudaUserObjectRetainFlags	11.3				hipUserObjectReta
cudaUserObject_t	11.3				hipUserObject_t
cudalibraryHostUniversalFunctionAndDataTable	12.8				
libraryPropertyType	8.0				
libraryPropertyType_t	8.0				
surfaceReference				12.0	surfaceReference
texture				12.0	texture
textureReference					textureReference

10.1.38 38. Execution Control [REMOVED]

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaConfigureCall				10.1	hipConfigureCall	1.9.0					
cudaLaunch				10.1	hipLaunchByPtr	1.9.0					
cudaSetupArgument				10.1	hipSetupArgument	1.9.0					

10.1.39 39. Texture Reference Management [REMOVED]

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaBindTexture		11.0		12.0	hipBindTexture	1.6.0	3.8.0				
cudaBindTexture2D		11.0		12.0	hipBindTexture2D	1.7.0	3.8.0				
cudaBindTextureToArray		11.0		12.0	hipBindTextureToArray	1.6.0	3.8.0				
cudaBindTextureToMipmap		11.0		12.0	hipBindTextureToMipmap	1.7.0	5.7.0				
cudaGetTextureAlignment		11.0		12.0	hipGetTextureAlignment	1.9.0	3.8.0				
cudaGetTextureReference		11.0		12.0	hipGetTextureReference	1.7.0	5.3.0				
cudaUnbindTexture		11.0		12.0	hipUnbindTexture	1.6.0	3.8.0				

10.1.40 40. Surface Reference Management [REMOVED]

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaBindSurfaceToArray		11.0		12.0							
cudaGetSurfaceReference		11.0		12.0							

10.1.41 41. Profiler Control [REMOVED]

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaProfilerInitialize		11.0		12.0							

10.1.42 42. Thread Management [REMOVED]

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cudaThreadExit		10.0		13.0	hipDeviceReset	1.6.0					
cudaThreadGetCacheConfi		10.0		13.0	hipDeviceGetCacheConfi	1.6.0					
cudaThreadGetLimit		10.0		13.0							
cudaThreadSetCacheConfi		10.0		13.0	hipDeviceSetCacheConfi	1.6.0					
cudaThreadSetLimit		10.0		13.0							
cudaThreadSynchronize		10.0		13.0	hipDeviceSynchronize	1.6.0					

10.2 CUDA Driver API supported by HIP

Note: In the tables that follow the columns marked A, D, C, R, U, and E mean the following: **A** - Added; **D** - Deprecated; **C** - Changed; **R** - Removed; **U** - Unsupported for CUDA version(s); **E** - Experimental

10.2.1 1. CUDA Driver Data Types

CUDA	A	D	C	R	
CIG_DATA_TYPE_D3D12_COMMAND_QUEUE	12.5				
CIG_DATA_TYPE_NV_BLOB	12.9				
CUCoredumpGenerationFlags	12.5				
CUDA_ARRAY3D_2DARRAY		5.0			
CUDA_ARRAY3D_COLOR_ATTACHMENT	10.0				
CUDA_ARRAY3D_CUBEMAP					
CUDA_ARRAY3D_DEFERRED_MAPPING	11.6				
CUDA_ARRAY3D_DEPTH_TEXTURE					
CUDA_ARRAY3D_DESCRIPTOR					
CUDA_ARRAY3D_DESCRIPTOR_st					
CUDA_ARRAY3D_DESCRIPTOR_v2	11.3				
CUDA_ARRAY3D_LAYERED					
CUDA_ARRAY3D_SPARSE	11.1				
CUDA_ARRAY3D_SURFACE_LDST					
CUDA_ARRAY3D_TEXTURE_GATHER					
CUDA_ARRAY3D_VIDEO_ENCODE_DECODE	12.5				
CUDA_ARRAY_DESCRIPTOR					
CUDA_ARRAY_DESCRIPTOR_st					
CUDA_ARRAY_DESCRIPTOR_v1					
CUDA_ARRAY_DESCRIPTOR_v1_st					
CUDA_ARRAY_DESCRIPTOR_v2	11.3				
CUDA_ARRAY_MEMORY_REQUIREMENTS	11.6				
CUDA_ARRAY_MEMORY_REQUIREMENTS_st	11.6				

Table 5 – continued from

CUDA	A	D	C	R	I
CUDA_ARRAY_MEMORY_REQUIREMENTS_v1	11.6				I
CUDA_ARRAY_SPARSE_PROPERTIES	11.1				
CUDA_ARRAY_SPARSE_PROPERTIES_st	11.1				
CUDA_ARRAY_SPARSE_PROPERTIES_v1	11.3				
CUDA_BATCH_MEM_OP_NODE_PARAMS	11.7				I
CUDA_BATCH_MEM_OP_NODE_PARAMS_st	11.7			12.2	I
CUDA_BATCH_MEM_OP_NODE_PARAMS_v1	12.2				I
CUDA_BATCH_MEM_OP_NODE_PARAMS_v1_st	12.2				I
CUDA_BATCH_MEM_OP_NODE_PARAMS_v2	12.2				I
CUDA_BATCH_MEM_OP_NODE_PARAMS_v2_st	12.2				I
CUDA_CB					
CUDA_CHILD_GRAPH_NODE_PARAMS	12.2				I
CUDA_CHILD_GRAPH_NODE_PARAMS_st	12.2				I
CUDA_CONDITIONAL_NODE_PARAMS	12.3				
CUDA_COOPERATIVE_LAUNCH_MULTI_DEVICE_NO_POST_LAUNCH_SYNC	9.0				I
CUDA_COOPERATIVE_LAUNCH_MULTI_DEVICE_NO_PRE_LAUNCH_SYNC	9.0				I
CUDA_ERROR_ALREADY_ACQUIRED					I
CUDA_ERROR_ALREADY_MAPPED					I
CUDA_ERROR_ARRAY_IS_MAPPED					I
CUDA_ERROR_ASSERT					I
CUDA_ERROR_CALL_REQUIRES_NEWER_DRIVER	13.0				
CUDA_ERROR_CAPTURED_EVENT	10.0				I
CUDA_ERROR_CDP_NOT_SUPPORTED	12.0				
CUDA_ERROR_CDP_VERSION_MISMATCH	12.0				
CUDA_ERROR_COMPAT_NOT_SUPPORTED_ON_DEVICE	10.1				
CUDA_ERROR_CONTAINED	12.8				
CUDA_ERROR_CONTEXT_ALREADY_CURRENT		3.2			I
CUDA_ERROR_CONTEXT_ALREADY_IN_USE					I
CUDA_ERROR_CONTEXT_IS_DESTROYED					I
CUDA_ERROR_COOPERATIVE_LAUNCH_TOO_LARGE	9.0				I
CUDA_ERROR_DEINITIALIZED					I
CUDA_ERROR_DEVICE_NOT_LICENSED	11.1				
CUDA_ERROR_DEVICE_UNAVAILABLE	11.7				
CUDA_ERROR_ECC_UNCORRECTABLE					I
CUDA_ERROR_EXTERNAL_DEVICE	11.4				
CUDA_ERROR_FILE_NOT_FOUND					I
CUDA_ERROR_FUNCTION_NOT_LOADED	12.4				
CUDA_ERROR_GRAPH_EXEC_UPDATE_FAILURE	10.2				I
CUDA_ERROR_GRAPH_RECAPTURE_FAILURE	13.3				
CUDA_ERROR_HARDWARE_STACK_ERROR					
CUDA_ERROR_HOST_MEMORY_ALREADY_REGISTERED					I
CUDA_ERROR_HOST_MEMORY_NOT_REGISTERED					I
CUDA_ERROR_ILLEGAL_ADDRESS					I
CUDA_ERROR_ILLEGAL_INSTRUCTION					
CUDA_ERROR_ILLEGAL_STATE	10.0				I
CUDA_ERROR_INVALID_ADDRESS_SPACE					
CUDA_ERROR_INVALID_CLUSTER_SIZE	11.8				I
CUDA_ERROR_INVALID_CONTEXT					I
CUDA_ERROR_INVALID_DEVICE					I
CUDA_ERROR_INVALID_GRAPHICS_CONTEXT					I

Table 5 – continued from

CUDA	A	D	C	R	I
CUDA_ERROR_INVALID_HANDLE					I
CUDA_ERROR_INVALID_IMAGE					I
CUDA_ERROR_INVALID_PC					
CUDA_ERROR_INVALID_PTX					I
CUDA_ERROR_INVALID_RESOURCE_CONFIGURATION	12.4				
CUDA_ERROR_INVALID_RESOURCE_TYPE	12.4				
CUDA_ERROR_INVALID_SOURCE					I
CUDA_ERROR_INVALID_VALUE					I
CUDA_ERROR_JIT_COMPILATION_DISABLED	11.2				
CUDA_ERROR_JIT_COMPILER_NOT_FOUND	9.0				
CUDA_ERROR_KEY_ROTATION	12.8				
CUDA_ERROR_LAUNCH_FAILED					I
CUDA_ERROR_LAUNCH_INCOMPATIBLE_TEXTURING					
CUDA_ERROR_LAUNCH_OUT_OF_RESOURCES					I
CUDA_ERROR_LAUNCH_TIMEOUT					I
CUDA_ERROR_LOSSY_QUERY					
CUDA_ERROR_MAP_FAILED					I
CUDA_ERROR_MISALIGNED_ADDRESS					
CUDA_ERROR_MPS_CLIENT_TERMINATED	11.8				
CUDA_ERROR_MPS_CONNECTION_FAILED	11.4				
CUDA_ERROR_MPS_MAX_CLIENTS_REACHED	11.4				
CUDA_ERROR_MPS_MAX_CONNECTIONS_REACHED	11.4				
CUDA_ERROR_MPS_RPC_FAILURE	11.4				
CUDA_ERROR_MPS_SERVER_NOT_READY	11.4				
CUDA_ERROR_NOT_FOUND					I
CUDA_ERROR_NOT_INITIALIZED					I
CUDA_ERROR_NOT_MAPPED					I
CUDA_ERROR_NOT_MAPPED_AS_ARRAY					I
CUDA_ERROR_NOT_MAPPED_AS_POINTER					I
CUDA_ERROR_NOT_PERMITTED					
CUDA_ERROR_NOT_READY					I
CUDA_ERROR_NOT_SUPPORTED					I
CUDA_ERROR_NO_BINARY_FOR_GPU					I
CUDA_ERROR_NO_DEVICE					I
CUDA_ERROR_NVLINK_UNCORRECTABLE	8.0				
CUDA_ERROR_OPERATING_SYSTEM					I
CUDA_ERROR_OUT_OF_MEMORY					I
CUDA_ERROR_PEER_ACCESS_ALREADY_ENABLED					I
CUDA_ERROR_PEER_ACCESS_NOT_ENABLED					I
CUDA_ERROR_PEER_ACCESS_UNSUPPORTED					I
CUDA_ERROR_PRIMARY_CONTEXT_ACTIVE					I
CUDA_ERROR_PROFILER_ALREADY_STARTED		5.0			I
CUDA_ERROR_PROFILER_ALREADY_STOPPED		5.0			I
CUDA_ERROR_PROFILER_DISABLED					I
CUDA_ERROR_PROFILER_NOT_INITIALIZED		5.0			I
CUDA_ERROR_SHARED_OBJECT_INIT_FAILED					I
CUDA_ERROR_SHARED_OBJECT_SYMBOL_NOT_FOUND					I
CUDA_ERROR_STREAM_CAPTURE_IMPLICIT	10.0				I
CUDA_ERROR_STREAM_CAPTURE_INVALIDATED	10.0				I
CUDA_ERROR_STREAM_CAPTURE_ISOLATION	10.0				I

Table 5 – continued from

CUDA	A	D	C	R	I
CUDA_ERROR_STREAM_CAPTURE_MERGE	10.0				I
CUDA_ERROR_STREAM_CAPTURE_UNJOINED	10.0				I
CUDA_ERROR_STREAM_CAPTURE_UNMATCHED	10.0				I
CUDA_ERROR_STREAM_CAPTURE_UNSUPPORTED	10.0				I
CUDA_ERROR_STREAM_CAPTURE_WRONG_THREAD	10.1				I
CUDA_ERROR_STREAM_DETACHED	13.1				
CUDA_ERROR_STUB_LIBRARY	11.1				
CUDA_ERROR_SYSTEM_DRIVER_MISMATCH	10.1				
CUDA_ERROR_SYSTEM_NOT_READY	10.0				
CUDA_ERROR_TENSOR_MEMORY_LEAK	12.8				
CUDA_ERROR_TIMEOUT	10.2				
CUDA_ERROR_TOO_MANY_PEERS					
CUDA_ERROR_UNKNOWN					I
CUDA_ERROR_UNMAP_FAILED					I
CUDA_ERROR_UNSUPPORTED_DEVSIDE_SYNC	12.1				
CUDA_ERROR_UNSUPPORTED_EXEC_AFFINITY	11.4				
CUDA_ERROR_UNSUPPORTED_LIMIT					I
CUDA_ERROR_UNSUPPORTED_PTX_VERSION	11.1				
CUDA_EVENT_RECORD_NODE_PARAMS	12.2				I
CUDA_EVENT_RECORD_NODE_PARAMS_st	12.2				I
CUDA_EVENT_WAIT_NODE_PARAMS	12.2				I
CUDA_EVENT_WAIT_NODE_PARAMS_st	12.2				I
CUDA_EXTERNAL_MEMORY_BUFFER_DESC	10.0				I
CUDA_EXTERNAL_MEMORY_BUFFER_DESC_st	10.0				I
CUDA_EXTERNAL_MEMORY_BUFFER_DESC_v1	11.3				I
CUDA_EXTERNAL_MEMORY_DEDICATED	10.0				I
CUDA_EXTERNAL_MEMORY_HANDLE_DESC	10.0				I
CUDA_EXTERNAL_MEMORY_HANDLE_DESC_st	10.0				I
CUDA_EXTERNAL_MEMORY_HANDLE_DESC_v1	11.3				I
CUDA_EXTERNAL_MEMORY_MIPMAPPED_ARRAY_DESC	10.0				
CUDA_EXTERNAL_MEMORY_MIPMAPPED_ARRAY_DESC_st	10.0				
CUDA_EXTERNAL_MEMORY_MIPMAPPED_ARRAY_DESC_v1	11.3				
CUDA_EXTERNAL_SEMAPHORE_HANDLE_DESC	10.0				I
CUDA_EXTERNAL_SEMAPHORE_HANDLE_DESC_st	10.0				I
CUDA_EXTERNAL_SEMAPHORE_HANDLE_DESC_v1	11.3				I
CUDA_EXTERNAL_SEMAPHORE_SIGNAL_PARAMS	10.0				I
CUDA_EXTERNAL_SEMAPHORE_SIGNAL_PARAMS_st	10.0				I
CUDA_EXTERNAL_SEMAPHORE_SIGNAL_PARAMS_v1	11.3				I
CUDA_EXTERNAL_SEMAPHORE_SIGNAL_SKIP_NVSCIBUF_MEMSYNC	10.2				
CUDA_EXTERNAL_SEMAPHORE_WAIT_PARAMS	10.0				I
CUDA_EXTERNAL_SEMAPHORE_WAIT_PARAMS_st	10.0				I
CUDA_EXTERNAL_SEMAPHORE_WAIT_PARAMS_v1	11.3				I
CUDA_EXTERNAL_SEMAPHORE_WAIT_SKIP_NVSCIBUF_MEMSYNC	10.2				
CUDA_EXT_SEM_SIGNAL_NODE_PARAMS	11.2				I
CUDA_EXT_SEM_SIGNAL_NODE_PARAMS_st	11.2				I
CUDA_EXT_SEM_SIGNAL_NODE_PARAMS_v1	11.3				I
CUDA_EXT_SEM_SIGNAL_NODE_PARAMS_v2	12.2				I
CUDA_EXT_SEM_SIGNAL_NODE_PARAMS_v2_st	12.2				I
CUDA_EXT_SEM_WAIT_NODE_PARAMS	11.2				I
CUDA_EXT_SEM_WAIT_NODE_PARAMS_st	11.2				I

Table 5 – continued from

CUDA	A	D	C	R	I
CUDA_EXT_SEM_WAIT_NODE_PARAMS_v1	11.3				I
CUDA_EXT_SEM_WAIT_NODE_PARAMS_v2	12.2				I
CUDA_EXT_SEM_WAIT_NODE_PARAMS_v2_st	12.2				I
CUDA_GRAPH_INSTANTIATE_CONDITIONAL_HANDLE_UNUSED	12.8				
CUDA_GRAPH_INSTANTIATE_ERROR	12.0				I
CUDA_GRAPH_INSTANTIATE_FLAG_AUTO_FREE_ON_LAUNCH	11.4				I
CUDA_GRAPH_INSTANTIATE_FLAG_DEVICE_LAUNCH	12.0				I
CUDA_GRAPH_INSTANTIATE_FLAG_UPLOAD	12.0				I
CUDA_GRAPH_INSTANTIATE_FLAG_USE_NODE_PRIORITY	11.7				I
CUDA_GRAPH_INSTANTIATE_INVALID_STRUCTURE	12.0				I
CUDA_GRAPH_INSTANTIATE_MULTIPLE_CTXS_NOT_SUPPORTED	12.0				I
CUDA_GRAPH_INSTANTIATE_NODE_OPERATION_NOT_SUPPORTED	12.0				I
CUDA_GRAPH_INSTANTIATE_PARAMS	12.0				I
CUDA_GRAPH_INSTANTIATE_PARAMS_st	12.0				I
CUDA_GRAPH_INSTANTIATE_SUCCESS	12.0				I
CUDA_HOST_NODE_PARAMS	10.0				I
CUDA_HOST_NODE_PARAMS_st	10.0				I
CUDA_HOST_NODE_PARAMS_v1	11.3				I
CUDA_HOST_NODE_PARAMS_v2	12.2		13.2		
CUDA_HOST_NODE_PARAMS_v2_st	12.2		13.2		
CUDA_KERNEL_NODE_PARAMS	10.0				I
CUDA_KERNEL_NODE_PARAMS_st	10.0				I
CUDA_KERNEL_NODE_PARAMS_v1	11.3				I
CUDA_KERNEL_NODE_PARAMS_v2	12.0				
CUDA_KERNEL_NODE_PARAMS_v2_st	12.0				
CUDA_KERNEL_NODE_PARAMS_v3	12.2				
CUDA_KERNEL_NODE_PARAMS_v3_st	12.2				
CUDA_LAUNCH_PARAMS	9.0				I
CUDA_LAUNCH_PARAMS_st	9.0				I
CUDA_LAUNCH_PARAMS_v1	11.3				I
CUDA_MEMCPY2D					I
CUDA_MEMCPY2D_st					I
CUDA_MEMCPY2D_v1					I
CUDA_MEMCPY2D_v1_st					I
CUDA_MEMCPY2D_v2	11.3				I
CUDA_MEMCPY3D					I
CUDA_MEMCPY3D_BATCH_OP	12.8				I
CUDA_MEMCPY3D_BATCH_OP_st	12.8				I
CUDA_MEMCPY3D_BATCH_OP_v1	12.8				I
CUDA_MEMCPY3D_PEER					
CUDA_MEMCPY3D_PEER_st					
CUDA_MEMCPY3D_PEER_v1	11.3				
CUDA_MEMCPY3D_st					I
CUDA_MEMCPY3D_v1					I
CUDA_MEMCPY3D_v1_st					I
CUDA_MEMCPY3D_v2	11.3				I
CUDA_MEMCPY_NODE_PARAMS	12.2				I
CUDA_MEMCPY_NODE_PARAMS_st	12.2				I
CUDA_MEMSET_NODE_PARAMS	10.0				I
CUDA_MEMSET_NODE_PARAMS_st	10.0				I

Table 5 – continued from

CUDA	A	D	C	R	I
CUDA_MEMSET_NODE_PARAMS_v1	11.3				I
CUDA_MEMSET_NODE_PARAMS_v2	12.2				
CUDA_MEMSET_NODE_PARAMS_v2_st	12.2				
CUDA_MEM_ALLOC_NODE_PARAMS	11.4				I
CUDA_MEM_ALLOC_NODE_PARAMS_st	11.4			12.2	I
CUDA_MEM_ALLOC_NODE_PARAMS_v1	12.2				I
CUDA_MEM_ALLOC_NODE_PARAMS_v1_st	12.2				I
CUDA_MEM_ALLOC_NODE_PARAMS_v2	12.2				
CUDA_MEM_ALLOC_NODE_PARAMS_v2_st	12.2				
CUDA_MEM_FREE_NODE_PARAMS	12.2				I
CUDA_MEM_FREE_NODE_PARAMS_st	12.2				I
CUDA_NVSCISYNC_ATTR_SIGNAL	10.2				
CUDA_NVSCISYNC_ATTR_WAIT	10.2				
CUDA_POINTER_ATTRIBUTE_ACCESS_FLAGS	11.1				
CUDA_POINTER_ATTRIBUTE_ACCESS_FLAGS_enum	11.1				
CUDA_POINTER_ATTRIBUTE_P2P_TOKENS					
CUDA_POINTER_ATTRIBUTE_P2P_TOKENS_st					
CUDA_POINTER_ATTRIBUTE_P2P_TOKENS_v1	11.3				
CUDA_RESOURCE_DESC					I
CUDA_RESOURCE_DESC_st					I
CUDA_RESOURCE_DESC_v1	11.3				I
CUDA_RESOURCE_VIEW_DESC					I
CUDA_RESOURCE_VIEW_DESC_st					I
CUDA_RESOURCE_VIEW_DESC_v1	11.3				I
CUDA_SUCCESS					I
CUDA_TEXTURE_DESC					I
CUDA_TEXTURE_DESC_st					I
CUDA_TEXTURE_DESC_v1	11.3				I
CUGLDeviceList					I
CUGLDeviceList_enum					I
CUGLmap_flags					
CUGLmap_flags_enum					
CUGPUDirectRDMAWritesOrdering	11.3				I
CUGPUDirectRDMAWritesOrdering_enum	11.3				I
CU_ACCESS_PROPERTY_NORMAL	11.0				I
CU_ACCESS_PROPERTY_PERSISTING	11.0				I
CU_ACCESS_PROPERTY_STREAMING	11.0				I
CU_AD_FORMAT_AYUV	12.5				
CU_AD_FORMAT_BC1_UNORM	11.5				
CU_AD_FORMAT_BC1_UNORM_SRGB	11.5				
CU_AD_FORMAT_BC2_UNORM	11.5				
CU_AD_FORMAT_BC2_UNORM_SRGB	11.5				
CU_AD_FORMAT_BC3_UNORM	11.5				
CU_AD_FORMAT_BC3_UNORM_SRGB	11.5				
CU_AD_FORMAT_BC4_SNORM	11.5				
CU_AD_FORMAT_BC4_UNORM	11.5				
CU_AD_FORMAT_BC5_SNORM	11.5				
CU_AD_FORMAT_BC5_UNORM	11.5				
CU_AD_FORMAT_BC6H_SF16	11.5				
CU_AD_FORMAT_BC6H_UF16	11.5				

Table 5 – continued from

CUDA	A	D	C	R	I
CU_AD_FORMAT_BC7_UNORM	11.5				
CU_AD_FORMAT_BC7_UNORM_SRGB	11.5				
CU_AD_FORMAT_FLOAT					I
CU_AD_FORMAT_HALF					I
CU_AD_FORMAT_MAX	12.5				
CU_AD_FORMAT_NV12	11.2				
CU_AD_FORMAT_NV16	12.5				
CU_AD_FORMAT_P010	12.5				
CU_AD_FORMAT_P016	12.5				
CU_AD_FORMAT_P210	12.5				
CU_AD_FORMAT_P216	12.5				
CU_AD_FORMAT_SIGNED_INT16					I
CU_AD_FORMAT_SIGNED_INT32					I
CU_AD_FORMAT_SIGNED_INT8					I
CU_AD_FORMAT_SNORM_INT16X1	11.5				
CU_AD_FORMAT_SNORM_INT16X2	11.5				
CU_AD_FORMAT_SNORM_INT16X4	11.5				
CU_AD_FORMAT_SNORM_INT8X1	11.5				
CU_AD_FORMAT_SNORM_INT8X2	11.5				
CU_AD_FORMAT_SNORM_INT8X4	11.5				
CU_AD_FORMAT_UINT16_PLANAR_420	13.1				
CU_AD_FORMAT_UINT16_PLANAR_422	13.1				
CU_AD_FORMAT_UINT16_PLANAR_444	13.1				
CU_AD_FORMAT_UINT16_SEMIPLANAR_420	13.1				
CU_AD_FORMAT_UINT16_SEMIPLANAR_422	13.1				
CU_AD_FORMAT_UINT16_SEMIPLANAR_444	13.1				
CU_AD_FORMAT_UINT8_PACKED_422	13.1				
CU_AD_FORMAT_UINT8_PACKED_444	13.1				
CU_AD_FORMAT_UINT8_PLANAR_420	13.1				
CU_AD_FORMAT_UINT8_PLANAR_422	13.1				
CU_AD_FORMAT_UINT8_PLANAR_444	13.1				
CU_AD_FORMAT_UINT8_SEMIPLANAR_420	13.1				
CU_AD_FORMAT_UINT8_SEMIPLANAR_422	13.1				
CU_AD_FORMAT_UINT8_SEMIPLANAR_444	13.1				
CU_AD_FORMAT_UNORM_INT16X1	11.5				
CU_AD_FORMAT_UNORM_INT16X2	11.5				
CU_AD_FORMAT_UNORM_INT16X4	11.5				
CU_AD_FORMAT_UNORM_INT8X1	11.5				
CU_AD_FORMAT_UNORM_INT8X2	11.5				
CU_AD_FORMAT_UNORM_INT8X4	11.5				
CU_AD_FORMAT_UNORM_INT_101010_2	12.8				
CU_AD_FORMAT_UNSIGNED_INT16					I
CU_AD_FORMAT_UNSIGNED_INT32					I
CU_AD_FORMAT_UNSIGNED_INT8					I
CU_AD_FORMAT_Y210	12.5				
CU_AD_FORMAT_Y216	12.5				
CU_AD_FORMAT_Y410	12.5				
CU_AD_FORMAT_Y416	12.5				
CU_AD_FORMAT_Y444_PLANAR10	12.5				
CU_AD_FORMAT_Y444_PLANAR8	12.5				

Table 5 – continued from

CUDA	A	D	C	R	I
CU_AD_FORMAT_YUV444_16bit_SemiPlanar	12.8				
CU_AD_FORMAT_YUV444_8bit_SemiPlanar	12.8				
CU_AD_FORMAT_YUY2	12.5				
CU_ARRAY_SPARSE_PROPERTIES_SINGLE_MIPTAIL	11.1				
CU_ARRAY_SPARSE_SUBRESOURCE_TYPE_MIPTAIL	11.1				I
CU_ARRAY_SPARSE_SUBRESOURCE_TYPE_SPARSE_LEVEL	11.1				I
CU_ASYNC_NOTIFICATION_TYPE_OVER_BUDGET	12.4				
CU_ATOMIC_CAPABILITY_REDUCTION	13.0				
CU_ATOMIC_CAPABILITY_SCALAR_128	13.0				
CU_ATOMIC_CAPABILITY_SCALAR_32	13.0				
CU_ATOMIC_CAPABILITY_SCALAR_64	13.0				
CU_ATOMIC_CAPABILITY_SIGNED	13.0				
CU_ATOMIC_CAPABILITY_UNSIGNED	13.0				
CU_ATOMIC_CAPABILITY_VECTOR_32x4	13.0				
CU_ATOMIC_OPERATION_AND	13.0				
CU_ATOMIC_OPERATION_CAS	13.0				
CU_ATOMIC_OPERATION_EXCHANGE	13.0				
CU_ATOMIC_OPERATION_FLOAT_ADD	13.0				
CU_ATOMIC_OPERATION_FLOAT_MAX	13.0				
CU_ATOMIC_OPERATION_FLOAT_MIN	13.0				
CU_ATOMIC_OPERATION_INTEGER_ADD	13.0				
CU_ATOMIC_OPERATION_INTEGER_DECREMENT	13.0				
CU_ATOMIC_OPERATION_INTEGER_INCREMENT	13.0				
CU_ATOMIC_OPERATION_INTEGER_MAX	13.0				
CU_ATOMIC_OPERATION_INTEGER_MIN	13.0				
CU_ATOMIC_OPERATION_MAX	13.0				
CU_ATOMIC_OPERATION_OR	13.0				
CU_ATOMIC_OPERATION_XOR	13.0				
CU_CLUSTER_SCHEDULING_POLICY_DEFAULT	11.8				I
CU_CLUSTER_SCHEDULING_POLICY_LOAD_BALANCING	11.8				I
CU_CLUSTER_SCHEDULING_POLICY_SPREAD	11.8				I
CU_COMPUTEMODE_DEFAULT					I
CU_COMPUTEMODE_EXCLUSIVE				8.0	I
CU_COMPUTEMODE_EXCLUSIVE_PROCESS					I
CU_COMPUTEMODE_PROHIBITED					I
CU_COMPUTE_ACCELERATED_TARGET_BASE	12.0				
CU_COMPUTE_FAMILY_TARGET_BASE	12.9				
CU_COREDUMP_DEFAULT_FLAGS	12.5				
CU_COREDUMP_ENABLE_ON_EXCEPTION	12.1				
CU_COREDUMP_ENABLE_USER_TRIGGER	12.1				
CU_COREDUMP_FILE	12.1				
CU_COREDUMP_GENERATION_FLAGS	12.5				
CU_COREDUMP_GZIP_COMPRESS	13.1				
CU_COREDUMP_LIGHTWEIGHT	12.1				
CU_COREDUMP_LIGHTWEIGHT_FLAGS	12.5				
CU_COREDUMP_MAX	12.1				
CU_COREDUMP_PIPE	12.1				
CU_COREDUMP_SKIP_ABORT	12.5				
CU_COREDUMP_SKIP_CONSTBANK_MEMORY	12.6				
CU_COREDUMP_SKIP_GLOBAL_MEMORY	12.5				

Table 5 – continued from

CUDA	A	D	C	R	
CU_COREDUMP_SKIP_LOCAL_MEMORY	12.5				
CU_COREDUMP_SKIP_NONRELOCATED_ELF_IMAGES	12.5				
CU_COREDUMP_SKIP_SHARED_MEMORY	12.5				
CU_COREDUMP_TRIGGER_HOST	12.1				
CU_CTX_BLOCKING_SYNC		4.0			
CU_CTX_COREDUMP_ENABLE	12.1				
CU_CTX_FLAGS_MASK					
CU_CTX_LMEM_RESIZE_TO_MAX					
CU_CTX_MAP_HOST					
CU_CTX_SCHED_AUTO					
CU_CTX_SCHED_BLOCKING_SYNC					
CU_CTX_SCHED_MASK					
CU_CTX_SCHED_SPIN					
CU_CTX_SCHED_YIELD					
CU_CTX_SYNC_MEMOPS	12.1				
CU_CTX_USER_COREDUMP_ENABLE	12.1				
CU_CUBEMAP_FACE_NEGATIVE_X					
CU_CUBEMAP_FACE_NEGATIVE_Y					
CU_CUBEMAP_FACE_NEGATIVE_Z					
CU_CUBEMAP_FACE_POSITIVE_X					
CU_CUBEMAP_FACE_POSITIVE_Y					
CU_CUBEMAP_FACE_POSITIVE_Z					
CU_D3D10_DEVICE_LIST_ALL					
CU_D3D10_DEVICE_LIST_CURRENT_FRAME					
CU_D3D10_DEVICE_LIST_NEXT_FRAME					
CU_D3D10_MAPRESOURCE_FLAGS_NONE					
CU_D3D10_MAPRESOURCE_FLAGS_READONLY					
CU_D3D10_MAPRESOURCE_FLAGS_WRITEDISCARD					
CU_D3D10_REGISTER_FLAGS_ARRAY					
CU_D3D10_REGISTER_FLAGS_NONE					
CU_D3D11_DEVICE_LIST_ALL					
CU_D3D11_DEVICE_LIST_CURRENT_FRAME					
CU_D3D11_DEVICE_LIST_NEXT_FRAME					
CU_D3D9_DEVICE_LIST_ALL					
CU_D3D9_DEVICE_LIST_CURRENT_FRAME					
CU_D3D9_DEVICE_LIST_NEXT_FRAME					
CU_D3D9_MAPRESOURCE_FLAGS_NONE					
CU_D3D9_MAPRESOURCE_FLAGS_READONLY					
CU_D3D9_MAPRESOURCE_FLAGS_WRITEDISCARD					
CU_D3D9_REGISTER_FLAGS_ARRAY					
CU_D3D9_REGISTER_FLAGS_NONE					
CU_DEVICE_ATTRIBUTE_ASYNC_ENGINE_COUNT					
CU_DEVICE_ATTRIBUTE_ATOMIC_REDUCTION_SUPPORTED	13.1				
CU_DEVICE_ATTRIBUTE_CAN_FLUSH_REMOTE_WRITES	9.2				
CU_DEVICE_ATTRIBUTE_CAN_MAP_HOST_MEMORY					
CU_DEVICE_ATTRIBUTE_CAN_TEX2D_GATHER		5.0			
CU_DEVICE_ATTRIBUTE_CAN_USE_64_BIT_STREAM_MEM_OPS	9.0				
CU_DEVICE_ATTRIBUTE_CAN_USE_64_BIT_STREAM_MEM_OPS_V1	12.0	12.0			
CU_DEVICE_ATTRIBUTE_CAN_USE_64_BIT_STREAM_MEM_OPS_V2	11.7			12.0	
CU_DEVICE_ATTRIBUTE_CAN_USE_HOST_POINTER_FOR_REGISTERED_MEM	9.0				

Table 5 – continued from

CUDA	A	D	C	R	I
CU_DEVICE_ATTRIBUTE_CAN_USE_STREAM_MEM_OPS	9.0			12.0	
CU_DEVICE_ATTRIBUTE_CAN_USE_STREAM_MEM_OPS_V1	12.0	12.0			
CU_DEVICE_ATTRIBUTE_CAN_USE_STREAM_WAIT_VALUE_NOR	9.0				I
CU_DEVICE_ATTRIBUTE_CAN_USE_STREAM_WAIT_VALUE_NOR_V1	12.0	12.0			I
CU_DEVICE_ATTRIBUTE_CAN_USE_STREAM_WAIT_VALUE_NOR_V2	11.7			12.0	
CU_DEVICE_ATTRIBUTE_CLOCK_RATE					I
CU_DEVICE_ATTRIBUTE_CLUSTER_LAUNCH	11.8				
CU_DEVICE_ATTRIBUTE_COMPUTE_CAPABILITY_MAJOR					I
CU_DEVICE_ATTRIBUTE_COMPUTE_CAPABILITY_MINOR					I
CU_DEVICE_ATTRIBUTE_COMPUTE_MODE					I
CU_DEVICE_ATTRIBUTE_COMPUTE_PREEMPTION_SUPPORTED	8.0				I
CU_DEVICE_ATTRIBUTE_CONCURRENT_KERNELS					I
CU_DEVICE_ATTRIBUTE_CONCURRENT_MANAGED_ACCESS	8.0				I
CU_DEVICE_ATTRIBUTE_COOPERATIVE_LAUNCH	9.0				I
CU_DEVICE_ATTRIBUTE_COOPERATIVE_MULTI_DEVICE_LAUNCH	9.0				I
CU_DEVICE_ATTRIBUTE_D3D12_CIG_STREAMS_SUPPORTED	13.3				
CU_DEVICE_ATTRIBUTE_D3D12_CIG_SUPPORTED	12.5				
CU_DEVICE_ATTRIBUTE_DEFERRED_MAPPING_CUDA_ARRAY_SUPPORTED	11.6				
CU_DEVICE_ATTRIBUTE_DIRECT_MANAGED_MEM_ACCESS_FROM_HOST	9.2				I
CU_DEVICE_ATTRIBUTE_DMA_BUF_MMAP_SUPPORTED	13.3				
CU_DEVICE_ATTRIBUTE_DMA_BUF_SUPPORTED	11.7				I
CU_DEVICE_ATTRIBUTE_ECC_ENABLED					I
CU_DEVICE_ATTRIBUTE_GENERIC_COMPRESSION_SUPPORTED	11.0				
CU_DEVICE_ATTRIBUTE_GLOBAL_L1_CACHE_SUPPORTED					I
CU_DEVICE_ATTRIBUTE_GLOBAL_MEMORY_BUS_WIDTH					I
CU_DEVICE_ATTRIBUTE_GPU_DIRECT_RDMA_FLUSH_WRITES_OPTIONS	11.3				
CU_DEVICE_ATTRIBUTE_GPU_DIRECT_RDMA_SUPPORTED	11.3				
CU_DEVICE_ATTRIBUTE_GPU_DIRECT_RDMA_WITH_CUDA_VMM_SUPPORTED	11.0				I
CU_DEVICE_ATTRIBUTE_GPU_DIRECT_RDMA_WRITES_ORDERING	11.3				
CU_DEVICE_ATTRIBUTE_GPU_OVERLAP		5.0			I
CU_DEVICE_ATTRIBUTE_GPU_PCI_DEVICE_ID	12.8				
CU_DEVICE_ATTRIBUTE_GPU_PCI_SUBSYSTEM_ID	12.8				
CU_DEVICE_ATTRIBUTE_HANDLE_TYPE_FABRIC_SUPPORTED	12.3				I
CU_DEVICE_ATTRIBUTE_HANDLE_TYPE_POSIX_FILE_DESCRIPTOR_SUPPORTED	10.2				
CU_DEVICE_ATTRIBUTE_HANDLE_TYPE_WIN32_HANDLE_SUPPORTED	10.2				
CU_DEVICE_ATTRIBUTE_HANDLE_TYPE_WIN32_KMT_HANDLE_SUPPORTED	10.2				
CU_DEVICE_ATTRIBUTE_HOST_ALLOC_DMA_BUF_SUPPORTED	13.0				
CU_DEVICE_ATTRIBUTE_HOST_MEMORY_POOLS_SUPPORTED	13.0				
CU_DEVICE_ATTRIBUTE_HOST_NATIVE_ATOMIC_SUPPORTED	8.0				I
CU_DEVICE_ATTRIBUTE_HOST_NUMA_ID	12.2				I
CU_DEVICE_ATTRIBUTE_HOST_NUMA_MEMORY_POOLS_SUPPORTED	12.9				
CU_DEVICE_ATTRIBUTE_HOST_NUMA_MULTINODE_IPC_SUPPORTED	12.8				
CU_DEVICE_ATTRIBUTE_HOST_NUMA_VIRTUAL_MEMORY_MANAGEMENT_SUPPORTED	12.9				
CU_DEVICE_ATTRIBUTE_HOST_REGISTER_SUPPORTED	9.2				I
CU_DEVICE_ATTRIBUTE_HOST_VIRTUAL_MEMORY_MANAGEMENT_SUPPORTED	13.0				
CU_DEVICE_ATTRIBUTE_INTEGRATED					I
CU_DEVICE_ATTRIBUTE_IPC_EVENT_SUPPORTED	12.0				
CU_DEVICE_ATTRIBUTE_KERNEL_EXEC_TIMEOUT					I
CU_DEVICE_ATTRIBUTE_L2_CACHE_SIZE					I
CU_DEVICE_ATTRIBUTE_LOCAL_L1_CACHE_SUPPORTED					I

Table 5 – continued from

CUDA	A	D	C	R	I
CU_DEVICE_ATTRIBUTE_LOGICAL_ENDPOINT_COUNTED_OPS_SUPPORTED	13.3				
CU_DEVICE_ATTRIBUTE_LOGICAL_ENDPOINT_MULTICAST_SUPPORTED	13.3				
CU_DEVICE_ATTRIBUTE_LOGICAL_ENDPOINT_UNICAST_ACCESS_ON_OWNER_DEVICE_SUPPORTED	13.3				
CU_DEVICE_ATTRIBUTE_LOGICAL_ENDPOINT_UNICAST_SUPPORTED	13.3				
CU_DEVICE_ATTRIBUTE_MANAGED_MEMORY					I
CU_DEVICE_ATTRIBUTE_MAX					
CU_DEVICE_ATTRIBUTE_MAXIMUM_SURFACE1D_LAYERED_LAYERS					
CU_DEVICE_ATTRIBUTE_MAXIMUM_SURFACE1D_LAYERED_WIDTH					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_SURFACE1D_WIDTH					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_SURFACE2D_HEIGHT					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_SURFACE2D_LAYERED_HEIGHT					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_SURFACE2D_LAYERED_LAYERS					
CU_DEVICE_ATTRIBUTE_MAXIMUM_SURFACE2D_LAYERED_WIDTH					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_SURFACE2D_WIDTH					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_SURFACE3D_DEPTH					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_SURFACE3D_HEIGHT					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_SURFACE3D_WIDTH					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_SURFACECUBEMAP_LAYERED_LAYERS					
CU_DEVICE_ATTRIBUTE_MAXIMUM_SURFACECUBEMAP_LAYERED_WIDTH					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_SURFACECUBEMAP_WIDTH					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE1D_LAYERED_LAYERS					
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE1D_LAYERED_WIDTH					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE1D_LINEAR_WIDTH		11.2			I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE1D_MIPMAPPED_WIDTH					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE1D_WIDTH					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE2D_ARRAY_HEIGHT		5.0			I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE2D_ARRAY_NUMSLICES		5.0			
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE2D_ARRAY_WIDTH		5.0			I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE2D_GATHER_HEIGHT					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE2D_GATHER_WIDTH					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE2D_HEIGHT					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE2D_LAYERED_HEIGHT					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE2D_LAYERED_LAYERS					
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE2D_LAYERED_WIDTH					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE2D_LINEAR_HEIGHT					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE2D_LINEAR_PITCH					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE2D_LINEAR_WIDTH					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE2D_MIPMAPPED_HEIGHT					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE2D_MIPMAPPED_WIDTH					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE2D_WIDTH					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE3D_DEPTH					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE3D_DEPTH_ALTERNATE					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE3D_HEIGHT					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE3D_HEIGHT_ALTERNATE					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE3D_WIDTH					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURE3D_WIDTH_ALTERNATE					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURECUBEMAP_LAYERED_LAYERS					
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURECUBEMAP_LAYERED_WIDTH					I
CU_DEVICE_ATTRIBUTE_MAXIMUM_TEXTURECUBEMAP_WIDTH					I
CU_DEVICE_ATTRIBUTE_MAX_ACCESS_POLICY_WINDOW_SIZE	11.0				

Table 5 – continued from

CUDA	A	D	C	R	I
CU_DEVICE_ATTRIBUTE_MAX_BLOCKS_PER_MULTIPROCESSOR	11.0				I
CU_DEVICE_ATTRIBUTE_MAX_BLOCK_DIM_X					I
CU_DEVICE_ATTRIBUTE_MAX_BLOCK_DIM_Y					I
CU_DEVICE_ATTRIBUTE_MAX_BLOCK_DIM_Z					I
CU_DEVICE_ATTRIBUTE_MAX_GRID_DIM_X					I
CU_DEVICE_ATTRIBUTE_MAX_GRID_DIM_Y					I
CU_DEVICE_ATTRIBUTE_MAX_GRID_DIM_Z					I
CU_DEVICE_ATTRIBUTE_MAX_PERSISTING_L2_CACHE_SIZE	11.0				
CU_DEVICE_ATTRIBUTE_MAX_PITCH					I
CU_DEVICE_ATTRIBUTE_MAX_REGISTERS_PER_BLOCK					I
CU_DEVICE_ATTRIBUTE_MAX_REGISTERS_PER_MULTIPROCESSOR					I
CU_DEVICE_ATTRIBUTE_MAX_SHARED_MEMORY_PER_BLOCK					I
CU_DEVICE_ATTRIBUTE_MAX_SHARED_MEMORY_PER_BLOCK_OPTIN	9.0				I
CU_DEVICE_ATTRIBUTE_MAX_SHARED_MEMORY_PER_MULTIPROCESSOR					I
CU_DEVICE_ATTRIBUTE_MAX_THREADS_PER_BLOCK					I
CU_DEVICE_ATTRIBUTE_MAX_THREADS_PER_MULTIPROCESSOR					I
CU_DEVICE_ATTRIBUTE_MEMORY_CLOCK_RATE					I
CU_DEVICE_ATTRIBUTE_MEMORY_POOLS_SUPPORTED	11.2				I
CU_DEVICE_ATTRIBUTE_MEMPOOL_SUPPORTED_HANDLE_TYPES	11.3				
CU_DEVICE_ATTRIBUTE_MEM_DECOMPRESS_ALGORITHM_MASK	12.8				
CU_DEVICE_ATTRIBUTE_MEM_DECOMPRESS_MAXIMUM_LENGTH	12.8				
CU_DEVICE_ATTRIBUTE_MEM_SYNC_DOMAIN_COUNT	12.0				
CU_DEVICE_ATTRIBUTE_MPS_ENABLED	12.3				
CU_DEVICE_ATTRIBUTE_MULTICAST_SUPPORTED	12.1				
CU_DEVICE_ATTRIBUTE_MULTIPROCESSOR_COUNT					I
CU_DEVICE_ATTRIBUTE_MULTI_GPU_BOARD					I
CU_DEVICE_ATTRIBUTE_MULTI_GPU_BOARD_GROUP_ID					I
CU_DEVICE_ATTRIBUTE_NUMA_CONFIG	12.2				
CU_DEVICE_ATTRIBUTE_NUMA_ID	12.2				
CU_DEVICE_ATTRIBUTE_ONLY_PARTIAL_HOST_NATIVE_ATOMIC_SUPPORTED	13.0				
CU_DEVICE_ATTRIBUTE_PAGEABLE_MEMORY_ACCESS	8.0				I
CU_DEVICE_ATTRIBUTE_PAGEABLE_MEMORY_ACCESS_USES_HOST_PAGE_TABLES	9.2				I
CU_DEVICE_ATTRIBUTE_PCI_BUS_ID					I
CU_DEVICE_ATTRIBUTE_PCI_DEVICE_ID					I
CU_DEVICE_ATTRIBUTE_PCI_DOMAIN_ID					I
CU_DEVICE_ATTRIBUTE_READ_ONLY_HOST_REGISTER_SUPPORTED	11.1				
CU_DEVICE_ATTRIBUTE_REGISTERS_PER_BLOCK		5.0			I
CU_DEVICE_ATTRIBUTE_RESERVED_SHARED_MEMORY_PER_BLOCK	11.0				
CU_DEVICE_ATTRIBUTE_SHARED_MEMORY_PER_BLOCK		5.0			I
CU_DEVICE_ATTRIBUTE_SINGLE_TO_DOUBLE_PRECISION_PERF_RATIO	8.0				I
CU_DEVICE_ATTRIBUTE_SPARSE_CUDA_ARRAY_SUPPORTED	11.1				
CU_DEVICE_ATTRIBUTE_STREAM_PRIORITIES_SUPPORTED					I
CU_DEVICE_ATTRIBUTE_SURFACE_ALIGNMENT					I
CU_DEVICE_ATTRIBUTE_TCC_DRIVER					I
CU_DEVICE_ATTRIBUTE_TENSOR_MAP_ACCESS_SUPPORTED	12.0				
CU_DEVICE_ATTRIBUTE_TEXTURE_ALIGNMENT					I
CU_DEVICE_ATTRIBUTE_TEXTURE_PITCH_ALIGNMENT					I
CU_DEVICE_ATTRIBUTE_TIMELINE_SEMAPHORE_INTEROP_SUPPORTED	11.2				
CU_DEVICE_ATTRIBUTE_TOTAL_CONSTANT_MEMORY					I
CU_DEVICE_ATTRIBUTE_UNIFIED_ADDRESSING					I

Table 5 – continued from

CUDA	A	D	C	R	I
CU_DEVICE_ATTRIBUTE_UNIFIED_FUNCTION_POINTERS	12.0				
CU_DEVICE_ATTRIBUTE_VIRTUAL_ADDRESS_MANAGEMENT_SUPPORTED	10.2	11.2			
CU_DEVICE_ATTRIBUTE_VIRTUAL_MEMORY_MANAGEMENT_SUPPORTED	11.2				I
CU_DEVICE_ATTRIBUTE_VULKAN_CIG_SUPPORTED	12.9				
CU_DEVICE_ATTRIBUTE_WARP_SIZE					I
CU_DEVICE_CPU	8.0				I
CU_DEVICE_INVALID	8.0				I
CU_DEVICE_NUMA_CONFIG_NONE	12.2				
CU_DEVICE_NUMA_CONFIG_NUMA_NODE	12.2				
CU_DEVICE_P2P_ATTRIBUTE_ACCESS_ACCESS_SUPPORTED	10.1	10.1			I
CU_DEVICE_P2P_ATTRIBUTE_ACCESS_SUPPORTED	8.0				I
CU_DEVICE_P2P_ATTRIBUTE_ARRAY_ACCESS_ACCESS_SUPPORTED	9.2	10.0		10.1	I
CU_DEVICE_P2P_ATTRIBUTE_CUDA_ARRAY_ACCESS_SUPPORTED	10.0				I
CU_DEVICE_P2P_ATTRIBUTE_NATIVE_ATOMIC_SUPPORTED	8.0				I
CU_DEVICE_P2P_ATTRIBUTE_ONLY_PARTIAL_NATIVE_ATOMIC_SUPPORTED	13.0				
CU_DEVICE_P2P_ATTRIBUTE_PERFORMANCE_RANK	8.0				I
CU_DEV_RESOURCE_TYPE_INVALID	12.4				
CU_DEV_RESOURCE_TYPE_MAX	12.4			13.1	
CU_DEV_RESOURCE_TYPE_SM	12.4				
CU_DEV_RESOURCE_TYPE_WORKQUEUE	13.1				
CU_DEV_RESOURCE_TYPE_WORKQUEUE_CONFIG	13.1				
CU_DEV_SM_RESOURCE_GROUP_BACKFILL	13.1				
CU_DEV_SM_RESOURCE_GROUP_DEFAULT	13.1				
CU_DEV_SM_RESOURCE_GROUP_PARAMS	13.1				
CU_DEV_SM_RESOURCE_GROUP_PARAMS_st	13.1				
CU_DEV_SM_RESOURCE_SPLIT_IGNORE_SM_COSCHEDULING	12.5				
CU_DEV_SM_RESOURCE_SPLIT_MAX_POTENTIAL_CLUSTER_SIZE	12.5				
CU_EGL_COLOR_FORMAT_A	9.1				
CU_EGL_COLOR_FORMAT_ABGR	9.1				
CU_EGL_COLOR_FORMAT_ARGB	9.0				
CU_EGL_COLOR_FORMAT_AYUV	9.1				
CU_EGL_COLOR_FORMAT_AYUV_ER	9.1				
CU_EGL_COLOR_FORMAT_BAYER10_BGGR	9.1				
CU_EGL_COLOR_FORMAT_BAYER10_GBRG	9.1				
CU_EGL_COLOR_FORMAT_BAYER10_GRBG	9.1				
CU_EGL_COLOR_FORMAT_BAYER10_RGGB	9.1				
CU_EGL_COLOR_FORMAT_BAYER12_BGGR	9.1				
CU_EGL_COLOR_FORMAT_BAYER12_GBRG	9.1				
CU_EGL_COLOR_FORMAT_BAYER12_GRBG	9.1				
CU_EGL_COLOR_FORMAT_BAYER12_RGGB	9.1				
CU_EGL_COLOR_FORMAT_BAYER14_BGGR	9.1				
CU_EGL_COLOR_FORMAT_BAYER14_GBRG	9.1				
CU_EGL_COLOR_FORMAT_BAYER14_GRBG	9.1				
CU_EGL_COLOR_FORMAT_BAYER14_RGGB	9.1				
CU_EGL_COLOR_FORMAT_BAYER20_BGGR	9.1				
CU_EGL_COLOR_FORMAT_BAYER20_GBRG	9.1				
CU_EGL_COLOR_FORMAT_BAYER20_GRBG	9.1				
CU_EGL_COLOR_FORMAT_BAYER20_RGGB	9.1				
CU_EGL_COLOR_FORMAT_BAYER_BGGR	9.1				
CU_EGL_COLOR_FORMAT_BAYER_GBRG	9.1				

Table 5 – continued from

CUDA	A	D	C	R
CU_EGL_COLOR_FORMAT_BAYER_GRBG	9.1			
CU_EGL_COLOR_FORMAT_BAYER_ISP_BGGR	9.2			
CU_EGL_COLOR_FORMAT_BAYER_ISP_GBRG	9.2			
CU_EGL_COLOR_FORMAT_BAYER_ISP_GRBG	9.2			
CU_EGL_COLOR_FORMAT_BAYER_ISP_RGGB	9.2			
CU_EGL_COLOR_FORMAT_BAYER_RGGB	9.1			
CU_EGL_COLOR_FORMAT_BGR	9.0			
CU_EGL_COLOR_FORMAT_BGRA	9.1			
CU_EGL_COLOR_FORMAT_L	9.0			
CU_EGL_COLOR_FORMAT_MAX	9.0			
CU_EGL_COLOR_FORMAT_R	9.0			
CU_EGL_COLOR_FORMAT_RG	9.1			
CU_EGL_COLOR_FORMAT_RGB	9.0			
CU_EGL_COLOR_FORMAT_RGBA				
CU_EGL_COLOR_FORMAT_UYVY_422	9.0			
CU_EGL_COLOR_FORMAT_UYVY_ER	9.1			
CU_EGL_COLOR_FORMAT_VYUY_ER	9.1			
CU_EGL_COLOR_FORMAT_Y10V10U10_420_SEMIPLANAR	9.1			
CU_EGL_COLOR_FORMAT_Y10V10U10_444_SEMIPLANAR	9.1			
CU_EGL_COLOR_FORMAT_Y12V12U12_420_SEMIPLANAR	9.1			
CU_EGL_COLOR_FORMAT_Y12V12U12_444_SEMIPLANAR	9.1			
CU_EGL_COLOR_FORMAT_YUV420_PLANAR	9.0			
CU_EGL_COLOR_FORMAT_YUV420_PLANAR_ER	9.1			
CU_EGL_COLOR_FORMAT_YUV420_SEMIPLANAR	9.0			
CU_EGL_COLOR_FORMAT_YUV420_SEMIPLANAR_ER	9.1			
CU_EGL_COLOR_FORMAT_YUV422_PLANAR	9.0			
CU_EGL_COLOR_FORMAT_YUV422_PLANAR_ER	9.1			
CU_EGL_COLOR_FORMAT_YUV422_SEMIPLANAR	9.0			
CU_EGL_COLOR_FORMAT_YUV422_SEMIPLANAR_ER	9.1			
CU_EGL_COLOR_FORMAT_YUV444_PLANAR	9.0			
CU_EGL_COLOR_FORMAT_YUV444_PLANAR_ER	9.1			
CU_EGL_COLOR_FORMAT_YUV444_SEMIPLANAR	9.0			
CU_EGL_COLOR_FORMAT_YUV444_SEMIPLANAR_ER	9.1			
CU_EGL_COLOR_FORMAT_YUVA_ER	9.1			
CU_EGL_COLOR_FORMAT_YUV_ER	9.1			
CU_EGL_COLOR_FORMAT_YUYV_422	9.0			
CU_EGL_COLOR_FORMAT_YUYV_ER	9.1			
CU_EGL_COLOR_FORMAT_YVU420_PLANAR	9.1			
CU_EGL_COLOR_FORMAT_YVU420_PLANAR_ER	9.1			
CU_EGL_COLOR_FORMAT_YVU420_SEMIPLANAR	9.1			
CU_EGL_COLOR_FORMAT_YVU420_SEMIPLANAR_ER	9.1			
CU_EGL_COLOR_FORMAT_YVU422_PLANAR	9.1			
CU_EGL_COLOR_FORMAT_YVU422_PLANAR_ER	9.1			
CU_EGL_COLOR_FORMAT_YVU422_SEMIPLANAR	9.1			
CU_EGL_COLOR_FORMAT_YVU422_SEMIPLANAR_ER	9.1			
CU_EGL_COLOR_FORMAT_YVU444_PLANAR	9.1			
CU_EGL_COLOR_FORMAT_YVU444_PLANAR_ER	9.1			
CU_EGL_COLOR_FORMAT_YVU444_SEMIPLANAR	9.1			
CU_EGL_COLOR_FORMAT_YVU444_SEMIPLANAR_ER	9.1			
CU_EGL_COLOR_FORMAT_YVYU_ER	9.1			

Table 5 – continued from

CUDA	A	D	C	R	I
CU_EGL_FRAME_TYPE_ARRAY	9.0				
CU_EGL_FRAME_TYPE_PITCH	9.0				
CU_EGL_RESOURCE_LOCATION_SYSMEM	9.0				
CU_EGL_RESOURCE_LOCATION_VIDMEM	9.0				
CU_EVENT_BLOCKING_SYNC					I
CU_EVENT_DEFAULT					I
CU_EVENT_DISABLE_TIMING					I
CU_EVENT_INTERPROCESS					I
CU_EVENT_RECORD_DEFAULT	11.1				I
CU_EVENT_RECORD_EXTERNAL	11.1				I
CU_EVENT_SCHED_AUTO	11.8				
CU_EVENT_SCHED_BLOCKING_SYNC	11.8				
CU_EVENT_SCHED_SPIN	11.8				
CU_EVENT_SCHED_YIELD	11.8				
CU_EVENT_WAIT_DEFAULT	11.1				
CU_EVENT_WAIT_EXTERNAL	11.1				
CU_EXEC_AFFINITY_TYPE_MAX	11.4				
CU_EXEC_AFFINITY_TYPE_SM_COUNT	11.4				
CU_EXTERNAL_MEMORY_HANDLE_TYPE_D3D11_RESOURCE	10.2				I
CU_EXTERNAL_MEMORY_HANDLE_TYPE_D3D11_RESOURCE_KMT	10.2				I
CU_EXTERNAL_MEMORY_HANDLE_TYPE_D3D12_HEAP	10.0				I
CU_EXTERNAL_MEMORY_HANDLE_TYPE_D3D12_RESOURCE	10.0				I
CU_EXTERNAL_MEMORY_HANDLE_TYPE_DMABUF_FD	13.0				
CU_EXTERNAL_MEMORY_HANDLE_TYPE_NVSCIBUF	10.2				
CU_EXTERNAL_MEMORY_HANDLE_TYPE_OPAQUE_FD	10.0				I
CU_EXTERNAL_MEMORY_HANDLE_TYPE_OPAQUE_WIN32	10.0				I
CU_EXTERNAL_MEMORY_HANDLE_TYPE_OPAQUE_WIN32_KMT	10.0				I
CU_EXTERNAL_SEMAPHORE_HANDLE_TYPE_D3D11_FENCE	10.2				
CU_EXTERNAL_SEMAPHORE_HANDLE_TYPE_D3D11_KEYED_MUTEX	10.2				
CU_EXTERNAL_SEMAPHORE_HANDLE_TYPE_D3D11_KEYED_MUTEX_KMT	10.2				
CU_EXTERNAL_SEMAPHORE_HANDLE_TYPE_D3D12_FENCE	10.0				I
CU_EXTERNAL_SEMAPHORE_HANDLE_TYPE_NVSCISYNC	10.2				
CU_EXTERNAL_SEMAPHORE_HANDLE_TYPE_OPAQUE_FD	10.0				I
CU_EXTERNAL_SEMAPHORE_HANDLE_TYPE_OPAQUE_WIN32	10.0				I
CU_EXTERNAL_SEMAPHORE_HANDLE_TYPE_OPAQUE_WIN32_KMT	10.0				I
CU_EXTERNAL_SEMAPHORE_HANDLE_TYPE_TIMELINE_SEMAPHORE_FD	11.2				
CU_EXTERNAL_SEMAPHORE_HANDLE_TYPE_TIMELINE_SEMAPHORE_WIN32	11.2				
CU_FLUSH_GPU_DIRECT_RDMA_WRITES_OPTION_HOST	11.3				I
CU_FLUSH_GPU_DIRECT_RDMA_WRITES_OPTION_MEMOPS	11.3				I
CU_FLUSH_GPU_DIRECT_RDMA_WRITES_TARGET_CURRENT_CTX	11.3				
CU_FLUSH_GPU_DIRECT_RDMA_WRITES_TO_ALL_DEVICES	11.3				
CU_FLUSH_GPU_DIRECT_RDMA_WRITES_TO_OWNER	11.3				
CU_FUNCTION_LOADING_STATE_LOADED	12.4				
CU_FUNCTION_LOADING_STATE_MAX	12.4				
CU_FUNCTION_LOADING_STATE_UNLOADED	12.4				
CU_FUNC_ATTRIBUTE_BINARY_VERSION					I
CU_FUNC_ATTRIBUTE_CACHE_MODE_CA					I
CU_FUNC_ATTRIBUTE_CLUSTER_SCHEDULING_POLICY_PREFERENCE	11.8				
CU_FUNC_ATTRIBUTE_CLUSTER_SIZE_MUST_BE_SET	11.8				
CU_FUNC_ATTRIBUTE_CONST_SIZE_BYTES					I

Table 5 – continued from

CUDA	A	D	C	R	I
CU_FUNC_ATTRIBUTE_DEVICE_NODE_UPDATE_SUPPORTED	13.3				
CU_FUNC_ATTRIBUTE_LOCAL_SIZE_BYTES					I
CU_FUNC_ATTRIBUTE_MAX					I
CU_FUNC_ATTRIBUTE_MAX_DYNAMIC_SHARED_SIZE_BYTES	9.0				I
CU_FUNC_ATTRIBUTE_MAX_THREADS_PER_BLOCK					I
CU_FUNC_ATTRIBUTE_NON_PORTABLE_CLUSTER_SIZE_ALLOWED	11.8				
CU_FUNC_ATTRIBUTE_NUM_REGS					I
CU_FUNC_ATTRIBUTE_PREFERRED_SHARED_MEMORY_CARVEOUT	9.0				I
CU_FUNC_ATTRIBUTE_PTX_VERSION					I
CU_FUNC_ATTRIBUTE_REQUIRED_CLUSTER_DEPTH	11.8				
CU_FUNC_ATTRIBUTE_REQUIRED_CLUSTER_HEIGHT	11.8				
CU_FUNC_ATTRIBUTE_REQUIRED_CLUSTER_WIDTH	11.8				
CU_FUNC_ATTRIBUTE_SHARED_SIZE_BYTES					I
CU_FUNC_CACHE_PREFER_EQUAL					I
CU_FUNC_CACHE_PREFER_L1					I
CU_FUNC_CACHE_PREFER_NONE					I
CU_FUNC_CACHE_PREFER_SHARED					I
CU_GET_PROC_ADDRESS_DEFAULT	11.3				I
CU_GET_PROC_ADDRESS_LEGACY_STREAM	11.3				I
CU_GET_PROC_ADDRESS_PER_THREAD_DEFAULT_STREAM	11.3				I
CU_GET_PROC_ADDRESS_SUCCESS	12.0				I
CU_GET_PROC_ADDRESS_SYMBOL_NOT_FOUND	12.0				I
CU_GET_PROC_ADDRESS_VERSION_NOT_SUFFICIENT	12.0				I
CU_GL_DEVICE_LIST_ALL					I
CU_GL_DEVICE_LIST_CURRENT_FRAME					I
CU_GL_DEVICE_LIST_NEXT_FRAME					I
CU_GL_MAP_RESOURCE_FLAGS_NONE					
CU_GL_MAP_RESOURCE_FLAGS_READ_ONLY					
CU_GL_MAP_RESOURCE_FLAGS_WRITE_DISCARD					
CU_GPU_DIRECT_RDMA_WRITES_ORDERING_ALL_DEVICES	11.3				I
CU_GPU_DIRECT_RDMA_WRITES_ORDERING_NONE	11.3				I
CU_GPU_DIRECT_RDMA_WRITES_ORDERING_OWNER	11.3				I
CU_GRAPHICS_MAP_RESOURCE_FLAGS_NONE					
CU_GRAPHICS_MAP_RESOURCE_FLAGS_READ_ONLY					
CU_GRAPHICS_MAP_RESOURCE_FLAGS_WRITE_DISCARD					
CU_GRAPHICS_REGISTER_FLAGS_NONE					I
CU_GRAPHICS_REGISTER_FLAGS_READ_ONLY					I
CU_GRAPHICS_REGISTER_FLAGS_SURFACE_LDST					I
CU_GRAPHICS_REGISTER_FLAGS_TEXTURE_GATHER					I
CU_GRAPHICS_REGISTER_FLAGS_WRITE_DISCARD					I
CU_GRAPH_CHILD_GRAPH_OWNERSHIP_CLONE	12.9				
CU_GRAPH_CHILD_GRAPH_OWNERSHIP_INVALID	13.2				
CU_GRAPH_CHILD_GRAPH_OWNERSHIP_MOVE	12.9				
CU_GRAPH_COND_ASSIGN_DEFAULT	12.3				
CU_GRAPH_COND_TYPE_IF	12.3				
CU_GRAPH_COND_TYPE_SWITCH	12.8				
CU_GRAPH_COND_TYPE_WHILE	12.3				
CU_GRAPH_DEBUG_DOT_FLAGS_BATCH_MEM_OP_NODE_PARAMS	11.7				
CU_GRAPH_DEBUG_DOT_FLAGS_CONDITIONAL_NODE_PARAMS	12.3				
CU_GRAPH_DEBUG_DOT_FLAGS_EVENT_NODE_PARAMS	11.3				I

Table 5 – continued from

CUDA	A	D	C	R	I
CU_GRAPH_DEBUG_DOT_FLAGS_EXTRA_TOPO_INFO	12.0				
CU_GRAPH_DEBUG_DOT_FLAGS_EXT_SEMAS_SIGNAL_NODE_PARAMS	11.3				I
CU_GRAPH_DEBUG_DOT_FLAGS_EXT_SEMAS_WAIT_NODE_PARAMS	11.3				I
CU_GRAPH_DEBUG_DOT_FLAGS_HANDLES	11.3				I
CU_GRAPH_DEBUG_DOT_FLAGS_HOST_NODE_PARAMS	11.3				I
CU_GRAPH_DEBUG_DOT_FLAGS_KERNEL_NODE_ATTRIBUTES	11.3				I
CU_GRAPH_DEBUG_DOT_FLAGS_KERNEL_NODE_PARAMS	11.3				I
CU_GRAPH_DEBUG_DOT_FLAGS_MEMCPY_NODE_PARAMS	11.3				I
CU_GRAPH_DEBUG_DOT_FLAGS_MEMSET_NODE_PARAMS	11.3				I
CU_GRAPH_DEBUG_DOT_FLAGS_MEM_ALLOC_NODE_PARAMS	11.4				
CU_GRAPH_DEBUG_DOT_FLAGS_MEM_FREE_NODE_PARAMS	11.4				
CU_GRAPH_DEBUG_DOT_FLAGS_RUNTIME_TYPES	11.3				I
CU_GRAPH_DEBUG_DOT_FLAGS_VERBOSE	11.3				I
CU_GRAPH_DEPENDENCY_TYPE_DEFAULT	12.3				I
CU_GRAPH_DEPENDENCY_TYPE_PROGRAMMATIC	12.3				I
CU_GRAPH_EXEC_UPDATE_ERROR	10.2				I
CU_GRAPH_EXEC_UPDATE_ERROR_ATTRIBUTES_CHANGED	11.6				
CU_GRAPH_EXEC_UPDATE_ERROR_FUNCTION_CHANGED	10.2				I
CU_GRAPH_EXEC_UPDATE_ERROR_NODE_TYPE_CHANGED	10.2				I
CU_GRAPH_EXEC_UPDATE_ERROR_NOT_SUPPORTED	10.2				I
CU_GRAPH_EXEC_UPDATE_ERROR_PARAMETERS_CHANGED	10.2				I
CU_GRAPH_EXEC_UPDATE_ERROR_TOPOLOGY_CHANGED	10.2				I
CU_GRAPH_EXEC_UPDATE_ERROR_UNSUPPORTED_FUNCTION_CHANGE	11.2				I
CU_GRAPH_EXEC_UPDATE_SUCCESS	10.2				I
CU_GRAPH_KERNEL_NODE_PORT_DEFAULT	12.3				I
CU_GRAPH_KERNEL_NODE_PORT_LAUNCH_ORDER	12.3				I
CU_GRAPH_KERNEL_NODE_PORT_PROGRAMMATIC	12.3				I
CU_GRAPH_MEM_ATTR_RESERVED_MEM_CURRENT	11.4				I
CU_GRAPH_MEM_ATTR_RESERVED_MEM_HIGH	11.4				I
CU_GRAPH_MEM_ATTR_USED_MEM_CURRENT	11.4				I
CU_GRAPH_MEM_ATTR_USED_MEM_HIGH	11.4				I
CU_GRAPH_NODE_TYPE_BATCH_MEM_OP	11.7				I
CU_GRAPH_NODE_TYPE_CONDITIONAL	12.3				
CU_GRAPH_NODE_TYPE_COUNT	10.0			11.0	I
CU_GRAPH_NODE_TYPE_EMPTY	10.0				I
CU_GRAPH_NODE_TYPE_EVENT_RECORD	11.1				I
CU_GRAPH_NODE_TYPE_EXT_SEMAS_SIGNAL	11.2				I
CU_GRAPH_NODE_TYPE_EXT_SEMAS_WAIT	11.2				I
CU_GRAPH_NODE_TYPE_GRAPH	10.0				I
CU_GRAPH_NODE_TYPE_HOST	10.0				I
CU_GRAPH_NODE_TYPE_KERNEL	10.0				I
CU_GRAPH_NODE_TYPE_MEMCPY	10.0				I
CU_GRAPH_NODE_TYPE_MEMSET	10.0				I
CU_GRAPH_NODE_TYPE_MEM_ALLOC	11.4				I
CU_GRAPH_NODE_TYPE_MEM_FREE	11.4				I
CU_GRAPH_NODE_TYPE_RESERVED_16	13.3				
CU_GRAPH_NODE_TYPE_WAIT_EVENT	11.1				I
CU_GRAPH_USER_OBJECT_MOVE	11.3				I
CU_GREEN_CTX_DEFAULT_STREAM	12.4				
CU_HOST_TASK_BLOCKING	13.2				

Table 5 – continued from

CUDA	A	D	C	R	I
CU_HOST_TASK_SPINWAIT	13.2				
CU_IPC_HANDLE_SIZE					I
CU_IPC_MEM_LAZY_ENABLE_PEER_ACCESS					I
CU_JIT_BINARY_LOADER_THREAD_COUNT	13.1				
CU_JIT_CACHE_MODE					I
CU_JIT_CACHE_OPTION_CA					
CU_JIT_CACHE_OPTION_CG					
CU_JIT_CACHE_OPTION_NONE					
CU_JIT_ERROR_LOG_BUFFER					I
CU_JIT_ERROR_LOG_BUFFER_SIZE_BYTES					I
CU_JIT_FALLBACK_STRATEGY					I
CU_JIT_FAST_COMPILE	8.0				I
CU_JIT_FMA	11.4	12.0			I
CU_JIT_FTZ	11.4	12.0			I
CU_JIT_GENERATE_DEBUG_INFO					I
CU_JIT_GENERATE_LINE_INFO					I
CU_JIT_GLOBAL_SYMBOL_ADDRESSES	10.0				I
CU_JIT_GLOBAL_SYMBOL_COUNT	10.0				I
CU_JIT_GLOBAL_SYMBOL_NAMES	10.0				I
CU_JIT_INFO_LOG_BUFFER					I
CU_JIT_INFO_LOG_BUFFER_SIZE_BYTES					I
CU_JIT_INPUT_CUBIN					I
CU_JIT_INPUT_FATBINARY					I
CU_JIT_INPUT_LIBRARY					I
CU_JIT_INPUT_NVVM	11.4	12.0			I
CU_JIT_INPUT_OBJECT					I
CU_JIT_INPUT_PTX					I
CU_JIT_LOG_VERBOSE					I
CU_JIT_LTO	11.4	12.0			I
CU_JIT_MAX_REGISTERS					I
CU_JIT_MAX_THREADS_PER_BLOCK	12.4				I
CU_JIT_MIN_CTA_PER_SM	12.3				I
CU_JIT_NEW_SM3X_OPT	8.0				I
CU_JIT_NUM_INPUT_TYPES					I
CU_JIT_NUM_OPTIONS					I
CU_JIT_OPTIMIZATION_LEVEL					I
CU_JIT_OPTIMIZE_UNUSED_DEVICE_VARIABLES	11.7	12.0			
CU_JIT_OVERRIDE_DIRECTIVE_VALUES	12.4				I
CU_JIT_POSITION_INDEPENDENT_CODE	12.0				I
CU_JIT_PREC_DIV	11.4	12.0			I
CU_JIT_PREC_SQRT	11.4	12.0			I
CU_JIT_REFERENCED_KERNEL_COUNT	11.7	12.0			
CU_JIT_REFERENCED_KERNEL_NAMES	11.7	12.0			
CU_JIT_REFERENCED_VARIABLE_COUNT	11.7	12.0			
CU_JIT_REFERENCED_VARIABLE_NAMES	11.7	12.0			
CU_JIT_SPLIT_COMPILE	13.0				
CU_JIT_TARGET					I
CU_JIT_TARGET_FROM_CUCONTEXT					I
CU_JIT_THREADS_PER_BLOCK					I
CU_JIT_WALL_TIME					I

Table 5 – continued from

CUDA	A	D	C	R	I
CU_KERNEL_NODE_ATTRIBUTE_ACCESS_POLICY_WINDOW	11.0				I
CU_KERNEL_NODE_ATTRIBUTE_CLUSTER_DIMENSION	11.8				
CU_KERNEL_NODE_ATTRIBUTE_CLUSTER_SCHEDULING_POLICY_PREFERENCE	11.8				
CU_KERNEL_NODE_ATTRIBUTE_COOPERATIVE	11.0				I
CU_KERNEL_NODE_ATTRIBUTE_DEVICE_UPDATABLE_KERNEL_NODE	12.4				
CU_KERNEL_NODE_ATTRIBUTE_MEM_SYNC_DOMAIN	12.0				
CU_KERNEL_NODE_ATTRIBUTE_MEM_SYNC_DOMAIN_MAP	12.0				
CU_KERNEL_NODE_ATTRIBUTE_PREFERRED_CLUSTER_DIMENSION	12.8				
CU_KERNEL_NODE_ATTRIBUTE_PREFERRED_SHARED_MEMORY_CARVEOUT	12.5				
CU_KERNEL_NODE_ATTRIBUTE_PRIORITY	11.7				I
CU_LAUNCH_ATTRIBUTE_ACCESS_POLICY_WINDOW	11.8				I
CU_LAUNCH_ATTRIBUTE_CLUSTER_DIMENSION	11.8				I
CU_LAUNCH_ATTRIBUTE_CLUSTER_SCHEDULING_POLICY_PREFERENCE	11.8				I
CU_LAUNCH_ATTRIBUTE_COOPERATIVE	11.8				I
CU_LAUNCH_ATTRIBUTE_DEVICE_UPDATABLE_KERNEL_NODE	12.4				
CU_LAUNCH_ATTRIBUTE_IGNORE	11.8				I
CU_LAUNCH_ATTRIBUTE_LAUNCH_COMPLETION_EVENT	12.3				
CU_LAUNCH_ATTRIBUTE_MAX	12.1				I
CU_LAUNCH_ATTRIBUTE_MEM_SYNC_DOMAIN	12.0				I
CU_LAUNCH_ATTRIBUTE_MEM_SYNC_DOMAIN_MAP	12.0				I
CU_LAUNCH_ATTRIBUTE_NVLINK_UTIL_CENTRIC_SCHEDULING	13.0				
CU_LAUNCH_ATTRIBUTE_PORTABLE_CLUSTER_SIZE_MODE	13.2				
CU_LAUNCH_ATTRIBUTE_PREFERRED_CLUSTER_DIMENSION	12.8				
CU_LAUNCH_ATTRIBUTE_PREFERRED_SHARED_MEMORY_CARVEOUT	12.5				
CU_LAUNCH_ATTRIBUTE_PRIORITY	11.8				I
CU_LAUNCH_ATTRIBUTE_PROGRAMMATIC_EVENT	11.8				
CU_LAUNCH_ATTRIBUTE_PROGRAMMATIC_STREAM_SERIALIZATION	11.8				
CU_LAUNCH_ATTRIBUTE_SHARED_MEMORY_MODE	13.2				
CU_LAUNCH_ATTRIBUTE_SYNCHRONIZATION_POLICY	11.8				I
CU_LAUNCH_KERNEL_REQUIRED_BLOCK_DIM	12.9				
CU_LAUNCH_MEM_SYNC_DOMAIN_DEFAULT	12.0				I
CU_LAUNCH_MEM_SYNC_DOMAIN_REMOTE	12.0				I
CU_LAUNCH_PARAM_BUFFER_POINTER					I
CU_LAUNCH_PARAM_BUFFER_POINTER_AS_INT	11.7				
CU_LAUNCH_PARAM_BUFFER_SIZE					I
CU_LAUNCH_PARAM_BUFFER_SIZE_AS_INT	11.7				
CU_LAUNCH_PARAM_END					I
CU_LAUNCH_PARAM_END_AS_INT	11.7				
CU_LAUNCH_PORTABLE_CLUSTER_MODE_ALLOW_NON_PORTABLE	13.2				
CU_LAUNCH_PORTABLE_CLUSTER_MODE_DEFAULT	13.2				
CU_LAUNCH_PORTABLE_CLUSTER_MODE_REQUIRE_PORTABLE	13.2				
CU_LIBRARY_BINARY_IS_PRESERVED	12.0				I
CU_LIBRARY_HOST_UNIVERSAL_FUNCTION_AND_DATA_TABLE	12.0				I
CU_LIBRARY_NUM_OPTIONS	12.0				
CU_LIMIT_CIG_ENABLED	12.5				
CU_LIMIT_CIG_SHMEM_FALLBACK_ENABLED	12.5				
CU_LIMIT_DEV_RUNTIME_PENDING_LAUNCH_COUNT					
CU_LIMIT_DEV_RUNTIME_SYNC_DEPTH					
CU_LIMIT_MALLOC_HEAP_SIZE					I
CU_LIMIT_MAX					

Table 5 – continued from

CUDA	A	D	C	R	I
CU_LIMIT_MAX_L2_FETCH_GRANULARITY	10.0				
CU_LIMIT_PERSISTING_L2_CACHE_SIZE	11.0				
CU_LIMIT_PRINTF_FIFO_SIZE					I
CU_LIMIT_SHMEM_SIZE	12.5				
CU_LIMIT_STACK_SIZE					I
CU_LOG_LEVEL_ERROR	12.9				
CU_LOG_LEVEL_WARNING	12.9				
CU_MEMCPY_FLAG_DEFAULT	12.8				I
CU_MEMCPY_FLAG_PREFER_OVERLAP_WITH_COMPUTE	12.8				I
CU_MEMCPY_OPERAND_TYPE_ARRAY	12.8				I
CU_MEMCPY_OPERAND_TYPE_MAX	12.8				I
CU_MEMCPY_OPERAND_TYPE_POINTER	12.8				I
CU_MEMCPY_SRC_ACCESS_ORDER_ANY	12.8				I
CU_MEMCPY_SRC_ACCESS_ORDER_DURING_API_CALL	12.8				I
CU_MEMCPY_SRC_ACCESS_ORDER_INVALID	12.8				I
CU_MEMCPY_SRC_ACCESS_ORDER_MAX	12.8				I
CU_MEMCPY_SRC_ACCESS_ORDER_STREAM	12.8				I
CU_MEMHOSTALLOC_DEVICEMAP					I
CU_MEMHOSTALLOC_PORTABLE					I
CU_MEMHOSTALLOC_WRITECOMBINED					I
CU_MEMHOSTREGISTER_DEVICEMAP					I
CU_MEMHOSTREGISTER_IOMEMORY	7.5				I
CU_MEMHOSTREGISTER_PORTABLE					I
CU_MEMHOSTREGISTER_READ_ONLY	11.1				I
CU_MEMORYTYPE_ARRAY					I
CU_MEMORYTYPE_DEVICE					I
CU_MEMORYTYPE_HOST					I
CU_MEMORYTYPE_UNIFIED					I
CU_MEMPOOL_ATTR_ALLOCATION_TYPE	13.2				
CU_MEMPOOL_ATTR_EXPORT_HANDLE_TYPES	13.2				
CU_MEMPOOL_ATTR_HW_DECOMPRESS_ENABLED	13.2				
CU_MEMPOOL_ATTR_LOCATION_ID	13.2				
CU_MEMPOOL_ATTR_LOCATION_TYPE	13.2				
CU_MEMPOOL_ATTR_MAX_POOL_SIZE	13.2				
CU_MEMPOOL_ATTR_RELEASE_THRESHOLD	11.2				I
CU_MEMPOOL_ATTR_RESERVED_MEM_CURRENT	11.3				I
CU_MEMPOOL_ATTR_RESERVED_MEM_HIGH	11.3				I
CU_MEMPOOL_ATTR_REUSE_ALLOW_INTERNAL_DEPENDENCIES	11.2				I
CU_MEMPOOL_ATTR_REUSE_ALLOW_OPPORTUNISTIC	11.2				I
CU_MEMPOOL_ATTR_REUSE_FOLLOW_EVENT_DEPENDENCIES	11.2				I
CU_MEMPOOL_ATTR_USED_MEM_CURRENT	11.3				I
CU_MEMPOOL_ATTR_USED_MEM_HIGH	11.3				I
CU_MEM_ACCESS_FLAGS_PROT_MAX	10.2				
CU_MEM_ACCESS_FLAGS_PROT_NONE	10.2				I
CU_MEM_ACCESS_FLAGS_PROT_READ	10.2				I
CU_MEM_ACCESS_FLAGS_PROT_READWRITE	10.2				I
CU_MEM_ADVISE_SET_ACCESSED_BY	8.0				I
CU_MEM_ADVISE_SET_PREFERRED_LOCATION	8.0				I
CU_MEM_ADVISE_SET_READ_MOSTLY	8.0				I
CU_MEM_ADVISE_UNSET_ACCESSED_BY	8.0				I

Table 5 – continued from

CUDA	A	D	C	R	I
CU_MEM_ADVISE_UNSET_PREFERRED_LOCATION	8.0				I
CU_MEM_ADVISE_UNSET_READ_MOSTLY	8.0				I
CU_MEM_ALLOCATION_TYPE_INVALID	10.2				I
CU_MEM_ALLOCATION_TYPE_MANAGED	13.0				I
CU_MEM_ALLOCATION_TYPE_MAX	10.2				I
CU_MEM_ALLOCATION_TYPE_PINNED	10.2				I
CU_MEM_ALLOC_GRANULARITY_MINIMUM	10.2				I
CU_MEM_ALLOC_GRANULARITY_RECOMMENDED	10.2				I
CU_MEM_ATTACH_GLOBAL					I
CU_MEM_ATTACH_HOST					I
CU_MEM_ATTACH_SINGLE					I
CU_MEM_CREATE_USAGE_HW_DECOMPRESS	12.8				
CU_MEM_CREATE_USAGE_TILE_POOL	11.1				
CU_MEM_DECOMPRESS_ALGORITHM_DEFLATE	12.8				
CU_MEM_DECOMPRESS_ALGORITHM_LZ4	12.9				
CU_MEM_DECOMPRESS_ALGORITHM_SNAPPY	12.8				
CU_MEM_DECOMPRESS_UNSUPPORTED	12.8				
CU_MEM_HANDLE_TYPE_FABRIC	12.3				I
CU_MEM_HANDLE_TYPE_GENERIC	11.1				I
CU_MEM_HANDLE_TYPE_MAX	10.2				
CU_MEM_HANDLE_TYPE_NONE	11.2				I
CU_MEM_HANDLE_TYPE_POSIX_FILE_DESCRIPTOR	10.2				I
CU_MEM_HANDLE_TYPE_WIN32	10.2				I
CU_MEM_HANDLE_TYPE_WIN32_KMT	10.2				I
CU_MEM_LOCATION_TYPE_DEVICE	10.2				I
CU_MEM_LOCATION_TYPE_HOST	12.2				I
CU_MEM_LOCATION_TYPE_HOST_NUMA	12.2				I
CU_MEM_LOCATION_TYPE_HOST_NUMA_CURRENT	12.2				I
CU_MEM_LOCATION_TYPE_INVALID	10.2				I
CU_MEM_LOCATION_TYPE_INVISIBLE	13.2				
CU_MEM_LOCATION_TYPE_MAX	10.2				
CU_MEM_LOCATION_TYPE_NONE	13.0				I
CU_MEM_OPERATION_TYPE_MAP	11.1				I
CU_MEM_OPERATION_TYPE_UNMAP	11.1				I
CU_MEM_POOL_CREATE_USAGE_HW_DECOMPRESS	12.8				
CU_MEM_RANGE_ATTRIBUTE_ACCESSED_BY	8.0				I
CU_MEM_RANGE_ATTRIBUTE_LAST_PREFETCH_LOCATION	8.0				I
CU_MEM_RANGE_ATTRIBUTE_LAST_PREFETCH_LOCATION_ID	12.2				
CU_MEM_RANGE_ATTRIBUTE_LAST_PREFETCH_LOCATION_TYPE	12.2				
CU_MEM_RANGE_ATTRIBUTE_PREFERRED_LOCATION	8.0				I
CU_MEM_RANGE_ATTRIBUTE_PREFERRED_LOCATION_ID	12.2				
CU_MEM_RANGE_ATTRIBUTE_PREFERRED_LOCATION_TYPE	12.2				
CU_MEM_RANGE_ATTRIBUTE_READ_MOSTLY	8.0				I
CU_MEM_RANGE_FLAG_DMA_BUF_MAPPING_TYPE_PCIE	12.8				I
CU_MEM_RANGE_HANDLE_TYPE_DMA_BUF_FD	11.7				I
CU_MEM_RANGE_HANDLE_TYPE_MAX	11.7				I
CU_MODULE_EAGER_LOADING	11.7				
CU_MODULE_LAZY_LOADING	11.7				
CU_MULTICAST_GRANULARITY_MINIMUM	12.1				
CU_MULTICAST_GRANULARITY_RECOMMENDED	12.1				

Table 5 – continued from

CUDA	A	D	C	R	I
CU_OCCUPANCY_DEFAULT					I
CU_OCCUPANCY_DISABLE_CACHING_OVERRIDE					I
CU_PARAM_TR_DEFAULT					
CU_POINTER_ATTRIBUTE_ACCESS_FLAGS	11.1				I
CU_POINTER_ATTRIBUTE_ACCESS_FLAG_NONE	11.1				
CU_POINTER_ATTRIBUTE_ACCESS_FLAG_READ	11.1				
CU_POINTER_ATTRIBUTE_ACCESS_FLAG_READWRITE	11.1				
CU_POINTER_ATTRIBUTE_ALLOWED_HANDLE_TYPES	10.2				I
CU_POINTER_ATTRIBUTE_BUFFER_ID					I
CU_POINTER_ATTRIBUTE_CONTEXT					I
CU_POINTER_ATTRIBUTE_DEVICE_ORDINAL	9.2				I
CU_POINTER_ATTRIBUTE_DEVICE_POINTER					I
CU_POINTER_ATTRIBUTE_HOST_POINTER					I
CU_POINTER_ATTRIBUTE_IS_GPU_DIRECT_RDMA_CAPABLE	11.0				I
CU_POINTER_ATTRIBUTE_IS_HW_DECOMPRESS_CAPABLE	12.8				
CU_POINTER_ATTRIBUTE_IS_LEGACY_CUDA_IPC_CAPABLE	10.2				I
CU_POINTER_ATTRIBUTE_IS_MANAGED					I
CU_POINTER_ATTRIBUTE_MAPPED	10.2				I
CU_POINTER_ATTRIBUTE_MAPPING_BASE_ADDR	11.7				
CU_POINTER_ATTRIBUTE_MAPPING_SIZE	11.7				
CU_POINTER_ATTRIBUTE_MEMORY_BLOCK_ID	11.7				
CU_POINTER_ATTRIBUTE_MEMORY_TYPE					I
CU_POINTER_ATTRIBUTE_MEMPOOL_HANDLE	11.3				I
CU_POINTER_ATTRIBUTE_P2P_TOKENS					I
CU_POINTER_ATTRIBUTE_RANGE_SIZE	10.2				I
CU_POINTER_ATTRIBUTE_RANGE_START_ADDR	10.2				I
CU_POINTER_ATTRIBUTE_SYNC_MEMOPS					I
CU_PREFER_BINARY					
CU_PREFER_PTX					
CU_PROCESS_STATE_CHECKPOINTED	12.8				
CU_PROCESS_STATE_FAILED	12.8				
CU_PROCESS_STATE_LOCKED	12.8				
CU_PROCESS_STATE_RUNNING	12.8				
CU_RESOURCE_TYPE_ARRAY					I
CU_RESOURCE_TYPE_LINEAR					I
CU_RESOURCE_TYPE_MIPMAPPED_ARRAY					I
CU_RESOURCE_TYPE_PITCH2D					I
CU_RES_VIEW_FORMAT_FLOAT_1X16					I
CU_RES_VIEW_FORMAT_FLOAT_1X32					I
CU_RES_VIEW_FORMAT_FLOAT_2X16					I
CU_RES_VIEW_FORMAT_FLOAT_2X32					I
CU_RES_VIEW_FORMAT_FLOAT_4X16					I
CU_RES_VIEW_FORMAT_FLOAT_4X32					I
CU_RES_VIEW_FORMAT_NONE					I
CU_RES_VIEW_FORMAT_SIGNED_BC4					I
CU_RES_VIEW_FORMAT_SIGNED_BC5					I
CU_RES_VIEW_FORMAT_SIGNED_BC6H					I
CU_RES_VIEW_FORMAT_SINT_1X16					I
CU_RES_VIEW_FORMAT_SINT_1X32					I
CU_RES_VIEW_FORMAT_SINT_1X8					I

Table 5 – continued from

CUDA	A	D	C	R	I
CU_RES_VIEW_FORMAT_SINT_2X16					I
CU_RES_VIEW_FORMAT_SINT_2X32					I
CU_RES_VIEW_FORMAT_SINT_2X8					I
CU_RES_VIEW_FORMAT_SINT_4X16					I
CU_RES_VIEW_FORMAT_SINT_4X32					I
CU_RES_VIEW_FORMAT_SINT_4X8					I
CU_RES_VIEW_FORMAT_UINT_1X16					I
CU_RES_VIEW_FORMAT_UINT_1X32					I
CU_RES_VIEW_FORMAT_UINT_1X8					I
CU_RES_VIEW_FORMAT_UINT_2X16					I
CU_RES_VIEW_FORMAT_UINT_2X32					I
CU_RES_VIEW_FORMAT_UINT_2X8					I
CU_RES_VIEW_FORMAT_UINT_4X16					I
CU_RES_VIEW_FORMAT_UINT_4X32					I
CU_RES_VIEW_FORMAT_UINT_4X8					I
CU_RES_VIEW_FORMAT_UNSIGNED_BC1					I
CU_RES_VIEW_FORMAT_UNSIGNED_BC2					I
CU_RES_VIEW_FORMAT_UNSIGNED_BC3					I
CU_RES_VIEW_FORMAT_UNSIGNED_BC4					I
CU_RES_VIEW_FORMAT_UNSIGNED_BC5					I
CU_RES_VIEW_FORMAT_UNSIGNED_BC6H					I
CU_RES_VIEW_FORMAT_UNSIGNED_BC7					I
CU_SHAREDMEM_CARVEOUT_DEFAULT	9.0				
CU_SHAREDMEM_CARVEOUT_MAX_L1	9.0				
CU_SHAREDMEM_CARVEOUT_MAX_SHARED	9.0				
CU_SHARED_MEMORY_MODE_ALLOW_NON_PORTABLE	13.2				
CU_SHARED_MEMORY_MODE_DEFAULT	13.2				
CU_SHARED_MEMORY_MODE_REQUIRE_PORTABLE	13.2				
CU_SHARED_MEM_CONFIG_DEFAULT_BANK_SIZE					I
CU_SHARED_MEM_CONFIG_EIGHT_BYTE_BANK_SIZE					I
CU_SHARED_MEM_CONFIG_FOUR_BYTE_BANK_SIZE					I
CU_STREAM_ADD_CAPTURE_DEPENDENCIES	11.3				I
CU_STREAM_ATOMIC_REDUCTION_OP_ADD	13.1				
CU_STREAM_ATOMIC_REDUCTION_OP_AND	13.1				
CU_STREAM_ATOMIC_REDUCTION_OP_OR	13.1				
CU_STREAM_ATOMIC_REDUCTION_UNSIGNED_32	13.1				
CU_STREAM_ATOMIC_REDUCTION_UNSIGNED_64	13.1				
CU_STREAM_ATTRIBUTE_ACCESS_POLICY_WINDOW	11.0				I
CU_STREAM_ATTRIBUTE_MEM_SYNC_DOMAIN	12.0				I
CU_STREAM_ATTRIBUTE_MEM_SYNC_DOMAIN_MAP	12.0				I
CU_STREAM_ATTRIBUTE_PRIORITY	12.0				I
CU_STREAM_ATTRIBUTE_SYNCHRONIZATION_POLICY	11.0				I
CU_STREAM_CAPTURE_MODE_GLOBAL	10.1				I
CU_STREAM_CAPTURE_MODE_RELAXED	10.1				I
CU_STREAM_CAPTURE_MODE_THREAD_LOCAL	10.1				I
CU_STREAM_CAPTURE_STATUS_ACTIVE	10.0				I
CU_STREAM_CAPTURE_STATUS_INVALIDATED	10.0				I
CU_STREAM_CAPTURE_STATUS_NONE	10.0				I
CU_STREAM_DEFAULT					I
CU_STREAM_LEGACY					I

Table 5 – continued from

CUDA	A	D	C	R	I
CU_STREAM_MEMORY_BARRIER_TYPE_GPU	11.7				
CU_STREAM_MEMORY_BARRIER_TYPE_SYS	11.7				
CU_STREAM_MEM_OP_ATOMIC_REDUCTION	13.1				I
CU_STREAM_MEM_OP_BARRIER	11.7				I
CU_STREAM_MEM_OP_FLUSH_REMOTE_WRITES	8.0				I
CU_STREAM_MEM_OP_WAIT_VALUE_32	8.0				I
CU_STREAM_MEM_OP_WAIT_VALUE_64	9.0				I
CU_STREAM_MEM_OP_WRITE_VALUE_32	8.0				I
CU_STREAM_MEM_OP_WRITE_VALUE_64	9.0				I
CU_STREAM_NON_BLOCKING					I
CU_STREAM_PER_THREAD					I
CU_STREAM_SET_CAPTURE_DEPENDENCIES	11.3				I
CU_STREAM_WAIT_VALUE_AND	8.0				I
CU_STREAM_WAIT_VALUE_EQ	8.0				I
CU_STREAM_WAIT_VALUE_FLUSH	8.0				
CU_STREAM_WAIT_VALUE_GEQ	8.0				I
CU_STREAM_WAIT_VALUE_NOR	9.0				I
CU_STREAM_WRITE_VALUE_DEFAULT	8.0				I
CU_STREAM_WRITE_VALUE_NO_MEMORY_BARRIER	8.0				
CU_SYNC_POLICY_AUTO	11.0				I
CU_SYNC_POLICY_BLOCKING_SYNC	11.0				I
CU_SYNC_POLICY_SPIN	11.0				I
CU_SYNC_POLICY_YIELD	11.0				I
CU_TARGET_COMPUTE_10				9.0	
CU_TARGET_COMPUTE_100	12.8				
CU_TARGET_COMPUTE_100A	12.8				
CU_TARGET_COMPUTE_100F	12.9				
CU_TARGET_COMPUTE_101	12.8			13.0	
CU_TARGET_COMPUTE_101A	12.8			13.0	
CU_TARGET_COMPUTE_101F	12.9			13.0	
CU_TARGET_COMPUTE_103	12.9				
CU_TARGET_COMPUTE_103A	12.9				
CU_TARGET_COMPUTE_103F	12.9				
CU_TARGET_COMPUTE_11				9.0	
CU_TARGET_COMPUTE_110	13.0				
CU_TARGET_COMPUTE_110A	13.0				
CU_TARGET_COMPUTE_110F	13.0				
CU_TARGET_COMPUTE_12				9.0	
CU_TARGET_COMPUTE_120	12.8				
CU_TARGET_COMPUTE_120A	12.8				
CU_TARGET_COMPUTE_120F	12.9				
CU_TARGET_COMPUTE_121	12.9				
CU_TARGET_COMPUTE_121A	12.9				
CU_TARGET_COMPUTE_121F	12.9				
CU_TARGET_COMPUTE_13				9.0	
CU_TARGET_COMPUTE_20				12.0	
CU_TARGET_COMPUTE_21				12.0	
CU_TARGET_COMPUTE_30					
CU_TARGET_COMPUTE_32					
CU_TARGET_COMPUTE_35					

Table 5 – continued from

CUDA	A	D	C	R	I
CU_TARGET_COMPUTE_37					
CU_TARGET_COMPUTE_50					
CU_TARGET_COMPUTE_52					
CU_TARGET_COMPUTE_53	8.0				
CU_TARGET_COMPUTE_60	8.0				
CU_TARGET_COMPUTE_61	8.0				
CU_TARGET_COMPUTE_62	8.0				
CU_TARGET_COMPUTE_70	9.0				
CU_TARGET_COMPUTE_72	10.1				
CU_TARGET_COMPUTE_73	9.1			10.0	
CU_TARGET_COMPUTE_75	9.1				
CU_TARGET_COMPUTE_80	11.0				
CU_TARGET_COMPUTE_86	11.1				
CU_TARGET_COMPUTE_87	11.7				
CU_TARGET_COMPUTE_89	11.8				
CU_TARGET_COMPUTE_90	11.8				
CU_TARGET_COMPUTE_90A	12.0				
CU_TENSOR_MAP_DATA_TYPE_16U4_ALIGN16B	12.8				
CU_TENSOR_MAP_DATA_TYPE_16U4_ALIGN8B	12.8				
CU_TENSOR_MAP_DATA_TYPE_16U6_ALIGN16B	12.8				
CU_TENSOR_MAP_DATA_TYPE_BFLOAT16	12.0				
CU_TENSOR_MAP_DATA_TYPE_FLOAT16	12.0				
CU_TENSOR_MAP_DATA_TYPE_FLOAT32	12.0				
CU_TENSOR_MAP_DATA_TYPE_FLOAT32_FTZ	12.0				
CU_TENSOR_MAP_DATA_TYPE_FLOAT64	12.0				
CU_TENSOR_MAP_DATA_TYPE_INT32	12.0				
CU_TENSOR_MAP_DATA_TYPE_INT64	12.0				
CU_TENSOR_MAP_DATA_TYPE_TFLOAT32	12.0				
CU_TENSOR_MAP_DATA_TYPE_TFLOAT32_FTZ	12.0				
CU_TENSOR_MAP_DATA_TYPE_UINT16	12.0				
CU_TENSOR_MAP_DATA_TYPE_UINT32	12.0				
CU_TENSOR_MAP_DATA_TYPE_UINT64	12.0				
CU_TENSOR_MAP_DATA_TYPE_UINT8	12.0				
CU_TENSOR_MAP_FLOAT_OOB_FILL_NAN_REQUEST_ZERO_FMA	12.0				
CU_TENSOR_MAP_FLOAT_OOB_FILL_NONE	12.0				
CU_TENSOR_MAP_IM2COL_WIDE_MODE_W	12.8				
CU_TENSOR_MAP_IM2COL_WIDE_MODE_W128	12.8				
CU_TENSOR_MAP_INTERLEAVE_16B	12.0				
CU_TENSOR_MAP_INTERLEAVE_32B	12.0				
CU_TENSOR_MAP_INTERLEAVE_NONE	12.0				
CU_TENSOR_MAP_L2_PROMOTION_L2_128B	12.0				
CU_TENSOR_MAP_L2_PROMOTION_L2_256B	12.0				
CU_TENSOR_MAP_L2_PROMOTION_L2_64B	12.0				
CU_TENSOR_MAP_L2_PROMOTION_NONE	12.0				
CU_TENSOR_MAP_NUM_QWORDS	12.0				
CU_TENSOR_MAP_SWIZZLE_128B	12.0				
CU_TENSOR_MAP_SWIZZLE_128B_ATOM_32B	12.8				
CU_TENSOR_MAP_SWIZZLE_128B_ATOM_32B_FLIP_8B	12.8				
CU_TENSOR_MAP_SWIZZLE_128B_ATOM_64B	12.8				
CU_TENSOR_MAP_SWIZZLE_32B	12.0				

Table 5 – continued from

CUDA	A	D	C	R	I
CU_TENSOR_MAP_SWIZZLE_64B	12.0				
CU_TENSOR_MAP_SWIZZLE_NONE	12.0				
CU_TRSA_OVERRIDE_FORMAT					I
CU_TRSF_DISABLE_TRILINEAR_OPTIMIZATION	11.0				
CU_TRSF_NORMALIZED_COORDINATES					I
CU_TRSF_READ_AS_INTEGER					I
CU_TRSF_SEAMLESS_CUBEMAP	11.6				
CU_TRSF_SRGB					I
CU_TR_ADDRESS_MODE_BORDER					I
CU_TR_ADDRESS_MODE_CLAMP					I
CU_TR_ADDRESS_MODE_MIRROR					I
CU_TR_ADDRESS_MODE_WRAP					I
CU_TR_FILTER_MODE_LINEAR					I
CU_TR_FILTER_MODE_POINT					I
CU_USER_OBJECT_NO_DESTRUCTOR_SYNC	11.3				I
CU_WORKQUEUE_SCOPE_DEVICE_CTX	13.1				
CU_WORKQUEUE_SCOPE_GREEN_CTX_BALANCED	13.1				
CUaccessPolicyWindow	11.0				I
CUaccessPolicyWindow_st	11.0				I
CUaccessProperty	11.0				I
CUaccessProperty_enum	11.0				I
CUaddress_mode					I
CUaddress_mode_enum					I
CUarray					I
CUarrayMapInfo	11.1				I
CUarrayMapInfo_st	11.1				I
CUarrayMapInfo_v1	11.3				I
CUarraySparseSubresourceType	11.1				I
CUarraySparseSubresourceType_enum	11.1				I
CUarray_cubemap_face					
CUarray_cubemap_face_enum					
CUarray_format					I
CUarray_format_enum					I
CUarray_st					I
CUasyncCallback	12.4				
CUasyncCallbackEntry_st	12.4				
CUasyncCallbackHandle	12.4				
CUasyncNotificationInfo	12.4				
CUasyncNotificationInfo_st	12.4				
CUasyncNotificationType	12.4				
CUasyncNotificationType_enum	12.4				
CUatomicOperation	13.0				
CUatomicOperationCapability	13.0				
CUatomicOperationCapability_enum	13.0				
CUatomicOperation_enum	13.0				
CUcheckpointCheckpointArgs	12.8				
CUcheckpointCheckpointArgs_st	12.8				
CUcheckpointGpuPair	13.0				
CUcheckpointGpuPair_st	13.0				
CUcheckpointLockArgs	12.8				

Table 5 – continued from

CUDA	A	D	C	R	
CUcheckpointLockArgs_st	12.8				
CUcheckpointRestoreArgs	12.8		13.3		
CUcheckpointRestoreArgs_st	12.8		13.3		
CUcheckpointUnlockArgs	12.8				
CUcheckpointUnlockArgs_st	12.8				
CUcigDataType	12.5				
CUcigDataType_enum	12.5				
CUclusterSchedulingPolicy	11.8				
CUclusterSchedulingPolicy_enum	11.8				
CUcomputemode					
CUcomputemode_enum					
CUcontext					
CUcoredumpCallbackEntry_st	13.2				
CUcoredumpCallbackHandle	13.2				
CUcoredumpSettings	12.1				
CUcoredumpSettings_enum	12.1				
CUctxCigParam	12.5				
CUctxCigParam_st	12.5				
CUctxCreateParams	12.5				
CUctxCreateParams_st	12.5				
CUctx_flags					
CUctx_flags_enum					
CUctx_st					
CUd3d10DeviceList					
CUd3d10DeviceList_enum					
CUd3d10map_flags					
CUd3d10map_flags_enum					
CUd3d10register_flags					
CUd3d10register_flags_enum					
CUd3d11DeviceList					
CUd3d11DeviceList_enum					
CUd3d9DeviceList					
CUd3d9DeviceList_enum					
CUd3d9map_flags					
CUd3d9map_flags_enum					
CUd3d9register_flags					
CUd3d9register_flags_enum					
CUdevResource	12.4				
CUdevResourceDesc	12.4				
CUdevResourceDesc_st	12.4				
CUdevResourceType	12.4				
CUdevResource_st	12.4		13.1		
CUdevSmResource	12.4				
CUdevSmResourceGroup_flags	13.1				
CUdevSmResourceSplitByCount_flags	13.1				
CUdevSmResourceSplit_flags	12.5			13.1	
CUdevSmResource_st	12.4		13.1		
CUdevWorkqueueConfigResource	13.1				
CUdevWorkqueueConfigResource_st	13.1				
CUdevWorkqueueConfigScope	13.1				

Table 5 – continued from

CUDA	A	D	C	R	I
CUdevWorkqueueResource	13.1				
CUdevWorkqueueResource_st	13.1				
CUdevice					I
CUdeviceNumaConfig	12.2				
CUdeviceNumaConfig_enum	12.2				
CUdevice_P2PAttribute	8.0				I
CUdevice_P2PAttribute_enum	8.0				I
CUdevice_attribute					I
CUdevice_attribute_enum					I
CUdevice_v1	11.3				I
CUdeviceptr					I
CUdeviceptr_v1					I
CUdeviceptr_v2	11.3				I
CUdevprop					
CUdevprop_st					
CUdevprop_v1	11.3				
CUdriverProcAddressQueryResult	12.0				I
CUdriverProcAddressQueryResult_enum	12.0				I
CUdriverProcAddress_flags	11.3				
CUdriverProcAddress_flags_enum	11.3				
CUeglColorFormat	9.0				
CUeglColorFormate_enum	9.0				
CUeglFrameType	9.0				
CUeglFrameType_enum	9.0				
CUeglResourceLocationFlags	9.0				
CUeglResourceLocationFlags_enum	9.0				
CUeglStreamConnection	9.0				
CUeglStreamConnection_st	9.0				
CUevent					I
CUevent_flags					
CUevent_flags_enum					
CUevent_record_flags	11.1				
CUevent_record_flags_enum	11.1				
CUevent_sched_flags	11.8				
CUevent_sched_flags_enum	11.8				
CUevent_st					I
CUevent_wait_flags	11.1				
CUevent_wait_flags_enum					
CUexecAffinityParam	11.4				
CUexecAffinityParam_st	11.4				
CUexecAffinityParam_v1	11.4				
CUexecAffinitySmCount	11.4				
CUexecAffinitySmCount_st	11.4				
CUexecAffinitySmCount_v1	11.4				
CUexecAffinityType	11.4				
CUexecAffinityType_enum	11.4				
CUextMemory_st	10.0				
CUextSemaphore_st	10.0				
CUextent3D	12.8				
CUextent3D_st	12.8				

Table 5 – continued from

CUDA	A	D	C	R	
CUextent3D_v1	12.8				
CUexternalMemory	10.0				
CUexternalMemoryHandleType	10.0				
CUexternalMemoryHandleType_enum	10.0				
CUexternalSemaphore	10.0				
CUexternalSemaphoreHandleType	10.0				
CUexternalSemaphoreHandleType_enum	10.0				
CUfilter_mode					
CUfilter_mode_enum					
CUflushGPUDirectRDMAWritesOptions	11.3				
CUflushGPUDirectRDMAWritesOptions_enum	11.3				
CUflushGPUDirectRDMAWritesScope	11.3				
CUflushGPUDirectRDMAWritesScope_enum	11.3				
CUflushGPUDirectRDMAWritesTarget	11.3				
CUflushGPUDirectRDMAWritesTarget_enum	11.3				
CUfunc_cache					
CUfunc_cache_enum					
CUfunc_st					
CUfunction					
CUfunctionLoadingState	12.4				
CUfunctionLoadingState_enum	12.4				
CUfunction_attribute					
CUfunction_attribute_enum					
CUgraph	10.0				
CUgraphChildGraphNodeOwnership	12.9				
CUgraphChildGraphNodeOwnership_enum	12.9				
CUgraphConditionalHandle	12.3				
CUgraphConditionalNodeType	12.3				
CUgraphConditionalNodeType_enum	12.3				
CUgraphDebugDot_flags	11.3				
CUgraphDebugDot_flags_enum	11.3				
CUgraphDependencyType	12.3				
CUgraphDependencyType_enum	12.3				
CUgraphDeviceNode	12.4				
CUgraphDeviceUpdatableNode_st	12.4				
CUgraphEdgeData	12.3				
CUgraphEdgeData_st	12.3				
CUgraphExec	10.0				
CUgraphExecUpdateResult	10.2				
CUgraphExecUpdateResultInfo	12.0				
CUgraphExecUpdateResultInfo_st	12.0				
CUgraphExecUpdateResultInfo_v1	12.0				
CUgraphExecUpdateResult_enum	10.2				
CUgraphExec_st	10.0				
CUgraphInstantiateResult	12.0				
CUgraphInstantiateResult_enum	12.0				
CUgraphInstantiate_flags	11.4				
CUgraphInstantiate_flags_enum	11.4				
CUgraphMem_attribute	11.4				
CUgraphMem_attribute_enum	11.4				

Table 5 – continued from

CUDA	A	D	C	R	
CUgraphNode	10.0				
CUgraphNodeParams	12.2		13.3		
CUgraphNodeParams_st	12.2		13.3		
CUgraphNodeType	10.0				
CUgraphNodeType_enum	10.0				
CUgraphNode_st	10.0				
CUgraph_st	10.0				
CUgraphicsMapResourceFlags					
CUgraphicsMapResourceFlags_enum					
CUgraphicsRegisterFlags					
CUgraphicsRegisterFlags_enum					
CUgraphicsResource					
CUgraphicsResource_st					
CUgreenCtx	12.4				
CUgreenCtxCreate_flags	12.4				
CUgreenCtx_st	12.4				
CUhostFn	10.0				
CUhostTaskSyncMode	13.2				
CUhostTaskSyncMode_enum	13.2				
CUipcEventHandle					
CUipcEventHandle_st					
CUipcEventHandle_v1	11.3				
CUipcMemHandle					
CUipcMemHandle_st					
CUipcMemHandle_v1	11.3				
CUipcMem_flags					
CUipcMem_flags_enum					
CUjitInputType					
CUjitInputType_enum					
CUjit_cacheMode					
CUjit_cacheMode_enum					
CUjit_fallback					
CUjit_fallback_enum					
CUjit_option					
CUjit_option_enum					
CUjit_target					
CUjit_target_enum					
CUkern_st	12.0				
CUkernel	12.0				
CUkernelNodeAttrID	11.0				
CUkernelNodeAttrID_enum	11.0			11.8	
CUkernelNodeAttrValue	11.0				
CUkernelNodeAttrValue_union	11.0			11.8	
CUkernelNodeAttrValue_v1	11.3				
CUlaunchAttribute	11.8				
CUlaunchAttributeID	11.8				
CUlaunchAttributeID_enum	11.8				
CUlaunchAttributePortableClusterMode	13.2				
CUlaunchAttributePortableClusterMode_enum	13.2				
CUlaunchAttributeValue	11.8		13.2		

Table 5 – continued from

CUDA	A	D	C	R	
CUlaunchAttributeValue_union	11.8		13.2		
CUlaunchAttribute_st	11.8				
CUlaunchConfig	11.8				
CUlaunchConfig_st	11.8				
CUlaunchMemSyncDomain	12.0				
CUlaunchMemSyncDomainMap	12.0				
CUlaunchMemSyncDomainMap_st	12.0				
CUlaunchMemSyncDomain_enum	12.0				
CUlib_st	12.0				
CUlibrary	12.0				
CUlibraryHostUniversalFunctionAndDataTable	12.0				
CUlibraryHostUniversalFunctionAndDataTable_st	12.0				
CUlibraryOption	12.0				
CUlibraryOption_enum	12.0				
CUlimit					
CUlimit_enum					
CUlinkState					
CUlinkState_st					
CUlogIterator	12.9				
CUlogLevel	12.9				
CUlogLevel_enum	12.9				
CUlogicalEndpointId	13.3				
CUlogsCallback	12.9				
CUlogsCallbackEntry_st	12.9				
CUlogsCallbackHandle	12.9				
CUmemAccessDesc	10.2				
CUmemAccessDesc_st	10.2				
CUmemAccessDesc_v1	11.3				
CUmemAccess_flags	10.2				
CUmemAccess_flags_enum	10.2				
CUmemAllocationGranularity_flags	10.2				
CUmemAllocationGranularity_flags_enum	10.2				
CUmemAllocationHandleType	10.2				
CUmemAllocationHandleType_enum	10.2				
CUmemAllocationProp	10.2				
CUmemAllocationProp_st	10.2				
CUmemAllocationProp_v1	11.3				
CUmemAllocationType	10.2				
CUmemAllocationType_enum	10.2				
CUmemAttach_flags					
CUmemAttach_flags_enum					
CUmemDecompressAlgorithm	12.8				
CUmemDecompressAlgorithm_enum	12.8				
CUmemDecompressParams	12.8				
CUmemDecompressParams_st	12.8				
CUmemFabricHandle	12.3				
CUmemFabricHandle_st	12.3				
CUmemFabricHandle_v1	12.3				
CUmemGenericAllocationHandle	10.2				
CUmemGenericAllocationHandle_v1	11.3				

Table 5 – continued from

CUDA	A	D	C	R	
CUmemHandleType	11.1				
CUmemHandleType_enum	11.1				
CUmemLocation	10.2		13.2		
CUmemLocationType	10.2				
CUmemLocationType_enum	10.2				
CUmemLocation_st	10.2		13.2		
CUmemLocation_v1	11.3		13.2		
CUmemOperationType	11.1				
CUmemOperationType_enum	11.1				
CUmemPoolHandle_st	11.2				
CUmemPoolProps	11.2				
CUmemPoolProps_st	11.2				
CUmemPoolProps_v1	11.3				
CUmemPoolPtrExportData	11.2				
CUmemPoolPtrExportData_st	11.2				
CUmemPoolPtrExportData_v1	11.3				
CUmemPool_attribute	11.2				
CUmemPool_attribute_enum	11.2				
CUmemRangeFlags	12.8				
CUmemRangeFlags_enum	12.8				
CUmemRangeHandleType	11.7				
CUmemRangeHandleType_enum	11.7				
CUmem_advise	8.0				
CUmem_advise_enum	8.0				
CUmem_range_attribute	8.0				
CUmem_range_attribute_enum	8.0				
CUmemcpy3DOperand	12.8				
CUmemcpy3DOperandType	12.8				
CUmemcpy3DOperandType_enum	12.8				
CUmemcpy3DOperand_st	12.8				
CUmemcpy3DOperand_v1	12.8				
CUmemcpyAttributes	12.8				
CUmemcpyAttributes_st	12.8				
CUmemcpyAttributes_v1	12.8				
CUmemcpyFlags	12.8				
CUmemcpyFlags_enum	12.8				
CUmemcpySrcAccessOrder	12.8				
CUmemcpySrcAccessOrder_enum	12.8				
CUmemoryPool	11.2				
CUmemorytype					
CUmemorytype_enum					
CUmipmappedArray					
CUmipmappedArray_st					
CUmod_st					
CUmodule					
CUmoduleLoadingMode	11.7				
CUmoduleLoadingMode_enum	11.7				
CUmulticastGranularity_flags	12.1				
CUmulticastGranularity_flags_enum	12.1				
CUmulticastObjectProp	12.1				

Table 5 – continued from

CUDA	A	D	C	R	I
CUmulticastObjectProp_st	12.1				
CUmulticastObjectProp_v1	12.1				
CUoccupancyB2DSize					v
CUoccupancy_flags					
CUoccupancy_flags_enum					
CUoffset3D	12.8				I
CUoffset3D_st	12.8				I
CUoffset3D_v1	12.8				I
CUpointer_attribute					I
CUpointer_attribute_enum					I
CUprocessState	12.8				
CUprocessState_enum	12.8				
CUresourceViewFormat					I
CUresourceViewFormat_enum					I
CUresourcetype					I
CUresourcetype_enum					I
CUresult					I
CUsharedMemoryMode	13.2				
CUsharedMemoryMode_enum	13.2				
CUshared_carveout	9.0				
CUshared_carveout_enum	9.0				
CUsharedconfig					I
CUsharedconfig_enum					I
CUstream					I
CUstreamAtomicReductionDataType	13.1				
CUstreamAtomicReductionDataType_enum	13.1				
CUstreamAtomicReductionOpType	13.1				
CUstreamAtomicReductionOpType_enum	13.1				
CUstreamAttrID	11.0				I
CUstreamAttrID_enum	11.0			11.8	I
CUstreamAttrValue	11.0				I
CUstreamAttrValue_union	11.0			11.8	I
CUstreamAttrValue_v1	11.3				I
CUstreamBatchMemOpParams	8.0				I
CUstreamBatchMemOpParams_union	8.0		13.1		I
CUstreamBatchMemOpParams_v1	11.3				I
CUstreamBatchMemOpType	8.0				I
CUstreamBatchMemOpType_enum	8.0				I
CUstreamCallback					I
CUstreamCaptureMode	10.1				I
CUstreamCaptureMode_enum	10.1				I
CUstreamCaptureStatus	10.0				I
CUstreamCaptureStatus_enum	10.0				I
CUstreamCigCaptureParams	13.2				
CUstreamCigCaptureParams_st	13.2				
CUstreamCigDataType	13.2				
CUstreamCigDataType_enum	13.2				
CUstreamCigParam	13.2				
CUstreamCigParam_st	13.2				
CUstreamMemOpAtomicReductionParams_st	13.1				

Table 5 – continued from

CUDA	A	D	C	R	
CUstreamMemOpMemoryBarrierParams_st	11.7				
CUstreamMemoryBarrier_flags	11.7				
CUstreamMemoryBarrier_flags_enum	11.7				
CUstreamUpdateCaptureDependencies_flags	11.3				
CUstreamUpdateCaptureDependencies_flags_enum	11.3				
CUstreamWaitValue_flags	8.0				
CUstreamWaitValue_flags_enum	8.0				
CUstreamWriteValue_flags	8.0				
CUstreamWriteValue_flags_enum	8.0				
CUstream_flags					
CUstream_flags_enum					
CUstream_st					
CUsurfObject					
CUsurfObject_v1	11.3				
CUsurfref					
CUsurfref_st					
CUsynchronizationPolicy	11.0				
CUsynchronizationPolicy_enum	11.0				
CUtensorMap	12.0				
CUtensorMapDataType	12.0				
CUtensorMapDataType_enum	12.0				
CUtensorMapFloatOOBfill	12.0				
CUtensorMapFloatOOBfill_enum	12.0				
CUtensorMapIm2ColWideMode	12.8				
CUtensorMapIm2ColWideMode_enum	12.8				
CUtensorMapInterleave	12.0				
CUtensorMapInterleave_enum	12.0				
CUtensorMapL2promotion	12.0				
CUtensorMapL2promotion_enum	12.0				
CUtensorMapSwizzle	12.0				
CUtensorMapSwizzle_enum	12.0				
CUtensorMap_st	12.0				
CUtexObject					
CUtexObject_v1	11.3				
CUtexref					
CUtexref_st					
CUuserObject	11.3				
CUuserObjectRetain_flags	11.3				
CUuserObjectRetain_flags_enum	11.3				
CUuserObject_flags	11.3				
CUuserObject_flags_enum	11.3				
CUuserObject_st	11.3				
CUuuid					
CUuuid_st					
GLenum					
GLuint					
NVCL_CTX_SCHED_AUTO	11.8				
NVCL_CTX_SCHED_BLOCKING_SYNC	11.8				
NVCL_CTX_SCHED_SPIN	11.8				
NVCL_CTX_SCHED_YIELD	11.8				

Table 5 – continued from

CUDA	A	D	C	R
NVCL_EVENT_SCHED_AUTO	11.8			
NVCL_EVENT_SCHED_BLOCKING_SYNC	11.8			
NVCL_EVENT_SCHED_SPIN	11.8			
NVCL_EVENT_SCHED_YIELD	11.8			
STREAM_CIG_DATA_TYPE_D3D12_COMMAND_LIST	13.2			
__CUDACC__				
cl_context_flags	11.8			
cl_context_flags_enum	11.8			
cl_event_flags	11.8			
cl_event_flags_enum	11.8			
cudaError_enum				
memoryBarrier	11.7			

10.2.2 2. Error Handling

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuGetErrorName					hipDrvGetErrorName	5.4.0					
cuGetErrorString					hipDrvGetErrorString	5.4.0					

10.2.3 3. Initialization

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuInit					hipInit	1.6.0					

10.2.4 4. Version Management

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuDriverGetVersion					hipDriverGetVersion	1.6.0					

10.2.5 5. Device Management

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuDeviceGet					hipDeviceGet	1.6.0					
cuDeviceGetAttribute					hipDeviceGetAttribute	1.6.0					
cuDeviceGetCount					hipGetDeviceCount	1.6.0					
cuDeviceGetDefaultMemPool	11.2				hipDeviceGetDefaultMe	5.2.0					
cuDeviceGetExecAffinitySupp	11.4										
cuDeviceGetHostAtomicCapabi	13.0										
cuDeviceGetLuid	10.0										
cuDeviceGetMemPool	11.2				hipDeviceGetMemPool	5.2.0					
cuDeviceGetName					hipDeviceGetName	1.6.0					
cuDeviceGetNvSciSyncAttribu	10.2										
cuDeviceGetTexture1DLinearM	11.1										
cuDeviceGetUuid	9.2				hipDeviceGetUuid	5.2.0					
cuDeviceGetUuid_v2	11.4				hipDeviceGetUuid	5.2.0					
cuDeviceSetMemPool	11.2				hipDeviceSetMemPool	5.2.0					
cuDeviceTotalMem					hipDeviceTotalMem	1.6.0					
cuDeviceTotalMem_v2					hipDeviceTotalMem	1.6.0					
cuFlushGPUDirectRDMAWrites	11.3										

10.2.6 6. Device Management [DEPRECATED]

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuDeviceComputeCapabili		9.2			hipDeviceComputeCapabili	1.6.0					
cuDeviceGetProperties		9.2									

10.2.7 7. Primary Context Management

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuDevicePrimaryCtxGetSta					hipDevicePrimaryCtxGet	1.9.0	6.1.0				
cuDevicePrimaryCtxReleas					hipDevicePrimaryCtxRel	1.9.0	6.1.0				
cuDevicePrimaryCtxReleas	11.0				hipDevicePrimaryCtxRel	1.9.0	6.1.0				
cuDevicePrimaryCtxReset					hipDevicePrimaryCtxRes	1.9.0	6.1.0				
cuDevicePrimaryCtxReset_	11.0				hipDevicePrimaryCtxRes	1.9.0	6.1.0				
cuDevicePrimaryCtxRetain					hipDevicePrimaryCtxRet	1.9.0	6.1.0				
cuDevicePrimaryCtxSetFla					hipDevicePrimaryCtxSet	1.9.0	6.1.0				
cuDevicePrimaryCtxSetFla	11.0				hipDevicePrimaryCtxSet	1.9.0	6.1.0				

10.2.8 8. Context Management

CUDA	A	D	C	R	HIP	A	D	C	R
cuCtxCreate			13.0		hipCtxCreate	1.6.0	1.9.0		
cuCtxCreate_v2					hipCtxCreate	1.6.0	1.9.0		
cuCtxCreate_v3	11.4								
cuCtxCreate_v4	12.5								
cuCtxDestroy					hipCtxDestroy	1.6.0	1.9.0		
cuCtxDestroy_v2					hipCtxDestroy	1.6.0	1.9.0		
cuCtxGetApiVersion					hipCtxGetApiVersion	1.9.0	1.9.0	7.0.0	
cuCtxGetCacheConfig					hipCtxGetCacheConfig	1.9.0	1.9.0		
cuCtxGetCurrent					hipCtxGetCurrent	1.6.0	1.9.0		
cuCtxGetDevice					hipCtxGetDevice	1.6.0	1.9.0		
cuCtxGetDevice_v2	13.0								
cuCtxGetExecAffinity	11.4								
cuCtxGetFlags					hipCtxGetFlags	1.9.0	1.9.0		
cuCtxGetId	12.0								
cuCtxGetLimit					hipDeviceGetLimit	1.6.0			

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Table 6 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
cuCtxGetSharedMemConfig				12.4	hipCtxGetSharedMemConfig	1.9.0	1.9.0		
cuCtxGetStreamPriorityRange					hipDeviceGetStreamPriorityRange	2.0.0			
cuCtxPopCurrent					hipCtxPopCurrent	1.6.0	1.9.0		
cuCtxPopCurrent_v2					hipCtxPopCurrent	1.6.0	1.9.0		
cuCtxPushCurrent					hipCtxPushCurrent	1.6.0	1.9.0		
cuCtxPushCurrent_v2					hipCtxPushCurrent	1.6.0	1.9.0		
cuCtxResetPersistingL2Cache	11.0								
cuCtxSetCacheConfig					hipCtxSetCacheConfig	1.9.0	1.9.0		
cuCtxSetCurrent					hipCtxSetCurrent	1.6.0	1.9.0		
cuCtxSetFlags	12.1								
cuCtxSetLimit					hipDeviceSetLimit	5.3.0			
cuCtxSetSharedMemConfig				12.4	hipCtxSetSharedMemConfig	1.9.0	1.9.0		
cuCtxSynchronize					hipCtxSynchronize	1.9.0	1.9.0		
cuCtxSynchronize_v2	13.0								
cuCtxWaitEvent	12.5								

10.2.9 9. Context Management [DEPRECATED]

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuCtxAttach											
cuCtxDetach											

10.2.10 10. Module Management

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuLinkAddData					hiprtcLinkAddData	5.3.0					
cuLinkAddData_v2					hiprtcLinkAddData	5.3.0					
cuLinkAddFile					hiprtcLinkAddFile	5.3.0					
cuLinkAddFile_v2					hiprtcLinkAddFile	5.3.0					
cuLinkComplete					hiprtcLinkComplete	5.3.0					
cuLinkCreate					hiprtcLinkCreate	5.3.0					
cuLinkCreate_v2					hiprtcLinkCreate	5.3.0					
cuLinkDestroy					hiprtcLinkDestroy	5.3.0					
cuModuleEnumerateFunctio	12.4										
cuModuleGetFunction					hipModuleGetFunction	1.6.0					
cuModuleGetFunctionCount	12.4				hipModuleGetFunctionCou	7.1.0					
cuModuleGetGlobal					hipModuleGetGlobal	1.6.0					
cuModuleGetGlobal_v2					hipModuleGetGlobal	1.6.0					
cuModuleGetLoadingMode	11.7										
cuModuleLoad					hipModuleLoad	1.6.0					
cuModuleLoadData					hipModuleLoadData	1.6.0					
cuModuleLoadDataEx					hipModuleLoadDataEx	1.6.0					
cuModuleLoadFatBinary					hipModuleLoadFatBinary	7.1.0					
cuModuleUnload					hipModuleUnload	1.6.0					

10.2.11 11. Module Management [DEPRECATED]

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuModuleGetSurfRef		12.0									
cuModuleGetTexRef		12.0			hipModuleGetTexRef	1.7.0					

10.2.12 12. Library Management

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuKernelGetAttribute	12.0				hipKernelGetAttribute	7.12.0					
cuKernelGetFunction	12.0				hipKernelGetFunction	7.12.0					
cuKernelGetLibrary	12.5				hipKernelGetLibrary	7.2.0					
cuKernelGetName	12.3				hipKernelGetName	7.2.0					
cuKernelGetParamCount	13.2										
cuKernelGetParamInfo	12.4										
cuKernelSetAttribute	12.0				hipKernelSetAttribute	7.12.0					
cuKernelSetCacheConfig	12.0										
cuLibraryEnumerateKernel	12.4				hipLibraryEnumerateKern	7.2.0					
cuLibraryGetGlobal	12.0										
cuLibraryGetKernel	12.0				hipLibraryGetKernel	7.1.0					
cuLibraryGetKernelCount	12.4				hipLibraryGetKernelCoun	7.1.0					
cuLibraryGetManaged	12.0										
cuLibraryGetModule	12.0										
cuLibraryGetUnifiedFunct	12.0										
cuLibraryLoadData	12.0				hipLibraryLoadData	7.1.0					
cuLibraryLoadFromFile	12.0				hipLibraryLoadFromFile	7.1.0					
cuLibraryUnload	12.0				hipLibraryUnload	7.1.0					

10.2.13 13. Memory Management

CUDA	A	D	C	R	HIP	A
cuArray3DCreate					hipArray3DCreate	1.7.1
cuArray3DCreate_v2					hipArray3DCreate	1.7.1
cuArray3DGetDescriptor					hipArray3DGetDescriptor	5.6.0
cuArray3DGetDescriptor_v2					hipArray3DGetDescriptor	5.6.0
cuArrayCreate					hipArrayCreate	1.9.0
cuArrayCreate_v2					hipArrayCreate	1.9.0
cuArrayDestroy					hipArrayDestroy	4.2.0
cuArrayGetDescriptor					hipArrayGetDescriptor	5.6.0
cuArrayGetDescriptor_v2					hipArrayGetDescriptor	5.6.0
cuArrayGetMemoryRequirements	11.6					
cuArrayGetPlane	11.2					
cuArrayGetSparseProperties	11.1					
cuDeviceGetByPCIBusId					hipDeviceGetByPCIBusId	1.6.0
cuDeviceGetPCIBusId					hipDeviceGetPCIBusId	1.6.0
cuDeviceRegisterAsyncNotification	12.4					
cuDeviceUnregisterAsyncNotification	12.4					
cuIpcCloseMemHandle					hipIpcCloseMemHandle	1.6.0
cuIpcGetEventHandle					hipIpcGetEventHandle	1.6.0
cuIpcGetMemHandle					hipIpcGetMemHandle	1.6.0
cuIpcOpenEventHandle					hipIpcOpenEventHandle	1.6.0
cuIpcOpenMemHandle					hipIpcOpenMemHandle	1.6.0
cuMemAlloc					hipMalloc	1.5.0
cuMemAllocHost					hipMemAllocHost	3.0.0
cuMemAllocHost_v2					hipMemAllocHost	3.0.0
cuMemAllocManaged					hipMallocManaged	2.5.0
cuMemAllocPitch					hipMemAllocPitch	3.0.0
cuMemAllocPitch_v2					hipMemAllocPitch	3.0.0
cuMemAlloc_v2					hipMalloc	1.5.0
cuMemBatchDecompressAsync	12.8					
cuMemFree					hipFree	1.5.0
cuMemFreeHost					hipHostFree	1.6.0
cuMemFree_v2					hipFree	1.5.0
cuMemGetAddressRange					hipMemGetAddressRange	1.9.0
cuMemGetAddressRange_v2					hipMemGetAddressRange	1.9.0
cuMemGetHandleForAddressRange	11.7				hipMemGetHandleForAddressRange	7.0.0
cuMemGetInfo					hipMemGetInfo	1.6.0
cuMemGetInfo_v2					hipMemGetInfo	1.6.0
cuMemHostAlloc					hipHostAlloc	1.6.0
cuMemHostGetDevicePointer					hipHostGetDevicePointer	1.6.0
cuMemHostGetDevicePointer_v2					hipHostGetDevicePointer	1.6.0
cuMemHostGetFlags					hipHostGetFlags	1.6.0
cuMemHostRegister					hipHostRegister	1.6.0
cuMemHostRegister_v2					hipHostRegister	1.6.0
cuMemHostUnregister					hipHostUnregister	1.6.0
cuMemcpy						
cuMemcpy2D					hipMemcpyParam2D	1.7.0
cuMemcpy2DAsync					hipMemcpyParam2DAsync	2.8.0
cuMemcpy2DAsync_v2					hipMemcpyParam2DAsync	2.8.0
cuMemcpy2DUnaligned					hipDrvMemcpy2DUnaligned	4.2.0

Table 7 – continued from previous page

CUDA	A	D	C	R	HIP	A
cuMemcpy2DUnaligned_v2					hipDrvMemcpy2DUnaligned	4.2.0
cuMemcpy2D_v2					hipMemcpyParam2D	1.7.0
cuMemcpy3D					hipDrvMemcpy3D	3.5.0
cuMemcpy3DAsync					hipDrvMemcpy3DAsync	3.5.0
cuMemcpy3DAsync_v2					hipDrvMemcpy3DAsync	3.5.0
cuMemcpy3DBatchAsync	12.8		13.0		hipMemcpy3DBatchAsync	7.1.0
cuMemcpy3DPeer						
cuMemcpy3DPeerAsync						
cuMemcpy3DWithAttributesAsync	13.2					
cuMemcpy3D_v2					hipDrvMemcpy3D	3.5.0
cuMemcpyAsync						
cuMemcpyAtoA					hipMemcpyAtoA	6.2.0
cuMemcpyAtoA_v2					hipMemcpyAtoA	6.2.0
cuMemcpyAtoD					hipMemcpyAtoD	6.2.0
cuMemcpyAtoD_v2					hipMemcpyAtoD	6.2.0
cuMemcpyAtoH					hipMemcpyAtoH	1.9.0
cuMemcpyAtoHAsync					hipMemcpyAtoHAsync	6.2.0
cuMemcpyAtoHAsync_v2					hipMemcpyAtoHAsync	6.2.0
cuMemcpyAtoH_v2					hipMemcpyAtoH	1.9.0
cuMemcpyBatchAsync	12.8		13.0		hipMemcpyBatchAsync	7.1.0
cuMemcpyDtoA					hipMemcpyDtoA	6.2.0
cuMemcpyDtoA_v2					hipMemcpyDtoA	6.2.0
cuMemcpyDtoD					hipMemcpyDtoD	1.6.0
cuMemcpyDtoDAsync					hipMemcpyDtoDAsync	1.6.0
cuMemcpyDtoDAsync_v2					hipMemcpyDtoDAsync	1.6.0
cuMemcpyDtoD_v2					hipMemcpyDtoD	1.6.0
cuMemcpyDtoH					hipMemcpyDtoH	1.6.0
cuMemcpyDtoHAsync					hipMemcpyDtoHAsync	1.6.0
cuMemcpyDtoHAsync_v2					hipMemcpyDtoHAsync	1.6.0
cuMemcpyDtoH_v2					hipMemcpyDtoH	1.6.0
cuMemcpyHtoA					hipMemcpyHtoA	1.9.0
cuMemcpyHtoAAsync					hipMemcpyHtoAAsync	6.2.0
cuMemcpyHtoAAsync_v2					hipMemcpyHtoAAsync	6.2.0
cuMemcpyHtoA_v2					hipMemcpyHtoA	1.9.0
cuMemcpyHtoD					hipMemcpyHtoD	1.6.0
cuMemcpyHtoDAsync					hipMemcpyHtoDAsync	1.6.0
cuMemcpyHtoDAsync_v2					hipMemcpyHtoDAsync	1.6.0
cuMemcpyHtoD_v2					hipMemcpyHtoD	1.6.0
cuMemcpyPeer						
cuMemcpyPeerAsync						
cuMemcpyWithAttributesAsync	13.2					
cuMemsetD16					hipMemsetD16	3.0.0
cuMemsetD16Async					hipMemsetD16Async	3.0.0
cuMemsetD16_v2					hipMemsetD16	3.0.0
cuMemsetD2D16					hipMemsetD2D16	7.1.0
cuMemsetD2D16Async					hipMemsetD2D16Async	7.1.0
cuMemsetD2D16_v2					hipMemsetD2D16	7.1.0
cuMemsetD2D32					hipMemsetD2D32	7.1.0
cuMemsetD2D32Async					hipMemsetD2D32Async	7.1.0
cuMemsetD2D32_v2					hipMemsetD2D32	7.1.0

Table 7 – continued from previous page

CUDA	A	D	C	R	HIP	A
cuMemsetD2D8					hipMemsetD2D8	7.1.0
cuMemsetD2D8Async					hipMemsetD2D8Async	7.1.0
cuMemsetD2D8_v2					hipMemsetD2D8	7.1.0
cuMemsetD32					hipMemsetD32	2.3.0
cuMemsetD32Async					hipMemsetD32Async	2.3.0
cuMemsetD32_v2					hipMemsetD32	2.3.0
cuMemsetD8					hipMemsetD8	1.6.0
cuMemsetD8Async					hipMemsetD8Async	3.0.0
cuMemsetD8_v2					hipMemsetD8	1.6.0
cuMipmappedArrayCreate					hipMipmappedArrayCreate	3.5.0
cuMipmappedArrayDestroy					hipMipmappedArrayDestroy	3.5.0
cuMipmappedArrayGetLevel					hipMipmappedArrayGetLevel	3.5.0
cuMipmappedArrayGetMemoryRequirements	11.6				hipMipmappedArrayGetMemoryRequirements	7.12.0

10.2.14 14. Virtual Memory Management

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuMemAddressFree	10.2				hipMemAddressFree	5.2.0					
cuMemAddressReserve	10.2				hipMemAddressReserve	5.2.0					
cuMemCreate	10.2				hipMemCreate	5.2.0					
cuMemExportToShareableHa	10.2				hipMemExportToShareableH	5.2.0					
cuMemGetAccess	10.2				hipMemGetAccess	5.2.0					
cuMemGetAllocationGranul	10.2				hipMemGetAllocationGranu	5.2.0					
cuMemGetAllocationPropei	10.2				hipMemGetAllocationPrope	5.2.0					
cuMemImportFromShareable	10.2				hipMemImportFromShareabl	5.2.0					
cuMemMap	10.2				hipMemMap	5.2.0					
cuMemMapArrayAsync	11.1				hipMemMapArrayAsync	5.2.0					
cuMemRelease	10.2				hipMemRelease	5.2.0					
cuMemRetainAllocationHar	11.0				hipMemRetainAllocationHa	5.2.0					
cuMemSetAccess	10.2				hipMemSetAccess	5.2.0					
cuMemUnmap	10.2				hipMemUnmap	5.2.0					

10.2.15 15. Stream Ordered Memory Allocator

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuMemAllocAsync	11.2				hipMallocAsync	5.2.0					
cuMemAllocFromPoolAsync	11.2				hipMallocFromPoolAsync	5.2.0					
cuMemFreeAsync	11.2				hipFreeAsync	5.2.0					
cuMemGetDefaultMemPool	13.0										
cuMemGetMemPool	13.0				hipMemGetMemPool	7.12.(					
cuMemPoolCreate	11.2				hipMemPoolCreate	5.2.0					
cuMemPoolDestroy	11.2				hipMemPoolDestroy	5.2.0					
cuMemPoolExportPointer	11.2				hipMemPoolExportPointer	5.2.0					
cuMemPoolExportToShareal	11.2				hipMemPoolExportToSharea	5.2.0					
cuMemPoolGetAccess	11.2				hipMemPoolGetAccess	5.2.0					
cuMemPoolGetAttribute	11.2				hipMemPoolGetAttribute	5.2.0					
cuMemPoolImportFromShar	11.2				hipMemPoolImportFromShar	5.2.0					
cuMemPoolImportPointer	11.2				hipMemPoolImportPointer	5.2.0					
cuMemPoolSetAccess	11.2				hipMemPoolSetAccess	5.2.0					
cuMemPoolSetAttribute	11.2				hipMemPoolSetAttribute	5.2.0					
cuMemPoolTrimTo	11.2				hipMemPoolTrimTo	5.2.0					
cuMemSetMemPool	13.0				hipMemSetMemPool	7.12.(					

10.2.16 16. Multicast Object Management

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuMulticastAddDevice	12.1										
cuMulticastBindAddr	12.1										
cuMulticastBindAddr_v2	13.1										
cuMulticastBindMem	12.1										
cuMulticastBindMem_v2	13.1										
cuMulticastCreate	12.1										
cuMulticastGetGranularity	12.1										
cuMulticastUnbind	12.1										

10.2.17 17. Unified Addressing

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuMemAdvise	8.0		13.0		hipMemAdvise	3.7.0				13.0	
cuMemAdvise_v2	12.2										
cuMemDiscardAndPrefetchI	13.0										
cuMemDiscardBatchAsync	13.0										
cuMemPrefetchAsync	8.0		13.0		hipMemPrefetchAsync	3.7.0				13.0	
cuMemPrefetchAsync_v2	12.2										
cuMemPrefetchBatchAsync	13.0				hipMemPrefetchBatch	7.13.(					7.13.0
cuMemRangeGetAttribute	8.0				hipMemRangeGetAttri	3.7.0					
cuMemRangeGetAttributes	8.0				hipMemRangeGetAttri	3.7.0					
cuPointerGetAttribute					hipPointerGetAttrib	5.0.0					
cuPointerGetAttributes					hipDrvPointerGetAtt	5.0.0					
cuPointerSetAttribute					hipPointerSetAttrib	5.5.0					

10.2.18 18. Stream Management

CUDA	A	D	C	R	HIP	A	D
cuStreamAddCallback					hipStreamAddCallback	1.6.0	
cuStreamAttachMemAsync					hipStreamAttachMemAsync	3.7.0	
cuStreamBeginCapture	10.0				hipStreamBeginCapture	4.3.0	
cuStreamBeginCaptureToCig	13.2						
cuStreamBeginCaptureToGraph	12.3				hipStreamBeginCaptureToGraph	6.2.0	
cuStreamBeginCapture_ptsz	10.1						
cuStreamBeginCapture_v2	10.1				hipStreamBeginCapture	4.3.0	
cuStreamCopyAttributes	11.0				hipStreamCopyAttributes	7.2.0	
cuStreamCreate					hipStreamCreateWithFlags	1.6.0	
cuStreamCreateWithPriority					hipStreamCreateWithPriority	2.0.0	
cuStreamDestroy					hipStreamDestroy	1.6.0	
cuStreamDestroy_v2					hipStreamDestroy	1.6.0	
cuStreamEndCapture	10.0				hipStreamEndCapture	4.3.0	
cuStreamEndCaptureToCig	13.2						
cuStreamGetAttribute	11.0				hipStreamGetAttribute	7.1.0	
cuStreamGetCaptureInfo	10.1		13.0		hipStreamGetCaptureInfo	5.0.0	
cuStreamGetCaptureInfo_v2	11.3				hipStreamGetCaptureInfo_v2	5.0.0	
cuStreamGetCaptureInfo_v3	12.3						
cuStreamGetCtx	9.2						
cuStreamGetCtx_v2	12.5						
cuStreamGetDevice	12.8						
cuStreamGetFlags					hipStreamGetFlags	1.6.0	
cuStreamGetId	12.0				hipStreamGetId	7.1.0	
cuStreamGetPriority					hipStreamGetPriority	2.0.0	
cuStreamIsCapturing	10.0				hipStreamIsCapturing	5.0.0	
cuStreamQuery					hipStreamQuery	1.6.0	
cuStreamSetAttribute	11.0				hipStreamSetAttribute	7.1.0	
cuStreamSynchronize					hipStreamSynchronize	1.6.0	
cuStreamUpdateCaptureDependencies	11.3		13.0		hipStreamUpdateCaptureDependencies	5.0.0	
cuStreamUpdateCaptureDependencies_v2	12.3						
cuStreamWaitEvent					hipStreamWaitEvent	1.6.0	
cuThreadExchangeStreamCaptureMode	10.1				hipThreadExchangeStreamCaptureMode	5.2.0	

10.2.19 19. Event Management

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuEventCreate					hipEventCreateWithFlags	1.6.0					
cuEventDestroy					hipEventDestroy	1.6.0					
cuEventDestroy_v2					hipEventDestroy	1.6.0					
cuEventElapsedTime					hipEventElapsedTime	1.6.0					
cuEventElapsedTime_v2	12.8				hipEventElapsedTime	1.6.0					
cuEventQuery					hipEventQuery	1.6.0					
cuEventRecord					hipEventRecord	1.6.0					
cuEventRecordWithFlags	11.1				hipEventRecordWithFlags	6.4.0					
cuEventSynchronize					hipEventSynchronize	1.6.0					

10.2.20 20. External Resource Interoperability

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuDestroyExternalMemory	10.0				hipDestroyExternalMemc	4.3.0					
cuDestroyExternalSemaphore	10.0				hipDestroyExternalSema	4.4.0					
cuExternalMemoryGetMappedB	10.0				hipExternalMemoryGetMa	4.3.0					
cuExternalMemoryGetMappedM	10.0										
cuImportExternalMemory	10.0				hipImportExternalMemor	4.3.0					
cuImportExternalSemaphore	10.0				hipImportExternalSemap	4.4.0					
cuSignalExternalSemaphores	10.0				hipSignalExternalSemap	4.4.0					
cuWaitExternalSemaphoresAs	10.0				hipWaitExternalSemaphc	4.4.0					

10.2.21 21. Stream Memory Operations

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuStreamBatchMemOp	8.0				hipStreamBatchMemOp	6.4.0					
cuStreamBatchMemOp_v2	11.7				hipStreamBatchMemOp	6.4.0					
cuStreamWaitValue32	8.0				hipStreamWaitValue32	4.2.0					
cuStreamWaitValue32_v2	11.7				hipStreamWaitValue32	4.2.0					
cuStreamWaitValue64	9.0				hipStreamWaitValue64	4.2.0					
cuStreamWaitValue64_v2	11.7				hipStreamWaitValue64	4.2.0					
cuStreamWriteValue32	8.0				hipStreamWriteValue32	4.2.0					
cuStreamWriteValue32_v2	11.7				hipStreamWriteValue32	4.2.0					
cuStreamWriteValue64	9.0				hipStreamWriteValue64	4.2.0					
cuStreamWriteValue64_v2	11.7				hipStreamWriteValue64	4.2.0					

10.2.22 22. Execution Control

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuFuncGetAttribute					hipFuncGetAttribute	2.8.0					
cuFuncGetModule	11.0										
cuFuncGetName	12.3										
cuFuncGetParamCount	13.2										
cuFuncGetParamInfo	12.4										
cuFuncIsLoaded	12.4										
cuFuncLoad	12.4										
cuFuncSetAttribute	9.0										
cuFuncSetCacheConfig											
cuFuncSetSharedMemCor				12.4							
cuLaunchCooperativeKe	9.0				hipModuleLaunchCooperati	5.5.0					
cuLaunchCooperativeKe	9.0	11.3			hipModuleLaunchCooperati	5.5.0					
cuLaunchHostFunc	10.0				hipLaunchHostFunc	5.2.0					
cuLaunchHostFunc_v2	13.2										
cuLaunchKernel					hipModuleLaunchKernel	1.6.0					
cuLaunchKernelEx	11.8				hipDrvLaunchKernelEx	7.0.0					

10.2.23 23. Execution Control [DEPRECATED]

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuFuncSetBlockShape		9.2									
cuFuncSetSharedSize		9.2									
cuLaunch		9.2									
cuLaunchGrid		9.2									
cuLaunchGridAsync		9.2									
cuParamSetSize		9.2									
cuParamSetTexRef		9.2									
cuParamSetf		9.2									
cuParamSeti		9.2									
cuParamSetv		9.2									

10.2.24 24. Graph Management

CUDA	A	D	C	R	HIP
cuDeviceGetGraphMemAttribute	11.4				hipDeviceGetGraphMemAttribute
cuDeviceGraphMemTrim	11.4				hipDeviceGraphMemTrim
cuDeviceSetGraphMemAttribute	11.4				hipDeviceSetGraphMemAttribute
cuGraphAddBatchMemOpNode	11.7				hipGraphAddBatchMemOpNode
cuGraphAddChildGraphNode	10.0				hipGraphAddChildGraphNode
cuGraphAddDependencies	10.0		13.0		hipGraphAddDependencies
cuGraphAddDependencies_v2	12.3				
cuGraphAddEmptyNode	10.0				hipGraphAddEmptyNode
cuGraphAddEventRecordNode	11.1				hipGraphAddEventRecordNode
cuGraphAddEventWaitNode	11.1				hipGraphAddEventWaitNode
cuGraphAddExternalSemaphoresSignalNode	11.2				hipGraphAddExternalSemaphoresSigna
cuGraphAddExternalSemaphoresWaitNode	11.2				hipGraphAddExternalSemaphoresWait
cuGraphAddHostNode	10.0				hipGraphAddHostNode
cuGraphAddKernelNode	10.0				hipGraphAddKernelNode
cuGraphAddMemAllocNode	11.4				hipGraphAddMemAllocNode
cuGraphAddMemFreeNode	11.4				hipDrvGraphAddMemFreeNode
cuGraphAddMemcpyNode	10.0				hipDrvGraphAddMemcpyNode
cuGraphAddMemsetNode	10.0				hipDrvGraphAddMemsetNode
cuGraphAddNode	12.2		13.0		hipGraphAddNode
cuGraphAddNode_v2	12.3				
cuGraphBatchMemOpNodeGetParams	11.7				hipGraphBatchMemOpNodeGetParams
cuGraphBatchMemOpNodeSetParams	11.7				hipGraphBatchMemOpNodeSetParams

Table 9 – continued from previous page

CUDA	A	D	C	R	HIP
cuGraphChildGraphNodeGetGraph	10.0				hipGraphChildGraphNodeGetGraph
cuGraphClone	10.0				hipGraphClone
cuGraphConditionalHandleCreate	12.3				
cuGraphCreate	10.0				hipGraphCreate
cuGraphDebugDotPrint	11.3				hipGraphDebugDotPrint
cuGraphDestroy	10.0				hipGraphDestroy
cuGraphDestroyNode	10.0				hipGraphDestroyNode
cuGraphEventRecordNodeGetEvent	11.1				hipGraphEventRecordNodeGetEvent
cuGraphEventRecordNodeSetEvent	11.1				hipGraphEventRecordNodeSetEvent
cuGraphEventWaitNodeGetEvent	11.1				hipGraphEventWaitNodeGetEvent
cuGraphEventWaitNodeSetEvent	11.1				hipGraphEventWaitNodeSetEvent
cuGraphExecBatchMemOpNodeSetParams	11.7				hipGraphExecBatchMemOpNodeSetPara
cuGraphExecChildGraphNodeSetParams	11.1				hipGraphExecChildGraphNodeSetPara
cuGraphExecDestroy	10.0				hipGraphExecDestroy
cuGraphExecEventRecordNodeSetEvent	11.1				hipGraphExecEventRecordNodeSetEve
cuGraphExecEventWaitNodeSetEvent	11.1				hipGraphExecEventWaitNodeSetEvent
cuGraphExecExternalSemaphoresSignalNodeSetParams	11.2				hipGraphExecExternalSemaphoresSig
cuGraphExecExternalSemaphoresWaitNodeSetParams	11.2				hipGraphExecExternalSemaphoresWai
cuGraphExecGetFlags	12.0				hipGraphExecGetFlags
cuGraphExecGetId	13.1				
cuGraphExecHostNodeSetParams	10.2				hipGraphExecHostNodeSetParams
cuGraphExecKernelNodeSetParams	10.1				hipGraphExecKernelNodeSetParams
cuGraphExecMemcpyNodeSetParams	10.2				hipDrvGraphExecMemcpyNodeSetParam
cuGraphExecMemsetNodeSetParams	10.2				hipDrvGraphExecMemsetNodeSetParam
cuGraphExecNodeSetParams	12.2				hipGraphExecNodeSetParams
cuGraphExecUpdate	10.2				hipGraphExecUpdate
cuGraphExternalSemaphoresSignalNodeGetParams	11.2				hipGraphExternalSemaphoresSignalN
cuGraphExternalSemaphoresSignalNodeSetParams	11.2				hipGraphExternalSemaphoresSignalN
cuGraphExternalSemaphoresWaitNodeGetParams	11.2				hipGraphExternalSemaphoresWaitNod
cuGraphExternalSemaphoresWaitNodeSetParams	11.2				hipGraphExternalSemaphoresWaitNod
cuGraphGetEdges	10.0		13.0		hipGraphGetEdges
cuGraphGetEdges_v2	12.3				
cuGraphGetId	13.1				
cuGraphGetNodes	10.0				hipGraphGetNodes
cuGraphGetRootNodes	10.0				hipGraphGetRootNodes
cuGraphHostNodeGetParams	10.0				hipGraphHostNodeGetParams
cuGraphHostNodeSetParams	10.0				hipGraphHostNodeSetParams
cuGraphInstantiate	10.0				hipGraphInstantiate
cuGraphInstantiateWithFlags	11.4				hipGraphInstantiateWithFlags
cuGraphInstantiateWithParams	12.0				hipGraphInstantiateWithParams
cuGraphInstantiate_v2	11.0				hipGraphInstantiate
cuGraphKernelNodeCopyAttributes	11.0				hipGraphKernelNodeCopyAttributes
cuGraphKernelNodeGetAttribute	11.0				hipGraphKernelNodeGetAttribute
cuGraphKernelNodeGetParams	10.0				hipGraphKernelNodeGetParams
cuGraphKernelNodeSetAttribute	11.0				hipGraphKernelNodeSetAttribute
cuGraphKernelNodeSetParams	10.0				hipGraphKernelNodeSetParams
cuGraphLaunch	10.0				hipGraphLaunch
cuGraphMemAllocNodeGetParams	11.4				hipGraphMemAllocNodeGetParams
cuGraphMemFreeNodeGetParams	11.4				hipGraphMemFreeNodeGetParams
cuGraphMemcpyNodeGetParams	10.0				hipDrvGraphMemcpyNodeGetParams

Table 9 – continued from previous page

CUDA	A	D	C	R	HIP
cuGraphMemcpyNodeSetParams	10.0				hipDrvGraphMemcpyNodeSetParams
cuGraphMemsetNodeGetParams	10.0				hipGraphMemsetNodeGetParams
cuGraphMemsetNodeSetParams	10.0				hipGraphMemsetNodeSetParams
cuGraphNodeFindInClone	10.0				hipGraphNodeFindInClone
cuGraphNodeGetContainingGraph	13.1				
cuGraphNodeGetDependencies	10.0		13.0		hipGraphNodeGetDependencies
cuGraphNodeGetDependencies_v2	12.3				
cuGraphNodeGetDependentNodes	10.0		13.0		hipGraphNodeGetDependentNodes
cuGraphNodeGetDependentNodes_v2	12.3				
cuGraphNodeGetEnabled	11.6				hipGraphNodeGetEnabled
cuGraphNodeGetLocalId	13.1				
cuGraphNodeGetToolsId	13.1				
cuGraphNodeGetType	10.0				hipGraphNodeGetType
cuGraphNodeSetEnabled	11.6				hipGraphNodeSetEnabled
cuGraphNodeSetParams	12.2				hipGraphNodeSetParams
cuGraphReleaseUserObject	11.3				hipGraphReleaseUserObject
cuGraphRemoveDependencies	10.0		13.0		hipGraphRemoveDependencies
cuGraphRemoveDependencies_v2	12.3				
cuGraphRetainUserObject	11.3				hipGraphRetainUserObject
cuGraphUpload	11.1				hipGraphUpload
cuUserObjectCreate	11.3				hipUserObjectCreate
cuUserObjectRelease	11.3				hipUserObjectRelease
cuUserObjectRetain	11.3				hipUserObjectRetain

10.2.25 25. Occupancy

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuGraphNodeGetParams	13.2										
cuOccupancyAvailableDyı	11.0				hipOccupancyAvailableDynaı	7.2.0					
cuOccupancyMaxActiveBl(					hipModuleOccupancyMaxActi	3.5.0					)r
cuOccupancyMaxActiveBl(					hipModuleOccupancyMaxActi	3.5.0					rWithFlags
cuOccupancyMaxActiveClı	11.8										
cuOccupancyMaxPotentia.					hipModuleOccupancyMaxPotei	3.5.0					
cuOccupancyMaxPotentia.					hipModuleOccupancyMaxPotei	3.5.0					
cuOccupancyMaxPotentia.	11.8										

10.2.26 26. Texture Reference Management [DEPRECATED]

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuTexRefCreate		11.0									
cuTexRefDestroy		11.0									
cuTexRefGetAddress		11.0			hipTexRefGetAddress	3.0.0	4.3.0				
cuTexRefGetAddressMode		11.0			hipTexRefGetAddressMode	3.0.0	4.3.0				
cuTexRefGetAddress_v2		11.0			hipTexRefGetAddress	3.0.0	4.3.0				
cuTexRefGetArray		11.0			hipTexRefGetArray	3.0.0	6.1.0				
cuTexRefGetBorderColor	8.0	11.0			hipTexRefGetBorderColor	6.1.0	6.1.0				
cuTexRefGetFilterMode		11.0			hipTexRefGetFilterMode	3.5.0	4.3.0				
cuTexRefGetFlags		11.0			hipTexRefGetFlags	3.5.0	4.3.0				
cuTexRefGetFormat		11.0			hipTexRefGetFormat	3.5.0	4.3.0				
cuTexRefGetMaxAnisotropy		11.0			hipTexRefGetMaxAnisotropy	3.5.0	4.3.0				
cuTexRefGetMipmapFilterMode		11.0			hipTexRefGetMipmapFilterMode	3.5.0	4.3.0				
cuTexRefGetMipmapLevelBias		11.0			hipTexRefGetMipmapLevelBias	3.5.0	4.3.0				
cuTexRefGetMipmapLevelClamp		11.0			hipTexRefGetMipmapLevelClamp	3.5.0	4.3.0				
cuTexRefGetMipmappedArray		11.0			hipTexRefGetMipMappedArray	3.5.0	4.3.0				
cuTexRefSetAddress		11.0			hipTexRefSetAddress	1.7.0	4.3.0				
cuTexRefSetAddress2D		11.0			hipTexRefSetAddress2D	1.7.0	4.3.0				
cuTexRefSetAddress2D_v2					hipTexRefSetAddress2D	1.7.0	4.3.0				
cuTexRefSetAddress2D_v3					hipTexRefSetAddress2D	1.7.0	4.3.0				
cuTexRefSetAddressMode		11.0			hipTexRefSetAddressMode	1.9.0	5.3.0				
cuTexRefSetAddress_v2		11.0			hipTexRefSetAddress	1.7.0	4.3.0				
cuTexRefSetArray		11.0			hipTexRefSetArray	1.9.0	5.3.0				
cuTexRefSetBorderColor	8.0	11.0			hipTexRefSetBorderColor	3.5.0	4.3.0				
cuTexRefSetFilterMode		11.0			hipTexRefSetFilterMode	1.9.0	5.3.0				
cuTexRefSetFlags		11.0			hipTexRefSetFlags	1.9.0	5.3.0				
cuTexRefSetFormat		11.0			hipTexRefSetFormat	1.9.0	5.3.0				
cuTexRefSetMaxAnisotropy		11.0			hipTexRefSetMaxAnisotropy	3.5.0	4.3.0				
cuTexRefSetMipmapFilterMode		11.0			hipTexRefSetMipmapFilterMode	3.5.0	5.3.0				
cuTexRefSetMipmapLevelBias		11.0			hipTexRefSetMipmapLevelBias	3.5.0	5.3.0				
cuTexRefSetMipmapLevelClamp		11.0			hipTexRefSetMipmapLevelClamp	3.5.0	5.3.0				
cuTexRefSetMipmappedArray		11.0			hipTexRefSetMipmappedArray	3.5.0	5.3.0				

10.2.27 27. Surface Reference Management [DEPRECATED]

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuSurfRefGetArray		11.0									
cuSurfRefSetArray		11.0									

10.2.28 28. Texture Object Management

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuTexObjectCreate					hipTexObjectCreate	3.5.0					
cuTexObjectDestroy					hipTexObjectDestroy	3.5.0					
cuTexObjectGetResourceDe					hipTexObjectGetResourceDe	3.5.0					
cuTexObjectGetResourceVi					hipTexObjectGetResourceVi	3.5.0					
cuTexObjectGetTextureDes					hipTexObjectGetTextureDes	3.5.0					

10.2.29 29. Surface Object Management

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuSurfObjectCreate											
cuSurfObjectDestroy											
cuSurfObjectGetResourceDesc											

10.2.30 30. Tensor Map Object Managment

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuTensorMapEncodeIm2col	12.0										
cuTensorMapEncodeIm2colWide											
cuTensorMapEncodeTiled	12.0										
cuTensorMapReplaceAddress	12.0										

10.2.31 31. Peer Context Memory Access

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuCtxDisablePeerAccess					hipCtxDisablePeerAcc	1.6.0	1.9.0				
cuCtxEnablePeerAccess					hipCtxEnablePeerAcce	1.6.0	1.9.0				
cuDeviceCanAccessPeer					hipDeviceCanAccessPe	1.9.0					
cuDeviceGetP2PAtomicCapabi	13.0										
cuDeviceGetP2PAttribute	8.0				hipDeviceGetP2PAttri	3.8.0					

10.2.32 32. Graphics Interoperability

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuGraphicsMapResources					hipGraphicsMapResources	4.5.0					
cuGraphicsResourceGetMappe											
cuGraphicsResourceGetMappe					hipGraphicsResourceGetM	4.5.0					
cuGraphicsResourceGetMappe					hipGraphicsResourceGetM	4.5.0					
cuGraphicsResourceSetMapFl											
cuGraphicsResourceSetMapFl											
cuGraphicsSubResourceGetMa					hipGraphicsSubResourceG	5.1.0					
cuGraphicsUnmapResources					hipGraphicsUnmapResourc	4.5.0					
cuGraphicsUnregisterResour					hipGraphicsUnregisterRe	4.5.0					

10.2.33 33. Driver Entry Point Access

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuGetProcAddre	11.3		12.0		hipGetProcAddre	6.2.0				11.3 11.4 11.5 11.6 11.7 11.8	

10.2.34 34. Coredump Attributes Control API

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
CUcoredumpStatusCallback	13.2										
cuCoredumpDeregisterCompleteCallback	13.2										
cuCoredumpDeregisterStartCallback	13.2										
cuCoredumpGetAttribute	12.1										
cuCoredumpGetAttributeGlobal	12.1										
cuCoredumpRegisterCompleteCallback	13.2										
cuCoredumpRegisterStartCallback	13.2										
cuCoredumpSetAttribute	12.1										
cuCoredumpSetAttributeGlobal	12.1										

10.2.35 35. Green Contexts

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuCtxFromGreenCtx	12.4										
cuCtxGetDevResource	12.4										
cuDevResourceGenerateDesc	12.4										
cuDevSmResourceSplit	13.1										
cuDevSmResourceSplitByCount	12.4										
cuDeviceGetDevResource	12.4										
cuGreenCtxCreate	12.4										
cuGreenCtxDestroy	12.4										
cuGreenCtxGetDevResource	12.4										
cuGreenCtxGetId	13.0										
cuGreenCtxRecordEvent	12.4										
cuGreenCtxStreamCreate	12.5										
cuGreenCtxWaitEvent	12.4										
cuStreamGetDevResource	13.1										
cuStreamGetGreenCtx	12.4										

10.2.36 36. Error Log Management

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuLogsCurrent	12.9										
cuLogsDumpToFile	12.9										
cuLogsDumpToMemory	12.9										
cuLogsRegisterCallback	12.9										
cuLogsUnregisterCallback	12.9										

10.2.37 37. Checkpointing

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuCheckpointProcessCheckpoint	12.8										
cuCheckpointProcessGetRestoreThreadId	12.8										
cuCheckpointProcessGetState	12.8										
cuCheckpointProcessLock	12.8										
cuCheckpointProcessRestore	12.8										
cuCheckpointProcessUnlock	12.8										

10.2.38 38. Profiler Control [DEPRECATED]

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuProfilerInitialize		11.0									

10.2.39 39. Profiler Control

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuProfilerStart					hipProfilerStart	1.6.0	3.0.0				
cuProfilerStop					hipProfilerStop	1.6.0	3.0.0				

10.2.40 40. OpenGL Interoperability

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuGLCtxCreate		9.2									
cuGLGetDevices					hipGLGetDevices	4.5.0					
cuGLInit		9.2									
cuGLMapBufferObject		9.2									
cuGLMapBufferObjectAsync		9.2									
cuGLRegisterBufferObject		9.2									
cuGLSetBufferObjectMapFl		9.2									
cuGLUnmapBufferObject		9.2									
cuGLUnmapBufferObjectAsy		9.2									
cuGLUnregisterBufferObje		9.2									
cuGraphicsGLRegisterBuff					hipGraphicsGLRegisterBuf	4.5.0					
cuGraphicsGLRegisterImag					hipGraphicsGLRegisterIma	5.1.0					
cuWGLGetDevice											

10.2.41 41. Direct3D 9 Interoperability

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuD3D9CtxCreate											
cuD3D9CtxCreateOnDevice											
cuD3D9GetDevice											
cuD3D9GetDevices											
cuD3D9GetDirect3DDevice											
cuD3D9MapResources		9.2									
cuD3D9RegisterResource		9.2									
cuD3D9ResourceGetMappedArray		9.2									
cuD3D9ResourceGetMappedPitch		9.2									
cuD3D9ResourceGetMappedPointer		9.2									
cuD3D9ResourceGetMappedSize		9.2									
cuD3D9ResourceGetSurfaceDimensions		9.2									
cuD3D9ResourceSetMapFlags		9.2									
cuD3D9UnmapResources		9.2									
cuD3D9UnregisterResource		9.2									
cuGraphicsD3D9RegisterResource											

10.2.42 42. Direct3D 10 Interoperability

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuD3D10CtxCreate		9.2									
cuD3D10CtxCreateOnDevice		9.2									
cuD3D10GetDevice											
cuD3D10GetDevices											
cuD3D10GetDirect3DDevice		9.2									
cuD3D10MapResources		9.2									
cuD3D10RegisterResource		9.2									
cuD3D10ResourceGetMappedArray		9.2									
cuD3D10ResourceGetMappedPitch		9.2									
cuD3D10ResourceGetMappedPointer		9.2									
cuD3D10ResourceGetMappedSize		9.2									
cuD3D10ResourceGetSurfaceDimensions		9.2									
cuD3D10ResourceSetMapFlags		9.2									
cuD3D10UnmapResources		9.2									
cuD3D10UnregisterResource		9.2									
cuGraphicsD3D10RegisterResource											

10.2.43 43. Direct3D 11 Interoperability

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuD3D11CtxCreate		9.2									
cuD3D11CtxCreateOnDevice		9.2									
cuD3D11GetDevice											
cuD3D11GetDevices											
cuD3D11GetDirect3DDevice		9.2									
cuGraphicsD3D11RegisterResource											

10.2.44 44. VDPAU Interoperability

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuGraphicsVDPAURegisterOutputSurface											
cuGraphicsVDPAURegisterVideoSurface											
cuVDPAUCtxCreate											
cuVDPAUGetDevice											

10.2.45 45. EGL Interoperability

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuEGLStreamConsumerAcquireFrame	9.1										
cuEGLStreamConsumerConnect	9.1										
cuEGLStreamConsumerConnectWithFlags	9.1										
cuEGLStreamConsumerDisconnect	9.1										
cuEGLStreamConsumerReleaseFrame	9.1										
cuEGLStreamProducerConnect	9.1										
cuEGLStreamProducerDisconnect	9.1										
cuEGLStreamProducerPresentFrame	9.1										
cuEGLStreamProducerReturnFrame	9.1										
cuEventCreateFromEGLSync	9.1										
cuGraphicsEGLRegisterImage	9.1										
cuGraphicsResourceGetMappedEglFrame	9.1										

10.3 CUCOMPLEX API supported by HIP

Note: In the tables that follow the columns marked A, D, C, R, U, and E mean the following: **A** - Added; **D** - Deprecated; **C** - Changed; **R** - Removed; **U** - Unsupported for CUDA version(s); **E** - Experimental

10.3.1 1. cuComplex Data types

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuComplex					hipComplex	1.6.0					
cuDoubleComplex					hipDoubleComplex	1.6.0					
cuFloatComplex					hipFloatComplex	1.6.0					

10.3.2 2. cuComplex API functions

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cuCabs					hipCabs	1.6.0					
cuCabsf					hipCabsf	1.6.0					
cuCadd					hipCadd	1.6.0					
cuCaddf					hipCaddf	1.6.0					
cuCdiv					hipCdiv	1.6.0					
cuCdivf					hipCdivf	1.6.0					
cuCfma					hipCfma	1.6.0					
cuCfmaf					hipCfmaf	1.6.0					
cuCimag					hipCimag	1.6.0					
cuCimagf					hipCimagf	1.6.0					
cuCmul					hipCmul	1.6.0					
cuCmulf					hipCmulf	1.6.0					
cuComplexDoubleToFloat					hipComplexDoubleToFloat	1.6.0					
cuComplexFloatToDouble					hipComplexFloatToDouble	1.6.0					
cuConj					hipConj	1.6.0					
cuConjf					hipConjf	1.6.0					
cuCreal					hipCreal	1.6.0					
cuCrealf					hipCrealf	1.6.0					
cuCsub					hipCsub	1.6.0					
cuCsubf					hipCsubf	1.6.0					
make_cuComplex					make_hipComplex	1.6.0					
make_cuDoubleComplex					make_hipDoubleComplex	1.6.0					
make_cuFloatComplex					make_hipFloatComplex	1.6.0					

10.4 CUDA DEVICE API supported by HIP

Note: In the tables that follow the columns marked A, D, C, R, U, and E mean the following: **A** - Added; **D** - Deprecated; **C** - Changed; **R** - Removed; **U** - Unsupported for CUDA version(s); **E** - Experimental

10.4.1 1. Device Functions

CUDA	A	D	C	R	HIP	A	D	C	R
_Pow_int									
__activemask	9.0				__activemask	6.2.0			
__all					__all	1.6.0			
__all_sync	9.0				__all_sync	6.2.0			
__any					__any	1.6.0			
__any_sync	9.0				__any_sync	6.2.0			
__assert_fail					__assert_fail	1.9.0			
__assertfail					__assertfail	1.9.0			
__ballot					__ballot	1.6.0			
__ballot_sync	9.0				__ballot_sync	6.2.0			
__bfloat1622float2	11.0				__bfloat1622float2	5.7.0			
__bfloat162bfloat162	11.0		12.2		__bfloat162bfloat162	5.7.0			
__bfloat162char_rz	12.2								
__bfloat162float	11.0				__bfloat162float	5.7.0			
__bfloat162int_rd	11.0								
__bfloat162int_rn	11.0								
__bfloat162int_ru	11.0								
__bfloat162int_rz	11.0								
__bfloat162ll_rd	11.0								
__bfloat162ll_rn	11.0								
__bfloat162ll_ru	11.0								
__bfloat162ll_rz	11.0								
__bfloat162short_rd	11.0								
__bfloat162short_rn	11.0								
__bfloat162short_ru	11.0								
__bfloat162short_rz	11.0								
__bfloat162uchar_rz	12.2								
__bfloat162uint_rd	11.0								
__bfloat162uint_rn	11.0								
__bfloat162uint_ru	11.0								
__bfloat162uint_rz	11.0								
__bfloat162ull_rd	11.0								
__bfloat162ull_rn	11.0								
__bfloat162ull_ru	11.0								
__bfloat162ull_rz	11.0								
__bfloat162ushort_rd	11.0								
__bfloat162ushort_rn	11.0								
__bfloat162ushort_ru	11.0								
__bfloat162ushort_rz	11.0								
__bfloat16_as_short	11.0		12.2		__bfloat16_as_short	5.7.0			
__bfloat16_as_ushort	11.0		12.2		__bfloat16_as_ushort	5.7.0			
__brev					__brev	1.6.0			

continues on ne

Table 11 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
__brevll					__brevll	1.6.0			
__brkpt									
__byte_perm					__byte_perm	1.6.0			
__clz					__clz	1.6.0			
__clzll					__clzll	1.6.0			
__cosf					__cosf	1.6.0			
__dadd_rd									
__dadd_rn					__dadd_rn	1.6.0			
__dadd_ru									
__dadd_rz									
__ddiv_rd									
__ddiv_rn					__ddiv_rn	1.6.0			
__ddiv_ru									
__ddiv_rz									
__dmul_rd									
__dmul_rn					__dmul_rn	1.6.0			
__dmul_ru									
__dmul_rz									
__double2bfloat16	11.0				__double2bfloat16	5.7.0			
__double2float_rd					__double2float_rd	1.6.0			
__double2float_rn					__double2float_rn	1.6.0			
__double2float_ru					__double2float_ru	1.6.0			
__double2float_rz					__double2float_rz	1.6.0			
__double2half	11.0								
__double2hiint					__double2hiint	1.6.0			
__double2int_rd					__double2int_rd	1.6.0			
__double2int_rn					__double2int_rn	1.6.0			
__double2int_ru					__double2int_ru	1.6.0			
__double2int_rz					__double2int_rz	1.6.0			
__double2ll_rd					__double2ll_rd	1.6.0			
__double2ll_rn					__double2ll_rn	1.6.0			
__double2ll_ru					__double2ll_ru	1.6.0			
__double2ll_rz					__double2ll_rz	1.6.0			
__double2loint					__double2loint	1.6.0			
__double2uint_rd					__double2uint_rd	1.6.0			
__double2uint_rn					__double2uint_rn	1.6.0			
__double2uint_ru					__double2uint_ru	1.6.0			
__double2uint_rz					__double2uint_rz	1.6.0			
__double2ull_rd					__double2ull_rd	1.6.0			
__double2ull_rn					__double2ull_rn	1.6.0			
__double2ull_ru					__double2ull_ru	1.6.0			
__double2ull_rz					__double2ull_rz	1.6.0			
__double_as_longlong					__double_as_longlong	1.6.0			
__drcp_rd									
__drcp_rn					__drcp_rn	1.6.0			
__drcp_ru									
__drcp_rz									
__dsqrt_rd									
__dsqrt_rn					__dsqrt_rn	1.6.0			
__dsqrt_ru									

continues on n

Table 11 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
__dsqrt_rz									
__dsub_rd									
__dsub_rn					__dsub_rn	1.6.0			
__dsub_ru									
__dsub_rz									
__exp10f					__exp10f	1.6.0			
__expf					__expf	1.6.0			
__fadd_rd									
__fadd_rn					__fadd_rn	1.6.0			
__fadd_ru									
__fadd_rz									
__fdiv_rd									
__fdiv_rn					__fdiv_rn	1.6.0			
__fdiv_ru									
__fdiv_rz									
__fdividef					__fdividef	1.6.0			
__ffs					__ffs	1.6.0			
__ffsll					__ffsll	1.6.0			
__finite									
__finitef									
__finitel									
__float22bfloat162_rn	11.0				__float22bfloat162_rn	5.7.0			
__float22half2_rn					__float22half2_rn	1.6.0			
__float2bfloat16	11.0				__float2bfloat16	5.7.0			
__float2bfloat162_rn	11.0								
__float2bfloat16_rd	11.0								
__float2bfloat16_rn	11.0								
__float2bfloat16_ru	11.0								
__float2bfloat16_rz	11.0								
__float2half					__float2half	1.6.0			
__float2half2_rn					__float2half2_rn	1.6.0			
__float2half_rd					__float2half_rd	1.6.0			
__float2half_rn					__float2half_rn	1.6.0			
__float2half_ru					__float2half_ru	1.6.0			
__float2half_rz					__float2half_rz	1.6.0			
__float2int_rd					__float2int_rd	1.6.0			
__float2int_rn					__float2int_rn	1.6.0			
__float2int_ru					__float2int_ru	1.6.0			
__float2int_rz					__float2int_rz	1.6.0			
__float2ll_rd					__float2ll_rd	1.6.0			
__float2ll_rn					__float2ll_rn	1.6.0			
__float2ll_ru					__float2ll_ru	1.6.0			
__float2ll_rz					__float2ll_rz	1.6.0			
__float2uint_rd					__float2uint_rd	1.6.0			
__float2uint_rn					__float2uint_rn	1.6.0			
__float2uint_ru					__float2uint_ru	1.6.0			
__float2uint_rz					__float2uint_rz	1.6.0			
__float2ull_rd					__float2ull_rd	1.6.0			
__float2ull_rn					__float2ull_rn	1.6.0			
__float2ull_ru					__float2ull_ru	1.6.0			

continues on n

Table 11 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
__float2ull_rz					__float2ull_rz	1.6.0			
__float_as_int					__float_as_int	1.6.0			
__float_as_uint					__float_as_uint	1.6.0			
__floats2bfloat162_rn	11.0								
__floats2half2_rn					__floats2half2_rn	1.6.0			
__fma_rd									
__fma_rn					__fma_rn	1.6.0			
__fma_ru									
__fma_rz									
__fmaf_rd									
__fmaf_rn					__fmaf_rn	1.6.0			
__fmaf_ru									
__fmaf_rz									
__fmul_rd									
__fmul_rn					__fmul_rn	1.6.0			
__fmul_ru									
__fmul_rz									
__frcp_rd									
__frcp_rn					__frcp_rn	1.6.0			
__frcp_ru									
__frcp_rz									
__frsqrt_rn					__frsqrt_rn	1.6.0			
__fsqrt_rd									
__fsqrt_rn					__fsqrt_rn	1.6.0			
__fsqrt_ru									
__fsqrt_rz									
__fsub_rd									
__fsub_rn					__fsub_rn	1.6.0			
__fsub_ru									
__fsub_rz									
__funnelshift_l					__funnelshift_l	4.4.0			
__funnelshift_lc					__funnelshift_lc	4.4.0			
__funnelshift_r					__funnelshift_r	4.4.0			
__funnelshift_rc					__funnelshift_rc	4.4.0			
__h2div					__h2div	1.9.0			
__habs					__habs	3.5.0			
__habs2					__habs2	3.5.0			
__hadd					__hadd	1.6.0			
__hadd2					__hadd2	1.6.0			
__hadd2_rn	11.6				__hadd2_rn	7.1.0			
__hadd2_sat					__hadd2_sat	1.6.0			
__hadd_rn	11.6				__hadd_rn	7.1.0			
__hadd_sat					__hadd_sat	1.6.0			
__half22float2					__half22float2	1.6.0			
__half2char_rz	12.2								
__half2float					__half2float	1.6.0			
__half2half2					__half2half2	1.9.0			
__half2int_rd					__half2int_rd	1.6.0			
__half2int_rn					__half2int_rn	1.6.0			
__half2int_ru					__half2int_ru	1.6.0			

continues on n

Table 11 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
__half2int_rz					__half2int_rz	1.6.0			
__half2ll_rd					__half2ll_rd	1.6.0			
__half2ll_rn					__half2ll_rn	1.6.0			
__half2ll_ru					__half2ll_ru	1.6.0			
__half2ll_rz					__half2ll_rz	1.6.0			
__half2short_rd					__half2short_rd	1.6.0			
__half2short_rn					__half2short_rn	1.6.0			
__half2short_ru					__half2short_ru	1.6.0			
__half2short_rz					__half2short_rz	1.6.0			
__half2uchar_rz	12.2								
__half2uint_rd					__half2uint_rd	1.6.0			
__half2uint_rn					__half2uint_rn	1.6.0			
__half2uint_ru					__half2uint_ru	1.6.0			
__half2uint_rz					__half2uint_rz	1.6.0			
__half2ull_rd					__half2ull_rd	1.6.0			
__half2ull_rn					__half2ull_rn	1.6.0			
__half2ull_ru					__half2ull_ru	1.6.0			
__half2ull_rz					__half2ull_rz	1.6.0			
__half2ushort_rd					__half2ushort_rd	1.6.0			
__half2ushort_rn					__half2ushort_rn	1.6.0			
__half2ushort_ru					__half2ushort_ru	1.6.0			
__half2ushort_rz					__half2ushort_rz	1.6.0			
__half_as_short					__half_as_short	1.6.0			
__half_as_ushort					__half_as_ushort	1.6.0			
__halves2bfloat162	11.0		12.2		__halves2bfloat162	5.7.0			
__halves2half2					__halves2half2	1.6.0			
__hbeq2					__hbeq2	1.6.0			
__hbequ2					__hbequ2	1.9.0			
__hbge2					__hbge2	1.6.0			
__hbgeu2					__hbgeu2	1.9.0			
__hbgt2					__hbgt2	1.6.0			
__hbgtu2					__hbgtu2	1.9.0			
__hble2					__hble2	1.6.0			
__hbleu2					__hbleu2	1.9.0			
__hblt2					__hblt2	1.6.0			
__hbltu2					__hbltu2	1.9.0			
__hbne2					__hbne2	1.6.0			
__hbneu2					__hbneu2	1.9.0			
__hcmadd	11.1								
__hdiv					__hdiv	1.9.0			
__heq					__heq	1.6.0			
__heq2					__heq2	1.6.0			
__heq2_mask	12.0								
__hequ					__hequ	1.9.0			
__hequ2					__hequ2	1.9.0			
__hequ2_mask	12.0								
__hfma					__hfma	1.6.0			
__hfma2					__hfma2	1.6.0			
__hfma2_relu	11.0								
__hfma2_sat					__hfma2_sat	1.6.0			

continues on n

Table 11 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
__hfma_relu	11.0								
__hfma_sat					__hfma_sat	1.6.0			
__hge					__hge	1.6.0			
__hge2					__hge2	1.6.0			
__hge2_mask	12.0								
__hgeu					__hgeu	1.9.0			
__hgeu2					__hgeu2	1.9.0			
__hgeu2_mask	12.0								
__hgt					__hgt	1.6.0			
__hgt2					__hgt2	1.6.0			
__hgt2_mask	12.0								
__hgtu					__hgtu	1.9.0			
__hgtu2					__hgtu2	1.9.0			
__hgtu2_mask	12.0								
__high2bfloat16	11.0		12.2		__high2bfloat16	5.7.0			
__high2bfloat162	11.0		12.2		__high2bfloat162	5.7.0			
__high2float					__high2float	1.6.0			
__high2half					__high2half	1.6.0			
__high2half2					__high2half2	1.6.0			
__highs2bfloat162	11.0		12.2		__highs2bfloat162	5.7.0			
__highs2half2					__highs2half2	1.6.0			
__hiloint2double					__hiloint2double	1.6.0			
__hisinf					__hisinf	1.6.0			
__hisnan					__hisnan	1.6.0			
__hisnan2					__hisnan2	1.6.0			
__hle					__hle	1.6.0			
__hle2					__hle2	1.6.0			
__hle2_mask	12.0								
__hleu					__hleu	1.9.0			
__hleu2					__hleu2	1.9.0			
__hleu2_mask	12.0								
__hlt					__hlt	1.6.0			
__hlt2					__hlt2	1.6.0			
__hlt2_mask	12.0								
__hltu					__hltu	1.9.0			
__hltu2					__hltu2	1.9.0			
__hltu2_mask	12.0								
__hmax	11.0				__hmax	5.5.0			
__hmax2	11.0		12.2		__hmax2	5.7.0			
__hmax2_nan	11.0								
__hmax_nan	11.0				__hmax_nan	5.5.0			
__hmin	11.0				__hmin	5.5.0			
__hmin2	11.0		12.2		__hmin2	5.7.0			
__hmin2_nan	11.0								
__hmin_nan	11.0				__hmin_nan	5.5.0			
__hmul					__hmul	1.6.0			
__hmul2					__hmul2	1.6.0			
__hmul2_rn	11.6				__hmul2_rn	7.1.0			
__hmul2_sat					__hmul2_sat	1.6.0			
__hmul_rn	11.6				__hmul_rn	7.1.0			

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Table 11 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
__hmul_sat					__hmul_sat	1.6.0			
__hne					__hne	1.6.0			
__hne2					__hne2	1.6.0			
__hne2_mask	12.0								
__hneg					__hneg	1.6.0			
__hneg2					__hneg2	1.6.0			
__hneu					__hneu	1.9.0			
__hneu2					__hneu2	1.9.0			
__hneu2_mask	12.0								
__hsub					__hsub	1.6.0			
__hsub2					__hsub2	1.6.0			
__hsub2_rn	11.6				__hsub2_rn	7.1.0			
__hsub2_sat					__hsub2_sat	1.6.0			
__hsub_rn	11.6				__hsub_rn	7.1.0			
__hsub_sat					__hsub_sat	1.6.0			
__int2bfloat16_rd	11.0								
__int2bfloat16_rn	11.0				__int2bfloat16_rn	7.0.0			
__int2bfloat16_ru	11.0								
__int2bfloat16_rz	11.0								
__int2double_rn					__int2double_rn	1.6.0			
__int2float_rd					__int2float_rd	1.6.0			
__int2float_rn					__int2float_rn	1.6.0			
__int2float_ru					__int2float_ru	1.6.0			
__int2float_rz					__int2float_rz	1.6.0			
__int2half_rd					__int2half_rd	1.6.0			
__int2half_rn					__int2half_rn	1.6.0			
__int2half_ru					__int2half_ru	1.6.0			
__int2half_rz					__int2half_rz	1.6.0			
__int_as_float					__int_as_float	1.6.0			
__isinf									
__isinff									
__isinfl									
__isnan									
__isnanf									
__isnanl									
__ldca					__ldca	1.9.0			
__ldcg					__ldcg	1.9.0			
__ldcs					__ldcs	1.9.0			
__ldcv	11.0								
__ldg					__ldg	1.6.0			
__ldlu	11.0								
__ll2bfloat16_rd	11.0								
__ll2bfloat16_rn	11.0								
__ll2bfloat16_ru	11.0								
__ll2bfloat16_rz	11.0								
__ll2double_rd					__ll2double_rd	1.6.0			
__ll2double_rn					__ll2double_rn	1.6.0			
__ll2double_ru					__ll2double_ru	1.6.0			
__ll2double_rz					__ll2double_rz	1.6.0			
__ll2float_rd					__ll2float_rd	1.6.0			

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Table 11 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
__ll2float_rn					__ll2float_rn	1.6.0			
__ll2float_ru					__ll2float_ru	1.6.0			
__ll2float_rz					__ll2float_rz	1.6.0			
__ll2half_rd					__ll2half_rd	1.6.0			
__ll2half_rn					__ll2half_rn	1.6.0			
__ll2half_ru					__ll2half_ru	1.6.0			
__ll2half_rz					__ll2half_rz	1.6.0			
__log10f					__log10f	1.6.0			
__log2f					__log2f	1.6.0			
__logf					__logf	1.6.0			
__longlong_as_double					__longlong_as_double	1.6.0			
__low2bfloat16	11.0		12.2		__low2bfloat16	5.7.0			
__low2bfloat162	11.0		12.2		__low2bfloat162	5.7.0			
__low2float					__low2float	1.6.0			
__low2half					__low2half	1.6.0			
__low2half2					__low2half2	1.6.0			
__lowhigh2highlow					__lowhigh2highlow	1.6.0			
__lows2bfloat162	11.0		12.2		__lows2bfloat162	5.7.0			
__lows2half2					__lows2half2	1.6.0			
__match_all_sync	9.0				__match_all_sync	6.2.0			
__match_any_sync	9.0				__match_any_sync	6.2.0			
__mul24					__mul24	1.6.0			
__mul64hi					__mul64hi	1.6.0			
__mulhi					__mulhi	1.6.0			
__nv_bswap16	12.8								
__nv_bswap32	12.8								
__nv_bswap64	12.8								
__nv_cvt_bfloat162raw_to_e8m0x2	12.8								
__nv_cvt_bfloat16raw2_to_fp4x2	12.8				__hip_cvt_bfloat16raw2_to_fp4x2	7.0.0			
__nv_cvt_bfloat16raw2_to_fp6x2	12.8				__hip_cvt_bfloat16raw2_to_fp6x2	7.0.0			
__nv_cvt_bfloat16raw2_to_fp8x2	11.8				__hip_cvt_bfloat16raw2_to_fp8x2	6.2.0			
__nv_cvt_bfloat16raw_to_e8m0	12.8								
__nv_cvt_bfloat16raw_to_fp4	12.8				__hip_cvt_bfloat16raw_to_fp4	7.0.0			
__nv_cvt_bfloat16raw_to_fp6	12.8				__hip_cvt_bfloat16raw_to_fp6	7.0.0			
__nv_cvt_bfloat16raw_to_fp8	11.8				__hip_cvt_bfloat16raw_to_fp8	6.2.0			
__nv_cvt_double2_to_e8m0x2	12.8								
__nv_cvt_double2_to_fp4x2	12.8				__hip_cvt_double2_to_fp4x2	7.0.0			
__nv_cvt_double2_to_fp6x2	12.8				__hip_cvt_double2_to_fp6x2	7.0.0			
__nv_cvt_double2_to_fp8x2	11.8				__hip_cvt_double2_to_fp8x2	6.2.0			
__nv_cvt_double_to_e8m0	12.8								
__nv_cvt_double_to_fp4	12.8				__hip_cvt_double_to_fp4	7.0.0			
__nv_cvt_double_to_fp6	12.8				__hip_cvt_double_to_fp6	7.0.0			
__nv_cvt_double_to_fp8	11.8				__hip_cvt_double_to_fp8	6.2.0			
__nv_cvt_e8m0_to_bf16raw	12.8								
__nv_cvt_e8m0x2_to_bf162raw	12.8								
__nv_cvt_float2_to_e8m0x2	12.8								
__nv_cvt_float2_to_fp4x2	12.8				__hip_cvt_float2_to_fp4x2	7.0.0			
__nv_cvt_float2_to_fp6x2	12.8				__hip_cvt_float2_to_fp6x2	7.0.0			
__nv_cvt_float2_to_fp8x2	11.8				__hip_cvt_float2_to_fp8x2	6.2.0			
__nv_cvt_float_to_e8m0	12.8								

continues on n

Table 11 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
__nv_cvt_float_to_fp4	12.8				__hip_cvt_float_to_fp4	7.0.0			
__nv_cvt_float_to_fp6	12.8				__hip_cvt_float_to_fp6	7.0.0			
__nv_cvt_float_to_fp8	11.8				__hip_cvt_float_to_fp8	6.2.0			
__nv_cvt_fp4_to_halfraw	12.8				__hip_cvt_fp4_to_halfraw	7.0.0			
__nv_cvt_fp4x2_to_halfraw2	12.8				__hip_cvt_fp4x2_to_halfraw2	7.0.0			
__nv_cvt_fp6_to_halfraw	12.8				__hip_cvt_fp6_to_halfraw	7.0.0			
__nv_cvt_fp6x2_to_halfraw2	12.8				__hip_cvt_fp6x2_to_halfraw2	7.0.0			
__nv_cvt_fp8_to_halfraw	11.8				__hip_cvt_fp8_to_halfraw	6.2.0			
__nv_cvt_fp8x2_to_halfraw2	11.8				__hip_cvt_fp8x2_to_halfraw2	6.2.0			
__nv_cvt_halfraw2_to_fp4x2	12.8				__hip_cvt_halfraw2_to_fp4x2	7.0.0			
__nv_cvt_halfraw2_to_fp6x2	12.8				__hip_cvt_halfraw2_to_fp6x2	7.0.0			
__nv_cvt_halfraw2_to_fp8x2	11.8				__hip_cvt_halfraw2_to_fp8x2	6.2.0			
__nv_cvt_halfraw_to_fp4	12.8				__hip_cvt_halfraw_to_fp4	7.0.0			
__nv_cvt_halfraw_to_fp6	12.8				__hip_cvt_halfraw_to_fp6	7.0.0			
__nv_cvt_halfraw_to_fp8	11.8				__hip_cvt_halfraw_to_fp8	6.2.0			
__nv_fp128_acos	12.8								
__nv_fp128_acosh	12.8								
__nv_fp128_add	12.8								
__nv_fp128_asin	12.8								
__nv_fp128_asinh	12.8								
__nv_fp128_atan	12.8								
__nv_fp128_atanh	12.8								
__nv_fp128_ceil	12.8								
__nv_fp128_copysign	12.8								
__nv_fp128_cos	12.8								
__nv_fp128_cosh	12.8								
__nv_fp128_div	12.8								
__nv_fp128_exp	12.8								
__nv_fp128_exp10	12.8								
__nv_fp128_exp2	12.8								
__nv_fp128_expm1	12.8								
__nv_fp128_fabs	12.8								
__nv_fp128_fdim	12.8								
__nv_fp128_floor	12.8								
__nv_fp128_fma	12.8								
__nv_fp128_fmax	12.8								
__nv_fp128_fmin	12.8								
__nv_fp128_fmod	12.8								
__nv_fp128_frexp	12.8								
__nv_fp128_hypot	12.8								
__nv_fp128_ilogb	12.8								
__nv_fp128_isnan	12.8								
__nv_fp128_isunordered	12.8								
__nv_fp128_ldexp	12.8								
__nv_fp128_log	12.8								
__nv_fp128_log10	12.8								
__nv_fp128_log1p	12.8								
__nv_fp128_log2	12.8								
__nv_fp128_modf	12.8								
__nv_fp128_mul	12.8								

continues on n

Table 11 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
__nv_fp128_pow	12.8								
__nv_fp128_remainder	12.8								
__nv_fp128_rint	12.8								
__nv_fp128_round	12.8								
__nv_fp128_sin	12.8								
__nv_fp128_sinh	12.8								
__nv_fp128_sqrt	12.8								
__nv_fp128_sub	12.8								
__nv_fp128_tan	12.8								
__nv_fp128_tanh	12.8								
__nv_fp128_trunc	12.8								
__pm0									
__pm1									
__pm2									
__pm3									
__popc					__popc	1.6.0			
__popcll					__popcll	1.6.0			
__powf					__powf	1.6.0			
__prof_trigger									
__reduce_add_sync	11.0				__reduce_add_sync	7.0.0			
__reduce_max_sync	11.0				__reduce_max_sync	7.0.0			
__reduce_min_sync	11.0				__reduce_min_sync	7.0.0			
__rhadd					__rhadd	1.6.0			
__sad					__sad	1.6.0			
__saturatef					__saturatef	1.6.0			
__shfl	7.5	9.0			__shfl	1.6.0			
__shfl_down	7.5	9.0			__shfl_down	1.6.0			
__shfl_down_sync	9.0				__shfl_down_sync	6.2.0			
__shfl_sync	9.0				__shfl_sync	6.2.0			
__shfl_up	7.5	9.0			__shfl_up	1.6.0			
__shfl_up_sync	9.0				__shfl_up_sync	6.2.0			
__shfl_xor	7.5	9.0			__shfl_xor	1.6.0			
__shfl_xor_sync	9.0				__shfl_xor_sync	6.2.0			
__short2bfloat16_rd	11.0								
__short2bfloat16_rn	11.0								
__short2bfloat16_ru	11.0								
__short2bfloat16_rz	11.0								
__short2half_rd					__short2half_rd	1.6.0			
__short2half_rn					__short2half_rn	1.6.0			
__short2half_ru					__short2half_ru	1.6.0			
__short2half_rz					__short2half_rz	1.6.0			
__short_as_bfloat16	11.0		12.2		__short_as_bfloat16	5.7.0			
__short_as_half					__short_as_half	1.9.0			
__signbit									
__signbitf									
__signbitl									
__sincosf					__sincosf	1.6.0			
__sinf					__sinf	1.6.0			
__stcg	11.0								
__stcs	11.0								

continues on n

Table 11 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
__stwb	11.0								
__stwt	11.0								
__syncthreads					__syncthreads	1.6.0			
__syncthreads_and					__syncthreads_and	3.7.0			
__syncthreads_count					__syncthreads_count	3.7.0			
__syncthreads_or					__syncthreads_or	3.7.0			
__tanf					__tanf	1.6.0			
__threadfence					__threadfence	1.6.0			
__threadfence_block					__threadfence_block	1.6.0			
__threadfence_system					__threadfence_system	1.6.0			
__trap									
__uhadd					__uhadd	1.6.0			
__uint2bfloat16_rd	11.0								
__uint2bfloat16_rn	11.0								
__uint2bfloat16_ru	11.0								
__uint2bfloat16_rz	11.0								
__uint2double_rn					__uint2double_rn	1.6.0			
__uint2float_rd					__uint2float_rd	1.6.0			
__uint2float_rn					__uint2float_rn	1.6.0			
__uint2float_ru					__uint2float_ru	1.6.0			
__uint2float_rz					__uint2float_rz	1.6.0			
__uint2half_rd					__uint2half_rd	1.6.0			
__uint2half_rn					__uint2half_rn	1.6.0			
__uint2half_ru					__uint2half_ru	1.6.0			
__uint2half_rz					__uint2half_rz	1.6.0			
__uint_as_float					__uint_as_float	1.6.0			
__ull2bfloat16_rd	11.0								
__ull2bfloat16_rn	11.0								
__ull2bfloat16_ru	11.0								
__ull2bfloat16_rz	11.0								
__ull2double_rd					__ull2double_rd	1.6.0			
__ull2double_rn					__ull2double_rn	1.6.0			
__ull2double_ru					__ull2double_ru	1.6.0			
__ull2double_rz					__ull2double_rz	1.6.0			
__ull2float_rd					__ull2float_rd	1.6.0			
__ull2float_rn					__ull2float_rn	1.6.0			
__ull2float_ru					__ull2float_ru	1.6.0			
__ull2float_rz					__ull2float_rz	1.6.0			
__ull2half_rd					__ull2half_rd	1.6.0			
__ull2half_rn					__ull2half_rn	1.6.0			
__ull2half_ru					__ull2half_ru	1.6.0			
__ull2half_rz					__ull2half_rz	1.6.0			
__umul24					__umul24	1.6.0			
__umul64hi					__umul64hi	1.6.0			
__umulhi					__umulhi	1.6.0			
__urhadd					__urhadd	1.6.0			
__usad					__usad	1.6.0			
__ushort2bfloat16_rd	11.0								
__ushort2bfloat16_rn	11.0								
__ushort2bfloat16_ru	11.0								

continues on n

Table 11 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
__ushort2bfloat16_rz	11.0								
__ushort2half_rd					__ushort2half_rd	1.6.0			
__ushort2half_rn					__ushort2half_rn	1.6.0			
__ushort2half_ru					__ushort2half_ru	1.6.0			
__ushort2half_rz					__ushort2half_rz	1.6.0			
__ushort_as_bfloat16	11.0		12.2		__ushort_as_bfloat16	5.7.0			
__ushort_as_half					__ushort_as_half	1.6.0			
__vabs2									
__vabs4									
__vabsdiffs2									
__vabsdiffs4									
__vabsdiffu2									
__vabsdiffu4									
__vabsss2									
__vabsss4									
__vadd2									
__vadd4									
__vaddss2									
__vaddss4									
__vaddus2									
__vaddus4									
__vavgs2									
__vavgs4									
__vavgu2									
__vavgu4									
__vcmpeq2									
__vcmpeq4									
__vcmpges2									
__vcmpges4									
__vcmpgeu2									
__vcmpgeu4									
__vcmpgts2									
__vcmpgts4									
__vcmpgtu2									
__vcmpgtu4									
__vcmples2									
__vcmples4									
__vcmpleu4									
__vcmplts2									
__vcmplts4									
__vcmpltu2									
__vcmpltu4									
__vcmpne2									
__vcmpne4									
__vhaddu2									
__vhaddu4									
__vmaxs2									
__vmaxs4									
__vmaxu2									
__vmaxu4									

continues on n

Table 11 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
__vmins2									
__vmins4									
__vminu2									
__vminu4									
__vneg2									
__vneg4									
__vnegss2									
__vnegss4									
__vsads2									
__vsads4									
__vsadu2									
__vsadu4									
__vseteq2									
__vseteq4									
__vsetges2									
__vsetges4									
__vsetgeu2									
__vsetgeu4									
__vsetgts2									
__vsetgts4									
__vsetgtu4									
__vsetles2									
__vsetles4									
__vsetleu2									
__vsetleu4									
__vsetlts2									
__vsetlts4									
__vsetltu2									
__vsetltu4									
__vsetne2									
__vsetne4									
__vsub2									
__vsub4									
__vsubss2									
__vsubss4									
__vsubus2									
__vsubus4									
_fdsign									
_ldsign									
abs					abs	1.6.0			
acos					acos	1.6.0			
acosf					acosf	1.6.0			
acosh					acosh	1.6.0			
acoshf					acoshf	1.6.0			
asin					asin	1.6.0			
asinf					asinf	1.6.0			
asinh					asinh	1.6.0			
asinhf					asinhf	1.6.0			
atan					atan	1.6.0			
atan2					atan2	1.6.0			

continues on n

Table 11 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
atan2f					atan2f	1.6.0			
atanf					atanf	1.6.0			
atanh					atanh	1.6.0			
atanhf					atanhf	1.6.0			
atomicAdd					atomicAdd	1.6.0			
atomicAdd_system					atomicAdd_system	4.3.0			
atomicAnd					atomicAnd	1.6.0			
atomicAnd_system					atomicAnd_system	4.3.0			
atomicCAS					atomicCAS	1.6.0			
atomicCAS_system					atomicCAS_system	4.3.0			
atomicDec					atomicDec	1.6.0			
atomicExch					atomicExch	1.6.0			
atomicExch_system					atomicExch_system	4.3.0			
atomicInc					atomicInc	1.6.0			
atomicMax					atomicMax	1.6.0			
atomicMax_system					atomicMax_system	4.3.0			
atomicMin					atomicMin	1.6.0			
atomicMin_system					atomicMin_system	4.3.0			
atomicOr					atomicOr	1.6.0			
atomicOr_system					atomicOr_system	4.3.0			
atomicSub					atomicSub	1.6.0			
atomicSub_system					atomicSub_system	4.3.0			
atomicXor					atomicXor	1.6.0			
atomicXor_system					atomicXor_system	4.3.0			
cbrt					cbrt	1.6.0			
cbrtf					cbrtf	1.6.0			
ceil					ceil	1.6.0			
ceilf					ceilf	1.6.0			
clock					clock	1.6.0			
clock64					clock64	1.6.0			
copysign					copysign	1.6.0			
copysignf					copysignf	1.6.0			
cos					cos	1.6.0			
cosf					cosf	1.6.0			
cosh					cosh	1.6.0			
coshf					coshf	1.6.0			
cospi					cospi	1.6.0			
cospif					cospif	1.6.0			
cyl_bessel_i0					cyl_bessel_i0	1.9.0			
cyl_bessel_i0f					cyl_bessel_i0f	1.9.0			
cyl_bessel_i1					cyl_bessel_i1	1.9.0			
cyl_bessel_i1f					cyl_bessel_i1f	1.9.0			
erf					erf	1.6.0			
erfc					erfc	1.6.0			
erfcf					erfcf	1.6.0			
erfcinv					erfcinv	1.6.0			
erfcinvf					erfcinvf	1.6.0			
erfcx					erfcx	1.6.0			
erfcxf					erfcxf	1.6.0			
erff					erff	1.6.0			

continues on n

Table 11 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
erfinv					erfinv	1.6.0			
erfinvf					erfinvf	1.6.0			
exp					exp	1.6.0			
exp10					exp10	1.6.0			
exp10f					exp10f	1.6.0			
exp2					exp2	1.6.0			
exp2f					exp2f	1.6.0			
expf					expf	1.6.0			
expm1					expm1	1.6.0			
expm1f					expm1f	1.6.0			
fabs					fabs	1.6.0			
fabsf					fabsf	1.6.0			
fdim					fdim	1.6.0			
fdimf					fdimf	1.6.0			
fdivide									
fdividef					fdividef	1.6.0			
float2int									
float_as_int									
float_as_uint									
floor					floor	1.6.0			
floorf					floorf	1.6.0			
fma					fma	1.6.0			
fmaf					fmaf	1.6.0			
fmax					fmax	1.6.0			
fmaxf					fmaxf	1.6.0			
fmin					fmin	1.6.0			
fminf					fminf	1.6.0			
fmod					fmod	1.6.0			
fmodf					fmodf	1.6.0			
frexp					frexp	1.6.0			
frexpf					frexpf	1.6.0			
h2ceil					h2ceil	1.6.0			
h2cos					h2cos	1.6.0			
h2exp					h2exp	1.6.0			
h2exp10					h2exp10	1.6.0			
h2exp2					h2exp2	1.6.0			
h2floor					h2floor	1.6.0			
h2log					h2log	1.6.0			
h2log10					h2log10	1.6.0			
h2log2					h2log2	1.6.0			
h2rcp					h2rcp	1.6.0			
h2rint					h2rint	1.9.0			
h2rsqrt					h2rsqrt	1.6.0			
h2sin					h2sin	1.6.0			
h2sqrt					h2sqrt	1.6.0			
h2tanh	12.8								
h2tanh_approx	12.8								
h2trunc					h2trunc	1.6.0			
hceil					hceil	1.6.0			
hcos					hcos	1.6.0			

continues on n

Table 11 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
hexp					hexp	1.6.0			
hexp10					hexp10	1.6.0			
hexp2					hexp2	1.6.0			
hfloor					hfloor	1.6.0			
hlog					hlog	1.6.0			
hlog10					hlog10	1.6.0			
hlog2					hlog2	1.6.0			
hrcp					hrcp	1.9.0			
hrint					hrint	1.6.0			
hrsqrt					hrsqrt	1.6.0			
hsin					hsin	1.6.0			
hsqrt					hsqrt	1.6.0			
htanh	12.8								
htanh_approx	12.8								
htrunc					htrunc	1.6.0			
hypot					hypot	1.6.0			
hypotf					hypotf	1.6.0			
ilogb					ilogb	1.6.0			
ilogbf					ilogbf	1.6.0			
int2float									
int_as_float									
isfinite					isfinite	1.6.0			
isinf					isinf	1.6.0			
isnan					isnan	1.6.0			
j0					j0	1.6.0			
j0f					j0f	1.6.0			
j1					j1	1.6.0			
j1f					j1f	1.6.0			
jn					jn	1.6.0			
jnf					jnf	1.6.0			
labs					labs	1.9.0			
ldexp					ldexp	1.6.0			
ldexpf					ldexpf	1.6.0			
lgamma					lgamma	1.6.0			
lgammaf					lgammaf	1.6.0			
llabs					llabs	1.9.0			
llmax									
llmin									
llrint					llrint	1.6.0			
llrintf					llrintf	1.6.0			
llround					llround	1.6.0			
llroundf					llroundf	1.6.0			
log					log	1.6.0			
log10					log10	1.6.0			
log10f					log10f	1.6.0			
log1p					log1p	1.6.0			
log1pf					log1pf	1.6.0			
log2					log2	1.6.0			
log2f					log2f	1.6.0			
logb					logb	1.6.0			

continues on n

Table 11 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
logbf					logbf	1.6.0			
logf					logf	1.6.0			
lrint					lrint	1.6.0			
lrintf					lrintf	1.6.0			
lround					lround	1.6.0			
lroundf					lroundf	1.6.0			
make_bfloat162	12.2								
make_char1					make_char1	1.6.0			
make_char2					make_char2	1.6.0			
make_char3					make_char3	1.6.0			
make_char4					make_char4	1.6.0			
make_double1					make_double1	1.6.0			
make_double2					make_double2	1.6.0			
make_double3					make_double3	1.6.0			
make_double4		13.0			make_double4	1.6.0			
make_double4_16a	13.0								
make_double4_32a	13.0								
make_float1					make_float1	1.6.0			
make_float2					make_float2	1.6.0			
make_float3					make_float3	1.6.0			
make_float4					make_float4	1.6.0			
make_half2	12.2				make_half2	4.5.0			
make_int1					make_int1	1.6.0			
make_int2					make_int2	1.6.0			
make_int3					make_int3	1.6.0			
make_int4					make_int4	1.6.0			
make_long1					make_long1	1.6.0			
make_long2					make_long2	1.6.0			
make_long3					make_long3	1.6.0			
make_long4		13.0			make_long4	1.6.0			
make_long4_16a	13.0								
make_long4_32a	13.0								
make_longlong1					make_longlong1	1.6.0			
make_longlong2					make_longlong2	1.6.0			
make_longlong3					make_longlong3	1.6.0			
make_longlong4		13.0			make_longlong4	1.6.0			
make_longlong4_16a	13.0								
make_longlong4_32a	13.0								
make_short1					make_short1	1.6.0			
make_short2					make_short2	1.6.0			
make_short3					make_short3	1.6.0			
make_short4					make_short4	1.6.0			
make_uchar1					make_uchar1	1.6.0			
make_uchar2					make_uchar2	1.6.0			
make_uchar3					make_uchar3	1.6.0			
make_uchar4					make_uchar4	1.6.0			
make_uint1					make_uint1	1.6.0			
make_uint2					make_uint2	1.6.0			
make_uint3					make_uint3	1.6.0			
make_uint4					make_uint4	1.6.0			

continues on n

Table 11 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
make_ulong1					make_ulong1	1.6.0			
make_ulong2					make_ulong2	1.6.0			
make_ulong3					make_ulong3	1.6.0			
make_ulong4		13.0			make_ulong4	1.6.0			
make_ulong4_16a	13.0								
make_ulong4_32a	13.0								
make_ulonglong1					make_ulonglong1	1.6.0			
make_ulonglong2					make_ulonglong2	1.6.0			
make_ulonglong3					make_ulonglong3	1.6.0			
make_ulonglong4		13.0			make_ulonglong4	1.6.0			
make_ulonglong4_16a	13.0								
make_ulonglong4_32a	13.0								
make_ushort1					make_ushort1	1.6.0			
make_ushort2					make_ushort2	1.6.0			
make_ushort3					make_ushort3	1.6.0			
make_ushort4					make_ushort4	1.6.0			
max					max	1.6.0			
min					min	1.6.0			
modf					modf	1.9.0			
modff					modff	1.9.0			
mul24									
mul64hi									
mulhi									
nan					nan	1.6.0			
nanf					nanf	1.6.0			
nearbyint					nearbyint	1.6.0			
nearbyintf					nearbyintf	1.6.0			
nextafter					nextafter	1.6.0			
nextafterf					nextafterf	1.9.0			
norm					norm	1.6.0			
norm3d					norm3d	1.6.0			
norm3df					norm3df	1.6.0			
norm4d					norm4d	1.6.0			
norm4df					norm4df	1.6.0			
normcdf					normcdf	1.6.0			
normcdff					normcdff	1.6.0			
normcdfinv					normcdfinv	1.6.0			
normcdfinvf					normcdfinvf	1.6.0			
normf					normf	1.6.0			
pow					pow	1.6.0			
powf					powf	1.6.0			
rcbrt					rcbrt	1.6.0			
rcbrtf					rcbrtf	1.6.0			
remainder					remainder	1.6.0			
remainderf					remainderf	1.6.0			
remquo					remquo	1.9.0			
remquof					remquof	1.6.0			
rhypot					rhypot	1.6.0			
rhypotf					rhypotf	1.6.0			
rint					rint	1.6.0			

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Table 11 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
rintf					rintf	1.6.0			
rnorm					rnorm	1.6.0			
rnorm3d					rnorm3d	1.6.0			
rnorm3df					rnorm3df	1.6.0			
rnorm4d					rnorm4d	1.6.0			
rnorm4df					rnorm4df	1.6.0			
rnormf					rnormf	1.6.0			
round					round	1.6.0			
roundf					roundf	1.6.0			
rsqrt					rsqrt	1.6.0			
rsqrtf					rsqrtf	1.6.0			
saturate									
scalbln					scalbln	1.6.0			
scalblnf					scalblnf	1.6.0			
scalbn					scalbn	1.6.0			
scalbnf					scalbnf	1.6.0			
signbit					signbit	1.6.0			
sin					sin	1.6.0			
sincos					sincos	1.6.0			
sincosf					sincosf	1.6.0			
sincospi					sincospi	1.6.0			
sincospif					sincospif	1.6.0			
sinf					sinf	1.6.0			
sinh					sinh	1.6.0			
sinhf					sinhf	1.6.0			
sinpi					sinpi	1.6.0			
sinpif					sinpif	1.6.0			
sqrt					sqrt	1.6.0			
sqrtf					sqrtf	1.6.0			
tan					tan	1.6.0			
tanf					tanf	1.6.0			
tanh					tanh	1.6.0			
tanhf					tanhf	1.6.0			
tgamma					tgamma	1.6.0			
tgammaf					tgammaf	1.6.0			
trunc					trunc	1.6.0			
truncf					truncf	1.6.0			
uint2float									
uint_as_float									
ullmax									
ullmin									
umax									
umin									
umul24									
y0					y0	1.6.0			
y0f					y0f	1.6.0			
y1					y1	1.6.0			
y1f					y1f	1.6.0			
yn					yn	1.6.0			
ynf					ynf	1.6.0			

10.4.2 2. Device Types

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
CUDART_INF_FP16	12.2				HIPRT_INF_FP16	7.0.0					
CUDART_MAX_NORMAL_FP16	12.2				HIPRT_MAX_NORMAL_FP16	7.0.0					
CUDART_MIN_DENORM_FP16	12.2				HIPRT_MIN_DENORM_FP16	7.0.0					
CUDART_NAN_FP16	12.2				HIPRT_NAN_FP16	7.0.0					
CUDART_NEG_ZERO_FP16	12.2				HIPRT_NEG_ZERO_FP16	7.0.0					
CUDART_ONE_FP16	12.2				HIPRT_ONE_FP16	7.0.0					
CUDART_ZERO_FP16	12.2				HIPRT_ZERO_FP16	7.0.0					
__NV_E2M1	12.8				__HIP_E2M1	7.0.0					
__NV_E2M3	12.8				__HIP_E2M3	7.0.0					
__NV_E3M2	12.8				__HIP_E3M2	7.0.0					
__NV_E4M3	11.8				__HIP_E4M3_FNUZ	6.2.0					
__NV_E5M2	11.8				__HIP_E5M2_FNUZ	6.2.0					
__NV_NOSAT	11.8				__HIP_NOSAT	6.2.0					
__NV_SATFINITE	11.8				__HIP_SATFINITE	6.2.0					
__half					__half	1.6.0					
__half2					__half2	1.6.0					
__half2_raw					__half2_raw	1.9.0					
__half_raw					__half_raw	1.9.0					
__nv_bfloat16	11.0				__hip_bfloat16	5.7.0					
__nv_bfloat162	11.0				__hip_bfloat162	5.7.0					
__nv_bfloat162_raw	11.0				__hip_bfloat162_raw	6.2.0					
__nv_bfloat16_raw	11.0				__hip_bfloat16_raw	6.2.0					
__nv_fp4_e2m1	12.8				__hip_fp4_e2m1	7.0.0					
__nv_fp4_interpretation_t	12.8				__hip_fp4_interpretation_t	7.0.0					
__nv_fp4_storage_t	12.8				__hip_fp4_storage_t	7.0.0					
__nv_fp4x2_e2m1	12.8				__hip_fp4x2_e2m1	7.0.0					
__nv_fp4x2_storage_t	12.8				__hip_fp4x2_storage_t	7.0.0					
__nv_fp4x4_e2m1	12.8				__hip_fp4x4_e2m1	7.0.0					
__nv_fp4x4_storage_t	12.8				__hip_fp4x4_storage_t	7.0.0					
__nv_fp6_e2m3	12.8				__hip_fp6_e2m3	7.0.0					
__nv_fp6_e3m2	12.8				__hip_fp6_e3m2	7.0.0					
__nv_fp6_interpretation_t	12.8				__hip_fp6_interpretation_t	7.0.0					
__nv_fp6_storage_t	12.8				__hip_fp6_storage_t	7.0.0					
__nv_fp6x2_e2m3	12.8				__hip_fp6x2_e2m3	7.0.0					
__nv_fp6x2_e3m2	12.8				__hip_fp6x2_e3m2	7.0.0					
__nv_fp6x2_storage_t	12.8				__hip_fp6x2_storage_t	7.0.0					
__nv_fp6x4_e2m3	12.8				__hip_fp6x4_e2m3	7.0.0					
__nv_fp6x4_e3m2	12.8				__hip_fp6x4_e3m2	7.0.0					
__nv_fp6x4_storage_t	12.8				__hip_fp6x4_storage_t	7.0.0					
__nv_fp8_e4m3	11.8				__hip_fp8_e4m3_fnuz	6.2.0					
__nv_fp8_e5m2	11.8				__hip_fp8_e5m2_fnuz	6.2.0					
__nv_fp8_e8m0	12.8										
__nv_fp8_interpretation_t	11.8				__hip_fp8_interpretation_t	6.2.0					
__nv_fp8_storage_t	11.8				__hip_fp8_storage_t	6.2.0					
__nv_fp8x2_e4m3	11.8				__hip_fp8x2_e4m3_fnuz	6.2.0					
__nv_fp8x2_e5m2	11.8				__hip_fp8x2_e5m2_fnuz	6.2.0					
__nv_fp8x2_e8m0	12.8										
__nv_fp8x2_storage_t	11.8				__hip_fp8x2_storage_t	6.2.0					
__nv_fp8x4_e4m3	11.8				__hip_fp8x4_e4m3_fnuz	6.2.0					

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Table 12 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
__nv_fp8x4_e5m2	11.8				__hip_fp8x4_e5m2_fnuz	6.2.0					
__nv_fp8x4_e8m0	12.8										
__nv_fp8x4_storage_t	11.8				__hip_fp8x4_storage_t	6.2.0					
__nv_saturation_t	11.8				__hip_saturation_t	6.2.0					
char1					char1	1.6.0					
char2					char2	1.6.0					
char3					char3	1.6.0					
char4					char4	1.6.0					
cudaRoundMinInf					hipRoundMinInf	7.0.0					
cudaRoundMode					hipRoundMode	7.0.0					
cudaRoundNearest					hipRoundNearest	7.0.0					
cudaRoundPosInf					hipRoundPosInf	7.0.0					
cudaRoundZero					hipRoundZero	7.0.0					
double1					double1	1.6.0					
double2					double2	1.6.0					
double3					double3	1.6.0					
double4		13.0			double4	1.6.0					
double4_16a	13.0										
double4_32a	13.0										
float1					float1	1.6.0					
float2					float2	1.6.0					
float3					float3	1.6.0					
float4					float4	1.6.0					
int1					int1	1.6.0					
int2					int2	1.6.0					
int3					int3	1.6.0					
int4					int4	1.6.0					
long1					long1	1.6.0					
long2					long2	1.6.0					
long3					long3	1.6.0					
long4		13.0			long4	1.6.0					
long4_16a	13.0										
long4_32a	13.0										
longlong1					longlong1	1.6.0					
longlong2					longlong2	1.6.0					
longlong3					longlong3	1.6.0					
longlong4		13.0			longlong4	1.6.0					
longlong4_16a	13.0										
longlong4_32a	13.0										
nv_bfloat16	11.0				hip_bfloat16	3.5.0					
nv_bfloat162	11.0										
short1					short1	1.6.0					
short2					short2	1.6.0					
short3					short3	1.6.0					
short4					short4	1.6.0					
uchar1					uchar1	1.6.0					
uchar2					uchar2	1.6.0					
uchar3					uchar3	1.6.0					
uchar4					uchar4	1.6.0					
uint1					uint1	1.6.0					

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Table 12 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
uint2					uint2	1.6.0					
uint3					uint3	1.6.0					
uint4					uint4	1.6.0					
ulong1					ulong1	1.6.0					
ulong2					ulong2	1.6.0					
ulong3					ulong3	1.6.0					
ulong4		13.0			ulong4	1.6.0					
ulong4_16a	13.0										
ulong4_32a	13.0										
ulonglong1					ulonglong1	1.6.0					
ulonglong2					ulonglong2	1.6.0					
ulonglong3					ulonglong3	1.6.0					
ulonglong4		13.0			ulonglong4	1.6.0					
ulonglong4_16a	13.0										
ulonglong4_32a	13.0										
ushort1					ushort1	1.6.0					
ushort2					ushort2	1.6.0					
ushort3					ushort3	1.6.0					
ushort4					ushort4	1.6.0					

10.5 CUDA RTC API supported by HIP

Note: In the tables that follow the columns marked A, D, C, R, U, and E mean the following: **A** - Added; **D** - Deprecated; **C** - Changed; **R** - Removed; **U** - Unsupported for CUDA version(s); **E** - Experimental

10.5.1 1. RTC Data types

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
NVRTC_ERROR_BUILTIN_OPEF					HIPRTC_ERROR_BUILTIN_OPE	2.6.0					
NVRTC_ERROR_CANCELLED	12.8										
NVRTC_ERROR_COMPILATION					HIPRTC_ERROR_COMPILATION	2.6.0					
NVRTC_ERROR_INTERNAL_ERF	8.0				HIPRTC_ERROR_INTERNAL_ER	2.6.0					
NVRTC_ERROR_INVALID_INPU					HIPRTC_ERROR_INVALID_INP	2.6.0					
NVRTC_ERROR_INVALID_OPTI					HIPRTC_ERROR_INVALID_OPT	2.6.0					
NVRTC_ERROR_INVALID_PROC					HIPRTC_ERROR_INVALID_PRO	2.6.0					
NVRTC_ERROR_NAME_EXPRESS	8.0				HIPRTC_ERROR_NAME_EXPRES	2.6.0					
NVRTC_ERROR_NO_LOWERED_N	8.0				HIPRTC_ERROR_NO_LOWERED_	2.6.0					N
NVRTC_ERROR_NO_NAME_EXPF	8.0				HIPRTC_ERROR_NO_NAME_EXP	2.6.0					ION
NVRTC_ERROR_NO_PCH_CREAT	12.8										
NVRTC_ERROR_OUT_OF_MEMOF					HIPRTC_ERROR_OUT_OF_MEMO	2.6.0					
NVRTC_ERROR_PCH_CREATE	12.8										
NVRTC_ERROR_PCH_CREATE_I	12.8										
NVRTC_ERROR_PROGRAM_CREA					HIPRTC_ERROR_PROGRAM_CRE	2.6.0					
NVRTC_ERROR_TIME_FILE_WF	12.1										
NVRTC_ERROR_TIME_TRACE_F	13.0										
NVRTC_SUCCESS					HIPRTC_SUCCESS	2.6.0					
_nvrtcProgram					_hiprtcProgram	2.6.0					
nvrtcProgram					hiprtcProgram	2.6.0					
nvrtcResult					hiprtcResult	2.6.0					

10.5.2 2. RTC API functions

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
nvrtcAddNameExpression	8.0				hiprtcAddNameExpres	2.6.0					
nvrtcCompileProgram			8.0		hiprtcCompileProgra	2.6.0		7.0.0			
nvrtcCreateProgram			8.0		hiprtcCreateProgram	2.6.0		7.0.0			
nvrtcDestroyProgram					hiprtcDestroyProgra	2.6.0					
nvrtcGetCUBIN	11.1				hiprtcGetBitcode	5.3.0					
nvrtcGetCUBINSize	11.1				hiprtcGetBitcodeSiz	5.3.0					
nvrtcGetErrorString					hiprtcGetErrorStrin	2.6.0					
nvrtcGetLTOIR	12.0										
nvrtcGetLTOIRSize	12.0										
nvrtcGetLoweredName	8.0				hiprtcGetLoweredNam	2.6.0					
nvrtcGetNVVM	11.4	12.0		13.0							
nvrtcGetNVVMSize	11.4	12.0		13.0							
nvrtcGetNumSupportedAr	11.2										
nvrtcGetOptiXIR	12.0										
nvrtcGetOptiXIRSize	12.0										
nvrtcGetPCHCreateStatus	12.8										
nvrtcGetPCHHeapSize	12.8										
nvrtcGetPCHHeapSizeRequ	12.8										
nvrtcGetPTX					hiprtcGetCode	2.6.0					
nvrtcGetPTXSize					hiprtcGetCodeSize	2.6.0					
nvrtcGetProgramLog					hiprtcGetProgramLog	2.6.0					
nvrtcGetProgramLogSize					hiprtcGetProgramLog	2.6.0					
nvrtcGetSupportedArchs	11.2										
nvrtcGetTileIR	13.2										
nvrtcGetTileIRSize	13.2										
nvrtcSetFlowCallback	12.8										
nvrtcSetPCHHeapSize	12.8										
nvrtcVersion					hiprtcVersion	2.6.0					

10.6 CUBLAS API supported by HIP

Note: In the tables that follow the columns marked A, D, C, R, U, and E mean the following: **A** - Added; **D** - Deprecated; **C** - Changed; **R** - Removed; **U** - Unsupported for CUDA version(s); **E** - Experimental

10.6.1 1. CUBLAS Data types

CUDA	A	D	C	R	HIP
CUBLAS_ATOMICS_ALLOWED					HIPBLAS_ATOMICS_ALLOWED
CUBLAS_ATOMICS_NOT_ALLOWED					HIPBLAS_ATOMICS_NOT_ALLOWED
CUBLAS_COMPUTE_16F	11.0				HIPBLAS_COMPUTE_16F
CUBLAS_COMPUTE_16F_PEDANTIC	11.0				HIPBLAS_COMPUTE_16F_PEDANTIC
CUBLAS_COMPUTE_32F	11.0				HIPBLAS_COMPUTE_32F
CUBLAS_COMPUTE_32F_EMULATED_16BFX9	12.9				
CUBLAS_COMPUTE_32F_FAST_16BF	11.0				HIPBLAS_COMPUTE_32F_FAST_16BF
CUBLAS_COMPUTE_32F_FAST_16F	11.0				HIPBLAS_COMPUTE_32F_FAST_16F
CUBLAS_COMPUTE_32F_FAST_TF32	11.0				HIPBLAS_COMPUTE_32F_FAST_TF32
CUBLAS_COMPUTE_32F_PEDANTIC	11.0				HIPBLAS_COMPUTE_32F_PEDANTIC
CUBLAS_COMPUTE_32I	11.0				HIPBLAS_COMPUTE_32I
CUBLAS_COMPUTE_32I_PEDANTIC	11.0				HIPBLAS_COMPUTE_32I_PEDANTIC
CUBLAS_COMPUTE_64F	11.0				HIPBLAS_COMPUTE_64F
CUBLAS_COMPUTE_64F_EMULATED_FIXEDPOINT	13.0				
CUBLAS_COMPUTE_64F_PEDANTIC	11.0				HIPBLAS_COMPUTE_64F_PEDANTIC
CUBLAS_DEFAULT_MATH	9.0				HIPBLAS_DEFAULT_MATH
CUBLAS_DIAG_NON_UNIT					HIPBLAS_DIAG_NON_UNIT
CUBLAS_DIAG_UNIT					HIPBLAS_DIAG_UNIT
CUBLAS_EMULATION_STRATEGY_DEFAULT	12.9				
CUBLAS_EMULATION_STRATEGY_EAGER	12.9				
CUBLAS_EMULATION_STRATEGY_PERFORMANT	12.9				
CUBLAS_FILL_MODE_FULL	10.1				HIPBLAS_FILL_MODE_FULL
CUBLAS_FILL_MODE_LOWER					HIPBLAS_FILL_MODE_LOWER
CUBLAS_FILL_MODE_UPPER					HIPBLAS_FILL_MODE_UPPER
CUBLAS_FP32_EMULATED_BF16X9_MATH	12.9				HIPBLAS_FP32_EMULATED_BF16X9_MATH
CUBLAS_FP64_EMULATED_FIXEDPOINT_MATH	13.0				
CUBLAS_GEMM_ALGO0	8.0				
CUBLAS_GEMM_ALGO0_TENSOR_OP	9.0				
CUBLAS_GEMM_ALGO1	8.0				
CUBLAS_GEMM_ALGO10	9.0				
CUBLAS_GEMM_ALGO10_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO11	9.0				
CUBLAS_GEMM_ALGO11_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO12	9.0				
CUBLAS_GEMM_ALGO12_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO13	9.0				
CUBLAS_GEMM_ALGO13_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO14	9.0				
CUBLAS_GEMM_ALGO14_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO15	9.0				
CUBLAS_GEMM_ALGO15_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO16	9.0				

Table 13 – continued from previous page

CUDA	A	D	C	R	HIP
CUBLAS_GEMM_ALGO17	9.0				
CUBLAS_GEMM_ALGO18	9.2				
CUBLAS_GEMM_ALGO19	9.2				
CUBLAS_GEMM_ALGO1_TENSOR_OP	9.0				
CUBLAS_GEMM_ALGO2	8.0				
CUBLAS_GEMM_ALGO20	9.2				
CUBLAS_GEMM_ALGO21	9.2				
CUBLAS_GEMM_ALGO22	9.2				
CUBLAS_GEMM_ALGO23	9.2				
CUBLAS_GEMM_ALGO2_TENSOR_OP	9.0				
CUBLAS_GEMM_ALGO3	8.0				
CUBLAS_GEMM_ALGO3_TENSOR_OP	9.0				
CUBLAS_GEMM_ALGO4	8.0				
CUBLAS_GEMM_ALGO4_TENSOR_OP	9.0				
CUBLAS_GEMM_ALGO5	8.0				
CUBLAS_GEMM_ALGO5_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO6	8.0				
CUBLAS_GEMM_ALGO6_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO7	8.0				
CUBLAS_GEMM_ALGO7_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO8	9.0				
CUBLAS_GEMM_ALGO8_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO9	9.0				
CUBLAS_GEMM_ALGO9_TENSOR_OP	9.2				
CUBLAS_GEMM_AUTOTUNE	13.0				
CUBLAS_GEMM_DEFAULT	9.0				HIPBLAS_GEMM_DEFAULT
CUBLAS_GEMM_DEFAULT_TENSOR_OP	9.0				
CUBLAS_GEMM_DFALT	8.0				HIPBLAS_GEMM_DEFAULT
CUBLAS_GEMM_DFALT_TENSOR_OP	9.0				
CUBLAS_MATH_DISALLOW_REDUCED_PRECISION_REDUCTION	11.0				HIPBLAS_MATH_DISALLOW_REDUCED_PRE
CUBLAS_OP_C					HIPBLAS_OP_C
CUBLAS_OP_CONJG	10.1				
CUBLAS_OP_HERMITAN	10.1				HIPBLAS_OP_C
CUBLAS_OP_N					HIPBLAS_OP_N
CUBLAS_OP_T					HIPBLAS_OP_T
CUBLAS_PEDANTIC_MATH	11.0				HIPBLAS_PEDANTIC_MATH
CUBLAS_POINTER_MODE_DEVICE					HIPBLAS_POINTER_MODE_DEVICE
CUBLAS_POINTER_MODE_HOST					HIPBLAS_POINTER_MODE_HOST
CUBLAS_SIDE_LEFT					HIPBLAS_SIDE_LEFT
CUBLAS_SIDE_RIGHT					HIPBLAS_SIDE_RIGHT
CUBLAS_STATUS_ALLOC_FAILED					HIPBLAS_STATUS_ALLOC_FAILED
CUBLAS_STATUS_ARCH_MISMATCH					HIPBLAS_STATUS_ARCH_MISMATCH
CUBLAS_STATUS_EXECUTION_FAILED					HIPBLAS_STATUS_EXECUTION_FAILED
CUBLAS_STATUS_INTERNAL_ERROR					HIPBLAS_STATUS_INTERNAL_ERROR
CUBLAS_STATUS_INVALID_VALUE					HIPBLAS_STATUS_INVALID_VALUE
CUBLAS_STATUS_LICENSE_ERROR					HIPBLAS_STATUS_UNKNOWN
CUBLAS_STATUS_MAPPING_ERROR					HIPBLAS_STATUS_MAPPING_ERROR
CUBLAS_STATUS_NOT_INITIALIZED					HIPBLAS_STATUS_NOT_INITIALIZED
CUBLAS_STATUS_NOT_SUPPORTED					HIPBLAS_STATUS_NOT_SUPPORTED
CUBLAS_STATUS_SUCCESS					HIPBLAS_STATUS_SUCCESS

Table 13 – continued from previous page

CUDA	A	D	C	R	HIP
CUBLAS_TENSOR_OP_MATH	9.0	11.0			HIPBLAS_TENSOR_OP_MATH
CUBLAS_TF32_TENSOR_OP_MATH	11.0				HIPBLAS_TF32_TENSOR_OP_MATH
cublasAtomicsMode_t					hipblasAtomicsMode_t
cublasComputeType_t	11.0				hipblasComputeType_t
cublasContext					
cublasDiagType_t					hipblasDiagType_t
cublasEmulationStrategy_t	12.9				hipblasEmulationStrategy_t
cublasFillMode_t					hipblasFillMode_t
cublasGemmAlgo_t	8.0				hipblasGemmAlgo_t
cublasHandle_t					hipblasHandle_t
cublasMath_t	9.0				hipblasMath_t
cublasOperation_t					hipblasOperation_t
cublasPointerMode_t					hipblasPointerMode_t
cublasSideMode_t					hipblasSideMode_t
cublasStatus					hipblasStatus_t
cublasStatus_t					hipblasStatus_t

10.6.2 2. CUDA Library Data types

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
CUDA_C_16BF					HIP_C_16BF	5.5.0					
CUDA_C_16F	8.0				HIP_C_16F	3.0.0					
CUDA_C_16I	11.0				HIP_C_16I	5.5.0					
CUDA_C_16U	11.0				HIP_C_16U	5.5.0					
CUDA_C_32F	8.0				HIP_C_32F	3.0.0					
CUDA_C_32I	8.0				HIP_C_32I	5.5.0					
CUDA_C_32U	8.0				HIP_C_32U	5.5.0					
CUDA_C_4I	11.0				HIP_C_4I	5.5.0					
CUDA_C_4U	11.0				HIP_C_4U	5.5.0					
CUDA_C_64F	8.0				HIP_C_64F	3.0.0					
CUDA_C_64I	11.0				HIP_C_64I	5.5.0					
CUDA_C_64U	11.0				HIP_C_64U	5.5.0					
CUDA_C_8I	8.0				HIP_C_8I	5.5.0					
CUDA_C_8U	8.0				HIP_C_8U	5.5.0					
CUDA_R_16BF					HIP_R_16BF	5.5.0					
CUDA_R_16F	8.0				HIP_R_16F	3.0.0					
CUDA_R_16I	11.0				HIP_R_16I	5.5.0					
CUDA_R_16U	11.0				HIP_R_16U	5.5.0					
CUDA_R_32F	8.0				HIP_R_32F	3.0.0					
CUDA_R_32I	8.0				HIP_R_32I	5.5.0					
CUDA_R_32U	8.0				HIP_R_32U	5.5.0					
CUDA_R_4F_E2M1	12.8				HIP_R_4F_E2M1	7.0.0					
CUDA_R_4I	11.0				HIP_R_4I	5.5.0					
CUDA_R_4U	11.0				HIP_R_4U	5.5.0					
CUDA_R_64F	8.0				HIP_R_64F	3.0.0					
CUDA_R_64I	11.0				HIP_R_64I	5.5.0					
CUDA_R_64U	11.0				HIP_R_64U	5.5.0					
CUDA_R_6F_E2M3	12.8				HIP_R_6F_E2M3	7.0.0					

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Table 14 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
CUDA_R_6F_E3M2	12.8				HIP_R_6F_E3M2	7.0.0					
CUDA_R_8F_E4M3	11.8				HIP_R_8F_E4M3	6.3.0					
CUDA_R_8F_E5M2	11.8				HIP_R_8F_E5M2	6.3.0					
CUDA_R_8F_UE4M3	12.8				HIP_R_8F_E4M3	6.3.0					
CUDA_R_8F_UE8M0	12.8				HIP_R_8F_UE8M0	7.0.0					
CUDA_R_8I	8.0				HIP_R_8I	5.5.0					
CUDA_R_8U	8.0				HIP_R_8U	5.5.0					
cublasDataType_t	7.5				hipDataType	3.0.0					
cudaDataType	8.0				hipDataType	3.0.0					
cudaDataType_t	8.0				hipDataType	3.0.0					

10.6.3 3. CUBLASLt Data types

CUDA	A	D	C	R	HIP
CUBLASLT_ALGO_CAP_ATOMIC_SYNC	12.2			13.0	
CUBLASLT_ALGO_CAP_CTA_SWIZZLING_SUPPORT	10.1				
CUBLASLT_ALGO_CAP_CUSTOM_MEMORY_ORDER	10.1				
CUBLASLT_ALGO_CAP_CUSTOM_OPTION_MAX	10.1				
CUBLASLT_ALGO_CAP_EPILOGUE_MASK	10.1				
CUBLASLT_ALGO_CAP_FLOATING_POINT_EMULATION_SUPPORT	12.9				
CUBLASLT_ALGO_CAP_LD_NEGATIVE	11.0				
CUBLASLT_ALGO_CAP_MIN_ALIGNMENT_A_BYTES	11.0				
CUBLASLT_ALGO_CAP_MIN_ALIGNMENT_B_BYTES	11.0				
CUBLASLT_ALGO_CAP_MIN_ALIGNMENT_C_BYTES	11.0				
CUBLASLT_ALGO_CAP_MIN_ALIGNMENT_D_BYTES	11.0				
CUBLASLT_ALGO_CAP_NUMERICAL_IMPL_FLAGS	11.0				
CUBLASLT_ALGO_CAP_OUT_OF_PLACE_RESULT_SUPPORT	10.1				
CUBLASLT_ALGO_CAP_POINTER_ARRAY_BATCH_SUPPORT	12.9				
CUBLASLT_ALGO_CAP_POINTER_ARRAY_GROUPED_SUPPORT	13.1				
CUBLASLT_ALGO_CAP_POINTER_MODE_MASK	10.1				
CUBLASLT_ALGO_CAP_REDUCTION_SCHEME_MASK	10.1				
CUBLASLT_ALGO_CAP_SPLITK_SUPPORT	10.1				
CUBLASLT_ALGO_CAP_STAGES_IDS	11.0				
CUBLASLT_ALGO_CAP_STRIDED_BATCH_SUPPORT	10.1				
CUBLASLT_ALGO_CAP_TILE_IDS	10.1				
CUBLASLT_ALGO_CAP_UPLO_SUPPORT	10.1				
CUBLASLT_ALGO_CONFIG_CLUSTER_SHAPE_ID	11.8				
CUBLASLT_ALGO_CONFIG_CTA_SWIZZLING	10.1				
CUBLASLT_ALGO_CONFIG_CUSTOM_OPTION	10.1				
CUBLASLT_ALGO_CONFIG_ID	10.1				
CUBLASLT_ALGO_CONFIG_INNER_SHAPE_ID	11.8				
CUBLASLT_ALGO_CONFIG_REDUCTION_SCHEME	10.1				
CUBLASLT_ALGO_CONFIG_SPLITK_NUM	10.1				
CUBLASLT_ALGO_CONFIG_STAGES_ID	11.0				
CUBLASLT_ALGO_CONFIG_TILE_ID	10.1				
CUBLASLT_BATCH_MODE_GROUPED	13.1				
CUBLASLT_BATCH_MODE_POINTER_ARRAY	12.9				
CUBLASLT_BATCH_MODE_STRIDED	12.9				

Table 15 – continued from previous page

CUDA	A	D	C	R	HIP
CUBLASLT_CLUSTER_SHAPE_10x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_11x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_12x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_13x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_14x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_15x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_16x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x10x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x11x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x12x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x13x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x14x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x15x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x16x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x2x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x3x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x4x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x5x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x6x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x7x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x8x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x9x1	11.8				
CUBLASLT_CLUSTER_SHAPE_2x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_2x2x1	11.8				
CUBLASLT_CLUSTER_SHAPE_2x3x1	11.8				
CUBLASLT_CLUSTER_SHAPE_2x4x1	11.8				
CUBLASLT_CLUSTER_SHAPE_2x5x1	11.8				
CUBLASLT_CLUSTER_SHAPE_2x6x1	11.8				
CUBLASLT_CLUSTER_SHAPE_2x7x1	11.8				
CUBLASLT_CLUSTER_SHAPE_2x8x1	11.8				
CUBLASLT_CLUSTER_SHAPE_3x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_3x2x1	11.8				
CUBLASLT_CLUSTER_SHAPE_3x3x1	11.8				
CUBLASLT_CLUSTER_SHAPE_3x4x1	11.8				
CUBLASLT_CLUSTER_SHAPE_3x5x1	11.8				
CUBLASLT_CLUSTER_SHAPE_4x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_4x2x1	11.8				
CUBLASLT_CLUSTER_SHAPE_4x3x1	11.8				
CUBLASLT_CLUSTER_SHAPE_4x4x1	11.8				
CUBLASLT_CLUSTER_SHAPE_5x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_5x2x1	11.8				
CUBLASLT_CLUSTER_SHAPE_5x3x1	11.8				
CUBLASLT_CLUSTER_SHAPE_6x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_6x2x1	11.8				
CUBLASLT_CLUSTER_SHAPE_7x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_7x2x1	11.8				
CUBLASLT_CLUSTER_SHAPE_8x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_8x2x1	11.8				
CUBLASLT_CLUSTER_SHAPE_9x1x1	11.8				

Table 15 – continued from previous page

CUDA	A	D	C	R	HIP
CUBLASLT_CLUSTER_SHAPE_AUTO	11.8				
CUBLASLT_CLUSTER_SHAPE_END	11.8				
CUBLASLT_EMULATION_DESC_FIXEDPOINT_MANTISSA_BIT_COUNT_POINTER	13.0				
CUBLASLT_EMULATION_DESC_FIXEDPOINT_MANTISSA_BIT_OFFSET	13.0				
CUBLASLT_EMULATION_DESC_FIXEDPOINT_MANTISSA_CONTROL	13.0				
CUBLASLT_EMULATION_DESC_FIXEDPOINT_MAX_MANTISSA_BIT_COUNT	13.0				
CUBLASLT_EMULATION_DESC_SPECIAL_VALUES_SUPPORT	13.0				
CUBLASLT_EMULATION_DESC_STRATEGY	13.0				
CUBLASLT_EPILOGUE_BGRADA	11.4				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_BGRADB	11.4				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_BIAS	10.1				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_DEFAULT	10.1				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_DGELU	11.6				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_DGELU_BGRAD	11.3				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_DRELU	11.6				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_DRELU_BGRAD	11.3				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_GELU	11.3				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_GELU_AUX	11.3				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_GELU_AUX_BIAS	11.3				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_GELU_BIAS	11.3				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_RELU	10.1				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_RELU_AUX	11.3				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_RELU_AUX_BIAS	11.3				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_RELU_BIAS	10.1				HIPBLASLT_EPILOGU
CUBLASLT_GROUPED_MATRIX_LAYOUT_COLS_ARRAY	13.1				
CUBLASLT_GROUPED_MATRIX_LAYOUT_LD_ARRAY	13.1				
CUBLASLT_GROUPED_MATRIX_LAYOUT_LD_ARRAY_INTEGER_WIDTH	13.1				
CUBLASLT_GROUPED_MATRIX_LAYOUT_ROWS_ARRAY	13.1				
CUBLASLT_GROUPED_MATRIX_LAYOUT_ROWS_COLS_ARRAY_INTEGER_WIDTH	13.1				
CUBLASLT_INTEGER_WIDTH_32	13.1				
CUBLASLT_INTEGER_WIDTH_64	13.1				
CUBLASLT_MATMUL_DESC_ALPHA_BATCH_STRIDE	13.1				
CUBLASLT_MATMUL_DESC_ALPHA_VECTOR_BATCH_STRIDE	11.4				
CUBLASLT_MATMUL_DESC_AMAX_D_POINTER	11.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_ATOMIC_SYNC_IN_COUNTERS_POINTER	12.2			13.0	
CUBLASLT_MATMUL_DESC_ATOMIC_SYNC_NUM_CHUNKS_D_COLS	12.2	12.8		13.0	
CUBLASLT_MATMUL_DESC_ATOMIC_SYNC_NUM_CHUNKS_D_ROWS	12.2	12.8		13.0	
CUBLASLT_MATMUL_DESC_ATOMIC_SYNC_OUT_COUNTERS_POINTER	12.2			13.0	
CUBLASLT_MATMUL_DESC_A_SCALE_MODE	12.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_A_SCALE_POINTER	11.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_BETA_BATCH_STRIDE	13.1				
CUBLASLT_MATMUL_DESC_BIAS_BATCH_STRIDE	11.3				
CUBLASLT_MATMUL_DESC_BIAS_DATA_TYPE	11.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_BIAS_POINTER	10.1				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_B_SCALE_MODE	12.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_B_SCALE_POINTER	11.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_COMPUTE_TYPE	10.1				
CUBLASLT_MATMUL_DESC_C_SCALE_MODE	12.8				
CUBLASLT_MATMUL_DESC_C_SCALE_POINTER	11.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_D_OUT_SCALE_MODE	12.8				

Table 15 – continued from previous page

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_DESC_D_OUT_SCALE_POINTER	12.8				
CUBLASLT_MATMUL_DESC_D_SCALE_MODE	12.8				
CUBLASLT_MATMUL_DESC_D_SCALE_POINTER	11.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_EMULATION_DESCRIPTOR	13.0				
CUBLASLT_MATMUL_DESC_EPILOGUE	10.1				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_EPILOGUE_AUX_AMAX_POINTER	11.8				
CUBLASLT_MATMUL_DESC_EPILOGUE_AUX_BATCH_STRIDE	11.3				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_EPILOGUE_AUX_DATA_TYPE	11.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_EPILOGUE_AUX_LD	11.3				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_EPILOGUE_AUX_POINTER	11.3				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_EPILOGUE_AUX_SCALE_MODE	12.8				
CUBLASLT_MATMUL_DESC_EPILOGUE_AUX_SCALE_POINTER	11.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_FAST_ACCUM	11.8				
CUBLASLT_MATMUL_DESC_FILL_MODE	10.1				
CUBLASLT_MATMUL_DESC_POINTER_MODE	10.1				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_SCALE_TYPE	10.1				
CUBLASLT_MATMUL_DESC_SM_COUNT_TARGET	11.5				
CUBLASLT_MATMUL_DESC_TRANSA	10.1				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_TRANSB	10.1				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_TRANSC	10.1				
CUBLASLT_MATMUL_INNER_SHAPE_END	11.8				
CUBLASLT_MATMUL_INNER_SHAPE_MMA16816	11.8				
CUBLASLT_MATMUL_INNER_SHAPE_MMA1684	11.8				
CUBLASLT_MATMUL_INNER_SHAPE_MMA1688	11.8				
CUBLASLT_MATMUL_INNER_SHAPE_MMA884	11.8				
CUBLASLT_MATMUL_INNER_SHAPE_UNDEFINED	11.8				
CUBLASLT_MATMUL_MATRIX_SCALE_BLK128x128_32F	12.9				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_MATRIX_SCALE_END	12.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_MATRIX_SCALE_OUTER_VEC_32F	12.9				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_MATRIX_SCALE_PER_BATCH_SCALAR_32F	13.1				
CUBLASLT_MATMUL_MATRIX_SCALE_SCALAR_32F	12.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_MATRIX_SCALE_VEC128_32F	12.9				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_MATRIX_SCALE_VEC16_UE4M3	12.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_MATRIX_SCALE_VEC32_UE8M0	12.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_PREF_GROUPED_AVERAGE_REDUCTION_DIM	13.1				
CUBLASLT_MATMUL_PREF_GROUPED_DESC_D_AVERAGE_COLS	13.1				
CUBLASLT_MATMUL_PREF_GROUPED_DESC_D_AVERAGE_ROWS	13.1				
CUBLASLT_MATMUL_PREF_IMPL_MASK	11.0				
CUBLASLT_MATMUL_PREF_MAX_WAVES_COUNT	10.1				
CUBLASLT_MATMUL_PREF_MAX_WORKSPACE_BYTES	10.1				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_PREF_MIN_ALIGNMENT_A_BYTES	10.1				
CUBLASLT_MATMUL_PREF_MIN_ALIGNMENT_B_BYTES	10.1				
CUBLASLT_MATMUL_PREF_MIN_ALIGNMENT_C_BYTES	10.1				
CUBLASLT_MATMUL_PREF_MIN_ALIGNMENT_D_BYTES	10.1				
CUBLASLT_MATMUL_PREF_REDUCTION_SCHEME_MASK	10.1				
CUBLASLT_MATMUL_PREF_SEARCH_MODE	10.1				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_STAGES_128x1	11.0				
CUBLASLT_MATMUL_STAGES_128x2	11.0				
CUBLASLT_MATMUL_STAGES_128x3	11.0				
CUBLASLT_MATMUL_STAGES_128x4	11.0				

Table 15 – continued from previous page

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_STAGES_128x5	11.0				
CUBLASLT_MATMUL_STAGES_128x6	11.0				
CUBLASLT_MATMUL_STAGES_128xAUTO	11.8				
CUBLASLT_MATMUL_STAGES_16x1	11.0				
CUBLASLT_MATMUL_STAGES_16x10	11.0				
CUBLASLT_MATMUL_STAGES_16x2	11.0				
CUBLASLT_MATMUL_STAGES_16x3	11.0				
CUBLASLT_MATMUL_STAGES_16x4	11.0				
CUBLASLT_MATMUL_STAGES_16x5	11.0				
CUBLASLT_MATMUL_STAGES_16x6	11.0				
CUBLASLT_MATMUL_STAGES_16xAUTO	11.8				
CUBLASLT_MATMUL_STAGES_256xAUTO	12.8				
CUBLASLT_MATMUL_STAGES_32x1	11.0				
CUBLASLT_MATMUL_STAGES_32x10	11.0				
CUBLASLT_MATMUL_STAGES_32x2	11.0				
CUBLASLT_MATMUL_STAGES_32x3	11.0				
CUBLASLT_MATMUL_STAGES_32x4	11.0				
CUBLASLT_MATMUL_STAGES_32x5	11.0				
CUBLASLT_MATMUL_STAGES_32x6	11.0				
CUBLASLT_MATMUL_STAGES_32xAUTO	11.8				
CUBLASLT_MATMUL_STAGES_64x1	11.0				
CUBLASLT_MATMUL_STAGES_64x2	11.0				
CUBLASLT_MATMUL_STAGES_64x3	11.0				
CUBLASLT_MATMUL_STAGES_64x4	11.0				
CUBLASLT_MATMUL_STAGES_64x5	11.0				
CUBLASLT_MATMUL_STAGES_64x6	11.0				
CUBLASLT_MATMUL_STAGES_64xAUTO	11.8				
CUBLASLT_MATMUL_STAGES_768xAUTO	13.0				
CUBLASLT_MATMUL_STAGES_8x3	11.8				
CUBLASLT_MATMUL_STAGES_8x4	11.0				
CUBLASLT_MATMUL_STAGES_8x5	11.2				
CUBLASLT_MATMUL_STAGES_8xAUTO	11.8				
CUBLASLT_MATMUL_STAGES_END	11.0				
CUBLASLT_MATMUL_STAGES_UNDEFINED	11.0				
CUBLASLT_MATMUL_TILE_104x128	12.6				
CUBLASLT_MATMUL_TILE_104x192	12.6				
CUBLASLT_MATMUL_TILE_104x256	12.6				
CUBLASLT_MATMUL_TILE_104x320	12.6				
CUBLASLT_MATMUL_TILE_104x384	12.6				
CUBLASLT_MATMUL_TILE_104x448	12.6				
CUBLASLT_MATMUL_TILE_104x64	12.6				
CUBLASLT_MATMUL_TILE_112x128	12.6				
CUBLASLT_MATMUL_TILE_112x192	12.6				
CUBLASLT_MATMUL_TILE_112x256	12.6				
CUBLASLT_MATMUL_TILE_112x320	12.6				
CUBLASLT_MATMUL_TILE_112x384	12.6				
CUBLASLT_MATMUL_TILE_112x64	12.6				
CUBLASLT_MATMUL_TILE_120x128	12.6				
CUBLASLT_MATMUL_TILE_120x192	12.6				
CUBLASLT_MATMUL_TILE_120x256	12.6				

Table 15 – continued from previous page

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_120x320	12.6				
CUBLASLT_MATMUL_TILE_120x384	12.6				
CUBLASLT_MATMUL_TILE_120x64	12.6				
CUBLASLT_MATMUL_TILE_128x104	12.6				
CUBLASLT_MATMUL_TILE_128x112	12.6				
CUBLASLT_MATMUL_TILE_128x120	12.6				
CUBLASLT_MATMUL_TILE_128x128	10.1				
CUBLASLT_MATMUL_TILE_128x136	12.6				
CUBLASLT_MATMUL_TILE_128x144	12.6				
CUBLASLT_MATMUL_TILE_128x152	12.6				
CUBLASLT_MATMUL_TILE_128x16	12.6				
CUBLASLT_MATMUL_TILE_128x160	11.3				
CUBLASLT_MATMUL_TILE_128x168	12.6				
CUBLASLT_MATMUL_TILE_128x176	12.6				
CUBLASLT_MATMUL_TILE_128x184	12.6				
CUBLASLT_MATMUL_TILE_128x192	11.8				
CUBLASLT_MATMUL_TILE_128x200	12.6				
CUBLASLT_MATMUL_TILE_128x208	12.6				
CUBLASLT_MATMUL_TILE_128x216	12.6				
CUBLASLT_MATMUL_TILE_128x224	12.6				
CUBLASLT_MATMUL_TILE_128x232	12.6				
CUBLASLT_MATMUL_TILE_128x24	12.6				
CUBLASLT_MATMUL_TILE_128x240	12.6				
CUBLASLT_MATMUL_TILE_128x248	12.6				
CUBLASLT_MATMUL_TILE_128x256	10.1				
CUBLASLT_MATMUL_TILE_128x264	12.6				
CUBLASLT_MATMUL_TILE_128x272	12.6				
CUBLASLT_MATMUL_TILE_128x280	12.6				
CUBLASLT_MATMUL_TILE_128x288	12.6				
CUBLASLT_MATMUL_TILE_128x296	12.6				
CUBLASLT_MATMUL_TILE_128x304	12.6				
CUBLASLT_MATMUL_TILE_128x312	12.6				
CUBLASLT_MATMUL_TILE_128x32	10.1				
CUBLASLT_MATMUL_TILE_128x320	12.6				
CUBLASLT_MATMUL_TILE_128x328	12.6				
CUBLASLT_MATMUL_TILE_128x336	12.6				
CUBLASLT_MATMUL_TILE_128x344	12.6				
CUBLASLT_MATMUL_TILE_128x352	12.6				
CUBLASLT_MATMUL_TILE_128x360	12.6				
CUBLASLT_MATMUL_TILE_128x368	12.6				
CUBLASLT_MATMUL_TILE_128x376	12.6				
CUBLASLT_MATMUL_TILE_128x384	12.6				
CUBLASLT_MATMUL_TILE_128x392	12.6				
CUBLASLT_MATMUL_TILE_128x40	12.6				
CUBLASLT_MATMUL_TILE_128x400	12.6				
CUBLASLT_MATMUL_TILE_128x408	12.6				
CUBLASLT_MATMUL_TILE_128x416	12.6				
CUBLASLT_MATMUL_TILE_128x424	12.6				
CUBLASLT_MATMUL_TILE_128x432	12.6				
CUBLASLT_MATMUL_TILE_128x440	12.6				

Table 15 – continued from previous page

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_128x448	12.6				
CUBLASLT_MATMUL_TILE_128x456	12.6				
CUBLASLT_MATMUL_TILE_128x464	12.6				
CUBLASLT_MATMUL_TILE_128x472	12.6				
CUBLASLT_MATMUL_TILE_128x48	12.6				
CUBLASLT_MATMUL_TILE_128x480	12.6				
CUBLASLT_MATMUL_TILE_128x488	12.6				
CUBLASLT_MATMUL_TILE_128x496	12.6				
CUBLASLT_MATMUL_TILE_128x504	12.6				
CUBLASLT_MATMUL_TILE_128x512	12.6				
CUBLASLT_MATMUL_TILE_128x56	12.6				
CUBLASLT_MATMUL_TILE_128x64	10.1				
CUBLASLT_MATMUL_TILE_128x72	12.6				
CUBLASLT_MATMUL_TILE_128x8	12.6				
CUBLASLT_MATMUL_TILE_128x80	12.6				
CUBLASLT_MATMUL_TILE_128x88	12.6				
CUBLASLT_MATMUL_TILE_128x96	11.8				
CUBLASLT_MATMUL_TILE_136x128	12.6				
CUBLASLT_MATMUL_TILE_136x192	12.6				
CUBLASLT_MATMUL_TILE_136x256	12.6				
CUBLASLT_MATMUL_TILE_136x320	12.6				
CUBLASLT_MATMUL_TILE_136x64	12.6				
CUBLASLT_MATMUL_TILE_144x128	12.6				
CUBLASLT_MATMUL_TILE_144x192	12.6				
CUBLASLT_MATMUL_TILE_144x256	12.6				
CUBLASLT_MATMUL_TILE_144x320	12.6				
CUBLASLT_MATMUL_TILE_144x64	12.6				
CUBLASLT_MATMUL_TILE_152x128	12.6				
CUBLASLT_MATMUL_TILE_152x192	12.6				
CUBLASLT_MATMUL_TILE_152x256	12.6				
CUBLASLT_MATMUL_TILE_152x320	12.6				
CUBLASLT_MATMUL_TILE_152x64	12.6				
CUBLASLT_MATMUL_TILE_160x128	11.3				
CUBLASLT_MATMUL_TILE_160x192	12.6				
CUBLASLT_MATMUL_TILE_160x256	12.6				
CUBLASLT_MATMUL_TILE_160x64	12.6				
CUBLASLT_MATMUL_TILE_168x128	12.6				
CUBLASLT_MATMUL_TILE_168x192	12.6				
CUBLASLT_MATMUL_TILE_168x256	12.6				
CUBLASLT_MATMUL_TILE_168x64	12.6				
CUBLASLT_MATMUL_TILE_16x128	12.6				
CUBLASLT_MATMUL_TILE_16x16	10.1				
CUBLASLT_MATMUL_TILE_16x192	12.6				
CUBLASLT_MATMUL_TILE_16x256	12.6				
CUBLASLT_MATMUL_TILE_16x32	10.1				
CUBLASLT_MATMUL_TILE_16x320	12.6				
CUBLASLT_MATMUL_TILE_16x384	12.6				
CUBLASLT_MATMUL_TILE_16x448	12.6				
CUBLASLT_MATMUL_TILE_16x512	12.6				
CUBLASLT_MATMUL_TILE_16x576	12.6				

Table 15 – continued from previous page

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_16x64	12.6				
CUBLASLT_MATMUL_TILE_16x640	12.6				
CUBLASLT_MATMUL_TILE_16x704	12.6				
CUBLASLT_MATMUL_TILE_16x768	12.6				
CUBLASLT_MATMUL_TILE_16x8	10.1				
CUBLASLT_MATMUL_TILE_176x128	12.6				
CUBLASLT_MATMUL_TILE_176x192	12.6				
CUBLASLT_MATMUL_TILE_176x256	12.6				
CUBLASLT_MATMUL_TILE_176x64	12.6				
CUBLASLT_MATMUL_TILE_184x128	12.6				
CUBLASLT_MATMUL_TILE_184x192	12.6				
CUBLASLT_MATMUL_TILE_184x256	12.6				
CUBLASLT_MATMUL_TILE_184x64	12.6				
CUBLASLT_MATMUL_TILE_192x104	12.6				
CUBLASLT_MATMUL_TILE_192x112	12.6				
CUBLASLT_MATMUL_TILE_192x120	12.6				
CUBLASLT_MATMUL_TILE_192x128	11.3				
CUBLASLT_MATMUL_TILE_192x136	12.6				
CUBLASLT_MATMUL_TILE_192x144	12.6				
CUBLASLT_MATMUL_TILE_192x152	12.6				
CUBLASLT_MATMUL_TILE_192x16	12.6				
CUBLASLT_MATMUL_TILE_192x160	12.6				
CUBLASLT_MATMUL_TILE_192x168	12.6				
CUBLASLT_MATMUL_TILE_192x176	12.6				
CUBLASLT_MATMUL_TILE_192x184	12.6				
CUBLASLT_MATMUL_TILE_192x192	12.6				
CUBLASLT_MATMUL_TILE_192x200	12.6				
CUBLASLT_MATMUL_TILE_192x208	12.6				
CUBLASLT_MATMUL_TILE_192x216	12.6				
CUBLASLT_MATMUL_TILE_192x224	12.6				
CUBLASLT_MATMUL_TILE_192x232	12.6				
CUBLASLT_MATMUL_TILE_192x24	12.6				
CUBLASLT_MATMUL_TILE_192x240	12.6				
CUBLASLT_MATMUL_TILE_192x248	12.6				
CUBLASLT_MATMUL_TILE_192x256	12.6				
CUBLASLT_MATMUL_TILE_192x264	12.6				
CUBLASLT_MATMUL_TILE_192x272	12.6				
CUBLASLT_MATMUL_TILE_192x280	12.6				
CUBLASLT_MATMUL_TILE_192x288	12.6				
CUBLASLT_MATMUL_TILE_192x296	12.6				
CUBLASLT_MATMUL_TILE_192x304	12.6				
CUBLASLT_MATMUL_TILE_192x312	12.6				
CUBLASLT_MATMUL_TILE_192x32	12.6				
CUBLASLT_MATMUL_TILE_192x320	12.6				
CUBLASLT_MATMUL_TILE_192x328	12.6				
CUBLASLT_MATMUL_TILE_192x336	12.6				
CUBLASLT_MATMUL_TILE_192x40	12.6				
CUBLASLT_MATMUL_TILE_192x48	12.6				
CUBLASLT_MATMUL_TILE_192x56	12.6				
CUBLASLT_MATMUL_TILE_192x64	12.6				

Table 15 – continued from previous page

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_192x72	12.6				
CUBLASLT_MATMUL_TILE_192x8	12.6				
CUBLASLT_MATMUL_TILE_192x80	12.6				
CUBLASLT_MATMUL_TILE_192x88	12.6				
CUBLASLT_MATMUL_TILE_192x96	12.6				
CUBLASLT_MATMUL_TILE_200x128	12.6				
CUBLASLT_MATMUL_TILE_200x192	12.6				
CUBLASLT_MATMUL_TILE_200x64	12.6				
CUBLASLT_MATMUL_TILE_208x128	12.6				
CUBLASLT_MATMUL_TILE_208x192	12.6				
CUBLASLT_MATMUL_TILE_208x64	12.6				
CUBLASLT_MATMUL_TILE_216x128	12.6				
CUBLASLT_MATMUL_TILE_216x192	12.6				
CUBLASLT_MATMUL_TILE_216x64	12.6				
CUBLASLT_MATMUL_TILE_224x128	12.6				
CUBLASLT_MATMUL_TILE_224x192	12.6				
CUBLASLT_MATMUL_TILE_224x64	12.6				
CUBLASLT_MATMUL_TILE_232x128	12.6				
CUBLASLT_MATMUL_TILE_232x192	12.6				
CUBLASLT_MATMUL_TILE_232x64	12.6				
CUBLASLT_MATMUL_TILE_240x128	12.6				
CUBLASLT_MATMUL_TILE_240x192	12.6				
CUBLASLT_MATMUL_TILE_240x64	12.6				
CUBLASLT_MATMUL_TILE_248x128	12.6				
CUBLASLT_MATMUL_TILE_248x192	12.6				
CUBLASLT_MATMUL_TILE_248x64	12.6				
CUBLASLT_MATMUL_TILE_24x128	12.6				
CUBLASLT_MATMUL_TILE_24x192	12.6				
CUBLASLT_MATMUL_TILE_24x256	12.6				
CUBLASLT_MATMUL_TILE_24x320	12.6				
CUBLASLT_MATMUL_TILE_24x384	12.6				
CUBLASLT_MATMUL_TILE_24x448	12.6				
CUBLASLT_MATMUL_TILE_24x512	12.6				
CUBLASLT_MATMUL_TILE_24x576	12.6				
CUBLASLT_MATMUL_TILE_24x64	12.6				
CUBLASLT_MATMUL_TILE_24x640	12.6				
CUBLASLT_MATMUL_TILE_24x704	12.6				
CUBLASLT_MATMUL_TILE_24x768	12.6				
CUBLASLT_MATMUL_TILE_256x1024	12.8				
CUBLASLT_MATMUL_TILE_256x104	12.6				
CUBLASLT_MATMUL_TILE_256x112	12.6				
CUBLASLT_MATMUL_TILE_256x120	12.6				
CUBLASLT_MATMUL_TILE_256x128	10.1				
CUBLASLT_MATMUL_TILE_256x136	12.6				
CUBLASLT_MATMUL_TILE_256x144	12.6				
CUBLASLT_MATMUL_TILE_256x152	12.6				
CUBLASLT_MATMUL_TILE_256x16	12.6				
CUBLASLT_MATMUL_TILE_256x160	12.6				
CUBLASLT_MATMUL_TILE_256x168	12.6				
CUBLASLT_MATMUL_TILE_256x176	12.6				

Table 15 – continued from previous page

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_256x184	12.6				
CUBLASLT_MATMUL_TILE_256x192	12.6				
CUBLASLT_MATMUL_TILE_256x200	12.6				
CUBLASLT_MATMUL_TILE_256x208	12.6				
CUBLASLT_MATMUL_TILE_256x216	12.6				
CUBLASLT_MATMUL_TILE_256x224	12.6				
CUBLASLT_MATMUL_TILE_256x232	12.6				
CUBLASLT_MATMUL_TILE_256x24	12.6				
CUBLASLT_MATMUL_TILE_256x240	12.6				
CUBLASLT_MATMUL_TILE_256x248	12.6				
CUBLASLT_MATMUL_TILE_256x256	12.6				
CUBLASLT_MATMUL_TILE_256x32	12.1				
CUBLASLT_MATMUL_TILE_256x40	12.6				
CUBLASLT_MATMUL_TILE_256x48	12.6				
CUBLASLT_MATMUL_TILE_256x512	12.8				
CUBLASLT_MATMUL_TILE_256x56	12.6				
CUBLASLT_MATMUL_TILE_256x64	10.1				
CUBLASLT_MATMUL_TILE_256x72	12.6				
CUBLASLT_MATMUL_TILE_256x8	12.6				
CUBLASLT_MATMUL_TILE_256x80	12.6				
CUBLASLT_MATMUL_TILE_256x88	12.6				
CUBLASLT_MATMUL_TILE_256x96	12.6				
CUBLASLT_MATMUL_TILE_264x128	12.6				
CUBLASLT_MATMUL_TILE_264x64	12.6				
CUBLASLT_MATMUL_TILE_272x128	12.6				
CUBLASLT_MATMUL_TILE_272x64	12.6				
CUBLASLT_MATMUL_TILE_280x128	12.6				
CUBLASLT_MATMUL_TILE_280x64	12.6				
CUBLASLT_MATMUL_TILE_288x128	12.6				
CUBLASLT_MATMUL_TILE_288x64	12.6				
CUBLASLT_MATMUL_TILE_296x128	12.6				
CUBLASLT_MATMUL_TILE_296x64	12.6				
CUBLASLT_MATMUL_TILE_304x128	12.6				
CUBLASLT_MATMUL_TILE_304x64	12.6				
CUBLASLT_MATMUL_TILE_312x128	12.6				
CUBLASLT_MATMUL_TILE_312x64	12.6				
CUBLASLT_MATMUL_TILE_320x104	12.6				
CUBLASLT_MATMUL_TILE_320x112	12.6				
CUBLASLT_MATMUL_TILE_320x120	12.6				
CUBLASLT_MATMUL_TILE_320x128	12.6				
CUBLASLT_MATMUL_TILE_320x136	12.6				
CUBLASLT_MATMUL_TILE_320x144	12.6				
CUBLASLT_MATMUL_TILE_320x152	12.6				
CUBLASLT_MATMUL_TILE_320x16	12.6				
CUBLASLT_MATMUL_TILE_320x160	12.6				
CUBLASLT_MATMUL_TILE_320x168	12.6				
CUBLASLT_MATMUL_TILE_320x176	12.6				
CUBLASLT_MATMUL_TILE_320x184	12.6				
CUBLASLT_MATMUL_TILE_320x192	12.6				
CUBLASLT_MATMUL_TILE_320x200	12.6				

Table 15 – continued from previous page

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_320x24	12.6				
CUBLASLT_MATMUL_TILE_320x32	12.6				
CUBLASLT_MATMUL_TILE_320x40	12.6				
CUBLASLT_MATMUL_TILE_320x48	12.6				
CUBLASLT_MATMUL_TILE_320x56	12.6				
CUBLASLT_MATMUL_TILE_320x64	12.6				
CUBLASLT_MATMUL_TILE_320x72	12.6				
CUBLASLT_MATMUL_TILE_320x8	12.6				
CUBLASLT_MATMUL_TILE_320x80	12.6				
CUBLASLT_MATMUL_TILE_320x88	12.6				
CUBLASLT_MATMUL_TILE_320x96	12.6				
CUBLASLT_MATMUL_TILE_328x128	12.6				
CUBLASLT_MATMUL_TILE_328x64	12.6				
CUBLASLT_MATMUL_TILE_32x128	10.1				
CUBLASLT_MATMUL_TILE_32x16	10.1				
CUBLASLT_MATMUL_TILE_32x192	12.6				
CUBLASLT_MATMUL_TILE_32x256	12.1				
CUBLASLT_MATMUL_TILE_32x32	10.1				
CUBLASLT_MATMUL_TILE_32x320	12.6				
CUBLASLT_MATMUL_TILE_32x384	12.6				
CUBLASLT_MATMUL_TILE_32x448	12.6				
CUBLASLT_MATMUL_TILE_32x512	12.6				
CUBLASLT_MATMUL_TILE_32x576	12.6				
CUBLASLT_MATMUL_TILE_32x64	10.1				
CUBLASLT_MATMUL_TILE_32x640	12.6				
CUBLASLT_MATMUL_TILE_32x704	12.6				
CUBLASLT_MATMUL_TILE_32x768	12.6				
CUBLASLT_MATMUL_TILE_32x8	10.1				
CUBLASLT_MATMUL_TILE_336x128	12.6				
CUBLASLT_MATMUL_TILE_336x64	12.6				
CUBLASLT_MATMUL_TILE_344x128	12.6				
CUBLASLT_MATMUL_TILE_344x64	12.6				
CUBLASLT_MATMUL_TILE_352x128	12.6				
CUBLASLT_MATMUL_TILE_352x64	12.6				
CUBLASLT_MATMUL_TILE_360x128	12.6				
CUBLASLT_MATMUL_TILE_360x64	12.6				
CUBLASLT_MATMUL_TILE_368x128	12.6				
CUBLASLT_MATMUL_TILE_368x64	12.6				
CUBLASLT_MATMUL_TILE_376x128	12.6				
CUBLASLT_MATMUL_TILE_376x64	12.6				
CUBLASLT_MATMUL_TILE_384x104	12.6				
CUBLASLT_MATMUL_TILE_384x112	12.6				
CUBLASLT_MATMUL_TILE_384x120	12.6				
CUBLASLT_MATMUL_TILE_384x128	12.6				
CUBLASLT_MATMUL_TILE_384x136	12.6				
CUBLASLT_MATMUL_TILE_384x144	12.6				
CUBLASLT_MATMUL_TILE_384x152	12.6				
CUBLASLT_MATMUL_TILE_384x16	12.6				
CUBLASLT_MATMUL_TILE_384x160	12.6				
CUBLASLT_MATMUL_TILE_384x168	12.6				

Table 15 – continued from previous page

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_384x24	12.6				
CUBLASLT_MATMUL_TILE_384x32	12.6				
CUBLASLT_MATMUL_TILE_384x40	12.6				
CUBLASLT_MATMUL_TILE_384x48	12.6				
CUBLASLT_MATMUL_TILE_384x56	12.6				
CUBLASLT_MATMUL_TILE_384x64	12.6				
CUBLASLT_MATMUL_TILE_384x72	12.6				
CUBLASLT_MATMUL_TILE_384x8	12.6				
CUBLASLT_MATMUL_TILE_384x80	12.6				
CUBLASLT_MATMUL_TILE_384x88	12.6				
CUBLASLT_MATMUL_TILE_384x96	12.6				
CUBLASLT_MATMUL_TILE_392x64	12.6				
CUBLASLT_MATMUL_TILE_400x64	12.6				
CUBLASLT_MATMUL_TILE_408x64	12.6				
CUBLASLT_MATMUL_TILE_40x128	12.6				
CUBLASLT_MATMUL_TILE_40x192	12.6				
CUBLASLT_MATMUL_TILE_40x256	12.6				
CUBLASLT_MATMUL_TILE_40x320	12.6				
CUBLASLT_MATMUL_TILE_40x384	12.6				
CUBLASLT_MATMUL_TILE_40x448	12.6				
CUBLASLT_MATMUL_TILE_40x512	12.6				
CUBLASLT_MATMUL_TILE_40x576	12.6				
CUBLASLT_MATMUL_TILE_40x64	12.6				
CUBLASLT_MATMUL_TILE_40x640	12.6				
CUBLASLT_MATMUL_TILE_40x704	12.6				
CUBLASLT_MATMUL_TILE_40x768	12.6				
CUBLASLT_MATMUL_TILE_416x64	12.6				
CUBLASLT_MATMUL_TILE_424x64	12.6				
CUBLASLT_MATMUL_TILE_432x64	12.6				
CUBLASLT_MATMUL_TILE_440x64	12.6				
CUBLASLT_MATMUL_TILE_448x104	12.6				
CUBLASLT_MATMUL_TILE_448x112	12.6				
CUBLASLT_MATMUL_TILE_448x120	12.6				
CUBLASLT_MATMUL_TILE_448x128	12.6				
CUBLASLT_MATMUL_TILE_448x136	12.6				
CUBLASLT_MATMUL_TILE_448x144	12.6				
CUBLASLT_MATMUL_TILE_448x16	12.6				
CUBLASLT_MATMUL_TILE_448x24	12.6				
CUBLASLT_MATMUL_TILE_448x32	12.6				
CUBLASLT_MATMUL_TILE_448x40	12.6				
CUBLASLT_MATMUL_TILE_448x48	12.6				
CUBLASLT_MATMUL_TILE_448x56	12.6				
CUBLASLT_MATMUL_TILE_448x64	12.6				
CUBLASLT_MATMUL_TILE_448x72	12.6				
CUBLASLT_MATMUL_TILE_448x8	12.6				
CUBLASLT_MATMUL_TILE_448x80	12.6				
CUBLASLT_MATMUL_TILE_448x88	12.6				
CUBLASLT_MATMUL_TILE_448x96	12.6				
CUBLASLT_MATMUL_TILE_456x64	12.6				
CUBLASLT_MATMUL_TILE_464x64	12.6				

Table 15 – continued from previous page

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_472x64	12.6				
CUBLASLT_MATMUL_TILE_480x64	12.6				
CUBLASLT_MATMUL_TILE_488x64	12.6				
CUBLASLT_MATMUL_TILE_48x128	12.6				
CUBLASLT_MATMUL_TILE_48x192	12.6				
CUBLASLT_MATMUL_TILE_48x256	12.6				
CUBLASLT_MATMUL_TILE_48x320	12.6				
CUBLASLT_MATMUL_TILE_48x384	12.6				
CUBLASLT_MATMUL_TILE_48x448	12.6				
CUBLASLT_MATMUL_TILE_48x512	12.6				
CUBLASLT_MATMUL_TILE_48x576	12.6				
CUBLASLT_MATMUL_TILE_48x64	12.6				
CUBLASLT_MATMUL_TILE_48x640	12.6				
CUBLASLT_MATMUL_TILE_48x704	12.6				
CUBLASLT_MATMUL_TILE_48x768	12.6				
CUBLASLT_MATMUL_TILE_496x64	12.6				
CUBLASLT_MATMUL_TILE_504x64	12.6				
CUBLASLT_MATMUL_TILE_512x1024	12.8				
CUBLASLT_MATMUL_TILE_512x104	12.6				
CUBLASLT_MATMUL_TILE_512x112	12.6				
CUBLASLT_MATMUL_TILE_512x120	12.6				
CUBLASLT_MATMUL_TILE_512x128	12.6				
CUBLASLT_MATMUL_TILE_512x16	12.6				
CUBLASLT_MATMUL_TILE_512x24	12.6				
CUBLASLT_MATMUL_TILE_512x32	12.6				
CUBLASLT_MATMUL_TILE_512x40	12.6				
CUBLASLT_MATMUL_TILE_512x48	12.6				
CUBLASLT_MATMUL_TILE_512x512	12.8				
CUBLASLT_MATMUL_TILE_512x56	12.6				
CUBLASLT_MATMUL_TILE_512x64	10.1				
CUBLASLT_MATMUL_TILE_512x72	12.6				
CUBLASLT_MATMUL_TILE_512x8	12.6				
CUBLASLT_MATMUL_TILE_512x80	12.6				
CUBLASLT_MATMUL_TILE_512x88	12.6				
CUBLASLT_MATMUL_TILE_512x96	12.6				
CUBLASLT_MATMUL_TILE_520x64	12.6				
CUBLASLT_MATMUL_TILE_528x64	12.6				
CUBLASLT_MATMUL_TILE_536x64	12.6				
CUBLASLT_MATMUL_TILE_544x64	12.6				
CUBLASLT_MATMUL_TILE_552x64	12.6				
CUBLASLT_MATMUL_TILE_560x64	12.6				
CUBLASLT_MATMUL_TILE_568x64	12.6				
CUBLASLT_MATMUL_TILE_56x128	12.6				
CUBLASLT_MATMUL_TILE_56x192	12.6				
CUBLASLT_MATMUL_TILE_56x256	12.6				
CUBLASLT_MATMUL_TILE_56x320	12.6				
CUBLASLT_MATMUL_TILE_56x384	12.6				
CUBLASLT_MATMUL_TILE_56x448	12.6				
CUBLASLT_MATMUL_TILE_56x512	12.6				
CUBLASLT_MATMUL_TILE_56x576	12.6				

Table 15 – continued from previous page

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_56x640	12.6				
CUBLASLT_MATMUL_TILE_56x704	12.6				
CUBLASLT_MATMUL_TILE_56x768	12.6				
CUBLASLT_MATMUL_TILE_576x104	12.6				
CUBLASLT_MATMUL_TILE_576x112	12.6				
CUBLASLT_MATMUL_TILE_576x16	12.6				
CUBLASLT_MATMUL_TILE_576x24	12.6				
CUBLASLT_MATMUL_TILE_576x32	12.6				
CUBLASLT_MATMUL_TILE_576x40	12.6				
CUBLASLT_MATMUL_TILE_576x48	12.6				
CUBLASLT_MATMUL_TILE_576x56	12.6				
CUBLASLT_MATMUL_TILE_576x64	12.6				
CUBLASLT_MATMUL_TILE_576x72	12.6				
CUBLASLT_MATMUL_TILE_576x8	12.6				
CUBLASLT_MATMUL_TILE_576x80	12.6				
CUBLASLT_MATMUL_TILE_576x88	12.6				
CUBLASLT_MATMUL_TILE_576x96	12.6				
CUBLASLT_MATMUL_TILE_584x64	12.6				
CUBLASLT_MATMUL_TILE_592x64	12.6				
CUBLASLT_MATMUL_TILE_600x64	12.6				
CUBLASLT_MATMUL_TILE_608x64	12.6				
CUBLASLT_MATMUL_TILE_616x64	12.6				
CUBLASLT_MATMUL_TILE_624x64	12.6				
CUBLASLT_MATMUL_TILE_632x64	12.6				
CUBLASLT_MATMUL_TILE_640x16	12.6				
CUBLASLT_MATMUL_TILE_640x24	12.6				
CUBLASLT_MATMUL_TILE_640x32	12.6				
CUBLASLT_MATMUL_TILE_640x40	12.6				
CUBLASLT_MATMUL_TILE_640x48	12.6				
CUBLASLT_MATMUL_TILE_640x56	12.6				
CUBLASLT_MATMUL_TILE_640x64	12.6				
CUBLASLT_MATMUL_TILE_640x72	12.6				
CUBLASLT_MATMUL_TILE_640x8	12.6				
CUBLASLT_MATMUL_TILE_640x80	12.6				
CUBLASLT_MATMUL_TILE_640x88	12.6				
CUBLASLT_MATMUL_TILE_640x96	12.6				
CUBLASLT_MATMUL_TILE_648x64	12.6				
CUBLASLT_MATMUL_TILE_64x104	12.6				
CUBLASLT_MATMUL_TILE_64x112	12.6				
CUBLASLT_MATMUL_TILE_64x120	12.6				
CUBLASLT_MATMUL_TILE_64x128	10.1				
CUBLASLT_MATMUL_TILE_64x136	12.6				
CUBLASLT_MATMUL_TILE_64x144	12.6				
CUBLASLT_MATMUL_TILE_64x152	12.6				
CUBLASLT_MATMUL_TILE_64x16	12.6				
CUBLASLT_MATMUL_TILE_64x160	12.6				
CUBLASLT_MATMUL_TILE_64x168	12.6				
CUBLASLT_MATMUL_TILE_64x176	12.6				
CUBLASLT_MATMUL_TILE_64x184	12.6				
CUBLASLT_MATMUL_TILE_64x192	12.6				

Table 15 – continued from previous page

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_64x200	12.6				
CUBLASLT_MATMUL_TILE_64x208	12.6				
CUBLASLT_MATMUL_TILE_64x216	12.6				
CUBLASLT_MATMUL_TILE_64x224	12.6				
CUBLASLT_MATMUL_TILE_64x232	12.6				
CUBLASLT_MATMUL_TILE_64x24	12.6				
CUBLASLT_MATMUL_TILE_64x240	12.6				
CUBLASLT_MATMUL_TILE_64x248	12.6				
CUBLASLT_MATMUL_TILE_64x256	10.1				
CUBLASLT_MATMUL_TILE_64x264	12.6				
CUBLASLT_MATMUL_TILE_64x272	12.6				
CUBLASLT_MATMUL_TILE_64x280	12.6				
CUBLASLT_MATMUL_TILE_64x288	12.6				
CUBLASLT_MATMUL_TILE_64x296	12.6				
CUBLASLT_MATMUL_TILE_64x304	12.6				
CUBLASLT_MATMUL_TILE_64x312	12.6				
CUBLASLT_MATMUL_TILE_64x32	10.1				
CUBLASLT_MATMUL_TILE_64x320	12.6				
CUBLASLT_MATMUL_TILE_64x328	12.6				
CUBLASLT_MATMUL_TILE_64x336	12.6				
CUBLASLT_MATMUL_TILE_64x344	12.6				
CUBLASLT_MATMUL_TILE_64x352	12.6				
CUBLASLT_MATMUL_TILE_64x360	12.6				
CUBLASLT_MATMUL_TILE_64x368	12.6				
CUBLASLT_MATMUL_TILE_64x376	12.6				
CUBLASLT_MATMUL_TILE_64x384	12.6				
CUBLASLT_MATMUL_TILE_64x392	12.6				
CUBLASLT_MATMUL_TILE_64x40	12.6				
CUBLASLT_MATMUL_TILE_64x400	12.6				
CUBLASLT_MATMUL_TILE_64x408	12.6				
CUBLASLT_MATMUL_TILE_64x416	12.6				
CUBLASLT_MATMUL_TILE_64x424	12.6				
CUBLASLT_MATMUL_TILE_64x432	12.6				
CUBLASLT_MATMUL_TILE_64x440	12.6				
CUBLASLT_MATMUL_TILE_64x448	12.6				
CUBLASLT_MATMUL_TILE_64x456	12.6				
CUBLASLT_MATMUL_TILE_64x464	12.6				
CUBLASLT_MATMUL_TILE_64x472	12.6				
CUBLASLT_MATMUL_TILE_64x48	12.6				
CUBLASLT_MATMUL_TILE_64x480	12.6				
CUBLASLT_MATMUL_TILE_64x488	12.6				
CUBLASLT_MATMUL_TILE_64x496	12.6				
CUBLASLT_MATMUL_TILE_64x504	12.6				
CUBLASLT_MATMUL_TILE_64x512	10.1				
CUBLASLT_MATMUL_TILE_64x520	12.6				
CUBLASLT_MATMUL_TILE_64x528	12.6				
CUBLASLT_MATMUL_TILE_64x536	12.6				
CUBLASLT_MATMUL_TILE_64x544	12.6				
CUBLASLT_MATMUL_TILE_64x552	12.6				
CUBLASLT_MATMUL_TILE_64x56	12.6				

Table 15 – continued from previous page

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_64x560	12.6				
CUBLASLT_MATMUL_TILE_64x568	12.6				
CUBLASLT_MATMUL_TILE_64x576	12.6				
CUBLASLT_MATMUL_TILE_64x584	12.6				
CUBLASLT_MATMUL_TILE_64x592	12.6				
CUBLASLT_MATMUL_TILE_64x600	12.6				
CUBLASLT_MATMUL_TILE_64x608	12.6				
CUBLASLT_MATMUL_TILE_64x616	12.6				
CUBLASLT_MATMUL_TILE_64x624	12.6				
CUBLASLT_MATMUL_TILE_64x632	12.6				
CUBLASLT_MATMUL_TILE_64x64	10.1				
CUBLASLT_MATMUL_TILE_64x640	12.6				
CUBLASLT_MATMUL_TILE_64x648	12.6				
CUBLASLT_MATMUL_TILE_64x656	12.6				
CUBLASLT_MATMUL_TILE_64x664	12.6				
CUBLASLT_MATMUL_TILE_64x672	12.6				
CUBLASLT_MATMUL_TILE_64x680	12.6				
CUBLASLT_MATMUL_TILE_64x688	12.6				
CUBLASLT_MATMUL_TILE_64x696	12.6				
CUBLASLT_MATMUL_TILE_64x704	12.6				
CUBLASLT_MATMUL_TILE_64x712	12.6				
CUBLASLT_MATMUL_TILE_64x72	12.6				
CUBLASLT_MATMUL_TILE_64x720	12.6				
CUBLASLT_MATMUL_TILE_64x728	12.6				
CUBLASLT_MATMUL_TILE_64x736	12.6				
CUBLASLT_MATMUL_TILE_64x744	12.6				
CUBLASLT_MATMUL_TILE_64x752	12.6				
CUBLASLT_MATMUL_TILE_64x760	12.6				
CUBLASLT_MATMUL_TILE_64x768	12.6				
CUBLASLT_MATMUL_TILE_64x8	10.1				
CUBLASLT_MATMUL_TILE_64x80	12.6				
CUBLASLT_MATMUL_TILE_64x88	12.6				
CUBLASLT_MATMUL_TILE_64x96	11.3				
CUBLASLT_MATMUL_TILE_656x64	12.6				
CUBLASLT_MATMUL_TILE_664x64	12.6				
CUBLASLT_MATMUL_TILE_672x64	12.6				
CUBLASLT_MATMUL_TILE_680x64	12.6				
CUBLASLT_MATMUL_TILE_688x64	12.6				
CUBLASLT_MATMUL_TILE_696x64	12.6				
CUBLASLT_MATMUL_TILE_704x16	12.6				
CUBLASLT_MATMUL_TILE_704x24	12.6				
CUBLASLT_MATMUL_TILE_704x32	12.6				
CUBLASLT_MATMUL_TILE_704x40	12.6				
CUBLASLT_MATMUL_TILE_704x48	12.6				
CUBLASLT_MATMUL_TILE_704x56	12.6				
CUBLASLT_MATMUL_TILE_704x64	12.6				
CUBLASLT_MATMUL_TILE_704x72	12.6				
CUBLASLT_MATMUL_TILE_704x8	12.6				
CUBLASLT_MATMUL_TILE_704x80	12.6				
CUBLASLT_MATMUL_TILE_704x88	12.6				

Table 15 – continued from previous page

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_712x64	12.6				
CUBLASLT_MATMUL_TILE_720x64	12.6				
CUBLASLT_MATMUL_TILE_728x64	12.6				
CUBLASLT_MATMUL_TILE_72x128	12.6				
CUBLASLT_MATMUL_TILE_72x192	12.6				
CUBLASLT_MATMUL_TILE_72x256	12.6				
CUBLASLT_MATMUL_TILE_72x320	12.6				
CUBLASLT_MATMUL_TILE_72x384	12.6				
CUBLASLT_MATMUL_TILE_72x448	12.6				
CUBLASLT_MATMUL_TILE_72x512	12.6				
CUBLASLT_MATMUL_TILE_72x576	12.6				
CUBLASLT_MATMUL_TILE_72x64	12.6				
CUBLASLT_MATMUL_TILE_72x640	12.6				
CUBLASLT_MATMUL_TILE_736x64	12.6				
CUBLASLT_MATMUL_TILE_744x64	12.6				
CUBLASLT_MATMUL_TILE_752x64	12.6				
CUBLASLT_MATMUL_TILE_760x64	12.6				
CUBLASLT_MATMUL_TILE_768x16	12.6				
CUBLASLT_MATMUL_TILE_768x24	12.6				
CUBLASLT_MATMUL_TILE_768x32	12.6				
CUBLASLT_MATMUL_TILE_768x40	12.6				
CUBLASLT_MATMUL_TILE_768x48	12.6				
CUBLASLT_MATMUL_TILE_768x56	12.6				
CUBLASLT_MATMUL_TILE_768x64	12.6				
CUBLASLT_MATMUL_TILE_768x72	12.6				
CUBLASLT_MATMUL_TILE_768x8	12.6				
CUBLASLT_MATMUL_TILE_768x80	12.6				
CUBLASLT_MATMUL_TILE_80x128	12.6				
CUBLASLT_MATMUL_TILE_80x192	12.6				
CUBLASLT_MATMUL_TILE_80x256	12.6				
CUBLASLT_MATMUL_TILE_80x320	12.6				
CUBLASLT_MATMUL_TILE_80x384	12.6				
CUBLASLT_MATMUL_TILE_80x448	12.6				
CUBLASLT_MATMUL_TILE_80x512	12.6				
CUBLASLT_MATMUL_TILE_80x576	12.6				
CUBLASLT_MATMUL_TILE_80x64	12.6				
CUBLASLT_MATMUL_TILE_88x128	12.6				
CUBLASLT_MATMUL_TILE_88x192	12.6				
CUBLASLT_MATMUL_TILE_88x256	12.6				
CUBLASLT_MATMUL_TILE_88x320	12.6				
CUBLASLT_MATMUL_TILE_88x384	12.6				
CUBLASLT_MATMUL_TILE_88x448	12.6				
CUBLASLT_MATMUL_TILE_88x512	12.6				
CUBLASLT_MATMUL_TILE_88x64	12.6				
CUBLASLT_MATMUL_TILE_8x128	12.6				
CUBLASLT_MATMUL_TILE_8x16	10.1				
CUBLASLT_MATMUL_TILE_8x192	12.6				
CUBLASLT_MATMUL_TILE_8x256	12.6				
CUBLASLT_MATMUL_TILE_8x32	10.1				
CUBLASLT_MATMUL_TILE_8x320	12.6				

Table 15 – continued from previous page

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_8x384	12.6				
CUBLASLT_MATMUL_TILE_8x448	12.6				
CUBLASLT_MATMUL_TILE_8x512	12.6				
CUBLASLT_MATMUL_TILE_8x576	12.6				
CUBLASLT_MATMUL_TILE_8x64	10.1				
CUBLASLT_MATMUL_TILE_8x640	12.6				
CUBLASLT_MATMUL_TILE_8x704	12.6				
CUBLASLT_MATMUL_TILE_8x768	12.6				
CUBLASLT_MATMUL_TILE_8x8	10.1				
CUBLASLT_MATMUL_TILE_96x128	11.3				
CUBLASLT_MATMUL_TILE_96x192	12.6				
CUBLASLT_MATMUL_TILE_96x256	12.6				
CUBLASLT_MATMUL_TILE_96x320	12.6				
CUBLASLT_MATMUL_TILE_96x384	12.6				
CUBLASLT_MATMUL_TILE_96x448	12.6				
CUBLASLT_MATMUL_TILE_96x512	12.6				
CUBLASLT_MATMUL_TILE_96x64	11.3				
CUBLASLT_MATMUL_TILE_END	10.1				
CUBLASLT_MATMUL_TILE_UNDEFINED	10.1				
CUBLASLT_MATRIX_LAYOUT_BATCH_COUNT	10.1				HIPBLASLT_MATRIX_
CUBLASLT_MATRIX_LAYOUT_BATCH_MODE	12.9				
CUBLASLT_MATRIX_LAYOUT_COLS	10.1				HIPBLASLT_MATRIX_
CUBLASLT_MATRIX_LAYOUT_LD	10.1				HIPBLASLT_MATRIX_
CUBLASLT_MATRIX_LAYOUT_ORDER	10.1				HIPBLASLT_MATRIX_
CUBLASLT_MATRIX_LAYOUT_PLANE_OFFSET	10.1				
CUBLASLT_MATRIX_LAYOUT_ROWS	10.1				HIPBLASLT_MATRIX_
CUBLASLT_MATRIX_LAYOUT_STRIDED_BATCH_OFFSET	10.1				HIPBLASLT_MATRIX_
CUBLASLT_MATRIX_LAYOUT_TYPE	10.1				HIPBLASLT_MATRIX_
CUBLASLT_MATRIX_TRANSFORM_DESC_POINTER_MODE	10.1				HIPBLASLT_MATRIX_
CUBLASLT_MATRIX_TRANSFORM_DESC_SCALE_TYPE	10.1				HIPBLASLT_MATRIX_
CUBLASLT_MATRIX_TRANSFORM_DESC_TRANSA	10.1				HIPBLASLT_MATRIX_
CUBLASLT_MATRIX_TRANSFORM_DESC_TRANSB	10.1				HIPBLASLT_MATRIX_
CUBLASLT_NUMERICAL_IMPL_FLAGS_ACCUMULATOR_16F	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_ACCUMULATOR_32F	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_ACCUMULATOR_32I	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_ACCUMULATOR_64F	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_ACCUMULATOR_TYPE_MASK	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_DMMA	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_FMA	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_GAUSSIAN	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_HMMA	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_IMMA	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_16BF	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_16F	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_32F	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_64F	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_8F_E4M3	11.8				
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_8F_E5M2	11.8				
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_8I	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_TF32	11.0				

Table 15 – continued from previous page

CUDA	A	D	C	R	HIP
CUBLASLT_NUMERICAL_IMPL_FLAGS_OP_INPUT_TYPE_MASK	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_OP_TYPE_MASK	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_TENSOR_OP_MASK	11.0				
CUBLASLT_ORDER_COL	10.1				HIPBLASLT_ORDER_C
CUBLASLT_ORDER_COL32	10.1				
CUBLASLT_ORDER_COL32_2R_4R4	11.0				
CUBLASLT_ORDER_COL4_4R2_8C	10.1				
CUBLASLT_ORDER_ROW	10.1				HIPBLASLT_ORDER_R
CUBLASLT_POINTER_MODE_ALPHA_DEVICE_VECTOR_BETA_HOST	11.4				HIPBLASLT_POINTER
CUBLASLT_POINTER_MODE_ALPHA_DEVICE_VECTOR_BETA_ZERO	10.1				
CUBLASLT_POINTER_MODE_DEVICE					HIPBLASLT_POINTER
CUBLASLT_POINTER_MODE_DEVICE_VECTOR	10.1				
CUBLASLT_POINTER_MODE_HOST	10.1				HIPBLASLT_POINTER
CUBLASLT_POINTER_MODE_MASK_ALPHA_DEVICE_VECTOR_BETA_HOST	11.4				
CUBLASLT_POINTER_MODE_MASK_ALPHA_DEVICE_VECTOR_BETA_ZERO	10.1				
CUBLASLT_POINTER_MODE_MASK_DEVICE	10.1				
CUBLASLT_POINTER_MODE_MASK_DEVICE_VECTOR	10.1				
CUBLASLT_POINTER_MODE_MASK_HOST	10.1				
CUBLASLT_REDUCTION_SCHEME_COMPUTE_TYPE	10.1				
CUBLASLT_REDUCTION_SCHEME_INPLACE	10.1				
CUBLASLT_REDUCTION_SCHEME_MASK	10.1				
CUBLASLT_REDUCTION_SCHEME_NONE	10.1				
CUBLASLT_REDUCTION_SCHEME_OUTPUT_TYPE	10.1				
CUBLASLT_SEARCH_BEST_FIT	10.1				
CUBLASLT_SEARCH_LIMITED_BY_ALGO_ID	10.1				
CUBLASLT_SEARCH_RESERVED_02	11.0				
CUBLASLT_SEARCH_RESERVED_03	11.0				
CUBLASLT_SEARCH_RESERVED_04	11.0				
CUBLASLT_SEARCH_RESERVED_05	11.0				
CUBLASLT_SEARCH_RESERVED_06	12.6				
CUBLASLT_SEARCH_RESERVED_07	12.6				
CUBLASLT_SEARCH_RESERVED_08	12.6				
CUBLASLT_SEARCH_RESERVED_09	12.6				
cublasLtBatchMode_t	12.9				
cublasLtClusterShape_t	11.8				
cublasLtContext	10.1				
cublasLtEmulationDescAttributes_t	13.0				
cublasLtEmulationDescOpaque_t	13.0				
cublasLtEmulationDesc_t	13.0				
cublasLtEpilogue_t	10.1				hipblasLtEpilogue
cublasLtHandle_t	10.1				hipblasLtHandle_t
cublasLtIntegerWidth_t	13.1				
cublasLtLoggerCallback_t	11.0				
cublasLtMatmulAlgoCapAttributes_t	10.1				
cublasLtMatmulAlgoConfigAttributes_t	10.1				
cublasLtMatmulAlgo_t	10.1				hipblasLtMatmulAl
cublasLtMatmulDescAttributes_t	10.1				hipblasLtMatmulDe
cublasLtMatmulDescOpaque_t	11.0				hipblasLtMatmulDe
cublasLtMatmulDesc_t	10.1				hipblasLtMatmulDe
cublasLtMatmulHeuristicResult_t	10.1				hipblasLtMatmulHe

Table 15 – continued from previous page

CUDA	A	D	C	R	HIP
cublasLtMatmulInnerShape_t	11.8				
cublasLtMatmulMatrixScale_t	12.8				hipblasLtMatmulMa
cublasLtMatmulPreferenceAttributes_t	10.1				hipblasLtMatmulPr
cublasLtMatmulPreferenceOpaque_t	11.0		13.1		hipblasLtMatmulPr
cublasLtMatmulPreference_t	10.1				hipblasLtMatmulPr
cublasLtMatmulSearch_t	10.1				
cublasLtMatmulStages_t	11.0				
cublasLtMatmulTile_t	10.1				
cublasLtMatrixLayoutAttribute_t	10.1				hipblasLtMatrixLa
cublasLtMatrixLayoutOpaque_t	11.0		13.1		hipblasLtMatrixLa
cublasLtMatrixLayoutStruct	10.1			10.2	hipblasLtMatrixLa
cublasLtMatrixLayout_t	10.1				hipblasLtMatrixLa
cublasLtMatrixTransformDescAttributes_t	10.1				hipblasLtMatrixTr
cublasLtMatrixTransformDescOpaque_t	11.0				hipblasLtMatrixTr
cublasLtMatrixTransformDesc_t	10.1				hipblasLtMatrixTr
cublasLtNumericalImplFlags_t	11.0				
cublasLtOrder_t	10.1				hipblasLtOrder_t
cublasLtPointerModeMask_t	10.1				
cublasLtPointerMode_t	10.1				hipblasLtPointerM
cublasLtReductionScheme_t	10.1				

10.6.4 4. CUBLAS Helper Function Reference

CUDA	A	D	C	R	HIP	A	D
cublasAlloc							
cublasCreate					hipblasCreate	1.8.2	
cublasCreate_v2					hipblasCreate	1.8.2	
cublasDestroy					hipblasDestroy	1.8.2	
cublasDestroy_v2					hipblasDestroy	1.8.2	
cublasFree							
cublasGetAtomicsMode					hipblasGetAtomicsMode	3.10.0	
cublasGetCudartVersion	10.1						
cublasGetEmulationSpecialValuesSupport	13.0						
cublasGetEmulationStrategy	12.9						
cublasGetError							
cublasGetFixedPointEmulationMantissaBitCountPointer	13.0						
cublasGetFixedPointEmulationMantissaBitOffset	13.0						
cublasGetFixedPointEmulationMantissaControl	13.0						
cublasGetFixedPointEmulationMaxMantissaBitCount	13.0						
cublasGetLoggerCallback	9.2						
cublasGetMathMode	9.0				hipblasGetMathMode	6.1.0	
cublasGetMatrix					hipblasGetMatrix	1.8.2	
cublasGetMatrixAsync					hipblasGetMatrixAsync	3.7.0	
cublasGetMatrixAsync_64	12.0						
cublasGetMatrix_64	12.0						
cublasGetPointerMode					hipblasGetPointerMode	1.8.2	
cublasGetPointerMode_v2					hipblasGetPointerMode	1.8.2	
cublasGetProperty							

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Table 16 – continued from previous page

CUDA	A	D	C	R	HIP	A	D
cublasGetSmCountTarget	11.3						
cublasGetStatusName	11.4						
cublasGetStatusString	11.4						
cublasGetStream					hipblasGetStream	1.8.2	
cublasGetStream_v2					hipblasGetStream	1.8.2	
cublasGetVector					hipblasGetVector	1.8.2	
cublasGetVectorAsync					hipblasGetVectorAsync	3.7.0	
cublasGetVectorAsync_64	12.0						
cublasGetVector_64	12.0						
cublasGetVersion							
cublasGetVersion_v2							
cublasInit							
cublasLogCallback	9.2						
cublasLoggerConfigure	9.2						
cublasMigrateComputeType	11.0						
cublasSetAtomicsMode					hipblasSetAtomicsMode	3.10.0	
cublasSetEmulationSpecialValuesSupport	13.0						
cublasSetEmulationStrategy	12.9						
cublasSetFixedPointEmulationMantissaBitCountPointer	13.0						
cublasSetFixedPointEmulationMantissaBitOffset	13.0						
cublasSetFixedPointEmulationMantissaControl	13.0						
cublasSetFixedPointEmulationMaxMantissaBitCount	13.0						
cublasSetKernelStream							
cublasSetLoggerCallback	9.2						
cublasSetMathMode	9.0				hipblasSetMathMode	6.1.0	
cublasSetMatrix					hipblasSetMatrix	1.8.2	
cublasSetMatrixAsync					hipblasSetMatrixAsync	3.7.0	
cublasSetMatrixAsync_64	12.0						
cublasSetMatrix_64	12.0						
cublasSetPointerMode					hipblasSetPointerMode	1.8.2	
cublasSetPointerMode_v2					hipblasSetPointerMode	1.8.2	
cublasSetSmCountTarget	11.3						
cublasSetStream					hipblasSetStream	1.8.2	
cublasSetStream_v2					hipblasSetStream	1.8.2	
cublasSetVector					hipblasSetVector	1.8.2	
cublasSetVectorAsync					hipblasSetVectorAsync	3.7.0	
cublasSetVectorAsync_64	12.0						
cublasSetVector_64	12.0						
cublasSetWorkspace	11.0				hipblasSetWorkspace	7.0.0	
cublasSetWorkspace_v2	11.0				hipblasSetWorkspace	7.0.0	
cublasShutdown							
cublasXerbla							

10.6.5 5. CUBLAS Level-1 Function Reference

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cublasCaxpy					hipblasCaxpy	3.0.0		7.0.0			
cublasCaxpy_64	12.0				hipblasCaxpy_64	6.1.0		7.0.0			
cublasCaxpy_v2					hipblasCaxpy	3.0.0		7.0.0			
cublasCaxpy_v2_64	12.0				hipblasCaxpy_64	6.1.0		7.0.0			
cublasCcopy					hipblasCcopy	3.0.0		7.0.0			
cublasCcopy_64	12.0				hipblasCcopy_64	6.1.0		7.0.0			
cublasCcopy_v2					hipblasCcopy	3.0.0		7.0.0			
cublasCcopy_v2_64	12.0				hipblasCcopy_64	6.1.0		7.0.0			
cublasCdotc					hipblasCdotc	3.0.0		7.0.0			
cublasCdotc_64	12.0				hipblasCdotc_64	6.1.0		7.0.0			
cublasCdotc_v2					hipblasCdotc	3.0.0		7.0.0			
cublasCdotc_v2_64	12.0				hipblasCdotc_64	6.1.0		7.0.0			
cublasCdotu					hipblasCdotu	3.0.0		7.0.0			
cublasCdotu_64	12.0				hipblasCdotu_64	6.1.0		7.0.0			
cublasCdotu_v2					hipblasCdotu	3.0.0		7.0.0			
cublasCdotu_v2_64	12.0				hipblasCdotu_64	6.1.0		7.0.0			
cublasCrot					hipblasCrot	3.0.0		7.0.0			
cublasCrot_64	12.0				hipblasCrot_64	6.1.0		7.0.0			
cublasCrot_v2					hipblasCrot	3.0.0		7.0.0			
cublasCrot_v2_64	12.0				hipblasCrot_64	6.1.0		7.0.0			
cublasCrotg					hipblasCrotg	3.0.0		7.0.0			
cublasCrotg_v2					hipblasCrotg	3.0.0		7.0.0			
cublasCscal					hipblasCscal	1.6.0		7.0.0			
cublasCscal_64	12.0				hipblasCscal_64	6.1.0		7.0.0			
cublasCscal_v2					hipblasCscal	1.6.0		7.0.0			
cublasCscal_v2_64	12.0				hipblasCscal_64	6.1.0		7.0.0			
cublasCsrot					hipblasCsrot	3.0.0		7.0.0			
cublasCsrot_64	12.0				hipblasCsrot_64	6.1.0		7.0.0			
cublasCsrot_v2					hipblasCsrot	3.0.0		7.0.0			
cublasCsrot_v2_64	12.0				hipblasCsrot_64	6.1.0		7.0.0			
cublasCsscal					hipblasCsscal	3.0.0		7.0.0			
cublasCsscal_64	12.0				hipblasCsscal_64	6.1.0		7.0.0			
cublasCsscal_v2					hipblasCsscal	3.0.0		7.0.0			
cublasCsscal_v2_64	12.0				hipblasCsscal_64	6.1.0		7.0.0			
cublasCswap					hipblasCswap	3.0.0		7.0.0			
cublasCswap_64	12.0				hipblasCswap_64	6.1.0		7.0.0			
cublasCswap_v2					hipblasCswap	3.0.0		7.0.0			
cublasCswap_v2_64	12.0				hipblasCswap_64	6.1.0		7.0.0			
cublasDasum					hipblasDasum	1.8.2					
cublasDasum_64	12.0				hipblasDasum_64	6.1.0					
cublasDasum_v2					hipblasDasum	1.8.2					
cublasDasum_v2_64	12.0				hipblasDasum_64	6.1.0					
cublasDaxpy					hipblasDaxpy	1.8.2					
cublasDaxpy_64	12.0				hipblasDaxpy_64	6.1.0					
cublasDaxpy_v2					hipblasDaxpy	1.8.2					
cublasDaxpy_v2_64	12.0				hipblasDaxpy_64	6.1.0					
cublasDcopy					hipblasDcopy	1.8.2					
cublasDcopy_64	12.0				hipblasDcopy_64	6.1.0					
cublasDcopy_v2					hipblasDcopy	1.8.2					

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Table 17 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cublasDcopy_v2_64	12.0				hipblasDcopy_64	6.1.0					
cublasDdot					hipblasDdot	3.0.0					
cublasDdot_64	12.0				hipblasDdot_64	6.1.0					
cublasDdot_v2					hipblasDdot	3.0.0					
cublasDdot_v2_64	12.0				hipblasDdot_64	6.1.0					
cublasDnrm2					hipblasDnrm2	1.8.2					
cublasDnrm2_64	12.0				hipblasDnrm2_64	6.1.0					
cublasDnrm2_v2					hipblasDnrm2	1.8.2					
cublasDnrm2_v2_64	12.0				hipblasDnrm2_64	6.1.0					
cublasDrot					hipblasDrot	3.0.0					
cublasDrot_64	12.0				hipblasDrot_64	6.1.0					
cublasDrot_v2					hipblasDrot	3.0.0					
cublasDrot_v2_64	12.0				hipblasDrot_64	6.1.0					
cublasDrotg					hipblasDrotg	3.0.0					
cublasDrotg_v2					hipblasDrotg	3.0.0					
cublasDrotm					hipblasDrotm	3.0.0					
cublasDrotm_64	12.0				hipblasDrotm_64	6.1.0					
cublasDrotm_v2					hipblasDrotm	3.0.0					
cublasDrotm_v2_64	12.0				hipblasDrotm_64	6.1.0					
cublasDrotmg					hipblasDrotmg	3.0.0					
cublasDrotmg_v2					hipblasDrotmg	3.0.0					
cublasDscal					hipblasDscal	1.8.2					
cublasDscal_64	12.0				hipblasDscal_64	6.1.0					
cublasDscal_v2					hipblasDscal	1.8.2					
cublasDscal_v2_64	12.0				hipblasDscal_64	6.1.0					
cublasDswap					hipblasDswap	3.0.0					
cublasDswap_64	12.0				hipblasDswap_64	6.1.0					
cublasDswap_v2					hipblasDswap	3.0.0					
cublasDswap_v2_64	12.0				hipblasDswap_64	6.1.0					
cublasDzasum					hipblasDzasum	3.0.0		7.0.0			
cublasDzasum_64	12.0				hipblasDzasum_64	6.1.0		7.0.0			
cublasDzasum_v2					hipblasDzasum	3.0.0		7.0.0			
cublasDzasum_v2_64	12.0				hipblasDzasum_64	6.1.0		7.0.0			
cublasDznrm2					hipblasDznrm2	3.0.0		7.0.0			
cublasDznrm2_64	12.0				hipblasDznrm2_64	6.1.0		7.0.0			
cublasDznrm2_v2					hipblasDznrm2	3.0.0		7.0.0			
cublasDznrm2_v2_64	12.0				hipblasDznrm2_64	6.1.0		7.0.0			
cublasIcamax					hipblasIcamax	3.0.0		7.0.0			
cublasIcamax_64	12.0				hipblasIcamax_64	6.1.0		7.0.0			
cublasIcamax_v2					hipblasIcamax	3.0.0		7.0.0			
cublasIcamax_v2_64	12.0				hipblasIcamax_64	6.1.0		7.0.0			
cublasIcamin					hipblasIcamin	3.0.0		7.0.0			
cublasIcamin_64	12.0				hipblasIcamin_64	6.1.0		7.0.0			
cublasIcamin_v2					hipblasIcamin	3.0.0		7.0.0			
cublasIcamin_v2_64	12.0				hipblasIcamin_64	6.1.0		7.0.0			
cublasIdamax					hipblasIdamax	1.8.2					
cublasIdamax_64	12.0				hipblasIdamax_64	6.1.0					
cublasIdamax_v2					hipblasIdamax	1.8.2					
cublasIdamax_v2_64	12.0				hipblasIdamax_64	6.1.0					
cublasIdamin					hipblasIdamin	3.0.0					

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Table 17 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cublasIdamin_64	12.0				hipblasIdamin_64	6.1.0					
cublasIdamin_v2					hipblasIdamin	3.0.0					
cublasIdamin_v2_64	12.0				hipblasIdamin_64	6.1.0					
cublasIsamax					hipblasIsamax	1.8.2					
cublasIsamax_64	12.0				hipblasIsamax_64	6.1.0					
cublasIsamax_v2					hipblasIsamax	1.8.2					
cublasIsamax_v2_64	12.0				hipblasIsamax_64	6.1.0					
cublasIsamin					hipblasIsamin	3.0.0					
cublasIsamin_64	12.0				hipblasIsamin_64	6.1.0					
cublasIsamin_v2					hipblasIsamin	3.0.0					
cublasIsamin_v2_64	12.0				hipblasIsamin_64	6.1.0					
cublasIzamax					hipblasIzamax	3.0.0		7.0.0			
cublasIzamax_64	12.0				hipblasIzamax_64	6.1.0		7.0.0			
cublasIzamax_v2					hipblasIzamax	3.0.0		7.0.0			
cublasIzamax_v2_64	12.0				hipblasIzamax_64	6.1.0		7.0.0			
cublasIzamin					hipblasIzamin	3.0.0		7.0.0			
cublasIzamin_64	12.0				hipblasIzamin_64	6.1.0		7.0.0			
cublasIzamin_v2					hipblasIzamin	3.0.0		7.0.0			
cublasIzamin_v2_64	12.0				hipblasIzamin_64	6.1.0		7.0.0			
cublasNrm2Ex	8.0				hipblasNrm2Ex	4.1.0		7.0.0			
cublasNrm2Ex_64	12.0				hipblasNrm2Ex_64	6.2.0		7.0.0			
cublasSasum					hipblasSasum	1.8.2					
cublasSasum_64	12.0				hipblasSasum_64	6.1.0					
cublasSasum_v2					hipblasSasum	1.8.2					
cublasSasum_v2_64	12.0				hipblasSasum_64	6.1.0					
cublasSaxpy					hipblasSaxpy	1.8.2					
cublasSaxpy_64	12.0				hipblasSaxpy_64	6.1.0					
cublasSaxpy_v2					hipblasSaxpy	1.8.2					
cublasSaxpy_v2_64	12.0				hipblasSaxpy_64	6.1.0					
cublasScasum					hipblasScasum	3.0.0		7.0.0			
cublasScasum_64	12.0				hipblasScasum_64	6.1.0		7.0.0			
cublasScasum_v2					hipblasScasum	3.0.0		7.0.0			
cublasScasum_v2_64	12.0				hipblasScasum_64	6.1.0		7.0.0			
cublasScnrm2					hipblasScnrm2	3.0.0		7.0.0			
cublasScnrm2_64	12.0				hipblasScnrm2_64	6.1.0		7.0.0			
cublasScnrm2_v2					hipblasScnrm2	3.0.0		7.0.0			
cublasScnrm2_v2_64	12.0				hipblasScnrm2_64	6.1.0		7.0.0			
cublasScopy					hipblasScopy	1.8.2					
cublasScopy_64	12.0				hipblasScopy_64	6.1.0					
cublasScopy_v2					hipblasScopy	1.8.2					
cublasScopy_v2_64	12.0				hipblasScopy_64	6.1.0					
cublasSdot					hipblasSdot	3.0.0					
cublasSdot_64	12.0				hipblasSdot_64	6.1.0					
cublasSdot_v2					hipblasSdot	3.0.0					
cublasSdot_v2_64	12.0				hipblasSdot_64	6.1.0					
cublasSnrm2					hipblasSnrm2	1.8.2					
cublasSnrm2_64	12.0				hipblasSnrm2_64	6.1.0					
cublasSnrm2_v2					hipblasSnrm2	1.8.2					
cublasSnrm2_v2_64	12.0				hipblasSnrm2_64	6.1.0					
cublasSrot					hipblasSrot	3.0.0					

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Table 17 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cublasSrot_64	12.0				hipblasSrot_64	6.1.0					
cublasSrot_v2					hipblasSrot	3.0.0					
cublasSrot_v2_64	12.0				hipblasSrot_64	6.1.0					
cublasSrotg					hipblasSrotg	3.0.0					
cublasSrotg_v2					hipblasSrotg	3.0.0					
cublasSrotm					hipblasSrotm	3.0.0					
cublasSrotm_64	12.0				hipblasSrotm_64	6.1.0					
cublasSrotm_v2					hipblasSrotm	3.0.0					
cublasSrotm_v2_64	12.0				hipblasSrotm_64	6.1.0					
cublasSrotmg					hipblasSrotmg	3.0.0					
cublasSrotmg_v2					hipblasSrotmg	3.0.0					
cublasSscal					hipblasSscal	1.8.2					
cublasSscal_64	12.0				hipblasSscal_64	6.1.0					
cublasSscal_v2					hipblasSscal	1.8.2					
cublasSscal_v2_64	12.0				hipblasSscal_64	6.1.0					
cublasSswap					hipblasSswap	3.0.0					
cublasSswap_64	12.0				hipblasSswap_64	6.1.0					
cublasSswap_v2					hipblasSswap	3.0.0					
cublasSswap_v2_64	12.0				hipblasSswap_64	6.1.0					
cublasZaxpy					hipblasZaxpy	3.0.0		7.0.0			
cublasZaxpy_64	12.0				hipblasZaxpy_64	6.1.0		7.0.0			
cublasZaxpy_v2					hipblasZaxpy	3.0.0		7.0.0			
cublasZaxpy_v2_64	12.0				hipblasZaxpy_64	6.1.0		7.0.0			
cublasZcopy					hipblasZcopy	3.0.0		7.0.0			
cublasZcopy_64	12.0				hipblasZcopy_64	6.1.0		7.0.0			
cublasZcopy_v2					hipblasZcopy	3.0.0		7.0.0			
cublasZcopy_v2_64	12.0				hipblasZcopy_64	6.1.0		7.0.0			
cublasZdotc					hipblasZdotc	3.0.0		7.0.0			
cublasZdotc_64	12.0				hipblasZdotc_64	6.1.0		7.0.0			
cublasZdotc_v2					hipblasZdotc	3.0.0		7.0.0			
cublasZdotc_v2_64	12.0				hipblasZdotc_64	6.1.0		7.0.0			
cublasZdotu					hipblasZdotu	3.0.0		7.0.0			
cublasZdotu_64	12.0				hipblasZdotu_64	6.1.0		7.0.0			
cublasZdotu_v2					hipblasZdotu	3.0.0		7.0.0			
cublasZdotu_v2_64	12.0				hipblasZdotu_64	6.1.0		7.0.0			
cublasZdrot					hipblasZdrot	3.0.0		7.0.0			
cublasZdrot_64	12.0				hipblasZdrot_64	6.1.0		7.0.0			
cublasZdrot_v2					hipblasZdrot	3.0.0		7.0.0			
cublasZdrot_v2_64	12.0				hipblasZdrot_64	6.1.0		7.0.0			
cublasZdscal					hipblasZdscal	3.0.0		7.0.0			
cublasZdscal_64	12.0				hipblasZdscal_64	6.1.0		7.0.0			
cublasZdscal_v2					hipblasZdscal	3.0.0		7.0.0			
cublasZdscal_v2_64	12.0				hipblasZdscal_64	6.1.0		7.0.0			
cublasZrot					hipblasZrot	3.0.0		7.0.0			
cublasZrot_64	12.0				hipblasZrot_64	6.1.0		7.0.0			
cublasZrot_v2					hipblasZrot	3.0.0		7.0.0			
cublasZrot_v2_64	12.0				hipblasZrot_64	6.1.0		7.0.0			
cublasZrotg					hipblasZrotg	3.0.0		7.0.0			
cublasZrotg_v2					hipblasZrotg	3.0.0		7.0.0			
cublasZscal					hipblasZscal	1.6.0		7.0.0			

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Table 17 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cublasZscal_64	12.0				hipblasZscal_64	6.1.0		7.0.0			
cublasZscal_v2					hipblasZscal	1.6.0		7.0.0			
cublasZscal_v2_64	12.0				hipblasZscal_64	6.1.0		7.0.0			
cublasZswap					hipblasZswap	3.0.0		7.0.0			
cublasZswap_64	12.0				hipblasZswap_64	6.1.0		7.0.0			
cublasZswap_v2					hipblasZswap	3.0.0		7.0.0			
cublasZswap_v2_64	12.0				hipblasZswap_64	6.1.0		7.0.0			

10.6.6 6. CUBLAS Level-2 Function Reference

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cublasCgbmv					hipblasCgbmv	3.5.0		7.0.0			
cublasCgbmv_64	12.0				hipblasCgbmv_64	6.2.0		7.0.0			
cublasCgbmv_v2					hipblasCgbmv	3.5.0		7.0.0			
cublasCgbmv_v2_64	12.0				hipblasCgbmv_64	6.2.0		7.0.0			
cublasCgemv					hipblasCgemv	3.0.0		7.0.0			
cublasCgemv_64	12.0				hipblasCgemv_64	6.2.0		7.0.0			
cublasCgemv_v2					hipblasCgemv	3.0.0		7.0.0			
cublasCgemv_v2_64	12.0				hipblasCgemv_64	6.2.0		7.0.0			
cublasCgerc					hipblasCgerc	3.5.0		7.0.0			
cublasCgerc_64	12.0				hipblasCgerc_64	6.2.0		7.0.0			
cublasCgerc_v2					hipblasCgerc	3.5.0		7.0.0			
cublasCgerc_v2_64	12.0				hipblasCgerc_64	6.2.0		7.0.0			
cublasCgeru					hipblasCgeru	3.5.0		7.0.0			
cublasCgeru_64	12.0				hipblasCgeru_64	6.2.0		7.0.0			
cublasCgeru_v2					hipblasCgeru	3.5.0		7.0.0			
cublasCgeru_v2_64	12.0				hipblasCgeru_64	6.2.0		7.0.0			
cublasChbmv					hipblasChbmv	3.5.0		7.0.0			
cublasChbmv_64	12.0				hipblasChbmv_64	6.2.0		7.0.0			
cublasChbmv_v2					hipblasChbmv	3.5.0		7.0.0			
cublasChbmv_v2_64	12.0				hipblasChbmv_64	6.2.0		7.0.0			
cublasChemv					hipblasChemv	3.5.0		7.0.0			
cublasChemv_64	12.0				hipblasChemv_64	6.2.0		7.0.0			
cublasChemv_v2					hipblasChemv	3.5.0		7.0.0			
cublasChemv_v2_64	12.0				hipblasChemv_64	6.2.0		7.0.0			
cublasCher					hipblasCher	3.5.0		7.0.0			
cublasCher2					hipblasCher2	3.5.0		7.0.0			
cublasCher2_64	12.0				hipblasCher2_64	6.2.0		7.0.0			
cublasCher2_v2					hipblasCher2	3.5.0		7.0.0			
cublasCher2_v2_64	12.0				hipblasCher2_64	6.2.0		7.0.0			
cublasCher_64	12.0				hipblasCher_64	6.2.0		7.0.0			
cublasCher_v2					hipblasCher	3.5.0		7.0.0			
cublasCher_v2_64	12.0				hipblasCher_64	6.2.0		7.0.0			
cublasChpmv					hipblasChpmv	3.5.0		7.0.0			
cublasChpmv_64	12.0				hipblasChpmv_64	6.2.0		7.0.0			
cublasChpmv_v2					hipblasChpmv	3.5.0		7.0.0			
cublasChpmv_v2_64	12.0				hipblasChpmv_64	6.2.0		7.0.0			
cublasChpr					hipblasChpr	3.5.0		7.0.0			

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Table 18 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cublasChpr2					hipblasChpr2	3.5.0		7.0.0			
cublasChpr2_64	12.0				hipblasChpr2_64	6.2.0		7.0.0			
cublasChpr2_v2					hipblasChpr2	3.5.0		7.0.0			
cublasChpr2_v2_64	12.0				hipblasChpr2_64	6.2.0		7.0.0			
cublasChpr_64	12.0				hipblasChpr_64	6.2.0		7.0.0			
cublasChpr_v2					hipblasChpr	3.5.0		7.0.0			
cublasChpr_v2_64	12.0				hipblasChpr_64	6.2.0		7.0.0			
cublasCsymv					hipblasCsymv	3.5.0		7.0.0			
cublasCsymv_64	12.0				hipblasCsymv_64	6.2.0		7.0.0			
cublasCsymv_v2					hipblasCsymv	3.5.0		7.0.0			
cublasCsymv_v2_64	12.0				hipblasCsymv_64	6.2.0		7.0.0			
cublasCsyr					hipblasCsyr	3.5.0		7.0.0			
cublasCsyr2					hipblasCsyr2	3.5.0		7.0.0			
cublasCsyr2_64	12.0				hipblasCsyr2_64	6.2.0		7.0.0			
cublasCsyr2_v2					hipblasCsyr2	3.5.0		7.0.0			
cublasCsyr2_v2_64	12.0				hipblasCsyr2_64	6.2.0		7.0.0			
cublasCsyr_64	12.0				hipblasCsyr_64	6.2.0		7.0.0			
cublasCsyr_v2					hipblasCsyr	3.5.0		7.0.0			
cublasCsyr_v2_64	12.0				hipblasCsyr_64	6.2.0		7.0.0			
cublasCtbmv					hipblasCtbmv	3.5.0		7.0.0			
cublasCtbmv_64	12.0				hipblasCtbmv_64	6.2.0		7.0.0			
cublasCtbmv_v2					hipblasCtbmv	3.5.0		7.0.0			
cublasCtbmv_v2_64	12.0				hipblasCtbmv_64	6.2.0		7.0.0			
cublasCtbsv					hipblasCtbsv	3.6.0		7.0.0			
cublasCtbsv_64	12.0				hipblasCtbsv_64	6.2.0		7.0.0			
cublasCtbsv_v2					hipblasCtbsv	3.6.0		7.0.0			
cublasCtbsv_v2_64	12.0				hipblasCtbsv_64	6.2.0		7.0.0			
cublasCtpmv					hipblasCtpmv	3.5.0		7.0.0			
cublasCtpmv_64	12.0				hipblasCtpmv_64	6.2.0		7.0.0			
cublasCtpmv_v2					hipblasCtpmv	3.5.0		7.0.0			
cublasCtpmv_v2_64	12.0				hipblasCtpmv_64	6.2.0		7.0.0			
cublasCtpsv					hipblasCtpsv	3.5.0		7.0.0			
cublasCtpsv_64	12.0				hipblasCtpsv_64	6.2.0		7.0.0			
cublasCtpsv_v2					hipblasCtpsv	3.5.0		7.0.0			
cublasCtpsv_v2_64	12.0				hipblasCtpsv_64	6.2.0		7.0.0			
cublasCtrmv					hipblasCtrmv	3.5.0		7.0.0			
cublasCtrmv_64	12.0				hipblasCtrmv_64	6.2.0		7.0.0			
cublasCtrmv_v2					hipblasCtrmv	3.5.0		7.0.0			
cublasCtrmv_v2_64	12.0				hipblasCtrmv_64	6.2.0		7.0.0			
cublasCtrsv					hipblasCtrsv	3.5.0		7.0.0			
cublasCtrsv_64	12.0				hipblasCtrsv_64	6.2.0		7.0.0			
cublasCtrsv_v2					hipblasCtrsv	3.5.0		7.0.0			
cublasCtrsv_v2_64	12.0				hipblasCtrsv_64	6.2.0		7.0.0			
cublasDgbmv					hipblasDgbmv	3.5.0					
cublasDgbmv_64	12.0				hipblasDgbmv_64	6.2.0					
cublasDgbmv_v2					hipblasDgbmv	3.5.0					
cublasDgbmv_v2_64	12.0				hipblasDgbmv_64	6.2.0					
cublasDgemv					hipblasDgemv	1.8.2					
cublasDgemv_64	12.0				hipblasDgemv_64	6.2.0					
cublasDgemv_v2					hipblasDgemv	1.8.2					

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Table 18 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cublasDgemv_v2_64	12.0				hipblasDgemv_64	6.2.0					
cublasDger					hipblasDger	1.8.2					
cublasDger_64	12.0				hipblasDger_64	6.2.0					
cublasDger_v2					hipblasDger	1.8.2					
cublasDger_v2_64	12.0				hipblasDger_64	6.2.0					
cublasDsbmv					hipblasDsbmv	3.5.0					
cublasDsbmv_64	12.0				hipblasDsbmv_64	6.2.0					
cublasDsbmv_v2					hipblasDsbmv	3.5.0					
cublasDsbmv_v2_64	12.0				hipblasDsbmv_64	6.2.0					
cublasDspmv					hipblasDspmv	3.5.0					
cublasDspmv_64	12.0				hipblasDspmv_64	6.2.0					
cublasDspmv_v2					hipblasDspmv	3.5.0					
cublasDspmv_v2_64	12.0				hipblasDspmv_64	6.2.0					
cublasDspr					hipblasDspr	3.5.0					
cublasDspr2					hipblasDspr2	3.5.0					
cublasDspr2_64	12.0				hipblasDspr2_64	6.2.0					
cublasDspr2_v2					hipblasDspr2	3.5.0					
cublasDspr2_v2_64	12.0				hipblasDspr2_64	6.2.0					
cublasDspr_64	12.0				hipblasDspr_64	6.2.0					
cublasDspr_v2					hipblasDspr	3.5.0					
cublasDspr_v2_64	12.0				hipblasDspr_64	6.2.0					
cublasDsymv					hipblasDsymv	3.5.0					
cublasDsymv_64	12.0				hipblasDsymv_64	6.2.0					
cublasDsymv_v2					hipblasDsymv	3.5.0					
cublasDsymv_v2_64	12.0				hipblasDsymv_64	6.2.0					
cublasDsyr					hipblasDsyr	3.0.0					
cublasDsyr2					hipblasDsyr2	3.5.0					
cublasDsyr2_64	12.0				hipblasDsyr2_64	6.2.0					
cublasDsyr2_v2					hipblasDsyr2	3.5.0					
cublasDsyr2_v2_64	12.0				hipblasDsyr2_64	6.2.0					
cublasDsyr_64	12.0				hipblasDsyr_64	6.2.0					
cublasDsyr_v2					hipblasDsyr	3.0.0					
cublasDsyr_v2_64	12.0				hipblasDsyr_64	6.2.0					
cublasDtbmv					hipblasDtbmv	3.5.0					
cublasDtbmv_64	12.0				hipblasDtbmv_64	6.2.0					
cublasDtbmv_v2					hipblasDtbmv	3.5.0					
cublasDtbmv_v2_64	12.0				hipblasDtbmv_64	6.2.0					
cublasDtbsv					hipblasDtbsv	3.6.0					
cublasDtbsv_64	12.0				hipblasDtbsv_64	6.2.0					
cublasDtbsv_v2					hipblasDtbsv	3.6.0					
cublasDtbsv_v2_64	12.0				hipblasDtbsv_64	6.2.0					
cublasDtpmv					hipblasDtpmv	3.5.0					
cublasDtpmv_64	12.0				hipblasDtpmv_64	6.2.0					
cublasDtpmv_v2					hipblasDtpmv	3.5.0					
cublasDtpmv_v2_64	12.0				hipblasDtpmv_64	6.2.0					
cublasDtpsv					hipblasDtpsv	3.5.0					
cublasDtpsv_64	12.0				hipblasDtpsv_64	6.2.0					
cublasDtpsv_v2					hipblasDtpsv	3.5.0					
cublasDtpsv_v2_64	12.0				hipblasDtpsv_64	6.2.0					
cublasDtrmv					hipblasDtrmv	3.5.0					

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Table 18 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cublasDtrmv_64	12.0				hipblasDtrmv_64	6.2.0					
cublasDtrmv_v2					hipblasDtrmv	3.5.0					
cublasDtrmv_v2_64	12.0				hipblasDtrmv_64	6.2.0					
cublasDtrsv					hipblasDtrsv	3.0.0					
cublasDtrsv_64	12.0				hipblasDtrsv_64	6.2.0					
cublasDtrsv_v2					hipblasDtrsv	3.0.0					
cublasDtrsv_v2_64	12.0				hipblasDtrsv_64	6.2.0					
cublasSgbmv					hipblasSgbmv	3.5.0					
cublasSgbmv_64	12.0				hipblasSgbmv_64	6.2.0					
cublasSgbmv_v2					hipblasSgbmv	3.5.0					
cublasSgbmv_v2_64	12.0				hipblasSgbmv_64	6.2.0					
cublasSgemv					hipblasSgemv	1.8.2					
cublasSgemv_64	12.0				hipblasSgemv_64	6.2.0					
cublasSgemv_v2					hipblasSgemv	1.8.2					
cublasSgemv_v2_64	12.0				hipblasSgemv_64	6.2.0					
cublasSger					hipblasSger	1.8.2					
cublasSger_64	12.0				hipblasSger_64	6.2.0					
cublasSger_v2					hipblasSger	1.8.2					
cublasSger_v2_64	12.0				hipblasSger_64	6.2.0					
cublasSsbmv					hipblasSsbmv	3.5.0					
cublasSsbmv_64	12.0				hipblasSsbmv_64	6.2.0					
cublasSsbmv_v2					hipblasSsbmv	3.5.0					
cublasSsbmv_v2_64	12.0				hipblasSsbmv_64	6.2.0					
cublasSspmv					hipblasSspmv	3.5.0					
cublasSspmv_64	12.0				hipblasSspmv_64	6.2.0					
cublasSspmv_v2					hipblasSspmv	3.5.0					
cublasSspmv_v2_64	12.0				hipblasSspmv_64	6.2.0					
cublasSspr					hipblasSspr	3.5.0					
cublasSspr2					hipblasSspr2	3.5.0					
cublasSspr2_64	12.0				hipblasSspr2_64	6.2.0					
cublasSspr2_v2					hipblasSspr2	3.5.0					
cublasSspr2_v2_64	12.0				hipblasSspr2_64	6.2.0					
cublasSspr_64	12.0				hipblasSspr_64	6.2.0					
cublasSspr_v2					hipblasSspr	3.5.0					
cublasSspr_v2_64	12.0				hipblasSspr_64	6.2.0					
cublasSsymv					hipblasSsymv	3.5.0					
cublasSsymv_64	12.0				hipblasSsymv_64	6.2.0					
cublasSsymv_v2					hipblasSsymv	3.5.0					
cublasSsymv_v2_64	12.0				hipblasSsymv_64	6.2.0					
cublasSsyr					hipblasSsyr	3.0.0					
cublasSsyr2					hipblasSsyr2	3.5.0					
cublasSsyr2_64	12.0				hipblasSsyr2_64	6.2.0					
cublasSsyr2_v2					hipblasSsyr2	3.5.0					
cublasSsyr2_v2_64	12.0				hipblasSsyr2_64	6.2.0					
cublasSsyr_64	12.0				hipblasSsyr_64	6.2.0					
cublasSsyr_v2					hipblasSsyr	3.0.0					
cublasSsyr_v2_64	12.0				hipblasSsyr_64	6.2.0					
cublasStbmv					hipblasStbmv	3.5.0					
cublasStbmv_64	12.0				hipblasStbmv_64	6.2.0					
cublasStbmv_v2					hipblasStbmv	3.5.0					

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Table 18 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cublasStbmv_v2_64	12.0				hipblasStbmv_64	6.2.0					
cublasStbsv					hipblasStbsv	3.6.0					
cublasStbsv_64	12.0				hipblasStbsv_64	6.2.0					
cublasStbsv_v2					hipblasStbsv	3.6.0					
cublasStbsv_v2_64	12.0				hipblasStbsv_64	6.2.0					
cublasStpmv					hipblasStpmv	3.5.0					
cublasStpmv_64	12.0				hipblasStpmv_64	6.2.0					
cublasStpmv_v2					hipblasStpmv	3.5.0					
cublasStpmv_v2_64	12.0				hipblasStpmv_64	6.2.0					
cublasStpsv					hipblasStpsv	3.5.0					
cublasStpsv_64	12.0				hipblasStpsv_64	6.2.0					
cublasStpsv_v2					hipblasStpsv	3.5.0					
cublasStpsv_v2_64	12.0				hipblasStpsv_64	6.2.0					
cublasStrmv					hipblasStrmv	3.5.0					
cublasStrmv_64	12.0				hipblasStrmv_64	6.2.0					
cublasStrmv_v2					hipblasStrmv	3.5.0					
cublasStrmv_v2_64	12.0				hipblasStrmv_64	6.2.0					
cublasStrsv					hipblasStrsv	3.0.0					
cublasStrsv_64	12.0				hipblasStrsv_64	6.2.0					
cublasStrsv_v2					hipblasStrsv	3.0.0					
cublasStrsv_v2_64	12.0				hipblasStrsv_64	6.2.0					
cublasZgbmv					hipblasZgbmv	3.5.0		7.0.0			
cublasZgbmv_64	12.0				hipblasZgbmv_64	6.2.0		7.0.0			
cublasZgbmv_v2					hipblasZgbmv	3.5.0		7.0.0			
cublasZgbmv_v2_64	12.0				hipblasZgbmv_64	6.2.0		7.0.0			
cublasZgemv					hipblasZgemv	3.0.0		7.0.0			
cublasZgemv_64	12.0				hipblasZgemv_64	6.2.0		7.0.0			
cublasZgemv_v2					hipblasZgemv	3.0.0		7.0.0			
cublasZgemv_v2_64	12.0				hipblasZgemv_64	6.2.0		7.0.0			
cublasZgerc					hipblasZgerc	3.5.0		7.0.0			
cublasZgerc_64	12.0				hipblasZgerc_64	6.2.0		7.0.0			
cublasZgerc_v2					hipblasZgerc	3.5.0		7.0.0			
cublasZgerc_v2_64	12.0				hipblasZgerc_64	6.2.0		7.0.0			
cublasZgeru					hipblasZgeru	3.5.0		7.0.0			
cublasZgeru_64	12.0				hipblasZgeru_64	6.2.0		7.0.0			
cublasZgeru_v2					hipblasZgeru	3.5.0		7.0.0			
cublasZgeru_v2_64	12.0				hipblasZgeru_64	6.2.0		7.0.0			
cublasZhbmv					hipblasZhbmv	3.5.0		7.0.0			
cublasZhbmv_64	12.0				hipblasZhbmv_64	6.2.0		7.0.0			
cublasZhbmv_v2					hipblasZhbmv	3.5.0		7.0.0			
cublasZhbmv_v2_64	12.0				hipblasZhbmv_64	6.2.0		7.0.0			
cublasZhemv					hipblasZhemv	3.5.0		7.0.0			
cublasZhemv_64	12.0				hipblasZhemv_64	6.2.0		7.0.0			
cublasZhemv_v2					hipblasZhemv	3.5.0		7.0.0			
cublasZhemv_v2_64	12.0				hipblasZhemv_64	6.2.0		7.0.0			
cublasZher					hipblasZher	3.5.0		7.0.0			
cublasZher2					hipblasZher2	3.5.0		7.0.0			
cublasZher2_64	12.0				hipblasZher2_64	6.2.0		7.0.0			
cublasZher2_v2					hipblasZher2	3.5.0		7.0.0			
cublasZher2_v2_64	12.0				hipblasZher2_64	6.2.0		7.0.0			

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Table 18 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cublasZher_64	12.0				hipblasZher_64	6.2.0		7.0.0			
cublasZher_v2					hipblasZher	3.5.0		7.0.0			
cublasZher_v2_64	12.0				hipblasZher_64	6.2.0		7.0.0			
cublasZhpmv					hipblasZhpmv	3.5.0		7.0.0			
cublasZhpmv_64	12.0				hipblasZhpmv_64	6.2.0		7.0.0			
cublasZhpmv_v2					hipblasZhpmv	3.5.0		7.0.0			
cublasZhpmv_v2_64	12.0				hipblasZhpmv_64	6.2.0		7.0.0			
cublasZhpr					hipblasZhpr	3.5.0		7.0.0			
cublasZhpr2					hipblasZhpr2	3.5.0		7.0.0			
cublasZhpr2_64	12.0				hipblasZhpr2_64	6.2.0		7.0.0			
cublasZhpr2_v2					hipblasZhpr2	3.5.0		7.0.0			
cublasZhpr2_v2_64	12.0				hipblasZhpr2_64	6.2.0		7.0.0			
cublasZhpr_64	12.0				hipblasZhpr_64	6.2.0		7.0.0			
cublasZhpr_v2					hipblasZhpr	3.5.0		7.0.0			
cublasZhpr_v2_64	12.0				hipblasZhpr_64	6.2.0		7.0.0			
cublasZsymv					hipblasZsymv	3.5.0		7.0.0			
cublasZsymv_64	12.0				hipblasZsymv_64	6.2.0		7.0.0			
cublasZsymv_v2					hipblasZsymv	3.5.0		7.0.0			
cublasZsymv_v2_64	12.0				hipblasZsymv_64	6.2.0		7.0.0			
cublasZsyr					hipblasZsyr	3.5.0		7.0.0			
cublasZsyr2					hipblasZsyr2	3.5.0		7.0.0			
cublasZsyr2_64	12.0				hipblasZsyr2_64	6.2.0		7.0.0			
cublasZsyr2_v2					hipblasZsyr2	3.5.0		7.0.0			
cublasZsyr2_v2_64	12.0				hipblasZsyr2_64	6.2.0		7.0.0			
cublasZsyr_64	12.0				hipblasZsyr_64	6.2.0		7.0.0			
cublasZsyr_v2					hipblasZsyr	3.5.0		7.0.0			
cublasZsyr_v2_64	12.0				hipblasZsyr_64	6.2.0		7.0.0			
cublasZtbmv					hipblasZtbmv	3.5.0		7.0.0			
cublasZtbmv_64	12.0				hipblasZtbmv_64	6.2.0		7.0.0			
cublasZtbmv_v2					hipblasZtbmv	3.5.0		7.0.0			
cublasZtbmv_v2_64	12.0				hipblasZtbmv_64	6.2.0		7.0.0			
cublasZtbsv					hipblasZtbsv	3.6.0		7.0.0			
cublasZtbsv_64	12.0				hipblasZtbsv_64	6.2.0		7.0.0			
cublasZtbsv_v2					hipblasZtbsv	3.6.0		7.0.0			
cublasZtbsv_v2_64	12.0				hipblasZtbsv_64	6.2.0		7.0.0			
cublasZtpmv					hipblasZtpmv	3.5.0		7.0.0			
cublasZtpmv_64	12.0				hipblasZtpmv_64	6.2.0		7.0.0			
cublasZtpmv_v2					hipblasZtpmv	3.5.0		7.0.0			
cublasZtpmv_v2_64	12.0				hipblasZtpmv_64	6.2.0		7.0.0			
cublasZtpsv					hipblasZtpsv	3.5.0		7.0.0			
cublasZtpsv_64	12.0				hipblasZtpsv_64	6.2.0		7.0.0			
cublasZtpsv_v2					hipblasZtpsv	3.5.0		7.0.0			
cublasZtpsv_v2_64	12.0				hipblasZtpsv_64	6.2.0		7.0.0			
cublasZtrmv					hipblasZtrmv	3.5.0		7.0.0			
cublasZtrmv_64	12.0				hipblasZtrmv_64	6.2.0		7.0.0			
cublasZtrmv_v2					hipblasZtrmv	3.5.0		7.0.0			
cublasZtrmv_v2_64	12.0				hipblasZtrmv_64	6.2.0		7.0.0			
cublasZtrsv					hipblasZtrsv	3.5.0		7.0.0			
cublasZtrsv_64	12.0				hipblasZtrsv_64	6.2.0		7.0.0			
cublasZtrsv_v2					hipblasZtrsv	3.5.0		7.0.0			

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Table 18 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cublasZtrsv_v2_64	12.0				hipblasZtrsv_64	6.2.0		7.0.0			

10.6.7 7. CUBLAS Level-3 Function Reference

CUDA	A	D	C	R	HIP	A	D	C	R	U
cublasCgemm					hipblasCgemm	1.6.0		7.0.0		
cublasCgemm3m	8.0									
cublasCgemm3mBatched	8.0									
cublasCgemm3mBatched_64	12.0									
cublasCgemm3mEx	8.0									
cublasCgemm3mEx_64	12.0									
cublasCgemm3mStridedBatched	8.0									
cublasCgemm3mStridedBatched_64	12.0									
cublasCgemm3m_64	12.0									
cublasCgemmBatched					hipblasCgemmBatched	1.6.0		7.0.0		
cublasCgemmBatched_64	12.0				hipblasCgemmBatched_64	6.3.0		7.0.0		
cublasCgemmStridedBatched	8.0				hipblasCgemmStridedBatched	3.0.0		7.0.0		
cublasCgemmStridedBatched_64	12.0				hipblasCgemmStridedBatched_64	6.3.0		7.0.0		
cublasCgemm_64	12.0				hipblasCgemm_64	6.3.0		7.0.0		
cublasCgemm_v2					hipblasCgemm	1.6.0		7.0.0		
cublasCgemm_v2_64	12.0				hipblasCgemm_64	6.3.0		7.0.0		
cublasCgemvBatched	11.6				hipblasCgemvBatched	3.0.0		7.0.0		
cublasCgemvBatched_64	12.0				hipblasCgemvBatched_64	6.2.0		7.0.0		
cublasCgemvStridedBatched	11.6				hipblasCgemvStridedBatched	3.0.0		7.0.0		
cublasCgemvStridedBatched_64	12.0				hipblasCgemvStridedBatched_64	6.2.0		7.0.0		
cublasChemm					hipblasChemm	3.6.0		7.0.0		
cublasChemm_64	12.0				hipblasChemm_64	6.3.0		7.0.0		
cublasChemm_v2					hipblasChemm	3.6.0		7.0.0		
cublasChemm_v2_64	12.0				hipblasChemm_64	6.3.0		7.0.0		
cublasCher2k					hipblasCher2k	3.5.0		7.0.0		
cublasCher2k_64	12.0				hipblasCher2k_64	6.3.0		7.0.0		
cublasCher2k_v2					hipblasCher2k	3.5.0		7.0.0		
cublasCher2k_v2_64	12.0				hipblasCher2k_64	6.3.0		7.0.0		
cublasCherk					hipblasCherk	3.5.0		7.0.0		
cublasCherk_64	12.0				hipblasCherk_64	6.3.0		7.0.0		
cublasCherk_v2					hipblasCherk	3.5.0		7.0.0		
cublasCherk_v2_64	12.0				hipblasCherk_64	6.3.0		7.0.0		
cublasCherkx					hipblasCherkx	3.5.0		7.0.0		
cublasCherkx_64	12.0				hipblasCherkx_64	6.3.0		7.0.0		
cublasCsymm					hipblasCsymm	3.6.0		7.0.0		
cublasCsymm_64	12.0				hipblasCsymm_64	6.3.0		7.0.0		
cublasCsymm_v2					hipblasCsymm	3.6.0		7.0.0		
cublasCsymm_v2_64	12.0				hipblasCsymm_64	6.3.0		7.0.0		
cublasCsyr2k					hipblasCsyr2k	3.5.0		7.0.0		
cublasCsyr2k_64	12.0				hipblasCsyr2k_64	6.3.0		7.0.0		
cublasCsyr2k_v2					hipblasCsyr2k	3.5.0		7.0.0		
cublasCsyr2k_v2_64	12.0				hipblasCsyr2k_64	6.3.0		7.0.0		
cublasCsyrk					hipblasCsyrk	3.5.0		7.0.0		

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Table 19 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U
cublasCsyrk_64	12.0				hipblasCsyrk_64	6.3.0		7.0.0		
cublasCsyrk_v2					hipblasCsyrk	3.5.0		7.0.0		
cublasCsyrk_v2_64	12.0				hipblasCsyrk_64	6.3.0		7.0.0		
cublasCsyrkx					hipblasCsyrkx	3.5.0		7.0.0		
cublasCsyrkx_64	12.0				hipblasCsyrkx_64	6.3.0		7.0.0		
cublasCtrmm					hipblasCtrmm	3.5.0		7.0.0		
cublasCtrmm_64	12.0				hipblasCtrmm_64	6.3.0		7.0.0		
cublasCtrmm_v2					hipblasCtrmm	3.5.0		7.0.0		
cublasCtrmm_v2_64	12.0				hipblasCtrmm_64	6.3.0		7.0.0		
cublasCtrsm					hipblasCtrsm	3.5.0		7.0.0		
cublasCtrsm_64	12.0				hipblasCtrsm_64	6.3.0		7.0.0		
cublasCtrsm_v2					hipblasCtrsm	3.5.0		7.0.0		
cublasCtrsm_v2_64	12.0				hipblasCtrsm_64	6.3.0		7.0.0		
cublasDgemm					hipblasDgemm	1.8.2				
cublasDgemmBatched					hipblasDgemmBatched	1.8.2				
cublasDgemmBatched_64	12.0				hipblasDgemmBatched_64	6.3.0				
cublasDgemmGroupedBatched	12.4									
cublasDgemmGroupedBatched_64	12.4									
cublasDgemmStridedBatched	8.0				hipblasDgemmStridedBatched	1.8.2				
cublasDgemmStridedBatched_64	12.0				hipblasDgemmStridedBatched_64	6.3.0				
cublasDgemm_64	12.0				hipblasDgemm_64	6.3.0				
cublasDgemm_v2					hipblasDgemm	1.8.2				
cublasDgemm_v2_64	12.0				hipblasDgemm_64	6.3.0				
cublasDgemvBatched	11.6				hipblasDgemvBatched	3.0.0				
cublasDgemvBatched_64	12.0				hipblasDgemvBatched_64	6.2.0				
cublasDgemvStridedBatched	11.6				hipblasDgemvStridedBatched	3.0.0				
cublasDgemvStridedBatched_64	12.0				hipblasDgemvStridedBatched_64	6.2.0				
cublasDsymm					hipblasDsymm	3.6.0				
cublasDsymm_64	12.0				hipblasDsymm_64	6.3.0				
cublasDsymm_v2					hipblasDsymm	3.6.0				
cublasDsymm_v2_64	12.0				hipblasDsymm_64	6.3.0				
cublasDsyr2k					hipblasDsyr2k	3.5.0				
cublasDsyr2k_64	12.0				hipblasDsyr2k_64	6.3.0				
cublasDsyr2k_v2					hipblasDsyr2k	3.5.0				
cublasDsyr2k_v2_64	12.0				hipblasDsyr2k_64	6.3.0				
cublasDsyrk					hipblasDsyrk	3.5.0				
cublasDsyrk_64	12.0				hipblasDsyrk_64	6.3.0				
cublasDsyrk_v2					hipblasDsyrk	3.5.0				
cublasDsyrk_v2_64	12.0				hipblasDsyrk_64	6.3.0				
cublasDsyrkx					hipblasDsyrkx	3.5.0				
cublasDsyrkx_64	12.0				hipblasDsyrkx_64	6.3.0				
cublasDtrmm					hipblasDtrmm	3.2.0		6.0.0		
cublasDtrmm_64	12.0				hipblasDtrmm_64	6.3.0				
cublasDtrmm_v2					hipblasDtrmm	3.2.0		6.0.0		
cublasDtrmm_v2_64	12.0				hipblasDtrmm_64	6.3.0				
cublasDtrsm					hipblasDtrsm	1.8.2				
cublasDtrsm_64	12.0				hipblasDtrsm_64	6.3.0				
cublasDtrsm_v2					hipblasDtrsm	1.8.2				
cublasDtrsm_v2_64	12.0				hipblasDtrsm_64	6.3.0				
cublasGemmGroupedBatchedEx	12.5									

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Table 19 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U
cublasGemmGroupedBatchedEx_64	12.5									
cublasHSHgemvBatched	11.6									
cublasHSHgemvBatched_64	12.0									
cublasHSHgemvStridedBatched	11.6									
cublasHSHgemvStridedBatched_64	12.0									
cublasHSSgemvBatched	11.6									
cublasHSSgemvBatched_64	12.0									
cublasHSSgemvStridedBatched	11.6									
cublasHSSgemvStridedBatched_64	12.0									
cublasHgemm	7.5				hipblasHgemm	1.8.2				
cublasHgemmBatched	9.0				hipblasHgemmBatched	3.0.0				
cublasHgemmBatched_64	12.0				hipblasHgemmBatched_64	6.3.0				
cublasHgemmStridedBatched	8.0				hipblasHgemmStridedBatched	3.0.0				
cublasHgemmStridedBatched_64	12.0				hipblasHgemmStridedBatched_64	6.3.0				
cublasHgemm_64	12.0				hipblasHgemm_64	6.3.0				
cublasSgemm					hipblasSgemm	1.8.2				
cublasSgemmBatched					hipblasSgemmBatched	1.8.2				
cublasSgemmBatched_64	12.0				hipblasSgemmBatched_64	6.3.0				
cublasSgemmGroupedBatched	12.4									
cublasSgemmGroupedBatched_64	12.4									
cublasSgemmStridedBatched	8.0				hipblasSgemmStridedBatched	1.8.2				
cublasSgemmStridedBatched_64	12.0				hipblasSgemmStridedBatched_64	6.3.0				
cublasSgemm_64	12.0				hipblasSgemm_64	6.3.0				
cublasSgemm_v2					hipblasSgemm	1.8.2				
cublasSgemm_v2_64	12.0				hipblasSgemm_64	6.3.0				
cublasSgemvBatched	11.6				hipblasSgemvBatched	1.6.0				
cublasSgemvBatched_64	12.0				hipblasSgemvBatched_64	6.2.0				
cublasSgemvStridedBatched	11.6				hipblasSgemvStridedBatched	3.0.0				
cublasSgemvStridedBatched_64	12.0				hipblasSgemvStridedBatched_64	6.2.0				
cublasSsymm					hipblasSsymm	3.6.0				
cublasSsymm_64	12.0				hipblasSsymm_64	6.3.0				
cublasSsymm_v2					hipblasSsymm	3.6.0				
cublasSsymm_v2_64	12.0				hipblasSsymm_64	6.3.0				
cublasSsyr2k					hipblasSsyr2k	3.5.0				
cublasSsyr2k_64	12.0				hipblasSsyr2k_64	6.3.0				
cublasSsyr2k_v2					hipblasSsyr2k	3.5.0				
cublasSsyr2k_v2_64	12.0				hipblasSsyr2k_64	6.3.0				
cublasSsyrk					hipblasSsyrk	3.5.0				
cublasSsyrk_64	12.0				hipblasSsyrk_64	6.3.0				
cublasSsyrk_v2					hipblasSsyrk	3.5.0				
cublasSsyrk_v2_64	12.0				hipblasSsyrk_64	6.3.0				
cublasSsyrkx					hipblasSsyrkx	3.5.0				
cublasSsyrkx_64	12.0				hipblasSsyrkx_64	6.3.0				
cublasStrmm					hipblasStrmm	3.2.0		6.0.0		
cublasStrmm_64	12.0				hipblasStrmm_64	6.3.0				
cublasStrmm_v2					hipblasStrmm	3.2.0		6.0.0		
cublasStrmm_v2_64	12.0				hipblasStrmm_64	6.3.0				
cublasStrsm					hipblasStrsm	1.8.2				
cublasStrsm_64	12.0				hipblasStrsm_64	6.3.0				
cublasStrsm_v2					hipblasStrsm	1.8.2				

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Table 19 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U
cublasStrsm_v2_64	12.0				hipblasStrsm_64	6.3.0				
cublasTSSgemvBatched	11.6									
cublasTSSgemvBatched_64	12.0									
cublasTSSgemvStridedBatched	11.6									
cublasTSSgemvStridedBatched_64	12.0									
cublasTSTgemvBatched	11.6									
cublasTSTgemvBatched_64	12.0									
cublasTSTgemvStridedBatched	11.6									
cublasTSTgemvStridedBatched_64	12.0									
cublasZgemm					hipblasZgemm	1.6.0		7.0.0		
cublasZgemm3m	8.0									
cublasZgemm3m_64	12.0									
cublasZgemmBatched					hipblasZgemmBatched	1.6.0		7.0.0		
cublasZgemmBatched_64	12.0				hipblasZgemmBatched_64	6.3.0		7.0.0		
cublasZgemmStridedBatched	8.0				hipblasZgemmStridedBatched	3.0.0		7.0.0		
cublasZgemmStridedBatched_64	12.0				hipblasZgemmStridedBatched_64	6.3.0		7.0.0		
cublasZgemm_64	12.0				hipblasZgemm_64	6.3.0		7.0.0		
cublasZgemm_v2					hipblasZgemm	1.6.0		7.0.0		
cublasZgemm_v2_64	12.0				hipblasZgemm_64	6.3.0		7.0.0		
cublasZgemvBatched	11.6				hipblasZgemvBatched	3.0.0		7.0.0		
cublasZgemvBatched_64	12.0				hipblasZgemvBatched_64	6.2.0		7.0.0		
cublasZgemvStridedBatched	11.6				hipblasZgemvStridedBatched	3.0.0		7.0.0		
cublasZgemvStridedBatched_64	12.0				hipblasZgemvStridedBatched_64	6.2.0		7.0.0		
cublasZhemm					hipblasZhemm	3.6.0		7.0.0		
cublasZhemm_64	12.0				hipblasZhemm_64	6.3.0		7.0.0		
cublasZhemm_v2					hipblasZhemm	3.6.0		7.0.0		
cublasZhemm_v2_64	12.0				hipblasZhemm_64	6.3.0		7.0.0		
cublasZher2k					hipblasZher2k	3.5.0		7.0.0		
cublasZher2k_64	12.0				hipblasZher2k_64	6.3.0		7.0.0		
cublasZher2k_v2					hipblasZher2k	3.5.0		7.0.0		
cublasZher2k_v2_64	12.0				hipblasZher2k_64	6.3.0		7.0.0		
cublasZherk					hipblasZherk	3.5.0		7.0.0		
cublasZherk_64	12.0				hipblasZherk_64	6.3.0		7.0.0		
cublasZherk_v2					hipblasZherk	3.5.0		7.0.0		
cublasZherk_v2_64	12.0				hipblasZherk_64	6.3.0		7.0.0		
cublasZherkx					hipblasZherkx	3.5.0		7.0.0		
cublasZherkx_64	12.0				hipblasZherkx_64	6.3.0		7.0.0		
cublasZsymm					hipblasZsymm	3.6.0		7.0.0		
cublasZsymm_64	12.0				hipblasZsymm_64	6.3.0		7.0.0		
cublasZsymm_v2					hipblasZsymm	3.6.0		7.0.0		
cublasZsymm_v2_64	12.0				hipblasZsymm_64	6.3.0		7.0.0		
cublasZsyr2k					hipblasZsyr2k	3.5.0		7.0.0		
cublasZsyr2k_64	12.0				hipblasZsyr2k_64	6.3.0		7.0.0		
cublasZsyr2k_v2					hipblasZsyr2k	3.5.0		7.0.0		
cublasZsyr2k_v2_64	12.0				hipblasZsyr2k_64	6.3.0		7.0.0		
cublasZsyrk					hipblasZsyrk	3.5.0		7.0.0		
cublasZsyrk_64	12.0				hipblasZsyrk_64	6.3.0		7.0.0		
cublasZsyrk_v2					hipblasZsyrk	3.5.0		7.0.0		
cublasZsyrk_v2_64	12.0				hipblasZsyrk_64	6.3.0		7.0.0		
cublasZsyrkx					hipblasZsyrkx	3.5.0		7.0.0		

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Table 19 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U
cublasZsyrkx_64	12.0				hipblasZsyrkx_64	6.3.0		7.0.0		
cublasZtrmm					hipblasZtrmm	3.5.0		7.0.0		
cublasZtrmm_64	12.0				hipblasZtrmm_64	6.3.0		7.0.0		
cublasZtrmm_v2					hipblasZtrmm	3.5.0		7.0.0		
cublasZtrmm_v2_64	12.0				hipblasZtrmm_64	6.3.0		7.0.0		
cublasZtrsm					hipblasZtrsm	3.5.0		7.0.0		
cublasZtrsm_64	12.0				hipblasZtrsm_64	6.3.0		7.0.0		
cublasZtrsm_v2					hipblasZtrsm	3.5.0		7.0.0		
cublasZtrsm_v2_64	12.0				hipblasZtrsm_64	6.3.0		7.0.0		

10.6.8 8. BLAS-like Extension

CUDA	A	D	C	R	HIP	A	D	C	R
cublasAsumEx	10.1								
cublasAsumEx_64	12.0								
cublasAxpyEx	8.0				hipblasAxpyEx	4.1.0		7.0.0	
cublasAxpyEx_64	12.0				hipblasAxpyEx_64	6.2.0		7.0.0	
cublasCdgmm					hipblasCdgmm	3.6.0		7.0.0	
cublasCdgmm_64	12.0				hipblasCdgmm_64	6.3.0		7.0.0	
cublasCgeam					hipblasCgeam	3.6.0		7.0.0	
cublasCgeam_64	12.0				hipblasCgeam_64	6.3.0		7.0.0	
cublasCgelsBatched					hipblasCgelsBatched	5.4.0		7.0.0	
cublasCgemmEx	8.0								
cublasCgemmEx_64	12.0								
cublasCgeqrfBatched					hipblasCgeqrfBatched	3.5.0		7.0.0	
cublasCgetrfBatched					hipblasCgetrfBatched	3.5.0		7.0.0	
cublasCgetriBatched					hipblasCgetriBatched	3.7.0		7.0.0	
cublasCgetrsBatched					hipblasCgetrsBatched	3.5.0		7.0.0	
cublasCherk3mEx	8.0								
cublasCherk3mEx_64	12.0								
cublasCherkEx	8.0				hipblasHerkEx	7.10.0			
cublasCherkEx_64	12.0								
cublasCmatinvBatched									
cublasCopyEx	10.1								
cublasCopyEx_64	12.0								
cublasCsyrk3mEx	8.0								
cublasCsyrk3mEx_64	12.0								
cublasCsyrkEx	8.0				hipblasSyrkEx	7.10.0			
cublasCsyrkEx_64	12.0								
cublasCtpttr									
cublasCtrsmBatched					hipblasCtrsmBatched	3.5.0		7.0.0	
cublasCtrsmBatched_64	12.0				hipblasCtrsmBatched_64	6.3.0		7.0.0	
cublasCtrttp									
cublasDdgmm					hipblasDdgmm	3.6.0			
cublasDdgmm_64	12.0				hipblasDdgmm_64	6.3.0			
cublasDgeam					hipblasDgeam	1.8.2			
cublasDgeam_64	12.0				hipblasDgeam_64	6.3.0			
cublasDgelsBatched					hipblasDgelsBatched	5.4.0			

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Table 20 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
cublasDgeqrfBatched					hipblasDgeqrfBatched	3.5.0			
cublasDgetrfBatched					hipblasDgetrfBatched	3.5.0			
cublasDgetriBatched					hipblasDgetriBatched	3.7.0			
cublasDgetrsBatched					hipblasDgetrsBatched	3.5.0			
cublasDmatinvBatched									
cublasDotEx	8.0				hipblasDotEx	4.1.0		7.0.0	
cublasDotEx_64	12.0				hipblasDotEx_64	6.2.0		7.0.0	
cublasDotcEx	8.0				hipblasDotcEx	4.1.0		7.0.0	
cublasDotcEx_64	12.0				hipblasDotcEx_64	6.2.0		7.0.0	
cublasDtpttr									
cublasDtrsmBatched					hipblasDtrsmBatched	3.2.0			
cublasDtrsmBatched_64	12.0				hipblasDtrsmBatched_64	6.3.0			
cublasDtrttp									
cublasGemmBatchedEx	9.1		11.0		hipblasGemmBatchedEx	3.6.0		7.0.0	
cublasGemmBatchedEx_64	12.0				hipblasGemmBatchedEx_64	6.3.0		7.0.0	
cublasGemmEx	8.0		11.0		hipblasGemmEx	1.8.2		7.0.0	
cublasGemmEx_64	12.0				hipblasGemmEx_64	6.3.0		7.0.0	
cublasGemmStridedBatchedEx	9.1		11.0		hipblasGemmStridedBatchedEx	3.6.0		7.0.0	
cublasGemmStridedBatchedEx_64	12.0				hipblasGemmStridedBatchedEx_64	6.3.0		7.0.0	
cublasIamaxEx	10.1								
cublasIamaxEx_64	12.0								
cublasIaminEx	10.1								
cublasIaminEx_64	12.0								
cublasRotEx	10.1				hipblasRotEx	4.1.0		7.0.0	
cublasRotEx_64	12.0				hipblasRotEx_64	6.2.0		7.0.0	
cublasRotgEx	10.1								
cublasRotmEx	10.1								
cublasRotmEx_64	12.0								
cublasRotmgEx	10.1								
cublasScalEx	8.0				hipblasScalEx	4.1.0		7.0.0	
cublasScalEx_64	12.0				hipblasScalEx_64	6.2.0		7.0.0	
cublasSdgmm					hipblasSdgmm	3.6.0			
cublasSdgmm_64	12.0				hipblasSdgmm_64	6.3.0			
cublasSgeam					hipblasSgeam	1.8.2			
cublasSgeam_64	12.0				hipblasSgeam_64	6.3.0			
cublasSgelsBatched					hipblasSgelsBatched	5.4.0			
cublasSgemmEx	7.5								
cublasSgemmEx_64	12.0								
cublasSgeqrfBatched					hipblasSgeqrfBatched	3.5.0			
cublasSgetrfBatched					hipblasSgetrfBatched	3.5.0			
cublasSgetriBatched					hipblasSgetriBatched	3.7.0			
cublasSgetrsBatched					hipblasSgetrsBatched	3.5.0			
cublasSmatinvBatched									
cublasStpttr									
cublasStrsmBatched					hipblasStrsmBatched	3.2.0			
cublasStrsmBatched_64	12.0				hipblasStrsmBatched_64	6.3.0			
cublasStrttp									
cublasSwapEx	10.1								
cublasSwapEx_64	12.0								
cublasUint8gemmBias	8.0								

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Table 20 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
cublasZdgmm					hipblasZdgmm	3.6.0		7.0.0	
cublasZdgmm_64	12.0				hipblasZdgmm_64	6.3.0		7.0.0	
cublasZgeam					hipblasZgeam	3.6.0		7.0.0	
cublasZgeam_64	12.0				hipblasZgeam_64	6.3.0		7.0.0	
cublasZgelsBatched					hipblasZgelsBatched	5.4.0		7.0.0	
cublasZgeqrfBatched					hipblasZgeqrfBatched	3.5.0		7.0.0	
cublasZgetrfBatched					hipblasZgetrfBatched	3.5.0		7.0.0	
cublasZgetriBatched					hipblasZgetriBatched	3.7.0		7.0.0	
cublasZgetrsBatched					hipblasZgetrsBatched	3.5.0		7.0.0	
cublasZmatinvBatched									
cublasZtpttr									
cublasZtrsmBatched					hipblasZtrsmBatched	3.5.0		7.0.0	
cublasZtrsmBatched_64	12.0				hipblasZtrsmBatched_64	6.3.0		7.0.0	
cublasZtrttp									

10.6.9 9. BLASLt Function Reference

CUDA	A	D	C	R	HIP
cublasLtCreate	10.1				hipblasLtCreate
cublasLtDestroy	10.1				hipblasLtDestroy
cublasLtDisableCpuInstructionsSetMask	12.1				
cublasLtEmulationDescDestroy	13.0				
cublasLtEmulationDescGetAttribute	13.0				
cublasLtEmulationDescInit	13.0				
cublasLtEmulationDescSetAttribute	13.0				
cublasLtGetCudartVersion	10.1				
cublasLtGetProperty	10.1				
cublasLtGetStatusName	11.4				
cublasLtGetStatusString	11.4				
cublasLtGetVersion	10.1				
cublasLtGroupedMatrixLayoutCreate	13.1				
cublasLtGroupedMatrixLayoutInit	13.1				
cublasLtGroupedMatrixLayoutInit_internal	13.1				
cublasLtHeuristicsCacheGetCapacity	11.8				
cublasLtHeuristicsCacheSetCapacity	11.8				
cublasLtLoggerForceDisable	11.0				
cublasLtLoggerOpenFile	11.0				
cublasLtLoggerSetCallback	11.0				
cublasLtLoggerSetFile	11.0				
cublasLtLoggerSetLevel	11.0				
cublasLtLoggerSetMask	11.0				
cublasLtMatmul	10.1				hipblasLtMatmul
cublasLtMatmulAlgoCapGetAttribute	10.1				
cublasLtMatmulAlgoCheck	10.1				
cublasLtMatmulAlgoConfigGetAttribute	10.1				
cublasLtMatmulAlgoConfigSetAttribute	10.1				
cublasLtMatmulAlgoGetHeuristic	10.1				hipblasLtMatmulAlgoGetHeuristic
cublasLtMatmulAlgoGetIds	10.1				

Table 21 – continued from previous page

CUDA	A	D	C	R	HIP
cublasLtMatmulAlgoInit	10.1				
cublasLtMatmulDescCreate	10.1		11.0		hipblasLtMatmulDescCreate
cublasLtMatmulDescDestroy	10.1				hipblasLtMatmulDescDestroy
cublasLtMatmulDescGetAttribute	10.1				hipblasLtMatmulDescGetAttribute
cublasLtMatmulDescInit	11.0				
cublasLtMatmulDescSetAttribute	10.1				hipblasLtMatmulDescSetAttribute
cublasLtMatmulPreferenceCreate	10.1				hipblasLtMatmulPreferenceCreate
cublasLtMatmulPreferenceDestroy	10.1				hipblasLtMatmulPreferenceDestroy
cublasLtMatmulPreferenceGetAttribute	10.1				hipblasLtMatmulPreferenceGetAttribute
cublasLtMatmulPreferenceInit	11.0				
cublasLtMatmulPreferenceSetAttribute	10.1				hipblasLtMatmulPreferenceSetAttribute
cublasLtMatrixLayoutCreate	10.1				hipblasLtMatrixLayoutCreate
cublasLtMatrixLayoutDestroy	10.1				hipblasLtMatrixLayoutDestroy
cublasLtMatrixLayoutGetAttribute	10.1				hipblasLtMatrixLayoutGetAttribute
cublasLtMatrixLayoutInit	11.0				
cublasLtMatrixLayoutSetAttribute	10.1				hipblasLtMatrixLayoutSetAttribute
cublasLtMatrixTransform	10.1				hipblasLtMatrixTransform
cublasLtMatrixTransformDescCreate	10.1				hipblasLtMatrixTransformDescCreate
cublasLtMatrixTransformDescDestroy	10.1				hipblasLtMatrixTransformDescDestroy
cublasLtMatrixTransformDescGetAttribute	10.1				hipblasLtMatrixTransformDescGetAttribute
cublasLtMatrixTransformDescInit	11.0				
cublasLtMatrixTransformDescSetAttribute	10.1				hipblasLtMatrixTransformDescSetAttribute

10.7 CUSPARSE API supported by HIP

Note: In the tables that follow the columns marked A, D, C, R, U, and E mean the following: **A** - Added; **D** - Deprecated; **C** - Changed; **R** - Removed; **U** - Unsupported for CUDA version(s); **E** - Experimental

10.7.1 4. CUSPARSE Types References

CUDA	A	D	C	R	HIP
CUSPARSE_ACTION_NUMERIC					HIPSPARSE_ACTION_NUMERIC
CUSPARSE_ACTION_SYMBOLIC					HIPSPARSE_ACTION_SYMBOLIC
CUSPARSE_ALG0	8.0			11.0	
CUSPARSE_ALG1	8.0			11.0	
CUSPARSE_ALG_MERGE_PATH	9.2			12.0	
CUSPARSE_ALG_NAIVE	9.2			11.0	
CUSPARSE_COLOR_ALG0	8.0	12.2			
CUSPARSE_COLOR_ALG1	8.0	12.2			
CUSPARSE_COOMM_ALG1	10.1	11.0		12.0	HIPSPARSE_COOMM_ALG1
CUSPARSE_COOMM_ALG2	10.1	11.0		12.0	HIPSPARSE_COOMM_ALG2
CUSPARSE_COOMM_ALG3	10.1	11.0		12.0	HIPSPARSE_COOMM_ALG3
CUSPARSE_COOMV_ALG	10.2	11.2		12.0	HIPSPARSE_COOMV_ALG
CUSPARSE_CSR2CSC_ALG1	10.1				HIPSPARSE_CSR2CSC_ALG1
CUSPARSE_CSR2CSC_ALG2	10.1			12.0	HIPSPARSE_CSR2CSC_ALG2
CUSPARSE_CSR2CSC_ALG_DEFAULT	12.0				HIPSPARSE_CSR2CSC_ALG_DEFAULT

Table 22 – continued from previous page

CUDA	A	D	C	R	HIP
CUSPARSE_CSRMM_ALG1	10.2	11.0		12.0	HIPSPARSE_CSRMM_ALG1
CUSPARSE_CSRMV_ALG1	10.2	11.2		12.0	HIPSPARSE_CSRMV_ALG1
CUSPARSE_CSRMV_ALG2	10.2	11.2		12.0	HIPSPARSE_CSRMV_ALG2
CUSPARSE_DENSETOSPARSE_ALG_DEFAULT	11.1				HIPSPARSE_DENSETOSPARSE_ALG_DEFAULT
CUSPARSE_DIAG_TYPE_NON_UNIT					HIPSPARSE_DIAG_TYPE_NON_UNIT
CUSPARSE_DIAG_TYPE_UNIT					HIPSPARSE_DIAG_TYPE_UNIT
CUSPARSE_DIRECTION_COLUMN					HIPSPARSE_DIRECTION_COLUMN
CUSPARSE_DIRECTION_ROW					HIPSPARSE_DIRECTION_ROW
CUSPARSE_ENABLE_EXPERIMENTAL_API	13.1				
CUSPARSE_FILL_MODE_LOWER					HIPSPARSE_FILL_MODE_LOWER
CUSPARSE_FILL_MODE_UPPER					HIPSPARSE_FILL_MODE_UPPER
CUSPARSE_FORMAT_BLOCKED_ELL	11.2				HIPSPARSE_FORMAT_BLOCKED_ELL
CUSPARSE_FORMAT_BSR	12.1				
CUSPARSE_FORMAT_COO	10.1				HIPSPARSE_FORMAT_COO
CUSPARSE_FORMAT_COO_AOS	10.2			12.0	HIPSPARSE_FORMAT_COO_AOS
CUSPARSE_FORMAT_CSC	10.1				HIPSPARSE_FORMAT_CSC
CUSPARSE_FORMAT_CSR	10.1				HIPSPARSE_FORMAT_CSR
CUSPARSE_FORMAT_SLICED_ELLPACK	12.1				
CUSPARSE_HYB_PARTITION_AUTO		10.2		11.0	HIPSPARSE_HYB_PARTITION_AUTO
CUSPARSE_HYB_PARTITION_MAX		10.2		11.0	HIPSPARSE_HYB_PARTITION_MAX
CUSPARSE_HYB_PARTITION_USER		10.2		11.0	HIPSPARSE_HYB_PARTITION_USER
CUSPARSE_INDEX_16U	10.1				HIPSPARSE_INDEX_16U
CUSPARSE_INDEX_32I	10.1				HIPSPARSE_INDEX_32I
CUSPARSE_INDEX_64I	10.1				HIPSPARSE_INDEX_64I
CUSPARSE_INDEX_BASE_ONE					HIPSPARSE_INDEX_BASE_ONE
CUSPARSE_INDEX_BASE_ZERO					HIPSPARSE_INDEX_BASE_ZERO
CUSPARSE_MATRIX_TYPE_GENERAL					HIPSPARSE_MATRIX_TYPE_GENERAL
CUSPARSE_MATRIX_TYPE_HERMITIAN					HIPSPARSE_MATRIX_TYPE_HERMITIAN
CUSPARSE_MATRIX_TYPE_SYMMETRIC					HIPSPARSE_MATRIX_TYPE_SYMMETRIC
CUSPARSE_MATRIX_TYPE_TRIANGULAR					HIPSPARSE_MATRIX_TYPE_TRIANGULAR
CUSPARSE_MM_ALG_DEFAULT	10.2	11.0		12.0	HIPSPARSE_MM_ALG_DEFAULT
CUSPARSE_MV_ALG_DEFAULT	10.2	11.3		12.0	HIPSPARSE_MV_ALG_DEFAULT
CUSPARSE_OPERATION_CONJUGATE_TRANSPOSE					HIPSPARSE_OPERATION_CONJUGATE_TRANSPOSE
CUSPARSE_OPERATION_NON_TRANSPOSE					HIPSPARSE_OPERATION_NON_TRANSPOSE
CUSPARSE_OPERATION_TRANSPOSE					HIPSPARSE_OPERATION_TRANSPOSE
CUSPARSE_ORDER_COL	10.1				HIPSPARSE_ORDER_COL
CUSPARSE_ORDER_ROW	10.1				HIPSPARSE_ORDER_ROW
CUSPARSE_POINTER_MODE_DEVICE					HIPSPARSE_POINTER_MODE_DEVICE
CUSPARSE_POINTER_MODE_HOST					HIPSPARSE_POINTER_MODE_HOST
CUSPARSE_SDDMM_ALG_DEFAULT	11.2				HIPSPARSE_SDDMM_ALG_DEFAULT
CUSPARSE_SIDE_LEFT				11.5	
CUSPARSE_SIDE_RIGHT				11.5	
CUSPARSE_SOLVE_POLICY_NO_LEVEL		12.2			HIPSPARSE_SOLVE_POLICY_NO_LEVEL
CUSPARSE_SOLVE_POLICY_USE_LEVEL		12.2			HIPSPARSE_SOLVE_POLICY_USE_LEVEL
CUSPARSE_SPARSETODENSE_ALG_DEFAULT	11.1				HIPSPARSE_SPARSETODENSE_ALG_DEFAULT
CUSPARSE_SPGEMM_ALG1	12.0				HIPSPARSE_SPGEMM_ALG1
CUSPARSE_SPGEMM_ALG2	12.0				HIPSPARSE_SPGEMM_ALG2
CUSPARSE_SPGEMM_ALG3	12.0				HIPSPARSE_SPGEMM_ALG3
CUSPARSE_SPGEMM_CSR_ALG_DETERMINITIC	11.3				HIPSPARSE_SPGEMM_CSR_ALG_DETERMINISTIC
CUSPARSE_SPGEMM_CSR_ALG_NONDETERMINITIC	11.3				HIPSPARSE_SPGEMM_CSR_ALG_NONDETERMINIST

Table 22 – continued from previous page

CUDA	A	D	C	R	HIP
CUSPARSE_SPGEMM_DEFAULT	11.0				HIPSPARSE_SPGEMM_DEFAULT
CUSPARSE_SPMAT_DIAG_TYPE	11.3				HIPSPARSE_SPMAT_DIAG_TYPE
CUSPARSE_SPMAT_FILL_MODE	11.3				HIPSPARSE_SPMAT_FILL_MODE
CUSPARSE_SPMMA_ALG1	11.1			11.2	
CUSPARSE_SPMMA_ALG2	11.1			11.2	
CUSPARSE_SPMMA_ALG3	11.1			11.2	
CUSPARSE_SPMMA_ALG4	11.1			11.2	
CUSPARSE_SPMMA_PREPROCESS	11.1			11.2	
CUSPARSE_SPMM_ALG_DEFAULT	11.0				HIPSPARSE_SPMM_ALG_DEFAULT
CUSPARSE_SPMM_BLOCKED_ELL_ALG1	11.2				HIPSPARSE_SPMM_BLOCKED_ELL_ALG1
CUSPARSE_SPMM_BSR_ALG1	12.5				
CUSPARSE_SPMM_COO_ALG1	11.0				HIPSPARSE_SPMM_COO_ALG1
CUSPARSE_SPMM_COO_ALG2	11.0				HIPSPARSE_SPMM_COO_ALG2
CUSPARSE_SPMM_COO_ALG3	11.0				HIPSPARSE_SPMM_COO_ALG3
CUSPARSE_SPMM_COO_ALG4	11.0				HIPSPARSE_SPMM_COO_ALG4
CUSPARSE_SPMM_CSR_ALG1	11.0				HIPSPARSE_SPMM_CSR_ALG1
CUSPARSE_SPMM_CSR_ALG2	11.0				HIPSPARSE_SPMM_CSR_ALG2
CUSPARSE_SPMM_CSR_ALG3	11.2				HIPSPARSE_SPMM_CSR_ALG3
CUSPARSE_SPMM_OP_ALG_DEFAULT	11.5	13.2			
CUSPARSE_SPMV_ALG_DEFAULT	11.2				HIPSPARSE_SPMV_ALG_DEFAULT
CUSPARSE_SPMV_BSR_ALG1	13.0				
CUSPARSE_SPMV_COO_ALG1	11.2				HIPSPARSE_SPMV_COO_ALG1
CUSPARSE_SPMV_COO_ALG2	11.2				HIPSPARSE_SPMV_COO_ALG2
CUSPARSE_SPMV_CSR_ALG1	11.2				HIPSPARSE_SPMV_CSR_ALG1
CUSPARSE_SPMV_CSR_ALG2	11.2				HIPSPARSE_SPMV_CSR_ALG2
CUSPARSE_SPMV_SELL_ALG1	12.1				HIPSPARSE_SPMV_SELL_ALG1
CUSPARSE_SPSM_ALG_DEFAULT	11.3				HIPSPARSE_SPSM_ALG_DEFAULT
CUSPARSE_SPSM_UPDATE_DIAGONAL	12.4				
CUSPARSE_SPSM_UPDATE_GENERAL	12.4				
CUSPARSE_SPSV_ALG_DEFAULT	11.3				HIPSPARSE_SPSV_ALG_DEFAULT
CUSPARSE_SPSV_UPDATE_DIAGONAL	12.1				
CUSPARSE_SPSV_UPDATE_GENERAL	12.1				
CUSPARSE_STATUS_ALLOC_FAILED					HIPSPARSE_STATUS_ALLOC_FAILED
CUSPARSE_STATUS_ARCH_MISMATCH					HIPSPARSE_STATUS_ARCH_MISMATCH
CUSPARSE_STATUS_EXECUTION_FAILED					HIPSPARSE_STATUS_EXECUTION_FAILED
CUSPARSE_STATUS_INSUFFICIENT_RESOURCES	11.0				HIPSPARSE_STATUS_INSUFFICIENT_RESOURCES
CUSPARSE_STATUS_INTERNAL_ERROR					HIPSPARSE_STATUS_INTERNAL_ERROR
CUSPARSE_STATUS_INVALID_VALUE					HIPSPARSE_STATUS_INVALID_VALUE
CUSPARSE_STATUS_MAPPING_ERROR					HIPSPARSE_STATUS_MAPPING_ERROR
CUSPARSE_STATUS_MATRIX_TYPE_NOT_SUPPORTED					HIPSPARSE_STATUS_MATRIX_TYPE_NOT_SUPPO
CUSPARSE_STATUS_NOT_INITIALIZED					HIPSPARSE_STATUS_NOT_INITIALIZED
CUSPARSE_STATUS_NOT_SUPPORTED	10.2				HIPSPARSE_STATUS_NOT_SUPPORTED
CUSPARSE_STATUS_SUCCESS					HIPSPARSE_STATUS_SUCCESS
CUSPARSE_STATUS_ZERO_PIVOT					HIPSPARSE_STATUS_ZERO_PIVOT
bsric02Info					bsric02Info
bsric02Info_t					bsric02Info_t
bsrilu02Info		12.2			bsrilu02Info
bsrilu02Info_t		12.2			bsrilu02Info_t
bsrsm2Info		12.2			bsrsm2Info
bsrsm2Info_t		12.2			bsrsm2Info_t

Table 22 – continued from previous page

CUDA	A	D	C	R	HIP
bsrsv2Info		12.2			bsrsv2Info
bsrsv2Info_t		12.2			bsrsv2Info_t
csrgemm2Info				12.0	csrgemm2Info
csrgemm2Info_t				12.0	csrgemm2Info_t
csric02Info		12.2			csric02Info
csric02Info_t		12.2			csric02Info_t
csrilu02Info		12.2			csrilu02Info
csrilu02Info_t		12.2			csrilu02Info_t
csrsm2Info	9.2			12.0	
csrsm2Info_t	9.2			12.0	csrsm2Info_t
csrsv2Info				12.0	
csrsv2Info_t				12.0	csrsv2Info_t
csru2csrInfo		12.2			csru2csrInfo
csru2csrInfo_t		12.2			csru2csrInfo_t
cusparseAction_t					hipsparseAction_t
cusparseAlgMode_t	8.0			12.0	
cusparseColorAlg_t	8.0	12.2			
cusparseColorInfo		12.2			
cusparseColorInfo_t		12.2			hipsparseColorInfo_t
cusparseConstDnMatDescr_t	12.0				hipsparseConstDnMatDescr_t
cusparseConstDnVecDescr_t	12.0				hipsparseConstDnVecDescr_t
cusparseConstSpMatDescr_t	12.0				hipsparseConstSpMatDescr_t
cusparseConstSpVecDescr_t	12.0				hipsparseConstSpVecDescr_t
cusparseContext					
cusparseCsr2CscAlg_t	10.1				hipsparseCsr2CscAlg_t
cusparseDenseToSparseAlg_t	11.1				hipsparseDenseToSparseAlg_t
cusparseDiagType_t					hipsparseDiagType_t
cusparseDirection_t					hipsparseDirection_t
cusparseDnMatDescr	10.1				
cusparseDnMatDescr_t	10.1				hipsparseDnMatDescr_t
cusparseDnVecDescr	10.2				
cusparseDnVecDescr_t	10.2				hipsparseDnVecDescr_t
cusparseFillMode_t					hipsparseFillMode_t
cusparseFormat_t	10.1				hipsparseFormat_t
cusparseHandle_t					hipsparseHandle_t
cusparseHybMat		10.2		11.0	
cusparseHybMat_t		10.2		11.0	hipsparseHybMat_t
cusparseHybPartition_t		10.2		11.0	hipsparseHybPartition_t
cusparseIndexBase_t					hipsparseIndexBase_t
cusparseIndexType_t	10.1				hipsparseIndexType_t
cusparseLoggerCallback_t	11.5				
cusparseMatDescr					
cusparseMatDescr_t					hipsparseMatDescr_t
cusparseMatrixType_t					hipsparseMatrixType_t
cusparseOperation_t					hipsparseOperation_t
cusparseOrder_t	10.1				hipsparseOrder_t
cusparsePointerMode_t					hipsparsePointerMode_t
cusparseSDDMMAlg_t	11.2				hipsparseSDDMMAlg_t
cusparseSideMode_t				11.5	
cusparseSolveAnalysisInfo		10.2		11.0	

Table 22 – continued from previous page

CUDA	A	D	C	R	HIP
cusparseSolveAnalysisInfo_t		10.2		11.0	
cusparseSolvePolicy_t		12.2			hipsparseSolvePolicy_t
cusparseSpGEMMAlg_t	11.0				hipsparseSpGEMMAlg_t
cusparseSpGEMMDescr	11.0				hipsparseSpGEMMDescr
cusparseSpGEMMDescr_t	11.0				hipsparseSpGEMMDescr_t
cusparseSpMMAlg_t	10.1				hipsparseSpMMAlg_t
cusparseSpMMOpAlg_t	11.5	13.2			
cusparseSpMMOpPlan	11.5				
cusparseSpMMOpPlan_t	11.5	13.2			
cusparseSpMVAlg_t	10.2				hipsparseSpMVAlg_t
cusparseSpMVOpDescr	13.1				
cusparseSpMVOpDescr_t	13.1				
cusparseSpMVOpPlan	13.1				
cusparseSpMVOpPlan_t	13.1				
cusparseSpMatAttribute_t	11.3				hipsparseSpMatAttribute_t
cusparseSpMatDescr	10.1				
cusparseSpMatDescr_t	10.1				hipsparseSpMatDescr_t
cusparseSpSMAlg_t	11.3				hipsparseSpSMAlg_t
cusparseSpSMDescr	11.3				hipsparseSpSMDescr
cusparseSpSMDescr_t	11.3				hipsparseSpSMDescr_t
cusparseSpSMUpdate_t	12.4				
cusparseSpSVAlg_t	11.3				hipsparseSpSVAlg_t
cusparseSpSVDescr	11.3				hipsparseSpSVDescr
cusparseSpSVDescr_t	11.3				hipsparseSpSVDescr_t
cusparseSpSVUpdate_t	12.1				
cusparseSpVecDescr	10.2				
cusparseSpVecDescr_t	10.2				hipsparseSpVecDescr_t
cusparseSparseToDenseAlg_t	11.1				hipsparseSparseToDenseAlg_t
cusparseStatus_t					hipsparseStatus_t
pruneInfo	9.0	12.2			pruneInfo
pruneInfo_t	9.0	12.2			pruneInfo_t

10.7.2 5. CUSPARSE Management Function Reference

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cusparseCreate					hipsparseCreate	1.9.2					
cusparseDestroy					hipsparseDestroy	1.9.2					
cusparseGetErrorName	10.2				hipsparseGetErrorName	6.0.0					
cusparseGetErrorString	10.2				hipsparseGetErrorString	6.0.0					
cusparseGetPointerMode					hipsparseGetPointerMode	1.9.2					
cusparseGetStream	8.0				hipsparseGetStream	1.9.2					
cusparseGetVersion					hipsparseGetVersion	1.9.2					
cusparseSetPointerMode					hipsparseSetPointerMode	1.9.2					
cusparseSetStream					hipsparseSetStream	1.9.2					

10.7.3 6. CUSPARSE Logging

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cusparseLoggerForceDisable	11.5										
cusparseLoggerOpenFile	11.5										
cusparseLoggerSetCallback	11.5										
cusparseLoggerSetFile	11.5										
cusparseLoggerSetLevel	11.5										
cusparseLoggerSetMask	11.5										

10.7.4 7. CUSPARSE Helper Function Reference

CUDA	A	D	C	R	HIP	A	D	C	R
cusparseCopyMatDescr	8.0			12.0	hipsparseCopyMatDescr	1.9.2			
cusparseCreateBsric02Info		12.2			hipsparseCreateBsric02Info	3.8.0	6.2.0		
cusparseCreateBsrilu02Info		12.2			hipsparseCreateBsrilu02Info	3.9.0	6.2.0		
cusparseCreateBsrsm2Info		12.2			hipsparseCreateBsrsm2Info	4.5.0	6.2.0		
cusparseCreateBsrsv2Info		12.2			hipsparseCreateBsrsv2Info	3.6.0	6.2.0		

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Table 23 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
cusparseCreateColorInfo		12.2			hipsparseCreateColorInfo	4.5.0	6.2.0		
cusparseCreateCsrgemm2Info		11.0		12.0	hipsparseCreateCsrgemm2Info	2.8.0	3.9.0		
cusparseCreateCsric02Info		12.2			hipsparseCreateCsric02Info	3.1.0	6.2.0		
cusparseCreateCsrilu02Info		12.2			hipsparseCreateCsrilu02Info	1.9.2	6.2.0		
cusparseCreateCsrsm2Info	9.2	11.3		12.0	hipsparseCreateCsrsm2Info	3.1.0	5.6.0		
cusparseCreateCsrsv2Info		11.3		12.0	hipsparseCreateCsrsv2Info	1.9.2	5.6.0		
cusparseCreateHybMat		10.2		11.0	hipsparseCreateHybMat	1.9.2	3.9.0		
cusparseCreateMatDescr					hipsparseCreateMatDescr	1.9.2			
cusparseCreatePruneInfo	9.0	12.2			hipsparseCreatePruneInfo	3.9.0	6.2.0		
cusparseCreateSolveAnalysisInfo		10.2		11.0					
cusparseDestroyBsric02Info		12.2			hipsparseDestroyBsric02Info	3.8.0	6.2.0		
cusparseDestroyBsrilu02Info		12.2			hipsparseDestroyBsrilu02Info	3.9.0	6.2.0		
cusparseDestroyBsrsm2Info		12.2			hipsparseDestroyBsrsm2Info	4.5.0	6.2.0		
cusparseDestroyBsrsv2Info		12.2			hipsparseDestroyBsrsv2Info	3.6.0	6.2.0		
cusparseDestroyColorInfo		12.2			hipsparseDestroyColorInfo	4.5.0	6.2.0		
cusparseDestroyCsrgemm2Info		11.0		12.0	hipsparseDestroyCsrgemm2Info	2.8.0	3.9.0		
cusparseDestroyCsric02Info		12.2			hipsparseDestroyCsric02Info	3.1.0	6.2.0		
cusparseDestroyCsrilu02Info		12.2			hipsparseDestroyCsrilu02Info	1.9.2	6.2.0		
cusparseDestroyCsrsm2Info	9.2	11.3		12.0	hipsparseDestroyCsrsm2Info	3.1.0	5.6.0		
cusparseDestroyCsrsv2Info		11.3		12.0	hipsparseDestroyCsrsv2Info	1.9.2	5.6.0		
cusparseDestroyHybMat		10.2		11.0	hipsparseDestroyHybMat	1.9.2	3.9.0		
cusparseDestroyMatDescr					hipsparseDestroyMatDescr	1.9.2			
cusparseDestroyPruneInfo	9.0	12.2			hipsparseDestroyPruneInfo	3.9.0	6.2.0		
cusparseDestroySolveAnalysisInfo		10.2		11.0					
cusparseGetLevelInfo				11.0					
cusparseGetMatDiagType					hipsparseGetMatDiagType	1.9.2			
cusparseGetMatFillMode					hipsparseGetMatFillMode	1.9.2			
cusparseGetMatIndexBase					hipsparseGetMatIndexBase	1.9.2			
cusparseGetMatType					hipsparseGetMatType	1.9.2			
cusparseSetMatDiagType					hipsparseSetMatDiagType	1.9.2			
cusparseSetMatFillMode					hipsparseSetMatFillMode	1.9.2			
cusparseSetMatIndexBase					hipsparseSetMatIndexBase	1.9.2			
cusparseSetMatType					hipsparseSetMatType	1.9.2			

10.7.5 8. CUSPARSE Level 1 Function Reference

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cusparseCaxpyi		11.0		12.0	hipsparseCaxpyi	3.1.0	3.9.0				
cusparseCdotci		10.2		11.0	hipsparseCdotci	3.1.0	3.9.0				
cusparseCdoti		10.2		11.0	hipsparseCdoti	3.1.0	3.9.0				
cusparseCgthr		11.0		12.0	hipsparseCgthr	3.1.0	3.9.0				
cusparseCgthrz		11.0		12.0	hipsparseCgthrz	3.1.0	3.9.0				
cusparseCsctr		11.0		12.0	hipsparseCsctr	3.1.0	3.9.0				
cusparseDaxpyi		11.0		12.0	hipsparseDaxpyi	1.9.2	3.9.0				
cusparseDdoti		10.2		11.0	hipsparseDdoti	1.9.2	3.9.0				
cusparseDgthr		11.0		12.0	hipsparseDgthr	1.9.2	3.9.0				
cusparseDgthrz		11.0		12.0	hipsparseDgthrz	1.9.2	3.9.0				
cusparseDroti		11.0		12.0	hipsparseDroti	1.9.2	3.9.0				
cusparseDsctr		11.0		12.0	hipsparseDsctr	1.9.2	3.9.0				
cusparseSaxpyi		11.0		12.0	hipsparseSaxpyi	1.9.2	3.9.0				
cusparseSdoti		10.2		11.0	hipsparseSdoti	1.9.2	3.9.0				
cusparseSgthr		11.0		12.0	hipsparseSgthr	1.9.2	3.9.0				
cusparseSgthrz		11.0		12.0	hipsparseSgthrz	1.9.2	3.9.0				
cusparseSroti		11.0		12.0	hipsparseSroti	1.9.2	3.9.0				
cusparseSsctr		11.0		12.0	hipsparseSsctr	1.9.2	3.9.0				
cusparseZaxpyi		11.0		12.0	hipsparseZaxpyi	3.1.0	3.9.0				
cusparseZdotci		10.2		11.0	hipsparseZdotci	3.1.0	3.9.0				
cusparseZdoti		10.2		11.0	hipsparseZdoti	3.1.0	3.9.0				
cusparseZgthr		11.0		12.0	hipsparseZgthr	3.1.0	3.9.0				
cusparseZgthrz		11.0		12.0	hipsparseZgthrz	3.1.0	3.9.0				
cusparseZsctr		11.0		12.0	hipsparseZsctr	3.1.0	3.9.0				

10.7.6 9. CUSPARSE Level 2 Function Reference

CUDA	A	D	C	R	HIP	A	D	C	R
cusparseCbsrmv		13.1			hipsparseCbsrmv	3.5.0			
cusparseCbsrsv2_analysis		12.2			hipsparseCbsrsv2_analysis	3.6.0	6.2.0		
cusparseCbsrsv2_bufferSize		12.2			hipsparseCbsrsv2_bufferSize	3.6.0	6.2.0		
cusparseCbsrsv2_bufferSizeExt		12.2			hipsparseCbsrsv2_bufferSizeExt	3.6.0			
cusparseCbsrsv2_solve		12.2			hipsparseCbsrsv2_solve	3.6.0	6.2.0		
cusparseCbsrxmv		12.2			hipsparseCbsrxmv	4.5.0	6.2.0		
cusparseCcsrmv		10.2		11.0	hipsparseCcsrmv	3.1.0	3.9.0		
cusparseCcsrmv_mp	8.0	10.2		11.0					
cusparseCcsrsv2_analysis		11.3		12.0	hipsparseCcsrsv2_analysis	3.1.0	5.6.0		
cusparseCcsrsv2_bufferSize		11.3		12.0	hipsparseCcsrsv2_bufferSize	3.1.0	5.6.0		
cusparseCcsrsv2_bufferSizeExt		11.3		12.0	hipsparseCcsrsv2_bufferSizeExt	3.1.0			
cusparseCcsrsv2_solve		11.3		12.0	hipsparseCcsrsv2_solve	3.1.0	5.6.0		
cusparseCcsrsv_analysis		10.2		11.0					
cusparseCcsrsv_solve		10.2		11.0					
cusparseCgemvi	7.5	12.8			hipsparseCgemvi	4.3.0			
cusparseCgemvi_bufferSize	7.5	12.8			hipsparseCgemvi_bufferSize	4.3.0			
cusparseChybmv		10.2		11.0	hipsparseChybmv	3.1.0	3.9.0		
cusparseChybsv_analysis		10.2		11.0					
cusparseChybsv_solve		10.2		11.0					
cusparseCsrmvEx	8.0	11.2		12.0					
cusparseCsrmvEx_bufferSize	8.0	11.2		12.0					
cusparseCsrsv_analysisEx	8.0	10.2		11.0					
cusparseCsrsv_solveEx	8.0	10.2		11.0					
cusparseDbsrmv		13.1			hipsparseDbsrmv	3.5.0			
cusparseDbsrsv2_analysis		12.2			hipsparseDbsrsv2_analysis	3.6.0	6.2.0		
cusparseDbsrsv2_bufferSize		12.2			hipsparseDbsrsv2_bufferSize	3.6.0	6.2.0		
cusparseDbsrsv2_bufferSizeExt		12.2			hipsparseDbsrsv2_bufferSizeExt	3.6.0			
cusparseDbsrsv2_solve		12.2			hipsparseDbsrsv2_solve	3.6.0	6.2.0		
cusparseDbsrxmv		12.2			hipsparseDbsrxmv	4.5.0	6.2.0		
cusparseDcsrmv		10.2		11.0	hipsparseDcsrmv	1.9.2	3.9.0		
cusparseDcsrmv_mp	8.0	10.2		11.0					
cusparseDcsrsv2_analysis		11.3		12.0	hipsparseDcsrsv2_analysis	1.9.2	5.6.0		
cusparseDcsrsv2_bufferSize		11.3		12.0	hipsparseDcsrsv2_bufferSize	1.9.2	5.6.0		
cusparseDcsrsv2_bufferSizeExt		11.3		12.0	hipsparseDcsrsv2_bufferSizeExt	1.9.2			
cusparseDcsrsv2_solve		11.3		12.0	hipsparseDcsrsv2_solve	1.9.2	5.6.0		
cusparseDcsrsv_analysis		10.2		11.0					
cusparseDcsrsv_solve		10.2		11.0					
cusparseDgemvi	7.5	12.8			hipsparseDgemvi	4.3.0			
cusparseDgemvi_bufferSize	7.5	12.8			hipsparseDgemvi_bufferSize	4.3.0			
cusparseDhybmv		10.2		11.0	hipsparseDhybmv	1.9.2	3.9.0		
cusparseDhybsv_analysis		10.2		11.0					
cusparseDhybsv_solve		10.2		11.0					
cusparseSbsrmv		13.1			hipsparseSbsrmv	3.5.0			
cusparseSbsrsv2_analysis		12.2			hipsparseSbsrsv2_analysis	3.6.0	6.2.0		
cusparseSbsrsv2_bufferSize		12.2			hipsparseSbsrsv2_bufferSize	3.6.0	6.2.0		
cusparseSbsrsv2_bufferSizeExt		12.2			hipsparseSbsrsv2_bufferSizeExt	3.6.0			
cusparseSbsrsv2_solve		12.2			hipsparseSbsrsv2_solve	3.6.0	6.2.0		
cusparseSbsrxmv		12.2			hipsparseSbsrxmv	4.5.0	6.2.0		
cusparseScsrmv		10.2		11.0	hipsparseScsrmv	1.9.2	3.9.0		

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Table 24 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
cusparseScsrmv_mp	8.0	10.2		11.0					
cusparseScsrsv2_analysis		11.3		12.0	hipsparseScsrsv2_analysis	1.9.2	5.6.0		
cusparseScsrsv2_bufferSize		11.3		12.0	hipsparseScsrsv2_bufferSize	1.9.2	5.6.0		
cusparseScsrsv2_bufferSizeExt		11.3		12.0	hipsparseScsrsv2_bufferSizeExt	1.9.2			
cusparseScsrsv2_solve		11.3		12.0	hipsparseScsrsv2_solve	1.9.2	5.6.0		
cusparseScsrsv_analysis		10.2		11.0					
cusparseScsrsv_solve		10.2		11.0					
cusparseSgemvi	7.5	12.8			hipsparseSgemvi	4.3.0			
cusparseSgemvi_bufferSize	7.5	12.8			hipsparseSgemvi_bufferSize	4.3.0			
cusparseShybmv		10.2		11.0	hipsparseShybmv	1.9.2	3.9.0		
cusparseShybsv_analysis		10.2		11.0					
cusparseShybsv_solve		10.2		11.0					
cusparseXbsrsv2_zeroPivot		12.2			hipsparseXbsrsv2_zeroPivot	3.6.0	6.2.0		
cusparseXcsrsv2_zeroPivot		11.3		12.0	hipsparseXcsrsv2_zeroPivot	1.9.2	5.6.0		
cusparseZbsrmv		13.1			hipsparseZbsrmv	3.5.0			
cusparseZbsrsv2_analysis		12.2			hipsparseZbsrsv2_analysis	3.6.0	6.2.0		
cusparseZbsrsv2_bufferSize		12.2			hipsparseZbsrsv2_bufferSize	3.6.0	6.2.0		
cusparseZbsrsv2_bufferSizeExt		12.2			hipsparseZbsrsv2_bufferSizeExt	3.6.0			
cusparseZbsrsv2_solve		12.2			hipsparseZbsrsv2_solve	3.6.0	6.2.0		
cusparseZbsrxmv		12.2			hipsparseZbsrxmv	4.5.0	6.2.0		
cusparseZcsrmv		10.2		11.0	hipsparseZcsrmv	3.1.0	3.9.0		
cusparseZcsrmv_mp	8.0	10.2		11.0					
cusparseZcsrsv2_analysis		11.3		12.0	hipsparseZcsrsv2_analysis	3.1.0	5.6.0		
cusparseZcsrsv2_bufferSize		11.3		12.0	hipsparseZcsrsv2_bufferSize	3.1.0	5.6.0		
cusparseZcsrsv2_bufferSizeExt		11.3		12.0	hipsparseZcsrsv2_bufferSizeExt	3.1.0			
cusparseZcsrsv2_solve		11.3		12.0	hipsparseZcsrsv2_solve	3.1.0	5.6.0		
cusparseZcsrsv_analysis		10.2		11.0					
cusparseZcsrsv_solve		10.2		11.0					
cusparseZgemvi	7.5	12.8			hipsparseZgemvi	4.3.0			
cusparseZgemvi_bufferSize	7.5	12.8			hipsparseZgemvi_bufferSize	4.3.0			
cusparseZhybmv		10.2		11.0	hipsparseZhybmv	3.1.0	3.9.0		
cusparseZhybsv_analysis		10.2		11.0					
cusparseZhybsv_solve		10.2		11.0					

10.7.7 10. CUSPARSE Level 3 Function Reference

CUDA	A	D	C	R	HIP	A	D	C	R
cusparseCbsrmm		12.8			hipsparseCbsrmm	3.7.0			
cusparseCbsrsm2_analysis		12.2			hipsparseCbsrsm2_analysis	4.5.0	6.2.0		
cusparseCbsrsm2_bufferSize		12.2			hipsparseCbsrsm2_bufferSize	4.5.0	6.2.0		
cusparseCbsrsm2_bufferSizeExt		12.2							
cusparseCbsrsm2_solve		12.2			hipsparseCbsrsm2_solve	4.5.0	6.2.0		
cusparseCcsrmm		10.2		11.0	hipsparseCcsrmm	3.1.0	3.9.0		
cusparseCcsrmm2		10.2		11.0	hipsparseCcsrmm2	3.1.0	3.9.0		
cusparseCcsrsm2_analysis	9.2	11.3		12.0	hipsparseCcsrsm2_analysis	3.1.0	5.6.0		
cusparseCcsrsm2_bufferSizeExt	9.2	11.3		12.0	hipsparseCcsrsm2_bufferSizeExt	3.1.0	5.6.0		
cusparseCcsrsm2_solve	9.2	11.3		12.0	hipsparseCcsrsm2_solve	3.1.0	5.6.0		
cusparseCcsrsm_analysis		10.2		11.0					

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Table 25 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
cusparseCcsrsm_solve		10.2		11.0					
cusparseCgemmi	8.0	11.0		12.0	hipsparseCgemmi	3.7.0	3.9.0		
cusparseDbsrmm		12.8			hipsparseDbsrmm	3.7.0			
cusparseDbsrsm2_analysis		12.2			hipsparseDbsrsm2_analysis	4.5.0	6.2.0		
cusparseDbsrsm2_bufferSize		12.2			hipsparseDbsrsm2_bufferSize	4.5.0	6.2.0		
cusparseDbsrsm2_bufferSizeExt		12.2							
cusparseDbsrsm2_solve		12.2			hipsparseDbsrsm2_solve	4.5.0	6.2.0		
cusparseDcsrmm		10.2		11.0	hipsparseDcsrmm	1.9.2	3.9.0		
cusparseDcsrmm2		10.2		11.0	hipsparseDcsrmm2	1.9.2	3.9.0		
cusparseDcsrsm2_analysis	9.2	11.3		12.0	hipsparseDcsrsm2_analysis	3.1.0	5.6.0		
cusparseDcsrsm2_bufferSizeExt	9.2	11.3		12.0	hipsparseDcsrsm2_bufferSizeExt	3.1.0	5.6.0		
cusparseDcsrsm2_solve	9.2	11.3		12.0	hipsparseDcsrsm2_solve	3.1.0	5.6.0		
cusparseDcsrsm_analysis		10.2		11.0					
cusparseDcsrsm_solve		10.2		11.0					
cusparseDgemmi	8.0	11.0		12.0	hipsparseDgemmi	3.7.0	3.9.0		
cusparseSbsrmm		12.8			hipsparseSbsrmm	3.7.0			
cusparseSbsrsm2_analysis		12.2			hipsparseSbsrsm2_analysis	4.5.0	6.2.0		
cusparseSbsrsm2_bufferSize		12.2			hipsparseSbsrsm2_bufferSize	4.5.0	6.2.0		
cusparseSbsrsm2_bufferSizeExt		12.2							
cusparseSbsrsm2_solve		12.2			hipsparseSbsrsm2_solve	4.5.0	6.2.0		
cusparseScsrmm		10.2		11.0	hipsparseScsrmm	1.9.2	3.9.0		
cusparseScsrmm2		10.2		11.0	hipsparseScsrmm2	1.9.2	3.9.0		
cusparseScsrsm2_analysis	9.2	11.3		12.0	hipsparseScsrsm2_analysis	3.1.0	5.6.0		
cusparseScsrsm2_bufferSizeExt	9.2	11.3		12.0	hipsparseScsrsm2_bufferSizeExt	3.1.0	5.6.0		
cusparseScsrsm2_solve	9.2	11.3		12.0	hipsparseScsrsm2_solve	3.1.0	5.6.0		
cusparseScsrsm_analysis		10.2		11.0					
cusparseScsrsm_solve		10.2		11.0					
cusparseSgemmi	8.0	11.0		12.0	hipsparseSgemmi	3.7.0	3.9.0		
cusparseXbsrsm2_zeroPivot		12.2			hipsparseXbsrsm2_zeroPivot	4.5.0	6.2.0		
cusparseXcsrsm2_zeroPivot	9.2	11.3		12.0	hipsparseXcsrsm2_zeroPivot	3.1.0	5.6.0		
cusparseZbsrmm		12.8			hipsparseZbsrmm	3.7.0			
cusparseZbsrsm2_analysis		12.2			hipsparseZbsrsm2_analysis	4.5.0	6.2.0		
cusparseZbsrsm2_bufferSize		12.2			hipsparseZbsrsm2_bufferSize	4.5.0	6.2.0		
cusparseZbsrsm2_bufferSizeExt		12.2							
cusparseZbsrsm2_solve		12.2			hipsparseZbsrsm2_solve	4.5.0	6.2.0		
cusparseZcsrmm		10.2		11.0	hipsparseZcsrmm	3.1.0	3.9.0		
cusparseZcsrmm2		10.2		11.0	hipsparseZcsrmm2	3.1.0	3.9.0		
cusparseZcsrsm2_analysis	9.2	11.3		12.0	hipsparseZcsrsm2_analysis	3.1.0	5.6.0		
cusparseZcsrsm2_bufferSizeExt	9.2	11.3		12.0	hipsparseZcsrsm2_bufferSizeExt	3.1.0	5.6.0		
cusparseZcsrsm2_solve	9.2	11.3		12.0	hipsparseZcsrsm2_solve	3.1.0	5.6.0		
cusparseZcsrsm_analysis		10.2		11.0					
cusparseZcsrsm_solve		10.2		11.0					
cusparseZgemmi	8.0	11.0		12.0	hipsparseZgemmi	3.7.0	3.9.0		

10.7.8 11. CUSPARSE Extra Function Reference

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cusparseCcsrgeam		10.2		11.0	hipsparseCcsrgeam	3.5.0	3.9.0				
cusparseCcsrgeam2	10.0				hipsparseCcsrgeam2	3.5.0					
cusparseCcsrgeam2_buf:	10.0				hipsparseCcsrgeam2_buf	3.5.0					
cusparseCcsrgemm		10.2		11.0	hipsparseCcsrgemm	3.1.0	3.9.0				
cusparseCcsrgemm2		11.0		12.0	hipsparseCcsrgemm2	3.1.0	3.9.0				
cusparseCcsrgemm2_buf:		11.0		12.0	hipsparseCcsrgemm2_buf	3.1.0	3.9.0				
cusparseDcsrgeam		10.2		11.0	hipsparseDcsrgeam	3.5.0	3.9.0				
cusparseDcsrgeam2	10.0				hipsparseDcsrgeam2	3.5.0					
cusparseDcsrgeam2_buf:	10.0				hipsparseDcsrgeam2_buf	3.5.0					
cusparseDcsrgemm		10.2		11.0	hipsparseDcsrgemm	2.8.0	3.9.0				
cusparseDcsrgemm2		11.0		12.0	hipsparseDcsrgemm2	2.8.0	3.9.0				
cusparseDcsrgemm2_buf:		11.0		12.0	hipsparseDcsrgemm2_buf	2.8.0	3.9.0				
cusparseScsrgeam		10.2		11.0	hipsparseScsrgeam	3.5.0	3.9.0				
cusparseScsrgeam2	10.0				hipsparseScsrgeam2	3.5.0					
cusparseScsrgeam2_buf:	10.0				hipsparseScsrgeam2_buf	3.5.0					
cusparseScsrgemm		10.2		11.0	hipsparseScsrgemm	2.8.0	3.9.0				
cusparseScsrgemm2		11.0		12.0	hipsparseScsrgemm2	2.8.0	3.9.0				
cusparseScsrgemm2_buf:		11.0		12.0	hipsparseScsrgemm2_buf	2.8.0	3.9.0				
cusparseXcsrgeam2Nnz	10.0				hipsparseXcsrgeam2Nnz	3.5.0					
cusparseXcsrgeamNnz		10.2		11.0	hipsparseXcsrgeamNnz	3.5.0	3.9.0				
cusparseXcsrgemm2Nnz		11.0		12.0	hipsparseXcsrgemm2Nnz	2.8.0	3.9.0				
cusparseXcsrgemmNnz		10.2		11.0	hipsparseXcsrgemmNnz	2.8.0	3.9.0				
cusparseZcsrgeam		10.2		11.0	hipsparseZcsrgeam	3.5.0	3.9.0				
cusparseZcsrgeam2	10.0				hipsparseZcsrgeam2	3.5.0					
cusparseZcsrgeam2_buf:	10.0				hipsparseZcsrgeam2_buf	3.5.0					
cusparseZcsrgemm		10.2		11.0	hipsparseZcsrgemm	3.1.0	3.9.0				
cusparseZcsrgemm2		11.0		12.0	hipsparseZcsrgemm2	3.1.0	3.9.0				
cusparseZcsrgemm2_buf:		11.0		12.0	hipsparseZcsrgemm2_buf	3.1.0	3.9.0				

10.7.9 12. CUSPARSE Preconditioners Reference

CUDA	A	D	C	R	HIP
cusparseCbsric02		12.2			hipsparseCbsric02
cusparseCbsric02_analysis		12.2			hipsparseCbsric02_analysis
cusparseCbsric02_bufferSize		12.2			hipsparseCbsric02_bufferSize
cusparseCbsric02_bufferSizeExt		12.2			
cusparseCbsrilu02		12.2			hipsparseCbsrilu02
cusparseCbsrilu02_analysis		12.2			hipsparseCbsrilu02_analysis
cusparseCbsrilu02_bufferSize		12.2			hipsparseCbsrilu02_bufferSize
cusparseCbsrilu02_bufferSizeExt		12.2			
cusparseCbsrilu02_numericBoost		12.2			hipsparseCbsrilu02_numericBoost
cusparseCcsric0		10.2		11.0	
cusparseCcsric02		12.2			hipsparseCcsric02
cusparseCcsric02_analysis		12.2			hipsparseCcsric02_analysis
cusparseCcsric02_bufferSize		12.2			hipsparseCcsric02_bufferSize
cusparseCcsric02_bufferSizeExt		12.2			hipsparseCcsric02_bufferSizeExt
cusparseCcsrilu0		10.2		11.0	
cusparseCcsrilu02		12.2			hipsparseCcsrilu02
cusparseCcsrilu02_analysis		12.2			hipsparseCcsrilu02_analysis
cusparseCcsrilu02_bufferSize		12.2			hipsparseCcsrilu02_bufferSize
cusparseCcsrilu02_bufferSizeExt		12.2			hipsparseCcsrilu02_bufferSizeExt
cusparseCcsrilu02_numericBoost		12.2			hipsparseCcsrilu02_numericBoost
cusparseCgpsvInterleavedBatch	9.2				hipsparseCgpsvInterleavedBatch
cusparseCgpsvInterleavedBatch_bufferSizeExt	9.2				hipsparseCgpsvInterleavedBatch_buffer
cusparseCgtsv		10.2		11.0	
cusparseCgtsv2	9.0				hipsparseCgtsv2
cusparseCgtsv2StridedBatch	9.0				hipsparseCgtsv2StridedBatch
cusparseCgtsv2StridedBatch_bufferSizeExt	9.0				hipsparseCgtsv2StridedBatch_bufferSiz
cusparseCgtsv2_bufferSizeExt	9.0				hipsparseCgtsv2_bufferSizeExt
cusparseCgtsv2_nopivot	9.0				hipsparseCgtsv2_nopivot
cusparseCgtsv2_nopivot_bufferSizeExt	9.0				hipsparseCgtsv2_nopivot_bufferSizeExt
cusparseCgtsvInterleavedBatch	9.2				hipsparseCgtsvInterleavedBatch
cusparseCgtsvInterleavedBatch_bufferSizeExt	9.2				hipsparseCgtsvInterleavedBatch_buffer
cusparseCgtsvStridedBatch		10.2		11.0	
cusparseCgtsv_nopivot		10.2		11.0	
cusparseCsrilu0Ex	8.0	10.2		11.0	
cusparseDbsric02		12.2			hipsparseDbsric02
cusparseDbsric02_analysis		12.2			hipsparseDbsric02_analysis
cusparseDbsric02_bufferSize		12.2			hipsparseDbsric02_bufferSize
cusparseDbsric02_bufferSizeExt		12.2			
cusparseDbsrilu02		12.2			hipsparseDbsrilu02
cusparseDbsrilu02_analysis		12.2			hipsparseDbsrilu02_analysis
cusparseDbsrilu02_bufferSize		12.2			hipsparseDbsrilu02_bufferSize
cusparseDbsrilu02_bufferSizeExt		12.2			
cusparseDbsrilu02_numericBoost		12.2			hipsparseDbsrilu02_numericBoost
cusparseDcsric0		10.2		11.0	
cusparseDcsric02		12.2			hipsparseDcsric02
cusparseDcsric02_analysis		12.2			hipsparseDcsric02_analysis
cusparseDcsric02_bufferSize		12.2			hipsparseDcsric02_bufferSize
cusparseDcsric02_bufferSizeExt		12.2			hipsparseDcsric02_bufferSizeExt
cusparseDcsrilu0		10.2		11.0	

Table 26 – continued from previous page

CUDA	A	D	C	R	HIP
cusparseDcsrilu02		12.2			hipsparseDcsrilu02
cusparseDcsrilu02_analysis		12.2			hipsparseDcsrilu02_analysis
cusparseDcsrilu02_bufferSize		12.2			hipsparseDcsrilu02_bufferSize
cusparseDcsrilu02_bufferSizeExt		12.2			hipsparseDcsrilu02_bufferSizeExt
cusparseDcsrilu02_numericBoost		12.2			hipsparseDcsrilu02_numericBoost
cusparseDgpsvInterleavedBatch	9.2				hipsparseDgpsvInterleavedBatch
cusparseDgpsvInterleavedBatch_bufferSizeExt	9.2				hipsparseDgpsvInterleavedBatch_buffer
cusparseDgtsv		10.2		11.0	
cusparseDgtsv2	9.0				hipsparseDgtsv2
cusparseDgtsv2StridedBatch	9.0				hipsparseDgtsv2StridedBatch
cusparseDgtsv2StridedBatch_bufferSizeExt	9.0				hipsparseDgtsv2StridedBatch_bufferSiz
cusparseDgtsv2_bufferSizeExt	9.0				hipsparseDgtsv2_bufferSizeExt
cusparseDgtsv2_nopivot	9.0				hipsparseDgtsv2_nopivot
cusparseDgtsv2_nopivot_bufferSizeExt	9.0				hipsparseDgtsv2_nopivot_bufferSizeExt
cusparseDgtsvInterleavedBatch	9.2				hipsparseDgtsvInterleavedBatch
cusparseDgtsvInterleavedBatch_bufferSizeExt	9.2				hipsparseDgtsvInterleavedBatch_buffer
cusparseDgtsvStridedBatch		10.2		11.0	
cusparseDgtsv_nopivot		10.2		11.0	
cusparseSbsric02		12.2			hipsparseSbsric02
cusparseSbsric02_analysis		12.2			hipsparseSbsric02_analysis
cusparseSbsric02_bufferSize		12.2			hipsparseSbsric02_bufferSize
cusparseSbsric02_bufferSizeExt		12.2			
cusparseSbsrilu02		12.2			hipsparseSbsrilu02
cusparseSbsrilu02_analysis		12.2			hipsparseSbsrilu02_analysis
cusparseSbsrilu02_bufferSize		12.2			hipsparseSbsrilu02_bufferSize
cusparseSbsrilu02_bufferSizeExt		12.2			
cusparseSbsrilu02_numericBoost		12.2			hipsparseSbsrilu02_numericBoost
cusparseScsric0		10.2		11.0	
cusparseScsric02		12.2			hipsparseScsric02
cusparseScsric02_analysis		12.2			hipsparseScsric02_analysis
cusparseScsric02_bufferSize		12.2			hipsparseScsric02_bufferSize
cusparseScsric02_bufferSizeExt		12.2			hipsparseScsric02_bufferSizeExt
cusparseScsrilu0		10.2		11.0	
cusparseScsrilu02		12.2			hipsparseScsrilu02
cusparseScsrilu02_analysis		12.2			hipsparseScsrilu02_analysis
cusparseScsrilu02_bufferSize		12.2			hipsparseScsrilu02_bufferSize
cusparseScsrilu02_bufferSizeExt		12.2			hipsparseScsrilu02_bufferSizeExt
cusparseScsrilu02_numericBoost		12.2			hipsparseScsrilu02_numericBoost
cusparseSgpsvInterleavedBatch	9.2				hipsparseSgpsvInterleavedBatch
cusparseSgpsvInterleavedBatch_bufferSizeExt	9.2				hipsparseSgpsvInterleavedBatch_buffer
cusparseSgtsv		10.2		11.0	
cusparseSgtsv2	9.0				hipsparseSgtsv2
cusparseSgtsv2StridedBatch	9.0				hipsparseSgtsv2StridedBatch
cusparseSgtsv2StridedBatch_bufferSizeExt	9.0				hipsparseSgtsv2StridedBatch_bufferSiz
cusparseSgtsv2_bufferSizeExt	9.0				hipsparseSgtsv2_bufferSizeExt
cusparseSgtsv2_nopivot	9.0				hipsparseSgtsv2_nopivot
cusparseSgtsv2_nopivot_bufferSizeExt	9.0				hipsparseSgtsv2_nopivot_bufferSizeExt
cusparseSgtsvInterleavedBatch	9.2				hipsparseSgtsvInterleavedBatch
cusparseSgtsvInterleavedBatch_bufferSizeExt	9.2				hipsparseSgtsvInterleavedBatch_buffer
cusparseSgtsvStridedBatch		10.2		11.0	

Table 26 – continued from previous page

CUDA	A	D	C	R	HIP
cusparseSgtsv_nopivot		10.2		11.0	
cusparseXbsric02_zeroPivot		12.2			hipsparseXbsric02_zeroPivot
cusparseXbsrilu02_zeroPivot		12.2			hipsparseXbsrilu02_zeroPivot
cusparseXcsric02_zeroPivot		12.2			hipsparseXcsric02_zeroPivot
cusparseXcsrilu02_zeroPivot		12.2			hipsparseXcsrilu02_zeroPivot
cusparseZbsric02		12.2			hipsparseZbsric02
cusparseZbsric02_analysis		12.2			hipsparseZbsric02_analysis
cusparseZbsric02_bufferSize		12.2			hipsparseZbsric02_bufferSize
cusparseZbsric02_bufferSizeExt		12.2			
cusparseZbsrilu02		12.2			hipsparseZbsrilu02
cusparseZbsrilu02_analysis		12.2			hipsparseZbsrilu02_analysis
cusparseZbsrilu02_bufferSize		12.2			hipsparseZbsrilu02_bufferSize
cusparseZbsrilu02_bufferSizeExt		12.2			
cusparseZbsrilu02_numericBoost		12.2			hipsparseZbsrilu02_numericBoost
cusparseZcsric0		10.2		11.0	
cusparseZcsric02		12.2			hipsparseZcsric02
cusparseZcsric02_analysis		12.2			hipsparseZcsric02_analysis
cusparseZcsric02_bufferSize		12.2			hipsparseZcsric02_bufferSize
cusparseZcsric02_bufferSizeExt		12.2			hipsparseZcsric02_bufferSizeExt
cusparseZcsrilu0		10.2		11.0	
cusparseZcsrilu02		12.2			hipsparseZcsrilu02
cusparseZcsrilu02_analysis		12.2			hipsparseZcsrilu02_analysis
cusparseZcsrilu02_bufferSize		12.2			hipsparseZcsrilu02_bufferSize
cusparseZcsrilu02_bufferSizeExt		12.2			hipsparseZcsrilu02_bufferSizeExt
cusparseZcsrilu02_numericBoost		12.2			hipsparseZcsrilu02_numericBoost
cusparseZgpsvInterleavedBatch	9.2				hipsparseZgpsvInterleavedBatch
cusparseZgpsvInterleavedBatch_bufferSizeExt	9.2				hipsparseZgpsvInterleavedBatch_buffer
cusparseZgtsv		10.2		11.0	
cusparseZgtsv2	9.0				hipsparseZgtsv2
cusparseZgtsv2StridedBatch	9.0				hipsparseZgtsv2StridedBatch
cusparseZgtsv2StridedBatch_bufferSizeExt	9.0				hipsparseZgtsv2StridedBatch_bufferSiz
cusparseZgtsv2_bufferSizeExt	9.0				hipsparseZgtsv2_bufferSizeExt
cusparseZgtsv2_nopivot	9.0				hipsparseZgtsv2_nopivot
cusparseZgtsv2_nopivot_bufferSizeExt	9.0				hipsparseZgtsv2_nopivot_bufferSizeExt
cusparseZgtsvInterleavedBatch	9.2				hipsparseZgtsvInterleavedBatch
cusparseZgtsvInterleavedBatch_bufferSizeExt	9.2				hipsparseZgtsvInterleavedBatch_buffer
cusparseZgtsvStridedBatch		10.2		11.0	
cusparseZgtsv_nopivot		10.2		11.0	

10.7.10 13. CUSPARSE Reorderings Reference

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
cusparseCcsrcolor		12.2			hipsparseCcsrcolor	4.5.0	6.2.0				
cusparseDcsrcolor		12.2			hipsparseDcsrcolor	4.5.0	6.2.0				
cusparseScsrcolor		12.2			hipsparseScsrcolor	4.5.0	6.2.0				
cusparseZcsrcolor		12.2			hipsparseZcsrcolor	4.5.0	6.2.0				

10.7.11 14. CUSPARSE Format Conversion Reference

CUDA	A	D	C	R	HIP
cusparseCbsr2csr		12.8			hipsparseCbsr2csr
cusparseCcsc2dense		11.1		12.0	hipsparseCcsc2dense
cusparseCcsc2hyb		10.2		11.0	
cusparseCcsr2bsr		12.4			hipsparseCcsr2bsr
cusparseCcsr2csc		10.2		11.0	hipsparseCcsr2csc
cusparseCcsr2csr_compress	8.0	12.2			hipsparseCcsr2csr_compress
cusparseCcsr2csru		12.2			hipsparseCcsr2csru
cusparseCcsr2dense		11.1		12.0	hipsparseCcsr2dense
cusparseCcsr2gebsr					hipsparseCcsr2gebsr
cusparseCcsr2gebsr_bufferSize					hipsparseCcsr2gebsr_bufferSize
cusparseCcsr2gebsr_bufferSizeExt					
cusparseCcsr2hyb		10.2		11.0	hipsparseCcsr2hyb
cusparseCcsru2csr		12.2			hipsparseCcsru2csr
cusparseCcsru2csr_bufferSizeExt		12.2			hipsparseCcsru2csr_bufferSizeEx
cusparseCdense2csc		11.1		12.0	hipsparseCdense2csc
cusparseCdense2csr		11.1		12.0	hipsparseCdense2csr
cusparseCdense2hyb		10.2		11.0	
cusparseCgebsr2csr		12.4			hipsparseCgebsr2csr
cusparseCgebsr2gebsc					hipsparseCgebsr2gebsc
cusparseCgebsr2gebsc_bufferSize					hipsparseCgebsr2gebsc_bufferSi
cusparseCgebsr2gebsc_bufferSizeExt					
cusparseCgebsr2gebsr		12.8			hipsparseCgebsr2gebsr
cusparseCgebsr2gebsr_bufferSize		12.8			hipsparseCgebsr2gebsr_bufferSi
cusparseCgebsr2gebsr_bufferSizeExt		12.8			
cusparseChyb2csc		10.2		11.0	
cusparseChyb2csr		10.2		11.0	hipsparseChyb2csr
cusparseChyb2dense		10.2		11.0	
cusparseCnnz					hipsparseCnnz
cusparseCnnz_compress	8.0	12.2			hipsparseCnnz_compress
cusparseCreateCsru2csrInfo		12.2			hipsparseCreateCsru2csrInfo
cusparseCreateIdentityPermutation		12.2			hipsparseCreateIdentityPermuta
cusparseCsr2cscEx	8.0	10.2		11.0	
cusparseCsr2cscEx2	10.1				hipsparseCsr2cscEx2
cusparseCsr2cscEx2_bufferSize	10.1				hipsparseCsr2cscEx2_bufferSize

Table 27 – continued from previous page

CUDA	A	D	C	R	HIP
cusparseDbsr2csr		12.8			hipsparseDbsr2csr
cusparseDcsc2dense		11.1		12.0	hipsparseDcsc2dense
cusparseDcsc2hyb		10.2		11.0	
cusparseDcsr2bsr		12.4			hipsparseDcsr2bsr
cusparseDcsr2csc		10.2		11.0	hipsparseDcsr2csc
cusparseDcsr2csr_compress	8.0	12.2			hipsparseDcsr2csr_compress
cusparseDcsr2csru		12.2			hipsparseDcsr2csru
cusparseDcsr2dense		11.1		12.0	hipsparseDcsr2dense
cusparseDcsr2gebsr					hipsparseDcsr2gebsr
cusparseDcsr2gebsr_bufferSize					hipsparseDcsr2gebsr_bufferSize
cusparseDcsr2gebsr_bufferSizeExt					
cusparseDcsr2hyb		10.2		11.0	hipsparseDcsr2hyb
cusparseDcsru2csr		12.2			hipsparseDcsru2csr
cusparseDcsru2csr_bufferSizeExt		12.2			hipsparseDcsru2csr_bufferSizeEx
cusparseDdense2csc		11.1		12.0	hipsparseDdense2csc
cusparseDdense2csr		11.1		12.0	hipsparseDdense2csr
cusparseDdense2hyb		10.2		11.0	
cusparseDestroyCsru2csrInfo		12.2			hipsparseDestroyCsru2csrInfo
cusparseDgebsr2csr		12.4			hipsparseDgebsr2csr
cusparseDgebsr2gebsc					hipsparseDgebsr2gebsc
cusparseDgebsr2gebsc_bufferSize					hipsparseDgebsr2gebsc_bufferSi
cusparseDgebsr2gebsc_bufferSizeExt					
cusparseDgebsr2gebsr		12.8			hipsparseDgebsr2gebsr
cusparseDgebsr2gebsr_bufferSize		12.8			hipsparseDgebsr2gebsr_bufferSi
cusparseDgebsr2gebsr_bufferSizeExt		12.8			
cusparseDhyb2csc		10.2		11.0	
cusparseDhyb2csr		10.2		11.0	hipsparseDhyb2csr
cusparseDhyb2dense		10.2		11.0	
cusparseDnnz					hipsparseDnnz
cusparseDnnz_compress	8.0	12.2			hipsparseDnnz_compress
cusparseDpruneCsr2csr	9.0	12.2			hipsparseDpruneCsr2csr
cusparseDpruneCsr2csrByPercentage	9.0	12.2			hipsparseDpruneCsr2csrByPercen
cusparseDpruneCsr2csrByPercentage_bufferSizeExt	9.0	12.2			hipsparseDpruneCsr2csrByPercen
cusparseDpruneCsr2csrNnz	9.0	12.2			hipsparseDpruneCsr2csrNnz
cusparseDpruneCsr2csrNnzByPercentage	9.0	12.2			hipsparseDpruneCsr2csrNnzByPer
cusparseDpruneCsr2csr_bufferSizeExt	9.0	12.2			hipsparseDpruneCsr2csr_bufferSi
cusparseDpruneDense2csr	9.0	12.2			hipsparseDpruneDense2csr
cusparseDpruneDense2csrByPercentage	9.0	12.2			hipsparseDpruneDense2csrByPerc
cusparseDpruneDense2csrByPercentage_bufferSizeExt	9.0	12.2			hipsparseDpruneDense2csrByPerc
cusparseDpruneDense2csrNnz	9.0	12.2			hipsparseDpruneDense2csrNnz
cusparseDpruneDense2csrNnzByPercentage	9.0	12.2			hipsparseDpruneDense2csrNnzByP
cusparseDpruneDense2csr_bufferSizeExt	9.0	12.2			hipsparseDpruneDense2csr_buffe
cusparseHpruneCsr2csr	9.0	12.2			
cusparseHpruneCsr2csrByPercentage	9.0	12.2			
cusparseHpruneCsr2csrByPercentage_bufferSizeExt	9.0	12.2			
cusparseHpruneCsr2csrNnz	9.0	12.2			
cusparseHpruneCsr2csrNnzByPercentage	9.0	12.2			
cusparseHpruneCsr2csr_bufferSizeExt	9.0	12.2			
cusparseHpruneDense2csr	9.0	12.2			
cusparseHpruneDense2csrByPercentage	9.0	12.2			

Table 27 – continued from previous page

CUDA	A	D	C	R	HIP
cusparseHpruneDense2csrByPercentage_bufferSizeExt	9.0	12.2			
cusparseHpruneDense2csrNnz	9.0	12.2			
cusparseHpruneDense2csrNnzByPercentage	9.0	12.2			
cusparseHpruneDense2csr_bufferSizeExt	9.0	12.2			
cusparseSbsr2csr		12.8			hipsparseSbsr2csr
cusparseScsc2dense		11.1		12.0	hipsparseScsc2dense
cusparseScsc2hyb		10.2		11.0	
cusparseScsr2bsr		12.4			hipsparseScsr2bsr
cusparseScsr2csc		10.2		11.0	hipsparseScsr2csc
cusparseScsr2csr_compress	8.0	12.2			hipsparseScsr2csr_compress
cusparseScsr2csru		12.2			hipsparseScsr2csru
cusparseScsr2dense		11.1		12.0	hipsparseScsr2dense
cusparseScsr2gebsr					hipsparseScsr2gebsr
cusparseScsr2gebsr_bufferSize					hipsparseScsr2gebsr_bufferSize
cusparseScsr2gebsr_bufferSizeExt					
cusparseScsr2hyb		10.2		11.0	hipsparseScsr2hyb
cusparseScsru2csr		12.2			hipsparseScsru2csr
cusparseScsru2csr_bufferSizeExt		12.2			hipsparseScsru2csr_bufferSizeEx
cusparseSdense2csc		11.1		12.0	hipsparseSdense2csc
cusparseSdense2csr		11.1		12.0	hipsparseSdense2csr
cusparseSdense2hyb		10.2		11.0	
cusparseSgebsr2csr		12.4			hipsparseSgebsr2csr
cusparseSgebsr2gebsc					hipsparseSgebsr2gebsc
cusparseSgebsr2gebsc_bufferSize					hipsparseSgebsr2gebsc_bufferSi
cusparseSgebsr2gebsc_bufferSizeExt					
cusparseSgebsr2gebsr		12.8			hipsparseSgebsr2gebsr
cusparseSgebsr2gebsr_bufferSize		12.8			hipsparseSgebsr2gebsr_bufferSi
cusparseSgebsr2gebsr_bufferSizeExt		12.8			
cusparseShyb2csc		10.2		11.0	
cusparseShyb2csr		10.2		11.0	hipsparseShyb2csr
cusparseShyb2dense		10.2		11.0	
cusparseSnnz					hipsparseSnnz
cusparseSnnz_compress	8.0	12.2			hipsparseSnnz_compress
cusparseSpruneCsr2csr	9.0	12.2			hipsparseSpruneCsr2csr
cusparseSpruneCsr2csrByPercentage	9.0	12.2			hipsparseSpruneCsr2csrByPercen
cusparseSpruneCsr2csrByPercentage_bufferSizeExt	9.0	12.2			hipsparseSpruneCsr2csrByPercen
cusparseSpruneCsr2csrNnz	9.0	12.2			hipsparseSpruneCsr2csrNnz
cusparseSpruneCsr2csrNnzByPercentage	9.0	12.2			hipsparseSpruneCsr2csrNnzByPer
cusparseSpruneCsr2csr_bufferSizeExt	9.0	12.2			hipsparseSpruneCsr2csr_bufferS
cusparseSpruneDense2csr	9.0	12.2			hipsparseSpruneDense2csr
cusparseSpruneDense2csrByPercentage	9.0	12.2			hipsparseSpruneDense2csrByPerc
cusparseSpruneDense2csrByPercentage_bufferSizeExt	9.0	12.2			hipsparseSpruneDense2csrByPerc
cusparseSpruneDense2csrNnz	9.0	12.2			hipsparseSpruneDense2csrNnz
cusparseSpruneDense2csrNnzByPercentage	9.0	12.2			hipsparseSpruneDense2csrNnzByP
cusparseSpruneDense2csr_bufferSizeExt	9.0	12.2			hipsparseSpruneDense2csr_buffe
cusparseXcoo2csr					hipsparseXcoo2csr
cusparseXcoosortByColumn					hipsparseXcoosortByColumn
cusparseXcoosortByRow					hipsparseXcoosortByRow
cusparseXcoosort_bufferSizeExt					hipsparseXcoosort_bufferSizeEx
cusparseXcscsort					hipsparseXcscsort

Table 27 – continued from previous page

CUDA	A	D	C	R	HIP
cusparseXcscsort_bufferSizeExt					hipsparseXcscsort_bufferSizeEx
cusparseXcsr2bsrNnz		12.4			hipsparseXcsr2bsrNnz
cusparseXcsr2coo					hipsparseXcsr2coo
cusparseXcsr2gebsrNnz					hipsparseXcsr2gebsrNnz
cusparseXcsrsort					hipsparseXcsrsort
cusparseXcsrsort_bufferSizeExt					hipsparseXcsrsort_bufferSizeEx
cusparseXgebsr2csr		12.4			
cusparseXgebsr2gebsrNnz		12.8			hipsparseXgebsr2gebsrNnz
cusparseZbsr2csr		12.8			hipsparseZbsr2csr
cusparseZcsc2dense		11.1		12.0	hipsparseZcsc2dense
cusparseZcsc2hyb		10.2		11.0	
cusparseZcsr2bsr		12.4			hipsparseZcsr2bsr
cusparseZcsr2csc		10.2		11.0	hipsparseZcsr2csc
cusparseZcsr2csr_compress	8.0	12.2			hipsparseZcsr2csr_compress
cusparseZcsr2csru		12.2			hipsparseZcsr2csru
cusparseZcsr2dense		11.1		12.0	hipsparseZcsr2dense
cusparseZcsr2gebsr					hipsparseZcsr2gebsr
cusparseZcsr2gebsr_bufferSize					hipsparseZcsr2gebsr_bufferSize
cusparseZcsr2gebsr_bufferSizeExt					
cusparseZcsr2hyb		10.2		11.0	hipsparseZcsr2hyb
cusparseZcsru2csr		12.2			hipsparseZcsru2csr
cusparseZcsru2csr_bufferSizeExt		12.2			hipsparseZcsru2csr_bufferSizeE
cusparseZdense2csc		11.1		12.0	hipsparseZdense2csc
cusparseZdense2csr		11.1		12.0	hipsparseZdense2csr
cusparseZdense2hyb		10.2		11.0	
cusparseZgebsr2csr		12.4			hipsparseZgebsr2csr
cusparseZgebsr2gebsc					hipsparseZgebsr2gebsc
cusparseZgebsr2gebsc_bufferSize					hipsparseZgebsr2gebsc_bufferSi
cusparseZgebsr2gebsc_bufferSizeExt					
cusparseZgebsr2gebsr		12.8			hipsparseZgebsr2gebsr
cusparseZgebsr2gebsr_bufferSize		12.8			hipsparseZgebsr2gebsr_bufferSi
cusparseZgebsr2gebsr_bufferSizeExt		12.8			
cusparseZhyb2csc		10.2		11.0	
cusparseZhyb2csr		10.2		11.0	hipsparseZhyb2csr
cusparseZhyb2dense		10.2		11.0	
cusparseZnnz					hipsparseZnnz
cusparseZnnz_compress	8.0	12.2			hipsparseZnnz_compress

10.7.12 15. CUSPARSE Generic API Reference

CUDA	A	D	C	R	HIP	A
cusparseAxpby	11.0	12.8	12.0		hipsparseAxpby	4.1.0
cusparseBlockedEllGet	11.2				hipsparseBlockedEllGet	4.5.0
cusparseBsrSetStridedBatch	12.1					
cusparseConstBlockedEllGet	12.0				hipsparseConstBlockedEllGet	6.0.0
cusparseConstCooGet	12.0				hipsparseConstCooGet	6.0.0
cusparseConstCscGet	12.0				hipsparseConstCscGet	6.2.0
cusparseConstCsrGet	12.0				hipsparseConstCsrGet	6.0.0

Table 28 – continued from previous page

CUDA	A	D	C	R	HIP	A
cusparseConstDnMatGet	12.0				hipsparseConstDnMatGet	6.0.0
cusparseConstDnMatGetValues	12.0				hipsparseConstDnMatGetValues	6.0.0
cusparseConstDnVecGet	12.0				hipsparseConstDnVecGet	6.0.0
cusparseConstDnVecGetValues	12.0				hipsparseConstDnVecGetValues	6.0.0
cusparseConstSpMatGetValues	12.0				hipsparseConstSpMatGetValues	6.0.0
cusparseConstSpVecGet	12.0				hipsparseConstSpVecGet	6.0.0
cusparseConstSpVecGetValues	12.0				hipsparseConstSpVecGetValues	6.0.0
cusparseConstrainedGeMM	10.2	11.2		12.0		
cusparseConstrainedGeMM_bufferSize	10.2	11.2		12.0		
cusparseCooAoSGet	10.2	11.2		12.0	hipsparseCooAoSGet	4.1.0
cusparseCooGet	10.1				hipsparseCooGet	4.1.0
cusparseCooSetPointers	11.1				hipsparseCooSetPointers	4.2.0
cusparseCooSetStridedBatch	11.0				hipsparseCooSetStridedBatch	5.2.0
cusparseCreateBlockedEll	11.2				hipsparseCreateBlockedEll	4.5.0
cusparseCreateBsr	12.1					
cusparseCreateConstBlockedEll	12.0				hipsparseCreateConstBlockedEll	6.0.0
cusparseCreateConstBsr	12.1					
cusparseCreateConstCoo	12.0				hipsparseCreateConstCoo	6.0.0
cusparseCreateConstCsc	12.0				hipsparseCreateConstCsc	6.0.0
cusparseCreateConstCsr	12.0				hipsparseCreateConstCsr	6.0.0
cusparseCreateConstDnMat	12.0				hipsparseCreateConstDnMat	6.0.0
cusparseCreateConstDnVec	12.0				hipsparseCreateConstDnVec	6.0.0
cusparseCreateConstSlicedEll	12.1				hipsparseCreateConstSlicedEll	7.11.0
cusparseCreateConstSpVec	12.0				hipsparseCreateConstSpVec	6.0.0
cusparseCreateCoo	10.1				hipsparseCreateCoo	4.1.0
cusparseCreateCooAoS	10.2	11.2		12.0	hipsparseCreateCooAoS	4.1.0
cusparseCreateCsc	11.1				hipsparseCreateCsc	4.2.0
cusparseCreateCsr	10.2				hipsparseCreateCsr	4.1.0
cusparseCreateDnMat	10.1				hipsparseCreateDnMat	4.2.0
cusparseCreateDnVec	10.2				hipsparseCreateDnVec	4.1.0
cusparseCreateSlicedEll	12.1				hipsparseCreateSlicedEll	7.11.0
cusparseCreateSpVec	10.2				hipsparseCreateSpVec	4.1.0
cusparseCscGet	11.7				hipsparseCscGet	6.2.0
cusparseCscSetPointers	11.1				hipsparseCscSetPointers	4.2.0
cusparseCsrGet	10.2				hipsparseCsrGet	4.1.0
cusparseCsrSetPointers	11.0				hipsparseCsrSetPointers	4.1.0
cusparseCsrSetStridedBatch	11.0				hipsparseCsrSetStridedBatch	5.2.0
cusparseDenseToSparse_analysis	11.1		12.0		hipsparseDenseToSparse_analysis	4.2.0
cusparseDenseToSparse_bufferSize	11.1		12.0		hipsparseDenseToSparse_bufferSize	4.2.0
cusparseDenseToSparse_convert	11.1		12.0		hipsparseDenseToSparse_convert	4.2.0
cusparseDestroyDnMat	10.1		12.0		hipsparseDestroyDnMat	4.2.0
cusparseDestroyDnVec	10.2		12.0		hipsparseDestroyDnVec	4.1.0
cusparseDestroySpMat	10.1		12.0		hipsparseDestroySpMat	4.1.0
cusparseDestroySpVec	10.2		12.0		hipsparseDestroySpVec	4.1.0
cusparseDnMatGet	10.1				hipsparseDnMatGet	4.2.0
cusparseDnMatGetStridedBatch	10.1		12.0		hipsparseDnMatGetStridedBatch	5.2.0
cusparseDnMatGetValues	10.2				hipsparseDnMatGetValues	4.2.0
cusparseDnMatSetStridedBatch	10.1				hipsparseDnMatSetStridedBatch	5.2.0
cusparseDnMatSetValues	10.2				hipsparseDnMatSetValues	4.2.0
cusparseDnVecGet	10.2				hipsparseDnVecGet	4.1.0

Table 28 – continued from previous page

CUDA	A	D	C	R	HIP	A
cusparseDnVecGetValues	10.2				hipsparseDnVecGetValues	4.1.0
cusparseDnVecSetValues	10.2				hipsparseDnVecSetValues	4.1.0
cusparseGather	11.0		12.0		hipsparseGather	4.1.0
cusparseRot	11.0	12.2			hipsparseRot	4.1.0
cusparseSDDMM	11.2		12.0		hipsparseSDDMM	4.3.0
cusparseSDDMM_bufferSize	11.2		12.0		hipsparseSDDMM_bufferSize	4.3.0
cusparseSDDMM_preprocess	11.2		12.0		hipsparseSDDMM_preprocess	4.3.0
cusparseScatter	11.0		12.0		hipsparseScatter	4.1.0
cusparseSpGEMM_compute	11.0		12.0		hipsparseSpGEMM_compute	4.1.0
cusparseSpGEMM_copy	11.0		12.0		hipsparseSpGEMM_copy	4.1.0
cusparseSpGEMM_createDescr	11.0				hipsparseSpGEMM_createDescr	4.1.0
cusparseSpGEMM_destroyDescr	11.0				hipsparseSpGEMM_destroyDescr	4.1.0
cusparseSpGEMM_estimateMemory	12.0					
cusparseSpGEMM_getNumProducts	12.0					
cusparseSpGEMM_workEstimation	11.0		12.0		hipsparseSpGEMM_workEstimation	4.1.0
cusparseSpGEMMreuse_compute	11.3	13.2	12.0		hipsparseSpGEMMreuse_compute	5.1.0
cusparseSpGEMMreuse_copy	11.3	13.2	12.0		hipsparseSpGEMMreuse_copy	5.1.0
cusparseSpGEMMreuse_nnz	11.3	13.2	12.0		hipsparseSpGEMMreuse_nnz	5.1.0
cusparseSpGEMMreuse_workEstimation	11.3	13.2	12.0		hipsparseSpGEMMreuse_workEstimation	5.1.0
cusparseSpMM	10.1		12.0		hipsparseSpMM	4.2.0
cusparseSpMMOp	11.5	13.2				
cusparseSpMMOp_createPlan	11.5	13.2				
cusparseSpMMOp_destroyPlan	11.5	13.2				
cusparseSpMM_bufferSize	10.1		12.0		hipsparseSpMM_bufferSize	4.2.0
cusparseSpMM_preprocess	11.2		12.0		hipsparseSpMM_preprocess	4.5.0
cusparseSpMV	10.1		12.0		hipsparseSpMV	4.1.0
cusparseSpMVOp	13.1					
cusparseSpMVOp_bufferSize	13.1					
cusparseSpMVOp_createDescr	13.1		13.1			
cusparseSpMVOp_createPlan	13.1					
cusparseSpMVOp_destroyDescr	13.1					
cusparseSpMVOp_destroyPlan	13.1					
cusparseSpMVOp_setGlobalUserData	13.1					
cusparseSpMV_bufferSize	10.1		12.0		hipsparseSpMV_bufferSize	4.1.0
cusparseSpMV_preprocess	12.4				hipsparseSpMV_preprocess	5.2.0
cusparseSpMatGetAttribute	11.3		12.0		hipsparseSpMatGetAttribute	4.5.0
cusparseSpMatGetFormat	10.1		12.0		hipsparseSpMatGetFormat	4.1.0
cusparseSpMatGetIndexBase	10.1		12.0		hipsparseSpMatGetIndexBase	4.1.0
cusparseSpMatGetNumBatches	10.1			10.2		
cusparseSpMatGetSize	11.0		12.0		hipsparseSpMatGetSize	4.1.0
cusparseSpMatGetStridedBatch	10.2		12.0		hipsparseSpMatGetStridedBatch	5.2.0
cusparseSpMatGetValues	10.2				hipsparseSpMatGetValues	4.1.0
cusparseSpMatSetAttribute	11.3				hipsparseSpMatSetAttribute	4.5.0
cusparseSpMatSetNumBatches	10.1			10.2		
cusparseSpMatSetStridedBatch	10.2			12.0	hipsparseSpMatSetStridedBatch	5.2.0
cusparseSpMatSetValues	10.2				hipsparseSpMatSetValues	4.1.0
cusparseSpSM_analysis	11.3		12.0		hipsparseSpSM_analysis	4.5.0
cusparseSpSM_bufferSize	11.3		12.0		hipsparseSpSM_bufferSize	4.5.0
cusparseSpSM_createDescr	11.3				hipsparseSpSM_createDescr	4.5.0
cusparseSpSM_destroyDescr	11.3				hipsparseSpSM_destroyDescr	4.5.0

Table 28 – continued from previous page

CUDA	A	D	C	R	HIP	A
cusparseSpSM_solve	11.3		12.0		hipsparseSpSM_solve	4.5.0
cusparseSpSM_updateMatrix	12.4					
cusparseSpSV_analysis	11.3		12.0		hipsparseSpSV_analysis	4.5.0
cusparseSpSV_bufferSize	11.3		12.0		hipsparseSpSV_bufferSize	4.5.0
cusparseSpSV_createDescr	11.3				hipsparseSpSV_createDescr	4.5.0
cusparseSpSV_destroyDescr	11.3				hipsparseSpSV_destroyDescr	4.5.0
cusparseSpSV_solve	11.3		12.0		hipsparseSpSV_solve	4.5.0
cusparseSpSV_updateMatrix	12.1					
cusparseSpVV	10.1	12.8	12.0		hipsparseSpVV	4.1.0
cusparseSpVV_bufferSize	10.1	12.8	12.0		hipsparseSpVV_bufferSize	4.1.0
cusparseSpVecGet	10.2				hipsparseSpVecGet	4.1.0
cusparseSpVecGetIndexBase	10.2		12.0		hipsparseSpVecGetIndexBase	4.1.0
cusparseSpVecGetValues	10.2				hipsparseSpVecGetValues	4.1.0
cusparseSpVecSetValues	10.2				hipsparseSpVecSetValues	4.1.0
cusparseSparseToDense	11.1		12.0		hipsparseSparseToDense	4.2.0
cusparseSparseToDense_bufferSize	11.1		12.0		hipsparseSparseToDense_bufferSize	4.2.0

10.8 CUSOLVER API supported by HIP

Note: In the tables that follow the columns marked A, D, C, R, U, and E mean the following: **A** - Added; **D** - Deprecated; **C** - Changed; **R** - Removed; **U** - Unsupported for CUDA version(s); **E** - Experimental

10.8.1 1. CUSOLVER Data types

CUDA	A	D	C	R	HIP
CUBLAS_DIRECT_BACKWARD	11.0				
CUBLAS_DIRECT_FORWARD	11.0				
CUBLAS_STOREV_COLUMNWISE	11.0				
CUBLAS_STOREV_ROWWISE	11.0				
CUDALIBMG_GRID_MAPPING_COL_MAJOR	10.1				
CUDALIBMG_GRID_MAPPING_ROW_MAJOR	10.1				
CUSOLVERDN_GEQRF	13.2				
CUSOLVERDN_GETRF	11.0				HIPSOLVERDN_GETRF
CUSOLVERDN_POTRF	11.5				
CUSOLVERDN_SYEVBATCHED	13.0				
CUSOLVERRF_FACTORIZATION_ALG0					HIPSOLVERRF_FACTORIZATION_AL
CUSOLVERRF_FACTORIZATION_ALG1					HIPSOLVERRF_FACTORIZATION_AL
CUSOLVERRF_FACTORIZATION_ALG2					HIPSOLVERRF_FACTORIZATION_AL
CUSOLVERRF_MATRIX_FORMAT_CSC					HIPSOLVERRF_MATRIX_FORMAT_CS
CUSOLVERRF_MATRIX_FORMAT_CSR					HIPSOLVERRF_MATRIX_FORMAT_CS
CUSOLVERRF_NUMERIC_BOOST_NOT_USED					HIPSOLVERRF_NUMERIC_BOOST_NO
CUSOLVERRF_NUMERIC_BOOST_USED					HIPSOLVERRF_NUMERIC_BOOST_US
CUSOLVERRF_RESET_VALUES_FAST_MODE_OFF					HIPSOLVERRF_RESET_VALUES_FAS
CUSOLVERRF_RESET_VALUES_FAST_MODE_ON					HIPSOLVERRF_RESET_VALUES_FAS
CUSOLVERRF_TRIANGULAR_SOLVE_ALG1					HIPSOLVERRF_TRIANGULAR_SOLVE
CUSOLVERRF_TRIANGULAR_SOLVE_ALG2					HIPSOLVERRF_TRIANGULAR_SOLVE

Table 29 – continued from previous page

CUDA	A	D	C	R	HIP
CUSOLVERRF_TRIANGULAR_SOLVE_ALG3					HIPSOLVERRF_TRIANGULAR_SOLVE
CUSOLVERRF_UNIT_DIAGONAL_ASSUMED_L					HIPSOLVERRF_UNIT_DIAGONAL_AS
CUSOLVERRF_UNIT_DIAGONAL_ASSUMED_U					HIPSOLVERRF_UNIT_DIAGONAL_AS
CUSOLVERRF_UNIT_DIAGONAL_STORED_L					HIPSOLVERRF_UNIT_DIAGONAL_ST
CUSOLVERRF_UNIT_DIAGONAL_STORED_U					HIPSOLVERRF_UNIT_DIAGONAL_ST
CUSOLVER_ALG_0	11.0				HIPSOLVER_ALG_0
CUSOLVER_ALG_1	11.0				HIPSOLVER_ALG_1
CUSOLVER_ALG_2	11.5				
CUSOLVER_ALLOW_NON_DETERMINISTIC_RESULTS	12.2				HIPSOLVER_ALLOW_NON_DETERMIN
CUSOLVER_C_16BF	11.0				
CUSOLVER_C_16F	11.0				
CUSOLVER_C_32F	11.0				
CUSOLVER_C_64F	11.0				
CUSOLVER_C_8I	11.0				
CUSOLVER_C_8U	11.0				
CUSOLVER_C_AP	11.0				
CUSOLVER_C_TF32	11.0				
CUSOLVER_DEFAULT_MATH	13.0				
CUSOLVER_DETERMINISTIC_RESULTS	12.2				HIPSOLVER_DETERMINISTIC_RESU
CUSOLVER_EIG_COMP_I	13.2				
CUSOLVER_EIG_COMP_N	13.2				
CUSOLVER_EIG_COMP_V	13.2				
CUSOLVER_EIG_MODE_NOVECTOR	8.0				HIPSOLVER_EIG_MODE_NOVECTOR
CUSOLVER_EIG_MODE_VECTOR	8.0				HIPSOLVER_EIG_MODE_VECTOR
CUSOLVER_EIG_RANGE_ALL	10.1				HIPSOLVER_EIG_RANGE_ALL
CUSOLVER_EIG_RANGE_I	10.1				HIPSOLVER_EIG_RANGE_I
CUSOLVER_EIG_RANGE_V	10.1				HIPSOLVER_EIG_RANGE_V
CUSOLVER_EIG_TYPE_1	8.0				HIPSOLVER_EIG_TYPE_1
CUSOLVER_EIG_TYPE_2	8.0				HIPSOLVER_EIG_TYPE_2
CUSOLVER_EIG_TYPE_3	8.0				HIPSOLVER_EIG_TYPE_3
CUSOLVER_FP32_EMULATED_BF16X9_MATH	13.0				
CUSOLVER_FP32_FP64_EMULATED_MATH	13.2				
CUSOLVER_FP64_EMULATED_FIXEDPOINT_MATH	13.2				
CUSOLVER_FRO_NORM	10.2				
CUSOLVER_INF_NORM	10.2				
CUSOLVER_IRS_REFINE_CLASSICAL	10.2				
CUSOLVER_IRS_REFINE_CLASSICAL_GMRES	10.2				
CUSOLVER_IRS_REFINE_GMRES	10.2				
CUSOLVER_IRS_REFINE_GMRES_GMRES	10.2				
CUSOLVER_IRS_REFINE_GMRES_NOPCOND	11.0				
CUSOLVER_IRS_REFINE_NONE	10.2				
CUSOLVER_IRS_REFINE_NOT_SET	10.2				
CUSOLVER_MAX_NORM	10.2				
CUSOLVER_ONE_NORM	10.2				
CUSOLVER_PREC_DD	10.2				
CUSOLVER_PREC_SHT	10.2				
CUSOLVER_PREC_SS	10.2				
CUSOLVER_R_16BF	11.0				
CUSOLVER_R_16F	11.0				
CUSOLVER_R_32F	11.0				

Table 29 – continued from previous page

CUDA	A	D	C	R	HIP
CUSOLVER_R_64F	11.0				
CUSOLVER_R_8I	11.0				
CUSOLVER_R_8U	11.0				
CUSOLVER_R_AP	11.0				
CUSOLVER_R_TF32	11.0				
CUSOLVER_STATUS_ALLOC_FAILED					HIPSOLVER_STATUS_ALLOC_FAILE
CUSOLVER_STATUS_ARCH_MISMATCH					HIPSOLVER_STATUS_ARCH_MISMAT
CUSOLVER_STATUS_EXECUTION_FAILED					HIPSOLVER_STATUS_EXECUTION_F
CUSOLVER_STATUS_INTERNAL_ERROR					HIPSOLVER_STATUS_INTERNAL_ER
CUSOLVER_STATUS_INVALID_LICENSE					
CUSOLVER_STATUS_INVALID_VALUE					HIPSOLVER_STATUS_INVALID_VAL
CUSOLVER_STATUS_INVALID_WORKSPACE	11.0				
CUSOLVER_STATUS_IRS_INFOS_NOT_DESTROYED	11.0				
CUSOLVER_STATUS_IRS_INFOS_NOT_INITIALIZED	10.2				
CUSOLVER_STATUS_IRS_INTERNAL_ERROR	10.2				HIPSOLVER_STATUS_INTERNAL_ER
CUSOLVER_STATUS_IRS_MATRIX_SINGULAR	11.0				
CUSOLVER_STATUS_IRS_NOT_SUPPORTED	10.2				HIPSOLVER_STATUS_NOT_SUPPORT
CUSOLVER_STATUS_IRS_NRHS_NOT_SUPPORTED_FOR_REFINE_GMRES	10.2				
CUSOLVER_STATUS_IRS_OUT_OF_RANGE	10.2				
CUSOLVER_STATUS_IRS_PARAMS_INVALID	10.2				HIPSOLVER_STATUS_INVALID_VAL
CUSOLVER_STATUS_IRS_PARAMS_INVALID_MAXITER	11.0				
CUSOLVER_STATUS_IRS_PARAMS_INVALID_PREC	11.0				
CUSOLVER_STATUS_IRS_PARAMS_INVALID_REFINE	11.0				
CUSOLVER_STATUS_IRS_PARAMS_NOT_INITIALIZED	10.2				
CUSOLVER_STATUS_MAPPING_ERROR					HIPSOLVER_STATUS_MAPPING_ERR
CUSOLVER_STATUS_MATRIX_TYPE_NOT_SUPPORTED					HIPSOLVER_STATUS_MATRIX_TYPE
CUSOLVER_STATUS_NOT_INITIALIZED					HIPSOLVER_STATUS_NOT_INITIAL
CUSOLVER_STATUS_NOT_SUPPORTED					HIPSOLVER_STATUS_NOT_SUPPORT
CUSOLVER_STATUS_SUCCESS					HIPSOLVER_STATUS_SUCCESS
CUSOLVER_STATUS_ZERO_PIVOT					HIPSOLVER_STATUS_ZERO_PIVOT
csrcholInfo	7.5				
csrcholInfoHost	7.5				
csrcholInfoHost_t	7.5				
csrcholInfo_t	7.5				
csrluInfoHost	7.5				
csrluInfoHost_t	7.5				
csrqrInfo					
csrqrInfoHost	7.5				
csrqrInfoHost_t	7.5				
csrqrInfo_t					
cudaLibMgGrid_t	10.1				
cudaLibMgMatrixDesc_t	10.1				
cusolverAlgMode_t	11.0				hipsolverAlgMode_t
cusolverDeterministicMode_t	12.2				hipsolverDeterministicMode_t
cusolverDirectMode_t	11.0				
cusolverDnContext					
cusolverDnFunction_t	11.0				hipsolverDnFunction_t
cusolverDnHandle_t					hipsolverHandle_t
cusolverDnIRSInfos	10.2				
cusolverDnIRSInfos_t	10.2				

Table 29 – continued from previous page

CUDA	A	D	C	R	HIP
cusolverDnIRSParams	10.2				
cusolverDnIRSParams_t	10.2				
cusolverDnLoggerCallback_t	11.7				
cusolverDnParams	11.0				
cusolverDnParams_t	11.0				hipsolverDnParams_t
cusolverEigComp_t	13.2				
cusolverEigMode_t	8.0				hipsolverEigMode_t
cusolverEigRange_t	10.1				hipsolverEigRange_t
cusolverEigType_t	8.0				hipsolverEigType_t
cusolverIRSRefinement_t	10.2				
cusolverMathMode_t	13.0				
cusolverMgContext	10.1				
cusolverMgGridMapping_t	10.1				
cusolverMgHandle_t	10.1				
cusolverNorm_t	10.2				
cusolverPrecType_t	11.0				
cusolverRfCommon					
cusolverRfFactorization_t					hipsolverRfFactorization_t
cusolverRfHandle_t					hipsolverRfHandle_t
cusolverRfMatrixFormat_t					hipsolverRfMatrixFormat_t
cusolverRfNumericBoostReport_t					hipsolverRfNumericBoostRepor
cusolverRfResetValuesFastMode_t					hipsolverRfResetValuesFastMo
cusolverRfTriangularSolve_t					hipsolverRfTriangularSolve_t
cusolverRfUnitDiagonal_t					hipsolverRfUnitDiagonal_t
cusolverSpContext					
cusolverSpHandle_t					hipsolverSpHandle_t
cusolverStatus_t					hipsolverStatus_t
cusolverStorevMode_t	11.0				
cusolver_int_t	10.1				int
gesvdjInfo	9.0				
gesvdjInfo_t	9.0				hipsolverGesvdjInfo_t
syevjInfo	9.0				
syevjInfo_t	9.0				hipsolverSyevjInfo_t

10.8.2 2. CUSOLVER Function Reference

CUDA	A	D	C	R	HIP
cusolverDnCCgels	11.0				hipsolverDnCCgels
cusolverDnCCgels_bufferSize	11.0				hipsolverDnCCgels_bufferSize
cusolverDnCCgesv	10.2				hipsolverDnCCgesv
cusolverDnCCgesv_bufferSize	10.2				hipsolverDnCCgesv_bufferSize
cusolverDnCEgels	11.0				
cusolverDnCEgels_bufferSize	11.0				
cusolverDnCEgesv	11.0				
cusolverDnCEgesv_bufferSize	11.0				
cusolverDnCKgels	11.0				
cusolverDnCKgels_bufferSize	11.0				
cusolverDnCKgesv	10.2				

Table 30 – continued from previous page

CUDA	A	D	C	R	HIP
cusolverDnCKgesv_bufferSize	10.2				
cusolverDnCYgels	11.0				
cusolverDnCYgels_bufferSize	11.0				
cusolverDnCYgesv	11.0				
cusolverDnCYgesv_bufferSize	11.0				
cusolverDnCgebrd					hipsolverDnCgebrd
cusolverDnCgebrd_bufferSize					hipsolverDnCgebrd_bufferSize
cusolverDnCgeqrf					hipsolverDnCgeqrf
cusolverDnCgeqrf_bufferSize					hipsolverDnCgeqrf_bufferSize
cusolverDnCgesvd					hipsolverDnCgesvd
cusolverDnCgesvd_bufferSize					hipsolverDnCgesvd_bufferSize
cusolverDnCgesvdaStridedBatched	10.1				hipsolverDnCgesvdaStridedBat
cusolverDnCgesvdaStridedBatched_bufferSize	10.1				hipsolverDnCgesvdaStridedBat
cusolverDnCgesvdj	9.0				hipsolverDnCgesvdj
cusolverDnCgesvdjBatched	9.0				hipsolverDnCgesvdjBatched
cusolverDnCgesvdjBatched_bufferSize	9.0				hipsolverDnCgesvdjBatched_bu
cusolverDnCgesvdj_bufferSize	9.0				hipsolverDnCgesvdj_bufferSiz
cusolverDnCgetrf					hipsolverDnCgetrf
cusolverDnCgetrf_bufferSize					hipsolverDnCgetrf_bufferSize
cusolverDnCgetrs					hipsolverDnCgetrs
cusolverDnCheevd	8.0				hipsolverDnCheevd
cusolverDnCheevd_bufferSize	8.0				hipsolverDnCheevd_bufferSize
cusolverDnCheevdx	10.1				hipsolverDnCheevdx
cusolverDnCheevdx_bufferSize	10.1				hipsolverDnCheevdx_bufferSiz
cusolverDnCheevj	9.0				hipsolverDnCheevj
cusolverDnCheevjBatched	9.0				hipsolverDnCheevjBatched
cusolverDnCheevjBatched_bufferSize	9.0				hipsolverDnCheevjBatched_buf
cusolverDnCheevj_bufferSize	9.0				hipsolverDnCheevj_bufferSize
cusolverDnChegvd	8.0				hipsolverDnChegvd
cusolverDnChegvd_bufferSize	8.0				hipsolverDnChegvd_bufferSize
cusolverDnChegvdx	10.1				hipsolverDnChegvdx
cusolverDnChegvdx_bufferSize	10.1				hipsolverDnChegvdx_bufferSiz
cusolverDnChegvj	9.0				hipsolverDnChegvj
cusolverDnChegvj_bufferSize	9.0				hipsolverDnChegvj_bufferSize
cusolverDnChetrd	8.0				hipsolverDnChetrd
cusolverDnChetrd_bufferSize	8.0				hipsolverDnChetrd_bufferSize
cusolverDnClaswp					
cusolverDnClauum	10.1				
cusolverDnClauum_bufferSize	10.1				
cusolverDnCpotrf					hipsolverDnCpotrf
cusolverDnCpotrfBatched	9.1				hipsolverDnCpotrfBatched
cusolverDnCpotrf_bufferSize					hipsolverDnCpotrf_bufferSize
cusolverDnCpotri	10.1				hipsolverDnCpotri
cusolverDnCpotri_bufferSize	10.1				hipsolverDnCpotri_bufferSize
cusolverDnCpotrs					hipsolverDnCpotrs
cusolverDnCpotrsBatched	9.1				hipsolverDnCpotrsBatched
cusolverDnCreate					hipsolverDnCreate
cusolverDnCreateGesvdjInfo	9.0				hipsolverDnCreateGesvdjInfo
cusolverDnCreateParams	11.0				hipsolverDnCreateParams
cusolverDnCreateSyevjInfo	9.0				hipsolverDnCreateSyevjInfo

Table 30 – continued from previous page

CUDA	A	D	C	R	HIP
cusolverDnCsytrf					hipsolverDnCsytrf
cusolverDnCsytrf_bufferSize					hipsolverDnCsytrf_bufferSize
cusolverDnCsytri	10.1				
cusolverDnCsytri_bufferSize	10.1				
cusolverDnCungbr	8.0				hipsolverDnCungbr
cusolverDnCungbr_bufferSize	8.0				hipsolverDnCungbr_bufferSize
cusolverDnCungqr	8.0				hipsolverDnCungqr
cusolverDnCungqr_bufferSize	8.0				hipsolverDnCungqr_bufferSize
cusolverDnCungtr	8.0				hipsolverDnCungtr
cusolverDnCungtr_bufferSize	8.0				hipsolverDnCungtr_bufferSize
cusolverDnCunmqr					hipsolverDnCunmqr
cusolverDnCunmqr_bufferSize	8.0				hipsolverDnCunmqr_bufferSize
cusolverDnCunmtr	8.0				hipsolverDnCunmtr
cusolverDnCunmtr_bufferSize	8.0				hipsolverDnCunmtr_bufferSize
cusolverDnDBgels	11.0				
cusolverDnDBgels_bufferSize	11.0				
cusolverDnDBgesv	11.0				
cusolverDnDBgesv_bufferSize	11.0				
cusolverDnDDgels	11.0				hipsolverDnDDgels
cusolverDnDDgels_bufferSize	11.0				hipsolverDnDDgels_bufferSize
cusolverDnDDgesv	10.2				hipsolverDnDDgesv
cusolverDnDDgesv_bufferSize	10.2				hipsolverDnDDgesv_bufferSize
cusolverDnDHgels	11.0				
cusolverDnDHgels_bufferSize	11.0				
cusolverDnDHgesv	10.2				
cusolverDnDHgesv_bufferSize	10.2				
cusolverDnDSgels	11.0				
cusolverDnDSgels_bufferSize	11.0				
cusolverDnDSgesv	10.2				
cusolverDnDSgesv_bufferSize	10.2				
cusolverDnDXgels	11.0				
cusolverDnDXgels_bufferSize	11.0				
cusolverDnDXgesv	11.0				
cusolverDnDXgesv_bufferSize	11.0				
cusolverDnDestroy					hipsolverDnDestroy
cusolverDnDestroyGesvdjInfo	9.0				hipsolverDnDestroyGesvdjInfo
cusolverDnDestroyParams	11.0				hipsolverDnDestroyParams
cusolverDnDestroySyevjInfo	9.0				hipsolverDnDestroySyevjInfo
cusolverDnDgebrd					hipsolverDnDgebrd
cusolverDnDgebrd_bufferSize					hipsolverDnDgebrd_bufferSize
cusolverDnDgeqrf					hipsolverDnDgeqrf
cusolverDnDgeqrf_bufferSize					hipsolverDnDgeqrf_bufferSize
cusolverDnDgesvd					hipsolverDnDgesvd
cusolverDnDgesvd_bufferSize					hipsolverDnDgesvd_bufferSize
cusolverDnDgesvdaStridedBatched	10.1				hipsolverDnDgesvdaStridedBat
cusolverDnDgesvdaStridedBatched_bufferSize	10.1				hipsolverDnDgesvdaStridedBat
cusolverDnDgesvdj	9.0				hipsolverDnDgesvdj
cusolverDnDgesvdjBatched	9.0				hipsolverDnDgesvdjBatched
cusolverDnDgesvdjBatched_bufferSize	9.0				hipsolverDnDgesvdjBatched_bu
cusolverDnDgesvdj_bufferSize	9.0				hipsolverDnDgesvdj_bufferSiz

Table 30 – continued from previous page

CUDA	A	D	C	R	HIP
cusolverDnDgetrf					hipsolverDnDgetrf
cusolverDnDgetrf_bufferSize					hipsolverDnDgetrf_bufferSize
cusolverDnDgetrs					hipsolverDnDgetrs
cusolverDnDlaswp					
cusolverDnDlauum	10.1				
cusolverDnDlauum_bufferSize	10.1				
cusolverDnDorgbr	8.0				hipsolverDnDorgbr
cusolverDnDorgbr_bufferSize	8.0				hipsolverDnDorgbr_bufferSize
cusolverDnDorgqr	8.0				hipsolverDnDorgqr
cusolverDnDorgqr_bufferSize	8.0				hipsolverDnDorgqr_bufferSize
cusolverDnDorgtr	8.0				hipsolverDnDorgtr
cusolverDnDorgtr_bufferSize	8.0				hipsolverDnDorgtr_bufferSize
cusolverDnDormqr					hipsolverDnDormqr
cusolverDnDormqr_bufferSize	8.0				hipsolverDnDormqr_bufferSize
cusolverDnDormtr	8.0				hipsolverDnDormtr
cusolverDnDormtr_bufferSize	8.0				hipsolverDnDormtr_bufferSize
cusolverDnDpotrf					hipsolverDnDpotrf
cusolverDnDpotrfBatched	9.1				hipsolverDnDpotrfBatched
cusolverDnDpotrf_bufferSize					hipsolverDnDpotrf_bufferSize
cusolverDnDpotri	10.1				hipsolverDnDpotri
cusolverDnDpotri_bufferSize	10.1				hipsolverDnDpotri_bufferSize
cusolverDnDpotrs					hipsolverDnDpotrs
cusolverDnDpotrsBatched	9.1				hipsolverDnDpotrsBatched
cusolverDnDsyevd	8.0				hipsolverDnDsyevd
cusolverDnDsyevd_bufferSize	8.0				hipsolverDnDsyevd_bufferSize
cusolverDnDsyevdx	10.1				hipsolverDnDsyevdx
cusolverDnDsyevdx_bufferSize	10.1				hipsolverDnDsyevdx_bufferSiz
cusolverDnDsyevj	9.0				hipsolverDnDsyevj
cusolverDnDsyevjBatched	9.0				hipsolverDnDsyevjBatched
cusolverDnDsyevjBatched_bufferSize	9.0				hipsolverDnDsyevjBatched_buf
cusolverDnDsyevj_bufferSize	9.0				hipsolverDnDsyevj_bufferSize
cusolverDnDsygvd	8.0				hipsolverDnDsygvd
cusolverDnDsygvd_bufferSize	8.0				hipsolverDnDsygvd_bufferSize
cusolverDnDsygvdx	10.1				hipsolverDnDsygvdx
cusolverDnDsygvdx_bufferSize	10.1				hipsolverDnDsygvdx_bufferSiz
cusolverDnDsygvj	9.0				hipsolverDnDsygvj
cusolverDnDsygvj_bufferSize	9.0				hipsolverDnDsygvj_bufferSize
cusolverDnDsytrd					hipsolverDnDsytrd
cusolverDnDsytrd_bufferSize	8.0				hipsolverDnDsytrd_bufferSize
cusolverDnDsytrf					hipsolverDnDsytrf
cusolverDnDsytrf_bufferSize					hipsolverDnDsytrf_bufferSize
cusolverDnDsytri	10.1				
cusolverDnDsytri_bufferSize	10.1				
cusolverDnGeqrf	11.0	11.1		13.0	
cusolverDnGeqrf_bufferSize	11.0	11.1		13.0	
cusolverDnGesvd	11.0	11.1		13.0	
cusolverDnGesvd_bufferSize	11.0	11.1		13.0	
cusolverDnGetDeterministicMode	12.2				hipsolverDnGetDeterministicM
cusolverDnGetEmulationSpecialValuesSupport	13.2				
cusolverDnGetEmulationStrategy	13.0				

Table 30 – continued from previous page

CUDA	A	D	C	R	HIP
cusolverDnGetFixedPointEmulationMantissaBitOffset	13.2				
cusolverDnGetFixedPointEmulationMantissaControl	13.2				
cusolverDnGetFixedPointEmulationMaxMantissaBitCount	13.2				
cusolverDnGetMathMode	13.0				
cusolverDnGetStream					hipsolverGetStream
cusolverDnGetrf	11.0	11.1		13.0	
cusolverDnGetrf_bufferSize	11.0	11.1		13.0	
cusolverDnGetrs	11.0	11.1		13.0	
cusolverDnIRSInfosCreate	10.2				
cusolverDnIRSInfosDestroy	10.2				
cusolverDnIRSInfosGetMaxIters	10.2				
cusolverDnIRSInfosGetNiters	10.2				
cusolverDnIRSInfosGetOuterNiters	10.2				
cusolverDnIRSInfosGetResidualHistory	10.2				
cusolverDnIRSInfosRequestResidual	10.2				
cusolverDnIRSParamsCreate	10.2				
cusolverDnIRSParamsDestroy	10.2				
cusolverDnIRSParamsDisableFallback	11.0				
cusolverDnIRSParamsEnableFallback	11.0				
cusolverDnIRSParamsGetMaxIters	10.2				
cusolverDnIRSParamsSetMaxIters	10.2				
cusolverDnIRSParamsSetMaxItersInner	10.2				
cusolverDnIRSParamsSetRefinementSolver	10.2				
cusolverDnIRSParamsSetSolverLowestPrecision	10.2				
cusolverDnIRSParamsSetSolverMainPrecision	10.2				
cusolverDnIRSParamsSetSolverPrecisions	10.2				
cusolverDnIRSParamsSetTol	10.2				
cusolverDnIRSParamsSetTolInner	10.2				
cusolverDnIRSXgels	11.0				
cusolverDnIRSXgels_bufferSize	11.0				
cusolverDnIRSXgesv	10.2				
cusolverDnIRSXgesv_bufferSize	10.2				
cusolverDnLoggerForceDisable	11.7				
cusolverDnLoggerOpenFile	11.7				
cusolverDnLoggerSetCallback	11.7				
cusolverDnLoggerSetFile	11.7				
cusolverDnLoggerSetLevel	11.7				
cusolverDnLoggerSetMask	11.7				
cusolverDnPotrf	11.0	11.1		13.0	
cusolverDnPotrf_bufferSize	11.0	11.1		13.0	
cusolverDnPotrs	11.0	11.1		13.0	
cusolverDnSBgels	11.0				
cusolverDnSBgels_bufferSize	11.0				
cusolverDnSBgesv	11.0				
cusolverDnSBgesv_bufferSize	11.0				
cusolverDnSHgels	11.0				
cusolverDnSHgels_bufferSize	11.0				
cusolverDnSHgesv	10.2				
cusolverDnSHgesv_bufferSize	10.2				
cusolverDnSSgels	11.0				hipsolverDnSSgels

Table 30 – continued from previous page

CUDA	A	D	C	R	HIP
cusolverDnSSgels_bufferSize	11.0				hipsolverDnSSgels_bufferSize
cusolverDnSSgesv	10.2				hipsolverDnSSgesv
cusolverDnSSgesv_bufferSize	10.2				hipsolverDnSSgesv_bufferSize
cusolverDnSXgels	11.0				
cusolverDnSXgels_bufferSize	11.0				
cusolverDnSXgesv	11.0				
cusolverDnSXgesv_bufferSize	11.0				
cusolverDnSetAdvOptions	11.0				hipsolverDnSetAdvOptions
cusolverDnSetDeterministicMode	12.2				hipsolverDnSetDeterministicM
cusolverDnSetEmulationSpecialValuesSupport	13.2				
cusolverDnSetEmulationStrategy	13.0				
cusolverDnSetFixedPointEmulationMantissaBitOffset	13.2				
cusolverDnSetFixedPointEmulationMantissaControl	13.2				
cusolverDnSetFixedPointEmulationMaxMantissaBitCount	13.2				
cusolverDnSetMathMode	13.0				
cusolverDnSetStream					hipsolverSetStream
cusolverDnSgebrd					hipsolverDnSgebrd
cusolverDnSgebrd_bufferSize					hipsolverDnSgebrd_bufferSize
cusolverDnSgeqrf					hipsolverDnSgeqrf
cusolverDnSgeqrf_bufferSize					hipsolverDnSgeqrf_bufferSize
cusolverDnSgesvd					hipsolverDnSgesvd
cusolverDnSgesvd_bufferSize					hipsolverDnSgesvd_bufferSize
cusolverDnSgesvdaStridedBatched	10.1				hipsolverDnSgesvdaStridedBat
cusolverDnSgesvdaStridedBatched_bufferSize	10.1				hipsolverDnSgesvdaStridedBat
cusolverDnSgesvdj	9.0				hipsolverDnSgesvdj
cusolverDnSgesvdjBatched	9.0				hipsolverDnSgesvdjBatched
cusolverDnSgesvdjBatched_bufferSize	9.0				hipsolverDnSgesvdjBatched_bu
cusolverDnSgesvdj_bufferSize	9.0				hipsolverDnSgesvdj_bufferSiz
cusolverDnSgetrf					hipsolverDnSgetrf
cusolverDnSgetrf_bufferSize					hipsolverDnSgetrf_bufferSize
cusolverDnSgetrs					hipsolverDnSgetrs
cusolverDnSlaswp					
cusolverDnSlauum	10.1				
cusolverDnSlauum_bufferSize	10.1				
cusolverDnSorgbr	8.0				hipsolverDnSorgbr
cusolverDnSorgbr_bufferSize	8.0				hipsolverDnSorgbr_bufferSize
cusolverDnSorgqr	8.0				hipsolverDnSorgqr
cusolverDnSorgqr_bufferSize	8.0				hipsolverDnSorgqr_bufferSize
cusolverDnSorgtr	8.0				hipsolverDnSorgtr
cusolverDnSorgtr_bufferSize	8.0				hipsolverDnSorgtr_bufferSize
cusolverDnSormqr					hipsolverDnSormqr
cusolverDnSormqr_bufferSize	8.0				hipsolverDnSormqr_bufferSize
cusolverDnSormtr	8.0				hipsolverDnSormtr
cusolverDnSormtr_bufferSize	8.0				hipsolverDnSormtr_bufferSize
cusolverDnSpotrf					hipsolverDnSpotrf
cusolverDnSpotrfBatched	9.1				hipsolverDnSpotrfBatched
cusolverDnSpotrf_bufferSize					hipsolverDnSpotrf_bufferSize
cusolverDnSpotri	10.1				hipsolverDnSpotri
cusolverDnSpotri_bufferSize	10.1				hipsolverDnSpotri_bufferSize
cusolverDnSpotrs					hipsolverDnSpotrs

Table 30 – continued from previous page

CUDA	A	D	C	R	HIP
cusolverDnSpotrsBatched	9.1				hipsolverDnSpotrsBatched
cusolverDnSsyevd	8.0				hipsolverDnSsyevd
cusolverDnSsyevd_bufferSize	8.0				hipsolverDnSsyevd_bufferSize
cusolverDnSsyevdx	10.1				hipsolverDnSsyevdx
cusolverDnSsyevdx_bufferSize	10.1				hipsolverDnSsyevdx_bufferSiz
cusolverDnSsyevj	9.0				hipsolverDnSsyevj
cusolverDnSsyevjBatched	9.0				hipsolverDnSsyevjBatched
cusolverDnSsyevjBatched_bufferSize	9.0				hipsolverDnSsyevjBatched_buf
cusolverDnSsyevj_bufferSize	9.0				hipsolverDnSsyevj_bufferSize
cusolverDnSsygvd	8.0				hipsolverDnSsygvd
cusolverDnSsygvd_bufferSize	8.0				hipsolverDnSsygvd_bufferSize
cusolverDnSsygvdx	10.1				hipsolverDnSsygvdx
cusolverDnSsygvdx_bufferSize	10.1				hipsolverDnSsygvdx_bufferSiz
cusolverDnSsygvj	9.0				hipsolverDnSsygvj
cusolverDnSsygvj_bufferSize	9.0				hipsolverDnSsygvj_bufferSize
cusolverDnSsytrd					hipsolverDnSsytrd
cusolverDnSsytrd_bufferSize	8.0				hipsolverDnSsytrd_bufferSize
cusolverDnSsytrf					hipsolverDnSsytrf
cusolverDnSsytrf_bufferSize					hipsolverDnSsytrf_bufferSize
cusolverDnSsytri	10.1				
cusolverDnSsytri_bufferSize	10.1				
cusolverDnSyevd	11.0	11.1		13.0	
cusolverDnSyevd_bufferSize	11.0	11.1		13.0	
cusolverDnSyevdx	11.0	11.1		13.0	
cusolverDnSyevdx_bufferSize	11.0	11.1		13.0	
cusolverDnXgeev	12.6				
cusolverDnXgeev_bufferSize	12.6				
cusolverDnXgeqrf	11.1				hipsolverDnXgeqrf
cusolverDnXgeqrf_bufferSize	11.1				hipsolverDnXgeqrf_bufferSize
cusolverDnXgesvd	11.1				
cusolverDnXgesvd_bufferSize	11.1				
cusolverDnXgesvdjGetResidual	9.0				hipsolverDnXgesvdjGetResidual
cusolverDnXgesvdjGetSweeps	9.0				hipsolverDnXgesvdjGetSweeps
cusolverDnXgesvdjSetMaxSweeps	9.0				hipsolverDnXgesvdjSetMaxSweep
cusolverDnXgesvdjSetSortEig	9.0				hipsolverDnXgesvdjSetSortEig
cusolverDnXgesvdjSetTolerance	9.0				hipsolverDnXgesvdjSetTolerance
cusolverDnXgesvdp	11.1				
cusolverDnXgesvdp_bufferSize	11.1				
cusolverDnXgesvdr	11.2				
cusolverDnXgesvdr_bufferSize	11.2				
cusolverDnXgetrf	11.1				hipsolverDnXgetrf
cusolverDnXgetrf_bufferSize	11.1				hipsolverDnXgetrf_bufferSize
cusolverDnXgetrs	11.1				hipsolverDnXgetrs
cusolverDnXlarft	12.4				
cusolverDnXlarft_bufferSize	12.4				
cusolverDnXpolar	13.2				
cusolverDnXpolar_bufferSize	13.2				
cusolverDnXpotrf	11.1				hipsolverDnXpotrf
cusolverDnXpotrf_bufferSize	11.1				hipsolverDnXpotrf_bufferSize
cusolverDnXpotrs	11.1				hipsolverDnXpotrs

Table 30 – continued from previous page

CUDA	A	D	C	R	HIP
cusolverDnXstedc	13.2				
cusolverDnXstedc_bufferSize	13.2				
cusolverDnXsyevBatched	12.6				
cusolverDnXsyevBatched_bufferSize	12.6				
cusolverDnXsyevd	11.1				
cusolverDnXsyevd_bufferSize	11.1				
cusolverDnXsyevdx	11.1				
cusolverDnXsyevdx_bufferSize	11.1				
cusolverDnXsyevjGetResidual	9.0				hipsolverDnXsyevjGetResidual
cusolverDnXsyevjGetSweeps	9.0				hipsolverDnXsyevjGetSweeps
cusolverDnXsyevjSetMaxSweeps	9.0				hipsolverDnXsyevjSetMaxSweeps
cusolverDnXsyevjSetSortEig	9.0				hipsolverDnXsyevjSetSortEig
cusolverDnXsyevjSetTolerance	9.0				hipsolverDnXsyevjSetTolerance
cusolverDnXsygvd	13.2				
cusolverDnXsygvd_bufferSize	13.2				
cusolverDnXsygvdx	13.2				
cusolverDnXsygvdx_bufferSize	13.2				
cusolverDnXsytrs	11.3				
cusolverDnXsytrs_bufferSize	11.3				
cusolverDnXtrtri	11.4				
cusolverDnXtrtri_bufferSize	11.4				
cusolverDnZCgels	11.0				
cusolverDnZCgels_bufferSize	11.0				
cusolverDnZCgesv	10.2				
cusolverDnZCgesv_bufferSize	10.2				
cusolverDnZEgels	11.0				
cusolverDnZEgels_bufferSize	11.0				
cusolverDnZEgesv	11.0				
cusolverDnZEgesv_bufferSize	11.0				
cusolverDnZKgels	11.0				
cusolverDnZKgels_bufferSize	11.0				
cusolverDnZKgesv	10.2				
cusolverDnZKgesv_bufferSize	10.2				
cusolverDnZYgels	11.0				
cusolverDnZYgels_bufferSize	11.0				
cusolverDnZYgesv	11.0				
cusolverDnZYgesv_bufferSize	11.0				
cusolverDnZZgels	11.0				hipsolverDnZZgels
cusolverDnZZgels_bufferSize	11.0				hipsolverDnZZgels_bufferSize
cusolverDnZZgesv	10.2				hipsolverDnZZgesv
cusolverDnZZgesv_bufferSize	10.2				hipsolverDnZZgesv_bufferSize
cusolverDnZgebrd					hipsolverDnZgebrd
cusolverDnZgebrd_bufferSize					hipsolverDnZgebrd_bufferSize
cusolverDnZgeqrf					hipsolverDnZgeqrf
cusolverDnZgeqrf_bufferSize					hipsolverDnZgeqrf_bufferSize
cusolverDnZgesvd					hipsolverDnZgesvd
cusolverDnZgesvd_bufferSize					hipsolverDnZgesvd_bufferSize
cusolverDnZgesvdaStridedBatched	10.1				hipsolverDnZgesvdaStridedBatched
cusolverDnZgesvdaStridedBatched_bufferSize	10.1				hipsolverDnZgesvdaStridedBatched
cusolverDnZgesvdj	9.0				hipsolverDnZgesvdj

Table 30 – continued from previous page

CUDA	A	D	C	R	HIP
cusolverDnZgesvdjBatched	9.0				hipsolverDnZgesvdjBatched
cusolverDnZgesvdjBatched_bufferSize	9.0				hipsolverDnZgesvdjBatched_bu
cusolverDnZgesvdj_bufferSize	9.0				hipsolverDnZgesvdj_bufferSiz
cusolverDnZgetrf					hipsolverDnZgetrf
cusolverDnZgetrf_bufferSize					hipsolverDnZgetrf_bufferSize
cusolverDnZgetrs					hipsolverDnZgetrs
cusolverDnZheevd	8.0				hipsolverDnZheevd
cusolverDnZheevd_bufferSize	8.0				hipsolverDnZheevd_bufferSize
cusolverDnZheevdx	10.1				hipsolverDnZheevdx
cusolverDnZheevdx_bufferSize	10.1				hipsolverDnZheevdx_bufferSiz
cusolverDnZheevj	9.0				hipsolverDnZheevj
cusolverDnZheevjBatched	9.0				hipsolverDnZheevjBatched
cusolverDnZheevjBatched_bufferSize	9.0				hipsolverDnZheevjBatched_buf
cusolverDnZheevj_bufferSize	9.0				hipsolverDnZheevj_bufferSize
cusolverDnZhegvd	8.0				hipsolverDnZhegvd
cusolverDnZhegvd_bufferSize	8.0				hipsolverDnZhegvd_bufferSize
cusolverDnZhegvdx	10.1				hipsolverDnZhegvdx
cusolverDnZhegvdx_bufferSize	10.1				hipsolverDnZhegvdx_bufferSiz
cusolverDnZhegvj	9.0				hipsolverDnZhegvj
cusolverDnZhegvj_bufferSize	9.0				hipsolverDnZhegvj_bufferSize
cusolverDnZhetrd	8.0				hipsolverDnZhetrd
cusolverDnZhetrd_bufferSize	8.0				hipsolverDnZhetrd_bufferSize
cusolverDnZlaswp					
cusolverDnZlauum	10.1				
cusolverDnZlauum_bufferSize	10.1				
cusolverDnZpotrf					hipsolverDnZpotrf
cusolverDnZpotrfBatched	9.1				hipsolverDnZpotrfBatched
cusolverDnZpotrf_bufferSize					hipsolverDnZpotrf_bufferSize
cusolverDnZpotri	10.1				hipsolverDnZpotri
cusolverDnZpotri_bufferSize	10.1				hipsolverDnZpotri_bufferSize
cusolverDnZpotrs					hipsolverDnZpotrs
cusolverDnZpotrsBatched	9.1				hipsolverDnZpotrsBatched
cusolverDnZsytrf					hipsolverDnZsytrf
cusolverDnZsytrf_bufferSize					hipsolverDnZsytrf_bufferSize
cusolverDnZsytri	10.1				
cusolverDnZsytri_bufferSize	10.1				
cusolverDnZungbr	8.0				hipsolverDnZungbr
cusolverDnZungbr_bufferSize	8.0				hipsolverDnZungbr_bufferSize
cusolverDnZungqr	8.0				hipsolverDnZungqr
cusolverDnZungqr_bufferSize	8.0				hipsolverDnZungqr_bufferSize
cusolverDnZungtr	8.0				hipsolverDnZungtr
cusolverDnZungtr_bufferSize	8.0				hipsolverDnZungtr_bufferSize
cusolverDnZunmqr					hipsolverDnZunmqr
cusolverDnZunmqr_bufferSize	8.0				hipsolverDnZunmqr_bufferSize
cusolverDnZunmtr	8.0				hipsolverDnZunmtr
cusolverDnZunmtr_bufferSize	8.0				hipsolverDnZunmtr_bufferSize
cusolverMgCreate	10.1	13.0			
cusolverMgCreateDeviceGrid	10.1	13.0			
cusolverMgCreateMatrixDesc	10.1	13.0			
cusolverMgDestroy	10.1	13.0			

Table 30 – continued from previous page

CUDA	A	D	C	R	HIP
cusolverMgDestroyGrid	10.1	13.0			
cusolverMgDestroyMatrixDesc	10.1	13.0			
cusolverMgDeviceSelect	10.1	13.0			
cusolverMgGetrf	10.2	13.0			
cusolverMgGetrf_bufferSize	10.2	13.0			
cusolverMgGetrs	10.2	13.0			
cusolverMgGetrs_bufferSize	10.2	13.0			
cusolverMgPotrf	11.0	13.0			
cusolverMgPotrf_bufferSize	11.0	13.0			
cusolverMgPotri	11.0	13.0			
cusolverMgPotri_bufferSize	11.0	13.0			
cusolverMgPotrs	11.0	13.0			
cusolverMgPotrs_bufferSize	11.0	13.0			
cusolverMgSyevd	10.1	13.0			
cusolverMgSyevd_bufferSize	10.1	13.0			
cusolverRfAccessBundledFactorsDevice		12.8			hipsolverRfAccessBundledFacto
cusolverRfAnalyze		12.8			hipsolverRfAnalyze
cusolverRfBatchAnalyze		13.0			hipsolverRfBatchAnalyze
cusolverRfBatchRefactor		13.0			hipsolverRfBatchRefactor
cusolverRfBatchResetValues		13.0			hipsolverRfBatchResetValues
cusolverRfBatchSetupHost		13.0			hipsolverRfBatchSetupHost
cusolverRfBatchSolve		13.0			hipsolverRfBatchSolve
cusolverRfBatchZeroPivot		13.0			hipsolverRfBatchZeroPivot
cusolverRfCreate		13.0			hipsolverRfCreate
cusolverRfDestroy		13.0			hipsolverRfDestroy
cusolverRfExtractBundledFactorsHost		12.8			hipsolverRfExtractBundledFac
cusolverRfExtractSplitFactorsHost		12.8			hipsolverRfExtractSplitFactor
cusolverRfGetAlgs		13.0			
cusolverRfGetMatrixFormat		13.0			hipsolverRfGetMatrixFormat
cusolverRfGetNumericBoostReport		13.0			hipsolverRfGetNumericBoostRep
cusolverRfGetNumericProperties		13.0			hipsolverRfGetNumericPropert
cusolverRfGetResetValuesFastMode		13.0			hipsolverRfGetResetValuesFas
cusolverRfRefactor		12.8			hipsolverRfRefactor
cusolverRfResetValues		12.8			hipsolverRfResetValues
cusolverRfSetAlgs		13.0			hipsolverRfSetAlgs
cusolverRfSetMatrixFormat		13.0			hipsolverRfSetMatrixFormat
cusolverRfSetNumericProperties		13.0			hipsolverRfSetNumericPropert
cusolverRfSetResetValuesFastMode		13.0			hipsolverRfSetResetValuesFas
cusolverRfSetupDevice		12.8			hipsolverRfSetupDevice
cusolverRfSetupHost		12.8			hipsolverRfSetupHost
cusolverRfSolve		12.8			hipsolverRfSolve
cusolverSpCcsrcholBufferInfo	7.5	12.8			
cusolverSpCcsrcholBufferInfoHost	7.5	12.8			
cusolverSpCcsrcholDiag	10.1	12.8			
cusolverSpCcsrcholFactor	7.5	12.8			
cusolverSpCcsrcholFactorHost	7.5	12.8			
cusolverSpCcsrcholSolve	7.5	12.8			
cusolverSpCcsrcholSolveHost	7.5	12.8			
cusolverSpCcsrcholZeroPivot	7.5	12.8			
cusolverSpCcsrcholZeroPivotHost	7.5	12.8			

Table 30 – continued from previous page

CUDA	A	D	C	R	HIP
cusolverSpCcsreigsHost		13.0			
cusolverSpCcsreigvsi		13.0			
cusolverSpCcsreigvsiHost		13.0			
cusolverSpCcsrlsqvqrHost		13.0			
cusolverSpCcsrlsvchol		12.8			
cusolverSpCcsrlsvcholHost		12.8			
cusolverSpCcsrlsvluHost		12.8			
cusolverSpCcsrlsvqr		13.0			hipsolverSpCcsrlsvqr
cusolverSpCcsrlsvqrHost		13.0			
cusolverSpCcsrluBufferInfoHost	7.5	12.8			
cusolverSpCcsrluExtractHost	7.5	12.8			
cusolverSpCcsrluFactorHost	7.5	12.8			
cusolverSpCcsrluSolveHost	7.5	12.8			
cusolverSpCcsrluZeroPivotHost	7.5	12.8			
cusolverSpCcsrqrBufferInfo	7.5				
cusolverSpCcsrqrBufferInfoBatched		13.0			
cusolverSpCcsrqrBufferInfoHost	7.5				
cusolverSpCcsrqrFactor	7.5				
cusolverSpCcsrqrFactorHost	7.5				
cusolverSpCcsrqrSetup	7.5				
cusolverSpCcsrqrSetupHost	7.5				
cusolverSpCcsrqrSolve	7.5				
cusolverSpCcsrqrSolveHost	7.5				
cusolverSpCcsrqrZeroPivot	7.5				
cusolverSpCcsrqrZeroPivotHost	7.5				
cusolverSpCcsrqrsvBatched		13.0			
cusolverSpCcsrzfdHost	9.2	13.0			
cusolverSpCreate		13.0			hipsolverSpCreate
cusolverSpCreateCsrcholInfo	7.5	12.8			
cusolverSpCreateCsrcholInfoHost	7.5				
cusolverSpCreateCsrluInfoHost	7.5				
cusolverSpCreateCsrqrInfo		13.0			
cusolverSpCreateCsrqrInfoHost	7.5				
cusolverSpDcsrcholBufferInfo	7.5	12.8			
cusolverSpDcsrcholBufferInfoHost	7.5	12.8			
cusolverSpDcsrcholDiag	10.1	12.8			
cusolverSpDcsrcholFactor	7.5	12.8			
cusolverSpDcsrcholFactorHost	7.5	12.8			
cusolverSpDcsrcholSolve	7.5	12.8			
cusolverSpDcsrcholSolveHost	7.5	12.8			
cusolverSpDcsrcholZeroPivot	7.5	12.8			
cusolverSpDcsrcholZeroPivotHost	7.5	12.8			
cusolverSpDcsreigsHost		13.0			
cusolverSpDcsreigvsi		13.0			
cusolverSpDcsreigvsiHost		13.0			
cusolverSpDcsrlsqvqrHost		13.0			
cusolverSpDcsrlsvchol		12.8			hipsolverSpDcsrlsvchol
cusolverSpDcsrlsvcholHost		12.8			hipsolverSpDcsrlsvcholHost
cusolverSpDcsrlsvluHost		12.8			
cusolverSpDcsrlsvqr		13.0			hipsolverSpDcsrlsvqr

Table 30 – continued from previous page

CUDA	A	D	C	R	HIP
cusolverSpDcsrlsvqrHost		13.0			
cusolverSpDcsrluBufferInfoHost	7.5	12.8			
cusolverSpDcsrluExtractHost	7.5	12.8			
cusolverSpDcsrluFactorHost	7.5	12.8			
cusolverSpDcsrluSolveHost	7.5	12.8			
cusolverSpDcsrluZeroPivotHost	7.5	12.8			
cusolverSpDcsrqrBufferInfo	7.5				
cusolverSpDcsrqrBufferInfoBatched		13.0			
cusolverSpDcsrqrBufferInfoHost	7.5				
cusolverSpDcsrqrFactor	7.5				
cusolverSpDcsrqrFactorHost	7.5				
cusolverSpDcsrqrSetup	7.5				
cusolverSpDcsrqrSetupHost	7.5				
cusolverSpDcsrqrSolve	7.5				
cusolverSpDcsrqrSolveHost	7.5				
cusolverSpDcsrqrZeroPivot	7.5				
cusolverSpDcsrqrZeroPivotHost	7.5				
cusolverSpDcsrqrsvBatched		13.0			
cusolverSpDcsrzfdHost	9.2	13.0			
cusolverSpDestroy		13.0			hipsolverSpDestroy
cusolverSpDestroyCsrcholInfo	7.5	12.8			
cusolverSpDestroyCsrcholInfoHost	7.5				
cusolverSpDestroyCsrluInfoHost	7.5				
cusolverSpDestroyCsrqrInfo		13.0			
cusolverSpDestroyCsrqrInfoHost	7.5				
cusolverSpGetStream		13.0			
cusolverSpScsrcholBufferInfo	7.5	12.8			
cusolverSpScsrcholBufferInfoHost	7.5	12.8			
cusolverSpScsrcholDiag	10.1	12.8			
cusolverSpScsrcholFactor	7.5	12.8			
cusolverSpScsrcholFactorHost	7.5	12.8			
cusolverSpScsrcholSolve	7.5	12.8			
cusolverSpScsrcholSolveHost	7.5	12.8			
cusolverSpScsrcholZeroPivot	7.5	12.8			
cusolverSpScsrcholZeroPivotHost	7.5	12.8			
cusolverSpScsreigsHost		13.0			
cusolverSpScsreigvsi		13.0			
cusolverSpScsreigvsiHost		13.0			
cusolverSpScsrlsqvqrHost		13.0			
cusolverSpScsrlsvchol		12.8			hipsolverSpScsrlsvchol
cusolverSpScsrlsvcholHost		12.8			hipsolverSpScsrlsvcholHost
cusolverSpScsrlsvluHost		12.8			
cusolverSpScsrlsvqr		13.0			hipsolverSpScsrlsvqr
cusolverSpScsrlsvqrHost		13.0			
cusolverSpScsrluBufferInfoHost	7.5	12.8			
cusolverSpScsrluExtractHost	7.5	12.8			
cusolverSpScsrluFactorHost	7.5	12.8			
cusolverSpScsrluSolveHost	7.5	12.8			
cusolverSpScsrluZeroPivotHost	7.5	12.8			
cusolverSpScsrqrBufferInfo	7.5				

Table 30 – continued from previous page

CUDA	A	D	C	R	HIP
cusolverSpScsrqrBufferInfoBatched		13.0			
cusolverSpScsrqrBufferInfoHost	7.5				
cusolverSpScsrqrFactor	7.5				
cusolverSpScsrqrFactorHost	7.5				
cusolverSpScsrqrSetup	7.5				
cusolverSpScsrqrSetupHost	7.5				
cusolverSpScsrqrSolve	7.5				
cusolverSpScsrqrSolveHost	7.5				
cusolverSpScsrqrZeroPivot	7.5				
cusolverSpScsrqrZeroPivotHost	7.5				
cusolverSpScsrqrsvBatched		13.0			
cusolverSpScsrzfdHost	9.2	13.0			
cusolverSpSetStream		13.0			hipsolverSpSetStream
cusolverSpXcsrcholAnalysis	7.5	12.8			
cusolverSpXcsrcholAnalysisHost	7.5	12.8			
cusolverSpXcsrissymHost		13.0			
cusolverSpXcsrluAnalysisHost	7.5	12.8			
cusolverSpXcsrluNnzHost	7.5	12.8			
cusolverSpXcsrmetisndHost	9.2	13.0			
cusolverSpXcsrpermHost		13.0			
cusolverSpXcsrperm_bufferSizeHost		13.0			
cusolverSpXcsrqrAnalysis	7.5				
cusolverSpXcsrqrAnalysisBatched		13.0			
cusolverSpXcsrqrAnalysisHost	7.5				
cusolverSpXcsrsymamdHost	7.5	13.0			
cusolverSpXcsrsymmdqHost	7.5	13.0			
cusolverSpXcsrsymrcmHost		13.0			
cusolverSpZcsrcholBufferInfo	7.5	12.8			
cusolverSpZcsrcholBufferInfoHost	7.5	12.8			
cusolverSpZcsrcholDiag	10.1	12.8			
cusolverSpZcsrcholFactor	7.5	12.8			
cusolverSpZcsrcholFactorHost	7.5	12.8			
cusolverSpZcsrcholSolve	7.5	12.8			
cusolverSpZcsrcholSolveHost	7.5	12.8			
cusolverSpZcsrcholZeroPivot	7.5	12.8			
cusolverSpZcsrcholZeroPivotHost	7.5	12.8			
cusolverSpZcsreigsHost		13.0			
cusolverSpZcsreigvsi		13.0			
cusolverSpZcsreigvsiHost		13.0			
cusolverSpZcsrlsqvqrHost		13.0			
cusolverSpZcsrlsvchol		12.8			
cusolverSpZcsrlsvcholHost		12.8			
cusolverSpZcsrlsvluHost		12.8			
cusolverSpZcsrlsvqr		13.0			hipsolverSpZcsrlsvqr
cusolverSpZcsrlsvqrHost		13.0			
cusolverSpZcsrluBufferInfoHost	7.5	12.8			
cusolverSpZcsrluExtractHost	7.5	12.8			
cusolverSpZcsrluFactorHost	7.5	12.8			
cusolverSpZcsrluSolveHost	7.5	12.8			
cusolverSpZcsrluZeroPivotHost	7.5	12.8			

Table 30 – continued from previous page

CUDA	A	D	C	R	HIP
cusolverSpZcsrqrBufferInfo	7.5				
cusolverSpZcsrqrBufferInfoBatched		13.0			
cusolverSpZcsrqrBufferInfoHost	7.5				
cusolverSpZcsrqrFactor	7.5				
cusolverSpZcsrqrFactorHost	7.5				
cusolverSpZcsrqrSetup	7.5				
cusolverSpZcsrqrSetupHost	7.5				
cusolverSpZcsrqrSolve	7.5				
cusolverSpZcsrqrSolveHost	7.5				
cusolverSpZcsrqrZeroPivot	7.5				
cusolverSpZcsrqrZeroPivotHost	7.5				
cusolverSpZcsrqrsvBatched		13.0			
cusolverSpZcsrzfdHost	9.2	13.0			

10.9 CURAND API supported by HIP

Note: In the tables that follow the columns marked A, D, C, R, U, and E mean the following: **A** - Added; **D** - Deprecated; **C** - Changed; **R** - Removed; **U** - Unsupported for CUDA version(s); **E** - Experimental

10.9.1 1. CURAND Data types

CUDA	A	D	C	R	HIP
CURAND_3RD					
CURAND_BINARY_SEARCH					
CURAND_CHOOSE_BEST					
CURAND_DEFINITION					
CURAND_DEVICE_API					
CURAND_DIRECTION_VECTORS_32_JOEKUO6					HIPRAND_DIRECTION_VECTORS_32_JOEKUO6
CURAND_DIRECTION_VECTORS_64_JOEKUO6					HIPRAND_DIRECTION_VECTORS_64_JOEKUO6
CURAND_DISCRETE_GAUSS					
CURAND_FAST_REJECTION					
CURAND_HITR					
CURAND_ITR					
CURAND_KNUTH					
CURAND_M1					
CURAND_M2					
CURAND_ORDERING_PSEUDO_BEST					HIPRAND_ORDERING_PSEUDO_BEST
CURAND_ORDERING_PSEUDO_DEFAULT					HIPRAND_ORDERING_PSEUDO_DEFAULT
CURAND_ORDERING_PSEUDO_DYNAMIC	11.5				HIPRAND_ORDERING_PSEUDO_DYNAMIC
CURAND_ORDERING_PSEUDO_LEGACY	11.0				HIPRAND_ORDERING_PSEUDO_LEGACY
CURAND_ORDERING_PSEUDO_SEEDED					HIPRAND_ORDERING_PSEUDO_SEEDED
CURAND_ORDERING_QUASI_DEFAULT					HIPRAND_ORDERING_QUASI_DEFAULT
CURAND_POISSON					
CURAND_REJECTION					
CURAND_RNG_PSEUDO_DEFAULT					HIPRAND_RNG_PSEUDO_DEFAULT
CURAND_RNG_PSEUDO_MRG32K3A					HIPRAND_RNG_PSEUDO_MRG32K3A

Table 31 – continued from previous page

CUDA	A	D	C	R	HIP
CURAND_RNG_PSEUDO_MT19937					HIPRAND_RNG_PSEUDO_MT19937
CURAND_RNG_PSEUDO_MTGP32					HIPRAND_RNG_PSEUDO_MTGP32
CURAND_RNG_PSEUDO_PHILOX4_32_10					HIPRAND_RNG_PSEUDO_PHILOX4_32_10
CURAND_RNG_PSEUDO_XORWOW					HIPRAND_RNG_PSEUDO_XORWOW
CURAND_RNG_QUASI_DEFAULT					HIPRAND_RNG_QUASI_DEFAULT
CURAND_RNG_QUASI_SCRAMBLED_SOBOL32					HIPRAND_RNG_QUASI_SCRAMBLED_SOBOL32
CURAND_RNG_QUASI_SCRAMBLED_SOBOL64					HIPRAND_RNG_QUASI_SCRAMBLED_SOBOL64
CURAND_RNG_QUASI_SOBOL32					HIPRAND_RNG_QUASI_SOBOL32
CURAND_RNG_QUASI_SOBOL64					HIPRAND_RNG_QUASI_SOBOL64
CURAND_RNG_TEST					HIPRAND_RNG_TEST
CURAND_SCRAMBLED_DIRECTION_VECTORS_32_JOEKUO6					HIPRAND_SCRAMBLED_DIRECTION_VECTORS_32
CURAND_SCRAMBLED_DIRECTION_VECTORS_64_JOEKUO6					HIPRAND_SCRAMBLED_DIRECTION_VECTORS_64
CURAND_STATUS_ALLOCATION_FAILED					HIPRAND_STATUS_ALLOCATION_FAILED
CURAND_STATUS_ARCH_MISMATCH					HIPRAND_STATUS_ARCH_MISMATCH
CURAND_STATUS_DOUBLE_PRECISION_REQUIRED					HIPRAND_STATUS_DOUBLE_PRECISION_REQUIR
CURAND_STATUS_INITIALIZATION_FAILED					HIPRAND_STATUS_INITIALIZATION_FAILED
CURAND_STATUS_INTERNAL_ERROR					HIPRAND_STATUS_INTERNAL_ERROR
CURAND_STATUS_LAUNCH_FAILURE					HIPRAND_STATUS_LAUNCH_FAILURE
CURAND_STATUS_LENGTH_NOT_MULTIPLE					HIPRAND_STATUS_LENGTH_NOT_MULTIPLE
CURAND_STATUS_NOT_INITIALIZED					HIPRAND_STATUS_NOT_INITIALIZED
CURAND_STATUS_OUT_OF_RANGE					HIPRAND_STATUS_OUT_OF_RANGE
CURAND_STATUS_PREEXISTING_FAILURE					HIPRAND_STATUS_PREEXISTING_FAILURE
CURAND_STATUS_SUCCESS					HIPRAND_STATUS_SUCCESS
CURAND_STATUS_TYPE_ERROR					HIPRAND_STATUS_TYPE_ERROR
CURAND_STATUS_VERSION_MISMATCH					HIPRAND_STATUS_VERSION_MISMATCH
curandDirectionVectorSet					hiprandDirectionVectorSet_t
curandDirectionVectorSet_t					hiprandDirectionVectorSet_t
curandDirectionVectors32_t					hiprandDirectionVectors32_t
curandDirectionVectors64_t					hiprandDirectionVectors64_t
curandDiscreteDistribution_st					hiprandDiscreteDistribution_st
curandDiscreteDistribution_t					hiprandDiscreteDistribution_t
curandDistributionM2Shift_st					
curandDistributionM2Shift_t					
curandDistributionShift_st					
curandDistributionShift_t					
curandDistribution_st					
curandDistribution_t					
curandGenerator_st					hiprandGenerator_st
curandGenerator_t					hiprandGenerator_t
curandHistogramM2K_st					
curandHistogramM2K_t					
curandHistogramM2V_st					
curandHistogramM2V_t					
curandHistogramM2_st					
curandHistogramM2_t					
curandMethod					
curandMethod_t					
curandOrdering					hiprandOrdering
curandOrdering_t					hiprandOrdering_t
curandRngType					hiprandRngType_t

Table 31 – continued from previous page

CUDA	A	D	C	R	HIP
curandRngType_t					hiprandRngType_t
curandState					hiprandState
curandStateMRG32k3a					hiprandStateMRG32k3a
curandStateMRG32k3a_t					hiprandStateMRG32k3a_t
curandStateMtgp32					hiprandStateMtgp32
curandStateMtgp32_t					hiprandStateMtgp32_t
curandStatePhilox4_32_10					hiprandStatePhilox4_32_10
curandStatePhilox4_32_10_t					hiprandStatePhilox4_32_10_t
curandStateScrambledSobol32					hiprandStateScrambledSobol32
curandStateScrambledSobol32_t					hiprandStateScrambledSobol32_t
curandStateScrambledSobol64					hiprandStateScrambledSobol64
curandStateScrambledSobol64_t					hiprandStateScrambledSobol64_t
curandStateSobol32					hiprandStateSobol32
curandStateSobol32_t					hiprandStateSobol32_t
curandStateSobol64					hiprandStateSobol64
curandStateSobol64_t					hiprandStateSobol64_t
curandStateXORWOW					hiprandStateXORWOW
curandStateXORWOW_t					hiprandStateXORWOW_t
curandState_t					hiprandState_t
curandStatus					hiprandStatus
curandStatus_t					hiprandStatus_t

10.9.2 2. Host API Functions

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
curandCreateGenerator					hiprandCreateGenerator	1.5.0					
curandCreateGeneratorHos					hiprandCreateGeneratorHo	1.5.0					
curandCreatePoissonDistr					hiprandCreatePoissonDist	1.5.0					
curandDestroyDistributio					hiprandDestroyDistributi	1.5.0					
curandDestroyGenerator					hiprandDestroyGenerator	1.5.0					
curandGenerate					hiprandGenerate	1.5.0					
curandGenerateLogNormal					hiprandGenerateLogNormal	1.5.0					
curandGenerateLogNormalD					hiprandGenerateLogNormalI	1.5.0					
curandGenerateLongLong					hiprandGenerateLongLong	5.5.0					
curandGenerateNormal					hiprandGenerateNormal	1.5.0					
curandGenerateNormalDoub					hiprandGenerateNormalDoul	1.5.0					
curandGeneratePoisson					hiprandGeneratePoisson	1.5.0					
curandGenerateSeeds					hiprandGenerateSeeds	1.5.0					
curandGenerateUniform					hiprandGenerateUniform	1.5.0					
curandGenerateUniformDou					hiprandGenerateUniformDo	1.5.0					
curandGetDirectionVector					hiprandGetDirectionVecto	6.0.0					
curandGetDirectionVector					hiprandGetDirectionVecto	6.0.0					
curandGetProperty	8.0										
curandGetScrambleConstan					hiprandGetScrambleConsta	6.0.0					
curandGetScrambleConstan					hiprandGetScrambleConsta	6.0.0					
curandGetVersion					hiprandGetVersion	1.5.0					
curandMakeMTGP32Constant					hiprandMakeMTGP32Constan	1.5.0					
curandMakeMTGP32KernelSt					hiprandMakeMTGP32KernelS	1.5.0					
curandSetGeneratorOffset					hiprandSetGeneratorOffse	1.5.0					
curandSetGeneratorOrderi					hiprandSetGeneratorOrder	6.2.0					
curandSetPseudoRandomGen					hiprandSetPseudoRandomGe	1.5.0					
curandSetQuasiRandomGene					hiprandSetQuasiRandomGen	1.5.0					
curandSetStream					hiprandSetStream	1.5.0					

10.9.3 3. Device API Functions

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
__curand_umul	11.5										
curand					hiprand	1.5.0					
curand_Philox4x32_10											
curand_discrete					hiprand_discrete	1.5.0					
curand_discrete4					hiprand_discrete4	1.5.0					
curand_init					hiprand_init	1.5.0					
curand_log_normal					hiprand_log_normal	1.5.0					
curand_log_normal2					hiprand_log_normal2	1.5.0					
curand_log_normal2_doubl					hiprand_log_normal2_do	1.5.0					
curand_log_normal4					hiprand_log_normal4	1.5.0					
curand_log_normal4_doubl		13.0			hiprand_log_normal4_do	1.5.0					
curand_log_normal_double					hiprand_log_normal_dou	1.5.0					
curand_mtgp32_single											
curand_mtgp32_single_spe											
curand_mtgp32_specific											
curand_normal					hiprand_normal	1.5.0					
curand_normal2					hiprand_normal2	1.5.0					
curand_normal2_double					hiprand_normal2_double	1.5.0					
curand_normal4					hiprand_normal4	1.5.0					
curand_normal4_double					hiprand_normal4_double	1.5.0					
curand_normal_double					hiprand_normal_double	1.5.0					
curand_poisson					hiprand_poisson	1.5.0					
curand_poisson4					hiprand_poisson4	1.5.0					
curand_uniform					hiprand_uniform	1.5.0					
curand_uniform2_double					hiprand_uniform2_doubl	1.5.0					
curand_uniform4					hiprand_uniform4	1.5.0					
curand_uniform4_double		13.0			hiprand_uniform4_doubl	1.5.0					
curand_uniform_double					hiprand_uniform_double	1.5.0					

10.10 CUFFT API supported by HIP

Note: In the tables that follow the columns marked A, D, C, R, U, and E mean the following: **A** - Added; **D** - Deprecated; **C** - Changed; **R** - Removed; **U** - Unsupported for CUDA version(s); **E** - Experimental

10.10.1 1. CUFFT Data types

CUDA	A	D	C	R	HIP
CUFFT_ALLOC_FAILED					HIPFFT_ALLOC_FAILED
CUFFT_C2C					HIPFFT_C2C
CUFFT_C2R					HIPFFT_C2R
CUFFT_CB_LD_COMPLEX					HIPFFT_CB_LD_COMPLEX
CUFFT_CB_LD_COMPLEX_DOUBLE					HIPFFT_CB_LD_COMPLEX_DOUBLE
CUFFT_CB_LD_REAL					HIPFFT_CB_LD_REAL
CUFFT_CB_LD_REAL_DOUBLE					HIPFFT_CB_LD_REAL_DOUBLE
CUFFT_CB_ST_COMPLEX					HIPFFT_CB_ST_COMPLEX
CUFFT_CB_ST_COMPLEX_DOUBLE					HIPFFT_CB_ST_COMPLEX_DOUBLE
CUFFT_CB_ST_REAL					HIPFFT_CB_ST_REAL
CUFFT_CB_ST_REAL_DOUBLE					HIPFFT_CB_ST_REAL_DOUBLE
CUFFT_CB_UNDEFINED					HIPFFT_CB_UNDEFINED
CUFFT_COMPATIBILITY_DEFAULT					
CUFFT_COMPATIBILITY_FFTW_PADDING					
CUFFT_COPY_DEVICE_TO_DEVICE					HIPFFT_COPY_DEVICE_TO_DEVICE
CUFFT_COPY_DEVICE_TO_HOST					HIPFFT_COPY_DEVICE_TO_HOST
CUFFT_COPY_HOST_TO_DEVICE					HIPFFT_COPY_HOST_TO_DEVICE
CUFFT_COPY_UNDEFINED					HIPFFT_COPY_UNDEFINED
CUFFT_D2Z					HIPFFT_D2Z
CUFFT_DESC_C2C	13.1				
CUFFT_DESC_C2R	13.1				
CUFFT_DESC_DOUBLE	13.1				
CUFFT_DESC_FORWARD	13.1				
CUFFT_DESC_HALF	13.1				
CUFFT_DESC_INVERSE	13.1				
CUFFT_DESC_R2C	13.1				
CUFFT_DESC_SINGLE	13.1				
CUFFT_DESC_TRAIT_DIRECTION	13.1				
CUFFT_DESC_TRAIT_ELEMENTS_PER_THREAD	13.1				
CUFFT_DESC_TRAIT_PRECISION	13.1				
CUFFT_DESC_TRAIT_SIZE	13.1				
CUFFT_DESC_TRAIT_SM	13.1				
CUFFT_DESC_TRAIT_TYPE	13.1				
CUFFT_DEVICE_FATBIN	13.1				
CUFFT_DEVICE_FUNC_TRAIT_ELEMENTS_PER_THREAD	13.1				
CUFFT_DEVICE_FUNC_TRAIT_SHARED_MEMORY_PER_FFT	13.1				
CUFFT_DEVICE_FUNC_TRAIT_STORAGE_SIZE	13.1				
CUFFT_DEVICE_FUNC_TRAIT_SUGGESTED_FFTS_PER_BLOCK	13.1				
CUFFT_DEVICE_FUNC_TRAIT_THREADS_PER_FFT	13.1				
CUFFT_DEVICE_LTOIR	13.1				
CUFFT_ENABLE_EXPERIMENTAL_API	13.1				
CUFFT_EXEC_FAILED					HIPFFT_EXEC_FAILED

Table 32 – continued from previous page

CUDA	A	D	C	R	HIP
CUFFT_FORMAT_UNDEFINED					HIPFFT_FORMAT_UNDEFINED
CUFFT_FORWARD					HIPFFT_FORWARD
CUFFT_INCOMPLETE_PARAMETER_LIST				13.0	HIPFFT_INCOMPLETE_PARAMETER_LIST
CUFFT_INTERNAL_ERROR					HIPFFT_INTERNAL_ERROR
CUFFT_INVALID_DEVICE					HIPFFT_INVALID_DEVICE
CUFFT_INVALID_PLAN					HIPFFT_INVALID_PLAN
CUFFT_INVALID_SIZE					HIPFFT_INVALID_SIZE
CUFFT_INVALID_TYPE					HIPFFT_INVALID_TYPE
CUFFT_INVALID_VALUE					HIPFFT_INVALID_VALUE
CUFFT_INVERSE					HIPFFT_BACKWARD
CUFFT_LICENSE_ERROR				13.0	
CUFFT_MISSING_DEPENDENCY	13.0				
CUFFT_NOT_IMPLEMENTED					HIPFFT_NOT_IMPLEMENTED
CUFFT_NOT_SUPPORTED	8.0				HIPFFT_NOT_SUPPORTED
CUFFT_NO_WORKSPACE					HIPFFT_NO_WORKSPACE
CUFFT_NVJITLINK_FAILURE	13.0				
CUFFT_NVRTC_FAILURE	13.0				
CUFFT_NVSHMEM_FAILURE	13.0				
CUFFT_PARSE_ERROR				13.0	HIPFFT_PARSE_ERROR
CUFFT_QUERY_1D_FACTORS					
CUFFT_QUERY_UNDEFINED					
CUFFT_R2C					HIPFFT_R2C
CUFFT_SETUP_FAILED					HIPFFT_SETUP_FAILED
CUFFT_SUCCESS					HIPFFT_SUCCESS
CUFFT_UNALIGNED_DATA					HIPFFT_UNALIGNED_DATA
CUFFT_WORKAREA_MINIMAL	9.2				
CUFFT_WORKAREA_PERFORMANCE					
CUFFT_WORKAREA_USER	9.2				
CUFFT_XT_FORMAT_1D_INPUT_SHUFFLED					HIPFFT_XT_FORMAT_1D_INPUT_SHUFFLE
CUFFT_XT_FORMAT_DISTRIBUTED_INPUT	11.8				
CUFFT_XT_FORMAT_DISTRIBUTED_OUTPUT	11.8				
CUFFT_XT_FORMAT_INPLACE					HIPFFT_XT_FORMAT_INPLACE
CUFFT_XT_FORMAT_INPLACE_SHUFFLED					HIPFFT_XT_FORMAT_INPLACE_SHUFFLED
CUFFT_XT_FORMAT_INPUT					HIPFFT_XT_FORMAT_INPUT
CUFFT_XT_FORMAT_OUTPUT					HIPFFT_XT_FORMAT_OUTPUT
CUFFT_Z2D					HIPFFT_Z2D
CUFFT_Z2Z					HIPFFT_Z2Z
FFTW_BACKWARD					FFTW_BACKWARD
FFTW_DESTROY_INPUT					FFTW_DESTROY_INPUT
FFTW_ESTIMATE					FFTW_ESTIMATE
FFTW_EXHAUSTIVE					FFTW_EXHAUSTIVE
FFTW_FORWARD					FFTW_FORWARD
FFTW_INVERSE					
FFTW_MEASURE					FFTW_MEASURE
FFTW_PATIENT					FFTW_PATIENT
FFTW_PRESERVE_INPUT					FFTW_PRESERVE_INPUT
FFTW_UNALIGNED					FFTW_UNALIGNED
FFTW_WISDOM_ONLY					FFTW_WISDOM_ONLY
MAX_CUFFT_ERROR					
NVFFT_PLAN_PROPERTY_INT64_MAX_NUM_HOST_THREADS	12.5				

Table 32 – continued from previous page

CUDA	A	D	C	R	HIP
NVFFT_PLAN_PROPERTY_INT64_PATIENT_JIT	12.4				
cudaLibXtDesc					hipLibXtDesc
cudaLibXtDesc_t					hipLibXtDesc_t
cufftBox3d	11.8				
cufftBox3d_t	11.8				
cufftCompatibility					
cufftCompatibility_t					
cufftComplex					hipfftComplex
cufftDescriptionDirection	13.1				
cufftDescriptionDirection_t	13.1				
cufftDescriptionHandle	13.1				
cufftDescriptionPrecision	13.1				
cufftDescriptionPrecision_t	13.1				
cufftDescriptionTrait	13.1				
cufftDescriptionTrait_t	13.1				
cufftDescriptionType	13.1				
cufftDescriptionType_t	13.1				
cufftDeviceCodeContainer	13.1				
cufftDeviceCodeContainer_t	13.1				
cufftDeviceFunctionHandle	13.1				
cufftDeviceFunctionTrait	13.1				
cufftDeviceFunctionTrait_t	13.1				
cufftDeviceHandle	13.1				
cufftDoubleComplex					hipfftDoubleComplex
cufftDoubleReal					hipfftDoubleReal
cufftHandle					hipfftHandle
cufftProperty	12.4				
cufftProperty_t	12.4				
cufftReal					hipfftReal
cufftResult					hipfftResult
cufftResult_t					hipfftResult_t
cufftType					hipfftType
cufftType_t					hipfftType_t
cufftXt1dFactors					
cufftXt1dFactors_t					
cufftXtCallbackType					hipfftXtCallbackType
cufftXtCallbackType_t					hipfftXtCallbackType_t
cufftXtCopyType					hipfftXtCopyType
cufftXtCopyType_t					hipfftXtCopyType_t
cufftXtQueryType					
cufftXtQueryType_t					
cufftXtSubFormat					hipfftXtSubFormat
cufftXtSubFormat_t					hipfftXtSubFormat_t
cufftXtWorkAreaPolicy	9.2				
cufftXtWorkAreaPolicy_t	9.2				
fftw_complex					fftw_complex
fftw_iodim					fftw_iodim
fftw_iodim64					fftw_iodim64
fftw_plan					fftw_plan
fftwf_complex					fftwf_complex

Table 32 – continued from previous page

CUDA	A	D	C	R	HIP
fftwf_iodim					fftwf_iodim
fftwf_iodim64					fftwf_iodim64
fftwf_plan					fftwf_plan

10.10.2 2. CUFFT API functions

CUDA	A	D	C	R	HIP	A	D	C
cufftCallbackLoadC					hipfftCallbackLoadC	4.3.0		
cufftCallbackLoadD					hipfftCallbackLoadD	4.3.0		
cufftCallbackLoadR					hipfftCallbackLoadR	4.3.0		
cufftCallbackLoadZ					hipfftCallbackLoadZ	4.3.0		
cufftCallbackStoreC					hipfftCallbackStoreC	4.3.0		
cufftCallbackStoreD					hipfftCallbackStoreD	4.3.0		
cufftCallbackStoreR					hipfftCallbackStoreR	4.3.0		
cufftCallbackStoreZ					hipfftCallbackStoreZ	4.3.0		
cufftCreate					hipfftCreate	1.7.0		
cufftDescriptionCreate	13.1							
cufftDescriptionGetTraitInt64	13.1							
cufftDescriptionSetTraitInt64	13.1							
cufftDestroy					hipfftDestroy	1.7.0		
cufftDeviceCreate	13.1							
cufftDeviceDestroy	13.1							
cufftDeviceGetDatabaseStr	13.1							
cufftDeviceGetDatabaseStrSize	13.1							
cufftDeviceGetDeviceFunctionTraitInt64	13.1							
cufftDeviceGetDeviceFunctions	13.1							
cufftDeviceGetLTOIRSizes	13.1							
cufftDeviceGetLTOIRs	13.1							
cufftDeviceGetNumDeviceFunctions	13.1							
cufftDeviceGetNumLTOIRs	13.1							
cufftDeviceGetSemanticVersion	13.2							
cufftDeviceGetVersion	13.1							
cufftDeviceIsSupported	13.1							
cufftEstimate1d					hipfftEstimate1d	1.7.0		
cufftEstimate2d					hipfftEstimate2d	1.7.0		
cufftEstimate3d					hipfftEstimate3d	1.7.0		
cufftEstimateMany					hipfftEstimateMany	1.7.0		
cufftExecC2C					hipfftExecC2C	1.7.0		
cufftExecC2R					hipfftExecC2R	1.7.0		
cufftExecD2Z					hipfftExecD2Z	1.7.0		
cufftExecR2C					hipfftExecR2C	1.7.0		
cufftExecZ2D					hipfftExecZ2D	1.7.0		
cufftExecZ2Z					hipfftExecZ2Z	1.7.0		
cufftGetPlanPropertyInt64	12.4							
cufftGetProperty	8.0				hipfftGetProperty	2.6.0		
cufftGetSize					hipfftGetSize	1.7.0		
cufftGetSize1d					hipfftGetSize1d	1.7.0		
cufftGetSize2d					hipfftGetSize2d	1.7.0		

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Table 33 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C
cufftGetSize3d					hipfftGetSize3d	1.7.0		
cufftGetSizeMany					hipfftGetSizeMany	1.7.0		
cufftGetSizeMany64	7.5				hipfftGetSizeMany64	1.7.0		
cufftGetVersion					hipfftGetVersion	1.7.0		
cufftMakePlan1d					hipfftMakePlan1d	1.7.0		
cufftMakePlan2d					hipfftMakePlan2d	1.7.0		
cufftMakePlan3d					hipfftMakePlan3d	1.7.0		
cufftMakePlanMany					hipfftMakePlanMany	1.7.0		
cufftMakePlanMany64	7.5				hipfftMakePlanMany64	1.7.0		
cufftPlan1d					hipfftPlan1d	1.7.0		
cufftPlan2d					hipfftPlan2d	1.7.0		
cufftPlan3d					hipfftPlan3d	1.7.0		
cufftPlanMany					hipfftPlanMany	1.7.0		
cufftResetPlanProperty	12.4							
cufftSetAutoAllocation					hipfftSetAutoAllocation	1.7.0		
cufftSetPlanPropertyInt64	12.4							
cufftSetStream					hipfftSetStream	1.7.0		
cufftSetWorkArea					hipfftSetWorkArea	1.7.0		
cufftXtClearCallback					hipfftXtClearCallback	4.3.0		
cufftXtExec	8.0				hipfftXtExec	5.6.0		
cufftXtExecDescriptor	8.0				hipfftXtExecDescriptor	6.0.0		
cufftXtExecDescriptorC2C					hipfftXtExecDescriptorC2C	6.0.0		
cufftXtExecDescriptorC2R					hipfftXtExecDescriptorC2R	6.0.0		
cufftXtExecDescriptorD2Z					hipfftXtExecDescriptorD2Z	6.0.0		
cufftXtExecDescriptorR2C					hipfftXtExecDescriptorR2C	6.0.0		
cufftXtExecDescriptorZ2D					hipfftXtExecDescriptorZ2D	6.0.0		
cufftXtExecDescriptorZ2Z					hipfftXtExecDescriptorZ2Z	6.0.0		
cufftXtFree					hipfftXtFree	6.0.0		
cufftXtGetSizeMany	8.0				hipfftXtGetSizeMany	5.6.0		
cufftXtMakePlanMany	8.0				hipfftXtMakePlanMany	5.6.0		
cufftXtMalloc					hipfftXtMalloc	6.0.0		
cufftXtMemcpy					hipfftXtMemcpy	6.0.0		
cufftXtQueryPlan								
cufftXtSetCallback					hipfftXtSetCallback	4.3.0		
cufftXtSetCallbackSharedSize					hipfftXtSetCallbackSharedSize	4.3.0		
cufftXtSetDistribution	11.8							
cufftXtSetGPUs					hipfftXtSetGPUs	6.0.0		
cufftXtSetWorkArea								
cufftXtSetWorkAreaPolicy	9.2							
fftw_cleanup					fftw_cleanup	7.1.0		
fftw_cost					fftw_cost	7.1.0		
fftw_destroy_plan					fftw_destroy_plan	7.1.0		
fftw_execute					fftw_execute	7.1.0		
fftw_execute_dft					fftw_execute_dft	7.2.0		
fftw_execute_dft_c2r					fftw_execute_dft_c2r	7.2.0		
fftw_execute_dft_r2c					fftw_execute_dft_r2c	7.2.0		
fftw_export_wisdom_to_file								
fftw_flops					fftw_flops	7.1.0		
fftw_import_wisdom_from_file								
fftw_plan_dft					fftw_plan_dft	7.1.0		

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Table 33 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C
fftw_plan_dft_1d					fftw_plan_dft_1d	7.1.0		
fftw_plan_dft_2d					fftw_plan_dft_2d	7.1.0		
fftw_plan_dft_3d					fftw_plan_dft_3d	7.1.0		
fftw_plan_dft_c2r					fftw_plan_dft_c2r	7.1.0		
fftw_plan_dft_c2r_1d					fftw_plan_dft_c2r_1d			
fftw_plan_dft_c2r_2d					fftw_plan_dft_c2r_2d	7.1.0		
fftw_plan_dft_c2r_3d					fftw_plan_dft_c2r_3d	7.1.0		
fftw_plan_dft_r2c					fftw_plan_dft_r2c	7.1.0		
fftw_plan_dft_r2c_1d					fftw_plan_dft_r2c_1d	7.1.0		
fftw_plan_dft_r2c_2d					fftw_plan_dft_r2c_2d	7.1.0		
fftw_plan_dft_r2c_3d					fftw_plan_dft_r2c_3d	7.1.0		
fftw_plan_guru64_dft	10.0				fftw_plan_guru64_dft	7.11.0		
fftw_plan_guru64_dft_c2r	10.0				fftw_plan_guru64_dft_c2r	7.11.0		
fftw_plan_guru64_dft_r2c	10.0				fftw_plan_guru64_dft_r2c	7.11.0		
fftw_plan_guru_dft					fftw_plan_guru_dft	7.11.0		
fftw_plan_guru_dft_c2r					fftw_plan_guru_dft_c2r	7.11.0		
fftw_plan_guru_dft_r2c					fftw_plan_guru_dft_r2c	7.11.0		
fftw_plan_many_dft					fftw_plan_many_dft	7.10.0		
fftw_plan_many_dft_c2r					fftw_plan_many_dft_c2r	7.10.0		
fftw_plan_many_dft_r2c					fftw_plan_many_dft_r2c	7.10.0		
fftw_print_plan					fftw_print_plan	7.1.0		
fftw_set_timelimit					fftw_set_timelimit	7.1.0		
fftwf_cleanup					fftwf_cleanup	7.1.0		
fftwf_cost					fftwf_cost	7.1.0		
fftwf_destroy_plan					fftwf_destroy_plan	7.1.0		
fftwf_execute					fftwf_execute	7.1.0		
fftwf_execute_dft					fftwf_execute_dft	7.2.0		
fftwf_execute_dft_c2r					fftwf_execute_dft_c2r	7.2.0		
fftwf_execute_dft_r2c					fftwf_execute_dft_r2c	7.2.0		
fftwf_export_wisdom_to_file								
fftwf_flops					fftwf_flops	7.1.0		
fftwf_import_wisdom_from_file								
fftwf_plan_dft					fftwf_plan_dft	7.1.0		
fftwf_plan_dft_1d					fftwf_plan_dft_1d	7.1.0		
fftwf_plan_dft_2d					fftwf_plan_dft_2d	7.1.0		
fftwf_plan_dft_3d					fftwf_plan_dft_3d	7.1.0		
fftwf_plan_dft_c2r					fftwf_plan_dft_c2r	7.1.0		
fftwf_plan_dft_c2r_1d					fftwf_plan_dft_c2r_1d	7.1.0		
fftwf_plan_dft_c2r_2d					fftwf_plan_dft_c2r_2d	7.1.0		
fftwf_plan_dft_c2r_3d					fftwf_plan_dft_c2r_3d	7.1.0		
fftwf_plan_dft_r2c					fftwf_plan_dft_r2c	7.1.0		
fftwf_plan_dft_r2c_1d					fftwf_plan_dft_r2c_1d	7.1.0		
fftwf_plan_dft_r2c_2d					fftwf_plan_dft_r2c_2d	7.1.0		
fftwf_plan_dft_r2c_3d					fftwf_plan_dft_r2c_3d	7.1.0		
fftwf_plan_guru64_dft	10.0				fftwf_plan_guru64_dft	7.11.0		
fftwf_plan_guru64_dft_c2r	10.0				fftwf_plan_guru64_dft_c2r	7.11.0		
fftwf_plan_guru64_dft_r2c	10.0				fftwf_plan_guru64_dft_r2c	7.11.0		
fftwf_plan_guru_dft					fftwf_plan_guru_dft	7.11.0		
fftwf_plan_guru_dft_c2r					fftwf_plan_guru_dft_c2r	7.11.0		
fftwf_plan_guru_dft_r2c					fftwf_plan_guru_dft_r2c	7.11.0		

continues on

Table 33 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C
fftwf_plan_many_dft					fftwf_plan_many_dft	7.10.0		
fftwf_plan_many_dft_c2r					fftwf_plan_many_dft_c2r	7.10.0		
fftwf_plan_many_dft_r2c					fftwf_plan_many_dft_r2c	7.10.0		
fftwf_print_plan					fftwf_print_plan	7.1.0		
fftwf_set_timelimit					fftwf_set_timelimit	7.1.0		

10.11 CUTENSOR API supported by HIP

Note: In the tables that follow the columns marked A, D, C, R, U, and E mean the following: **A** - Added; **D** - Deprecated; **C** - Changed; **R** - Removed; **U** - Unsupported for CUDA version(s); **E** - Experimental

10.11.1 1. CUTENSOR Data types

CUDA	A	D	C	R	HIP
CUTENSORMG_ALGO_DEFAULT	1.4.0.0				
CUTENSORMG_CONTRACTION_FIND_ATTRIBUTE_MAX	1.5.0.0				
CUTENSOR_ALGO_DEFAULT	1.0.1.0				HIPTENSOR_ALGO_D
CUTENSOR_ALGO_DEFAULT_PATIENT	1.4.0.0				HIPTENSOR_ALGO_D
CUTENSOR_ALGO_GETT	1.0.1.0				
CUTENSOR_ALGO_TGETT	1.0.1.0				
CUTENSOR_ALGO_TTGT	1.0.1.0				
CUTENSOR_AUTOTUNE_INCREMENTAL	1.2.0.0			2.0.0.0	HIPTENSOR_AUTOTU
CUTENSOR_AUTOTUNE_MODE_INCREMENTAL	2.0.0.0				HIPTENSOR_AUTOTU
CUTENSOR_AUTOTUNE_MODE_NONE	2.0.0.0				HIPTENSOR_AUTOTU
CUTENSOR_AUTOTUNE_NONE	1.2.0.0			2.0.0.0	HIPTENSOR_AUTOTU
CUTENSOR_CACHE_MODE_NONE	1.2.0.0				HIPTENSOR_CACHE_
CUTENSOR_CACHE_MODE_PEDANTIC	1.2.0.0				HIPTENSOR_CACHE_
CUTENSOR_COMPUTE_16BF	1.0.1.0			2.0.0.0	HIPTENSOR_COMPUT
CUTENSOR_COMPUTE_16F	1.0.1.0			2.0.0.0	HIPTENSOR_COMPUT
CUTENSOR_COMPUTE_32F	1.0.1.0			2.0.0.0	HIPTENSOR_COMPUT
CUTENSOR_COMPUTE_32I	1.0.1.0			2.0.0.0	HIPTENSOR_COMPUT
CUTENSOR_COMPUTE_32U	1.0.1.0			2.0.0.0	HIPTENSOR_COMPUT
CUTENSOR_COMPUTE_3XTF32	2.0.0.0				
CUTENSOR_COMPUTE_64F	1.0.1.0			2.0.0.0	HIPTENSOR_COMPUT
CUTENSOR_COMPUTE_8I	1.0.1.0			2.0.0.0	HIPTENSOR_COMPUT
CUTENSOR_COMPUTE_8U	1.0.1.0			2.0.0.0	HIPTENSOR_COMPUT
CUTENSOR_COMPUTE_DESC_16BF	2.0.0.0				HIPTENSOR_COMPUT
CUTENSOR_COMPUTE_DESC_16F	2.0.0.0				HIPTENSOR_COMPUT
CUTENSOR_COMPUTE_DESC_32F	2.0.0.0				HIPTENSOR_COMPUT
CUTENSOR_COMPUTE_DESC_3XTF32	2.0.0.0				
CUTENSOR_COMPUTE_DESC_4X16F	2.5.0.0				
CUTENSOR_COMPUTE_DESC_64F	2.0.0.0				HIPTENSOR_COMPUT
CUTENSOR_COMPUTE_DESC_8XINT8	2.4.0.0				
CUTENSOR_COMPUTE_DESC_9X16BF	2.3.0.0				
CUTENSOR_COMPUTE_DESC_TF32	2.0.0.0				
CUTENSOR_COMPUTE_TF32	1.0.1.0			2.0.0.0	

Table 34 – continued from previous page

CUDA	A	D	C	R	HIP
CUTENSOR_C_16BF	2.0.0.0				HIPTENSOR_C_16BF
CUTENSOR_C_16F	2.0.0.0				HIPTENSOR_C_16F
CUTENSOR_C_16I	2.0.0.0				HIPTENSOR_C_16I
CUTENSOR_C_16U	2.0.0.0				HIPTENSOR_C_16U
CUTENSOR_C_32F	2.0.0.0				HIPTENSOR_C_32F
CUTENSOR_C_32I	2.0.0.0				HIPTENSOR_C_32I
CUTENSOR_C_32U	2.0.0.0				HIPTENSOR_C_32U
CUTENSOR_C_4I	2.0.0.0				HIPTENSOR_C_4I
CUTENSOR_C_4U	2.0.0.0				HIPTENSOR_C_4U
CUTENSOR_C_64F	2.0.0.0				HIPTENSOR_C_64F
CUTENSOR_C_64I	2.0.0.0				HIPTENSOR_C_64I
CUTENSOR_C_64U	2.0.0.0				HIPTENSOR_C_64U
CUTENSOR_C_8I	2.0.0.0				HIPTENSOR_C_8I
CUTENSOR_C_8U	2.0.0.0				HIPTENSOR_C_8U
CUTENSOR_C_MIN_16F	1.0.1.0	1.2.0.0		2.0.0.0	
CUTENSOR_C_MIN_32F	1.0.1.0	1.2.0.0		2.0.0.0	
CUTENSOR_C_MIN_64F	1.0.1.0	1.2.0.0		2.0.0.0	
CUTENSOR_C_MIN_TF32	1.0.1.0	1.2.0.0		2.0.0.0	
CUTENSOR_JIT_MODE_DEFAULT	2.0.0.0				HIPTENSOR_JIT_MO
CUTENSOR_JIT_MODE_NONE	2.0.0.0				HIPTENSOR_JIT_MO
CUTENSOR_MG_DEVICE_HOST	1.4.0.0				
CUTENSOR_MG_DEVICE_HOST_PINNED	1.4.0.0				
CUTENSOR_OPERATION_DESCRIPTOR_BLOCKSPARSE_REPRODUCIBLE	2.7.0.0				
CUTENSOR_OPERATION_DESCRIPTOR_FLOPS	2.0.0.0				HIPTENSOR_OPERAT
CUTENSOR_OPERATION_DESCRIPTOR_MOVED_BYTES	2.0.0.0				HIPTENSOR_OPERAT
CUTENSOR_OPERATION_DESCRIPTOR_PADDING_LEFT	2.0.0.0				HIPTENSOR_OPERAT
CUTENSOR_OPERATION_DESCRIPTOR_PADDING_RIGHT	2.0.0.0				HIPTENSOR_OPERAT
CUTENSOR_OPERATION_DESCRIPTOR_PADDING_VALUE	2.0.0.0				HIPTENSOR_OPERAT
CUTENSOR_OPERATION_DESCRIPTOR_SCALAR_TYPE	2.0.0.0				HIPTENSOR_OPERAT
CUTENSOR_OPERATION_DESCRIPTOR_TAG	2.0.0.0				HIPTENSOR_OPERAT
CUTENSOR_OP_ABS	1.0.1.0				HIPTENSOR_OP_ABS
CUTENSOR_OP_ACOS	1.0.1.0				HIPTENSOR_OP_ACO
CUTENSOR_OP_ACOSH	1.0.1.0				HIPTENSOR_OP_ACO
CUTENSOR_OP_ADD	1.0.1.0				HIPTENSOR_OP_ADD
CUTENSOR_OP_ASIN	1.0.1.0				HIPTENSOR_OP_ASI
CUTENSOR_OP_ASINH	1.0.1.0				HIPTENSOR_OP_ASI
CUTENSOR_OP_ATAN	1.0.1.0				HIPTENSOR_OP_ATA
CUTENSOR_OP_ATANH	1.0.1.0				HIPTENSOR_OP_ATA
CUTENSOR_OP_CEIL	1.0.1.0				HIPTENSOR_OP_CEI
CUTENSOR_OP_CONJ	1.0.1.0				HIPTENSOR_OP_CON
CUTENSOR_OP_COS	1.0.1.0				HIPTENSOR_OP_COS
CUTENSOR_OP_COSH	1.0.1.0				HIPTENSOR_OP_COS
CUTENSOR_OP_EXP	1.0.1.0				HIPTENSOR_OP_EXP
CUTENSOR_OP_FLOOR	1.0.1.0				HIPTENSOR_OP_FLO
CUTENSOR_OP_IDENTITY	1.0.1.0				HIPTENSOR_OP_IDE
CUTENSOR_OP_LOG	1.0.1.0				HIPTENSOR_OP_LOG
CUTENSOR_OP_MAX	1.0.1.0				HIPTENSOR_OP_MAX
CUTENSOR_OP_MIN	1.0.1.0				HIPTENSOR_OP_MIN
CUTENSOR_OP_MISH	2.0.0.0				
CUTENSOR_OP_MUL	1.0.1.0				HIPTENSOR_OP_MUL

Table 34 – continued from previous page

CUDA	A	D	C	R	HIP
CUTENSOR_OP_NEG	1.0.1.0				HIPTENSOR_OP_NEG
CUTENSOR_OP_RCP	1.0.1.0				HIPTENSOR_OP_RCP
CUTENSOR_OP_RELU	1.0.1.0				HIPTENSOR_OP_REL
CUTENSOR_OP_SIGMOID	1.0.1.0				HIPTENSOR_OP_SIG
CUTENSOR_OP_SIN	1.0.1.0				HIPTENSOR_OP_SIN
CUTENSOR_OP_SINH	1.0.1.0				HIPTENSOR_OP_SIN
CUTENSOR_OP_SOFT_PLUS	2.0.0.0				
CUTENSOR_OP_SOFT_SIGN	2.0.0.0				
CUTENSOR_OP_SQRT	1.0.1.0				HIPTENSOR_OP_SQR
CUTENSOR_OP_SWISH	2.0.0.0				
CUTENSOR_OP_TAN	1.0.1.0				HIPTENSOR_OP_TAN
CUTENSOR_OP_TANH	1.0.1.0				HIPTENSOR_OP_TAN
CUTENSOR_OP_UNKNOWN	1.0.1.0				HIPTENSOR_OP_UNK
CUTENSOR_PLAN_PREFERENCE_ALGO	2.0.0.0				HIPTENSOR_PLAN_P
CUTENSOR_PLAN_PREFERENCE_AUTOTUNE_MODE	2.0.0.0				HIPTENSOR_PLAN_P
CUTENSOR_PLAN_PREFERENCE_CACHE_MODE	2.0.0.0				HIPTENSOR_PLAN_P
CUTENSOR_PLAN_PREFERENCE_GPU_ARCH	2.6.0.0				
CUTENSOR_PLAN_PREFERENCE_INCREMENTAL_COUNT	2.0.0.0				HIPTENSOR_PLAN_P
CUTENSOR_PLAN_PREFERENCE_JIT	2.0.0.0				HIPTENSOR_PLAN_P
CUTENSOR_PLAN_PREFERENCE_KERNEL_RANK	2.0.0.0				HIPTENSOR_PLAN_P
CUTENSOR_PLAN_REQUIRED_WORKSPACE	2.0.0.0				HIPTENSOR_PLAN_R
CUTENSOR_R_16BF	2.0.0.0				HIPTENSOR_R_16BF
CUTENSOR_R_16F	2.0.0.0				HIPTENSOR_R_16F
CUTENSOR_R_16I	2.0.0.0				HIPTENSOR_R_16I
CUTENSOR_R_16U	2.0.0.0				HIPTENSOR_R_16U
CUTENSOR_R_32F	2.0.0.0				HIPTENSOR_R_32F
CUTENSOR_R_32I	2.0.0.0				HIPTENSOR_R_32I
CUTENSOR_R_32U	2.0.0.0				HIPTENSOR_R_32U
CUTENSOR_R_4I	2.0.0.0				HIPTENSOR_R_4I
CUTENSOR_R_4U	2.0.0.0				HIPTENSOR_R_4U
CUTENSOR_R_64F	2.0.0.0				HIPTENSOR_R_64F
CUTENSOR_R_64I	2.0.0.0				HIPTENSOR_R_64I
CUTENSOR_R_64U	2.0.0.0				HIPTENSOR_R_64U
CUTENSOR_R_8I	2.0.0.0				HIPTENSOR_R_8I
CUTENSOR_R_8U	2.0.0.0				HIPTENSOR_R_8U
CUTENSOR_R_MIN_16BF	1.0.1.0	1.2.0.0		2.0.0.0	
CUTENSOR_R_MIN_16F	1.0.1.0	1.2.0.0		2.0.0.0	
CUTENSOR_R_MIN_32F	1.0.1.0	1.2.0.0		2.0.0.0	
CUTENSOR_R_MIN_32I	1.0.1.0	1.2.0.0		2.0.0.0	
CUTENSOR_R_MIN_32U	1.0.1.0	1.2.0.0		2.0.0.0	
CUTENSOR_R_MIN_64F	1.0.1.0	1.2.0.0		2.0.0.0	
CUTENSOR_R_MIN_8I	1.0.1.0	1.2.0.0		2.0.0.0	
CUTENSOR_R_MIN_8U	1.0.1.0	1.2.0.0		2.0.0.0	
CUTENSOR_R_MIN_TF32	1.0.1.0	1.2.0.0		2.0.0.0	
CUTENSOR_STATUS_ALLOC_FAILED	1.0.1.0				HIPTENSOR_STATUS
CUTENSOR_STATUS_ARCH_MISMATCH	1.0.1.0				HIPTENSOR_STATUS
CUTENSOR_STATUS_CUBLAS_ERROR	1.0.1.0				
CUTENSOR_STATUS_CUDA_ERROR	1.0.1.0				
CUTENSOR_STATUS_EXECUTION_FAILED	1.0.1.0				HIPTENSOR_STATUS
CUTENSOR_STATUS_INSUFFICIENT_DRIVER	1.0.1.0				HIPTENSOR_STATUS

Table 34 – continued from previous page

CUDA	A	D	C	R	HIP
CUTENSOR_STATUS_INSUFFICIENT_WORKSPACE	1.0.1.0				HIPTENSOR_STATUS
CUTENSOR_STATUS_INTERNAL_ERROR	1.0.1.0				HIPTENSOR_STATUS
CUTENSOR_STATUS_INVALID_VALUE	1.0.1.0				HIPTENSOR_STATUS
CUTENSOR_STATUS_IO_ERROR	1.2.0.0				HIPTENSOR_STATUS
CUTENSOR_STATUS_LICENSE_ERROR	1.0.1.0				
CUTENSOR_STATUS_MAPPING_ERROR	1.0.1.0				
CUTENSOR_STATUS_NOT_INITIALIZED	1.0.1.0				HIPTENSOR_STATUS
CUTENSOR_STATUS_NOT_SUPPORTED	1.0.1.0				HIPTENSOR_STATUS
CUTENSOR_STATUS_SUCCESS	1.0.1.0				HIPTENSOR_STATUS
CUTENSOR_WORKSPACE_DEFAULT	2.0.0.0				HIPTENSOR_WORKSP
CUTENSOR_WORKSPACE_MAX	1.0.1.0				HIPTENSOR_WORKSP
CUTENSOR_WORKSPACE_MIN	1.0.1.0				HIPTENSOR_WORKSP
CUTENSOR_WORKSPACE_RECOMMENDED	1.0.1.0			2.0.0.0	
cutensorAlgo_t	1.0.1.0				hiptensorAlgo_t
cutensorAutotuneMode_t	1.2.0.0		2.0.0.0		hiptensorAutotun
cutensorBlockSparseTensorDescriptor	2.3.0.0				
cutensorBlockSparseTensorDescriptor_t	2.3.0.0				
cutensorCacheMode_t	1.2.0.0				hiptensorCacheMo
cutensorComputeDescriptor	2.0.0.0				
cutensorComputeDescriptor_t	2.0.0.0				hiptensorCompute
cutensorComputeType_t					hiptensorCompute
cutensorContractionPlan_t	1.0.1.0			2.0.0.0	hiptensorContrac
cutensorDataType_t	2.0.0.0				hiptensorDataTyp
cutensorHandle	2.0.0.0				hiptensorHandle
cutensorHandle_t	1.0.1.0				hiptensorHandle_
cutensorJitMode_t	2.0.0.0				hiptensorJitMode
cutensorLoggerCallback_t	1.3.2.0				hiptensorLoggerC
cutensorMgAlgo_t	1.4.0.0				
cutensorMgContractionDescriptor_s	1.4.0.0				
cutensorMgContractionDescriptor_t	1.4.0.0				
cutensorMgContractionFindAttribute_t	1.5.0.0				
cutensorMgContractionFind_s	1.4.0.0				
cutensorMgContractionFind_t	1.4.0.0				
cutensorMgContractionPlan_s	1.4.0.0				
cutensorMgContractionPlan_t	1.4.0.0				
cutensorMgCopyDescriptor_s	1.4.0.0				
cutensorMgCopyDescriptor_t	1.4.0.0				
cutensorMgCopyPlan_s	1.4.0.0				
cutensorMgCopyPlan_t	1.4.0.0				
cutensorMgHandle_s	1.4.0.0				
cutensorMgHandle_t	1.4.0.0				
cutensorMgHostDevice_t	1.4.0.0				
cutensorMgTensorDescriptor_s	1.4.0.0				
cutensorMgTensorDescriptor_t	1.4.0.0				
cutensorOperationDescriptor	2.0.0.0				hiptensorOperati
cutensorOperationDescriptorAttribute_t	2.0.0.0				hiptensorOperati
cutensorOperationDescriptor_t	2.0.0.0				hiptensorOperati
cutensorOperator_t	1.0.1.0				hiptensorOperato
cutensorPlan	2.0.0.0				hiptensorPlan
cutensorPlanAttribute_t	2.0.0.0				hiptensorPlanAtt

Table 34 – continued from previous page

CUDA	A	D	C	R	HIP
cutensorPlanPreference	2.0.0.0				hiptensorPlanPre
cutensorPlanPreferenceAttribute_t	2.0.0.0				hiptensorPlanPre
cutensorPlanPreference_t	2.0.0.0				hiptensorPlanPre
cutensorPlan_t	2.0.0.0				hiptensorPlan_t
cutensorStatus_t	1.0.1.0				hiptensorStatus_
cutensorTensorDescriptor	2.0.0.0				hiptensorTensorD
cutensorTensorDescriptor_t	1.0.1.0				hiptensorTensorD
cutensorWorksizePreference_t	1.0.1.0				hiptensorWorksiz

10.11.2 2. CUTENSOR Function Reference

CUDA	A	D	C	R	HIP
cutensorBlockSparseContract	2.3.0.0				
cutensorContract	2.0.0.0				hiptensorContract
cutensorContractTrinary	2.2.0.0				
cutensorContraction	1.0.1.0			2.0.0.0	hiptensorContraction
cutensorCreate	1.7.0.0		2.0.0.0		hiptensorCreate
cutensorCreateBlockSparseContraction	2.3.0.0				
cutensorCreateBlockSparseTensorDescriptor	2.3.0.0				
cutensorCreateContraction	2.0.0.0				hiptensorCreateContraction
cutensorCreateContractionTrinary	2.2.0.0				
cutensorCreateElementwiseBinary	2.0.0.0				hiptensorCreateElementwiseBinary
cutensorCreateElementwiseTrinary	2.0.0.0				hiptensorCreateElementwiseTrinar
cutensorCreatePermutation	2.0.0.0				hiptensorCreatePermutation
cutensorCreatePlan	2.0.0.0				hiptensorCreatePlan
cutensorCreatePlanPreference	2.0.0.0				hiptensorCreatePlanPreference
cutensorCreateReduction	2.0.0.0				hiptensorCreateReduction
cutensorCreateTensorDescriptor	2.0.0.0				hiptensorCreateTensorDescriptor
cutensorDestroy	1.7.0.0		2.0.0.0		hiptensorDestroy
cutensorDestroyBlockSparseTensorDescriptor	2.3.0.0				
cutensorDestroyOperationDescriptor	2.0.0.0				hiptensorDestroyOperationDescrip
cutensorDestroyPlan	2.0.0.0				hiptensorDestroyPlan
cutensorDestroyPlanPreference	2.0.0.0				hiptensorDestroyPlanPreference
cutensorDestroyTensorDescriptor	2.0.0.0				hiptensorDestroyTensorDescriptor
cutensorElementwiseBinaryExecute	2.0.0.0				hiptensorElementwiseBinaryExecut
cutensorElementwiseTrinaryExecute	2.0.0.0				hiptensorElementwiseTrinaryExecu
cutensorEstimateWorkspaceSize	2.0.0.0				hiptensorEstimateWorkspaceSize
cutensorGetCudartVersion	1.0.1.0				hiptensorGetHiprtVersion
cutensorGetErrorString	1.0.1.0				hiptensorGetErrorString
cutensorGetVersion	1.0.1.0				hiptensorGetVersion
cutensorHandleReadPlanCacheFromFile	2.0.0.0				hiptensorHandleReadPlanCacheFrom
cutensorHandleResizePlanCache	2.0.0.0				hiptensorHandleResizePlanCache
cutensorHandleWritePlanCacheToFile	2.0.0.0				hiptensorHandleWritePlanCacheToF
cutensorInitTensorDescriptor	1.0.1.0			2.0.0.0	hiptensorInitTensorDescriptor
cutensorLoggerForceDisable	1.3.2.0				hiptensorLoggerForceDisable
cutensorLoggerOpenFile	1.3.2.0				hiptensorLoggerOpenFile
cutensorLoggerSetCallback	1.3.2.0				hiptensorLoggerSetCallback
cutensorLoggerSetFile	1.3.2.0				hiptensorLoggerSetFile

Table 35 – continued from previous page

CUDA	A	D	C	R	HIP
cutensorLoggerSetLevel	1.3.2.0				hiptensorLoggerSetLevel
cutensorLoggerSetMask	1.3.2.0				hiptensorLoggerSetMask
cutensorMgContraction	1.4.0.0				
cutensorMgContractionFindSetAttribute	1.5.0.0				
cutensorMgContractionGetWorkspace	1.4.0.0				
cutensorMgCopy	1.4.0.0				
cutensorMgCopyGetWorkspace	1.4.0.0				
cutensorMgCreate	1.4.0.0				
cutensorMgCreateContractionDescriptor	1.4.0.0				
cutensorMgCreateContractionFind	1.4.0.0				
cutensorMgCreateContractionPlan	1.4.0.0				
cutensorMgCreateCopyDescriptor	1.4.0.0				
cutensorMgCreateCopyPlan	1.4.0.0				
cutensorMgCreateTensorDescriptor	1.4.0.0				
cutensorMgDestroy	1.4.0.0				
cutensorMgDestroyContractionDescriptor	1.4.0.0				
cutensorMgDestroyContractionFind	1.4.0.0				
cutensorMgDestroyContractionPlan	1.4.0.0				
cutensorMgDestroyCopyDescriptor	1.4.0.0				
cutensorMgDestroyCopyPlan	1.4.0.0				
cutensorMgDestroyTensorDescriptor	1.4.0.0				
cutensorOperationDescriptorGetAttribute	2.0.0.0				hiptensorOperationDescriptorGetA
cutensorOperationDescriptorSetAttribute	2.0.0.0				hiptensorOperationDescriptorSetA
cutensorPermutation	1.0.1.0			2.0.0.0	hiptensorPermutation
cutensorPermute	2.0.0.0				hiptensorPermute
cutensorPlanGetAttribute	2.0.0.0				hiptensorPlanGetAttribute
cutensorPlanPreferenceGetAttribute	2.4.0.0				
cutensorPlanPreferenceSetAttribute	2.0.0.0				hiptensorPlanPreferenceSetAttrib
cutensorReadKernelCacheFromFile	2.0.0.0				hiptensorReadKernelCacheFromFile
cutensorReduce	2.0.0.0				hiptensorReduce
cutensorReduction	1.0.1.0			2.0.0.0	hiptensorReduction
cutensorWriteKernelCacheToFile	2.0.0.0				hiptensorWriteKernelCacheToFile

10.12 CUB API supported by HIP

Note: In the tables that follow the columns marked A, D, C, R, U, and E mean the following: **A** - Added; **D** - Deprecated; **C** - Changed; **R** - Removed; **U** - Unsupported for CUDA version(s); **E** - Experimental

10.12.1 1. CUB Data types

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
CUB_ALIGN											
CUB_CAT											
CUB_CAT_											
CUB_COMPILER_DEPRECATION											
CUB_COMPILER_DEPRECATION_SOFT											

continues on next page

Table 36 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
CUB_COMP_DEPR_IMPL											
CUB_COMP_DEPR_IMPL0											
CUB_COMP_DEPR_IMPL1											
CUB_CPLUSPLUS											
CUB_CPP_DIALECT											
CUB_DEFINE_DETECT_NESTED_TYPE											
CUB_DEFINE_VECTOR_TYPE											
CUB_DEPRECATED											
CUB_DEVICE_COMPILER											
CUB_DEVICE_COMPILER_CLANG											
CUB_DEVICE_COMPILER_GCC											
CUB_DEVICE_COMPILER_MSVC											
CUB_DEVICE_COMPILER_NVCC											
CUB_DEVICE_COMPILER_UNKNOWN											
CUB_HOST_COMPILER											
CUB_HOST_COMPILER_CLANG											
CUB_HOST_COMPILER_GCC											
CUB_HOST_COMPILER_MSVC											
CUB_HOST_COMPILER_UNKNOWN											
CUB_IGNORE_DEPRECATED_API											
CUB_IGNORE_DEPRECATED_COMPILER											
CUB_IGNORE_DEPRECATED_CPP_11											
CUB_IGNORE_DEPRECATED_CPP_DIALECT											
CUB_IGNORE_DEPRECATED_DIALECT											
CUB_INCLUDE_DEVICE_CODE											
CUB_INCLUDE_HOST_CODE											
CUB_IS_DEVICE_CODE											
CUB_IS_HOST_CODE											
CUB_LOG_SMEM_BANKS											
CUB_LOG_WARP_THREADS											
CUB_MAX					CUB_MAX	4.5.0					
CUB_MAX_DEVICES											
CUB_MIN					CUB_MIN	4.5.0					
CUB_MSVC_VERSION											
CUB_MSVC_VERSION_FULL											
CUB_NAMESPACE_BEGIN					BEGIN_HIPCUB_NAMESPACE	2.5.0					
CUB_NAMESPACE_END					END_HIPCUB_NAMESPACE	2.5.0					
CUB_PREFER_CONFLICT_OVER_PADDING											
CUB_PREVENT_MACRO_SUBSTITUTION											
CUB_PTX_ARCH					HIPCUB_ARCH	2.5.0					
CUB_PTX_LOG_SMEM_BANKS											
CUB_PTX_LOG_WARP_THREADS											
CUB_PTX_PREFER_CONFLICT_OVER_PADDING											
CUB_PTX_SMEM_BANKS											
CUB_PTX_SUBSCRIPTION_FACTOR											
CUB_PTX_WARP_THREADS					HIPCUB_WARP_THREADS	2.5.0					
CUB_QUOTIENT_CEILING											
CUB_QUOTIENT_FLOOR											
CUB_ROUND_DOWN_NEAREST											
CUB_ROUND_UP_NEAREST											

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Table 36 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E
CUB_RUNTIME_ENABLED											
CUB_RUNTIME_FUNCTION					HIPCUB_RUNTIME_FUNCTION	2.5.0					
CUB_SMEM_BANKS											
CUB_STATIC_ASSERT											
CUB_STDERR					HIPCUB_STDERR	2.5.0					
CUB_SUBSCRIPTION_FACTOR											
CUB_USE_COOPERATIVE_GROUPS											
CubDebug					HipcubDebug	2.5.0					
CubDebugExit											
CubVector											
_CUB_ASM_PTR_											
_CUB_ASM_PTR_SIZE_											
_CubLog					_HipcubLog	2.5.0					
__CUB_ALIGN_BYTES					__HIPCUB_ALIGN_BYTES	4.5.0					
__CUB_LP64__											

10.13 cuFile API supported by HIP

Note: In the tables that follow the columns marked A, D, C, R, U, and E mean the following: **A** - Added; **D** - Deprecated; **C** - Changed; **R** - Removed; **U** - Unsupported for CUDA version(s); **E** - Experimental

10.13.1 1. cuFile Types

CUDA	A	D	C	R	HIP
CUFILEStatus_enum	1.2.0				hipFileStatus
CUFILE_BATCH	1.2.0				hipFileBatch
CUFILE_C2C	1.16.0				
CUFILE_CANCELED	1.2.0				hipFileCanceled
CUFILE_COMPLETE	1.2.0				hipFileComplete
CUFILE_DMABUF	1.16.0				
CUFILE_ERRSTR	1.0.0				HIPFILE_ERRSTR
CUFILE_FAILED	1.2.0				hipFileFailed
CUFILE_GPU_UUID_LEN	1.15.0				
CUFILE_INVALID	1.2.0				hipFileInvalid
CUFILE_NVFS	1.16.0				
CUFILE_NVIDIA_PEERMEM	1.16.0				
CUFILE_P2PDMA	1.16.0				
CUFILE_PARAM_ENV_LOGFILE_PATH	1.14.0				hipFileParamEnvLogfilePath
CUFILE_PARAM_EXECUTION_MAX_IO_QUEUE_DEPTH	1.14.0				hipFileParamExecutionMaxIOQue
CUFILE_PARAM_EXECUTION_MAX_IO_THREADS	1.14.0				hipFileParamExecutionMaxIOThr
CUFILE_PARAM_EXECUTION_MAX_REQUEST_PARALLELISM	1.14.0				hipFileParamExecutionMaxReque
CUFILE_PARAM_EXECUTION_MIN_IO_THRESHOLD_SIZE_KB	1.14.0				hipFileParamExecutionMinIOThr
CUFILE_PARAM_EXECUTION_PARALLEL_IO	1.14.0				hipFileParamExecutionParallel
CUFILE_PARAM_FORCE_COMPAT_MODE	1.14.0				hipFileParamForceCompatMode
CUFILE_PARAM_FORCE_ODIRECT_MODE	1.14.0				hipFileParamForceOdirectMode
CUFILE_PARAM_FS_MISC_API_CHECK_AGGRESSIVE	1.14.0				hipFileParamFsMiscApiCheckAgg

Table 37 – continued from previous page

CUDA	A	D	C	R	HIP
CUFILE_PARAM_GPU_BOUNCE_BUFFER_SLAB_COUNT	1.17.0				
CUFILE_PARAM_GPU_BOUNCE_BUFFER_SLAB_SIZE_KB	1.17.0				
CUFILE_PARAM_LOGGING_LEVEL	1.14.0				hipFileParamLoggingLevel
CUFILE_PARAM_LOG_DIR	1.14.0				hipFileParamLogDir
CUFILE_PARAM_POLLTHRESHOLD_SIZE_KB	1.14.0				hipFileParamPollthresholdSize
CUFILE_PARAM_POSIX_POOL_SLAB_COUNT	1.15.0				
CUFILE_PARAM_POSIX_POOL_SLAB_SIZE_KB	1.15.0				
CUFILE_PARAM_PREFER_IO_URING	1.14.0				hipFileParamPreferIOUring
CUFILE_PARAM_PROFILE_NVTX	1.14.0				hipFileParamProfileNvtx
CUFILE_PARAM_PROFILE_STATS	1.14.0				hipFileParamProfileStats
CUFILE_PARAM_PROPERTIES_ALLOW_COMPAT_MODE	1.14.0				hipFileParamPropertiesAllowCo
CUFILE_PARAM_PROPERTIES_ALLOW_SYSTEM_MEMORY	1.14.0				hipFileParamPropertiesAllowSy
CUFILE_PARAM_PROPERTIES_BATCH_IO_TIMEOUT_MS	1.14.0				hipFileParamPropertiesBatchIO
CUFILE_PARAM_PROPERTIES_IO_BATCHSIZE	1.14.0				hipFileParamPropertiesIOBatch
CUFILE_PARAM_PROPERTIES_MAX_DEVICE_CACHE_SIZE_KB	1.14.0				hipFileParamPropertiesMaxDevi
CUFILE_PARAM_PROPERTIES_MAX_DEVICE_PINNED_MEM_SIZE_KB	1.14.0				hipFileParamPropertiesMaxDevi
CUFILE_PARAM_PROPERTIES_MAX_DIRECT_IO_SIZE_KB	1.14.0				hipFileParamPropertiesMaxDire
CUFILE_PARAM_PROPERTIES_PER_BUFFER_CACHE_SIZE_KB	1.14.0				hipFileParamPropertiesPerBuff
CUFILE_PARAM_PROPERTIES_USE_POLL_MODE	1.14.0				hipFileParamPropertiesUsePoll
CUFILE_PARAM_SKIP_TOPOLOGY_DETECTION	1.14.0				hipFileParamSkipTopologyDetec
CUFILE_PARAM_STREAM_MEMOPS_BYPASS	1.14.0				hipFileParamStreamMemopsBypas
CUFILE_PARAM_USE_PCIP2PDMA	1.14.0				hipFileParamUsePcip2pdma
CUFILE_PENDING	1.2.0				hipFilePending
CUFILE_READ	1.2.0				hipFileBatchRead
CUFILE_TIMEOUT	1.2.0				hipFileTimeout
CUFILE_WAITING	1.2.0				hipFileWaiting
CUFILE_WRITE	1.2.0				hipFileBatchWrite
CUFileArrayConfigParameter_t	1.15.0				
CUFileBoolConfigParameter_t	1.14.0				hipFileBoolConfigParameter_t
CUFileSizeTConfigParameter_t	1.14.0				hipFileSizeTConfigParameter_t
CUFileStringConfigParameter_t	1.14.0				hipFileStringConfigParameter_
CU_FILE_ALLOW_COMPAT_MODE	1.0.0				hipFileAllowCompatMode
CU_FILE_ASYNC_NOT_SUPPORTED	1.7.0				hipFileAsyncNotSupported
CU_FILE_BATCH_FULL	1.5.1				hipFileBatchFull
CU_FILE_BATCH_IO_SUPPORTED	1.0.0				hipFileBatchIOSupported
CU_FILE_BATCH_SUBMIT_FAILED	1.2.0				hipFileBatchSubmitFailed
CU_FILE_BEEGFS_SUPPORTED	1.1.1				hipFileBEEGFSSupported
CU_FILE_CUDA_CONTEXT_MISMATCH	1.0.0				hipFileHipContextMismatch
CU_FILE_CUDA_DRIVER_ERROR	1.0.0				hipFileHipDriverError
CU_FILE_CUDA_ERR	1.0.0				HIP_DRV_ERR
CU_FILE_CUDA_MEMORY_TYPE_INVALID	1.0.0				hipFileHipMemoryTypeInvalid
CU_FILE_CUDA_POINTER_INVALID	1.0.0				hipFileHipPointerInvalid
CU_FILE_CUDA_POINTER_RANGE_ERROR	1.0.0				hipFileHipPointerRangeError
CU_FILE_DEVICE_NOT_FOUND	1.0.0				hipFileDeviceNotFound
CU_FILE_DEVICE_NOT_SUPPORTED	1.0.0				hipFileDeviceNotSupported
CU_FILE_DIO_NOT_SET	1.0.0				hipFileDIONotSet
CU_FILE_DRIVER_ALREADY_OPEN	1.0.0				hipFileDriverAlreadyOpen
CU_FILE_DRIVER_CLOSING	1.0.0				hipFileDriverClosing
CU_FILE_DRIVER_INVALID_PROPS	1.0.0				hipFileDriverInvalidProps
CU_FILE_DRIVER_NOT_INITIALIZED	1.0.0				hipFileDriverNotInitialized

Table 37 – continued from previous page

CUDA	A	D	C	R	HIP
CU_FILE_DRIVER_UNSUPPORTED_LIMIT	1.0.0				hipFileDriverUnsupportedLimit
CU_FILE_DRIVER_VERSION_MISMATCH	1.0.0				hipFileDriverVersionMismatch
CU_FILE_DRIVER_VERSION_READ_ERROR	1.0.0				hipFileDriverVersionReadError
CU_FILE_DYN_ROUTING_SUPPORTED	1.0.0				hipFileDynRoutingSupported
CU_FILE_FALLBACK_IO_MODE	1.17.0				
CU_FILE_GETNEWFD_FAILED	1.0.0				hipFileGetNewFDFailed
CU_FILE_GPFS_SUPPORTED	1.0.0				hipFileGPFSSupported
CU_FILE_GPU_MEMORY_PINNING_FAILED	1.2.0				hipFileGPUMemoryPinningFailed
CU_FILE_HANDLE_ALREADY_REGISTERED	1.0.0				hipFileHandleAlreadyRegistere
CU_FILE_HANDLE_NOT_REGISTERED	1.0.0				hipFileHandleNotRegistered
CU_FILE_HANDLE_TYPE_OPAQUE_FD	1.0.0				hipFileHandleTypeOpaqueFD
CU_FILE_HANDLE_TYPE_OPAQUE_WIN32	1.0.0				hipFileHandleTypeOpaqueWin32
CU_FILE_HANDLE_TYPE_USERSPACE_FS	1.0.0				hipFileHandleTypeUserspaceFS
CU_FILE_INTERNAL_ERROR	1.0.0				hipFileInternalError
CU_FILE_INVALID_FILE_OPEN_FLAG	1.0.0				hipFileInvalidFileOpenFlag
CU_FILE_INVALID_FILE_TYPE	1.0.0				hipFileInvalidFileType
CU_FILE_INVALID_MAPPING_RANGE	1.0.0				hipFileInvalidMappingRange
CU_FILE_INVALID_MAPPING_SIZE	1.0.0				hipFileInvalidMappingSize
CU_FILE_INVALID_VALUE	1.0.0				hipFileInvalidValue
CU_FILE_IO_DISABLED	1.0.0				hipFileIODisabled
CU_FILE_IO_MAX_ERROR	1.1.0				hipFileIOMaxError
CU_FILE_IO_NOT_SUPPORTED	1.0.0				hipFileIONotSupported
CU_FILE_LUSTRE_SUPPORTED	1.0.0				hipFileLustreSupported
CU_FILE_MAX_TARGET_TYPES	1.16.0				
CU_FILE_MEMORY_ALREADY_REGISTERED	1.0.0				hipFileMemoryAlreadyRegistere
CU_FILE_MEMORY_NOT_REGISTERED	1.0.0				hipFileMemoryNotRegistered
CU_FILE_NFS_SUPPORTED	1.0.0				hipFileNFSSupported
CU_FILE_NVFS_DRIVER_ERROR	1.0.0				hipFileDriverError
CU_FILE_NVFS_SETUP_ERROR	1.0.0				hipFileDriverSetupError
CU_FILE_NVMEOF_SUPPORTED	1.0.0				hipFileNVMeoFSupported
CU_FILE_NVMESH_SUPPORTED	1.0.0				hipFileNVMeshSupported
CU_FILE_NVME_P2P_SUPPORTED	1.13.0				hipFileNVMeP2PSupported
CU_FILE_NVME_SUPPORTED	1.0.0				hipFileNVMeSupported
CU_FILE_P2P_FLAG_C2C	1.16.0				
CU_FILE_P2P_FLAG_DMABUF	1.16.0				
CU_FILE_P2P_FLAG_NVFS	1.16.0				
CU_FILE_P2P_FLAG_PCI_P2PDMA	1.16.0				
CU_FILE_P2P_SUPPORTED	1.16.0				
CU_FILE_PARALLEL_IO_SUPPORTED	1.8.0				hipFileParallelIOSupported
CU_FILE_PERMISSION_DENIED	1.0.0				hipFilePermissionDenied
CU_FILE_PLATFORM_NOT_SUPPORTED	1.0.0				hipFilePlatformNotSupported
CU_FILE_POSIX_IO_MODE	1.17.0				
CU_FILE_RDMA_REGISTER	1.0.0				HIPFILE_RDMA_REGISTER
CU_FILE_RDMA_RELAXED_ORDERING	1.0.0				HIPFILE_RDMA_RELAXED_ORDERING
CU_FILE_SCALEFLUX_CSD_SUPPORTED	1.0.0				hipFileScaleFluxCSDSupported
CU_FILE_SCATEFS_SUPPORTED	1.14.0				
CU_FILE_SCSI_SUPPORTED	1.0.0				hipFileSCSISupported
CU_FILE_STREAMS_SUPPORTED	1.0.0				hipFileStreamsSupported
CU_FILE_STREAM_FIXED_BUF_OFFSET	1.7.0				HIPFILE_STREAM_FIXED_BUF_OFFS
CU_FILE_STREAM_FIXED_FILE_OFFSET	1.7.0				HIPFILE_STREAM_FIXED_FILE_OFF

Table 37 – continued from previous page

CUDA	A	D	C	R	HIP
CU_FILE_STREAM_FIXED_FILE_SIZE	1.7.0				HIPFILE_STREAM_FIXED_FILE_SIZ
CU_FILE_STREAM_PAGE_ALIGNED_INPUTS	1.7.0				HIPFILE_STREAM_PAGE_ALIGNED_I
CU_FILE_SUCCESS	1.0.0				hipFileSuccess
CU_FILE_USE_POLL_MODE	1.0.0				hipFileUsePollMode
CU_FILE_VIRTIOFS_SUPPORTED	1.16.0				
CU_FILE_WEKAFS_SUPPORTED	1.0.0				hipFileWekaFSSupported
CUfileBatchHandle_t	1.2.0				hipFileBatchHandle_t
CUfileBatchMode_t	1.2.0				hipFileBatchMode_t
CUfileDescr_t	1.0.0				hipFileDescr_t
CUfileDriverControlFlags	1.0.0				hipFileDriverControlFlags
CUfileDriverControlFlags_t	1.0.0				hipFileDriverControlFlags_t
CUfileDriverStatusFlags	1.0.0				hipFileDriverStatusFlags
CUfileDriverStatusFlags_t	1.0.0				hipFileDriverStatusFlags_t
CUfileDrvProps	1.0.0				hipFileDriverProps
CUfileDrvProps_t	1.0.0				hipFileDriverProps_t
CUfileError					hipFileError
CUfileError_t	1.0.0				hipFileError_t
CUfileFSOps	1.0.0				hipFileFSOps
CUfileFSOps_t	1.0.0				hipFileFSOps_t
CUfileFeatureFlags	1.0.0				hipFileFeatureFlags
CUfileFeatureFlags_t	1.0.0				hipFileFeatureFlags_t
CUfileFileHandleType	1.0.0				hipFileFileHandleType
CUfileHandle_t	1.0.0				hipFileHandle_t
CUfileIOEvents	1.2.0				hipFileIOEvents
CUfileIOEvents_t	1.2.0				hipFileIOEvents_t
CUfileIOParams	1.2.0				hipFileIOParams
CUfileIOParams_t	1.2.0				hipFileIOParams_t
CUfileOpCounter	1.15.0				
CUfileOpCounter_t	1.15.0				
CUfileOpError	1.0.0				hipFileOpError_t
CUfileOpcode	1.0.0				hipFileOpcode
CUfileOpcode_t	1.2.0				hipFileOpcode_t
CUfileP2PFlags	1.16.0				
CUfileP2PFlags_t	1.16.0				
CUfilePerGpuStats	1.15.0				
CUfilePerGpuStats_t	1.15.0				
CUfileStatsLevel1	1.15.0				
CUfileStatsLevel1_t	1.15.0				
CUfileStatsLevel2	1.15.0				
CUfileStatsLevel2_t	1.15.0				
CUfileStatsLevel3	1.15.0				
CUfileStatsLevel3_t	1.15.0				
CUfileStatus_t	1.2.0				hipFileStatus_t
IS_CUDA_ERR	1.0.0				IS_HIP_DRV_ERR
IS_CUFILE_ERR	1.0.0				IS_HIPFILE_ERR
cufileBatchMode	1.2.0				hipFileBatchMode
cufileRDMAInfo	1.0.0				hipFileRDMAInfo
cufileRDMAInfo_t	1.0.0				hipFileRDMAInfo_t
sockaddr_t	1.0.0				sockaddr

10.13.2 2. cuFile Functions

CUDA	A	D	C	R	HIP	A
cuFileBatchIOCancel	1.2.0				hipFileBatchIOCancel	7.2.0
cuFileBatchIODestroy	1.2.0				hipFileBatchIODestroy	7.2.0
cuFileBatchIOGetStatus	1.2.0				hipFileBatchIOGetStatus	7.2.0
cuFileBatchIOSetUp	1.2.0				hipFileBatchIOSetUp	7.2.0
cuFileBatchIOSubmit	1.2.0				hipFileBatchIOSubmit	7.2.0
cuFileBufDeregister	1.0.0				hipFileBufDeregister	7.2.0
cuFileBufRegister	1.0.0				hipFileBufRegister	7.2.0
cuFileDriverClose	1.0.0				hipFileDriverClose	7.2.0
cuFileDriverClose_v2	1.4.0				hipFileDriverClose	7.2.0
cuFileDriverGetP2PFlags	1.15.0					
cuFileDriverGetProperties	1.0.0				hipFileDriverGetProperties	7.2.0
cuFileDriverOpen	1.0.0				hipFileDriverOpen	7.2.0
cuFileDriverSetMaxCacheSize	1.0.0				hipFileDriverSetMaxCacheSize	7.2.0
cuFileDriverSetMaxDirectIOSize	1.0.0				hipFileDriverSetMaxDirectIOSize	7.2.0
cuFileDriverSetMaxPinnedMemSize	1.0.0				hipFileDriverSetMaxPinnedMemSize	7.2.0
cuFileDriverSetP2PFlags	1.15.0					
cuFileDriverSetPollMode	1.0.0				hipFileDriverSetPollMode	7.2.0
cuFileExportPCIeTopology	1.17.0					
cuFileGetBARSizeInKB	1.15.0					
cuFileGetParameterBool	1.14.0				hipFileGetParameterBool	7.2.0
cuFileGetParameterGpuBounceBufferSlabArray	1.17.0					
cuFileGetParameterMinMaxValue	1.15.0					
cuFileGetParameterPosixPoolSlabArray	1.15.0					
cuFileGetParameterSizeT	1.14.0				hipFileGetParameterSizeT	7.2.0
cuFileGetParameterString	1.14.0				hipFileGetParameterString	7.2.0
cuFileGetStatsL1	1.15.0					
cuFileGetStatsL2	1.15.0					
cuFileGetStatsL3	1.15.0					
cuFileGetStatsLevel	1.15.0					
cuFileGetVersion	1.8.0					
cuFileHandleDeregister	1.0.0				hipFileHandleDeregister	7.2.0
cuFileHandleRegister	1.0.0				hipFileHandleRegister	7.2.0
cuFileRead	1.0.0				hipFileRead	7.2.0
cuFileReadAsync	1.7.0				hipFileReadAsync	7.2.0
cuFileSetParameterBool	1.14.0				hipFileSetParameterBool	7.2.0
cuFileSetParameterGpuBounceBufferSlabArray	1.17.0					
cuFileSetParameterPosixPoolSlabArray	1.15.0					
cuFileSetParameterSizeT	1.14.0				hipFileSetParameterSizeT	7.2.0
cuFileSetParameterString	1.14.0				hipFileSetParameterString	7.2.0
cuFileSetStatsLevel	1.15.0					
cuFileStatsReset	1.15.0					
cuFileStatsStart	1.15.0					
cuFileStatsStop	1.15.0					
cuFileStreamDeregister	1.7.0				hipFileStreamDeregister	7.2.0
cuFileStreamRegister	1.7.0				hipFileStreamRegister	7.2.0
cuFileUseCount	1.4.0				hipFileUseCount	7.2.0
cuFileWrite	1.0.0				hipFileWrite	7.2.0
cuFileWriteAsync	1.7.0				hipFileWriteAsync	7.2.0

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Table 38 – continued from previous page

CUDA	A	D	C	R	HIP	A
cufileop_status_error	1.0.0				hipFileOpStatusError	7.2.0

CHAPTER

ELEVEN

CUDA APIS SUPPORTED BY ROC

CUDA	ROC
CUBLAS API	*ROC BLAS API*
CUSPARSE API	*ROC SPARSE API*
CURAND API	*ROC RAND API*
CUDNN API	*MIOPEN API*

To generate the above documentation with the information about all supported CUDA APIs in Markdown format, run `hipify-clang --md --doc-format=full --doc-roc=separate` with or without specifying the output directory (`-o`). By running `hipify-clang --csv --doc-format=full --doc-roc=separate`, the documentation will be generated in CSV format.

11.1 CUBLAS API supported by ROC

Note: In the tables that follow the columns marked `A`, `D`, `C`, `R`, `U`, and `E` mean the following: **A** - Added; **D** - Deprecated; **C** - Changed; **R** - Removed; **U** - Unsupported for CUDA version(s); **E** - Experimental

11.1.1 1. CUBLAS Data types

CUDA	A	D	C	R	ROC
CUBLAS_ATOMICS_ALLOWED					rocblas_atomics_allowed
CUBLAS_ATOMICS_NOT_ALLOWED					rocblas_atomics_not_allowed
CUBLAS_COMPUTE_16F	11.0				
CUBLAS_COMPUTE_16F_PEDANTIC	11.0				
CUBLAS_COMPUTE_32F	11.0				rocblas_compute_type_f32
CUBLAS_COMPUTE_32F_EMULATED_16BFX9	12.9				
CUBLAS_COMPUTE_32F_FAST_16BF	11.0				
CUBLAS_COMPUTE_32F_FAST_16F	11.0				
CUBLAS_COMPUTE_32F_FAST_TF32	11.0				
CUBLAS_COMPUTE_32F_PEDANTIC	11.0				
CUBLAS_COMPUTE_32I	11.0				
CUBLAS_COMPUTE_32I_PEDANTIC	11.0				
CUBLAS_COMPUTE_64F	11.0				
CUBLAS_COMPUTE_64F_EMULATED_FIXEDPOINT	13.0				
CUBLAS_COMPUTE_64F_PEDANTIC	11.0				

Table 1 – continued from previous page

CUDA	A	D	C	R	ROC
CUBLAS_DEFAULT_MATH	9.0				rocblas_default_math
CUBLAS_DIAG_NON_UNIT					rocblas_diagonal_non_unit
CUBLAS_DIAG_UNIT					rocblas_diagonal_unit
CUBLAS_EMULATION_STRATEGY_DEFAULT	12.9				
CUBLAS_EMULATION_STRATEGY_EAGER	12.9				
CUBLAS_EMULATION_STRATEGY_PERFORMANT	12.9				
CUBLAS_FILL_MODE_FULL	10.1				rocblas_fill_full
CUBLAS_FILL_MODE_LOWER					rocblas_fill_lower
CUBLAS_FILL_MODE_UPPER					rocblas_fill_upper
CUBLAS_FP32_EMULATED_BF16X9_MATH	12.9				
CUBLAS_FP64_EMULATED_FIXEDPOINT_MATH	13.0				
CUBLAS_GEMM_ALGO0	8.0				
CUBLAS_GEMM_ALGO0_TENSOR_OP	9.0				
CUBLAS_GEMM_ALGO1	8.0				
CUBLAS_GEMM_ALGO10	9.0				
CUBLAS_GEMM_ALGO10_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO11	9.0				
CUBLAS_GEMM_ALGO11_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO12	9.0				
CUBLAS_GEMM_ALGO12_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO13	9.0				
CUBLAS_GEMM_ALGO13_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO14	9.0				
CUBLAS_GEMM_ALGO14_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO15	9.0				
CUBLAS_GEMM_ALGO15_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO16	9.0				
CUBLAS_GEMM_ALGO17	9.0				
CUBLAS_GEMM_ALGO18	9.2				
CUBLAS_GEMM_ALGO19	9.2				
CUBLAS_GEMM_ALGO1_TENSOR_OP	9.0				
CUBLAS_GEMM_ALGO2	8.0				
CUBLAS_GEMM_ALGO20	9.2				
CUBLAS_GEMM_ALGO21	9.2				
CUBLAS_GEMM_ALGO22	9.2				
CUBLAS_GEMM_ALGO23	9.2				
CUBLAS_GEMM_ALGO2_TENSOR_OP	9.0				
CUBLAS_GEMM_ALGO3	8.0				
CUBLAS_GEMM_ALGO3_TENSOR_OP	9.0				
CUBLAS_GEMM_ALGO4	8.0				
CUBLAS_GEMM_ALGO4_TENSOR_OP	9.0				
CUBLAS_GEMM_ALGO5	8.0				
CUBLAS_GEMM_ALGO5_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO6	8.0				
CUBLAS_GEMM_ALGO6_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO7	8.0				
CUBLAS_GEMM_ALGO7_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO8	9.0				
CUBLAS_GEMM_ALGO8_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO9	9.0				

Table 1 – continued from previous page

CUDA	A	D	C	R	ROC
CUBLAS_GEMM_ALGO9_TENSOR_OP	9.2				
CUBLAS_GEMM_AUTOTUNE	13.0				
CUBLAS_GEMM_DEFAULT	9.0				rocblas_gemm_algo_standard
CUBLAS_GEMM_DEFAULT_TENSOR_OP	9.0				
CUBLAS_GEMM_DFALT	8.0				rocblas_gemm_algo_standard
CUBLAS_GEMM_DFALT_TENSOR_OP	9.0				
CUBLAS_MATH_DISALLOW_REDUCED_PRECISION_REDUCTION	11.0				
CUBLAS_OP_C					rocblas_operation_conjugate_transp
CUBLAS_OP_CONJG	10.1				
CUBLAS_OP_HERMITAN	10.1				rocblas_operation_conjugate_transp
CUBLAS_OP_N					rocblas_operation_none
CUBLAS_OP_T					rocblas_operation_transpose
CUBLAS_PEDANTIC_MATH	11.0				
CUBLAS_POINTER_MODE_DEVICE					rocblas_pointer_mode_device
CUBLAS_POINTER_MODE_HOST					rocblas_pointer_mode_host
CUBLAS_SIDE_LEFT					rocblas_side_left
CUBLAS_SIDE_RIGHT					rocblas_side_right
CUBLAS_STATUS_ALLOC_FAILED					rocblas_status_not_implemented
CUBLAS_STATUS_ARCH_MISMATCH					rocblas_status_arch_mismatch
CUBLAS_STATUS_EXECUTION_FAILED					rocblas_status_memory_error
CUBLAS_STATUS_INTERNAL_ERROR					rocblas_status_internal_error
CUBLAS_STATUS_INVALID_VALUE					rocblas_status_invalid_value
CUBLAS_STATUS_LICENSE_ERROR					
CUBLAS_STATUS_MAPPING_ERROR					rocblas_status_invalid_size
CUBLAS_STATUS_NOT_INITIALIZED					rocblas_status_invalid_handle
CUBLAS_STATUS_NOT_SUPPORTED					rocblas_status_perf_degraded
CUBLAS_STATUS_SUCCESS					rocblas_status_success
CUBLAS_TENSOR_OP_MATH	9.0	11.0			
CUBLAS_TF32_TENSOR_OP_MATH	11.0				
cublasAtomicsMode_t					rocblas_atomics_mode
cublasComputeType_t	11.0				rocblas_computetype
cublasContext					_rocblas_handle
cublasDiagType_t					rocblas_diagonal
cublasEmulationStrategy_t	12.9				
cublasFillMode_t					rocblas_fill
cublasGemmAlgo_t	8.0				rocblas_gemm_algo
cublasHandle_t					rocblas_handle
cublasMath_t	9.0				rocblas_math_mode
cublasOperation_t					rocblas_operation
cublasPointerMode_t					rocblas_pointer_mode
cublasSideMode_t					rocblas_side
cublasStatus					rocblas_status
cublasStatus_t					rocblas_status

11.1.2 2. CUDA Library Data types

CUDA	A	D	C	R	ROC	A	D	C	R	U	E
CUDA_C_16BF					rocblas_datatype_bf16_c	3.5.0					
CUDA_C_16F	8.0				rocblas_datatype_f16_c	1.8.2					
CUDA_C_16I	11.0										
CUDA_C_16U	11.0										
CUDA_C_32F	8.0				rocblas_datatype_f32_c	1.8.2					
CUDA_C_32I	8.0				rocblas_datatype_i32_c	2.0.0					
CUDA_C_32U	8.0				rocblas_datatype_u32_c	2.0.0					
CUDA_C_4I	11.0										
CUDA_C_4U	11.0										
CUDA_C_64F	8.0				rocblas_datatype_f64_c	1.8.2					
CUDA_C_64I	11.0										
CUDA_C_64U	11.0										
CUDA_C_8I	8.0				rocblas_datatype_i8_c	2.0.0					
CUDA_C_8U	8.0				rocblas_datatype_u8_c	2.0.0					
CUDA_R_16BF					rocblas_datatype_bf16_r	3.5.0					
CUDA_R_16F	8.0				rocblas_datatype_f16_r	1.8.2					
CUDA_R_16I	11.0										
CUDA_R_16U	11.0										
CUDA_R_32F	8.0				rocblas_datatype_f32_r	1.8.2					
CUDA_R_32I	8.0				rocblas_datatype_i32_r	2.0.0					
CUDA_R_32U	8.0				rocblas_datatype_u32_r	2.0.0					
CUDA_R_4F_E2M1	12.8										
CUDA_R_4I	11.0										
CUDA_R_4U	11.0										
CUDA_R_64F	8.0				rocblas_datatype_f64_r	1.8.2					
CUDA_R_64I	11.0										
CUDA_R_64U	11.0										
CUDA_R_6F_E2M3	12.8										
CUDA_R_6F_E3M2	12.8										
CUDA_R_8F_E4M3	11.8										
CUDA_R_8F_E5M2	11.8										
CUDA_R_8F_UE4M3	12.8										
CUDA_R_8F_UE8M0	12.8										
CUDA_R_8I	8.0				rocblas_datatype_i8_r	2.0.0					
CUDA_R_8U	8.0				rocblas_datatype_u8_r	2.0.0					
cublasDataType_t	7.5				rocblas_datatype	1.8.2					
cudaDataType	8.0				rocblas_datatype	1.8.2					
cudaDataType_t	8.0				rocblas_datatype_	1.8.2					

11.1.3 3. CUBLASLt Data types

CUDA	A	D	C	R	ROC	A	D	C
CUBLASLT_ALGO_CAP_ATOMIC_SYNC	12.2			13.0				
CUBLASLT_ALGO_CAP_CTA_SWIZZLING_SUPPORT	10.1							
CUBLASLT_ALGO_CAP_CUSTOM_MEMORY_ORDER	10.1							
CUBLASLT_ALGO_CAP_CUSTOM_OPTION_MAX	10.1							
CUBLASLT_ALGO_CAP_EPILOGUE_MASK	10.1							
CUBLASLT_ALGO_CAP_FLOATING_POINT_EMULATION_SUPPORT	12.9							
CUBLASLT_ALGO_CAP_LD_NEGATIVE	11.0							
CUBLASLT_ALGO_CAP_MIN_ALIGNMENT_A_BYTES	11.0							
CUBLASLT_ALGO_CAP_MIN_ALIGNMENT_B_BYTES	11.0							
CUBLASLT_ALGO_CAP_MIN_ALIGNMENT_C_BYTES	11.0							
CUBLASLT_ALGO_CAP_MIN_ALIGNMENT_D_BYTES	11.0							
CUBLASLT_ALGO_CAP_NUMERICAL_IMPL_FLAGS	11.0							
CUBLASLT_ALGO_CAP_OUT_OF_PLACE_RESULT_SUPPORT	10.1							
CUBLASLT_ALGO_CAP_POINTER_ARRAY_BATCH_SUPPORT	12.9							
CUBLASLT_ALGO_CAP_POINTER_ARRAY_GROUPED_SUPPORT	13.1							
CUBLASLT_ALGO_CAP_POINTER_MODE_MASK	10.1							
CUBLASLT_ALGO_CAP_REDUCTION_SCHEME_MASK	10.1							
CUBLASLT_ALGO_CAP_SPLITK_SUPPORT	10.1							
CUBLASLT_ALGO_CAP_STAGES_IDS	11.0							
CUBLASLT_ALGO_CAP_STRIDED_BATCH_SUPPORT	10.1							
CUBLASLT_ALGO_CAP_TILE_IDS	10.1							
CUBLASLT_ALGO_CAP_UPLO_SUPPORT	10.1							
CUBLASLT_ALGO_CONFIG_CLUSTER_SHAPE_ID	11.8							
CUBLASLT_ALGO_CONFIG_CTA_SWIZZLING	10.1							
CUBLASLT_ALGO_CONFIG_CUSTOM_OPTION	10.1							
CUBLASLT_ALGO_CONFIG_ID	10.1							
CUBLASLT_ALGO_CONFIG_INNER_SHAPE_ID	11.8							
CUBLASLT_ALGO_CONFIG_REDUCTION_SCHEME	10.1							
CUBLASLT_ALGO_CONFIG_SPLITK_NUM	10.1							
CUBLASLT_ALGO_CONFIG_STAGES_ID	11.0							
CUBLASLT_ALGO_CONFIG_TILE_ID	10.1							
CUBLASLT_BATCH_MODE_GROUPED	13.1							
CUBLASLT_BATCH_MODE_POINTER_ARRAY	12.9							
CUBLASLT_BATCH_MODE_STRIDED	12.9							
CUBLASLT_CLUSTER_SHAPE_10x1x1	11.8							
CUBLASLT_CLUSTER_SHAPE_11x1x1	11.8							
CUBLASLT_CLUSTER_SHAPE_12x1x1	11.8							
CUBLASLT_CLUSTER_SHAPE_13x1x1	11.8							
CUBLASLT_CLUSTER_SHAPE_14x1x1	11.8							
CUBLASLT_CLUSTER_SHAPE_15x1x1	11.8							
CUBLASLT_CLUSTER_SHAPE_16x1x1	11.8							
CUBLASLT_CLUSTER_SHAPE_1x10x1	11.8							
CUBLASLT_CLUSTER_SHAPE_1x11x1	11.8							
CUBLASLT_CLUSTER_SHAPE_1x12x1	11.8							
CUBLASLT_CLUSTER_SHAPE_1x13x1	11.8							
CUBLASLT_CLUSTER_SHAPE_1x14x1	11.8							
CUBLASLT_CLUSTER_SHAPE_1x15x1	11.8							
CUBLASLT_CLUSTER_SHAPE_1x16x1	11.8							
CUBLASLT_CLUSTER_SHAPE_1x1x1	11.8							

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Table 3 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C
CUBLASLT_CLUSTER_SHAPE_1x2x1	11.8							
CUBLASLT_CLUSTER_SHAPE_1x3x1	11.8							
CUBLASLT_CLUSTER_SHAPE_1x4x1	11.8							
CUBLASLT_CLUSTER_SHAPE_1x5x1	11.8							
CUBLASLT_CLUSTER_SHAPE_1x6x1	11.8							
CUBLASLT_CLUSTER_SHAPE_1x7x1	11.8							
CUBLASLT_CLUSTER_SHAPE_1x8x1	11.8							
CUBLASLT_CLUSTER_SHAPE_1x9x1	11.8							
CUBLASLT_CLUSTER_SHAPE_2x1x1	11.8							
CUBLASLT_CLUSTER_SHAPE_2x2x1	11.8							
CUBLASLT_CLUSTER_SHAPE_2x3x1	11.8							
CUBLASLT_CLUSTER_SHAPE_2x4x1	11.8							
CUBLASLT_CLUSTER_SHAPE_2x5x1	11.8							
CUBLASLT_CLUSTER_SHAPE_2x6x1	11.8							
CUBLASLT_CLUSTER_SHAPE_2x7x1	11.8							
CUBLASLT_CLUSTER_SHAPE_2x8x1	11.8							
CUBLASLT_CLUSTER_SHAPE_3x1x1	11.8							
CUBLASLT_CLUSTER_SHAPE_3x2x1	11.8							
CUBLASLT_CLUSTER_SHAPE_3x3x1	11.8							
CUBLASLT_CLUSTER_SHAPE_3x4x1	11.8							
CUBLASLT_CLUSTER_SHAPE_3x5x1	11.8							
CUBLASLT_CLUSTER_SHAPE_4x1x1	11.8							
CUBLASLT_CLUSTER_SHAPE_4x2x1	11.8							
CUBLASLT_CLUSTER_SHAPE_4x3x1	11.8							
CUBLASLT_CLUSTER_SHAPE_4x4x1	11.8							
CUBLASLT_CLUSTER_SHAPE_5x1x1	11.8							
CUBLASLT_CLUSTER_SHAPE_5x2x1	11.8							
CUBLASLT_CLUSTER_SHAPE_5x3x1	11.8							
CUBLASLT_CLUSTER_SHAPE_6x1x1	11.8							
CUBLASLT_CLUSTER_SHAPE_6x2x1	11.8							
CUBLASLT_CLUSTER_SHAPE_7x1x1	11.8							
CUBLASLT_CLUSTER_SHAPE_7x2x1	11.8							
CUBLASLT_CLUSTER_SHAPE_8x1x1	11.8							
CUBLASLT_CLUSTER_SHAPE_8x2x1	11.8							
CUBLASLT_CLUSTER_SHAPE_9x1x1	11.8							
CUBLASLT_CLUSTER_SHAPE_AUTO	11.8							
CUBLASLT_CLUSTER_SHAPE_END	11.8							
CUBLASLT_EMULATION_DESC_FIXEDPOINT_MANTISSA_BIT_COUNT_POINTER	13.0							
CUBLASLT_EMULATION_DESC_FIXEDPOINT_MANTISSA_BIT_OFFSET	13.0							
CUBLASLT_EMULATION_DESC_FIXEDPOINT_MANTISSA_CONTROL	13.0							
CUBLASLT_EMULATION_DESC_FIXEDPOINT_MAX_MANTISSA_BIT_COUNT	13.0							
CUBLASLT_EMULATION_DESC_SPECIAL_VALUES_SUPPORT	13.0							
CUBLASLT_EMULATION_DESC_STRATEGY	13.0							
CUBLASLT_EPILOGUE_BGRADA	11.4							
CUBLASLT_EPILOGUE_BGRADB	11.4							
CUBLASLT_EPILOGUE_BIAS	10.1							
CUBLASLT_EPILOGUE_DEFAULT	10.1							
CUBLASLT_EPILOGUE_DGELU	11.6							
CUBLASLT_EPILOGUE_DGELU_BGRAD	11.3							
CUBLASLT_EPILOGUE_DRELU	11.6							

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Table 3 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C
CUBLASLT_EPILOGUE_DRELU_BGRAD	11.3							
CUBLASLT_EPILOGUE_GELU	11.3							
CUBLASLT_EPILOGUE_GELU_AUX	11.3							
CUBLASLT_EPILOGUE_GELU_AUX_BIAS	11.3							
CUBLASLT_EPILOGUE_GELU_BIAS	11.3							
CUBLASLT_EPILOGUE_RELU	10.1							
CUBLASLT_EPILOGUE_RELU_AUX	11.3							
CUBLASLT_EPILOGUE_RELU_AUX_BIAS	11.3							
CUBLASLT_EPILOGUE_RELU_BIAS	10.1							
CUBLASLT_GROUPED_MATRIX_LAYOUT_COLS_ARRAY	13.1							
CUBLASLT_GROUPED_MATRIX_LAYOUT_LD_ARRAY	13.1							
CUBLASLT_GROUPED_MATRIX_LAYOUT_LD_ARRAY_INTEGER_WIDTH	13.1							
CUBLASLT_GROUPED_MATRIX_LAYOUT_ROWS_ARRAY	13.1							
CUBLASLT_GROUPED_MATRIX_LAYOUT_ROWS_COLS_ARRAY_INTEGER_WIDTH	13.1							
CUBLASLT_INTEGER_WIDTH_32	13.1							
CUBLASLT_INTEGER_WIDTH_64	13.1							
CUBLASLT_MATMUL_DESC_ALPHA_BATCH_STRIDE	13.1							
CUBLASLT_MATMUL_DESC_ALPHA_VECTOR_BATCH_STRIDE	11.4							
CUBLASLT_MATMUL_DESC_AMAX_D_POINTER	11.8							
CUBLASLT_MATMUL_DESC_ATOMIC_SYNC_IN_COUNTERS_POINTER	12.2			13.0				
CUBLASLT_MATMUL_DESC_ATOMIC_SYNC_NUM_CHUNKS_D_COLS	12.2	12.8		13.0				
CUBLASLT_MATMUL_DESC_ATOMIC_SYNC_NUM_CHUNKS_D_ROWS	12.2	12.8		13.0				
CUBLASLT_MATMUL_DESC_ATOMIC_SYNC_OUT_COUNTERS_POINTER	12.2			13.0				
CUBLASLT_MATMUL_DESC_A_SCALE_MODE	12.8							
CUBLASLT_MATMUL_DESC_A_SCALE_POINTER	11.8							
CUBLASLT_MATMUL_DESC_BETA_BATCH_STRIDE	13.1							
CUBLASLT_MATMUL_DESC_BIAS_BATCH_STRIDE	11.3							
CUBLASLT_MATMUL_DESC_BIAS_DATA_TYPE	11.8							
CUBLASLT_MATMUL_DESC_BIAS_POINTER	10.1							
CUBLASLT_MATMUL_DESC_B_SCALE_MODE	12.8							
CUBLASLT_MATMUL_DESC_B_SCALE_POINTER	11.8							
CUBLASLT_MATMUL_DESC_COMPUTE_TYPE	10.1							
CUBLASLT_MATMUL_DESC_C_SCALE_MODE	12.8							
CUBLASLT_MATMUL_DESC_C_SCALE_POINTER	11.8							
CUBLASLT_MATMUL_DESC_D_OUT_SCALE_MODE	12.8							
CUBLASLT_MATMUL_DESC_D_OUT_SCALE_POINTER	12.8							
CUBLASLT_MATMUL_DESC_D_SCALE_MODE	12.8							
CUBLASLT_MATMUL_DESC_D_SCALE_POINTER	11.8							
CUBLASLT_MATMUL_DESC_EMULATION_DESCRIPTOR	13.0							
CUBLASLT_MATMUL_DESC_EPILOGUE	10.1							
CUBLASLT_MATMUL_DESC_EPILOGUE_AUX_AMAX_POINTER	11.8							
CUBLASLT_MATMUL_DESC_EPILOGUE_AUX_BATCH_STRIDE	11.3							
CUBLASLT_MATMUL_DESC_EPILOGUE_AUX_DATA_TYPE	11.8							
CUBLASLT_MATMUL_DESC_EPILOGUE_AUX_LD	11.3							
CUBLASLT_MATMUL_DESC_EPILOGUE_AUX_POINTER	11.3							
CUBLASLT_MATMUL_DESC_EPILOGUE_AUX_SCALE_MODE	12.8							
CUBLASLT_MATMUL_DESC_EPILOGUE_AUX_SCALE_POINTER	11.8							
CUBLASLT_MATMUL_DESC_FAST_ACCUM	11.8							
CUBLASLT_MATMUL_DESC_FILL_MODE	10.1							
CUBLASLT_MATMUL_DESC_POINTER_MODE	10.1							

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Table 3 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C
CUBLASLT_MATMUL_DESC_SCALE_TYPE	10.1							
CUBLASLT_MATMUL_DESC_SM_COUNT_TARGET	11.5							
CUBLASLT_MATMUL_DESC_TRANSA	10.1							
CUBLASLT_MATMUL_DESC_TRANSB	10.1							
CUBLASLT_MATMUL_DESC_TRANSC	10.1							
CUBLASLT_MATMUL_INNER_SHAPE_END	11.8							
CUBLASLT_MATMUL_INNER_SHAPE_MMA16816	11.8							
CUBLASLT_MATMUL_INNER_SHAPE_MMA1684	11.8							
CUBLASLT_MATMUL_INNER_SHAPE_MMA1688	11.8							
CUBLASLT_MATMUL_INNER_SHAPE_MMA884	11.8							
CUBLASLT_MATMUL_INNER_SHAPE_UNDEFINED	11.8							
CUBLASLT_MATMUL_MATRIX_SCALE_BLK128x128_32F	12.9							
CUBLASLT_MATMUL_MATRIX_SCALE_END	12.8							
CUBLASLT_MATMUL_MATRIX_SCALE_OUTER_VEC_32F	12.9							
CUBLASLT_MATMUL_MATRIX_SCALE_PER_BATCH_SCALAR_32F	13.1							
CUBLASLT_MATMUL_MATRIX_SCALE_SCALAR_32F	12.8							
CUBLASLT_MATMUL_MATRIX_SCALE_VEC128_32F	12.9							
CUBLASLT_MATMUL_MATRIX_SCALE_VEC16_UE4M3	12.8							
CUBLASLT_MATMUL_MATRIX_SCALE_VEC32_UE8M0	12.8							
CUBLASLT_MATMUL_PREF_GROUPED_AVERAGE_REDUCTION_DIM	13.1							
CUBLASLT_MATMUL_PREF_GROUPED_DESC_D_AVERAGE_COLS	13.1							
CUBLASLT_MATMUL_PREF_GROUPED_DESC_D_AVERAGE_ROWS	13.1							
CUBLASLT_MATMUL_PREF_IMPL_MASK	11.0							
CUBLASLT_MATMUL_PREF_MAX_WAVES_COUNT	10.1							
CUBLASLT_MATMUL_PREF_MAX_WORKSPACE_BYTES	10.1							
CUBLASLT_MATMUL_PREF_MIN_ALIGNMENT_A_BYTES	10.1							
CUBLASLT_MATMUL_PREF_MIN_ALIGNMENT_B_BYTES	10.1							
CUBLASLT_MATMUL_PREF_MIN_ALIGNMENT_C_BYTES	10.1							
CUBLASLT_MATMUL_PREF_MIN_ALIGNMENT_D_BYTES	10.1							
CUBLASLT_MATMUL_PREF_REDUCTION_SCHEME_MASK	10.1							
CUBLASLT_MATMUL_PREF_SEARCH_MODE	10.1							
CUBLASLT_MATMUL_STAGES_128x1	11.0							
CUBLASLT_MATMUL_STAGES_128x2	11.0							
CUBLASLT_MATMUL_STAGES_128x3	11.0							
CUBLASLT_MATMUL_STAGES_128x4	11.0							
CUBLASLT_MATMUL_STAGES_128x5	11.0							
CUBLASLT_MATMUL_STAGES_128x6	11.0							
CUBLASLT_MATMUL_STAGES_128xAUTO	11.8							
CUBLASLT_MATMUL_STAGES_16x1	11.0							
CUBLASLT_MATMUL_STAGES_16x10	11.0							
CUBLASLT_MATMUL_STAGES_16x2	11.0							
CUBLASLT_MATMUL_STAGES_16x3	11.0							
CUBLASLT_MATMUL_STAGES_16x4	11.0							
CUBLASLT_MATMUL_STAGES_16x5	11.0							
CUBLASLT_MATMUL_STAGES_16x6	11.0							
CUBLASLT_MATMUL_STAGES_16xAUTO	11.8							
CUBLASLT_MATMUL_STAGES_256xAUTO	12.8							
CUBLASLT_MATMUL_STAGES_32x1	11.0							
CUBLASLT_MATMUL_STAGES_32x10	11.0							
CUBLASLT_MATMUL_STAGES_32x2	11.0							

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Table 3 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C
CUBLASLT_MATMUL_STAGES_32x3	11.0							
CUBLASLT_MATMUL_STAGES_32x4	11.0							
CUBLASLT_MATMUL_STAGES_32x5	11.0							
CUBLASLT_MATMUL_STAGES_32x6	11.0							
CUBLASLT_MATMUL_STAGES_32xAUTO	11.8							
CUBLASLT_MATMUL_STAGES_64x1	11.0							
CUBLASLT_MATMUL_STAGES_64x2	11.0							
CUBLASLT_MATMUL_STAGES_64x3	11.0							
CUBLASLT_MATMUL_STAGES_64x4	11.0							
CUBLASLT_MATMUL_STAGES_64x5	11.0							
CUBLASLT_MATMUL_STAGES_64x6	11.0							
CUBLASLT_MATMUL_STAGES_64xAUTO	11.8							
CUBLASLT_MATMUL_STAGES_768xAUTO	13.0							
CUBLASLT_MATMUL_STAGES_8x3	11.8							
CUBLASLT_MATMUL_STAGES_8x4	11.0							
CUBLASLT_MATMUL_STAGES_8x5	11.2							
CUBLASLT_MATMUL_STAGES_8xAUTO	11.8							
CUBLASLT_MATMUL_STAGES_END	11.0							
CUBLASLT_MATMUL_STAGES_UNDEFINED	11.0							
CUBLASLT_MATMUL_TILE_104x128	12.6							
CUBLASLT_MATMUL_TILE_104x192	12.6							
CUBLASLT_MATMUL_TILE_104x256	12.6							
CUBLASLT_MATMUL_TILE_104x320	12.6							
CUBLASLT_MATMUL_TILE_104x384	12.6							
CUBLASLT_MATMUL_TILE_104x448	12.6							
CUBLASLT_MATMUL_TILE_104x64	12.6							
CUBLASLT_MATMUL_TILE_112x128	12.6							
CUBLASLT_MATMUL_TILE_112x192	12.6							
CUBLASLT_MATMUL_TILE_112x256	12.6							
CUBLASLT_MATMUL_TILE_112x320	12.6							
CUBLASLT_MATMUL_TILE_112x384	12.6							
CUBLASLT_MATMUL_TILE_112x64	12.6							
CUBLASLT_MATMUL_TILE_120x128	12.6							
CUBLASLT_MATMUL_TILE_120x192	12.6							
CUBLASLT_MATMUL_TILE_120x256	12.6							
CUBLASLT_MATMUL_TILE_120x320	12.6							
CUBLASLT_MATMUL_TILE_120x384	12.6							
CUBLASLT_MATMUL_TILE_120x64	12.6							
CUBLASLT_MATMUL_TILE_128x104	12.6							
CUBLASLT_MATMUL_TILE_128x112	12.6							
CUBLASLT_MATMUL_TILE_128x120	12.6							
CUBLASLT_MATMUL_TILE_128x128	10.1							
CUBLASLT_MATMUL_TILE_128x136	12.6							
CUBLASLT_MATMUL_TILE_128x144	12.6							
CUBLASLT_MATMUL_TILE_128x152	12.6							
CUBLASLT_MATMUL_TILE_128x16	12.6							
CUBLASLT_MATMUL_TILE_128x160	11.3							
CUBLASLT_MATMUL_TILE_128x168	12.6							
CUBLASLT_MATMUL_TILE_128x176	12.6							
CUBLASLT_MATMUL_TILE_128x184	12.6							

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Table 3 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C
CUBLASLT_MATMUL_TILE_128x192	11.8							
CUBLASLT_MATMUL_TILE_128x200	12.6							
CUBLASLT_MATMUL_TILE_128x208	12.6							
CUBLASLT_MATMUL_TILE_128x216	12.6							
CUBLASLT_MATMUL_TILE_128x224	12.6							
CUBLASLT_MATMUL_TILE_128x232	12.6							
CUBLASLT_MATMUL_TILE_128x24	12.6							
CUBLASLT_MATMUL_TILE_128x240	12.6							
CUBLASLT_MATMUL_TILE_128x248	12.6							
CUBLASLT_MATMUL_TILE_128x256	10.1							
CUBLASLT_MATMUL_TILE_128x264	12.6							
CUBLASLT_MATMUL_TILE_128x272	12.6							
CUBLASLT_MATMUL_TILE_128x280	12.6							
CUBLASLT_MATMUL_TILE_128x288	12.6							
CUBLASLT_MATMUL_TILE_128x296	12.6							
CUBLASLT_MATMUL_TILE_128x304	12.6							
CUBLASLT_MATMUL_TILE_128x312	12.6							
CUBLASLT_MATMUL_TILE_128x32	10.1							
CUBLASLT_MATMUL_TILE_128x320	12.6							
CUBLASLT_MATMUL_TILE_128x328	12.6							
CUBLASLT_MATMUL_TILE_128x336	12.6							
CUBLASLT_MATMUL_TILE_128x344	12.6							
CUBLASLT_MATMUL_TILE_128x352	12.6							
CUBLASLT_MATMUL_TILE_128x360	12.6							
CUBLASLT_MATMUL_TILE_128x368	12.6							
CUBLASLT_MATMUL_TILE_128x376	12.6							
CUBLASLT_MATMUL_TILE_128x384	12.6							
CUBLASLT_MATMUL_TILE_128x392	12.6							
CUBLASLT_MATMUL_TILE_128x40	12.6							
CUBLASLT_MATMUL_TILE_128x400	12.6							
CUBLASLT_MATMUL_TILE_128x408	12.6							
CUBLASLT_MATMUL_TILE_128x416	12.6							
CUBLASLT_MATMUL_TILE_128x424	12.6							
CUBLASLT_MATMUL_TILE_128x432	12.6							
CUBLASLT_MATMUL_TILE_128x440	12.6							
CUBLASLT_MATMUL_TILE_128x448	12.6							
CUBLASLT_MATMUL_TILE_128x456	12.6							
CUBLASLT_MATMUL_TILE_128x464	12.6							
CUBLASLT_MATMUL_TILE_128x472	12.6							
CUBLASLT_MATMUL_TILE_128x48	12.6							
CUBLASLT_MATMUL_TILE_128x480	12.6							
CUBLASLT_MATMUL_TILE_128x488	12.6							
CUBLASLT_MATMUL_TILE_128x496	12.6							
CUBLASLT_MATMUL_TILE_128x504	12.6							
CUBLASLT_MATMUL_TILE_128x512	12.6							
CUBLASLT_MATMUL_TILE_128x56	12.6							
CUBLASLT_MATMUL_TILE_128x64	10.1							
CUBLASLT_MATMUL_TILE_128x72	12.6							
CUBLASLT_MATMUL_TILE_128x8	12.6							
CUBLASLT_MATMUL_TILE_128x80	12.6							

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Table 3 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C
CUBLASLT_MATMUL_TILE_128x88	12.6							
CUBLASLT_MATMUL_TILE_128x96	11.8							
CUBLASLT_MATMUL_TILE_136x128	12.6							
CUBLASLT_MATMUL_TILE_136x192	12.6							
CUBLASLT_MATMUL_TILE_136x256	12.6							
CUBLASLT_MATMUL_TILE_136x320	12.6							
CUBLASLT_MATMUL_TILE_136x64	12.6							
CUBLASLT_MATMUL_TILE_144x128	12.6							
CUBLASLT_MATMUL_TILE_144x192	12.6							
CUBLASLT_MATMUL_TILE_144x256	12.6							
CUBLASLT_MATMUL_TILE_144x320	12.6							
CUBLASLT_MATMUL_TILE_144x64	12.6							
CUBLASLT_MATMUL_TILE_152x128	12.6							
CUBLASLT_MATMUL_TILE_152x192	12.6							
CUBLASLT_MATMUL_TILE_152x256	12.6							
CUBLASLT_MATMUL_TILE_152x320	12.6							
CUBLASLT_MATMUL_TILE_152x64	12.6							
CUBLASLT_MATMUL_TILE_160x128	11.3							
CUBLASLT_MATMUL_TILE_160x192	12.6							
CUBLASLT_MATMUL_TILE_160x256	12.6							
CUBLASLT_MATMUL_TILE_160x64	12.6							
CUBLASLT_MATMUL_TILE_168x128	12.6							
CUBLASLT_MATMUL_TILE_168x192	12.6							
CUBLASLT_MATMUL_TILE_168x256	12.6							
CUBLASLT_MATMUL_TILE_168x64	12.6							
CUBLASLT_MATMUL_TILE_16x128	12.6							
CUBLASLT_MATMUL_TILE_16x16	10.1							
CUBLASLT_MATMUL_TILE_16x192	12.6							
CUBLASLT_MATMUL_TILE_16x256	12.6							
CUBLASLT_MATMUL_TILE_16x32	10.1							
CUBLASLT_MATMUL_TILE_16x320	12.6							
CUBLASLT_MATMUL_TILE_16x384	12.6							
CUBLASLT_MATMUL_TILE_16x448	12.6							
CUBLASLT_MATMUL_TILE_16x512	12.6							
CUBLASLT_MATMUL_TILE_16x576	12.6							
CUBLASLT_MATMUL_TILE_16x64	12.6							
CUBLASLT_MATMUL_TILE_16x640	12.6							
CUBLASLT_MATMUL_TILE_16x704	12.6							
CUBLASLT_MATMUL_TILE_16x768	12.6							
CUBLASLT_MATMUL_TILE_16x8	10.1							
CUBLASLT_MATMUL_TILE_176x128	12.6							
CUBLASLT_MATMUL_TILE_176x192	12.6							
CUBLASLT_MATMUL_TILE_176x256	12.6							
CUBLASLT_MATMUL_TILE_176x64	12.6							
CUBLASLT_MATMUL_TILE_184x128	12.6							
CUBLASLT_MATMUL_TILE_184x192	12.6							
CUBLASLT_MATMUL_TILE_184x256	12.6							
CUBLASLT_MATMUL_TILE_184x64	12.6							
CUBLASLT_MATMUL_TILE_192x104	12.6							
CUBLASLT_MATMUL_TILE_192x112	12.6							

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Table 3 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C
CUBLASLT_MATMUL_TILE_192x120	12.6							
CUBLASLT_MATMUL_TILE_192x128	11.3							
CUBLASLT_MATMUL_TILE_192x136	12.6							
CUBLASLT_MATMUL_TILE_192x144	12.6							
CUBLASLT_MATMUL_TILE_192x152	12.6							
CUBLASLT_MATMUL_TILE_192x16	12.6							
CUBLASLT_MATMUL_TILE_192x160	12.6							
CUBLASLT_MATMUL_TILE_192x168	12.6							
CUBLASLT_MATMUL_TILE_192x176	12.6							
CUBLASLT_MATMUL_TILE_192x184	12.6							
CUBLASLT_MATMUL_TILE_192x192	12.6							
CUBLASLT_MATMUL_TILE_192x200	12.6							
CUBLASLT_MATMUL_TILE_192x208	12.6							
CUBLASLT_MATMUL_TILE_192x216	12.6							
CUBLASLT_MATMUL_TILE_192x224	12.6							
CUBLASLT_MATMUL_TILE_192x232	12.6							
CUBLASLT_MATMUL_TILE_192x24	12.6							
CUBLASLT_MATMUL_TILE_192x240	12.6							
CUBLASLT_MATMUL_TILE_192x248	12.6							
CUBLASLT_MATMUL_TILE_192x256	12.6							
CUBLASLT_MATMUL_TILE_192x264	12.6							
CUBLASLT_MATMUL_TILE_192x272	12.6							
CUBLASLT_MATMUL_TILE_192x280	12.6							
CUBLASLT_MATMUL_TILE_192x288	12.6							
CUBLASLT_MATMUL_TILE_192x296	12.6							
CUBLASLT_MATMUL_TILE_192x304	12.6							
CUBLASLT_MATMUL_TILE_192x312	12.6							
CUBLASLT_MATMUL_TILE_192x32	12.6							
CUBLASLT_MATMUL_TILE_192x320	12.6							
CUBLASLT_MATMUL_TILE_192x328	12.6							
CUBLASLT_MATMUL_TILE_192x336	12.6							
CUBLASLT_MATMUL_TILE_192x40	12.6							
CUBLASLT_MATMUL_TILE_192x48	12.6							
CUBLASLT_MATMUL_TILE_192x56	12.6							
CUBLASLT_MATMUL_TILE_192x64	12.6							
CUBLASLT_MATMUL_TILE_192x72	12.6							
CUBLASLT_MATMUL_TILE_192x8	12.6							
CUBLASLT_MATMUL_TILE_192x80	12.6							
CUBLASLT_MATMUL_TILE_192x88	12.6							
CUBLASLT_MATMUL_TILE_192x96	12.6							
CUBLASLT_MATMUL_TILE_200x128	12.6							
CUBLASLT_MATMUL_TILE_200x192	12.6							
CUBLASLT_MATMUL_TILE_200x64	12.6							
CUBLASLT_MATMUL_TILE_208x128	12.6							
CUBLASLT_MATMUL_TILE_208x192	12.6							
CUBLASLT_MATMUL_TILE_208x64	12.6							
CUBLASLT_MATMUL_TILE_216x128	12.6							
CUBLASLT_MATMUL_TILE_216x192	12.6							
CUBLASLT_MATMUL_TILE_216x64	12.6							
CUBLASLT_MATMUL_TILE_224x128	12.6							

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Table 3 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C
CUBLASLT_MATMUL_TILE_224x192	12.6							
CUBLASLT_MATMUL_TILE_224x64	12.6							
CUBLASLT_MATMUL_TILE_232x128	12.6							
CUBLASLT_MATMUL_TILE_232x192	12.6							
CUBLASLT_MATMUL_TILE_232x64	12.6							
CUBLASLT_MATMUL_TILE_240x128	12.6							
CUBLASLT_MATMUL_TILE_240x192	12.6							
CUBLASLT_MATMUL_TILE_240x64	12.6							
CUBLASLT_MATMUL_TILE_248x128	12.6							
CUBLASLT_MATMUL_TILE_248x192	12.6							
CUBLASLT_MATMUL_TILE_248x64	12.6							
CUBLASLT_MATMUL_TILE_24x128	12.6							
CUBLASLT_MATMUL_TILE_24x192	12.6							
CUBLASLT_MATMUL_TILE_24x256	12.6							
CUBLASLT_MATMUL_TILE_24x320	12.6							
CUBLASLT_MATMUL_TILE_24x384	12.6							
CUBLASLT_MATMUL_TILE_24x448	12.6							
CUBLASLT_MATMUL_TILE_24x512	12.6							
CUBLASLT_MATMUL_TILE_24x576	12.6							
CUBLASLT_MATMUL_TILE_24x64	12.6							
CUBLASLT_MATMUL_TILE_24x640	12.6							
CUBLASLT_MATMUL_TILE_24x704	12.6							
CUBLASLT_MATMUL_TILE_24x768	12.6							
CUBLASLT_MATMUL_TILE_256x1024	12.8							
CUBLASLT_MATMUL_TILE_256x104	12.6							
CUBLASLT_MATMUL_TILE_256x112	12.6							
CUBLASLT_MATMUL_TILE_256x120	12.6							
CUBLASLT_MATMUL_TILE_256x128	10.1							
CUBLASLT_MATMUL_TILE_256x136	12.6							
CUBLASLT_MATMUL_TILE_256x144	12.6							
CUBLASLT_MATMUL_TILE_256x152	12.6							
CUBLASLT_MATMUL_TILE_256x16	12.6							
CUBLASLT_MATMUL_TILE_256x160	12.6							
CUBLASLT_MATMUL_TILE_256x168	12.6							
CUBLASLT_MATMUL_TILE_256x176	12.6							
CUBLASLT_MATMUL_TILE_256x184	12.6							
CUBLASLT_MATMUL_TILE_256x192	12.6							
CUBLASLT_MATMUL_TILE_256x200	12.6							
CUBLASLT_MATMUL_TILE_256x208	12.6							
CUBLASLT_MATMUL_TILE_256x216	12.6							
CUBLASLT_MATMUL_TILE_256x224	12.6							
CUBLASLT_MATMUL_TILE_256x232	12.6							
CUBLASLT_MATMUL_TILE_256x24	12.6							
CUBLASLT_MATMUL_TILE_256x240	12.6							
CUBLASLT_MATMUL_TILE_256x248	12.6							
CUBLASLT_MATMUL_TILE_256x256	12.6							
CUBLASLT_MATMUL_TILE_256x32	12.1							
CUBLASLT_MATMUL_TILE_256x40	12.6							
CUBLASLT_MATMUL_TILE_256x48	12.6							
CUBLASLT_MATMUL_TILE_256x512	12.8							

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Table 3 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C
CUBLASLT_MATMUL_TILE_256x56	12.6							
CUBLASLT_MATMUL_TILE_256x64	10.1							
CUBLASLT_MATMUL_TILE_256x72	12.6							
CUBLASLT_MATMUL_TILE_256x8	12.6							
CUBLASLT_MATMUL_TILE_256x80	12.6							
CUBLASLT_MATMUL_TILE_256x88	12.6							
CUBLASLT_MATMUL_TILE_256x96	12.6							
CUBLASLT_MATMUL_TILE_264x128	12.6							
CUBLASLT_MATMUL_TILE_264x64	12.6							
CUBLASLT_MATMUL_TILE_272x128	12.6							
CUBLASLT_MATMUL_TILE_272x64	12.6							
CUBLASLT_MATMUL_TILE_280x128	12.6							
CUBLASLT_MATMUL_TILE_280x64	12.6							
CUBLASLT_MATMUL_TILE_288x128	12.6							
CUBLASLT_MATMUL_TILE_288x64	12.6							
CUBLASLT_MATMUL_TILE_296x128	12.6							
CUBLASLT_MATMUL_TILE_296x64	12.6							
CUBLASLT_MATMUL_TILE_304x128	12.6							
CUBLASLT_MATMUL_TILE_304x64	12.6							
CUBLASLT_MATMUL_TILE_312x128	12.6							
CUBLASLT_MATMUL_TILE_312x64	12.6							
CUBLASLT_MATMUL_TILE_320x104	12.6							
CUBLASLT_MATMUL_TILE_320x112	12.6							
CUBLASLT_MATMUL_TILE_320x120	12.6							
CUBLASLT_MATMUL_TILE_320x128	12.6							
CUBLASLT_MATMUL_TILE_320x136	12.6							
CUBLASLT_MATMUL_TILE_320x144	12.6							
CUBLASLT_MATMUL_TILE_320x152	12.6							
CUBLASLT_MATMUL_TILE_320x16	12.6							
CUBLASLT_MATMUL_TILE_320x160	12.6							
CUBLASLT_MATMUL_TILE_320x168	12.6							
CUBLASLT_MATMUL_TILE_320x176	12.6							
CUBLASLT_MATMUL_TILE_320x184	12.6							
CUBLASLT_MATMUL_TILE_320x192	12.6							
CUBLASLT_MATMUL_TILE_320x200	12.6							
CUBLASLT_MATMUL_TILE_320x24	12.6							
CUBLASLT_MATMUL_TILE_320x32	12.6							
CUBLASLT_MATMUL_TILE_320x40	12.6							
CUBLASLT_MATMUL_TILE_320x48	12.6							
CUBLASLT_MATMUL_TILE_320x56	12.6							
CUBLASLT_MATMUL_TILE_320x64	12.6							
CUBLASLT_MATMUL_TILE_320x72	12.6							
CUBLASLT_MATMUL_TILE_320x8	12.6							
CUBLASLT_MATMUL_TILE_320x80	12.6							
CUBLASLT_MATMUL_TILE_320x88	12.6							
CUBLASLT_MATMUL_TILE_320x96	12.6							
CUBLASLT_MATMUL_TILE_328x128	12.6							
CUBLASLT_MATMUL_TILE_328x64	12.6							
CUBLASLT_MATMUL_TILE_32x128	10.1							
CUBLASLT_MATMUL_TILE_32x16	10.1							

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Table 3 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C
CUBLASLT_MATMUL_TILE_32x192	12.6							
CUBLASLT_MATMUL_TILE_32x256	12.1							
CUBLASLT_MATMUL_TILE_32x32	10.1							
CUBLASLT_MATMUL_TILE_32x320	12.6							
CUBLASLT_MATMUL_TILE_32x384	12.6							
CUBLASLT_MATMUL_TILE_32x448	12.6							
CUBLASLT_MATMUL_TILE_32x512	12.6							
CUBLASLT_MATMUL_TILE_32x576	12.6							
CUBLASLT_MATMUL_TILE_32x64	10.1							
CUBLASLT_MATMUL_TILE_32x640	12.6							
CUBLASLT_MATMUL_TILE_32x704	12.6							
CUBLASLT_MATMUL_TILE_32x768	12.6							
CUBLASLT_MATMUL_TILE_32x8	10.1							
CUBLASLT_MATMUL_TILE_336x128	12.6							
CUBLASLT_MATMUL_TILE_336x64	12.6							
CUBLASLT_MATMUL_TILE_344x128	12.6							
CUBLASLT_MATMUL_TILE_344x64	12.6							
CUBLASLT_MATMUL_TILE_352x128	12.6							
CUBLASLT_MATMUL_TILE_352x64	12.6							
CUBLASLT_MATMUL_TILE_360x128	12.6							
CUBLASLT_MATMUL_TILE_360x64	12.6							
CUBLASLT_MATMUL_TILE_368x128	12.6							
CUBLASLT_MATMUL_TILE_368x64	12.6							
CUBLASLT_MATMUL_TILE_376x128	12.6							
CUBLASLT_MATMUL_TILE_376x64	12.6							
CUBLASLT_MATMUL_TILE_384x104	12.6							
CUBLASLT_MATMUL_TILE_384x112	12.6							
CUBLASLT_MATMUL_TILE_384x120	12.6							
CUBLASLT_MATMUL_TILE_384x128	12.6							
CUBLASLT_MATMUL_TILE_384x136	12.6							
CUBLASLT_MATMUL_TILE_384x144	12.6							
CUBLASLT_MATMUL_TILE_384x152	12.6							
CUBLASLT_MATMUL_TILE_384x16	12.6							
CUBLASLT_MATMUL_TILE_384x160	12.6							
CUBLASLT_MATMUL_TILE_384x168	12.6							
CUBLASLT_MATMUL_TILE_384x24	12.6							
CUBLASLT_MATMUL_TILE_384x32	12.6							
CUBLASLT_MATMUL_TILE_384x40	12.6							
CUBLASLT_MATMUL_TILE_384x48	12.6							
CUBLASLT_MATMUL_TILE_384x56	12.6							
CUBLASLT_MATMUL_TILE_384x64	12.6							
CUBLASLT_MATMUL_TILE_384x72	12.6							
CUBLASLT_MATMUL_TILE_384x8	12.6							
CUBLASLT_MATMUL_TILE_384x80	12.6							
CUBLASLT_MATMUL_TILE_384x88	12.6							
CUBLASLT_MATMUL_TILE_384x96	12.6							
CUBLASLT_MATMUL_TILE_392x64	12.6							
CUBLASLT_MATMUL_TILE_400x64	12.6							
CUBLASLT_MATMUL_TILE_408x64	12.6							
CUBLASLT_MATMUL_TILE_40x128	12.6							

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Table 3 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C
CUBLASLT_MATMUL_TILE_40x192	12.6							
CUBLASLT_MATMUL_TILE_40x256	12.6							
CUBLASLT_MATMUL_TILE_40x320	12.6							
CUBLASLT_MATMUL_TILE_40x384	12.6							
CUBLASLT_MATMUL_TILE_40x448	12.6							
CUBLASLT_MATMUL_TILE_40x512	12.6							
CUBLASLT_MATMUL_TILE_40x576	12.6							
CUBLASLT_MATMUL_TILE_40x64	12.6							
CUBLASLT_MATMUL_TILE_40x640	12.6							
CUBLASLT_MATMUL_TILE_40x704	12.6							
CUBLASLT_MATMUL_TILE_40x768	12.6							
CUBLASLT_MATMUL_TILE_416x64	12.6							
CUBLASLT_MATMUL_TILE_424x64	12.6							
CUBLASLT_MATMUL_TILE_432x64	12.6							
CUBLASLT_MATMUL_TILE_440x64	12.6							
CUBLASLT_MATMUL_TILE_448x104	12.6							
CUBLASLT_MATMUL_TILE_448x112	12.6							
CUBLASLT_MATMUL_TILE_448x120	12.6							
CUBLASLT_MATMUL_TILE_448x128	12.6							
CUBLASLT_MATMUL_TILE_448x136	12.6							
CUBLASLT_MATMUL_TILE_448x144	12.6							
CUBLASLT_MATMUL_TILE_448x16	12.6							
CUBLASLT_MATMUL_TILE_448x24	12.6							
CUBLASLT_MATMUL_TILE_448x32	12.6							
CUBLASLT_MATMUL_TILE_448x40	12.6							
CUBLASLT_MATMUL_TILE_448x48	12.6							
CUBLASLT_MATMUL_TILE_448x56	12.6							
CUBLASLT_MATMUL_TILE_448x64	12.6							
CUBLASLT_MATMUL_TILE_448x72	12.6							
CUBLASLT_MATMUL_TILE_448x8	12.6							
CUBLASLT_MATMUL_TILE_448x80	12.6							
CUBLASLT_MATMUL_TILE_448x88	12.6							
CUBLASLT_MATMUL_TILE_448x96	12.6							
CUBLASLT_MATMUL_TILE_456x64	12.6							
CUBLASLT_MATMUL_TILE_464x64	12.6							
CUBLASLT_MATMUL_TILE_472x64	12.6							
CUBLASLT_MATMUL_TILE_480x64	12.6							
CUBLASLT_MATMUL_TILE_488x64	12.6							
CUBLASLT_MATMUL_TILE_48x128	12.6							
CUBLASLT_MATMUL_TILE_48x192	12.6							
CUBLASLT_MATMUL_TILE_48x256	12.6							
CUBLASLT_MATMUL_TILE_48x320	12.6							
CUBLASLT_MATMUL_TILE_48x384	12.6							
CUBLASLT_MATMUL_TILE_48x448	12.6							
CUBLASLT_MATMUL_TILE_48x512	12.6							
CUBLASLT_MATMUL_TILE_48x576	12.6							
CUBLASLT_MATMUL_TILE_48x64	12.6							
CUBLASLT_MATMUL_TILE_48x640	12.6							
CUBLASLT_MATMUL_TILE_48x704	12.6							
CUBLASLT_MATMUL_TILE_48x768	12.6							

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Table 3 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C
CUBLASLT_MATMUL_TILE_496x64	12.6							
CUBLASLT_MATMUL_TILE_504x64	12.6							
CUBLASLT_MATMUL_TILE_512x1024	12.8							
CUBLASLT_MATMUL_TILE_512x104	12.6							
CUBLASLT_MATMUL_TILE_512x112	12.6							
CUBLASLT_MATMUL_TILE_512x120	12.6							
CUBLASLT_MATMUL_TILE_512x128	12.6							
CUBLASLT_MATMUL_TILE_512x16	12.6							
CUBLASLT_MATMUL_TILE_512x24	12.6							
CUBLASLT_MATMUL_TILE_512x32	12.6							
CUBLASLT_MATMUL_TILE_512x40	12.6							
CUBLASLT_MATMUL_TILE_512x48	12.6							
CUBLASLT_MATMUL_TILE_512x512	12.8							
CUBLASLT_MATMUL_TILE_512x56	12.6							
CUBLASLT_MATMUL_TILE_512x64	10.1							
CUBLASLT_MATMUL_TILE_512x72	12.6							
CUBLASLT_MATMUL_TILE_512x8	12.6							
CUBLASLT_MATMUL_TILE_512x80	12.6							
CUBLASLT_MATMUL_TILE_512x88	12.6							
CUBLASLT_MATMUL_TILE_512x96	12.6							
CUBLASLT_MATMUL_TILE_520x64	12.6							
CUBLASLT_MATMUL_TILE_528x64	12.6							
CUBLASLT_MATMUL_TILE_536x64	12.6							
CUBLASLT_MATMUL_TILE_544x64	12.6							
CUBLASLT_MATMUL_TILE_552x64	12.6							
CUBLASLT_MATMUL_TILE_560x64	12.6							
CUBLASLT_MATMUL_TILE_568x64	12.6							
CUBLASLT_MATMUL_TILE_56x128	12.6							
CUBLASLT_MATMUL_TILE_56x192	12.6							
CUBLASLT_MATMUL_TILE_56x256	12.6							
CUBLASLT_MATMUL_TILE_56x320	12.6							
CUBLASLT_MATMUL_TILE_56x384	12.6							
CUBLASLT_MATMUL_TILE_56x448	12.6							
CUBLASLT_MATMUL_TILE_56x512	12.6							
CUBLASLT_MATMUL_TILE_56x576	12.6							
CUBLASLT_MATMUL_TILE_56x640	12.6							
CUBLASLT_MATMUL_TILE_56x704	12.6							
CUBLASLT_MATMUL_TILE_56x768	12.6							
CUBLASLT_MATMUL_TILE_576x104	12.6							
CUBLASLT_MATMUL_TILE_576x112	12.6							
CUBLASLT_MATMUL_TILE_576x16	12.6							
CUBLASLT_MATMUL_TILE_576x24	12.6							
CUBLASLT_MATMUL_TILE_576x32	12.6							
CUBLASLT_MATMUL_TILE_576x40	12.6							
CUBLASLT_MATMUL_TILE_576x48	12.6							
CUBLASLT_MATMUL_TILE_576x56	12.6							
CUBLASLT_MATMUL_TILE_576x64	12.6							
CUBLASLT_MATMUL_TILE_576x72	12.6							
CUBLASLT_MATMUL_TILE_576x8	12.6							
CUBLASLT_MATMUL_TILE_576x80	12.6							

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Table 3 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C
CUBLASLT_MATMUL_TILE_576x88	12.6							
CUBLASLT_MATMUL_TILE_576x96	12.6							
CUBLASLT_MATMUL_TILE_584x64	12.6							
CUBLASLT_MATMUL_TILE_592x64	12.6							
CUBLASLT_MATMUL_TILE_600x64	12.6							
CUBLASLT_MATMUL_TILE_608x64	12.6							
CUBLASLT_MATMUL_TILE_616x64	12.6							
CUBLASLT_MATMUL_TILE_624x64	12.6							
CUBLASLT_MATMUL_TILE_632x64	12.6							
CUBLASLT_MATMUL_TILE_640x16	12.6							
CUBLASLT_MATMUL_TILE_640x24	12.6							
CUBLASLT_MATMUL_TILE_640x32	12.6							
CUBLASLT_MATMUL_TILE_640x40	12.6							
CUBLASLT_MATMUL_TILE_640x48	12.6							
CUBLASLT_MATMUL_TILE_640x56	12.6							
CUBLASLT_MATMUL_TILE_640x64	12.6							
CUBLASLT_MATMUL_TILE_640x72	12.6							
CUBLASLT_MATMUL_TILE_640x8	12.6							
CUBLASLT_MATMUL_TILE_640x80	12.6							
CUBLASLT_MATMUL_TILE_640x88	12.6							
CUBLASLT_MATMUL_TILE_640x96	12.6							
CUBLASLT_MATMUL_TILE_648x64	12.6							
CUBLASLT_MATMUL_TILE_64x104	12.6							
CUBLASLT_MATMUL_TILE_64x112	12.6							
CUBLASLT_MATMUL_TILE_64x120	12.6							
CUBLASLT_MATMUL_TILE_64x128	10.1							
CUBLASLT_MATMUL_TILE_64x136	12.6							
CUBLASLT_MATMUL_TILE_64x144	12.6							
CUBLASLT_MATMUL_TILE_64x152	12.6							
CUBLASLT_MATMUL_TILE_64x16	12.6							
CUBLASLT_MATMUL_TILE_64x160	12.6							
CUBLASLT_MATMUL_TILE_64x168	12.6							
CUBLASLT_MATMUL_TILE_64x176	12.6							
CUBLASLT_MATMUL_TILE_64x184	12.6							
CUBLASLT_MATMUL_TILE_64x192	12.6							
CUBLASLT_MATMUL_TILE_64x200	12.6							
CUBLASLT_MATMUL_TILE_64x208	12.6							
CUBLASLT_MATMUL_TILE_64x216	12.6							
CUBLASLT_MATMUL_TILE_64x224	12.6							
CUBLASLT_MATMUL_TILE_64x232	12.6							
CUBLASLT_MATMUL_TILE_64x24	12.6							
CUBLASLT_MATMUL_TILE_64x240	12.6							
CUBLASLT_MATMUL_TILE_64x248	12.6							
CUBLASLT_MATMUL_TILE_64x256	10.1							
CUBLASLT_MATMUL_TILE_64x264	12.6							
CUBLASLT_MATMUL_TILE_64x272	12.6							
CUBLASLT_MATMUL_TILE_64x280	12.6							
CUBLASLT_MATMUL_TILE_64x288	12.6							
CUBLASLT_MATMUL_TILE_64x296	12.6							
CUBLASLT_MATMUL_TILE_64x304	12.6							

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Table 3 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C
CUBLASLT_MATMUL_TILE_64x312	12.6							
CUBLASLT_MATMUL_TILE_64x32	10.1							
CUBLASLT_MATMUL_TILE_64x320	12.6							
CUBLASLT_MATMUL_TILE_64x328	12.6							
CUBLASLT_MATMUL_TILE_64x336	12.6							
CUBLASLT_MATMUL_TILE_64x344	12.6							
CUBLASLT_MATMUL_TILE_64x352	12.6							
CUBLASLT_MATMUL_TILE_64x360	12.6							
CUBLASLT_MATMUL_TILE_64x368	12.6							
CUBLASLT_MATMUL_TILE_64x376	12.6							
CUBLASLT_MATMUL_TILE_64x384	12.6							
CUBLASLT_MATMUL_TILE_64x392	12.6							
CUBLASLT_MATMUL_TILE_64x40	12.6							
CUBLASLT_MATMUL_TILE_64x400	12.6							
CUBLASLT_MATMUL_TILE_64x408	12.6							
CUBLASLT_MATMUL_TILE_64x416	12.6							
CUBLASLT_MATMUL_TILE_64x424	12.6							
CUBLASLT_MATMUL_TILE_64x432	12.6							
CUBLASLT_MATMUL_TILE_64x440	12.6							
CUBLASLT_MATMUL_TILE_64x448	12.6							
CUBLASLT_MATMUL_TILE_64x456	12.6							
CUBLASLT_MATMUL_TILE_64x464	12.6							
CUBLASLT_MATMUL_TILE_64x472	12.6							
CUBLASLT_MATMUL_TILE_64x48	12.6							
CUBLASLT_MATMUL_TILE_64x480	12.6							
CUBLASLT_MATMUL_TILE_64x488	12.6							
CUBLASLT_MATMUL_TILE_64x496	12.6							
CUBLASLT_MATMUL_TILE_64x504	12.6							
CUBLASLT_MATMUL_TILE_64x512	10.1							
CUBLASLT_MATMUL_TILE_64x520	12.6							
CUBLASLT_MATMUL_TILE_64x528	12.6							
CUBLASLT_MATMUL_TILE_64x536	12.6							
CUBLASLT_MATMUL_TILE_64x544	12.6							
CUBLASLT_MATMUL_TILE_64x552	12.6							
CUBLASLT_MATMUL_TILE_64x56	12.6							
CUBLASLT_MATMUL_TILE_64x560	12.6							
CUBLASLT_MATMUL_TILE_64x568	12.6							
CUBLASLT_MATMUL_TILE_64x576	12.6							
CUBLASLT_MATMUL_TILE_64x584	12.6							
CUBLASLT_MATMUL_TILE_64x592	12.6							
CUBLASLT_MATMUL_TILE_64x600	12.6							
CUBLASLT_MATMUL_TILE_64x608	12.6							
CUBLASLT_MATMUL_TILE_64x616	12.6							
CUBLASLT_MATMUL_TILE_64x624	12.6							
CUBLASLT_MATMUL_TILE_64x632	12.6							
CUBLASLT_MATMUL_TILE_64x64	10.1							
CUBLASLT_MATMUL_TILE_64x640	12.6							
CUBLASLT_MATMUL_TILE_64x648	12.6							
CUBLASLT_MATMUL_TILE_64x656	12.6							
CUBLASLT_MATMUL_TILE_64x664	12.6							

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Table 3 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C
CUBLASLT_MATMUL_TILE_64x672	12.6							
CUBLASLT_MATMUL_TILE_64x680	12.6							
CUBLASLT_MATMUL_TILE_64x688	12.6							
CUBLASLT_MATMUL_TILE_64x696	12.6							
CUBLASLT_MATMUL_TILE_64x704	12.6							
CUBLASLT_MATMUL_TILE_64x712	12.6							
CUBLASLT_MATMUL_TILE_64x72	12.6							
CUBLASLT_MATMUL_TILE_64x720	12.6							
CUBLASLT_MATMUL_TILE_64x728	12.6							
CUBLASLT_MATMUL_TILE_64x736	12.6							
CUBLASLT_MATMUL_TILE_64x744	12.6							
CUBLASLT_MATMUL_TILE_64x752	12.6							
CUBLASLT_MATMUL_TILE_64x760	12.6							
CUBLASLT_MATMUL_TILE_64x768	12.6							
CUBLASLT_MATMUL_TILE_64x8	10.1							
CUBLASLT_MATMUL_TILE_64x80	12.6							
CUBLASLT_MATMUL_TILE_64x88	12.6							
CUBLASLT_MATMUL_TILE_64x96	11.3							
CUBLASLT_MATMUL_TILE_656x64	12.6							
CUBLASLT_MATMUL_TILE_664x64	12.6							
CUBLASLT_MATMUL_TILE_672x64	12.6							
CUBLASLT_MATMUL_TILE_680x64	12.6							
CUBLASLT_MATMUL_TILE_688x64	12.6							
CUBLASLT_MATMUL_TILE_696x64	12.6							
CUBLASLT_MATMUL_TILE_704x16	12.6							
CUBLASLT_MATMUL_TILE_704x24	12.6							
CUBLASLT_MATMUL_TILE_704x32	12.6							
CUBLASLT_MATMUL_TILE_704x40	12.6							
CUBLASLT_MATMUL_TILE_704x48	12.6							
CUBLASLT_MATMUL_TILE_704x56	12.6							
CUBLASLT_MATMUL_TILE_704x64	12.6							
CUBLASLT_MATMUL_TILE_704x72	12.6							
CUBLASLT_MATMUL_TILE_704x8	12.6							
CUBLASLT_MATMUL_TILE_704x80	12.6							
CUBLASLT_MATMUL_TILE_704x88	12.6							
CUBLASLT_MATMUL_TILE_712x64	12.6							
CUBLASLT_MATMUL_TILE_720x64	12.6							
CUBLASLT_MATMUL_TILE_728x64	12.6							
CUBLASLT_MATMUL_TILE_72x128	12.6							
CUBLASLT_MATMUL_TILE_72x192	12.6							
CUBLASLT_MATMUL_TILE_72x256	12.6							
CUBLASLT_MATMUL_TILE_72x320	12.6							
CUBLASLT_MATMUL_TILE_72x384	12.6							
CUBLASLT_MATMUL_TILE_72x448	12.6							
CUBLASLT_MATMUL_TILE_72x512	12.6							
CUBLASLT_MATMUL_TILE_72x576	12.6							
CUBLASLT_MATMUL_TILE_72x64	12.6							
CUBLASLT_MATMUL_TILE_72x640	12.6							
CUBLASLT_MATMUL_TILE_736x64	12.6							
CUBLASLT_MATMUL_TILE_744x64	12.6							

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Table 3 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C
CUBLASLT_MATMUL_TILE_752x64	12.6							
CUBLASLT_MATMUL_TILE_760x64	12.6							
CUBLASLT_MATMUL_TILE_768x16	12.6							
CUBLASLT_MATMUL_TILE_768x24	12.6							
CUBLASLT_MATMUL_TILE_768x32	12.6							
CUBLASLT_MATMUL_TILE_768x40	12.6							
CUBLASLT_MATMUL_TILE_768x48	12.6							
CUBLASLT_MATMUL_TILE_768x56	12.6							
CUBLASLT_MATMUL_TILE_768x64	12.6							
CUBLASLT_MATMUL_TILE_768x72	12.6							
CUBLASLT_MATMUL_TILE_768x8	12.6							
CUBLASLT_MATMUL_TILE_768x80	12.6							
CUBLASLT_MATMUL_TILE_80x128	12.6							
CUBLASLT_MATMUL_TILE_80x192	12.6							
CUBLASLT_MATMUL_TILE_80x256	12.6							
CUBLASLT_MATMUL_TILE_80x320	12.6							
CUBLASLT_MATMUL_TILE_80x384	12.6							
CUBLASLT_MATMUL_TILE_80x448	12.6							
CUBLASLT_MATMUL_TILE_80x512	12.6							
CUBLASLT_MATMUL_TILE_80x576	12.6							
CUBLASLT_MATMUL_TILE_80x64	12.6							
CUBLASLT_MATMUL_TILE_88x128	12.6							
CUBLASLT_MATMUL_TILE_88x192	12.6							
CUBLASLT_MATMUL_TILE_88x256	12.6							
CUBLASLT_MATMUL_TILE_88x320	12.6							
CUBLASLT_MATMUL_TILE_88x384	12.6							
CUBLASLT_MATMUL_TILE_88x448	12.6							
CUBLASLT_MATMUL_TILE_88x512	12.6							
CUBLASLT_MATMUL_TILE_88x64	12.6							
CUBLASLT_MATMUL_TILE_8x128	12.6							
CUBLASLT_MATMUL_TILE_8x16	10.1							
CUBLASLT_MATMUL_TILE_8x192	12.6							
CUBLASLT_MATMUL_TILE_8x256	12.6							
CUBLASLT_MATMUL_TILE_8x32	10.1							
CUBLASLT_MATMUL_TILE_8x320	12.6							
CUBLASLT_MATMUL_TILE_8x384	12.6							
CUBLASLT_MATMUL_TILE_8x448	12.6							
CUBLASLT_MATMUL_TILE_8x512	12.6							
CUBLASLT_MATMUL_TILE_8x576	12.6							
CUBLASLT_MATMUL_TILE_8x64	10.1							
CUBLASLT_MATMUL_TILE_8x640	12.6							
CUBLASLT_MATMUL_TILE_8x704	12.6							
CUBLASLT_MATMUL_TILE_8x768	12.6							
CUBLASLT_MATMUL_TILE_8x8	10.1							
CUBLASLT_MATMUL_TILE_96x128	11.3							
CUBLASLT_MATMUL_TILE_96x192	12.6							
CUBLASLT_MATMUL_TILE_96x256	12.6							
CUBLASLT_MATMUL_TILE_96x320	12.6							
CUBLASLT_MATMUL_TILE_96x384	12.6							
CUBLASLT_MATMUL_TILE_96x448	12.6							

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Table 3 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C
CUBLASLT_MATMUL_TILE_96x512	12.6							
CUBLASLT_MATMUL_TILE_96x64	11.3							
CUBLASLT_MATMUL_TILE_END	10.1							
CUBLASLT_MATMUL_TILE_UNDEFINED	10.1							
CUBLASLT_MATRIX_LAYOUT_BATCH_COUNT	10.1							
CUBLASLT_MATRIX_LAYOUT_BATCH_MODE	12.9							
CUBLASLT_MATRIX_LAYOUT_COLS	10.1							
CUBLASLT_MATRIX_LAYOUT_LD	10.1							
CUBLASLT_MATRIX_LAYOUT_ORDER	10.1							
CUBLASLT_MATRIX_LAYOUT_PLANE_OFFSET	10.1							
CUBLASLT_MATRIX_LAYOUT_ROWS	10.1							
CUBLASLT_MATRIX_LAYOUT_STRIDED_BATCH_OFFSET	10.1							
CUBLASLT_MATRIX_LAYOUT_TYPE	10.1							
CUBLASLT_MATRIX_TRANSFORM_DESC_POINTER_MODE	10.1							
CUBLASLT_MATRIX_TRANSFORM_DESC_SCALE_TYPE	10.1							
CUBLASLT_MATRIX_TRANSFORM_DESC_TRANSA	10.1							
CUBLASLT_MATRIX_TRANSFORM_DESC_TRANSB	10.1							
CUBLASLT_NUMERICAL_IMPL_FLAGS_ACCUMULATOR_16F	11.0							
CUBLASLT_NUMERICAL_IMPL_FLAGS_ACCUMULATOR_32F	11.0							
CUBLASLT_NUMERICAL_IMPL_FLAGS_ACCUMULATOR_32I	11.0							
CUBLASLT_NUMERICAL_IMPL_FLAGS_ACCUMULATOR_64F	11.0							
CUBLASLT_NUMERICAL_IMPL_FLAGS_ACCUMULATOR_TYPE_MASK	11.0							
CUBLASLT_NUMERICAL_IMPL_FLAGS_DMMA	11.0							
CUBLASLT_NUMERICAL_IMPL_FLAGS_FMA	11.0							
CUBLASLT_NUMERICAL_IMPL_FLAGS_GAUSSIAN	11.0							
CUBLASLT_NUMERICAL_IMPL_FLAGS_HMMA	11.0							
CUBLASLT_NUMERICAL_IMPL_FLAGS_IMMA	11.0							
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_16BF	11.0							
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_16F	11.0							
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_32F	11.0							
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_64F	11.0							
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_8F_E4M3	11.8							
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_8F_E5M2	11.8							
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_8I	11.0							
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_TF32	11.0							
CUBLASLT_NUMERICAL_IMPL_FLAGS_OP_INPUT_TYPE_MASK	11.0							
CUBLASLT_NUMERICAL_IMPL_FLAGS_OP_TYPE_MASK	11.0							
CUBLASLT_NUMERICAL_IMPL_FLAGS_TENSOR_OP_MASK	11.0							
CUBLASLT_ORDER_COL	10.1							
CUBLASLT_ORDER_COL32	10.1							
CUBLASLT_ORDER_COL32_2R_4R4	11.0							
CUBLASLT_ORDER_COL4_4R2_8C	10.1							
CUBLASLT_ORDER_ROW	10.1							
CUBLASLT_POINTER_MODE_ALPHA_DEVICE_VECTOR_BETA_HOST	11.4							
CUBLASLT_POINTER_MODE_ALPHA_DEVICE_VECTOR_BETA_ZERO	10.1							
CUBLASLT_POINTER_MODE_DEVICE								
CUBLASLT_POINTER_MODE_DEVICE_VECTOR	10.1							
CUBLASLT_POINTER_MODE_HOST	10.1							
CUBLASLT_POINTER_MODE_MASK_ALPHA_DEVICE_VECTOR_BETA_HOST	11.4							
CUBLASLT_POINTER_MODE_MASK_ALPHA_DEVICE_VECTOR_BETA_ZERO	10.1							

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Table 3 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C
CUBLASLT_POINTER_MODE_MASK_DEVICE	10.1							
CUBLASLT_POINTER_MODE_MASK_DEVICE_VECTOR	10.1							
CUBLASLT_POINTER_MODE_MASK_HOST	10.1							
CUBLASLT_REDUCTION_SCHEME_COMPUTE_TYPE	10.1							
CUBLASLT_REDUCTION_SCHEME_INPLACE	10.1							
CUBLASLT_REDUCTION_SCHEME_MASK	10.1							
CUBLASLT_REDUCTION_SCHEME_NONE	10.1							
CUBLASLT_REDUCTION_SCHEME_OUTPUT_TYPE	10.1							
CUBLASLT_SEARCH_BEST_FIT	10.1							
CUBLASLT_SEARCH_LIMITED_BY_ALGO_ID	10.1							
CUBLASLT_SEARCH_RESERVED_02	11.0							
CUBLASLT_SEARCH_RESERVED_03	11.0							
CUBLASLT_SEARCH_RESERVED_04	11.0							
CUBLASLT_SEARCH_RESERVED_05	11.0							
CUBLASLT_SEARCH_RESERVED_06	12.6							
CUBLASLT_SEARCH_RESERVED_07	12.6							
CUBLASLT_SEARCH_RESERVED_08	12.6							
CUBLASLT_SEARCH_RESERVED_09	12.6							
cublasLtBatchMode_t	12.9							
cublasLtClusterShape_t	11.8							
cublasLtContext	10.1							
cublasLtEmulationDescAttributes_t	13.0							
cublasLtEmulationDescOpaque_t	13.0							
cublasLtEmulationDesc_t	13.0							
cublasLtEpilogue_t	10.1							
cublasLtHandle_t	10.1							
cublasLtIntegerWidth_t	13.1							
cublasLtLoggerCallback_t	11.0							
cublasLtMatmulAlgoCapAttributes_t	10.1							
cublasLtMatmulAlgoConfigAttributes_t	10.1							
cublasLtMatmulAlgo_t	10.1							
cublasLtMatmulDescAttributes_t	10.1							
cublasLtMatmulDescOpaque_t	11.0							
cublasLtMatmulDesc_t	10.1							
cublasLtMatmulHeuristicResult_t	10.1							
cublasLtMatmulInnerShape_t	11.8							
cublasLtMatmulMatrixScale_t	12.8							
cublasLtMatmulPreferenceAttributes_t	10.1							
cublasLtMatmulPreferenceOpaque_t	11.0		13.1					
cublasLtMatmulPreference_t	10.1							
cublasLtMatmulSearch_t	10.1							
cublasLtMatmulStages_t	11.0							
cublasLtMatmulTile_t	10.1							
cublasLtMatrixLayoutAttribute_t	10.1							
cublasLtMatrixLayoutOpaque_t	11.0		13.1					
cublasLtMatrixLayoutStruct	10.1			10.2				
cublasLtMatrixLayout_t	10.1							
cublasLtMatrixTransformDescAttributes_t	10.1							
cublasLtMatrixTransformDescOpaque_t	11.0							
cublasLtMatrixTransformDesc_t	10.1							

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Table 3 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C
cublasLtNumericalImplFlags_t	11.0							
cublasLtOrder_t	10.1							
cublasLtPointerModeMask_t	10.1							
cublasLtPointerMode_t	10.1							
cublasLtReductionScheme_t	10.1							

11.1.4 4. CUBLAS Helper Function Reference

CUDA	A	D	C	R	ROC	A
cublasAlloc						
cublasCreate					rocblas_create_handle	1.5.0
cublasCreate_v2					rocblas_create_handle	1.5.0
cublasDestroy					rocblas_destroy_handle	1.5.0
cublasDestroy_v2					rocblas_destroy_handle	1.5.0
cublasFree						
cublasGetAtomicsMode					rocblas_get_atomics_mode	3.8.0
cublasGetCudartVersion	10.1					
cublasGetEmulationSpecialValuesSupport	13.0					
cublasGetEmulationStrategy	12.9					
cublasGetError						
cublasGetFixedPointEmulationMantissaBitCountPointer	13.0					
cublasGetFixedPointEmulationMantissaBitOffset	13.0					
cublasGetFixedPointEmulationMantissaControl	13.0					
cublasGetFixedPointEmulationMaxMantissaBitCount	13.0					
cublasGetLoggerCallback	9.2					
cublasGetMathMode	9.0				rocblas_get_math_mode	5.7.0
cublasGetMatrix					rocblas_get_matrix	1.6.0
cublasGetMatrixAsync					rocblas_get_matrix_async	3.5.0
cublasGetMatrixAsync_64	12.0					
cublasGetMatrix_64	12.0					
cublasGetPointerMode					rocblas_get_pointer_mode	1.6.0
cublasGetPointerMode_v2					rocblas_get_pointer_mode	1.6.0
cublasGetProperty						
cublasGetSmCountTarget	11.3					
cublasGetStatusName	11.4					
cublasGetStatusString	11.4				rocblas_status_to_string	3.5.0
cublasGetStream					rocblas_get_stream	1.5.0
cublasGetStream_v2					rocblas_get_stream	1.5.0
cublasGetVector					rocblas_get_vector	1.6.0
cublasGetVectorAsync					rocblas_get_vector_async	3.5.0
cublasGetVectorAsync_64	12.0					
cublasGetVector_64	12.0					
cublasGetVersion						
cublasGetVersion_v2						
cublasInit					rocblas_initialize	3.5.0
cublasLogCallback	9.2					
cublasLoggerConfigure	9.2					
cublasMigrateComputeType	11.0					

cont

Table 4 – continued from previous page

CUDA	A	D	C	R	ROC	A
cublasSetAtomicsMode					rocblas_set_atomics_mode	3.8.0
cublasSetEmulationSpecialValuesSupport	13.0					
cublasSetEmulationStrategy	12.9					
cublasSetFixedPointEmulationMantissaBitCountPointer	13.0					
cublasSetFixedPointEmulationMantissaBitOffset	13.0					
cublasSetFixedPointEmulationMantissaControl	13.0					
cublasSetFixedPointEmulationMaxMantissaBitCount	13.0					
cublasSetKernelStream						
cublasSetLoggerCallback	9.2					
cublasSetMathMode	9.0				rocblas_set_math_mode	5.7.0
cublasSetMatrix					rocblas_set_matrix	1.6.0
cublasSetMatrixAsync					rocblas_set_matrix_async	3.5.0
cublasSetMatrixAsync_64	12.0					
cublasSetMatrix_64	12.0					
cublasSetPointerMode					rocblas_set_pointer_mode	1.6.0
cublasSetPointerMode_v2					rocblas_set_pointer_mode	1.6.0
cublasSetSmCountTarget	11.3					
cublasSetStream					rocblas_set_stream	1.5.0
cublasSetStream_v2					rocblas_set_stream	1.5.0
cublasSetVector					rocblas_set_vector	1.6.0
cublasSetVectorAsync					rocblas_set_vector_async	3.5.0
cublasSetVectorAsync_64	12.0					
cublasSetVector_64	12.0					
cublasSetWorkspace	11.0					
cublasSetWorkspace_v2	11.0					
cublasShutdown						
cublasXerbla						

11.1.5 5. CUBLAS Level-1 Function Reference

CUDA	A	D	C	R	ROC	A	D	C	R	U	E
cublasCaxpy					rocblas_caxpy	1.5.0					
cublasCaxpy_64	12.0				rocblas_caxpy_64	6.1.0					
cublasCaxpy_v2					rocblas_caxpy	1.5.0					
cublasCaxpy_v2_64	12.0				rocblas_caxpy_64	6.1.0					
cublasCcopy					rocblas_ccopy	1.5.0					
cublasCcopy_64	12.0				rocblas_ccopy_64	6.1.0					
cublasCcopy_v2					rocblas_ccopy	1.5.0					
cublasCcopy_v2_64	12.0				rocblas_ccopy_64	6.1.0					
cublasCdotc					rocblas_cdotc	3.5.0					
cublasCdotc_64	12.0				rocblas_cdotc_64	6.1.0					
cublasCdotc_v2					rocblas_cdotc	3.5.0					
cublasCdotc_v2_64	12.0				rocblas_cdotc_64	6.1.0					
cublasCdotu					rocblas_cdotu	1.5.0					
cublasCdotu_64	12.0				rocblas_cdotu_64	6.1.0					
cublasCdotu_v2					rocblas_cdotu	1.5.0					
cublasCdotu_v2_64	12.0				rocblas_cdotu_64	6.1.0					
cublasCrot					rocblas_crot	3.5.0					

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Table 5 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C	R	U	E
cublasCrot_64	12.0				rocblas_crot_64	6.1.0					
cublasCrot_v2					rocblas_crot	3.5.0					
cublasCrot_v2_64	12.0				rocblas_crot_64	6.1.0					
cublasCrotg					rocblas_crotg	3.5.0					
cublasCrotg_v2					rocblas_crotg	3.5.0					
cublasCscal					rocblas_cscal	1.5.0					
cublasCscal_64	12.0				rocblas_cscal_64	6.1.0					
cublasCscal_v2					rocblas_cscal	1.5.0					
cublasCscal_v2_64	12.0				rocblas_cscal_64	6.1.0					
cublasCsrot					rocblas_csrot	3.5.0					
cublasCsrot_64	12.0				rocblas_csrot_64	6.1.0					
cublasCsrot_v2					rocblas_csrot	3.5.0					
cublasCsrot_v2_64	12.0				rocblas_csrot_64	6.1.0					
cublasCsscal					rocblas_csscal	3.5.0					
cublasCsscal_64	12.0				rocblas_csscal_64	6.1.0					
cublasCsscal_v2					rocblas_csscal	3.5.0					
cublasCsscal_v2_64	12.0				rocblas_csscal_64	6.1.0					
cublasCswap					rocblas_cswap	1.5.0					
cublasCswap_64	12.0				rocblas_cswap_64	6.1.0					
cublasCswap_v2					rocblas_cswap	1.5.0					
cublasCswap_v2_64	12.0				rocblas_cswap_64	6.1.0					
cublasDasum					rocblas_dasum	1.5.0					
cublasDasum_64	12.0				rocblas_dasum_64	6.1.0					
cublasDasum_v2					rocblas_dasum	1.5.0					
cublasDasum_v2_64	12.0				rocblas_dasum_64	6.1.0					
cublasDaxpy					rocblas_daxpy	1.5.0					
cublasDaxpy_64	12.0				rocblas_daxpy_64	6.1.0					
cublasDaxpy_v2					rocblas_daxpy	1.5.0					
cublasDaxpy_v2_64	12.0				rocblas_daxpy_64	6.1.0					
cublasDcopy					rocblas_dcopy	1.5.0					
cublasDcopy_64	12.0				rocblas_dcopy_64	6.1.0					
cublasDcopy_v2					rocblas_dcopy	1.5.0					
cublasDcopy_v2_64	12.0				rocblas_dcopy_64	6.1.0					
cublasDdot					rocblas_ddot	1.5.0					
cublasDdot_64	12.0				rocblas_ddot_64	6.1.0					
cublasDdot_v2					rocblas_ddot	1.5.0					
cublasDdot_v2_64	12.0				rocblas_ddot_64	6.1.0					
cublasDnrm2					rocblas_dnrm2	1.5.0					
cublasDnrm2_64	12.0				rocblas_dnrm2_64	6.1.0					
cublasDnrm2_v2					rocblas_dnrm2	1.5.0					
cublasDnrm2_v2_64	12.0				rocblas_dnrm2_64	6.1.0					
cublasDrot					rocblas_drot	3.5.0					
cublasDrot_64	12.0				rocblas_drot_64	6.1.0					
cublasDrot_v2					rocblas_drot	3.5.0					
cublasDrot_v2_64	12.0				rocblas_drot_64	6.1.0					
cublasDrotg					rocblas_drotg	3.5.0					
cublasDrotg_v2					rocblas_drotg	3.5.0					
cublasDrotm					rocblas_drotm	3.5.0					
cublasDrotm_64	12.0				rocblas_drotm_64	6.1.0					
cublasDrotm_v2					rocblas_drotm	3.5.0					

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Table 5 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C	R	U	E
cublasDrotm_v2_64	12.0				rocblas_drotm_64	6.1.0					
cublasDrotmg					rocblas_drotmg	3.5.0					
cublasDrotmg_v2					rocblas_drotmg	3.5.0					
cublasDscal					rocblas_dscal	1.5.0					
cublasDscal_64	12.0				rocblas_dscal_64	6.1.0					
cublasDscal_v2					rocblas_dscal	1.5.0					
cublasDscal_v2_64	12.0				rocblas_dscal_64	6.1.0					
cublasDswap					rocblas_dswap	1.5.0					
cublasDswap_64	12.0				rocblas_dswap_64	6.1.0					
cublasDswap_v2					rocblas_dswap	1.5.0					
cublasDswap_v2_64	12.0				rocblas_dswap_64	6.1.0					
cublasDzasum					rocblas_dzasum	1.5.0					
cublasDzasum_64	12.0				rocblas_dzasum_64	6.1.0					
cublasDzasum_v2					rocblas_dzasum	1.5.0					
cublasDzasum_v2_64	12.0				rocblas_dzasum_64	6.1.0					
cublasDznrm2					rocblas_dznrm2	1.5.0					
cublasDznrm2_64	12.0				rocblas_dznrm2_64	6.1.0					
cublasDznrm2_v2					rocblas_dznrm2	1.5.0					
cublasDznrm2_v2_64	12.0				rocblas_dznrm2_64	6.1.0					
cublasIcamax					rocblas_icamax	3.5.0					
cublasIcamax_64	12.0				rocblas_icamax_64	6.1.0					
cublasIcamax_v2					rocblas_icamax	3.5.0					
cublasIcamax_v2_64	12.0				rocblas_icamax_64	6.1.0					
cublasIcamin					rocblas_icamin	3.5.0					
cublasIcamin_64	12.0				rocblas_icamin_64	6.1.0					
cublasIcamin_v2					rocblas_icamin	3.5.0					
cublasIcamin_v2_64	12.0				rocblas_icamin_64	6.1.0					
cublasIdamax					rocblas_idamax	1.6.4					
cublasIdamax_64	12.0				rocblas_idamax_64	6.1.0					
cublasIdamax_v2					rocblas_idamax	1.6.4					
cublasIdamax_v2_64	12.0				rocblas_idamax_64	6.1.0					
cublasIdamin					rocblas_idamin	1.6.4					
cublasIdamin_64	12.0				rocblas_idamin_64	6.1.0					
cublasIdamin_v2					rocblas_idamin	1.6.4					
cublasIdamin_v2_64	12.0				rocblas_idamin_64	6.1.0					
cublasIsamax					rocblas_isamax	1.6.4					
cublasIsamax_64	12.0				rocblas_isamax_64	6.1.0					
cublasIsamax_v2					rocblas_isamax	1.6.4					
cublasIsamax_v2_64	12.0				rocblas_isamax_64	6.1.0					
cublasIsamin					rocblas_isamin	1.6.4					
cublasIsamin_64	12.0				rocblas_isamin_64	6.1.0					
cublasIsamin_v2					rocblas_isamin	1.6.4					
cublasIsamin_v2_64	12.0				rocblas_isamin_64	6.1.0					
cublasIzamax					rocblas_izamax	3.5.0					
cublasIzamax_64	12.0				rocblas_izamax_64	6.1.0					
cublasIzamax_v2					rocblas_izamax	3.5.0					
cublasIzamax_v2_64	12.0				rocblas_izamax_64	6.1.0					
cublasIzamin					rocblas_izamin	3.5.0					
cublasIzamin_64	12.0				rocblas_izamin_64	6.1.0					
cublasIzamin_v2					rocblas_izamin	3.5.0					

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Table 5 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C	R	U	E
cublasIzamin_v2_64	12.0				rocblas_izamin_64	6.1.0					
cublasNrm2Ex	8.0				rocblas_nrm2_ex	4.1.0					
cublasNrm2Ex_64	12.0				rocblas_nrm2_ex_64	6.1.0					
cublasSasum					rocblas_sasum	1.5.0					
cublasSasum_64	12.0				rocblas_sasum_64	6.1.0					
cublasSasum_v2					rocblas_sasum	1.5.0					
cublasSasum_v2_64	12.0				rocblas_sasum_64	6.1.0					
cublasSaxpy					rocblas_saxpy	1.5.0					
cublasSaxpy_64	12.0				rocblas_saxpy_64	6.1.0					
cublasSaxpy_v2					rocblas_saxpy	1.5.0					
cublasSaxpy_v2_64	12.0				rocblas_saxpy_64	6.1.0					
cublasScasum					rocblas_scasum	1.5.0					
cublasScasum_64	12.0				rocblas_scasum_64	6.1.0					
cublasScasum_v2					rocblas_scasum	1.5.0					
cublasScasum_v2_64	12.0				rocblas_scasum_64	6.1.0					
cublasScnrm2					rocblas_scnrm2	1.5.0					
cublasScnrm2_64	12.0				rocblas_scnrm2_64	6.1.0					
cublasScnrm2_v2					rocblas_scnrm2	1.5.0					
cublasScnrm2_v2_64	12.0				rocblas_scnrm2_64	6.1.0					
cublasScopy					rocblas_scopy	1.5.0					
cublasScopy_64	12.0				rocblas_scopy_64	6.1.0					
cublasScopy_v2					rocblas_scopy	1.5.0					
cublasScopy_v2_64	12.0				rocblas_scopy_64	6.1.0					
cublasSdot					rocblas_sdot	1.5.0					
cublasSdot_64	12.0				rocblas_sdot_64	6.1.0					
cublasSdot_v2					rocblas_sdot	1.5.0					
cublasSdot_v2_64	12.0				rocblas_sdot_64	6.1.0					
cublasSnrm2					rocblas_snrm2	1.5.0					
cublasSnrm2_64	12.0				rocblas_snrm2_64	6.1.0					
cublasSnrm2_v2					rocblas_snrm2	1.5.0					
cublasSnrm2_v2_64	12.0				rocblas_snrm2_64	6.1.0					
cublasSrot					rocblas_srot	3.5.0					
cublasSrot_64	12.0				rocblas_srot_64	6.1.0					
cublasSrot_v2					rocblas_srot	3.5.0					
cublasSrot_v2_64	12.0				rocblas_srot_64	6.1.0					
cublasSrotg					rocblas_srotg	3.5.0					
cublasSrotg_v2					rocblas_srotg	3.5.0					
cublasSrotm					rocblas_srotm	3.5.0					
cublasSrotm_64	12.0				rocblas_srotm_64	6.1.0					
cublasSrotm_v2					rocblas_srotm	3.5.0					
cublasSrotm_v2_64	12.0				rocblas_srotm_64	6.1.0					
cublasSrotmg					rocblas_srotmg	3.5.0					
cublasSrotmg_v2					rocblas_srotmg	3.5.0					
cublasSscal					rocblas_sscal	1.5.0					
cublasSscal_64	12.0				rocblas_sscal_64	6.1.0					
cublasSscal_v2					rocblas_sscal	1.5.0					
cublasSscal_v2_64	12.0				rocblas_sscal_64	6.1.0					
cublasSswap					rocblas_sswap	1.5.0					
cublasSswap_64	12.0				rocblas_sswap_64	6.1.0					
cublasSswap_v2					rocblas_sswap	1.5.0					

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Table 5 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C	R	U	E
cublasSswap_v2_64	12.0				rocblas_sswap_64	6.1.0					
cublasZaxpy					rocblas_zaxpy	1.5.0					
cublasZaxpy_64	12.0				rocblas_zaxpy_64	6.1.0					
cublasZaxpy_v2					rocblas_zaxpy	1.5.0					
cublasZaxpy_v2_64	12.0				rocblas_zaxpy_64	6.1.0					
cublasZcopy					rocblas_zcopy	1.5.0					
cublasZcopy_64	12.0				rocblas_zcopy_64	6.1.0					
cublasZcopy_v2					rocblas_zcopy	1.5.0					
cublasZcopy_v2_64	12.0				rocblas_zcopy_64	6.1.0					
cublasZdotc					rocblas_zdotc	3.5.0					
cublasZdotc_64	12.0				rocblas_zdotc_64	6.1.0					
cublasZdotc_v2					rocblas_zdotc	3.5.0					
cublasZdotc_v2_64	12.0				rocblas_zdotc_64	6.1.0					
cublasZdotu					rocblas_zdotu	1.5.0					
cublasZdotu_64	12.0				rocblas_zdotu_64	6.1.0					
cublasZdotu_v2					rocblas_zdotu	1.5.0					
cublasZdotu_v2_64	12.0				rocblas_zdotu_64	6.1.0					
cublasZdrot					rocblas_zdrot	3.5.0					
cublasZdrot_64	12.0				rocblas_zdrot_64	6.1.0					
cublasZdrot_v2					rocblas_zdrot	3.5.0					
cublasZdrot_v2_64	12.0				rocblas_zdrot_64	6.1.0					
cublasZdscal					rocblas_zdscal	3.5.0					
cublasZdscal_64	12.0				rocblas_zdscal_64	6.1.0					
cublasZdscal_v2					rocblas_zdscal	3.5.0					
cublasZdscal_v2_64	12.0				rocblas_zdscal_64	6.1.0					
cublasZrot					rocblas_zrot	3.5.0					
cublasZrot_64	12.0				rocblas_zrot_64	6.1.0					
cublasZrot_v2					rocblas_zrot	3.5.0					
cublasZrot_v2_64	12.0				rocblas_zrot_64	6.1.0					
cublasZrotg					rocblas_zrotg	3.5.0					
cublasZrotg_v2					rocblas_zrotg	3.5.0					
cublasZscal					rocblas_zscal	1.5.0					
cublasZscal_64	12.0				rocblas_zscal_64	6.1.0					
cublasZscal_v2					rocblas_zscal	1.5.0					
cublasZscal_v2_64	12.0				rocblas_zscal_64	6.1.0					
cublasZswap					rocblas_zswap	1.5.0					
cublasZswap_64	12.0				rocblas_zswap_64	6.1.0					
cublasZswap_v2					rocblas_zswap	1.5.0					
cublasZswap_v2_64	12.0				rocblas_zswap_64	6.1.0					

11.1.6 6. CUBLAS Level-2 Function Reference

CUDA	A	D	C	R	ROC	A	D	C	R	U	E
cublasCgbmv					rocblas_cgbmv	3.5.0					
cublasCgbmv_64	12.0				rocblas_cgbmv_64	6.2.0					
cublasCgbmv_v2					rocblas_cgbmv	3.5.0					
cublasCgbmv_v2_64	12.0				rocblas_cgbmv_64	6.2.0					
cublasCgemv					rocblas_cgemv	1.5.0					

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Table 6 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C	R	U	E
cublasCgemv_64	12.0				rocblas_cgemv_64	6.2.0					
cublasCgemv_v2					rocblas_cgemv	1.5.0					
cublasCgemv_v2_64	12.0				rocblas_cgemv_64	6.2.0					
cublasCgerc					rocblas_cgerc	3.5.0					
cublasCgerc_64	12.0				rocblas_cgerc_64	6.2.0					
cublasCgerc_v2					rocblas_cgerc	3.5.0					
cublasCgerc_v2_64	12.0				rocblas_cgerc_64	6.2.0					
cublasCgeru					rocblas_cgeru	3.5.0					
cublasCgeru_64	12.0				rocblas_cgeru_64	6.2.0					
cublasCgeru_v2					rocblas_cgeru	3.5.0					
cublasCgeru_v2_64	12.0				rocblas_cgeru_64	6.2.0					
cublasChbmv					rocblas_chbmv	3.5.0					
cublasChbmv_64	12.0				rocblas_chbmv_64	6.2.0					
cublasChbmv_v2					rocblas_chbmv	3.5.0					
cublasChbmv_v2_64	12.0				rocblas_chbmv_64	6.2.0					
cublasChemv					rocblas_chemv	1.5.0					
cublasChemv_64	12.0				rocblas_chemv_64	6.2.0					
cublasChemv_v2					rocblas_chemv	1.5.0					
cublasChemv_v2_64	12.0				rocblas_chemv_64	6.2.0					
cublasCher					rocblas_cher	3.5.0					
cublasCher2					rocblas_cher2	3.5.0					
cublasCher2_64	12.0				rocblas_cher2_64	6.2.0					
cublasCher2_v2					rocblas_cher2	3.5.0					
cublasCher2_v2_64	12.0				rocblas_cher2_64	6.2.0					
cublasCher_64	12.0				rocblas_cher_64	6.2.0					
cublasCher_v2					rocblas_cher	3.5.0					
cublasCher_v2_64	12.0				rocblas_cher_64	6.2.0					
cublasChpmv					rocblas_chpmv	3.5.0					
cublasChpmv_64	12.0				rocblas_chpmv_64	6.2.0					
cublasChpmv_v2					rocblas_chpmv	3.5.0					
cublasChpmv_v2_64	12.0				rocblas_chpmv_64	6.2.0					
cublasChpr					rocblas_chpr	3.5.0					
cublasChpr2					rocblas_chpr2	3.5.0					
cublasChpr2_64	12.0				rocblas_chpr2_64	6.2.0					
cublasChpr2_v2					rocblas_chpr2	3.5.0					
cublasChpr2_v2_64	12.0				rocblas_chpr2_64	6.2.0					
cublasChpr_64	12.0				rocblas_chpr_64	6.2.0					
cublasChpr_v2					rocblas_chpr	3.5.0					
cublasChpr_v2_64	12.0				rocblas_chpr_64	6.2.0					
cublasCsymv					rocblas_csymv	3.5.0					
cublasCsymv_64	12.0				rocblas_csymv_64	6.2.0					
cublasCsymv_v2					rocblas_csymv	3.5.0					
cublasCsymv_v2_64	12.0				rocblas_csymv_64	6.2.0					
cublasCsyr					rocblas_csyr	1.7.1					
cublasCsyr2					rocblas_csyr2	3.5.0					
cublasCsyr2_64	12.0				rocblas_csyr2_64	6.2.0					
cublasCsyr2_v2					rocblas_csyr2	3.5.0					
cublasCsyr2_v2_64	12.0				rocblas_csyr2_64	6.2.0					
cublasCsyr_64	12.0				rocblas_csyr_64	6.2.0					
cublasCsyr_v2					rocblas_csyr	1.7.1					

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Table 6 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C	R	U	E
cublasCsyr_v2_64	12.0				rocblas_csyr_64	6.2.0					
cublasCtbmv					rocblas_ctbmv	3.5.0					
cublasCtbmv_64	12.0				rocblas_ctbmv_64	6.2.0					
cublasCtbmv_v2					rocblas_ctbmv	3.5.0					
cublasCtbmv_v2_64	12.0				rocblas_ctbmv_64	6.2.0					
cublasCtbsv					rocblas_ctbsv	3.5.0					
cublasCtbsv_64	12.0				rocblas_ctbsv_64	6.2.0					
cublasCtbsv_v2					rocblas_ctbsv	3.5.0					
cublasCtbsv_v2_64	12.0				rocblas_ctbsv_64	6.2.0					
cublasCtpmv					rocblas_ctpmv	3.5.0					
cublasCtpmv_64	12.0				rocblas_ctpmv_64	6.2.0					
cublasCtpmv_v2					rocblas_ctpmv	3.5.0					
cublasCtpmv_v2_64	12.0				rocblas_ctpmv_64	6.2.0					
cublasCtpsv					rocblas_ctpsv	3.5.0					
cublasCtpsv_64	12.0				rocblas_ctpsv_64	6.2.0					
cublasCtpsv_v2					rocblas_ctpsv	3.5.0					
cublasCtpsv_v2_64	12.0				rocblas_ctpsv_64	6.2.0					
cublasCtrmv					rocblas_ctrmv	3.5.0					
cublasCtrmv_64	12.0				rocblas_ctrmv_64	6.2.0					
cublasCtrmv_v2					rocblas_ctrmv	3.5.0					
cublasCtrmv_v2_64	12.0				rocblas_ctrmv_64	6.2.0					
cublasCtrsv					rocblas_ctrsv	3.5.0					
cublasCtrsv_64	12.0				rocblas_ctrsv_64	6.2.0					
cublasCtrsv_v2					rocblas_ctrsv	3.5.0					
cublasCtrsv_v2_64	12.0				rocblas_ctrsv_64	6.2.0					
cublasDgbmv					rocblas_dgbmv	3.5.0					
cublasDgbmv_64	12.0				rocblas_dgbmv_64	6.2.0					
cublasDgbmv_v2					rocblas_dgbmv	3.5.0					
cublasDgbmv_v2_64	12.0				rocblas_dgbmv_64	6.2.0					
cublasDgemv					rocblas_dgemv	1.5.0					
cublasDgemv_64	12.0				rocblas_dgemv_64	6.2.0					
cublasDgemv_v2					rocblas_dgemv	1.5.0					
cublasDgemv_v2_64	12.0				rocblas_dgemv_64	6.2.0					
cublasDger					rocblas_dger	1.5.0					
cublasDger_64	12.0				rocblas_dger_64	6.2.0					
cublasDger_v2					rocblas_dger	1.5.0					
cublasDger_v2_64	12.0				rocblas_dger_64	6.2.0					
cublasDsbmv					rocblas_dsbmv	3.5.0					
cublasDsbmv_64	12.0				rocblas_dsbmv_64	6.2.0					
cublasDsbmv_v2					rocblas_dsbmv	3.5.0					
cublasDsbmv_v2_64	12.0				rocblas_dsbmv_64	6.2.0					
cublasDspmv					rocblas_dspmv	3.5.0					
cublasDspmv_64	12.0				rocblas_dspmv_64	6.2.0					
cublasDspmv_v2					rocblas_dspmv	3.5.0					
cublasDspmv_v2_64	12.0				rocblas_dspmv_64	6.2.0					
cublasDspr					rocblas_dspr	3.5.0					
cublasDspr2					rocblas_dspr2	3.5.0					
cublasDspr2_64	12.0				rocblas_dspr2_64	6.2.0					
cublasDspr2_v2					rocblas_dspr2	3.5.0					
cublasDspr2_v2_64	12.0				rocblas_dspr2_64	6.2.0					

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Table 6 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C	R	U	E
cublasDspr_64	12.0				rocblas_dspr_64	6.2.0					
cublasDspr_v2					rocblas_dspr	3.5.0					
cublasDspr_v2_64	12.0				rocblas_dspr_64	6.2.0					
cublasDsymv					rocblas_dsymv	1.5.0					
cublasDsymv_64	12.0				rocblas_dsymv_64	6.2.0					
cublasDsymv_v2					rocblas_dsymv	1.5.0					
cublasDsymv_v2_64	12.0				rocblas_dsymv_64	6.2.0					
cublasDsyr					rocblas_dsyr	1.7.1					
cublasDsyr2					rocblas_dsyr2	3.5.0					
cublasDsyr2_64	12.0				rocblas_dsyr2_64	6.2.0					
cublasDsyr2_v2					rocblas_dsyr2	3.5.0					
cublasDsyr2_v2_64	12.0				rocblas_dsyr2_64	6.2.0					
cublasDsyr_64	12.0				rocblas_dsyr_64	6.2.0					
cublasDsyr_v2					rocblas_dsyr	1.7.1					
cublasDsyr_v2_64	12.0				rocblas_dsyr_64	6.2.0					
cublasDtbmv					rocblas_dtbmv	3.5.0					
cublasDtbmv_64	12.0				rocblas_dtbmv_64	6.2.0					
cublasDtbmv_v2					rocblas_dtbmv	3.5.0					
cublasDtbmv_v2_64	12.0				rocblas_dtbmv_64	6.2.0					
cublasDtbsv					rocblas_dtbsv	3.5.0					
cublasDtbsv_64	12.0				rocblas_dtbsv_64	6.2.0					
cublasDtbsv_v2					rocblas_dtbsv	3.5.0					
cublasDtbsv_v2_64	12.0				rocblas_dtbsv_64	6.2.0					
cublasDtpmv					rocblas_dtpmv	3.5.0					
cublasDtpmv_64	12.0				rocblas_dtpmv_64	6.2.0					
cublasDtpmv_v2					rocblas_dtpmv	3.5.0					
cublasDtpmv_v2_64	12.0				rocblas_dtpmv_64	6.2.0					
cublasDtpsv					rocblas_dtpsv	3.5.0					
cublasDtpsv_64	12.0				rocblas_dtpsv_64	6.2.0					
cublasDtpsv_v2					rocblas_dtpsv	3.5.0					
cublasDtpsv_v2_64	12.0				rocblas_dtpsv_64	6.2.0					
cublasDtrmv					rocblas_dtrmv	3.5.0					
cublasDtrmv_64	12.0				rocblas_dtrmv_64	6.2.0					
cublasDtrmv_v2					rocblas_dtrmv	3.5.0					
cublasDtrmv_v2_64	12.0				rocblas_dtrmv_64	6.2.0					
cublasDtrsv					rocblas_dtrsv	3.5.0					
cublasDtrsv_64	12.0				rocblas_dtrsv_64	6.2.0					
cublasDtrsv_v2					rocblas_dtrsv	3.5.0					
cublasDtrsv_v2_64	12.0				rocblas_dtrsv_64	6.2.0					
cublasSgbmv					rocblas_sgbmv	3.5.0					
cublasSgbmv_64	12.0				rocblas_sgbmv_64	6.2.0					
cublasSgbmv_v2					rocblas_sgbmv	3.5.0					
cublasSgbmv_v2_64	12.0				rocblas_sgbmv_64	6.2.0					
cublasSgemv					rocblas_sgemv	1.5.0					
cublasSgemv_64	12.0				rocblas_sgemv_64	6.2.0					
cublasSgemv_v2					rocblas_sgemv	1.5.0					
cublasSgemv_v2_64	12.0				rocblas_sgemv_64	6.2.0					
cublasSger					rocblas_sger	1.5.0					
cublasSger_64	12.0				rocblas_sger_64	6.2.0					
cublasSger_v2					rocblas_sger	1.5.0					

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Table 6 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C	R	U	E
cublasSger_v2_64	12.0				rocblas_sger_64	6.2.0					
cublasSsbmv					rocblas_ssbmv	3.5.0					
cublasSsbmv_64	12.0				rocblas_ssbmv_64	6.2.0					
cublasSsbmv_v2					rocblas_ssbmv	3.5.0					
cublasSsbmv_v2_64	12.0				rocblas_ssbmv_64	6.2.0					
cublasSspmv					rocblas_sspmv	3.5.0					
cublasSspmv_64	12.0				rocblas_sspmv_64	6.2.0					
cublasSspmv_v2					rocblas_sspmv	3.5.0					
cublasSspmv_v2_64	12.0				rocblas_sspmv_64	6.2.0					
cublasSspr					rocblas_sspr	3.5.0					
cublasSspr2					rocblas_sspr2	3.5.0					
cublasSspr2_64	12.0				rocblas_sspr2_64	6.2.0					
cublasSspr2_v2					rocblas_sspr2	3.5.0					
cublasSspr2_v2_64	12.0				rocblas_sspr2_64	6.2.0					
cublasSspr_64	12.0				rocblas_sspr_64	6.2.0					
cublasSspr_v2					rocblas_sspr	3.5.0					
cublasSspr_v2_64	12.0				rocblas_sspr_64	6.2.0					
cublasSsymv					rocblas_ssymv	1.5.0					
cublasSsymv_64	12.0				rocblas_ssymv_64	6.2.0					
cublasSsymv_v2					rocblas_ssymv	1.5.0					
cublasSsymv_v2_64	12.0				rocblas_ssymv_64	6.2.0					
cublasSsyr					rocblas_ssyr	1.7.1					
cublasSsyr2					rocblas_ssyr2	3.5.0					
cublasSsyr2_64	12.0				rocblas_ssyr2_64	6.2.0					
cublasSsyr2_v2					rocblas_ssyr2	3.5.0					
cublasSsyr2_v2_64	12.0				rocblas_ssyr2_64	6.2.0					
cublasSsyr_64	12.0				rocblas_ssyr_64	6.2.0					
cublasSsyr_v2					rocblas_ssyr	1.7.1					
cublasSsyr_v2_64	12.0				rocblas_ssyr_64	6.2.0					
cublasStbmv					rocblas_stbmv	3.5.0					
cublasStbmv_64	12.0				rocblas_stbmv_64	6.2.0					
cublasStbmv_v2					rocblas_stbmv	3.5.0					
cublasStbmv_v2_64	12.0				rocblas_stbmv_64	6.2.0					
cublasStbsv					rocblas_stbsv	3.5.0					
cublasStbsv_64	12.0				rocblas_stbsv_64	6.2.0					
cublasStbsv_v2					rocblas_stbsv	3.5.0					
cublasStbsv_v2_64	12.0				rocblas_stbsv_64	6.2.0					
cublasStpmv					rocblas_stpmv	3.5.0					
cublasStpmv_64	12.0				rocblas_stpmv_64	6.2.0					
cublasStpmv_v2					rocblas_stpmv	3.5.0					
cublasStpmv_v2_64	12.0				rocblas_stpmv_64	6.2.0					
cublasStpsv					rocblas_stpsv	3.5.0					
cublasStpsv_64	12.0				rocblas_stpsv_64	6.2.0					
cublasStpsv_v2					rocblas_stpsv	3.5.0					
cublasStpsv_v2_64	12.0				rocblas_stpsv_64	6.2.0					
cublasStrmv					rocblas_strmv	3.5.0					
cublasStrmv_64	12.0				rocblas_strmv_64	6.2.0					
cublasStrmv_v2					rocblas_strmv	3.5.0					
cublasStrmv_v2_64	12.0				rocblas_strmv_64	6.2.0					
cublasStrsv					rocblas_strsv	3.5.0					

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Table 6 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C	R	U	E
cublasStrsv_64	12.0				rocblas_strsv_64	6.2.0					
cublasStrsv_v2					rocblas_strsv	3.5.0					
cublasStrsv_v2_64	12.0				rocblas_strsv_64	6.2.0					
cublasZgbmv					rocblas_zgbmv	3.5.0					
cublasZgbmv_64	12.0				rocblas_zgbmv_64	6.2.0					
cublasZgbmv_v2					rocblas_zgbmv	3.5.0					
cublasZgbmv_v2_64	12.0				rocblas_zgbmv_64	6.2.0					
cublasZgemv					rocblas_zgemv	1.5.0					
cublasZgemv_64	12.0				rocblas_zgemv_64	6.2.0					
cublasZgemv_v2					rocblas_zgemv	1.5.0					
cublasZgemv_v2_64	12.0				rocblas_zgemv_64	6.2.0					
cublasZgerc					rocblas_zgerc	3.5.0					
cublasZgerc_64	12.0				rocblas_zgerc_64	6.2.0					
cublasZgerc_v2					rocblas_zgerc	3.5.0					
cublasZgerc_v2_64	12.0				rocblas_zgerc_64	6.2.0					
cublasZgeru					rocblas_zgeru	3.5.0					
cublasZgeru_64	12.0				rocblas_zgeru_64	6.2.0					
cublasZgeru_v2					rocblas_zgeru	3.5.0					
cublasZgeru_v2_64	12.0				rocblas_zgeru_64	6.2.0					
cublasZhbmv					rocblas_zhbmv	3.5.0					
cublasZhbmv_64	12.0				rocblas_zhbmv_64	6.2.0					
cublasZhbmv_v2					rocblas_zhbmv	3.5.0					
cublasZhbmv_v2_64	12.0				rocblas_zhbmv_64	6.2.0					
cublasZhemv					rocblas_zhemv	1.5.0					
cublasZhemv_64	12.0				rocblas_zhemv_64	6.2.0					
cublasZhemv_v2					rocblas_zhemv	1.5.0					
cublasZhemv_v2_64	12.0				rocblas_zhemv_64	6.2.0					
cublasZher					rocblas_zher	3.5.0					
cublasZher2					rocblas_zher2	3.5.0					
cublasZher2_64	12.0				rocblas_zher2_64	6.2.0					
cublasZher2_v2					rocblas_zher2	3.5.0					
cublasZher2_v2_64	12.0				rocblas_zher2_64	6.2.0					
cublasZher_64	12.0				rocblas_zher_64	6.2.0					
cublasZher_v2					rocblas_zher	3.5.0					
cublasZher_v2_64	12.0				rocblas_zher_64	6.2.0					
cublasZhpmv					rocblas_zhpmv	3.5.0					
cublasZhpmv_64	12.0				rocblas_zhpmv_64	6.2.0					
cublasZhpmv_v2					rocblas_zhpmv	3.5.0					
cublasZhpmv_v2_64	12.0				rocblas_zhpmv_64	6.2.0					
cublasZhpr					rocblas_zhpr	3.5.0					
cublasZhpr2					rocblas_zhpr2	3.5.0					
cublasZhpr2_64	12.0				rocblas_zhpr2_64	6.2.0					
cublasZhpr2_v2					rocblas_zhpr2	3.5.0					
cublasZhpr2_v2_64	12.0				rocblas_zhpr2_64	6.2.0					
cublasZhpr_64	12.0				rocblas_zhpr_64	6.2.0					
cublasZhpr_v2					rocblas_zhpr	3.5.0					
cublasZhpr_v2_64	12.0				rocblas_zhpr_64	6.2.0					
cublasZsymv					rocblas_zsymv	3.5.0					
cublasZsymv_64	12.0				rocblas_zsymv_64	6.2.0					
cublasZsymv_v2					rocblas_zsymv	3.5.0					

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Table 6 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C	R	U	E
cublasZsymv_v2_64	12.0				rocblas_zsymv_64	6.2.0					
cublasZsyr					rocblas_zsyr	1.7.1					
cublasZsyr2					rocblas_zsyr2	3.5.0					
cublasZsyr2_64	12.0				rocblas_zsyr2_64	6.2.0					
cublasZsyr2_v2					rocblas_zsyr2	3.5.0					
cublasZsyr2_v2_64	12.0				rocblas_zsyr2_64	6.2.0					
cublasZsyr_64	12.0				rocblas_zsyr_64	6.2.0					
cublasZsyr_v2					rocblas_zsyr	1.7.1					
cublasZsyr_v2_64	12.0				rocblas_zsyr_64	6.2.0					
cublasZtbmv					rocblas_ztbmv	3.5.0					
cublasZtbmv_64	12.0				rocblas_ztbmv_64	6.2.0					
cublasZtbmv_v2					rocblas_ztbmv	3.5.0					
cublasZtbmv_v2_64	12.0				rocblas_ztbmv_64	6.2.0					
cublasZtbsv					rocblas_ztbsv	3.5.0					
cublasZtbsv_64	12.0				rocblas_ztbsv_64	6.2.0					
cublasZtbsv_v2					rocblas_ztbsv	3.5.0					
cublasZtbsv_v2_64	12.0				rocblas_ztbsv_64	6.2.0					
cublasZtpmv					rocblas_ztpmv	3.5.0					
cublasZtpmv_64	12.0				rocblas_ztpmv_64	6.2.0					
cublasZtpmv_v2					rocblas_ztpmv	3.5.0					
cublasZtpmv_v2_64	12.0				rocblas_ztpmv_64	6.2.0					
cublasZtpsv					rocblas_ztpsv	3.5.0					
cublasZtpsv_64	12.0				rocblas_ztpsv_64	6.2.0					
cublasZtpsv_v2					rocblas_ztpsv	3.5.0					
cublasZtpsv_v2_64	12.0				rocblas_ztpsv_64	6.2.0					
cublasZtrmv					rocblas_ztrmv	3.5.0					
cublasZtrmv_64	12.0				rocblas_ztrmv_64	6.2.0					
cublasZtrmv_v2					rocblas_ztrmv	3.5.0					
cublasZtrmv_v2_64	12.0				rocblas_ztrmv_64	6.2.0					
cublasZtrsv					rocblas_ztrsv	3.5.0					
cublasZtrsv_64	12.0				rocblas_ztrsv_64	6.2.0					
cublasZtrsv_v2					rocblas_ztrsv	3.5.0					
cublasZtrsv_v2_64	12.0				rocblas_ztrsv_64	6.2.0					

11.1.7 7. CUBLAS Level-3 Function Reference

CUDA	A	D	C	R	ROC	A	D	C	R
cublasCgemm					rocblas_cgemm	1.5.0			
cublasCgemm3m	8.0								
cublasCgemm3mBatched	8.0								
cublasCgemm3mBatched_64	12.0								
cublasCgemm3mEx	8.0								
cublasCgemm3mEx_64	12.0								
cublasCgemm3mStridedBatched	8.0								
cublasCgemm3mStridedBatched_64	12.0								
cublasCgemm3m_64	12.0								
cublasCgemmBatched					rocblas_cgemm_batched	3.5.0			
cublasCgemmBatched_64	12.0				rocblas_cgemm_batched_64	6.3.0			

continues on n

Table 7 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C	R
cublasCgemmStridedBatched	8.0				rocblas_cgemm_strided_batched	1.5.0			
cublasCgemmStridedBatched_64	12.0				rocblas_cgemm_strided_batched_64	6.3.0			
cublasCgemm_64	12.0				rocblas_cgemm_64	6.3.0			
cublasCgemm_v2					rocblas_cgemm	1.5.0			
cublasCgemm_v2_64	12.0				rocblas_cgemm_64	6.3.0			
cublasCgemvBatched	11.6				rocblas_cgemv_batched	3.5.0			
cublasCgemvBatched_64	12.0				rocblas_cgemv_batched_64	6.2.0			
cublasCgemvStridedBatched	11.6				rocblas_cgemv_strided_batched	3.5.0			
cublasCgemvStridedBatched_64	12.0				rocblas_cgemv_strided_batched_64	6.2.0			
cublasChemm					rocblas_chemm	3.5.0			
cublasChemm_64	12.0				rocblas_chemm_64	6.3.0			
cublasChemm_v2					rocblas_chemm	3.5.0			
cublasChemm_v2_64	12.0				rocblas_chemm_64	6.3.0			
cublasCher2k					rocblas_cher2k	3.5.0			
cublasCher2k_64	12.0				rocblas_cher2k_64	6.3.0			
cublasCher2k_v2					rocblas_cher2k	3.5.0			
cublasCher2k_v2_64	12.0				rocblas_cher2k_64	6.3.0			
cublasCherk					rocblas_cherk	3.5.0			
cublasCherk_64	12.0				rocblas_cherk_64	6.3.0			
cublasCherk_v2					rocblas_cherk	3.5.0			
cublasCherk_v2_64	12.0				rocblas_cherk_64	6.3.0			
cublasCherkx					rocblas_cherkx	3.5.0			
cublasCherkx_64	12.0				rocblas_cherkx_64	6.3.0			
cublasCsymm					rocblas_csymm	3.5.0			
cublasCsymm_64	12.0				rocblas_csymm_64	6.3.0			
cublasCsymm_v2					rocblas_csymm	3.5.0			
cublasCsymm_v2_64	12.0				rocblas_csymm_64	6.3.0			
cublasCsyr2k					rocblas_csyr2k	3.5.0			
cublasCsyr2k_64	12.0				rocblas_csyr2k_64	6.3.0			
cublasCsyr2k_v2					rocblas_csyr2k	3.5.0			
cublasCsyr2k_v2_64	12.0				rocblas_csyr2k_64	6.3.0			
cublasCsyrk					rocblas_csyrk	3.5.0			
cublasCsyrk_64	12.0				rocblas_csyrk_64	6.3.0			
cublasCsyrk_v2					rocblas_csyrk	3.5.0			
cublasCsyrk_v2_64	12.0				rocblas_csyrk_64	6.3.0			
cublasCsyrkx					rocblas_csyrkx	3.5.0			
cublasCsyrkx_64	12.0				rocblas_csyrkx_64	6.3.0			
cublasCtrmm					rocblas_ctrmm	3.5.0		6.0.0	
cublasCtrmm_64	12.0				rocblas_ctrmm_64	6.3.0			
cublasCtrmm_v2					rocblas_ctrmm	3.5.0		6.0.0	
cublasCtrmm_v2_64	12.0				rocblas_ctrmm_64	6.3.0			
cublasCtrsm					rocblas_ctrsm	3.5.0			
cublasCtrsm_64	12.0				rocblas_ctrsm_64	6.2.0			
cublasCtrsm_v2					rocblas_ctrsm	3.5.0			
cublasCtrsm_v2_64	12.0				rocblas_ctrsm_64	6.2.0			
cublasDgemm					rocblas_dgemm	1.5.0			
cublasDgemmBatched					rocblas_dgemm_batched	3.5.0			
cublasDgemmBatched_64	12.0				rocblas_dgemm_batched_64	6.3.0			
cublasDgemmGroupedBatched	12.4								
cublasDgemmGroupedBatched_64	12.4								

continues on n

Table 7 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C	R
cublasDgemmStridedBatched	8.0				rocblas_dgemm_strided_batched	1.5.0			
cublasDgemmStridedBatched_64	12.0				rocblas_dgemm_strided_batched_64	6.3.0			
cublasDgemm_64	12.0				rocblas_dgemm_64	6.3.0			
cublasDgemm_v2					rocblas_dgemm	1.5.0			
cublasDgemm_v2_64	12.0				rocblas_dgemm_64	6.3.0			
cublasDgemvBatched	11.6				rocblas_dgemv_batched	3.5.0			
cublasDgemvBatched_64	12.0				rocblas_dgemv_batched_64	6.2.0			
cublasDgemvStridedBatched	11.6				rocblas_dgemv_strided_batched	3.5.0			
cublasDgemvStridedBatched_64	12.0				rocblas_dgemv_strided_batched_64	6.2.0			
cublasDsymm					rocblas_dsymm	3.5.0			
cublasDsymm_64	12.0				rocblas_dsymm_64	6.3.0			
cublasDsymm_v2					rocblas_dsymm	3.5.0			
cublasDsymm_v2_64	12.0				rocblas_dsymm_64	6.3.0			
cublasDsyr2k					rocblas_dsyr2k	3.5.0			
cublasDsyr2k_64	12.0				rocblas_dsyr2k_64	6.3.0			
cublasDsyr2k_v2					rocblas_dsyr2k	3.5.0			
cublasDsyr2k_v2_64	12.0				rocblas_dsyr2k_64	6.3.0			
cublasDsyrk					rocblas_dsyrk	3.5.0			
cublasDsyrk_64	12.0				rocblas_dsyrk_64	6.3.0			
cublasDsyrk_v2					rocblas_dsyrk	3.5.0			
cublasDsyrk_v2_64	12.0				rocblas_dsyrk_64	6.3.0			
cublasDsyrkx					rocblas_dsyrkx	3.5.0			
cublasDsyrkx_64	12.0				rocblas_dsyrkx_64	6.3.0			
cublasDtrmm					rocblas_dtrmm	3.5.0		6.0.0	
cublasDtrmm_64	12.0				rocblas_dtrmm_64	6.3.0			
cublasDtrmm_v2					rocblas_dtrmm	3.5.0		6.0.0	
cublasDtrmm_v2_64	12.0				rocblas_dtrmm_64	6.3.0			
cublasDtrsm					rocblas_dtrsm	1.5.0			
cublasDtrsm_64	12.0				rocblas_dtrsm_64	6.2.0			
cublasDtrsm_v2					rocblas_dtrsm	1.5.0			
cublasDtrsm_v2_64	12.0				rocblas_dtrsm_64	6.2.0			
cublasGemmGroupedBatchedEx	12.5								
cublasGemmGroupedBatchedEx_64	12.5								
cublasHSHgemvBatched	11.6				rocblas_hshgemv_batched	6.0.0			
cublasHSHgemvBatched_64	12.0				rocblas_hshgemv_batched_64	6.2.0			
cublasHSHgemvStridedBatched	11.6				rocblas_hshgemv_strided_batched	6.0.0			
cublasHSHgemvStridedBatched_64	12.0				rocblas_hshgemv_strided_batched_64	6.2.0			
cublasHSSgemvBatched	11.6				rocblas_hssgemv_batched	6.0.0			
cublasHSSgemvBatched_64	12.0				rocblas_hssgemv_batched_64	6.2.0			
cublasHSSgemvStridedBatched	11.6				rocblas_hssgemv_strided_batched	6.0.0			
cublasHSSgemvStridedBatched_64	12.0				rocblas_hssgemv_strided_batched_64	6.2.0			
cublasHgemm	7.5				rocblas_hgemm	1.5.0			
cublasHgemmBatched	9.0				rocblas_hgemm_batched	3.5.0			
cublasHgemmBatched_64	12.0				rocblas_hgemm_batched_64	6.3.0			
cublasHgemmStridedBatched	8.0				rocblas_hgemm_strided_batched	1.5.0			
cublasHgemmStridedBatched_64	12.0				rocblas_hgemm_strided_batched_64	6.3.0			
cublasHgemm_64	12.0				rocblas_hgemm_64	6.3.0			
cublasSgemm					rocblas_sgemm	1.5.0			
cublasSgemmBatched					rocblas_sgemm_batched	3.5.0			
cublasSgemmBatched_64	12.0				rocblas_sgemm_batched_64	6.3.0			

continues on n

Table 7 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C	R
cublasSgemmGroupedBatched	12.4								
cublasSgemmGroupedBatched_64	12.4								
cublasSgemmStridedBatched	8.0				rocblas_sgemm_strided_batched	1.5.0			
cublasSgemmStridedBatched_64	12.0				rocblas_sgemm_strided_batched_64	6.3.0			
cublasSgemm_64	12.0				rocblas_sgemm_64	6.3.0			
cublasSgemm_v2					rocblas_sgemm	1.5.0			
cublasSgemm_v2_64	12.0				rocblas_sgemm_64	6.3.0			
cublasSgemvBatched	11.6				rocblas_sgemv_batched	3.5.0			
cublasSgemvBatched_64	12.0				rocblas_sgemv_batched_64	6.2.0			
cublasSgemvStridedBatched	11.6				rocblas_sgemv_strided_batched	3.5.0			
cublasSgemvStridedBatched_64	12.0				rocblas_sgemv_strided_batched_64	6.2.0			
cublasSsymm					rocblas_ssymm	3.5.0			
cublasSsymm_64	12.0				rocblas_ssymm_64	6.3.0			
cublasSsymm_v2					rocblas_ssymm	3.5.0			
cublasSsymm_v2_64	12.0				rocblas_ssymm_64	6.3.0			
cublasSsyr2k					rocblas_ssyr2k	3.5.0			
cublasSsyr2k_64	12.0				rocblas_ssyr2k_64	6.3.0			
cublasSsyr2k_v2					rocblas_ssyr2k	3.5.0			
cublasSsyr2k_v2_64	12.0				rocblas_ssyr2k_64	6.3.0			
cublasSsyrk					rocblas_ssyrk	3.5.0			
cublasSsyrk_64	12.0				rocblas_ssyrk_64	6.3.0			
cublasSsyrk_v2					rocblas_ssyrk	3.5.0			
cublasSsyrk_v2_64	12.0				rocblas_ssyrk_64	6.3.0			
cublasSsyrkx					rocblas_ssyrkx	3.5.0			
cublasSsyrkx_64	12.0				rocblas_ssyrkx_64	6.3.0			
cublasStrmm					rocblas_strmm	3.5.0		6.0.0	
cublasStrmm_64	12.0				rocblas_strmm_64	6.3.0			
cublasStrmm_v2					rocblas_strmm	3.5.0		6.0.0	
cublasStrmm_v2_64	12.0				rocblas_strmm_64	6.3.0			
cublasStrsm					rocblas_strsm	1.5.0			
cublasStrsm_64	12.0				rocblas_strsm_64	6.2.0			
cublasStrsm_v2					rocblas_strsm	1.5.0			
cublasStrsm_v2_64	12.0				rocblas_strsm_64	6.2.0			
cublasTSSgemvBatched	11.6				rocblas_tssgemv_batched	6.0.0			
cublasTSSgemvBatched_64	12.0				rocblas_tssgemv_batched_64	6.2.0			
cublasTSSgemvStridedBatched	11.6				rocblas_tssgemv_strided_batched	6.0.0			
cublasTSSgemvStridedBatched_64	12.0				rocblas_tssgemv_strided_batched_64	6.2.0			
cublasTSTgemvBatched	11.6				rocblas_tstgemv_batched	6.0.0			
cublasTSTgemvBatched_64	12.0				rocblas_tstgemv_batched_64	6.2.0			
cublasTSTgemvStridedBatched	11.6				rocblas_tstgemv_strided_batched	6.0.0			
cublasTSTgemvStridedBatched_64	12.0				rocblas_tstgemv_strided_batched_64	6.2.0			
cublasZgemm					rocblas_zgemm	1.5.0			
cublasZgemm3m	8.0								
cublasZgemm3m_64	12.0								
cublasZgemmBatched					rocblas_zgemm_batched	3.5.0			
cublasZgemmBatched_64	12.0				rocblas_zgemm_batched_64	6.3.0			
cublasZgemmStridedBatched	8.0				rocblas_zgemm_strided_batched	1.5.0			
cublasZgemmStridedBatched_64	12.0				rocblas_zgemm_strided_batched_64	6.3.0			
cublasZgemm_64	12.0				rocblas_zgemm_64	6.3.0			
cublasZgemm_v2					rocblas_zgemm	1.5.0			

continues on n

Table 7 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C	R
cublasZgemm_v2_64	12.0				rocblas_zgemm_64	6.3.0			
cublasZgemvBatched	11.6				rocblas_zgemv_batched	3.5.0			
cublasZgemvBatched_64	12.0				rocblas_zgemv_batched_64	6.2.0			
cublasZgemvStridedBatched	11.6				rocblas_zgemv_strided_batched	3.5.0			
cublasZgemvStridedBatched_64	12.0				rocblas_zgemv_strided_batched_64	6.2.0			
cublasZhemm					rocblas_zhemm	3.5.0			
cublasZhemm_64	12.0				rocblas_zhemm_64	6.3.0			
cublasZhemm_v2					rocblas_zhemm	3.5.0			
cublasZhemm_v2_64	12.0				rocblas_zhemm_64	6.3.0			
cublasZher2k					rocblas_zher2k	3.5.0			
cublasZher2k_64	12.0				rocblas_zher2k_64	6.3.0			
cublasZher2k_v2					rocblas_zher2k	3.5.0			
cublasZher2k_v2_64	12.0				rocblas_zher2k_64	6.3.0			
cublasZherk					rocblas_zherk	3.5.0			
cublasZherk_64	12.0				rocblas_zherk_64	6.3.0			
cublasZherk_v2					rocblas_zherk	3.5.0			
cublasZherk_v2_64	12.0				rocblas_zherk_64	6.3.0			
cublasZherkx					rocblas_zherkx	3.5.0			
cublasZherkx_64	12.0				rocblas_zherkx_64	6.3.0			
cublasZsymm					rocblas_zsymm	3.5.0			
cublasZsymm_64	12.0				rocblas_zsymm_64	6.3.0			
cublasZsymm_v2					rocblas_zsymm	3.5.0			
cublasZsymm_v2_64	12.0				rocblas_zsymm_64	6.3.0			
cublasZsyr2k					rocblas_zsyr2k	3.5.0			
cublasZsyr2k_64	12.0				rocblas_zsyr2k_64	6.3.0			
cublasZsyr2k_v2					rocblas_zsyr2k	3.5.0			
cublasZsyr2k_v2_64	12.0				rocblas_zsyr2k_64	6.3.0			
cublasZsyrk					rocblas_zsyrk	3.5.0			
cublasZsyrk_64	12.0				rocblas_zsyrk_64	6.3.0			
cublasZsyrk_v2					rocblas_zsyrk	3.5.0			
cublasZsyrk_v2_64	12.0				rocblas_zsyrk_64	6.3.0			
cublasZsyrkx					rocblas_zsyrkx	3.5.0			
cublasZsyrkx_64	12.0				rocblas_zsyrkx_64	6.3.0			
cublasZtrmm					rocblas_ztrmm	3.5.0		6.0.0	
cublasZtrmm_64	12.0				rocblas_ztrmm_64	6.3.0			
cublasZtrmm_v2					rocblas_ztrmm	3.5.0		6.0.0	
cublasZtrmm_v2_64	12.0				rocblas_ztrmm_64	6.3.0			
cublasZtrsm					rocblas_ztrsm	3.5.0			
cublasZtrsm_64	12.0				rocblas_ztrsm_64	6.2.0			
cublasZtrsm_v2					rocblas_ztrsm	3.5.0			
cublasZtrsm_v2_64	12.0				rocblas_ztrsm_64	6.2.0			

11.1.8 8. BLAS-like Extension

CUDA	A	D	C	R	ROC	A	D	C	R	U
cublasAsumEx	10.1									
cublasAsumEx_64	12.0									
cublasAxpyEx	8.0				rocblas_axpy_ex	3.9.0				
cublasAxpyEx_64	12.0				rocblas_axpy_ex_64	6.1.0				
cublasCdgmm					rocblas_cdgmm	3.5.0				
cublasCdgmm_64	12.0				rocblas_cdgmm_64	6.3.0				
cublasCgeam					rocblas_cgeam	3.5.0				
cublasCgeam_64	12.0				rocblas_cgeam_64	6.3.0				
cublasCgelsBatched										
cublasCgemmEx	8.0									
cublasCgemmEx_64	12.0									
cublasCgeqrfBatched										
cublasCgetrfBatched										
cublasCgetriBatched										
cublasCgetrsBatched										
cublasCherk3mEx	8.0									
cublasCherk3mEx_64	12.0									
cublasCherkEx	8.0				rocblas_herk_ex	7.10.0				
cublasCherkEx_64	12.0									
cublasCmatinvBatched										
cublasCopyEx	10.1									
cublasCopyEx_64	12.0									
cublasCsyrk3mEx	8.0									
cublasCsyrk3mEx_64	12.0									
cublasCsyrkEx	8.0				rocblas_syrk_ex	7.10.0				
cublasCsyrkEx_64	12.0									
cublasCtpttr										
cublasCtrsmBatched					rocblas_ctrsm_batched	3.5.0				
cublasCtrsmBatched_64	12.0				rocblas_ctrsm_batched_64	6.2.0				
cublasCtrttp										
cublasDdgmm					rocblas_ddgmm	3.5.0				
cublasDdgmm_64	12.0				rocblas_ddgmm_64	6.3.0				
cublasDgeam					rocblas_dgeam	1.6.4				
cublasDgeam_64	12.0				rocblas_dgeam_64	6.3.0				
cublasDgelsBatched										
cublasDgeqrfBatched										
cublasDgetrfBatched										
cublasDgetriBatched										
cublasDgetrsBatched										
cublasDmatinvBatched										
cublasDotEx	8.0				rocblas_dot_ex	4.1.0				
cublasDotEx_64	12.0				rocblas_dot_ex_64	6.1.0				
cublasDotcEx	8.0				rocblas_dotc_ex	4.1.0				
cublasDotcEx_64	12.0				rocblas_dotc_ex_64	6.1.0				
cublasDtpttr										
cublasDtrsmBatched					rocblas_dtrsm_batched	3.5.0				
cublasDtrsmBatched_64	12.0				rocblas_dtrsm_batched_64	6.2.0				
cublasDtrttp										
cublasGemmBatchedEx	9.1		11.0		rocblas_gemm_batched_ex	3.5.0				

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Table 8 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C	R	U
cublasGemmBatchedEx_64	12.0									
cublasGemmEx	8.0		11.0		rocblas_gemm_ex	1.8.2				
cublasGemmEx_64	12.0									
cublasGemmStridedBatchedEx	9.1		11.0		rocblas_gemm_strided_batched_ex	1.9.0				
cublasGemmStridedBatchedEx_64	12.0									
cublasIamaxEx	10.1									
cublasIamaxEx_64	12.0									
cublasIaminEx	10.1									
cublasIaminEx_64	12.0									
cublasRotEx	10.1				rocblas_rot_ex	4.1.0				
cublasRotEx_64	12.0				rocblas_rot_ex_64	6.1.0				
cublasRotgEx	10.1									
cublasRotmEx	10.1									
cublasRotmEx_64	12.0									
cublasRotmgEx	10.1									
cublasScalEx	8.0				rocblas_scal_ex	4.0.0				
cublasScalEx_64	12.0				rocblas_scal_ex_64	6.1.0				
cublasSdgmm					rocblas_sdgmm	3.5.0				
cublasSdgmm_64	12.0				rocblas_sdgmm_64	6.3.0				
cublasSgeam					rocblas_sgeam	1.6.4				
cublasSgeam_64	12.0				rocblas_sgeam_64	6.3.0				
cublasSgelsBatched										
cublasSgemmEx	7.5									
cublasSgemmEx_64	12.0									
cublasSgeqrfBatched										
cublasSgetrfBatched										
cublasSgetriBatched										
cublasSgetrsBatched										
cublasSmatinvBatched										
cublasStpttr										
cublasStrsmBatched					rocblas_strsm_batched	3.5.0				
cublasStrsmBatched_64	12.0				rocblas_strsm_batched_64	6.2.0				
cublasStrttp										
cublasSwapEx	10.1									
cublasSwapEx_64	12.0									
cublasUint8gemmBias	8.0									
cublasZdgmm					rocblas_zdgmm	3.5.0				
cublasZdgmm_64	12.0				rocblas_zdgmm_64	6.3.0				
cublasZgeam					rocblas_zgeam	3.5.0				
cublasZgeam_64	12.0				rocblas_zgeam_64	6.3.0				
cublasZgelsBatched										
cublasZgeqrfBatched										
cublasZgetrfBatched										
cublasZgetriBatched										
cublasZgetrsBatched										
cublasZmatinvBatched										
cublasZtpttr										
cublasZtrsmBatched					rocblas_ztrsm_batched	3.5.0				
cublasZtrsmBatched_64	12.0				rocblas_ztrsm_batched_64	6.2.0				
cublasZtrttp										

11.1.9 9. BLASLt Function Reference

CUDA	A	D	C	R	ROC	A	D	C	R	U	E
cublasLtCreate	10.1										
cublasLtDestroy	10.1										
cublasLtDisableCpuInstructionsSetMask	12.1										
cublasLtEmulationDescDestroy	13.0										
cublasLtEmulationDescGetAttribute	13.0										
cublasLtEmulationDescInit	13.0										
cublasLtEmulationDescSetAttribute	13.0										
cublasLtGetCudartVersion	10.1										
cublasLtGetProperty	10.1										
cublasLtGetStatusName	11.4										
cublasLtGetStatusString	11.4										
cublasLtGetVersion	10.1										
cublasLtGroupedMatrixLayoutCreate	13.1										
cublasLtGroupedMatrixLayoutInit	13.1										
cublasLtGroupedMatrixLayoutInit_internal	13.1										
cublasLtHeuristicsCacheGetCapacity	11.8										
cublasLtHeuristicsCacheSetCapacity	11.8										
cublasLtLoggerForceDisable	11.0										
cublasLtLoggerOpenFile	11.0										
cublasLtLoggerSetCallback	11.0										
cublasLtLoggerSetFile	11.0										
cublasLtLoggerSetLevel	11.0										
cublasLtLoggerSetMask	11.0										
cublasLtMatmul	10.1										
cublasLtMatmulAlgoCapGetAttribute	10.1										
cublasLtMatmulAlgoCheck	10.1										
cublasLtMatmulAlgoConfigGetAttribute	10.1										
cublasLtMatmulAlgoConfigSetAttribute	10.1										
cublasLtMatmulAlgoGetHeuristic	10.1										
cublasLtMatmulAlgoGetIds	10.1										
cublasLtMatmulAlgoInit	10.1										
cublasLtMatmulDescCreate	10.1		11.0								
cublasLtMatmulDescDestroy	10.1										
cublasLtMatmulDescGetAttribute	10.1										
cublasLtMatmulDescInit	11.0										
cublasLtMatmulDescSetAttribute	10.1										
cublasLtMatmulPreferenceCreate	10.1										
cublasLtMatmulPreferenceDestroy	10.1										
cublasLtMatmulPreferenceGetAttribute	10.1										
cublasLtMatmulPreferenceInit	11.0										
cublasLtMatmulPreferenceSetAttribute	10.1										
cublasLtMatrixLayoutCreate	10.1										
cublasLtMatrixLayoutDestroy	10.1										
cublasLtMatrixLayoutGetAttribute	10.1										
cublasLtMatrixLayoutInit	11.0										
cublasLtMatrixLayoutSetAttribute	10.1										
cublasLtMatrixTransform	10.1										
cublasLtMatrixTransformDescCreate	10.1										
cublasLtMatrixTransformDescDestroy	10.1										

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Table 9 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C	R	U	E
cublasLtMatrixTransformDescGetAttribute	10.1										
cublasLtMatrixTransformDescInit	11.0										
cublasLtMatrixTransformDescSetAttribute	10.1										

11.2 CUSPARSE API supported by ROC

Note: In the tables that follow the columns marked A, D, C, R, U, and E mean the following: **A** - Added; **D** - Deprecated; **C** - Changed; **R** - Removed; **U** - Unsupported for CUDA version(s); **E** - Experimental

11.2.1 4. CUSPARSE Types References

CUDA	A	D	C	R	ROC
CUSPARSE_ACTION_NUMERIC					rocsparse_action_numeric
CUSPARSE_ACTION_SYMBOLIC					rocsparse_action_symbolic
CUSPARSE_ALG0	8.0			11.0	
CUSPARSE_ALG1	8.0			11.0	
CUSPARSE_ALG_MERGE_PATH	9.2			12.0	
CUSPARSE_ALG_NAIVE	9.2			11.0	
CUSPARSE_COLOR_ALG0	8.0	12.2			
CUSPARSE_COLOR_ALG1	8.0	12.2			
CUSPARSE_COOMM_ALG1	10.1	11.0		12.0	
CUSPARSE_COOMM_ALG2	10.1	11.0		12.0	
CUSPARSE_COOMM_ALG3	10.1	11.0		12.0	
CUSPARSE_COOMV_ALG	10.2	11.2		12.0	
CUSPARSE_CSR2CSC_ALG1	10.1				
CUSPARSE_CSR2CSC_ALG2	10.1			12.0	
CUSPARSE_CSR2CSC_ALG_DEFAULT	12.0				
CUSPARSE_CSRMM_ALG1	10.2	11.0		12.0	
CUSPARSE_CSRMV_ALG1	10.2	11.2		12.0	
CUSPARSE_CSRMV_ALG2	10.2	11.2		12.0	
CUSPARSE_DENSETOSPARSE_ALG_DEFAULT	11.1				rocsparse_dense_to_sparse_alg_default
CUSPARSE_DIAG_TYPE_NON_UNIT					rocsparse_diag_type_non_unit
CUSPARSE_DIAG_TYPE_UNIT					rocsparse_diag_type_unit
CUSPARSE_DIRECTION_COLUMN					rocsparse_direction_column
CUSPARSE_DIRECTION_ROW					rocsparse_direction_row
CUSPARSE_ENABLE_EXPERIMENTAL_API	13.1				
CUSPARSE_FILL_MODE_LOWER					rocsparse_fill_mode_lower
CUSPARSE_FILL_MODE_UPPER					rocsparse_fill_mode_upper
CUSPARSE_FORMAT_BLOCKED_ELL	11.2				rocsparse_format_bell
CUSPARSE_FORMAT_BSR	12.1				rocsparse_format_bsr
CUSPARSE_FORMAT_COO	10.1				rocsparse_format_coo
CUSPARSE_FORMAT_COO_AOS	10.2			12.0	rocsparse_format_coo_aos
CUSPARSE_FORMAT_CSC	10.1				rocsparse_format_csc
CUSPARSE_FORMAT_CSR	10.1				rocsparse_format_csr
CUSPARSE_FORMAT_SLICED_ELLPACK	12.1				rocsparse_format_sell
CUSPARSE_HYB_PARTITION_AUTO		10.2		11.0	rocsparse_hyb_partition_auto

Table 10 – continued from previous page

CUDA	A	D	C	R	ROC
CUSPARSE_HYB_PARTITION_MAX		10.2		11.0	rocsparse_hyb_partition_max
CUSPARSE_HYB_PARTITION_USER		10.2		11.0	rocsparse_hyb_partition_user
CUSPARSE_INDEX_16U	10.1				rocsparse_indextype_u16
CUSPARSE_INDEX_32I	10.1				rocsparse_indextype_i32
CUSPARSE_INDEX_64I	10.1				rocsparse_indextype_i64
CUSPARSE_INDEX_BASE_ONE					rocsparse_index_base_one
CUSPARSE_INDEX_BASE_ZERO					rocsparse_index_base_zero
CUSPARSE_MATRIX_TYPE_GENERAL					rocsparse_matrix_type_general
CUSPARSE_MATRIX_TYPE_HERMITIAN					rocsparse_matrix_type_hermitian
CUSPARSE_MATRIX_TYPE_SYMMETRIC					rocsparse_matrix_type_symmetric
CUSPARSE_MATRIX_TYPE_TRIANGULAR					rocsparse_matrix_type_triangular
CUSPARSE_MM_ALG_DEFAULT	10.2	11.0		12.0	
CUSPARSE_MV_ALG_DEFAULT	10.2	11.3		12.0	
CUSPARSE_OPERATION_CONJUGATE_TRANSPOSE					rocsparse_operation_conjugate_transpos
CUSPARSE_OPERATION_NON_TRANSPOSE					rocsparse_operation_none
CUSPARSE_OPERATION_TRANSPOSE					rocsparse_operation_transpose
CUSPARSE_ORDER_COL	10.1				rocsparse_order_row
CUSPARSE_ORDER_ROW	10.1				rocsparse_order_column
CUSPARSE_POINTER_MODE_DEVICE					rocsparse_pointer_mode_device
CUSPARSE_POINTER_MODE_HOST					rocsparse_pointer_mode_host
CUSPARSE_SDDMM_ALG_DEFAULT	11.2				rocsparse_sddmm_alg_default
CUSPARSE_SIDE_LEFT				11.5	
CUSPARSE_SIDE_RIGHT				11.5	
CUSPARSE_SOLVE_POLICY_NO_LEVEL		12.2			rocsparse_solve_policy_auto
CUSPARSE_SOLVE_POLICY_USE_LEVEL		12.2			rocsparse_solve_policy_auto
CUSPARSE_SPARSETODENSE_ALG_DEFAULT	11.1				rocsparse_sparse_to_dense_alg_default
CUSPARSE_SPGEMM_ALG1	12.0				
CUSPARSE_SPGEMM_ALG2	12.0				
CUSPARSE_SPGEMM_ALG3	12.0				
CUSPARSE_SPGEMM_CSR_ALG_DETERMINITIC	11.3				
CUSPARSE_SPGEMM_CSR_ALG_NONDETERMINITIC	11.3				
CUSPARSE_SPGEMM_DEFAULT	11.0				rocsparse_spgemm_alg_default
CUSPARSE_SPMAT_DIAG_TYPE	11.3				rocsparse_spmat_diag_type
CUSPARSE_SPMAT_FILL_MODE	11.3				rocsparse_spmat_fill_mode
CUSPARSE_SPMMA_ALG1	11.1			11.2	
CUSPARSE_SPMMA_ALG2	11.1			11.2	
CUSPARSE_SPMMA_ALG3	11.1			11.2	
CUSPARSE_SPMMA_ALG4	11.1			11.2	
CUSPARSE_SPMMA_PREPROCESS	11.1			11.2	
CUSPARSE_SPMM_ALG_DEFAULT	11.0				rocsparse_spmm_alg_default
CUSPARSE_SPMM_BLOCKED_ELL_ALG1	11.2				rocsparse_spmm_alg_bell
CUSPARSE_SPMM_BSR_ALG1	12.5				
CUSPARSE_SPMM_COO_ALG1	11.0				rocsparse_spmm_alg_coo_segmented
CUSPARSE_SPMM_COO_ALG2	11.0				rocsparse_spmm_alg_coo_atomic
CUSPARSE_SPMM_COO_ALG3	11.0				rocsparse_spmm_alg_coo_segmented_atomi
CUSPARSE_SPMM_COO_ALG4	11.0				
CUSPARSE_SPMM_CSR_ALG1	11.0				rocsparse_spmm_alg_csr
CUSPARSE_SPMM_CSR_ALG2	11.0				rocsparse_spmm_alg_csr_row_split
CUSPARSE_SPMM_CSR_ALG3	11.2				rocsparse_spmm_alg_csr_merge
CUSPARSE_SPMM_OP_ALG_DEFAULT	11.5	13.2			

Table 10 – continued from previous page

CUDA	A	D	C	R	ROC
CUSPARSE_SPMV_ALG_DEFAULT	11.2				rocsparse_spmv_alg_default
CUSPARSE_SPMV_BSR_ALG1	13.0				
CUSPARSE_SPMV_COO_ALG1	11.2				rocsparse_spmv_alg_coo
CUSPARSE_SPMV_COO_ALG2	11.2				rocsparse_spmv_alg_coo_atomic
CUSPARSE_SPMV_CSR_ALG1	11.2				rocsparse_spmv_alg_csr_adaptive
CUSPARSE_SPMV_CSR_ALG2	11.2				rocsparse_spmv_alg_csr_stream
CUSPARSE_SPMV_SELL_ALG1	12.1				rocsparse_spmv_alg_ell
CUSPARSE_SPSM_ALG_DEFAULT	11.3				rocsparse_spsm_alg_default
CUSPARSE_SPSM_UPDATE_DIAGONAL	12.4				
CUSPARSE_SPSM_UPDATE_GENERAL	12.4				
CUSPARSE_SPSV_ALG_DEFAULT	11.3				rocsparse_spsv_alg_default
CUSPARSE_SPSV_UPDATE_DIAGONAL	12.1				
CUSPARSE_SPSV_UPDATE_GENERAL	12.1				
CUSPARSE_STATUS_ALLOC_FAILED					rocsparse_status_memory_error
CUSPARSE_STATUS_ARCH_MISMATCH					rocsparse_status_arch_mismatch
CUSPARSE_STATUS_EXECUTION_FAILED					
CUSPARSE_STATUS_INSUFFICIENT_RESOURCES	11.0				
CUSPARSE_STATUS_INTERNAL_ERROR					rocsparse_status_internal_error
CUSPARSE_STATUS_INVALID_VALUE					rocsparse_status_invalid_value
CUSPARSE_STATUS_MAPPING_ERROR					
CUSPARSE_STATUS_MATRIX_TYPE_NOT_SUPPORTED					
CUSPARSE_STATUS_NOT_INITIALIZED					rocsparse_status_not_initialized
CUSPARSE_STATUS_NOT_SUPPORTED	10.2				rocsparse_status_not_implemented
CUSPARSE_STATUS_SUCCESS					rocsparse_status_success
CUSPARSE_STATUS_ZERO_PIVOT					rocsparse_status_zero_pivot
bsric02Info					_rocsparse_mat_info
bsric02Info_t					rocsparse_mat_info
bsrilu02Info		12.2			_rocsparse_mat_info
bsrilu02Info_t		12.2			rocsparse_mat_info
bsrsm2Info		12.2			_rocsparse_mat_info
bsrsm2Info_t		12.2			rocsparse_mat_info
bsrsv2Info		12.2			_rocsparse_mat_info
bsrsv2Info_t		12.2			rocsparse_mat_info
csrgemm2Info				12.0	_rocsparse_mat_info
csrgemm2Info_t				12.0	rocsparse_mat_info
csric02Info		12.2			_rocsparse_mat_info
csric02Info_t		12.2			rocsparse_mat_info
csrilu02Info		12.2			_rocsparse_mat_info
csrilu02Info_t		12.2			rocsparse_mat_info
csrsm2Info	9.2			12.0	_rocsparse_mat_info
csrsm2Info_t	9.2			12.0	rocsparse_mat_info
csrsv2Info				12.0	_rocsparse_mat_descr
csrsv2Info_t				12.0	rocsparse_mat_descr
csru2csrInfo		12.2			
csru2csrInfo_t		12.2			
cusparseAction_t					rocsparse_action
cusparseAlgMode_t	8.0			12.0	
cusparseColorAlg_t	8.0	12.2			
cusparseColorInfo		12.2			_rocsparse_color_info
cusparseColorInfo_t		12.2			rocsparse_color_info

Table 10 – continued from previous page

CUDA	A	D	C	R	ROC
cusparseConstDnMatDescr_t	12.0				rocsparse_const_dnmat_descr
cusparseConstDnVecDescr_t	12.0				rocsparse_const_dnvec_descr
cusparseConstSpMatDescr_t	12.0				rocsparse_const_spmat_descr
cusparseConstSpVecDescr_t	12.0				rocsparse_const_spvec_descr
cusparseContext					_rocsparse_handle
cusparseCsr2CscAlg_t	10.1				
cusparseDenseToSparseAlg_t	11.1				rocsparse_dense_to_sparse_alg
cusparseDiagType_t					rocsparse_diag_type
cusparseDirection_t					rocsparse_direction
cusparseDnMatDescr	10.1				_rocsparse_dnmat_descr
cusparseDnMatDescr_t	10.1				rocsparse_dnmat_descr
cusparseDnVecDescr	10.2				_rocsparse_dnvec_descr
cusparseDnVecDescr_t	10.2				rocsparse_dnvec_descr
cusparseFillMode_t					rocsparse_fill_mode
cusparseFormat_t	10.1				rocsparse_format
cusparseHandle_t					rocsparse_handle
cusparseHybMat		10.2		11.0	_rocsparse_hyb_mat
cusparseHybMat_t		10.2		11.0	rocsparse_hyb_mat
cusparseHybPartition_t		10.2		11.0	rocsparse_hyb_partition
cusparseIndexBase_t					rocsparse_index_base
cusparseIndexType_t	10.1				rocsparse_indextype
cusparseLoggerCallback_t	11.5				
cusparseMatDescr					_rocsparse_mat_descr
cusparseMatDescr_t					rocsparse_mat_descr
cusparseMatrixType_t					rocsparse_matrix_type
cusparseOperation_t					rocsparse_operation
cusparseOrder_t	10.1				rocsparse_order
cusparsePointerMode_t					rocsparse_pointer_mode
cusparseSDDMMAlg_t	11.2				rocsparse_sddmm_alg
cusparseSideMode_t				11.5	
cusparseSolveAnalysisInfo		10.2		11.0	
cusparseSolveAnalysisInfo_t		10.2		11.0	
cusparseSolvePolicy_t		12.2			rocsparse_solve_policy
cusparseSpGEMMAlg_t	11.0				rocsparse_spgemm_alg
cusparseSpGEMMDescr	11.0				
cusparseSpGEMMDescr_t	11.0				
cusparseSpMMAlg_t	10.1				rocsparse_spmm_alg
cusparseSpMMOpAlg_t	11.5	13.2			
cusparseSpMMOpPlan	11.5				
cusparseSpMMOpPlan_t	11.5	13.2			
cusparseSpMVAlg_t	10.2				rocsparse_spmv_alg
cusparseSpMVOpDescr	13.1				
cusparseSpMVOpDescr_t	13.1				
cusparseSpMVOpPlan	13.1				
cusparseSpMVOpPlan_t	13.1				
cusparseSpMatAttribute_t	11.3				rocsparse_spmat_attribute
cusparseSpMatDescr	10.1				_rocsparse_spmat_descr
cusparseSpMatDescr_t	10.1				rocsparse_spmat_descr
cusparseSpSMAlg_t	11.3				rocsparse_spsm_alg
cusparseSpSMDescr	11.3				

Table 10 – continued from previous page

CUDA	A	D	C	R	ROC
cusparseSpSMDescr_t	11.3				
cusparseSpSMUpdate_t	12.4				
cusparseSpSVAlg_t	11.3				rocsparse_spsv_alg
cusparseSpSVDescr	11.3				
cusparseSpSVDescr_t	11.3				
cusparseSpSVUpdate_t	12.1				
cusparseSpVecDescr	10.2				_rocsparse_spvec_descr
cusparseSpVecDescr_t	10.2				rocsparse_spvec_descr
cusparseSparseToDenseAlg_t	11.1				rocsparse_sparse_to_dense_alg
cusparseStatus_t					rocsparse_status
pruneInfo	9.0	12.2			_rocsparse_mat_info
pruneInfo_t	9.0	12.2			rocsparse_mat_info

11.2.2 5. CUSPARSE Management Function Reference

CUDA	A	D	C	R	ROC	A	D	C	R	U	E
cusparseCreate					rocsparse_create_handle	1.9.0					
cusparseDestroy					rocsparse_destroy_handle	1.9.0					
cusparseGetErrorName	10.2				rocsparse_get_status_name	6.0.0					
cusparseGetErrorStri	10.2				rocsparse_get_status_descrip	6.0.0					
cusparseGetPointerMc					rocsparse_get_pointer_mode	1.9.0					
cusparseGetStream	8.0				rocsparse_get_stream	1.9.0					
cusparseGetVersion					rocsparse_get_version	1.9.0					
cusparseSetPointerMc					rocsparse_set_pointer_mode	1.9.0					
cusparseSetStream					rocsparse_set_stream	1.9.0					

11.2.3 6. CUSPARSE Logging

CUDA	A	D	C	R	ROC	A	D	C	R	U	E
cusparseLoggerForceDisable	11.5										
cusparseLoggerOpenFile	11.5										
cusparseLoggerSetCallback	11.5										
cusparseLoggerSetFile	11.5										
cusparseLoggerSetLevel	11.5										
cusparseLoggerSetMask	11.5										

11.2.4 7. CUSPARSE Helper Function Reference

CUDA	A	D	C	R	ROC	A	D	C	R	U
cusparseCopyMatDescr	8.0			12.0	rocsparse_copy_mat_descr	1.9.0				
cusparseCreateBsric02Info		12.2			rocsparse_create_mat_info	1.9.0				
cusparseCreateBsrilu02Info		12.2			rocsparse_create_mat_info	1.9.0				
cusparseCreateBsrsm2Info		12.2			rocsparse_create_mat_info	1.9.0				
cusparseCreateBsrsv2Info		12.2			rocsparse_create_mat_info	1.9.0				
cusparseCreateColorInfo		12.2			rocsparse_create_color_info	4.5.0				
cusparseCreateCsrgemm2Info		11.0		12.0	rocsparse_create_mat_info	1.9.0				
cusparseCreateCsric02Info		12.2			rocsparse_create_mat_info	1.9.0				
cusparseCreateCsrilu02Info		12.2			rocsparse_create_mat_info	1.9.0				
cusparseCreateCsrsm2Info	9.2	11.3		12.0	rocsparse_create_mat_info	1.9.0				
cusparseCreateCsrsv2Info		11.3		12.0	rocsparse_create_mat_info	1.9.0				
cusparseCreateHybMat		10.2		11.0	rocsparse_create_hyb_mat	1.9.0				
cusparseCreateMatDescr					rocsparse_create_mat_descr	1.9.0				
cusparseCreatePruneInfo	9.0	12.2			rocsparse_create_mat_info	1.9.0				
cusparseCreateSolveAnalysisInfo		10.2		11.0						
cusparseDestroyBsric02Info		12.2			rocsparse_destroy_mat_info	1.9.0				
cusparseDestroyBsrilu02Info		12.2			rocsparse_destroy_mat_info	1.9.0				
cusparseDestroyBsrsm2Info		12.2			rocsparse_destroy_mat_info	1.9.0				
cusparseDestroyBsrsv2Info		12.2			rocsparse_destroy_mat_info	1.9.0				
cusparseDestroyColorInfo		12.2			rocsparse_destroy_color_info	4.5.0				
cusparseDestroyCsrgemm2Info		11.0		12.0	rocsparse_destroy_mat_info	1.9.0				
cusparseDestroyCsric02Info		12.2			rocsparse_destroy_mat_info	1.9.0				
cusparseDestroyCsrilu02Info		12.2			rocsparse_destroy_mat_info	1.9.0				
cusparseDestroyCsrsm2Info	9.2	11.3		12.0	rocsparse_destroy_mat_info	1.9.0				
cusparseDestroyCsrsv2Info		11.3		12.0	rocsparse_destroy_mat_info	1.9.0				
cusparseDestroyHybMat		10.2		11.0	rocsparse_destroy_hyb_mat	1.9.0				
cusparseDestroyMatDescr					rocsparse_destroy_mat_descr	1.9.0				
cusparseDestroyPruneInfo	9.0	12.2			rocsparse_destroy_mat_info	1.9.0				
cusparseDestroySolveAnalysisInfo		10.2		11.0						
cusparseGetLevelInfo				11.0						

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Table 11 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C	R	U
cusparseGetMatDiagType					rocsparse_get_mat_diag_type	1.9.0				
cusparseGetMatFillMode					rocsparse_get_mat_fill_mode	1.9.0				
cusparseGetMatIndexBase					rocsparse_get_mat_index_base	1.9.0				
cusparseGetMatType					rocsparse_get_mat_type	1.9.0				
cusparseSetMatDiagType					rocsparse_set_mat_diag_type	1.9.0				
cusparseSetMatFillMode					rocsparse_set_mat_fill_mode	1.9.0				
cusparseSetMatIndexBase					rocsparse_set_mat_index_base	1.9.0				
cusparseSetMatType					rocsparse_set_mat_type	1.9.0				

11.2.5 8. CUSPARSE Level 1 Function Reference

CUDA	A	D	C	R	ROC	A	D	C	R	U	E
cusparseCaxpyi		11.0		12.0	rocsparse_caxpyi	1.9.0					
cusparseCdotci		10.2		11.0	rocsparse_cdotci	3.0.0					
cusparseCdoti		10.2		11.0	rocsparse_cdoti	1.9.0					
cusparseCgthr		11.0		12.0	rocsparse_cgthr	1.9.0					
cusparseCgthrz		11.0		12.0	rocsparse_cgthrz	1.9.0					
cusparseCsctr		11.0		12.0	rocsparse_csctr	1.9.0					
cusparseDaxpyi		11.0		12.0	rocsparse_daxpyi	1.9.0					
cusparseDdoti		10.2		11.0	rocsparse_ddoti	1.9.0					
cusparseDgthr		11.0		12.0	rocsparse_dgthr	1.9.0					
cusparseDgthrz		11.0		12.0	rocsparse_dgthrz	1.9.0					
cusparseDroti		11.0		12.0	rocsparse_droti	1.9.0					
cusparseDsctr		11.0		12.0	rocsparse_dsctr	1.9.0					
cusparseSaxpyi		11.0		12.0	rocsparse_saxpyi	1.9.0					
cusparseSdoti		10.2		11.0	rocsparse_sdoti	1.9.0					
cusparseSgthr		11.0		12.0	rocsparse_sgthr	1.9.0					
cusparseSgthrz		11.0		12.0	rocsparse_sgthrz	1.9.0					
cusparseSroti		11.0		12.0	rocsparse_sroti	1.9.0					
cusparseSsctr		11.0		12.0	rocsparse_ssctr	1.9.0					
cusparseZaxpyi		11.0		12.0	rocsparse_zaxpyi	1.9.0					
cusparseZdotci		10.2		11.0	rocsparse_zdotci	3.0.0					
cusparseZdoti		10.2		11.0	rocsparse_zdoti	1.9.0					
cusparseZgthr		11.0		12.0	rocsparse_zgthr	1.9.0					
cusparseZgthrz		11.0		12.0	rocsparse_zgthrz	1.9.0					
cusparseZsctr		11.0		12.0	rocsparse_zsctr	1.9.0					

11.2.6 9. CUSPARSE Level 2 Function Reference

CUDA	A	D	C	R	ROC	A	D	C	R	U
cusparseCbsrmv		13.1			rocsparse_cbsrmv	3.5.0	5.4.0			
cusparseCbsrsv2_analysis		12.2			rocsparse_cbsrsv_analysis	3.6.0				
cusparseCbsrsv2_bufferSize		12.2			rocsparse_cbsrsv_buffer_size	3.6.0				
cusparseCbsrsv2_bufferSizeExt		12.2			rocsparse_cbsrsv_buffer_size	3.6.0				
cusparseCbsrsv2_solve		12.2			rocsparse_cbsrsv_solve	3.6.0				
cusparseCbsrxmv		12.2			rocsparse_cbsrxmv	4.5.0				
cusparseCcsrmv		10.2		11.0	rocsparse_ccsrmv	1.9.0				
cusparseCcsrmv_mp	8.0	10.2		11.0						
cusparseCcsrsv2_analysis		11.3		12.0	rocsparse_ccsrsv_analysis	2.10.0				
cusparseCcsrsv2_bufferSize		11.3		12.0	rocsparse_ccsrsv_buffer_size	2.10.0				
cusparseCcsrsv2_bufferSizeExt		11.3		12.0	rocsparse_ccsrsv_buffer_size	2.10.0				
cusparseCcsrsv2_solve		11.3		12.0	rocsparse_ccsrsv_solve	2.10.0				
cusparseCcsrsv_analysis		10.2		11.0						
cusparseCcsrsv_solve		10.2		11.0						
cusparseCgemvi	7.5	12.8			rocsparse_cgemvi	4.3.0				
cusparseCgemvi_bufferSize	7.5	12.8			rocsparse_cgemvi_buffer_size	4.3.0				
cusparseChybmv		10.2		11.0	rocsparse_chybmv	2.10.0				
cusparseChybsv_analysis		10.2		11.0						
cusparseChybsv_solve		10.2		11.0						
cusparseCsrmvEx	8.0	11.2		12.0						
cusparseCsrmvEx_bufferSize	8.0	11.2		12.0						
cusparseCsrsv_analysisEx	8.0	10.2		11.0						
cusparseCsrsv_solveEx	8.0	10.2		11.0						
cusparseDbsrmv		13.1			rocsparse_dbsrmv	3.5.0	5.4.0			
cusparseDbsrsv2_analysis		12.2			rocsparse_dbsrsv_analysis	3.6.0				
cusparseDbsrsv2_bufferSize		12.2			rocsparse_dbsrsv_buffer_size	3.6.0				
cusparseDbsrsv2_bufferSizeExt		12.2			rocsparse_dbsrsv_buffer_size	3.6.0				
cusparseDbsrsv2_solve		12.2			rocsparse_dbsrsv_solve	3.6.0				
cusparseDbsrxmv		12.2			rocsparse_dbsrxmv	4.5.0				
cusparseDcsrmv		10.2		11.0	rocsparse_dcsrmv	1.9.0				
cusparseDcsrmv_mp	8.0	10.2		11.0						
cusparseDcsrsv2_analysis		11.3		12.0	rocsparse_dcsrsv_analysis	1.9.0				
cusparseDcsrsv2_bufferSize		11.3		12.0	rocsparse_dcsrsv_buffer_size	1.9.0				
cusparseDcsrsv2_bufferSizeExt		11.3		12.0	rocsparse_dcsrsv_buffer_size	1.9.0				
cusparseDcsrsv2_solve		11.3		12.0	rocsparse_dcsrsv_solve	1.9.0				
cusparseDcsrsv_analysis		10.2		11.0						
cusparseDcsrsv_solve		10.2		11.0						
cusparseDgemvi	7.5	12.8			rocsparse_dgemvi	4.3.0				
cusparseDgemvi_bufferSize	7.5	12.8			rocsparse_dgemvi_buffer_size	4.3.0				
cusparseDhybmv		10.2		11.0	rocsparse_dhybmv	1.9.0				
cusparseDhybsv_analysis		10.2		11.0						
cusparseDhybsv_solve		10.2		11.0						
cusparseSbsrmv		13.1			rocsparse_sbsrmv	3.5.0	5.4.0			
cusparseSbsrsv2_analysis		12.2			rocsparse_sbsrsv_analysis	3.6.0				
cusparseSbsrsv2_bufferSize		12.2			rocsparse_sbsrsv_buffer_size	3.6.0				
cusparseSbsrsv2_bufferSizeExt		12.2			rocsparse_sbsrsv_buffer_size	3.6.0				
cusparseSbsrsv2_solve		12.2			rocsparse_sbsrsv_solve	3.6.0				
cusparseSbsrxmv		12.2			rocsparse_sbsrxmv	4.5.0				
cusparseScsrmv		10.2		11.0	rocsparse_scsrmv	1.9.0				

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Table 12 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C	R	U
cusparseScsrmv_mp	8.0	10.2		11.0						
cusparseScsrsv2_analysis		11.3		12.0	rocsparse_scsrsv_analysis	1.9.0				
cusparseScsrsv2_bufferSize		11.3		12.0	rocsparse_scsrsv_buffer_size	1.9.0				
cusparseScsrsv2_bufferSizeExt		11.3		12.0	rocsparse_scsrsv_buffer_size	1.9.0				
cusparseScsrsv2_solve		11.3		12.0	rocsparse_scsrsv_solve	1.9.0				
cusparseScsrsv_analysis		10.2		11.0						
cusparseScsrsv_solve		10.2		11.0						
cusparseSgemvi	7.5	12.8			rocsparse_sgemvi	4.3.0				
cusparseSgemvi_bufferSize	7.5	12.8			rocsparse_sgemvi_buffer_size	4.3.0				
cusparseShybmv		10.2		11.0	rocsparse_shybmv	1.9.0				
cusparseShybsv_analysis		10.2		11.0						
cusparseShybsv_solve		10.2		11.0						
cusparseXbsrsv2_zeroPivot		12.2			rocsparse_bsrsv_zero_pivot	3.6.0				
cusparseXcsrsv2_zeroPivot		11.3		12.0	rocsparse_csrsv_zero_pivot	1.9.0				
cusparseZbsrmv		13.1			rocsparse_zbsrmv	3.5.0	5.4.0			
cusparseZbsrsv2_analysis		12.2			rocsparse_zbsrsv_analysis	3.6.0				
cusparseZbsrsv2_bufferSize		12.2			rocsparse_zbsrsv_buffer_size	3.6.0				
cusparseZbsrsv2_bufferSizeExt		12.2			rocsparse_zbsrsv_buffer_size	3.6.0				
cusparseZbsrsv2_solve		12.2			rocsparse_zbsrsv_solve	3.6.0				
cusparseZbsrxmv		12.2			rocsparse_zbsrxmv	4.5.0				
cusparseZcsrmv		10.2		11.0	rocsparse_zcsrmv	1.9.0				
cusparseZcsrmv_mp	8.0	10.2		11.0						
cusparseZcsrsv2_analysis		11.3		12.0	rocsparse_zcsrsv_analysis	2.10.0				
cusparseZcsrsv2_bufferSize		11.3		12.0	rocsparse_zcsrsv_buffer_size	2.10.0				
cusparseZcsrsv2_bufferSizeExt		11.3		12.0	rocsparse_zcsrsv_buffer_size	2.10.0				
cusparseZcsrsv2_solve		11.3		12.0	rocsparse_zcsrsv_solve	2.10.0				
cusparseZcsrsv_analysis		10.2		11.0						
cusparseZcsrsv_solve		10.2		11.0						
cusparseZgemvi	7.5	12.8			rocsparse_zgemvi	4.3.0				
cusparseZgemvi_bufferSize	7.5	12.8			rocsparse_zgemvi_buffer_size	4.3.0				
cusparseZhybmv		10.2		11.0	rocsparse_zhybmv	2.10.0				
cusparseZhybsv_analysis		10.2		11.0						
cusparseZhybsv_solve		10.2		11.0						

11.2.7 10. CUSPARSE Level 3 Function Reference

CUDA	A	D	C	R	ROC	A	D	C	R	U
cusparseCbsrmm		12.8			rocsparse_cbsrmm	3.7.0				
cusparseCbsrsm2_analysis		12.2			rocsparse_cbsrsm_analysis	3.6.0				
cusparseCbsrsm2_bufferSize		12.2			rocsparse_cbsrsm_buffer_size	4.5.0				
cusparseCbsrsm2_bufferSizeExt		12.2								
cusparseCbsrsm2_solve		12.2			rocsparse_cbsrsm_solve	4.5.0				
cusparseCcsrmm		10.2		11.0	rocsparse_ccsrmm	1.9.0				
cusparseCcsrmm2		10.2		11.0	rocsparse_ccsrmm	1.9.0				
cusparseCcsrsm2_analysis	9.2	11.3		12.0	rocsparse_ccsrsm_analysis	3.1.0				
cusparseCcsrsm2_bufferSizeExt	9.2	11.3		12.0	rocsparse_ccsrsm_buffer_size	3.1.0				
cusparseCcsrsm2_solve	9.2	11.3		12.0	rocsparse_ccsrsm_solve	3.1.0				
cusparseCcsrsm_analysis		10.2		11.0						

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Table 13 – continued from previous page

CUDA	A	D	C	R	ROC	A	D	C	R	U
cusparseCcsrsm_solve		10.2		11.0						
cusparseCgemmi	8.0	11.0		12.0						
cusparseDbsrmm		12.8			rocsparse_dbsrmm	3.7.0				
cusparseDbsrsm2_analysis		12.2			rocsparse_dbsrsm_analysis	3.6.0				
cusparseDbsrsm2_bufferSize		12.2			rocsparse_dbsrsm_buffer_size	4.5.0				
cusparseDbsrsm2_bufferSizeExt		12.2								
cusparseDbsrsm2_solve		12.2			rocsparse_dbsrsm_solve	4.5.0				
cusparseDcsrmm		10.2		11.0	rocsparse_dcsrmm	1.9.0				
cusparseDcsrmm2		10.2		11.0	rocsparse_dcsrmm	1.9.0				
cusparseDcsrsm2_analysis	9.2	11.3		12.0	rocsparse_dcsrsm_analysis	3.1.0				
cusparseDcsrsm2_bufferSizeExt	9.2	11.3		12.0	rocsparse_dcsrsm_buffer_size	3.1.0				
cusparseDcsrsm2_solve	9.2	11.3		12.0	rocsparse_dcsrsm_solve	3.1.0				
cusparseDcsrsm_analysis		10.2		11.0						
cusparseDcsrsm_solve		10.2		11.0						
cusparseDgemmi	8.0	11.0		12.0						
cusparseSbsrmm		12.8			rocsparse_sbsrmm	3.7.0				
cusparseSbsrsm2_analysis		12.2			rocsparse_sbsrsm_analysis	3.6.0				
cusparseSbsrsm2_bufferSize		12.2			rocsparse_sbsrsm_buffer_size	4.5.0				
cusparseSbsrsm2_bufferSizeExt		12.2								
cusparseSbsrsm2_solve		12.2			rocsparse_sbsrsm_solve	4.5.0				
cusparseScsrmm		10.2		11.0	rocsparse_scsrmm	1.9.0				
cusparseScsrmm2		10.2		11.0	rocsparse_scsrmm	1.9.0				
cusparseScsrsm2_analysis	9.2	11.3		12.0	rocsparse_scsrsm_analysis	3.1.0				
cusparseScsrsm2_bufferSizeExt	9.2	11.3		12.0	rocsparse_scsrsm_buffer_size	3.1.0				
cusparseScsrsm2_solve	9.2	11.3		12.0	rocsparse_scsrsm_solve	3.1.0				
cusparseScsrsm_analysis		10.2		11.0						
cusparseScsrsm_solve		10.2		11.0						
cusparseSgemmi	8.0	11.0		12.0						
cusparseXbsrsm2_zeroPivot		12.2			rocsparse_bsrsm_zero_pivot	4.5.0				
cusparseXcsrsm2_zeroPivot	9.2	11.3		12.0	rocsparse_csrsm_zero_pivot	3.1.0				
cusparseZbsrmm		12.8			rocsparse_zbsrmm	3.7.0				
cusparseZbsrsm2_analysis		12.2			rocsparse_zbsrsm_analysis	3.6.0				
cusparseZbsrsm2_bufferSize		12.2			rocsparse_zbsrsm_buffer_size	4.5.0				
cusparseZbsrsm2_bufferSizeExt		12.2								
cusparseZbsrsm2_solve		12.2			rocsparse_zbsrsm_solve	4.5.0				
cusparseZcsrmm		10.2		11.0	rocsparse_zcsrmm	1.9.0				
cusparseZcsrmm2		10.2		11.0	rocsparse_zcsrmm	1.9.0				
cusparseZcsrsm2_analysis	9.2	11.3		12.0	rocsparse_zcsrsm_analysis	3.1.0				
cusparseZcsrsm2_bufferSizeExt	9.2	11.3		12.0	rocsparse_zcsrsm_buffer_size	3.1.0				
cusparseZcsrsm2_solve	9.2	11.3		12.0	rocsparse_zcsrsm_solve	3.1.0				
cusparseZcsrsm_analysis		10.2		11.0						
cusparseZcsrsm_solve		10.2		11.0						
cusparseZgemmi	8.0	11.0		12.0						

11.2.8 11. CUSPARSE Extra Function Reference

CUDA	A	D	C	R	ROC	A	D	C	R	U	E
cusparseCcsrgeam		10.2		11.0	rocsparse_ccsrgeam	3.5.0					
cusparseCcsrgeam2	10.0				rocsparse_ccsrgeam	3.5.0					
cusparseCcsrgeam2_buffe	10.0										
cusparseCcsrgemm		10.2		11.0							
cusparseCcsrgemm2		11.0		12.0	rocsparse_ccsrgemm	2.8.0					
cusparseCcsrgemm2_buffe		11.0		12.0	rocsparse_ccsrgemm_buf	2.8.0					
cusparseDcsrgeam		10.2		11.0	rocsparse_dcsrgeam	3.5.0					
cusparseDcsrgeam2	10.0				rocsparse_dcsrgeam	3.5.0					
cusparseDcsrgeam2_buffe	10.0										
cusparseDcsrgemm		10.2		11.0							
cusparseDcsrgemm2		11.0		12.0	rocsparse_dcsrgemm	2.8.0					
cusparseDcsrgemm2_buffe		11.0		12.0	rocsparse_dcsrgemm_buf	2.8.0					
cusparseScsrgeam		10.2		11.0	rocsparse_scsrgeam	3.5.0					
cusparseScsrgeam2	10.0				rocsparse_scsrgeam	3.5.0					
cusparseScsrgeam2_buffe	10.0										
cusparseScsrgemm		10.2		11.0							
cusparseScsrgemm2		11.0		12.0	rocsparse_scsrgemm	2.8.0					
cusparseScsrgemm2_buffe		11.0		12.0	rocsparse_scsrgemm_buf	2.8.0					
cusparseXcsrgeam2Nnz	10.0				rocsparse_csrgeam_nnz	3.5.0					
cusparseXcsrgeamNnz		10.2		11.0	rocsparse_csrgeam_nnz	3.5.0					
cusparseXcsrgemm2Nnz		11.0		12.0	rocsparse_csrgemm_nnz	2.8.0					
cusparseXcsrgemmNnz		10.2		11.0							
cusparseZcsrgeam		10.2		11.0	rocsparse_zcsrgeam	3.5.0					
cusparseZcsrgeam2	10.0				rocsparse_zcsrgeam	3.5.0					
cusparseZcsrgeam2_buffe	10.0										
cusparseZcsrgemm		10.2		11.0							
cusparseZcsrgemm2		11.0		12.0	rocsparse_zcsrgemm	2.8.0					
cusparseZcsrgemm2_buffe		11.0		12.0	rocsparse_zcsrgemm_buf	2.8.0					

11.2.9 12. CUSPARSE Preconditioners Reference

CUDA	A	D	C	R	ROC
cusparseCbsric02		12.2			rocsparse_cbsric0
cusparseCbsric02_analysis		12.2			rocsparse_cbsric0_analysis
cusparseCbsric02_bufferSize		12.2			rocsparse_cbsric0_buffer_size
cusparseCbsric02_bufferSizeExt		12.2			
cusparseCbsrilu02		12.2			rocsparse_cbsrilu0
cusparseCbsrilu02_analysis		12.2			rocsparse_cbsrilu0_analysis
cusparseCbsrilu02_bufferSize		12.2			rocsparse_cbsrilu0_buffer_size
cusparseCbsrilu02_bufferSizeExt		12.2			
cusparseCbsrilu02_numericBoost		12.2			rocsparse_dcbsrilu0_numeric_boost
cusparseCcsric0		10.2		11.0	
cusparseCcsric02		12.2			rocsparse_ccsric0
cusparseCcsric02_analysis		12.2			rocsparse_ccsric0_analysis
cusparseCcsric02_bufferSize		12.2			rocsparse_ccsric0_buffer_size
cusparseCcsric02_bufferSizeExt		12.2			rocsparse_ccsric0_buffer_size
cusparseCcsrilu0		10.2		11.0	
cusparseCcsrilu02		12.2			rocsparse_ccsrilu0
cusparseCcsrilu02_analysis		12.2			rocsparse_ccsrilu0_analysis
cusparseCcsrilu02_bufferSize		12.2			rocsparse_ccsrilu0_buffer_size
cusparseCcsrilu02_bufferSizeExt		12.2			rocsparse_ccsrilu0_buffer_size
cusparseCcsrilu02_numericBoost		12.2			rocsparse_dccsrilu0_numeric_boost
cusparseCgpsvInterleavedBatch	9.2				rocsparse_cgpsv_interleaved_batch
cusparseCgpsvInterleavedBatch_bufferSizeExt	9.2				rocsparse_cgpsv_interleaved_batch_buf
cusparseCgtsv		10.2		11.0	
cusparseCgtsv2	9.0				rocsparse_cgtsv
cusparseCgtsv2StridedBatch	9.0				rocsparse_cgtsv_no_pivot_strided_batch
cusparseCgtsv2StridedBatch_bufferSizeExt	9.0				rocsparse_cgtsv_no_pivot_strided_batch
cusparseCgtsv2_bufferSizeExt	9.0				rocsparse_cgtsv_buffer_size
cusparseCgtsv2_nopivot	9.0				rocsparse_cgtsv_no_pivot
cusparseCgtsv2_nopivot_bufferSizeExt	9.0				rocsparse_cgtsv_no_pivot_buffer_size
cusparseCgtsvInterleavedBatch	9.2				rocsparse_cgtsv_interleaved_batch
cusparseCgtsvInterleavedBatch_bufferSizeExt	9.2				rocsparse_cgtsv_interleaved_batch_buf
cusparseCgtsvStridedBatch		10.2		11.0	
cusparseCgtsv_nopivot		10.2		11.0	
cusparseCsrilu0Ex	8.0	10.2		11.0	
cusparseDbsric02		12.2			rocsparse_dbsric0
cusparseDbsric02_analysis		12.2			rocsparse_dbsric0_analysis
cusparseDbsric02_bufferSize		12.2			rocsparse_dbsric0_buffer_size
cusparseDbsric02_bufferSizeExt		12.2			
cusparseDbsrilu02		12.2			rocsparse_dbsrilu0
cusparseDbsrilu02_analysis		12.2			rocsparse_dbsrilu0_analysis
cusparseDbsrilu02_bufferSize		12.2			rocsparse_dbsrilu0_buffer_size
cusparseDbsrilu02_bufferSizeExt		12.2			
cusparseDbsrilu02_numericBoost		12.2			rocsparse_dbsrilu0_numeric_boost
cusparseDcsric0		10.2		11.0	
cusparseDcsric02		12.2			rocsparse_dcsric0
cusparseDcsric02_analysis		12.2			rocsparse_dcsric0_analysis
cusparseDcsric02_bufferSize		12.2			rocsparse_dcsric0_buffer_size
cusparseDcsric02_bufferSizeExt		12.2			rocsparse_dcsric0_buffer_size
cusparseDcsrilu0		10.2		11.0	

Table 14 – continued from previous page

CUDA	A	D	C	R	ROC
cusparseDcsrilu02		12.2			rocsparse_dcsrilu0
cusparseDcsrilu02_analysis		12.2			rocsparse_dcsrilu0_analysis
cusparseDcsrilu02_bufferSize		12.2			rocsparse_dcsrilu0_buffer_size
cusparseDcsrilu02_bufferSizeExt		12.2			rocsparse_dcsrilu0_buffer_size
cusparseDcsrilu02_numericBoost		12.2			rocsparse_dcsrilu0_numeric_boost
cusparseDgpsvInterleavedBatch	9.2				rocsparse_dgpsv_interleaved_batch
cusparseDgpsvInterleavedBatch_bufferSizeExt	9.2				rocsparse_dgpsv_interleaved_batch_buf
cusparseDgtsv		10.2		11.0	
cusparseDgtsv2	9.0				rocsparse_dgtsv
cusparseDgtsv2StridedBatch	9.0				rocsparse_dgtsv_no_pivot_strided_batc
cusparseDgtsv2StridedBatch_bufferSizeExt	9.0				rocsparse_dgtsv_no_pivot_strided_batc
cusparseDgtsv2_bufferSizeExt	9.0				rocsparse_dgtsv_buffer_size
cusparseDgtsv2_nopivot	9.0				rocsparse_dgtsv_no_pivot
cusparseDgtsv2_nopivot_bufferSizeExt	9.0				rocsparse_dgtsv_no_pivot_buffer_size
cusparseDgtsvInterleavedBatch	9.2				rocsparse_dgtsv_interleaved_batch
cusparseDgtsvInterleavedBatch_bufferSizeExt	9.2				rocsparse_dgtsv_interleaved_batch_buf
cusparseDgtsvStridedBatch		10.2		11.0	
cusparseDgtsv_nopivot		10.2		11.0	
cusparseSbsric02		12.2			rocsparse_sbsric0
cusparseSbsric02_analysis		12.2			rocsparse_sbsric0_analysis
cusparseSbsric02_bufferSize		12.2			rocsparse_sbsric0_buffer_size
cusparseSbsric02_bufferSizeExt		12.2			
cusparseSbsrilu02		12.2			rocsparse_sbsrilu0
cusparseSbsrilu02_analysis		12.2			rocsparse_sbsrilu0_analysis
cusparseSbsrilu02_bufferSize		12.2			rocsparse_sbsrilu0_buffer_size
cusparseSbsrilu02_bufferSizeExt		12.2			
cusparseSbsrilu02_numericBoost		12.2			rocsparse_dsbsrilu0_numeric_boost
cusparseScsric0		10.2		11.0	
cusparseScsric02		12.2			rocsparse_scsric0
cusparseScsric02_analysis		12.2			rocsparse_scsric0_analysis
cusparseScsric02_bufferSize		12.2			rocsparse_scsric0_buffer_size
cusparseScsric02_bufferSizeExt		12.2			rocsparse_scsric0_buffer_size
cusparseScsrilu0		10.2		11.0	
cusparseScsrilu02		12.2			rocsparse_scsrilu0
cusparseScsrilu02_analysis		12.2			rocsparse_scsrilu0_analysis
cusparseScsrilu02_bufferSize		12.2			rocsparse_scsrilu0_buffer_size
cusparseScsrilu02_bufferSizeExt		12.2			rocsparse_scsrilu0_buffer_size
cusparseScsrilu02_numericBoost		12.2			rocsparse_dscsrilu0_numeric_boost
cusparseSgpsvInterleavedBatch	9.2				rocsparse_sgpsv_interleaved_batch
cusparseSgpsvInterleavedBatch_bufferSizeExt	9.2				rocsparse_sgpsv_interleaved_batch_buf
cusparseSgtsv		10.2		11.0	
cusparseSgtsv2	9.0				rocsparse_sgtsv
cusparseSgtsv2StridedBatch	9.0				rocsparse_sgtsv_no_pivot_strided_batc
cusparseSgtsv2StridedBatch_bufferSizeExt	9.0				rocsparse_sgtsv_no_pivot_strided_batc
cusparseSgtsv2_bufferSizeExt	9.0				rocsparse_sgtsv_buffer_size
cusparseSgtsv2_nopivot	9.0				rocsparse_sgtsv_no_pivot
cusparseSgtsv2_nopivot_bufferSizeExt	9.0				rocsparse_sgtsv_no_pivot_buffer_size
cusparseSgtsvInterleavedBatch	9.2				rocsparse_sgtsv_interleaved_batch
cusparseSgtsvInterleavedBatch_bufferSizeExt	9.2				rocsparse_sgtsv_interleaved_batch_buf
cusparseSgtsvStridedBatch		10.2		11.0	

Table 14 – continued from previous page

CUDA	A	D	C	R	ROC
cusparseSgtsv_nopivot		10.2		11.0	
cusparseXbsric02_zeroPivot		12.2			rocsparse_bsric0_zero_pivot
cusparseXbsrilu02_zeroPivot		12.2			rocsparse_bsrilu0_zero_pivot
cusparseXcsric02_zeroPivot		12.2			rocsparse_csric0_zero_pivot
cusparseXcsrilu02_zeroPivot		12.2			rocsparse_csrilu0_zero_pivot
cusparseZbsric02		12.2			rocsparse_zbsric0
cusparseZbsric02_analysis		12.2			rocsparse_zbsric0_analysis
cusparseZbsric02_bufferSize		12.2			rocsparse_zbsric0_buffer_size
cusparseZbsric02_bufferSizeExt		12.2			
cusparseZbsrilu02		12.2			rocsparse_zbsrilu0
cusparseZbsrilu02_analysis		12.2			rocsparse_zbsrilu0_analysis
cusparseZbsrilu02_bufferSize		12.2			rocsparse_zbsrilu0_buffer_size
cusparseZbsrilu02_bufferSizeExt		12.2			
cusparseZbsrilu02_numericBoost		12.2			rocsparse_zbsrilu0_numeric_boost
cusparseZcsric0		10.2		11.0	
cusparseZcsric02		12.2			rocsparse_zcsric0
cusparseZcsric02_analysis		12.2			rocsparse_zcsric0_analysis
cusparseZcsric02_bufferSize		12.2			rocsparse_zcsric0_buffer_size
cusparseZcsric02_bufferSizeExt		12.2			rocsparse_zcsric0_buffer_size
cusparseZcsrilu0		10.2		11.0	
cusparseZcsrilu02		12.2			rocsparse_zcsrilu0
cusparseZcsrilu02_analysis		12.2			rocsparse_zcsrilu0_analysis
cusparseZcsrilu02_bufferSize		12.2			rocsparse_zcsrilu0_buffer_size
cusparseZcsrilu02_bufferSizeExt		12.2			rocsparse_zcsrilu0_buffer_size
cusparseZcsrilu02_numericBoost		12.2			rocsparse_zcsrilu0_numeric_boost
cusparseZgpsvInterleavedBatch	9.2				rocsparse_zgpsv_interleaved_batch
cusparseZgpsvInterleavedBatch_bufferSizeExt	9.2				rocsparse_zgpsv_interleaved_batch_buf
cusparseZgtsv		10.2		11.0	
cusparseZgtsv2	9.0				rocsparse_zgtsv
cusparseZgtsv2StridedBatch	9.0				rocsparse_zgtsv_no_pivot_strided_batch
cusparseZgtsv2StridedBatch_bufferSizeExt	9.0				rocsparse_zgtsv_no_pivot_strided_batch
cusparseZgtsv2_bufferSizeExt	9.0				rocsparse_zgtsv_buffer_size
cusparseZgtsv2_nopivot	9.0				rocsparse_zgtsv_no_pivot
cusparseZgtsv2_nopivot_bufferSizeExt	9.0				rocsparse_zgtsv_no_pivot_buffer_size
cusparseZgtsvInterleavedBatch	9.2				rocsparse_zgtsv_interleaved_batch
cusparseZgtsvInterleavedBatch_bufferSizeExt	9.2				rocsparse_zgtsv_interleaved_batch_buf
cusparseZgtsvStridedBatch		10.2		11.0	
cusparseZgtsv_nopivot		10.2		11.0	

11.2.10 13. CUSPARSE Reorderings Reference

CUDA	A	D	C	R	ROC	A	D	C	R	U	E
cusparseCcsrcolor		12.2			rocsparse_ccsrcolor	4.5.0					
cusparseDcsrcolor		12.2			rocsparse_dcsrcolor	4.5.0					
cusparseScsrcolor		12.2			rocsparse_scsrcolor	4.5.0					
cusparseZcsrcolor		12.2			rocsparse_zcsrcolor	4.5.0					

11.2.11 14. CUSPARSE Format Conversion Reference

CUDA	A	D	C	R	ROC
cusparseCbsr2csr		12.8			rocsparse_cbsr2csr
cusparseCcsc2dense		11.1		12.0	rocsparse_ccsc2dense
cusparseCcsc2hyb		10.2		11.0	
cusparseCcsr2bsr		12.4			rocsparse_ccsr2bsr
cusparseCcsr2csc		10.2		11.0	
cusparseCcsr2csr_compress	8.0	12.2			rocsparse_ccsr2csr_compress
cusparseCcsr2csru		12.2			
cusparseCcsr2dense		11.1		12.0	rocsparse_ccsr2dense
cusparseCcsr2gebsr					rocsparse_ccsr2gebsr
cusparseCcsr2gebsr_bufferSize					rocsparse_ccsr2gebsr_buffer_si
cusparseCcsr2gebsr_bufferSizeExt					
cusparseCcsr2hyb		10.2		11.0	rocsparse_ccsr2hyb
cusparseCcsru2csr		12.2			
cusparseCcsru2csr_bufferSizeExt		12.2			
cusparseCdense2csc		11.1		12.0	rocsparse_cdense2csc
cusparseCdense2csr		11.1		12.0	rocsparse_cdense2csr
cusparseCdense2hyb		10.2		11.0	
cusparseCgebsr2csr		12.4			rocsparse_cgebsr2csr
cusparseCgebsr2gebsc					rocsparse_cgebsr2gebsc
cusparseCgebsr2gebsc_bufferSize					rocsparse_cgebsr2gebsc_buffer_s
cusparseCgebsr2gebsc_bufferSizeExt					
cusparseCgebsr2gebsr		12.8			rocsparse_cgebsr2gebsr
cusparseCgebsr2gebsr_bufferSize		12.8			rocsparse_cgebsr2gebsr_buffer_s
cusparseCgebsr2gebsr_bufferSizeExt		12.8			
cusparseChyb2csc		10.2		11.0	
cusparseChyb2csr		10.2		11.0	
cusparseChyb2dense		10.2		11.0	
cusparseCnnz					rocsparse_cnnz
cusparseCnnz_compress	8.0	12.2			rocsparse_cnnz_compress
cusparseCreateCsru2csrInfo		12.2			
cusparseCreateIdentityPermutation		12.2			rocsparse_create_identity_permu
cusparseCsr2cscEx	8.0	10.2		11.0	
cusparseCsr2cscEx2	10.1				
cusparseCsr2cscEx2_bufferSize	10.1				rocsparse_csr2csc_buffer_size

Table 15 – continued from previous page

CUDA	A	D	C	R	ROC
cusparseDbsr2csr		12.8			rocsparse_dbsr2csr
cusparseDcsc2dense		11.1		12.0	rocsparse_dcsc2dense
cusparseDcsc2hyb		10.2		11.0	
cusparseDcsr2bsr		12.4			rocsparse_dcsr2bsr
cusparseDcsr2csc		10.2		11.0	
cusparseDcsr2csr_compress	8.0	12.2			rocsparse_dcsr2csr_compress
cusparseDcsr2csru		12.2			
cusparseDcsr2dense		11.1		12.0	rocsparse_dcsr2dense
cusparseDcsr2gebsr					rocsparse_dcsr2gebsr
cusparseDcsr2gebsr_bufferSize					rocsparse_dcsr2gebsr_buffer_si
cusparseDcsr2gebsr_bufferSizeExt					
cusparseDcsr2hyb		10.2		11.0	rocsparse_dcsr2hyb
cusparseDcsru2csr		12.2			
cusparseDcsru2csr_bufferSizeExt		12.2			
cusparseDdense2csc		11.1		12.0	rocsparse_ddense2csc
cusparseDdense2csr		11.1		12.0	rocsparse_ddense2csr
cusparseDdense2hyb		10.2		11.0	
cusparseDestroyCsru2csrInfo		12.2			
cusparseDgebsr2csr		12.4			rocsparse_dgebsr2csr
cusparseDgebsr2gebsc					rocsparse_dgebsr2gebsc
cusparseDgebsr2gebsc_bufferSize					rocsparse_dgebsr2gebsc_buffer_s
cusparseDgebsr2gebsc_bufferSizeExt					
cusparseDgebsr2gebsr		12.8			rocsparse_dgebsr2gebsr
cusparseDgebsr2gebsr_bufferSize		12.8			rocsparse_dgebsr2gebsr_buffer_s
cusparseDgebsr2gebsr_bufferSizeExt		12.8			
cusparseDhyb2csc		10.2		11.0	
cusparseDhyb2csr		10.2		11.0	
cusparseDhyb2dense		10.2		11.0	
cusparseDnnz					rocsparse_dnnz
cusparseDnnz_compress	8.0	12.2			rocsparse_dnnz_compress
cusparseDpruneCsr2csr	9.0	12.2			rocsparse_dprune_csr2csr
cusparseDpruneCsr2csrByPercentage	9.0	12.2			rocsparse_dprune_csr2csr_by_per
cusparseDpruneCsr2csrByPercentage_bufferSizeExt	9.0	12.2			rocsparse_dprune_csr2csr_by_per
cusparseDpruneCsr2csrNnz	9.0	12.2			rocsparse_dprune_csr2csr_nnz
cusparseDpruneCsr2csrNnzByPercentage	9.0	12.2			rocsparse_dprune_csr2csr_nnz_by
cusparseDpruneCsr2csr_bufferSizeExt	9.0	12.2			rocsparse_dprune_csr2csr_buffer
cusparseDpruneDense2csr	9.0	12.2			rocsparse_dprune_dense2csr
cusparseDpruneDense2csrByPercentage	9.0	12.2			rocsparse_dprune_dense2csr_by_p
cusparseDpruneDense2csrByPercentage_bufferSizeExt	9.0	12.2			rocsparse_dprune_dense2csr_by_p
cusparseDpruneDense2csrNnz	9.0	12.2			rocsparse_dprune_dense2csr_nnz
cusparseDpruneDense2csrNnzByPercentage	9.0	12.2			rocsparse_dprune_dense2csr_nnz_
cusparseDpruneDense2csr_bufferSizeExt	9.0	12.2			rocsparse_dprune_dense2csr_buf
cusparseHpruneCsr2csr	9.0	12.2			
cusparseHpruneCsr2csrByPercentage	9.0	12.2			
cusparseHpruneCsr2csrByPercentage_bufferSizeExt	9.0	12.2			
cusparseHpruneCsr2csrNnz	9.0	12.2			
cusparseHpruneCsr2csrNnzByPercentage	9.0	12.2			
cusparseHpruneCsr2csr_bufferSizeExt	9.0	12.2			
cusparseHpruneDense2csr	9.0	12.2			
cusparseHpruneDense2csrByPercentage	9.0	12.2			

Table 15 – continued from previous page

CUDA	A	D	C	R	ROC
cusparseHpruneDense2csrByPercentage_bufferSizeExt	9.0	12.2			
cusparseHpruneDense2csrNnz	9.0	12.2			
cusparseHpruneDense2csrNnzByPercentage	9.0	12.2			
cusparseHpruneDense2csr_bufferSizeExt	9.0	12.2			
cusparseSbsr2csr		12.8			rocsparse_sbsr2csr
cusparseScsc2dense		11.1		12.0	rocsparse_scsc2dense
cusparseScsc2hyb		10.2		11.0	
cusparseScsr2bsr		12.4			rocsparse_scsr2bsr
cusparseScsr2csc		10.2		11.0	
cusparseScsr2csr_compress	8.0	12.2			rocsparse_scsr2csr_compress
cusparseScsr2csru		12.2			
cusparseScsr2dense		11.1		12.0	rocsparse_scsr2dense
cusparseScsr2gebsr					rocsparse_scsr2gebsr
cusparseScsr2gebsr_bufferSize					rocsparse_scsr2gebsr_buffer_si
cusparseScsr2gebsr_bufferSizeExt					
cusparseScsr2hyb		10.2		11.0	rocsparse_scsr2hyb
cusparseScsru2csr		12.2			
cusparseScsru2csr_bufferSizeExt		12.2			
cusparseSdense2csc		11.1		12.0	rocsparse_sdense2csc
cusparseSdense2csr		11.1		12.0	rocsparse_sdense2csr
cusparseSdense2hyb		10.2		11.0	
cusparseSgebsr2csr		12.4			rocsparse_sgebsr2csr
cusparseSgebsr2gebsc					rocsparse_sgebsr2gebsc
cusparseSgebsr2gebsc_bufferSize					rocsparse_sgebsr2gebsc_buffer_s
cusparseSgebsr2gebsc_bufferSizeExt					
cusparseSgebsr2gebsr		12.8			rocsparse_sgebsr2gebsr
cusparseSgebsr2gebsr_bufferSize		12.8			rocsparse_sgebsr2gebsr_buffer_s
cusparseSgebsr2gebsr_bufferSizeExt		12.8			
cusparseShyb2csc		10.2		11.0	
cusparseShyb2csr		10.2		11.0	
cusparseShyb2dense		10.2		11.0	
cusparseSnnz					rocsparse_snnz
cusparseSnnz_compress	8.0	12.2			rocsparse_snnz_compress
cusparseSpruneCsr2csr	9.0	12.2			rocsparse_sprune_csr2csr
cusparseSpruneCsr2csrByPercentage	9.0	12.2			rocsparse_sprune_csr2csr_by_per
cusparseSpruneCsr2csrByPercentage_bufferSizeExt	9.0	12.2			rocsparse_sprune_csr2csr_by_per
cusparseSpruneCsr2csrNnz	9.0	12.2			rocsparse_sprune_csr2csr_nnz
cusparseSpruneCsr2csrNnzByPercentage	9.0	12.2			rocsparse_sprune_csr2csr_nnz_by
cusparseSpruneCsr2csr_bufferSizeExt	9.0	12.2			rocsparse_sprune_csr2csr_buffer
cusparseSpruneDense2csr	9.0	12.2			rocsparse_sprune_dense2csr
cusparseSpruneDense2csrByPercentage	9.0	12.2			rocsparse_sprune_dense2csr_by_p
cusparseSpruneDense2csrByPercentage_bufferSizeExt	9.0	12.2			rocsparse_sprune_dense2csr_by_p
cusparseSpruneDense2csrNnz	9.0	12.2			rocsparse_sprune_dense2csr_nnz
cusparseSpruneDense2csrNnzByPercentage	9.0	12.2			rocsparse_sprune_dense2csr_nnz_
cusparseSpruneDense2csr_bufferSizeExt	9.0	12.2			rocsparse_sprune_dense2csr_buf
cusparseXcoo2csr					rocsparse_coo2csr
cusparseXcoosortByColumn					rocsparse_coosort_by_column
cusparseXcoosortByRow					rocsparse_coosort_by_row
cusparseXcoosort_bufferSizeExt					rocsparse_coosort_buffer_size
cusparseXcscsort					rocsparse_cscsort

Table 15 – continued from previous page

CUDA	A	D	C	R	ROC
cusparseXcscsort_bufferSizeExt					rocsparse_cscsort_buffer_size
cusparseXcsr2bsrNnz		12.4			rocsparse_csr2bsr_nnz
cusparseXcsr2coo					rocsparse_csr2coo
cusparseXcsr2gebsrNnz					rocsparse_csr2gebsr_nnz
cusparseXcsrsort					rocsparse_csrsort
cusparseXcsrsort_bufferSizeExt					rocsparse_csrsort_buffer_size
cusparseXgebsr2csr		12.4			
cusparseXgebsr2gebsrNnz		12.8			rocsparse_gebsr2gebsr_nnz
cusparseZbsr2csr		12.8			rocsparse_zbsr2csr
cusparseZcsc2dense		11.1		12.0	rocsparse_zcsc2dense
cusparseZcsc2hyb		10.2		11.0	
cusparseZcsr2bsr		12.4			rocsparse_zcsr2bsr
cusparseZcsr2csc		10.2		11.0	
cusparseZcsr2csr_compress	8.0	12.2			rocsparse_zcsr2csr_compress
cusparseZcsr2csru		12.2			
cusparseZcsr2dense		11.1		12.0	rocsparse_zcsr2dense
cusparseZcsr2gebsr					rocsparse_zcsr2gebsr
cusparseZcsr2gebsr_bufferSize					rocsparse_zcsr2gebsr_buffer_si
cusparseZcsr2gebsr_bufferSizeExt					
cusparseZcsr2hyb		10.2		11.0	rocsparse_zcsr2hyb
cusparseZcsru2csr		12.2			
cusparseZcsru2csr_bufferSizeExt		12.2			
cusparseZdense2csc		11.1		12.0	rocsparse_zdense2csc
cusparseZdense2csr		11.1		12.0	rocsparse_zdense2csr
cusparseZdense2hyb		10.2		11.0	
cusparseZgebsr2csr		12.4			rocsparse_zgebsr2csr
cusparseZgebsr2gebsc					rocsparse_zgebsr2gebsc
cusparseZgebsr2gebsc_bufferSize					rocsparse_zgebsr2gebsc_buffer_s
cusparseZgebsr2gebsc_bufferSizeExt					
cusparseZgebsr2gebsr		12.8			rocsparse_zgebsr2gebsr
cusparseZgebsr2gebsr_bufferSize		12.8			rocsparse_zgebsr2gebsr_buffer_s
cusparseZgebsr2gebsr_bufferSizeExt		12.8			
cusparseZhyb2csc		10.2		11.0	
cusparseZhyb2csr		10.2		11.0	
cusparseZhyb2dense		10.2		11.0	
cusparseZnnz					rocsparse_znnz
cusparseZnnz_compress	8.0	12.2			rocsparse_znnz_compress

11.2.12 15. CUSPARSE Generic API Reference

CUDA	A	D	C	R	ROC	A	D
cusparseAxpby	11.0	12.8	12.0		rocsparse_axpby	4.1.0	
cusparseBlockedEllGet	11.2				rocsparse_bell_get	4.1.0	
cusparseBsrSetStridedBatch	12.1						
cusparseConstBlockedEllGet	12.0				rocsparse_const_bell_get	6.0.0	
cusparseConstCooGet	12.0				rocsparse_const_coo_get	6.0.0	
cusparseConstCscGet	12.0				rocsparse_const_csc_get	6.0.0	
cusparseConstCsrGet	12.0				rocsparse_const_csr_get	6.0.0	

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Table 16 – continued from previous page

CUDA	A	D	C	R	ROC	A	D
cusparseConstDnMatGet	12.0				rocsparse_const_dnmat_get	6.0.0	
cusparseConstDnMatGetValues	12.0				rocsparse_const_dnmat_get_values	6.0.0	
cusparseConstDnVecGet	12.0				rocsparse_const_dnvec_get	6.0.0	
cusparseConstDnVecGetValues	12.0				rocsparse_const_dnvec_get_values	6.0.0	
cusparseConstSpMatGetValues	12.0				rocsparse_const_spmat_get_values	6.0.0	
cusparseConstSpVecGet	12.0				rocsparse_const_spvec_get	6.0.0	
cusparseConstSpVecGetValues	12.0				rocsparse_const_spvec_get_values	6.0.0	
cusparseConstrainedGeMM	10.2	11.2		12.0			
cusparseConstrainedGeMM_bufferSize	10.2	11.2		12.0			
cusparseCooAoSGet	10.2	11.2		12.0	rocsparse_coo_aos_get	4.1.0	
cusparseCooGet	10.1				rocsparse_coo_get	4.1.0	
cusparseCooSetPointers	11.1				rocsparse_coo_set_pointers	4.1.0	
cusparseCooSetStridedBatch	11.0				rocsparse_coo_set_strided_batch	5.2.0	
cusparseCreateBlockedEll	11.2				rocsparse_create_bell_descr	4.5.0	
cusparseCreateBsr	12.1						
cusparseCreateConstBlockedEll	12.0				rocsparse_create_const_bell_descr	6.0.0	
cusparseCreateConstBsr	12.1						
cusparseCreateConstCoo	12.0				rocsparse_create_const_coo_descr	6.0.0	
cusparseCreateConstCsc	12.0				rocsparse_create_const_csc_descr	6.0.0	
cusparseCreateConstCsr	12.0				rocsparse_create_const_csr_descr	6.0.0	
cusparseCreateConstDnMat	12.0				rocsparse_create_const_dnmat_descr	6.0.0	
cusparseCreateConstDnVec	12.0				rocsparse_create_const_dnvec_descr	6.0.0	
cusparseCreateConstSlicedEll	12.1						
cusparseCreateConstSpVec	12.0				rocsparse_create_const_spvec_descr	6.0.0	
cusparseCreateCoo	10.1				rocsparse_create_coo_descr	4.1.0	
cusparseCreateCooAoS	10.2	11.2		12.0	rocsparse_create_coo_aos_descr	4.1.0	
cusparseCreateCsc	11.1				rocsparse_create_csc_descr	4.1.0	
cusparseCreateCsr	10.2				rocsparse_create_csr_descr	4.1.0	
cusparseCreateDnMat	10.1				rocsparse_create_dnmat_descr	4.1.0	
cusparseCreateDnVec	10.2				rocsparse_create_dnvec_descr	4.1.0	
cusparseCreateSlicedEll	12.1						
cusparseCreateSpVec	10.2				rocsparse_create_spvec_descr	4.1.0	
cusparseCscGet	11.7				rocsparse_csc_get	6.1.0	
cusparseCscSetPointers	11.1				rocsparse_csc_set_pointers	4.1.0	
cusparseCsrGet	10.2				rocsparse_csr_get	4.1.0	
cusparseCsrSetPointers	11.0				rocsparse_csr_set_pointers	4.1.0	
cusparseCsrSetStridedBatch	11.0				rocsparse_csr_set_strided_batch	5.2.0	
cusparseDenseToSparse_analysis	11.1		12.0		rocsparse_dense_to_sparse	4.1.0	
cusparseDenseToSparse_bufferSize	11.1		12.0		rocsparse_dense_to_sparse	4.1.0	
cusparseDenseToSparse_convert	11.1		12.0				
cusparseDestroyDnMat	10.1		12.0		rocsparse_destroy_dnmat_descr	4.1.0	
cusparseDestroyDnVec	10.2		12.0		rocsparse_destroy_dnvec_descr	4.1.0	
cusparseDestroySpMat	10.1		12.0		rocsparse_destroy_spmat_descr	4.1.0	
cusparseDestroySpVec	10.2		12.0		rocsparse_destroy_spvec_descr	4.1.0	
cusparseDnMatGet	10.1				rocsparse_dnmat_get	4.1.0	
cusparseDnMatGetStridedBatch	10.1		12.0		rocsparse_dnmat_get_strided_batch	5.2.0	
cusparseDnMatGetValues	10.2				rocsparse_dnmat_get_values	4.1.0	
cusparseDnMatSetStridedBatch	10.1				rocsparse_dnmat_set_strided_batch	5.2.0	
cusparseDnMatSetValues	10.2				rocsparse_dnmat_set_values	4.1.0	
cusparseDnVecGet	10.2				rocsparse_dnvec_get	4.1.0	

CO

Table 16 – continued from previous page

CUDA	A	D	C	R	ROC	A	D
cusparseDnVecGetValues	10.2				rocsparse_dnvec_get_values	4.1.0	
cusparseDnVecSetValues	10.2				rocsparse_dnvec_set_values	4.1.0	
cusparseGather	11.0		12.0		rocsparse_gather	4.1.0	
cusparseRot	11.0	12.2			rocsparse_rot	4.1.0	
cusparseSDDMM	11.2		12.0		rocsparse_sddmm	4.3.0	
cusparseSDDMM_bufferSize	11.2		12.0		rocsparse_sddmm_buffer_size	4.3.0	
cusparseSDDMM_preprocess	11.2		12.0		rocsparse_sddmm_preprocess	4.3.0	
cusparseScatter	11.0		12.0		rocsparse_scatter	4.1.0	
cusparseSpGEMM_compute	11.0		12.0				
cusparseSpGEMM_copy	11.0		12.0				
cusparseSpGEMM_createDescr	11.0						
cusparseSpGEMM_destroyDescr	11.0						
cusparseSpGEMM_estimateMemory	12.0						
cusparseSpGEMM_getNumProducts	12.0						
cusparseSpGEMM_workEstimation	11.0		12.0				
cusparseSpGEMMreuse_compute	11.3	13.2	12.0				
cusparseSpGEMMreuse_copy	11.3	13.2	12.0				
cusparseSpGEMMreuse_nnz	11.3	13.2	12.0				
cusparseSpGEMMreuse_workEstimation	11.3	13.2	12.0				
cusparseSpMM	10.1		12.0		rocsparse_spmm	4.2.0	
cusparseSpMMOp	11.5	13.2					
cusparseSpMMOp_createPlan	11.5	13.2					
cusparseSpMMOp_destroyPlan	11.5	13.2					
cusparseSpMM_bufferSize	10.1		12.0		rocsparse_spmm	4.2.0	
cusparseSpMM_preprocess	11.2		12.0		rocsparse_spmm	4.2.0	
cusparseSpMV	10.1		12.0		rocsparse_spmv	4.1.0	
cusparseSpMVOp	13.1						
cusparseSpMVOp_bufferSize	13.1						
cusparseSpMVOp_createDescr	13.1		13.1				
cusparseSpMVOp_createPlan	13.1						
cusparseSpMVOp_destroyDescr	13.1						
cusparseSpMVOp_destroyPlan	13.1						
cusparseSpMVOp_setGlobalUserData	13.1						
cusparseSpMV_bufferSize	10.1		12.0		rocsparse_spmv	4.1.0	
cusparseSpMV_preprocess	12.4						
cusparseSpMatGetAttribute	11.3		12.0		rocsparse_spmat_get_attribute	4.5.0	
cusparseSpMatGetFormat	10.1		12.0		rocsparse_spmat_get_format	4.1.0	
cusparseSpMatGetIndexBase	10.1		12.0		rocsparse_spmat_get_index_base	4.1.0	
cusparseSpMatGetNumBatches	10.1			10.2			
cusparseSpMatGetSize	11.0		12.0		rocsparse_spmat_get_size	4.1.0	
cusparseSpMatGetStridedBatch	10.2		12.0		rocsparse_spmat_get_strided_batch	5.2.0	
cusparseSpMatGetValues	10.2				rocsparse_spmat_get_values	4.1.0	
cusparseSpMatSetAttribute	11.3				rocsparse_spmat_set_attribute	4.5.0	
cusparseSpMatSetNumBatches	10.1			10.2			
cusparseSpMatSetStridedBatch	10.2			12.0	rocsparse_spmat_set_strided_batch	5.2.0	
cusparseSpMatSetValues	10.2				rocsparse_spmat_set_values	4.1.0	
cusparseSpSM_analysis	11.3		12.0		rocsparse_spsm	4.5.0	
cusparseSpSM_bufferSize	11.3		12.0				
cusparseSpSM_createDescr	11.3						
cusparseSpSM_destroyDescr	11.3						

CO

Table 16 – continued from previous page

CUDA	A	D	C	R	ROC	A	D
cusparseSpSM_solve	11.3		12.0		rocsparse_spsm	4.5.0	
cusparseSpSM_updateMatrix	12.4						
cusparseSpSV_analysis	11.3		12.0				
cusparseSpSV_bufferSize	11.3		12.0		rocsparse_spsv	4.5.0	
cusparseSpSV_createDescr	11.3						
cusparseSpSV_destroyDescr	11.3						
cusparseSpSV_solve	11.3		12.0				
cusparseSpSV_updateMatrix	12.1						
cusparseSpVV	10.1	12.8	12.0		rocsparse_spvv	4.1.0	
cusparseSpVV_bufferSize	10.1	12.8	12.0		rocsparse_spvv	4.1.0	
cusparseSpVecGet	10.2				rocsparse_spvec_get	4.1.0	
cusparseSpVecGetIndexBase	10.2		12.0		rocsparse_spvec_get_index_base	4.1.0	
cusparseSpVecGetValues	10.2				rocsparse_spvec_get_values	4.1.0	
cusparseSpVecSetValues	10.2				rocsparse_spvec_set_values	4.1.0	
cusparseSparseToDense	11.1		12.0		rocsparse_sparse_to_dense	4.1.0	
cusparseSparseToDense_bufferSize	11.1		12.0		rocsparse_sparse_to_dense	4.1.0	

11.3 CURAND API supported by ROC

Note: In the tables that follow the columns marked A, D, C, R, U, and E mean the following: **A** - Added; **D** - Deprecated; **C** - Changed; **R** - Removed; **U** - Unsupported for CUDA version(s); **E** - Experimental

11.3.1 1. CURAND Data types

CUDA	A	D	C	R	ROC
CURAND_3RD					
CURAND_BINARY_SEARCH					
CURAND_CHOOSE_BEST					
CURAND_DEFINITION					
CURAND_DEVICE_API					
CURAND_DIRECTION_VECTORS_32_JOEKUO6					ROCRAND_DIRECTION_VECTORS_32_JOEKUO6
CURAND_DIRECTION_VECTORS_64_JOEKUO6					ROCRAND_DIRECTION_VECTORS_64_JOEKUO6
CURAND_DISCRETE_GAUSS					
CURAND_FAST_REJECTION					
CURAND_HITR					
CURAND_ITR					
CURAND_KNUTH					
CURAND_M1					
CURAND_M2					
CURAND_ORDERING_PSEUDO_BEST					ROCRAND_ORDERING_PSEUDO_BEST
CURAND_ORDERING_PSEUDO_DEFAULT					ROCRAND_ORDERING_PSEUDO_DEFAULT
CURAND_ORDERING_PSEUDO_DYNAMIC	11.5				ROCRAND_ORDERING_PSEUDO_DYNAMIC
CURAND_ORDERING_PSEUDO_LEGACY	11.0				ROCRAND_ORDERING_PSEUDO_LEGACY
CURAND_ORDERING_PSEUDO_SEEDED					ROCRAND_ORDERING_PSEUDO_SEEDED
CURAND_ORDERING_QUASI_DEFAULT					ROCRAND_ORDERING_QUASI_DEFAULT
CURAND_POISSON					

Table 17 – continued from previous page

CUDA	A	D	C	R	ROC
CURAND_REJECTION					
CURAND_RNG_PSEUDO_DEFAULT					ROCRAND_RNG_PSEUDO_DEFAULT
CURAND_RNG_PSEUDO_MRG32K3A					ROCRAND_RNG_PSEUDO_MRG32K3A
CURAND_RNG_PSEUDO_MT19937					ROCRAND_RNG_PSEUDO_MT19937
CURAND_RNG_PSEUDO_MTGP32					ROCRAND_RNG_PSEUDO_MTGP32
CURAND_RNG_PSEUDO_PHILOX4_32_10					ROCRAND_RNG_PSEUDO_PHILOX4_32_10
CURAND_RNG_PSEUDO_XORWOW					ROCRAND_RNG_PSEUDO_XORWOW
CURAND_RNG_QUASI_DEFAULT					ROCRAND_RNG_QUASI_DEFAULT
CURAND_RNG_QUASI_SCRAMBLED_SOBOL32					ROCRAND_RNG_QUASI_SCRAMBLED_SOBOL32
CURAND_RNG_QUASI_SCRAMBLED_SOBOL64					ROCRAND_RNG_QUASI_SCRAMBLED_SOBOL64
CURAND_RNG_QUASI_SOBOL32					ROCRAND_RNG_QUASI_SOBOL32
CURAND_RNG_QUASI_SOBOL64					ROCRAND_RNG_QUASI_SOBOL64
CURAND_RNG_TEST					
CURAND_SCRAMBLED_DIRECTION_VECTORS_32_JOEKUO6					ROCRAND_SCRAMBLED_DIRECTION_VECTORS_32
CURAND_SCRAMBLED_DIRECTION_VECTORS_64_JOEKUO6					ROCRAND_SCRAMBLED_DIRECTION_VECTORS_64
CURAND_STATUS_ALLOCATION_FAILED					ROCRAND_STATUS_ALLOCATION_FAILED
CURAND_STATUS_ARCH_MISMATCH					
CURAND_STATUS_DOUBLE_PRECISION_REQUIRED					ROCRAND_STATUS_DOUBLE_PRECISION_REQUIR
CURAND_STATUS_INITIALIZATION_FAILED					
CURAND_STATUS_INTERNAL_ERROR					ROCRAND_STATUS_INTERNAL_ERROR
CURAND_STATUS_LAUNCH_FAILURE					ROCRAND_STATUS_LAUNCH_FAILURE
CURAND_STATUS_LENGTH_NOT_MULTIPLE					ROCRAND_STATUS_LENGTH_NOT_MULTIPLE
CURAND_STATUS_NOT_INITIALIZED					ROCRAND_STATUS_NOT_CREATED
CURAND_STATUS_OUT_OF_RANGE					ROCRAND_STATUS_OUT_OF_RANGE
CURAND_STATUS_PREEXISTING_FAILURE					
CURAND_STATUS_SUCCESS					ROCRAND_STATUS_SUCCESS
CURAND_STATUS_TYPE_ERROR					ROCRAND_STATUS_TYPE_ERROR
CURAND_STATUS_VERSION_MISMATCH					ROCRAND_STATUS_VERSION_MISMATCH
curandDirectionVectorSet					rocrand_direction_vector_set
curandDirectionVectorSet_t					rocrand_direction_vector_set
curandDirectionVectors32_t					
curandDirectionVectors64_t					
curandDiscreteDistribution_st					rocrand_discrete_distribution_st
curandDiscreteDistribution_t					rocrand_discrete_distribution
curandDistributionM2Shift_st					
curandDistributionM2Shift_t					
curandDistributionShift_st					
curandDistributionShift_t					
curandDistribution_st					
curandDistribution_t					
curandGenerator_st					rocrand_generator_base_type
curandGenerator_t					rocrand_generator
curandHistogramM2K_st					
curandHistogramM2K_t					
curandHistogramM2V_st					
curandHistogramM2V_t					
curandHistogramM2_st					
curandHistogramM2_t					
curandMethod					
curandMethod_t					

Table 17 – continued from previous page

CUDA	A	D	C	R	ROC
curandOrdering					rocrand_ordering
curandOrdering_t					rocrand_ordering
curandRngType					rocrand_rng_type
curandRngType_t					rocrand_rng_type
curandState					
curandStateMRG32k3a					rocrand_device::mrg32k3a_engine
curandStateMRG32k3a_t					rocrand_state_mrg32k3a
curandStateMtgp32					rocrand_device::mtgp32_engine
curandStateMtgp32_t					rocrand_state_mtgp32
curandStatePhilox4_32_10					rocrand_device::philox4x32_10_engine
curandStatePhilox4_32_10_t					rocrand_state_philox4x32_10
curandStateScrambledSobol32					rocrand_device::scrambled_sobol32_engi
curandStateScrambledSobol32_t					rocrand_state_scrambled_sobol32
curandStateScrambledSobol64					rocrand_device::scrambled_sobol64_engi
curandStateScrambledSobol64_t					rocrand_state_scrambled_sobol64
curandStateSobol32					rocrand_device::sobol32_engine<false>
curandStateSobol32_t					rocrand_state_sobol32
curandStateSobol64					rocrand_device::sobol64_engine<false>
curandStateSobol64_t					rocrand_state_sobol64
curandStateXORWOW					rocrand_device::xorwow_engine
curandStateXORWOW_t					rocrand_state_xorwow
curandState_t					
curandStatus					rocrand_status
curandStatus_t					rocrand_status

11.3.2 2. Host API Functions

CUDA	A	D	C	R	ROC	A	D	C	R	U	E
curandCreateGenerator					rocrand_create_generator	1.5.0					
curandCreateGeneratorH					rocrand_create_generator_h	6.2.0					
curandCreatePoissonDist					rocrand_create_poisson_dis	1.5.0					
curandDestroyDistributi					rocrand_destroy_discrete_d	1.5.0					
curandDestroyGenerator					rocrand_destroy_generator	1.5.0					
curandGenerate					rocrand_generate	1.5.0					
curandGenerateLogNormal					rocrand_generate_log_norma	1.5.0					
curandGenerateLogNormal					rocrand_generate_log_norma	1.5.0					
curandGenerateLongLong					rocrand_generate_long_long	5.4.0					
curandGenerateNormal					rocrand_generate_normal	1.5.0					
curandGenerateNormalDou					rocrand_generate_normal_do	1.5.0					
curandGeneratePoisson					rocrand_generate_poisson	1.5.0					
curandGenerateSeeds					rocrand_initialize_generat	1.5.0					
curandGenerateUniform					rocrand_generate_uniform	1.5.0					
curandGenerateUniformDo					rocrand_generate_uniform_d	1.5.0					
curandGetDirectionVecto					rocrand_get_direction_vect	6.0.0					
curandGetDirectionVecto					rocrand_get_direction_vect	6.0.0					
curandGetProperty	8.0										
curandGetScrambleConsta					rocrand_get_scramble_const	6.0.0					
curandGetScrambleConsta					rocrand_get_scramble_const	6.0.0					
curandGetVersion					rocrand_get_version	1.5.0					
curandMakeMTGP32Constar					rocrand_make_constant	1.5.0					
curandMakeMTGP32KernelS					rocrand_make_state_mtgp32	1.5.0					
curandSetGeneratorOffse					rocrand_set_offset	1.5.0					
curandSetGeneratorOrder					rocrand_set_ordering	5.5.0					
curandSetPseudoRandomGe					rocrand_set_seed	1.5.0					
curandSetQuasiRandomGer					rocrand_set_quasi_random_g	1.5.0					
curandSetStream					rocrand_set_stream	1.5.0					

11.3.3 3. Device API Functions

CUDA	A	D	C	R	ROC	A	D	C	R	U	E
__curand_umul	11.5										
curand					rocrand	1.5.0					
curand_Philox4x32_10											
curand_discrete					rocrand_discrete	1.5.0					
curand_discrete4					rocrand_discrete4	1.5.0					
curand_init					rocrand_init	1.5.0					
curand_log_normal					rocrand_log_normal	1.5.0					
curand_log_normal2					rocrand_log_normal2	1.5.0					
curand_log_normal2_doubl					rocrand_log_normal_dou	1.5.0					
curand_log_normal4					rocrand_log_normal4	1.5.0					
curand_log_normal4_doubl		13.0			rocrand_log_normal_dou	1.5.0					
curand_log_normal_double					rocrand_log_normal_dou	1.5.0					
curand_mtgp32_single											
curand_mtgp32_single_spe											
curand_mtgp32_specific											
curand_normal					rocrand_normal	1.5.0					
curand_normal2					rocrand_normal2	1.5.0					
curand_normal2_double					rocrand_normal_double2	1.5.0					
curand_normal4					rocrand_normal4	1.5.0					
curand_normal4_double					rocrand_normal_double4	1.5.0					
curand_normal_double					rocrand_normal_double	1.5.0					
curand_poisson					rocrand_poisson	1.5.0					
curand_poisson4					rocrand_poisson4	1.5.0					
curand_uniform					rocrand_uniform	1.5.0					
curand_uniform2_double					rocrand_uniform_double	1.5.0					
curand_uniform4					rocrand_uniform4	1.5.0					
curand_uniform4_double		13.0			rocrand_uniform_double	1.5.0					
curand_uniform_double					rocrand_uniform_double	1.5.0					

11.4 CUDNN API supported by MIOPEN

Note: In the tables that follow the columns marked A, D, C, R, U, and E mean the following: **A** - Added; **D** - Deprecated; **C** - Changed; **R** - Removed; **U** - Unsupported for CUDA version(s); **E** - Experimental

11.4.1 1. CUDNN Data types

CUDA	A	D	C	R	MIOPEN
CUDNN_16BIT_INDICES	6.0.0	9.0.0			MIOPEN_16
CUDNN_32BIT_INDICES	6.0.0	9.0.0			MIOPEN_32
CUDNN_64BIT_INDICES	6.0.0	9.0.0			MIOPEN_64
CUDNN_8BIT_INDICES	6.0.0	9.0.0			MIOPEN_8B
CUDNN_ACTIVATION_CLIPPED_RELU	4.0.0	9.0.0			miopenAct
CUDNN_ACTIVATION_ELU	6.0.0	9.0.0			miopenAct
CUDNN_ACTIVATION_IDENTITY	7.1.3	9.0.0			miopenAct
CUDNN_ACTIVATION_RELU	1.0.0	9.0.0			miopenAct
CUDNN_ACTIVATION_SIGMOID	1.0.0	9.0.0			miopenAct
CUDNN_ACTIVATION_SWISH	8.2.0	9.0.0			
CUDNN_ACTIVATION_TANH	1.0.0	9.0.0			miopenAct
CUDNN_ADA_LAYER_NORM	9.7.0				
CUDNN_ATTN_DISABLE_PROJ_BIASES	7.6.3				
CUDNN_ATTN_ENABLE_PROJ_BIASES	7.6.3				
CUDNN_ATTN_QUERYMAP_ALL_TO_ONE	7.5.0				
CUDNN_ATTN_QUERYMAP_ONE_TO_ONE	7.5.0				
CUDNN_ATTN_WKIND_COUNT	7.6.3				
CUDNN_ATTR_CONVOLUTION_COMP_TYPE	8.0.1				MIOPEN_AT
CUDNN_ATTR_CONVOLUTION_CONV_MODE	8.0.2				MIOPEN_AT
CUDNN_ATTR_CONVOLUTION_DILATIONS	8.0.1				MIOPEN_AT
CUDNN_ATTR_CONVOLUTION_FILTER_STRIDES	8.0.1				MIOPEN_AT
CUDNN_ATTR_CONVOLUTION_POST_PADDINGS	8.0.1				MIOPEN_AT
CUDNN_ATTR_CONVOLUTION_PRE_PADDINGS	8.0.1				MIOPEN_AT
CUDNN_ATTR_CONVOLUTION_SPATIAL_DIMS	8.0.1				MIOPEN_AT
CUDNN_ATTR_DEVICEPROP_DEVICE_ID	9.8.0				
CUDNN_ATTR_DEVICEPROP_HANDLE	9.8.0				
CUDNN_ATTR_DEVICEPROP_JSON_REPRESENTATION	9.8.0				
CUDNN_ATTR_ENGINECFG_ENGINE	8.0.1				MIOPEN_AT
CUDNN_ATTR_ENGINECFG_INTERMEDIATE_INFO	8.0.1				MIOPEN_AT
CUDNN_ATTR_ENGINECFG_KNOB_CHOICES	8.0.1				MIOPEN_AT
CUDNN_ATTR_ENGINECFG_SHARED_MEMORY_USED	9.2.0				
CUDNN_ATTR_ENGINECFG_WORKSPACE_SIZE	9.2.0				
CUDNN_ATTR_ENGINEHEUR_DEVICEPROP	9.8.0				
CUDNN_ATTR_ENGINEHEUR_MODE	8.0.1				MIOPEN_AT
CUDNN_ATTR_ENGINEHEUR_OPERATION_GRAPH	8.0.1				MIOPEN_AT
CUDNN_ATTR_ENGINEHEUR_RESULTS	8.0.1				MIOPEN_AT
CUDNN_ATTR_ENGINEHEUR_SM_COUNT_TARGET	8.9.5				MIOPEN_AT
CUDNN_ATTR_ENGINE_BEHAVIOR_NOTE	8.2.0				MIOPEN_AT
CUDNN_ATTR_ENGINE_DEVICEPROP	9.8.0				
CUDNN_ATTR_ENGINE_DISABLE_CLUSTER_COOPERATIVE	9.17.0				
CUDNN_ATTR_ENGINE_GLOBAL_INDEX	8.0.1				MIOPEN_AT
CUDNN_ATTR_ENGINE_KNOB_INFO	8.0.2				MIOPEN_AT

Table 18 – continued from previou

CUDA	A	D	C	R	MIOPEN
CUDNN_ATTR_ENGINE_LAYOUT_INFO	8.0.2				MIOPEN_AT
CUDNN_ATTR_ENGINE_NUMERICAL_NOTE	8.0.1				MIOPEN_AT
CUDNN_ATTR_ENGINE_OPERATION_GRAPH	8.0.1				MIOPEN_AT
CUDNN_ATTR_ENGINE_SM_COUNT_TARGET	8.9.5				MIOPEN_AT
CUDNN_ATTR_EXECUTION_PLAN_COMPUTED_INTERMEDIATE_UIDS	8.0.2				MIOPEN_AT
CUDNN_ATTR_EXECUTION_PLAN_DEVICEPROP	9.8.0				
CUDNN_ATTR_EXECUTION_PLAN_ENGINE_CONFIG	8.0.1				MIOPEN_AT
CUDNN_ATTR_EXECUTION_PLAN_HANDLE	8.0.1	9.9.0			MIOPEN_AT
CUDNN_ATTR_EXECUTION_PLAN_JSON_REPRESENTATION	8.4.0				MIOPEN_AT
CUDNN_ATTR_EXECUTION_PLAN_KERNEL_CACHE	9.4.0				
CUDNN_ATTR_EXECUTION_PLAN_RUN_ONLY_INTERMEDIATE_UIDS	8.0.2				MIOPEN_AT
CUDNN_ATTR_EXECUTION_PLAN_WORKSPACE_SIZE	8.0.1				MIOPEN_AT
CUDNN_ATTR_INTERMEDIATE_INFO_DEPENDENT_ATTRIBUTES	8.0.2				MIOPEN_AT
CUDNN_ATTR_INTERMEDIATE_INFO_DEPENDENT_DATA_UIDS	8.0.2				MIOPEN_AT
CUDNN_ATTR_INTERMEDIATE_INFO_SIZE	8.0.1				MIOPEN_AT
CUDNN_ATTR_INTERMEDIATE_INFO_UNIQUE_ID	8.0.2				MIOPEN_AT
CUDNN_ATTR_KERNEL_CACHE_IS_ENGINECFG_KERNEL_CACHED	9.4.0				
CUDNN_ATTR_KERNEL_CACHE_JSON_REPRESENTATION	9.10.0				
CUDNN_ATTR_KERNEL_CACHE_OPERATION_GRAPH	9.5.0				
CUDNN_ATTR_KNOB_CHOICE_KNOB_TYPE	8.0.1				MIOPEN_AT
CUDNN_ATTR_KNOB_CHOICE_KNOB_VALUE	8.0.1				MIOPEN_AT
CUDNN_ATTR_KNOB_INFO_MAXIMUM_VALUE	8.0.1				MIOPEN_AT
CUDNN_ATTR_KNOB_INFO_MINIMUM_VALUE	8.0.1				MIOPEN_AT
CUDNN_ATTR_KNOB_INFO_STRIDE	8.0.1				MIOPEN_AT
CUDNN_ATTR_KNOB_INFO_TYPE	8.0.1				MIOPEN_AT
CUDNN_ATTR_LAYOUT_INFO_TENSOR_UID	8.0.2				MIOPEN_AT
CUDNN_ATTR_LAYOUT_INFO_TYPES	8.0.2				MIOPEN_AT
CUDNN_ATTR_MATMUL_COMP_TYPE	8.1.0				MIOPEN_AT
CUDNN_ATTR_MATMUL_PADDING_VALUE	8.9.0				MIOPEN_AT
CUDNN_ATTR_OPERATIONGRAPH_ENGINE_GLOBAL_COUNT	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATIONGRAPH_HANDLE	8.0.1	9.9.0			MIOPEN_AT
CUDNN_ATTR_OPERATIONGRAPH_IS_DYNAMIC_SHAPE_ENABLED	9.4.0				
CUDNN_ATTR_OPERATIONGRAPH_IS_OVERRIDE_SHAPE_ENABLED	9.21.0				
CUDNN_ATTR_OPERATIONGRAPH_IS_SAME_TOPOLOGY	9.6.0				
CUDNN_ATTR_OPERATIONGRAPH_MODE	9.23.0				
CUDNN_ATTR_OPERATIONGRAPH_OPS	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_BLOCK_SCALE_DEQUANTIZE_BLOCK_SIZE	9.7.0				
CUDNN_ATTR_OPERATION_BLOCK_SCALE_DEQUANTIZE_MATH_PREC	9.7.0				
CUDNN_ATTR_OPERATION_BLOCK_SCALE_DEQUANTIZE_NEG_SCALE	9.13.0				
CUDNN_ATTR_OPERATION_BLOCK_SCALE_DEQUANTIZE_SCALE_DESC	9.7.0				
CUDNN_ATTR_OPERATION_BLOCK_SCALE_DEQUANTIZE_XDESC	9.7.0				
CUDNN_ATTR_OPERATION_BLOCK_SCALE_DEQUANTIZE_YDESC	9.7.0				
CUDNN_ATTR_OPERATION_BLOCK_SCALE_QUANTIZE_BLOCK_SIZE	9.7.0				
CUDNN_ATTR_OPERATION_BLOCK_SCALE_QUANTIZE_DENOM_FACTOR_MODE	9.7.0			9.8.0	
CUDNN_ATTR_OPERATION_BLOCK_SCALE_QUANTIZE_MATH_PREC	9.7.0				
CUDNN_ATTR_OPERATION_BLOCK_SCALE_QUANTIZE_SCALE_DESC	9.7.0				
CUDNN_ATTR_OPERATION_BLOCK_SCALE_QUANTIZE_XDESC	9.7.0				
CUDNN_ATTR_OPERATION_BLOCK_SCALE_QUANTIZE_YDESC	9.7.0				
CUDNN_ATTR_OPERATION_BN_BWD_WEIGHTS_BN_SCALE_DESC	8.2.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_BWD_WEIGHTS_DBN_BIAS_DESC	8.2.0				MIOPEN_AT

Table 18 – continued from previou

CUDA	A	D	C	R	MIOPEN
CUDNN_ATTR_OPERATION_BN_BWD_WEIGHTS_DBN_SCALE_DESC	8.2.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_BWD_WEIGHTS_DY_DESC	8.2.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_BWD_WEIGHTS_EQ_BIAS	8.2.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_BWD_WEIGHTS_EQ_DY_SCALE_DESC	8.2.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_BWD_WEIGHTS_EQ_X_SCALE_DESC	8.2.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_BWD_WEIGHTS_INVSTD_DESC	8.2.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_BWD_WEIGHTS_MATH_PREC	8.2.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_BWD_WEIGHTS_MEAN_DESC	8.2.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_BWD_WEIGHTS_X_DESC	8.2.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_FINALIZE_ACCUM_COUNT_DESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_FINALIZE_BIAS_DESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_FINALIZE_EPSILON_DESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_FINALIZE_EQ_BIAS_DESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_FINALIZE_EQ_SCALE_DESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_FINALIZE_EXP_AVERATE_FACTOR_DESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_FINALIZE_MATH_PREC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_FINALIZE_PREV_RUNNING_MEAN_DESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_FINALIZE_PREV_RUNNING_VAR_DESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_FINALIZE_SAVED_INV_STD_DESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_FINALIZE_SAVED_MEAN_DESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_FINALIZE_SCALE_DESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_FINALIZE_STATS_MODE	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_FINALIZE_UPDATED_RUNNING_MEAN_DESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_FINALIZE_UPDATED_RUNNING_VAR_DESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_FINALIZE_Y_SQ_SUM_DESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_BN_FINALIZE_Y_SUM_DESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_CONCAT_AXIS	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_CONCAT_INPLACE_INDEX	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_CONCAT_INPUT_DESCS	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_CONCAT_OUTPUT_DESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_CONTRACT_BAND_MATRIX_AXIS	9.10.0				
CUDNN_ATTR_OPERATION_CONTRACT_BAND_MATRIX_LOWER_BANDWIDTH	9.10.0				
CUDNN_ATTR_OPERATION_CONTRACT_BAND_MATRIX_PAD_VALUE	9.10.0				
CUDNN_ATTR_OPERATION_CONTRACT_BAND_MATRIX_UPPER_BANDWIDTH	9.10.0				
CUDNN_ATTR_OPERATION_CONTRACT_BAND_MATRIX_XDESC	9.10.0				
CUDNN_ATTR_OPERATION_CONTRACT_BAND_MATRIX_YDESC	9.10.0				
CUDNN_ATTR_OPERATION_CONTRACT_BAND_MAX_TOKEN_VALUE	9.10.0				
CUDNN_ATTR_OPERATION_CONVOLUTION_BWD_DATA_ALPHA	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_CONVOLUTION_BWD_DATA_BETA	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_CONVOLUTION_BWD_DATA_CONV_DESC	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_CONVOLUTION_BWD_DATA_DX	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_CONVOLUTION_BWD_DATA_DY	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_CONVOLUTION_BWD_DATA_W	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_CONVOLUTION_BWD_FILTER_ALPHA	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_CONVOLUTION_BWD_FILTER_BETA	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_CONVOLUTION_BWD_FILTER_CONV_DESC	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_CONVOLUTION_BWD_FILTER_DW	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_CONVOLUTION_BWD_FILTER_DY	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_CONVOLUTION_BWD_FILTER_X	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_CONVOLUTION_FORWARD_ALPHA	8.0.1				MIOPEN_AT

Table 18 – continued from previou

CUDA	A	D	C	R	MIOPEN
CUDNN_ATTR_OPERATION_CONVOLUTION_FORWARD_BETA	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_CONVOLUTION_FORWARD_CONV_DESC	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_CONVOLUTION_FORWARD_W	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_CONVOLUTION_FORWARD_X	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_CONVOLUTION_FORWARD_Y	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_DIAGONAL_BAND_MASK_BDESC	9.20.0				
CUDNN_ATTR_OPERATION_DIAGONAL_BAND_MASK_COMPARISON_MODE	9.20.0				
CUDNN_ATTR_OPERATION_DIAGONAL_BAND_MASK_CU_SEQ_LEN_KVDESC	9.24.0				
CUDNN_ATTR_OPERATION_DIAGONAL_BAND_MASK_CU_SEQ_LEN_QDESC	9.24.0				
CUDNN_ATTR_OPERATION_DIAGONAL_BAND_MASK_LEFT_BOUND_DESC	9.20.0				
CUDNN_ATTR_OPERATION_DIAGONAL_BAND_MASK_SEQ_LEN_KVDESC	9.20.0				
CUDNN_ATTR_OPERATION_DIAGONAL_BAND_MASK_SEQ_LEN_QDESC	9.20.0				
CUDNN_ATTR_OPERATION_DIAGONAL_BAND_MASK_SHIFT_RIGHT_BOUND_DESC	9.20.0				
CUDNN_ATTR_OPERATION_DIAGONAL_BAND_MASK_XDESC	9.20.0				
CUDNN_ATTR_OPERATION_DIAGONAL_BAND_MASK_YDESC	9.20.0				
CUDNN_ATTR_OPERATION_EXPAND_BAND_MATRIX_AXIS	9.10.0				
CUDNN_ATTR_OPERATION_EXPAND_BAND_MATRIX_KV_TOKEN_OFFSET_DESC	9.10.0				
CUDNN_ATTR_OPERATION_EXPAND_BAND_MATRIX_LOWER_BANDWIDTH	9.10.0				
CUDNN_ATTR_OPERATION_EXPAND_BAND_MATRIX_PAD_VALUE	9.10.0				
CUDNN_ATTR_OPERATION_EXPAND_BAND_MATRIX_SPECULATIVE_MASK_DESC	9.13.0				
CUDNN_ATTR_OPERATION_EXPAND_BAND_MATRIX_UPPER_BANDWIDTH	9.10.0				
CUDNN_ATTR_OPERATION_EXPAND_BAND_MATRIX_XDESC	9.10.0				
CUDNN_ATTR_OPERATION_EXPAND_BAND_MATRIX_YDESC	9.10.0				
CUDNN_ATTR_OPERATION_GENSTATS_MATH_PREC	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_GENSTATS_MODE	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_GENSTATS_SQSUMDESC	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_GENSTATS_SUMDESC	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_GENSTATS_XDESC	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_MATMUL_ADESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_MATMUL_BDESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_MATMUL_CDESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_MATMUL_DESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_MATMUL_GEMM_K_OVERRIDE_DESC	8.7.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_MATMUL_GEMM_M_OVERRIDE_DESC	8.7.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_MATMUL_GEMM_N_OVERRIDE_DESC	8.7.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_MATMUL_IRREGULARLY_STRIDED_BATCH_COUNT	8.1.0	9.0.0			MIOPEN_AT
CUDNN_ATTR_OPERATION_MOE_GROUPED_MATMUL_BWD_DOUTPUT_DESC	9.22.0				
CUDNN_ATTR_OPERATION_MOE_GROUPED_MATMUL_BWD_DWEIGHT_DESC	9.22.0				
CUDNN_ATTR_OPERATION_MOE_GROUPED_MATMUL_BWD_FIRST_TOKEN_OFFSET_DESC	9.22.0				
CUDNN_ATTR_OPERATION_MOE_GROUPED_MATMUL_BWD_MATH_PREC	9.22.0				
CUDNN_ATTR_OPERATION_MOE_GROUPED_MATMUL_BWD_TOKEN_DESC	9.22.0				
CUDNN_ATTR_OPERATION_MOE_GROUPED_MATMUL_FIRST_TOKEN_OFFSET_DESC	9.15.0				
CUDNN_ATTR_OPERATION_MOE_GROUPED_MATMUL_MATH_PREC	9.15.0				
CUDNN_ATTR_OPERATION_MOE_GROUPED_MATMUL_MODE	9.15.0				
CUDNN_ATTR_OPERATION_MOE_GROUPED_MATMUL_OUTPUT_DESC	9.15.0				
CUDNN_ATTR_OPERATION_MOE_GROUPED_MATMUL_TOKEN_DESC	9.15.0				
CUDNN_ATTR_OPERATION_MOE_GROUPED_MATMUL_TOKEN_INDEX_DESC	9.15.0				
CUDNN_ATTR_OPERATION_MOE_GROUPED_MATMUL_TOKEN_KS_DESC	9.15.0				
CUDNN_ATTR_OPERATION_MOE_GROUPED_MATMUL_TOP_K	9.15.0				
CUDNN_ATTR_OPERATION_MOE_GROUPED_MATMUL_WEIGHT_DESC	9.15.0				

Table 18 – continued from previou

CUDA	A	D	C	R	MIOPEN
CUDNN_ATTR_OPERATION_NORM_BWD_DBIAS_DESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_BWD_DSCALE_DESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_BWD_DXDESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_BWD_DYDESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_BWD_EPSILON_DESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_BWD_INV_VARIANCE_DESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_BWD_MEAN_DESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_BWD_MODE	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_BWD_PEER_STAT_DESCS	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_BWD_SCALE_DESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_BWD_XDESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_FWD_BIAS_DESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_FWD_EPSILON_DESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_FWD_EXP_AVG_FACTOR_DESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_FWD_INPUT_RUNNING_MEAN_DESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_FWD_INPUT_RUNNING_VAR_DESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_FWD_INV_VARIANCE_DESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_FWD_MEAN_DESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_FWD_MODE	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_FWD_OUTPUT_RUNNING_MEAN_DESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_FWD_OUTPUT_RUNNING_VAR_DESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_FWD_PEER_STAT_DESCS	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_FWD_PHASE	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_FWD_SCALE_DESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_FWD_XDESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_NORM_FWD_YDESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_PAGED_CACHE_LOAD_CONTAINER_DESC	9.4.0				
CUDNN_ATTR_OPERATION_PAGED_CACHE_LOAD_PAGE_TABLE_DESC	9.4.0				
CUDNN_ATTR_OPERATION_PAGED_CACHE_LOAD_SEQUENCE_DESC	9.4.0				
CUDNN_ATTR_OPERATION_PAGED_CACHE_LOAD_YDESC	9.4.0				
CUDNN_ATTR_OPERATION_POINTWISE_ALPHA1	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_POINTWISE_ALPHA2	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_POINTWISE_BDESC	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_POINTWISE_DXDESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_POINTWISE_DYDESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_POINTWISE_PW_DESCRIPTOR	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_POINTWISE_TDESC	8.3.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_POINTWISE_XDESC	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_POINTWISE_YDESC	8.0.1				MIOPEN_AT
CUDNN_ATTR_OPERATION_REDUCTION_DESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_REDUCTION_GROUP_OFFSET_DESC	9.24.0				
CUDNN_ATTR_OPERATION_REDUCTION_XDESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_REDUCTION_YDESC	8.1.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_RESAMPLE_BWD_ALPHA	8.3.0	9.0.0			MIOPEN_AT
CUDNN_ATTR_OPERATION_RESAMPLE_BWD_BETA	8.3.0	9.0.0			MIOPEN_AT
CUDNN_ATTR_OPERATION_RESAMPLE_BWD_DESC	8.3.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_RESAMPLE_BWD_DXDESC	8.3.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_RESAMPLE_BWD_DYDESC	8.3.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_RESAMPLE_BWD_IDXDESC	8.3.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_RESAMPLE_BWD_XDESC	8.7.0				MIOPEN_AT

Table 18 – continued from previou

CUDA	A	D	C	R	MIOPEN
CUDNN_ATTR_OPERATION_RESAMPLE_BWD_YDESC	8.7.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_RESAMPLE_FWD_ALPHA	8.3.0	9.0.0			MIOPEN_AT
CUDNN_ATTR_OPERATION_RESAMPLE_FWD_BETA	8.3.0	9.0.0			MIOPEN_AT
CUDNN_ATTR_OPERATION_RESAMPLE_FWD_DESC	8.3.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_RESAMPLE_FWD_IDXDESC	8.3.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_RESAMPLE_FWD_XDESC	8.3.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_RESAMPLE_FWD_YDESC	8.3.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_RESHAPE_MODE	9.22.0				
CUDNN_ATTR_OPERATION_RESHAPE_XDESC	8.7.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_RESHAPE_YDESC	8.7.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_RNG_DESC	8.7.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_RNG_OFFSET_DESC	8.8.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_RNG_SEED	8.7.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_RNG_YDESC	8.7.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_ROPE_BWD_DXDESC	9.25.0				
CUDNN_ATTR_OPERATION_ROPE_BWD_DYDESC	9.25.0				
CUDNN_ATTR_OPERATION_ROPE_BWD_FREQSDESC	9.25.0				
CUDNN_ATTR_OPERATION_ROPE_BWD_OUTPUT_SCALE	9.25.0				
CUDNN_ATTR_OPERATION_ROPE_BWD_ROPE_DIM	9.25.0				
CUDNN_ATTR_OPERATION_ROPE_FWD_FREQSDESC	9.24.0				
CUDNN_ATTR_OPERATION_ROPE_FWD_OUTPUT_SCALE	9.24.0				
CUDNN_ATTR_OPERATION_ROPE_FWD_ROPE_DIM	9.24.0				
CUDNN_ATTR_OPERATION_ROPE_FWD_XDESC	9.24.0				
CUDNN_ATTR_OPERATION_ROPE_FWD_YDESC	9.24.0				
CUDNN_ATTR_OPERATION_SDPA_BWD_DKDESC	9.17.0				
CUDNN_ATTR_OPERATION_SDPA_BWD_DODDESC	9.17.0				
CUDNN_ATTR_OPERATION_SDPA_BWD_DQDESC	9.17.0				
CUDNN_ATTR_OPERATION_SDPA_BWD_DSINK_DESC	9.21.0				
CUDNN_ATTR_OPERATION_SDPA_BWD_DVDESC	9.17.0				
CUDNN_ATTR_OPERATION_SDPA_BWD_KDESC	9.17.0				
CUDNN_ATTR_OPERATION_SDPA_BWD_MAX_TOTAL_SEQ_LEN_KV	9.21.0				
CUDNN_ATTR_OPERATION_SDPA_BWD_MAX_TOTAL_SEQ_LEN_Q	9.21.0				
CUDNN_ATTR_OPERATION_SDPA_BWD_ODESC	9.17.0				
CUDNN_ATTR_OPERATION_SDPA_BWD_QDESC	9.17.0				
CUDNN_ATTR_OPERATION_SDPA_BWD_SCALEDESC	9.17.0				
CUDNN_ATTR_OPERATION_SDPA_BWD_SEQ_LEN_KVDESC	9.17.0				
CUDNN_ATTR_OPERATION_SDPA_BWD_SEQ_LEN_QDESC	9.17.0				
CUDNN_ATTR_OPERATION_SDPA_BWD_SINK_DESC	9.21.0				
CUDNN_ATTR_OPERATION_SDPA_BWD_STATSDESC	9.17.0				
CUDNN_ATTR_OPERATION_SDPA_BWD_SUBGRAPH	9.21.0				
CUDNN_ATTR_OPERATION_SDPA_BWD_SUBGRAPH_INPUT_UID	9.21.0				
CUDNN_ATTR_OPERATION_SDPA_BWD_SUBGRAPH_OUTPUT_UID	9.21.0				
CUDNN_ATTR_OPERATION_SDPA_BWD_VDESC	9.17.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_AMAX_ODESC	9.25.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_AMAX_SDESC	9.25.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_BLOCK_MASK_DESC	9.14.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_CU_SEQ_LEN_KVDESC	9.24.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_CU_SEQ_LEN_QDESC	9.24.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_DESCALE_KDESC	9.25.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_DESCALE_QDESC	9.25.0				

Table 18 – continued from previou

CUDA	A	D	C	R	MIOPEN
CUDNN_ATTR_OPERATION_SDPA_FWD_DESCALE_SDESC	9.25.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_DESCALE_VDESC	9.25.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_DROPOUT_OFFSET_DESC	9.21.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_DROPOUT_PROBABILITY	9.21.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_DROPOUT_RNG_DUMP_DESC	9.21.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_DROPOUT_SEED_DESC	9.21.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_KDESC	9.13.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_ODESC	9.13.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_PAGE_TABLE_KDESC	9.15.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_PAGE_TABLE_VDESC	9.15.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_QDESC	9.13.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_SCALEDESC	9.13.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_SCALE_ODESC	9.25.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_SCALE_SDESC	9.25.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_SEQ_LEN_KVDESC	9.15.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_SEQ_LEN_QDESC	9.15.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_SOFTMAX_DESC	9.21.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_STATSDESC	9.13.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_SUBGRAPH	9.21.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_SUBGRAPH_INPUT_UID	9.21.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_SUBGRAPH_OUTPUT_UID	9.21.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_UNFUSE_FMA	9.21.0				
CUDNN_ATTR_OPERATION_SDPA_FWD_VDESC	9.13.0				
CUDNN_ATTR_OPERATION_SIGNAL_FLAGDESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_SIGNAL_MODE	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_SIGNAL_VALUE	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_SIGNAL_XDESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_SIGNAL_YDESC	8.5.0				MIOPEN_AT
CUDNN_ATTR_OPERATION_SLICE_LIMIT_INDICES	9.22.0				
CUDNN_ATTR_OPERATION_SLICE_START_INDICES	9.22.0				
CUDNN_ATTR_OPERATION_SLICE_STRIDES	9.22.0				
CUDNN_ATTR_OPERATION_SLICE_XDESC	9.22.0				
CUDNN_ATTR_OPERATION_SLICE_YDESC	9.22.0				
CUDNN_ATTR_OPERATION_SOFTMAX_MAX_DESC	9.20.0				
CUDNN_ATTR_OPERATION_SOFTMAX_SINK_DESC	9.20.0				
CUDNN_ATTR_OPERATION_SOFTMAX_STATS_DESC	9.20.0				
CUDNN_ATTR_OPERATION_SOFTMAX_SUM_EXP_DESC	9.20.0				
CUDNN_ATTR_OPERATION_SOFTMAX_XDESC	9.20.0				
CUDNN_ATTR_OPERATION_SOFTMAX_YDESC	9.20.0				
CUDNN_ATTR_OPERATION_TRANSPOSE_PERMUTATION	9.22.0				
CUDNN_ATTR_OPERATION_TRANSPOSE_XDESC	9.22.0				
CUDNN_ATTR_OPERATION_TRANSPOSE_YDESC	9.22.0				
CUDNN_ATTR_POINTWISE_AXIS	8.4.0				MIOPEN_AT
CUDNN_ATTR_POINTWISE_ELU_ALPHA	8.1.0				MIOPEN_AT
CUDNN_ATTR_POINTWISE_MATH_PREC	8.0.1				MIOPEN_AT
CUDNN_ATTR_POINTWISE_MODE	8.0.1				MIOPEN_AT
CUDNN_ATTR_POINTWISE_NAN_PROPAGATION	8.0.1				MIOPEN_AT
CUDNN_ATTR_POINTWISE_RELU_LOWER_CLIP	8.0.1				MIOPEN_AT
CUDNN_ATTR_POINTWISE_RELU_LOWER_CLIP_SLOPE	8.1.0				MIOPEN_AT
CUDNN_ATTR_POINTWISE_RELU_UPPER_CLIP	8.0.1				MIOPEN_AT

Table 18 – continued from previou

CUDA	A	D	C	R	MIOPEN
CUDNN_ATTR_POINTWISE_SOFTPLUS_BETA	8.1.0				MIOPEN_AT
CUDNN_ATTR_POINTWISE_SWISH_BETA	8.1.0				MIOPEN_AT
CUDNN_ATTR_REDUCTION_COMP_TYPE	8.1.0				MIOPEN_AT
CUDNN_ATTR_REDUCTION_IS_DETERMINISTIC	9.11.0				
CUDNN_ATTR_REDUCTION_OPERATOR	8.1.0				MIOPEN_AT
CUDNN_ATTR_RESAMPLE_COMP_TYPE	8.3.0				MIOPEN_AT
CUDNN_ATTR_RESAMPLE_MODE	8.3.0				MIOPEN_AT
CUDNN_ATTR_RESAMPLE_NAN_PROPAGATION	8.3.0				MIOPEN_AT
CUDNN_ATTR_RESAMPLE_PADDING_MODE	8.3.0				MIOPEN_AT
CUDNN_ATTR_RESAMPLE_POST_PADDINGS	8.3.0				MIOPEN_AT
CUDNN_ATTR_RESAMPLE_PRE_PADDINGS	8.3.0				MIOPEN_AT
CUDNN_ATTR_RESAMPLE_SPATIAL_DIMS	8.3.0				MIOPEN_AT
CUDNN_ATTR_RESAMPLE_STRIDES	8.3.0				MIOPEN_AT
CUDNN_ATTR_RESAMPLE_WINDOW_DIMS	8.3.0				MIOPEN_AT
CUDNN_ATTR_RNG_BERNOULLI_DIST_PROBABILITY	8.7.0				MIOPEN_AT
CUDNN_ATTR_RNG_DISTRIBUTION	8.7.0				MIOPEN_AT
CUDNN_ATTR_RNG_NORMAL_DIST_MEAN	8.7.0				MIOPEN_AT
CUDNN_ATTR_RNG_NORMAL_DIST_STANDARD_DEVIATION	8.7.0				MIOPEN_AT
CUDNN_ATTR_RNG_UNIFORM_DIST_MAXIMUM	8.7.0				MIOPEN_AT
CUDNN_ATTR_RNG_UNIFORM_DIST_MINIMUM	8.7.0				MIOPEN_AT
CUDNN_ATTR_TENSOR_BYTE_ALIGNMENT	8.0.1				MIOPEN_AT
CUDNN_ATTR_TENSOR_CONSTANT_VALUE	9.22.0				
CUDNN_ATTR_TENSOR_DATA_TYPE	8.0.1				MIOPEN_AT
CUDNN_ATTR_TENSOR_DIMENSIONS	8.0.1				MIOPEN_AT
CUDNN_ATTR_TENSOR_IS_BY_VALUE	8.1.0				MIOPEN_AT
CUDNN_ATTR_TENSOR_IS_VIRTUAL	8.0.1				MIOPEN_AT
CUDNN_ATTR_TENSOR_RAGGED_OFFSET_DESC	8.9.0				MIOPEN_AT
CUDNN_ATTR_TENSOR_RAGGED_OFFSET_MULTIPLIER	9.24.0				
CUDNN_ATTR_TENSOR_REORDERING_MODE	8.3.0				MIOPEN_AT
CUDNN_ATTR_TENSOR_STRIDES	8.0.1				MIOPEN_AT
CUDNN_ATTR_TENSOR_UNIQUE_ID	8.0.1				MIOPEN_AT
CUDNN_ATTR_TENSOR_VECTORIZED_DIMENSION	8.0.1				MIOPEN_AT
CUDNN_ATTR_TENSOR_VECTOR_COUNT	8.0.1				MIOPEN_AT
CUDNN_ATTR_VARIANT_PACK_DATA_POINTERS	8.0.1				MIOPEN_AT
CUDNN_ATTR_VARIANT_PACK_INTERMEDIATES	8.0.1				MIOPEN_AT
CUDNN_ATTR_VARIANT_PACK_OVERRIDE_SHAPES	9.18.0				
CUDNN_ATTR_VARIANT_PACK_OVERRIDE_STRIDES	9.18.0				
CUDNN_ATTR_VARIANT_PACK_OVERRIDE_UNIQUE_IDS	9.18.0				
CUDNN_ATTR_VARIANT_PACK_UNIQUE_IDS	8.0.1				MIOPEN_AT
CUDNN_ATTR_VARIANT_PACK_WORKSPACE	8.0.1				MIOPEN_AT
CUDNN_BACKEND_CONVOLUTION_DESCRIPTOR	8.0.1				MIOPEN_BA
CUDNN_BACKEND_DEVICEPROP_DESCRIPTOR	9.8.0				
CUDNN_BACKEND_ENGINECFG_DESCRIPTOR	8.0.1				MIOPEN_BA
CUDNN_BACKEND_ENGINEHEUR_DESCRIPTOR	8.0.1				MIOPEN_BA
CUDNN_BACKEND_ENGINE_DESCRIPTOR	8.0.1				MIOPEN_BA
CUDNN_BACKEND_EXECUTION_PLAN_DESCRIPTOR	8.0.1				MIOPEN_BA
CUDNN_BACKEND_INTERMEDIATE_INFO_DESCRIPTOR	8.0.1				MIOPEN_BA
CUDNN_BACKEND_KERNEL_CACHE_DESCRIPTOR	9.4.0				
CUDNN_BACKEND_KNOB_CHOICE_DESCRIPTOR	8.0.1				MIOPEN_BA
CUDNN_BACKEND_KNOB_INFO_DESCRIPTOR	8.0.1				MIOPEN_BA

Table 18 – continued from previou

CUDA	A	D	C	R	MIOPEN
CUDNN_BACKEND_LAYOUT_INFO_DESCRIPTOR	8.0.1				MIOPEN_BA
CUDNN_BACKEND_MATMUL_DESCRIPTOR	8.1.0				MIOPEN_BA
CUDNN_BACKEND_OPERATIONGRAPH_DESCRIPTOR	8.0.1				MIOPEN_BA
CUDNN_BACKEND_OPERATION_BLOCK_SCALE_DEQUANTIZE_DESCRIPTOR	9.7.0				
CUDNN_BACKEND_OPERATION_BLOCK_SCALE_QUANTIZE_DESCRIPTOR	9.7.0				
CUDNN_BACKEND_OPERATION_BN_BWD_WEIGHTS_DESCRIPTOR	8.2.0				
CUDNN_BACKEND_OPERATION_BN_FINALIZE_STATISTICS_DESCRIPTOR	8.1.0				
CUDNN_BACKEND_OPERATION_CONCAT_DESCRIPTOR	8.5.0				MIOPEN_BA
CUDNN_BACKEND_OPERATION_CONTRACT_BAND_MATRIX_DESCRIPTOR	9.10.0				
CUDNN_BACKEND_OPERATION_CONVOLUTION_BACKWARD_DATA_DESCRIPTOR	8.0.1				MIOPEN_BA
CUDNN_BACKEND_OPERATION_CONVOLUTION_BACKWARD_FILTER_DESCRIPTOR	8.0.1				MIOPEN_BA
CUDNN_BACKEND_OPERATION_CONVOLUTION_FORWARD_DESCRIPTOR	8.0.1				MIOPEN_BA
CUDNN_BACKEND_OPERATION_DIAGONAL_BAND_MASK_DESCRIPTOR	9.20.0				
CUDNN_BACKEND_OPERATION_EXPAND_BAND_MATRIX_DESCRIPTOR	9.10.0				
CUDNN_BACKEND_OPERATION_GEN_STATS_DESCRIPTOR	8.0.1				MIOPEN_BA
CUDNN_BACKEND_OPERATION_MATMUL_DESCRIPTOR	8.1.0				MIOPEN_BA
CUDNN_BACKEND_OPERATION_MOE_GROUPED_MATMUL_BWD_DESCRIPTOR	9.22.0				
CUDNN_BACKEND_OPERATION_MOE_GROUPED_MATMUL_DESCRIPTOR	9.15.0				
CUDNN_BACKEND_OPERATION_NORM_BACKWARD_DESCRIPTOR	8.5.0				MIOPEN_BA
CUDNN_BACKEND_OPERATION_NORM_FORWARD_DESCRIPTOR	8.5.0				MIOPEN_BA
CUDNN_BACKEND_OPERATION_PAGED_CACHE_LOAD_DESCRIPTOR	9.4.0				
CUDNN_BACKEND_OPERATION_POINTWISE_DESCRIPTOR	8.0.1				MIOPEN_BA
CUDNN_BACKEND_OPERATION_REDUCTION_DESCRIPTOR	8.1.0				MIOPEN_BA
CUDNN_BACKEND_OPERATION_RESAMPLE_BWD_DESCRIPTOR	8.3.0				MIOPEN_BA
CUDNN_BACKEND_OPERATION_RESAMPLE_FWD_DESCRIPTOR	8.3.0				MIOPEN_BA
CUDNN_BACKEND_OPERATION_RESHAPE_DESCRIPTOR	8.7.0				MIOPEN_BA
CUDNN_BACKEND_OPERATION_RNG_DESCRIPTOR	8.7.0				MIOPEN_BA
CUDNN_BACKEND_OPERATION_ROPE_BWD_DESCRIPTOR	9.25.0				
CUDNN_BACKEND_OPERATION_ROPE_FWD_DESCRIPTOR	9.24.0				
CUDNN_BACKEND_OPERATION_SDPA_BWD_DESCRIPTOR	9.17.0				
CUDNN_BACKEND_OPERATION_SDPA_FWD_DESCRIPTOR	9.13.0				
CUDNN_BACKEND_OPERATION_SIGNAL_DESCRIPTOR	8.5.0				MIOPEN_BA
CUDNN_BACKEND_OPERATION_SLICE_DESCRIPTOR	9.22.0				
CUDNN_BACKEND_OPERATION_SOFTMAX_DESCRIPTOR	9.20.0				
CUDNN_BACKEND_OPERATION_TRANSPOSE_DESCRIPTOR	9.22.0				
CUDNN_BACKEND_POINTWISE_DESCRIPTOR	8.0.1				MIOPEN_BA
CUDNN_BACKEND_REDUCTION_DESCRIPTOR	8.1.0				MIOPEN_BA
CUDNN_BACKEND_RESAMPLE_DESCRIPTOR	8.3.0				MIOPEN_BA
CUDNN_BACKEND_RNG_DESCRIPTOR	8.7.0				MIOPEN_BA
CUDNN_BACKEND_TENSOR_DESCRIPTOR	8.0.1				MIOPEN_BA
CUDNN_BACKEND_VARIANT_PACK_DESCRIPTOR	8.0.1				MIOPEN_BA
CUDNN_BATCHNORM_OPS_BN	7.4.1	9.0.0			
CUDNN_BATCHNORM_OPS_BN_ACTIVATION	7.4.1	9.0.0			
CUDNN_BATCHNORM_OPS_BN_ADD_ACTIVATION	7.4.1	9.0.0			
CUDNN_BATCHNORM_PER_ACTIVATION	4.0.0	9.0.0			miopenBNP
CUDNN_BATCHNORM_SPATIAL	4.0.0	9.0.0			miopenBNS
CUDNN_BATCHNORM_SPATIAL_PERSISTENT	7.0.5	9.0.0			
CUDNN_BATCH_NORM	8.5.0				
CUDNN_BEHAVIOR_NOTE_CUBLASLT_DEPENDENCY	9.15.0				
CUDNN_BEHAVIOR_NOTE_REQUIRES_BIAS_INT8x32_REORDER	8.3.0				

Table 18 – continued from previou

CUDA	A	D	C	R	MIOPEN
CUDNN_BEHAVIOR_NOTE_REQUIRES_FILTER_INT8x32_REORDER	8.3.0				
CUDNN_BEHAVIOR_NOTE_RUNTIME_COMPILATION	8.2.0				
CUDNN_BEHAVIOR_NOTE_SUPPORTS_CUDA_GRAPH_NATIVE_API	9.5.0				
CUDNN_BEHAVIOR_NOTE_TYPE_COUNT	8.2.0				
CUDNN_BIDIRECTIONAL	5.0.0				miopenRNN
CUDNN_BN_FINALIZE_STATISTICS_INFERENCE	8.1.0				
CUDNN_BN_FINALIZE_STATISTICS_TRAINING	8.1.0				
CUDNN_BN_MIN_EPSILON	4.0.0				
CUDNN_CAUSAL_CONV1D_ACTIVATION_IDENTITY	9.22.0				
CUDNN_CAUSAL_CONV1D_ACTIVATION_SILU	9.22.0				
CUDNN_CONVOLUTION	1.0.0	9.0.0			miopenCon
CUDNN_CONVOLUTION_BWD_DATA_ALGO_0	3.0.0				miopenCon
CUDNN_CONVOLUTION_BWD_DATA_ALGO_1	3.0.0				miopenCon
CUDNN_CONVOLUTION_BWD_DATA_ALGO_COUNT	6.0.0				miopenTra
CUDNN_CONVOLUTION_BWD_DATA_ALGO_FFT	3.0.0				miopenCon
CUDNN_CONVOLUTION_BWD_DATA_ALGO_FFT_TILING	4.0.0				
CUDNN_CONVOLUTION_BWD_DATA_ALGO_WINOGRAD	5.0.0				miopenCon
CUDNN_CONVOLUTION_BWD_DATA_ALGO_WINOGRAD_NONFUSED	5.1.0				
CUDNN_CONVOLUTION_BWD_DATA_NO_WORKSPACE	3.0.0	7.6.5		8.0.1	
CUDNN_CONVOLUTION_BWD_DATA_PREFER_FASTEST	3.0.0	7.6.5		8.0.1	
CUDNN_CONVOLUTION_BWD_DATA_SPECIFY_WORKSPACE_LIMIT	3.0.0	7.6.5		8.0.1	
CUDNN_CONVOLUTION_BWD_FILTER_ALGO_0	3.0.0				
CUDNN_CONVOLUTION_BWD_FILTER_ALGO_1	3.0.0				
CUDNN_CONVOLUTION_BWD_FILTER_ALGO_3	3.0.0				
CUDNN_CONVOLUTION_BWD_FILTER_ALGO_COUNT	6.0.0				
CUDNN_CONVOLUTION_BWD_FILTER_ALGO_FFT	3.0.0				
CUDNN_CONVOLUTION_BWD_FILTER_ALGO_FFT_TILING	6.0.0				
CUDNN_CONVOLUTION_BWD_FILTER_ALGO_WINOGRAD	5.1.0				
CUDNN_CONVOLUTION_BWD_FILTER_ALGO_WINOGRAD_NONFUSED	5.1.0				
CUDNN_CONVOLUTION_BWD_FILTER_NO_WORKSPACE	3.0.0	7.6.5		8.0.1	
CUDNN_CONVOLUTION_BWD_FILTER_PREFER_FASTEST	3.0.0	7.6.5		8.0.1	
CUDNN_CONVOLUTION_BWD_FILTER_SPECIFY_WORKSPACE_LIMIT	3.0.0	7.6.5		8.0.1	
CUDNN_CONVOLUTION_FWD_ALGO_COUNT	6.0.0				
CUDNN_CONVOLUTION_FWD_ALGO_DIRECT	2.0.0				miopenCon
CUDNN_CONVOLUTION_FWD_ALGO_FFT	3.0.0				miopenCon
CUDNN_CONVOLUTION_FWD_ALGO_FFT_TILING	4.0.0				
CUDNN_CONVOLUTION_FWD_ALGO_GEMM	2.0.0				miopenCon
CUDNN_CONVOLUTION_FWD_ALGO_IMPLICIT_GEMM	2.0.0				miopenCon
CUDNN_CONVOLUTION_FWD_ALGO_IMPLICIT_PRECOMP_GEMM	2.0.0				
CUDNN_CONVOLUTION_FWD_ALGO_WINOGRAD	5.0.0				miopenCon
CUDNN_CONVOLUTION_FWD_ALGO_WINOGRAD_NONFUSED	5.1.0				
CUDNN_CONVOLUTION_FWD_NO_WORKSPACE	2.0.0	7.6.5		8.0.1	
CUDNN_CONVOLUTION_FWD_PREFER_FASTEST	2.0.0	7.6.5		8.0.1	
CUDNN_CONVOLUTION_FWD_SPECIFY_WORKSPACE_LIMIT	2.0.0	7.6.5		8.0.1	
CUDNN_CROSS_CORRELATION	1.0.0	9.0.0			miopenCon
CUDNN_CTC_LOSS_ALGO_DETERMINISTIC	7.0.5				MIOPEN_CT
CUDNN_CTC_LOSS_ALGO_NON_DETERMINISTIC	7.0.5				
CUDNN_CTC_SKIP_OOB_GRADIENTS	9.0.0				
CUDNN_CTC_ZERO_OOB_GRADIENTS	9.0.0				
CUDNN_DATA_BFLOAT16	8.1.0				miopenBFl

Table 18 – continued from previou

CUDA	A	D	C	R	MIOPEN
CUDNN_DATA_BOOLEAN	8.3.0				
CUDNN_DATA_BYTE_BOOLEAN	9.25.0				
CUDNN_DATA_COMPLEX_FP32	9.14.0				
CUDNN_DATA_COMPLEX_FP64	9.14.0				
CUDNN_DATA_DOUBLE	1.0.0				miopenDou
CUDNN_DATA_FAST_FLOAT_FOR_FP8	8.7.0				
CUDNN_DATA_FLOAT	1.0.0				miopenFlo
CUDNN_DATA_FP4_E2M1	9.7.0				
CUDNN_DATA_FP8_E4M3	8.6.0				miopenFlo
CUDNN_DATA_FP8_E5M2	8.6.0				miopenBFl
CUDNN_DATA_FP8_E8M0	9.7.0				
CUDNN_DATA_HALF	3.0.0				miopenHal
CUDNN_DATA_INT32	6.0.0				miopenInt
CUDNN_DATA_INT4	9.11.0				
CUDNN_DATA_INT64	8.1.0				miopenInt
CUDNN_DATA_INT8	6.0.0				miopenInt
CUDNN_DATA_INT8x32	7.2.1	9.0.0			
CUDNN_DATA_INT8x4	6.0.0	9.0.0			miopenInt
CUDNN_DATA_UINT32	9.11.0				
CUDNN_DATA_UINT4	9.11.0				
CUDNN_DATA_UINT8	7.1.3				
CUDNN_DATA_UINT8x4	7.1.3	9.0.0			
CUDNN_DEFAULT_MATH	7.0.5				miopenMat
CUDNN_DEFAULT_REORDER	7.6.0	9.0.0			
CUDNN_DETERMINISTIC	6.0.0				
CUDNN_DIM_MAX	4.0.0				
CUDNN_DIVNORM_PRECOMPUTED_MEANS	3.0.0				
CUDNN_EDGE_VAL_PAD	8.3.0				miopenPad
CUDNN_ERRQUERY_BLOCKING	7.0.5				
CUDNN_ERRQUERY_NONBLOCKING	7.0.5				
CUDNN_ERRQUERY_RAWCODE	7.0.5				
CUDNN_FMA_MATH	8.0.1				
CUDNN_FUSED_BN_FINALIZE_STATISTICS_INFERENCE	7.6.0				
CUDNN_FUSED_BN_FINALIZE_STATISTICS_TRAINING	7.6.0				
CUDNN_FUSED_CONV_SCALE_BIAS_ADD_ACTIVATION	7.6.0				
CUDNN_FUSED_DACTIVATION_FORK_DBATCHNORM	7.6.0				
CUDNN_FUSED_SCALE_BIAS_ACTIVATION_CONV_BNSTATS	7.6.0				
CUDNN_FUSED_SCALE_BIAS_ACTIVATION_WGRAD	7.6.0				
CUDNN_FUSED_SCALE_BIAS_ADD_ACTIVATION_GEN_BITMASK	7.6.0				
CUDNN_FWD_MODE_INFERENCE	8.0.1				miopenRNN
CUDNN_FWD_MODE_TRAINING	8.0.1				miopenRNN
CUDNN_GENSTATS_SUM_SQSUM	8.0.1				
CUDNN_GROUP_NORM	8.5.0				
CUDNN_GRU	5.0.0				miopenGRU
CUDNN_HEUR_MODES_COUNT	8.0.1				MIOPEN_HE
CUDNN_HEUR_MODE_A	8.3.0				MIOPEN_HE
CUDNN_HEUR_MODE_B	8.0.1				MIOPEN_HE
CUDNN_HEUR_MODE_FALLBACK	8.3.0				MIOPEN_HE
CUDNN_HEUR_MODE_INSTANT	8.0.1				MIOPEN_HE
CUDNN_INSTANCE_NORM	8.5.0				

Table 18 – continued from previou

CUDA	A	D	C	R	MIOPEN
CUDNN_KNOB_TYPE_ARRAY_SIZE_PER_THREAD	8.9.0				
CUDNN_KNOB_TYPE_BLOCK_SIZE	8.8.0				
CUDNN_KNOB_TYPE_CHUNK_K	8.0.1	9.0.0			
CUDNN_KNOB_TYPE_COUNTS	8.0.1				
CUDNN_KNOB_TYPE_CTA_COUNT	9.7.0				
CUDNN_KNOB_TYPE_CTA_SPLIT_K_MODE	8.0.1	9.0.0			
CUDNN_KNOB_TYPE_EDGE	8.0.1				
CUDNN_KNOB_TYPE_IDX_MODE	8.0.1	9.0.0			
CUDNN_KNOB_TYPE_INPUT_TMA_ENABLE	9.22.0				
CUDNN_KNOB_TYPE_KBLOCK	8.0.1	9.0.0			
CUDNN_KNOB_TYPE_KERNEL_CFG	8.1.0				
CUDNN_KNOB_TYPE_LDGA	8.0.1	9.0.0			
CUDNN_KNOB_TYPE_LDGB	8.0.1	9.0.0			
CUDNN_KNOB_TYPE_LDGC	8.0.1	9.0.0			
CUDNN_KNOB_TYPE_LOAD_SIZE	8.9.5				
CUDNN_KNOB_TYPE_MULTIPLY	8.0.1				
CUDNN_KNOB_TYPE_NUM_C_PER_BLOCK	8.9.0	9.0.0			
CUDNN_KNOB_TYPE_OCCUPANCY	8.9.0				
CUDNN_KNOB_TYPE_OUTPUT_TMA_ENABLE	9.22.0				
CUDNN_KNOB_TYPE_REDUCTION_MODE	8.0.1				
CUDNN_KNOB_TYPE_SINGLEBUFFER	8.0.1	9.0.0			
CUDNN_KNOB_TYPE_SLICED	8.0.1	9.0.0			
CUDNN_KNOB_TYPE_SPECFILT	8.0.1				
CUDNN_KNOB_TYPE_SPLIT_COLS	8.9.5				
CUDNN_KNOB_TYPE_SPLIT_H	8.0.1	9.0.0			
CUDNN_KNOB_TYPE_SPLIT_K	8.0.1	9.0.0			
CUDNN_KNOB_TYPE_SPLIT_K_BUF	8.0.1				
CUDNN_KNOB_TYPE_SPLIT_K_SLC	8.0.1				
CUDNN_KNOB_TYPE_SPLIT_P_SLC	9.7.0				
CUDNN_KNOB_TYPE_SPLIT_RS	8.0.1	9.0.0			
CUDNN_KNOB_TYPE_STAGES	8.0.1				
CUDNN_KNOB_TYPE_STREAM_K	9.7.0				
CUDNN_KNOB_TYPE_SWAP_AB	9.18.0				
CUDNN_KNOB_TYPE_SWIZZLE	8.0.1				
CUDNN_KNOB_TYPE_TILEK	8.0.1				
CUDNN_KNOB_TYPE_TILE_CGA	8.6.0	9.0.0			
CUDNN_KNOB_TYPE_TILE_CGA_M	8.6.0				
CUDNN_KNOB_TYPE_TILE_CGA_N	8.6.0				
CUDNN_KNOB_TYPE_TILE_COLS	8.9.5				
CUDNN_KNOB_TYPE_TILE_M	9.7.0				
CUDNN_KNOB_TYPE_TILE_N	9.7.0				
CUDNN_KNOB_TYPE_TILE_ROWS	8.9.5				
CUDNN_KNOB_TYPE_TILE_SIZE	8.0.1				
CUDNN_KNOB_TYPE_USE_TEX	8.0.1	9.0.0			
CUDNN_KNOB_TYPE_WARP_SPEC_CFG	9.7.0				
CUDNN_KNOB_TYPE_WINO_TILE	8.0.1	9.0.0			
CUDNN_KNOB_TYPE_WORKSPACE	8.4.0				
CUDNN_LAYER_NORM	8.5.0				
CUDNN_LAYOUT_TYPE_COUNT	8.0.2				
CUDNN_LAYOUT_TYPE_PREFERRED_NCHW	8.0.1				

Table 18 – continued from previou

CUDA	A	D	C	R	MIOPEN
CUDNN_LAYOUT_TYPE_PREFERRED_NHWC	8.0.2				
CUDNN_LAYOUT_TYPE_PREFERRED_PAD4CK	8.0.2				
CUDNN_LAYOUT_TYPE_PREFERRED_PAD8CK	8.0.2				
CUDNN_LINEAR_INPUT	5.0.0				miopenRNN
CUDNN_LOSS_NORMALIZATION_NONE	7.6.0				
CUDNN_LOSS_NORMALIZATION_SOFTMAX	7.6.0				
CUDNN_LRN_CROSS_CHANNEL_DIM1	3.0.0				miopenLRN
CUDNN_LRN_MAX_N	3.0.0				
CUDNN_LRN_MIN_BETA	3.0.0				
CUDNN_LRN_MIN_K	3.0.0				
CUDNN_LRN_MIN_N	3.0.0				
CUDNN_LSTM	5.0.0				miopenLST
CUDNN_MH_ATTN_K_BIASES	7.6.3	9.22.0			
CUDNN_MH_ATTN_K_WEIGHTS	7.5.0	9.22.0			
CUDNN_MH_ATTN_O_BIASES	7.6.3	9.22.0			
CUDNN_MH_ATTN_O_WEIGHTS	7.5.0	9.22.0			
CUDNN_MH_ATTN_Q_BIASES	7.6.3	9.22.0			
CUDNN_MH_ATTN_Q_WEIGHTS	7.5.0	9.22.0			
CUDNN_MH_ATTN_V_BIASES	7.6.3	9.22.0			
CUDNN_MH_ATTN_V_WEIGHTS	7.5.0	9.22.0			
CUDNN_MOE_GROUPED_MATMUL_MODE_GATHER	9.15.0				
CUDNN_MOE_GROUPED_MATMUL_MODE_NONE	9.15.0				
CUDNN_MOE_GROUPED_MATMUL_MODE_SCATTER	9.15.0				
CUDNN_NEG_INF_PAD	8.3.0				miopenPad
CUDNN_NON_DETERMINISTIC	6.0.0				
CUDNN_NORM_ALGO_PERSIST	8.0.1	9.0.0			
CUDNN_NORM_ALGO_STANDARD	8.0.1	9.0.0			
CUDNN_NORM_FWD_INFERENCE	8.5.0				
CUDNN_NORM_FWD_TRAINING	8.5.0				
CUDNN_NORM_OPS_NORM	8.0.1	9.0.0			
CUDNN_NORM_OPS_NORM_ACTIVATION	8.0.1	9.0.0			
CUDNN_NORM_OPS_NORM_ADD_ACTIVATION	8.0.1	9.0.0			
CUDNN_NORM_PER_ACTIVATION	8.0.1	9.0.0			
CUDNN_NORM_PER_CHANNEL	8.0.1	9.0.0			
CUDNN_NOT_PROPAGATE_NAN	4.0.0	9.0.0			MIOPEN_NO
CUDNN_NO_REORDER	7.6.0	9.0.0			
CUDNN_NUMERICAL_NOTE_DOWN_CONVERT_INPUTS	8.0.1				
CUDNN_NUMERICAL_NOTE_FFT	8.0.1				
CUDNN_NUMERICAL_NOTE_NONDETERMINISTIC	8.0.1				
CUDNN_NUMERICAL_NOTE_REDUCED_PRECISION_REDUCTION	8.0.1				
CUDNN_NUMERICAL_NOTE_STRICT_NAN_PROP	9.1.0				
CUDNN_NUMERICAL_NOTE_TENSOR_CORE	8.0.1				
CUDNN_NUMERICAL_NOTE_TYPE_COUNT	8.0.1				
CUDNN_NUMERICAL_NOTE_WINOGRAD	8.0.1				
CUDNN_NUMERICAL_NOTE_WINOGRAD_TILE_13x13	8.3.0				
CUDNN_NUMERICAL_NOTE_WINOGRAD_TILE_4x4	8.3.0				
CUDNN_NUMERICAL_NOTE_WINOGRAD_TILE_6x6	8.3.0				
CUDNN_OPERATIONGRAPH_MODE_AUTO	9.23.0				
CUDNN_OPERATIONGRAPH_MODE_BLAS_MATMUL	9.23.0				
CUDNN_OPERATIONGRAPH_MODE_CONV_BWD_DATA	9.23.0				

Table 18 – continued from previou

CUDA	A	D	C	R	MIOPEN
CUDNN_OPERATIONGRAPH_MODE_CONV_BWD_FILTER	9.23.0				
CUDNN_OPERATIONGRAPH_MODE_CONV_FORWARD	9.23.0				
CUDNN_OPERATIONGRAPH_MODE_GENERIC_CONV_FUSION	9.23.0				
CUDNN_OPERATIONGRAPH_MODE_GENERIC_MATMUL_FUSION	9.23.0				
CUDNN_OPERATIONGRAPH_MODE_GENERIC_POINTWISE_FUSION	9.23.0				
CUDNN_OPERATIONGRAPH_MODE_NORM_BWD	9.23.0				
CUDNN_OPERATIONGRAPH_MODE_NORM_FWD_INFER	9.23.0				
CUDNN_OPERATIONGRAPH_MODE_NORM_FWD_TRAIN	9.23.0				
CUDNN_OPERATIONGRAPH_MODE_RESAMPLE_BWD	9.23.0				
CUDNN_OPERATIONGRAPH_MODE_RESAMPLE_FWD	9.23.0				
CUDNN_OPERATIONGRAPH_MODE_SDPA_BWD	9.23.0				
CUDNN_OPERATIONGRAPH_MODE_SDPA_FWD	9.23.0				
CUDNN_OPERATIONGRAPH_MODE_UNIFIED_SDPA_BWD	9.23.0				
CUDNN_OPERATIONGRAPH_MODE_UNIFIED_SDPA_FWD	9.23.0				
CUDNN_OP_TENSOR_ADD	5.0.0				miopenTen
CUDNN_OP_TENSOR_MAX	5.0.0				miopenTen
CUDNN_OP_TENSOR_MIN	5.0.0				miopenTen
CUDNN_OP_TENSOR_MUL	5.0.0				miopenTen
CUDNN_OP_TENSOR_NOT	7.0.5				
CUDNN_OP_TENSOR_SQRT	6.0.0				
CUDNN_PARAM_ACTIVATION_BITMASK_DESC	7.6.0				
CUDNN_PARAM_ACTIVATION_BITMASK_PLACEHOLDER	7.6.0				
CUDNN_PARAM_ACTIVATION_DESC	7.6.0				
CUDNN_PARAM_BN_BIAS_PLACEHOLDER	7.6.0				
CUDNN_PARAM_BN_DBIAS_PLACEHOLDER	7.6.0				
CUDNN_PARAM_BN_DSCALE_PLACEHOLDER	7.6.0				
CUDNN_PARAM_BN_EQBIAS_PLACEHOLDER	7.6.0				
CUDNN_PARAM_BN_EQSCALEBIAS_DESC	7.6.0				
CUDNN_PARAM_BN_EQSCALE_PLACEHOLDER	7.6.0				
CUDNN_PARAM_BN_MODE	7.6.0				
CUDNN_PARAM_BN_RUNNING_MEAN_PLACEHOLDER	7.6.0				
CUDNN_PARAM_BN_RUNNING_VAR_PLACEHOLDER	7.6.0				
CUDNN_PARAM_BN_SAVED_INVSTD_PLACEHOLDER	7.6.0				
CUDNN_PARAM_BN_SAVED_MEAN_PLACEHOLDER	7.6.0				
CUDNN_PARAM_BN_SCALEBIAS_MEANVAR_DESC	7.6.0				
CUDNN_PARAM_BN_SCALE_PLACEHOLDER	7.6.0				
CUDNN_PARAM_BN_Z_EQBIAS_PLACEHOLDER	7.6.0				
CUDNN_PARAM_BN_Z_EQSCALEBIAS_DESC	7.6.0				
CUDNN_PARAM_BN_Z_EQSCALE_PLACEHOLDER	7.6.0				
CUDNN_PARAM_CONV_DESC	7.6.0				
CUDNN_PARAM_DWDATA_PLACEHOLDER	7.6.0				
CUDNN_PARAM_DWDESC	7.6.0				
CUDNN_PARAM_DXDATA_PLACEHOLDER	7.6.0				
CUDNN_PARAM_DXDESC	7.6.0				
CUDNN_PARAM_DYDATA_PLACEHOLDER	7.6.0				
CUDNN_PARAM_DYDESC	7.6.0				
CUDNN_PARAM_DZDATA_PLACEHOLDER	7.6.0				
CUDNN_PARAM_DZDESC	7.6.0				
CUDNN_PARAM_WDATA_PLACEHOLDER	7.6.0				
CUDNN_PARAM_WDESC	7.6.0				

Table 18 – continued from previou

CUDA	A	D	C	R	MIOPEN
CUDNN_PARAM_XDATA_PLACEHOLDER	7.6.0				
CUDNN_PARAM_XDESC	7.6.0				
CUDNN_PARAM_YDATA_PLACEHOLDER	7.6.0				
CUDNN_PARAM_YDESC	7.6.0				
CUDNN_PARAM_YSQSUM_PLACEHOLDER	7.6.0				
CUDNN_PARAM_YSTATS_DESC	7.6.0				
CUDNN_PARAM_YSUM_PLACEHOLDER	7.6.0				
CUDNN_PARAM_ZDATA_PLACEHOLDER	7.6.0				
CUDNN_PARAM_ZDESC	7.6.0				
CUDNN_POINTWISE_ABS	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_ADD	8.0.1				MIOPEN_PO
CUDNN_POINTWISE_ADD_SQUARE	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_ATAN2	9.1.0				
CUDNN_POINTWISE_BINARY_SELECT	8.4.0				MIOPEN_PO
CUDNN_POINTWISE_CEIL	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_CMP_EQ	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_CMP_GE	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_CMP_GT	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_CMP_LE	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_CMP_LT	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_CMP_NEQ	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_COS	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_DIV	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_ELU_BWD	8.1.0				MIOPEN_PO
CUDNN_POINTWISE_ELU_FWD	8.0.1				MIOPEN_PO
CUDNN_POINTWISE_ERF	8.5.0				MIOPEN_PO
CUDNN_POINTWISE_EXP	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_FLOOR	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_GELU_APPROX_TANH_BWD	8.5.0				MIOPEN_PO
CUDNN_POINTWISE_GELU_APPROX_TANH_FWD	8.5.0				MIOPEN_PO
CUDNN_POINTWISE_GELU_BWD	8.1.0				MIOPEN_PO
CUDNN_POINTWISE_GELU_FWD	8.1.0				MIOPEN_PO
CUDNN_POINTWISE_GEN_INDEX	8.4.0				MIOPEN_PO
CUDNN_POINTWISE_IDENTITY	8.5.0				MIOPEN_PO
CUDNN_POINTWISE_LOG	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_LOGICAL_AND	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_LOGICAL_NOT	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_LOGICAL_OR	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_MAX	8.0.1				MIOPEN_PO
CUDNN_POINTWISE_MIN	8.0.1				MIOPEN_PO
CUDNN_POINTWISE_MOD	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_MUL	8.0.1				MIOPEN_PO
CUDNN_POINTWISE_NEG	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_POW	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_RECIPROCAL	8.9.0				MIOPEN_PO
CUDNN_POINTWISE_RELU_BWD	8.1.0				MIOPEN_PO
CUDNN_POINTWISE_RELU_FWD	8.0.1				MIOPEN_PO
CUDNN_POINTWISE_RSQRT	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_SIGMOID_BWD	8.1.0				MIOPEN_PO
CUDNN_POINTWISE_SIGMOID_FWD	8.0.1				MIOPEN_PO

Table 18 – continued from previou

CUDA	A	D	C	R	MIOPEN
CUDNN_POINTWISE_SIN	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_SOFTPLUS_BWD	8.1.0				MIOPEN_PO
CUDNN_POINTWISE_SOFTPLUS_FWD	8.1.0				MIOPEN_PO
CUDNN_POINTWISE_SQRT	8.0.1				MIOPEN_PO
CUDNN_POINTWISE_SUB	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_SWISH_BWD	8.1.0				MIOPEN_PO
CUDNN_POINTWISE_SWISH_FWD	8.1.0				MIOPEN_PO
CUDNN_POINTWISE_TAN	8.3.0				MIOPEN_PO
CUDNN_POINTWISE_TANH_BWD	8.1.0				MIOPEN_PO
CUDNN_POINTWISE_TANH_FWD	8.0.1				MIOPEN_PO
CUDNN_POOLING_AVERAGE_COUNT_EXCLUDE_PADDING	2.0.0	9.0.0			miopenPoo
CUDNN_POOLING_AVERAGE_COUNT_INCLUDE_PADDING	2.0.0	9.0.0			miopenPoo
CUDNN_POOLING_MAX	1.0.0	9.0.0			miopenPoo
CUDNN_POOLING_MAX_DETERMINISTIC	6.0.0	9.0.0			
CUDNN_PROPAGATE_NAN	4.0.0	9.0.0			MIOPEN_PR
CUDNN_PTR_16B_ALIGNED	7.6.0				
CUDNN_PTR_ACTIVATION_BITMASK	7.6.0				
CUDNN_PTR_BN_BIAS	7.6.0				
CUDNN_PTR_BN_DBIAS	7.6.0				
CUDNN_PTR_BN_DSCALE	7.6.0				
CUDNN_PTR_BN_EQBIAS	7.6.0				
CUDNN_PTR_BN_EQSCALE	7.6.0				
CUDNN_PTR_BN_RUNNING_MEAN	7.6.0				
CUDNN_PTR_BN_RUNNING_VAR	7.6.0				
CUDNN_PTR_BN_SAVED_INVSTD	7.6.0				
CUDNN_PTR_BN_SAVED_MEAN	7.6.0				
CUDNN_PTR_BN_SCALE	7.6.0				
CUDNN_PTR_BN_Z_EQBIAS	7.6.0				
CUDNN_PTR_BN_Z_EQSCALE	7.6.0				
CUDNN_PTR_DWDATA	7.6.0				
CUDNN_PTR_DXDATA	7.6.0				
CUDNN_PTR_DYDATA	7.6.0				
CUDNN_PTR_DZDATA	7.6.0				
CUDNN_PTR_ELEM_ALIGNED	7.6.0				
CUDNN_PTR_NULL	7.6.0				
CUDNN_PTR_WDATA	7.6.0				
CUDNN_PTR_WORKSPACE	7.6.0				
CUDNN_PTR_XDATA	7.6.0				
CUDNN_PTR_YDATA	7.6.0				
CUDNN_PTR_YSQSUM	7.6.0				
CUDNN_PTR_YSUM	7.6.0				
CUDNN_PTR_ZDATA	7.6.0				
CUDNN_REDUCE_TENSOR_ADD	6.0.0				MIOPEN_RE
CUDNN_REDUCE_TENSOR_AMAX	6.0.0				MIOPEN_RE
CUDNN_REDUCE_TENSOR_AVG	6.0.0				MIOPEN_RE
CUDNN_REDUCE_TENSOR_FLATTENED_INDICES	6.0.0	9.0.0			MIOPEN_RE
CUDNN_REDUCE_TENSOR_MAX	6.0.0				MIOPEN_RE
CUDNN_REDUCE_TENSOR_MIN	6.0.0				MIOPEN_RE
CUDNN_REDUCE_TENSOR_MUL	6.0.0				MIOPEN_RE
CUDNN_REDUCE_TENSOR_MUL_NO_ZEROS	7.0.5				

Table 18 – continued from previou

CUDA	A	D	C	R	MIOPEN
CUDNN_REDUCE_TENSOR_NORM1	6.0.0				MIOPEN_RE
CUDNN_REDUCE_TENSOR_NORM2	6.0.0				MIOPEN_RE
CUDNN_REDUCE_TENSOR_NO_INDICES	6.0.0	9.0.0			MIOPEN_RE
CUDNN_RESAMPLE_AVGPOOL	8.3.0				
CUDNN_RESAMPLE_AVGPOOL_EXCLUDE_PADDING	8.6.0				
CUDNN_RESAMPLE_AVGPOOL_INCLUDE_PADDING	8.6.0				
CUDNN_RESAMPLE_BILINEAR	8.3.0				
CUDNN_RESAMPLE_MAXPOOL	8.3.0				
CUDNN_RESAMPLE_NEAREST	8.3.0				
CUDNN_RESHAPE_LOGICAL	9.22.0				
CUDNN_RESHAPE_VIEW_ONLY	9.22.0				
CUDNN_RMS_NORM	8.9.6				
CUDNN_RNG_DISTRIBUTION_BERNOULLI	8.7.0				MIOPEN_RN
CUDNN_RNG_DISTRIBUTION_NORMAL	8.7.0				MIOPEN_RN
CUDNN_RNG_DISTRIBUTION_UNIFORM	8.7.0				MIOPEN_RN
CUDNN_RNN_ALGO_COUNT	7.1.3				
CUDNN_RNN_ALGO_PERSIST_DYNAMIC	6.0.0				
CUDNN_RNN_ALGO_PERSIST_STATIC	6.0.0				
CUDNN_RNN_ALGO_PERSIST_STATIC_SMALL_H	8.1.0				
CUDNN_RNN_ALGO_STANDARD	6.0.0				miopenRNN
CUDNN_RNN_CLIP_MINMAX	7.2.1				
CUDNN_RNN_CLIP_NONE	7.2.1				
CUDNN_RNN_DATA_LAYOUT_BATCH_MAJOR_UNPACKED	7.2.1				
CUDNN_RNN_DATA_LAYOUT_SEQ_MAJOR_PACKED	7.2.1				
CUDNN_RNN_DATA_LAYOUT_SEQ_MAJOR_UNPACKED	7.2.1				
CUDNN_RNN_DOUBLE_BIAS	7.5.0				miopenRNN
CUDNN_RNN_NO_BIAS	7.5.0				miopenRNN
CUDNN_RNN_PADDED_IO_DISABLED	7.2.1	8.0.1		9.0.0	miopenRNN
CUDNN_RNN_PADDED_IO_ENABLED	7.2.1	8.0.1		9.0.0	miopenRNN
CUDNN_RNN_RELU	5.0.0				miopenRNN
CUDNN_RNN_SINGLE_INP_BIAS	7.5.0				miopenRNN
CUDNN_RNN_SINGLE_REC_BIAS	7.5.0				miopenRNN
CUDNN_RNN_TANH	5.0.0				miopenRNN
CUDNN_SAMPLER_BILINEAR	5.0.0				
CUDNN_SCALAR_DOUBLE_BN_EPSILON	7.6.0				
CUDNN_SCALAR_DOUBLE_BN_EXP_AVG_FACTOR	7.6.0				
CUDNN_SCALAR_INT64_T_BN_ACCUMULATION_COUNT	7.6.0				
CUDNN_SCALAR_SIZE_T_WORKSPACE_SIZE_IN_BYTES	7.6.0				
CUDNN_SEQDATA_BATCH_DIM	7.5.0	9.22.0			
CUDNN_SEQDATA_BEAM_DIM	7.5.0	9.22.0			
CUDNN_SEQDATA_DIM_COUNT	7.5.0				
CUDNN_SEQDATA_TIME_DIM	7.5.0	9.22.0			
CUDNN_SEQDATA_VECT_DIM	7.5.0	9.22.0			
CUDNN_SEV_ERROR	7.1.3				
CUDNN_SEV_ERROR_EN	7.1.3				
CUDNN_SEV_FATAL	7.1.3				
CUDNN_SEV_INFO	7.1.3				
CUDNN_SEV_INFO_EN	7.1.3				
CUDNN_SEV_WARNING	7.1.3				
CUDNN_SEV_WARNING_EN	7.1.3				

Table 18 – continued from previou

CUDA	A	D	C	R	MIOPEN
CUDNN_SIGNAL_SET	8.5.0				
CUDNN_SIGNAL_WAIT	8.5.0				
CUDNN_SKIP_INPUT	5.0.0				miopenRNN
CUDNN_SOFTMAX_ACCURATE	1.0.0				MIOPEN_SO
CUDNN_SOFTMAX_FAST	1.0.0				MIOPEN_SO
CUDNN_SOFTMAX_LOG	3.0.0				MIOPEN_SO
CUDNN_SOFTMAX_MODE_CHANNEL	1.0.0				MIOPEN_SO
CUDNN_SOFTMAX_MODE_INSTANCE	1.0.0				MIOPEN_SO
CUDNN_STATUS_ALLOC_FAILED	1.0.0	9.0.0			miopenSta
CUDNN_STATUS_ARCH_MISMATCH	1.0.0	9.0.0			
CUDNN_STATUS_BAD_PARAM	1.0.0				miopenSta
CUDNN_STATUS_BAD_PARAM_ATTRIBUTE_TYPE	9.0.0				
CUDNN_STATUS_BAD_PARAM_CUDA_GRAPH_MISMATCH	9.5.0				
CUDNN_STATUS_BAD_PARAM_DESCRIPTOR_TYPE	9.6.0				
CUDNN_STATUS_BAD_PARAM_DUPLICATED_ENTRIES	9.0.0				
CUDNN_STATUS_BAD_PARAM_MISALIGNED_POINTER	9.0.0				
CUDNN_STATUS_BAD_PARAM_NOT_FINALIZED	9.0.0				
CUDNN_STATUS_BAD_PARAM_NULL_POINTER	9.0.0				
CUDNN_STATUS_BAD_PARAM_OUT_OF_BOUND	9.0.0				
CUDNN_STATUS_BAD_PARAM_SHAPE_MISMATCH	9.0.0				
CUDNN_STATUS_BAD_PARAM_SIZE_INSUFFICIENT	9.0.0				
CUDNN_STATUS_BAD_PARAM_STREAM_MISMATCH	9.0.0				
CUDNN_STATUS_CATEGORY	9.0.0				
CUDNN_STATUS_DEPRECATED	9.0.0				
CUDNN_STATUS_EXECUTION_FAILED	1.0.0				
CUDNN_STATUS_EXECUTION_FAILED_CUBLAS	9.0.0				
CUDNN_STATUS_EXECUTION_FAILED_CUDART	9.0.0				
CUDNN_STATUS_EXECUTION_FAILED_CUDA_DRIVER	9.0.0				
CUDNN_STATUS_EXECUTION_FAILED_CURAND	9.0.0				
CUDNN_STATUS_FULL_ERROR_CODE	9.0.0				
CUDNN_STATUS_INTERNAL_ERROR	1.0.0				miopenSta
CUDNN_STATUS_INTERNAL_ERROR_BAD_LAUNCH_PARAM	9.0.0				
CUDNN_STATUS_INTERNAL_ERROR_COMPILATION_FAILED	9.0.0				
CUDNN_STATUS_INTERNAL_ERROR_DEVICE_ALLOCATION_FAILED	9.0.0				
CUDNN_STATUS_INTERNAL_ERROR_HOST_ALLOCATION_FAILED	9.0.0				
CUDNN_STATUS_INTERNAL_ERROR_TEXTURE_CREATION_FAILED	9.0.0				
CUDNN_STATUS_INTERNAL_ERROR_UNEXPECTED_VALUE	9.0.0				
CUDNN_STATUS_INVALID_VALUE	1.0.0	9.0.0			miopenSta
CUDNN_STATUS_LICENSE_ERROR	1.0.0				
CUDNN_STATUS_MAPPING_ERROR	1.0.0	9.0.0			
CUDNN_STATUS_NOT_INITIALIZED	1.0.0				miopenSta
CUDNN_STATUS_NOT_SUPPORTED	1.0.0				miopenSta
CUDNN_STATUS_NOT_SUPPORTED_ARCH_MISMATCH	9.0.0				
CUDNN_STATUS_NOT_SUPPORTED_BAD_LAUNCH_PARAM	9.0.0				
CUDNN_STATUS_NOT_SUPPORTED_CUDA_GRAPH_NATIVE_API	9.5.0				
CUDNN_STATUS_NOT_SUPPORTED_DATA_TYPE	9.0.0				
CUDNN_STATUS_NOT_SUPPORTED_GRAPH_PATTERN	9.0.0				
CUDNN_STATUS_NOT_SUPPORTED_INCOMPATIBLE_CUDART	9.0.0				
CUDNN_STATUS_NOT_SUPPORTED_INCOMPATIBLE_CUDA_DRIVER	9.0.0				
CUDNN_STATUS_NOT_SUPPORTED_INVALID_DYNAMIC_SHAPE	9.18.0				

Table 18 – continued from previou

CUDA	A	D	C	R	MIOPEN
CUDNN_STATUS_NOT_SUPPORTED_LAYOUT	9.0.0				
CUDNN_STATUS_NOT_SUPPORTED_PADDING	9.0.0				
CUDNN_STATUS_NOT_SUPPORTED_RUNTIME_PREREQUISITE_MISSING	9.0.0				
CUDNN_STATUS_NOT_SUPPORTED_SHAPE	9.0.0				
CUDNN_STATUS_NOT_SUPPORTED_SHARED_MEMORY_INSUFFICIENT	9.0.0				
CUDNN_STATUS_NOT_SUPPORTED_SUBLIBRARY_UNAVAILABLE	9.0.0				
CUDNN_STATUS_RUNTIME_FP_OVERFLOW	7.0.5				
CUDNN_STATUS_RUNTIME_IN_PROGRESS	7.0.5				
CUDNN_STATUS_RUNTIME_PREREQUISITE_MISSING	6.0.0	9.0.0			
CUDNN_STATUS_SERIALIZATION_VERSION_MISMATCH	9.0.0				
CUDNN_STATUS_SPECIFIC_ERROR	9.0.0				
CUDNN_STATUS_SUBLIBRARY_LOADING_FAILED	9.2.0				
CUDNN_STATUS_SUBLIBRARY_VERSION_MISMATCH	9.0.0				
CUDNN_STATUS_SUCCESS	1.0.0				miopenSta
CUDNN_STATUS_VERSION_MISMATCH	8.0.1	9.0.0			miopenSta
CUDNN_TENSOR_NCHW	1.0.0				miopenTen
CUDNN_TENSOR_NCHW_VECT_C	6.0.0				
CUDNN_TENSOR_NHWC	1.0.0				miopenTen
CUDNN_TENSOR_OP_MATH	7.0.5				
CUDNN_TENSOR_OP_MATH_ALLOW_CONVERSION	7.2.1				
CUDNN_TENSOR_REORDERING_F16x16	8.8.0				
CUDNN_TENSOR_REORDERING_F8_128x4	9.7.0				
CUDNN_TENSOR_REORDERING_INT8x32	8.3.0				
CUDNN_TENSOR_REORDERING_NONE	8.3.0				
CUDNN_TRANSFORM_FOLD	7.5.0				
CUDNN_TRANSFORM_UNFOLD	7.5.0				
CUDNN_TYPE_ATTRIB_NAME	8.0.1				MIOPEN_TY
CUDNN_TYPE_BACKEND_DESCRIPTOR	8.0.1				MIOPEN_TY
CUDNN_TYPE_BEHAVIOR_NOTE	8.2.0				MIOPEN_TY
CUDNN_TYPE_BN_FINALIZE_STATS_MODE	8.1.0				MIOPEN_TY
CUDNN_TYPE_BOOLEAN	8.0.1				MIOPEN_TY
CUDNN_TYPE_CHAR	8.4.0				MIOPEN_TY
CUDNN_TYPE_CONVOLUTION_MODE	8.0.1				MIOPEN_TY
CUDNN_TYPE_DATA_TYPE	8.0.1				MIOPEN_TY
CUDNN_TYPE_DOUBLE	8.0.1				MIOPEN_TY
CUDNN_TYPE_FLOAT	8.0.1				MIOPEN_TY
CUDNN_TYPE_FRACTION	8.5.0				MIOPEN_TY
CUDNN_TYPE_GENSTATS_MODE	8.0.1				MIOPEN_TY
CUDNN_TYPE_HANDLE	8.0.1				MIOPEN_TY
CUDNN_TYPE_HEUR_MODE	8.0.1				MIOPEN_TY
CUDNN_TYPE_INT32	8.3.0				MIOPEN_TY
CUDNN_TYPE_INT64	8.0.1				MIOPEN_TY
CUDNN_TYPE_KNOB_TYPE	8.0.1				MIOPEN_TY
CUDNN_TYPE_LAYOUT_TYPE	8.0.2				MIOPEN_TY
CUDNN_TYPE_MOE_GROUPED_MATMUL_MODE	9.15.0				MIOPEN_TY
CUDNN_TYPE_NAN_PROPOGATION	8.0.1	9.0.0			MIOPEN_TY
CUDNN_TYPE_NORM_FWD_PHASE	8.5.0				MIOPEN_TY
CUDNN_TYPE_NORM_MODE	8.5.0				MIOPEN_TY
CUDNN_TYPE_NUMERICAL_NOTE	8.0.1				MIOPEN_TY
CUDNN_TYPE_OPERATIONGRAPH_MODE	9.23.0				

Table 18 – continued from previou

CUDA	A	D	C	R	MIOPEN
CUDNN_TYPE_PADDING_MODE	8.3.0				MIOPEN_TY
CUDNN_TYPE_POINTWISE_MODE	8.0.1				MIOPEN_TY
CUDNN_TYPE_REDUCTION_OPERATOR_TYPE	8.1.0				MIOPEN_TY
CUDNN_TYPE_RESAMPLE_MODE	8.3.0				MIOPEN_TY
CUDNN_TYPE_RESHAPE_MODE	9.22.0				
CUDNN_TYPE_RNG_DISTRIBUTION	8.7.0				MIOPEN_TY
CUDNN_TYPE_SIGNAL_MODE	8.5.0				MIOPEN_TY
CUDNN_TYPE_TENSOR_REORDERING_MODE	8.3.0				MIOPEN_TY
CUDNN_TYPE_VOID_PTR	8.0.1				MIOPEN_TY
CUDNN_UNIDIRECTIONAL	5.0.0				miopenRNN
CUDNN_WGRAD_MODE_ADD	7.5.0				
CUDNN_WGRAD_MODE_SET	7.5.0				
CUDNN_ZERO_PAD	8.3.0				miopenPad
cudnnActivationDescriptor_t	4.0.0	9.0.0			miopenAct
cudnnActivationMode_t	1.0.0	9.0.0			miopenAct
cudnnActivationStruct	4.0.0	9.0.0			
cudnnAlgorithmDescriptor_t	7.1.3			9.0.0	
cudnnAlgorithmPerformanceStruct	7.1.3			9.0.0	
cudnnAlgorithmPerformance_t	7.1.3			9.0.0	
cudnnAlgorithmStruct	7.1.3			9.0.0	
cudnnAlgorithmUnionStruct	8.2.0			9.0.0	
cudnnAlgorithm_t	7.1.3			9.0.0	
cudnnAttnDescriptor_t	7.5.0	9.0.0			
cudnnAttnQueryMap_t	7.5.0			9.0.0	
cudnnAttnStruct	7.5.0	9.22.0			
cudnnBackendAttributeName_t	8.0.1				miopenBac
cudnnBackendAttributeType_t	8.0.1				miopenBac
cudnnBackendBehaviorNote_t	8.2.0				
cudnnBackendDescriptorType_t	8.0.1				miopenBac
cudnnBackendDescriptor_t	8.0.1				miopenBac
cudnnBackendHeurMode_t	8.0.1				miopenBac
cudnnBackendKnobType_t	8.0.1				
cudnnBackendLayoutType_t	8.0.1				
cudnnBackendNormFwdPhase_t	8.5.0				
cudnnBackendNormMode_t	8.5.0				
cudnnBackendNumericalNote_t	8.0.1				
cudnnBackendOperationGraphMode_t	9.23.0				
cudnnBackendReshapeMode_t	9.22.0				
cudnnBackendTensorReordering_t	8.3.0				
cudnnBatchNormMode_t	4.0.0	9.0.0			miopenBat
cudnnBatchNormOps_t	7.4.1	9.0.0			
cudnnBnFinalizeStatsMode_t	8.1.0				
cudnnCTCGradMode_t	9.0.0				
cudnnCTCLossAlgo_t	7.0.5				miopenCTC
cudnnCTCLossDescriptor_t	7.0.5				miopenCTC
cudnnCTCLossStruct	7.0.5				
cudnnCallback_t	7.1.3				
cudnnCausalConv1dActivation_t	9.22.0				
cudnnContext	1.0.0				miopenHan
cudnnConvolutionBwdDataAlgoPerfStruct	8.2.0	9.0.0			miopenCon

Table 18 – continued from previou

CUDA	A	D	C	R	MIOPEN
cudnnConvolutionBwdDataAlgoPerf_t	3.0.0	9.0.0			miopenCon
cudnnConvolutionBwdDataAlgo_t	3.0.0				miopenCon
cudnnConvolutionBwdDataPreference_t	3.0.0	7.6.5		8.0.1	
cudnnConvolutionBwdFilterAlgoPerfStruct	8.2.0				
cudnnConvolutionBwdFilterAlgoPerf_t	3.0.0	9.0.0			
cudnnConvolutionBwdFilterAlgo_t	3.0.0				
cudnnConvolutionBwdFilterPreference_t	3.0.0	7.6.5		8.0.1	
cudnnConvolutionDescriptor_t	1.0.0	9.0.0			miopenCon
cudnnConvolutionFwdAlgoPerfStruct	8.2.0				miopenCon
cudnnConvolutionFwdAlgoPerf_t	3.0.0	9.0.0			miopenCon
cudnnConvolutionFwdAlgo_t	2.0.0				miopenCon
cudnnConvolutionFwdPreference_t	2.0.0	7.6.5		8.0.1	
cudnnConvolutionMode_t	1.0.0				miopenCon
cudnnConvolutionStruct	1.0.0				
cudnnDataType_t	1.0.0				miopenDat
cudnnDebugStruct	8.2.0				
cudnnDebug_t	7.1.3				
cudnnDeterminism_t	6.0.0				
cudnnDirectionMode_t	5.0.0				miopenRNN
cudnnDivNormMode_t	3.0.0				
cudnnDropoutDescriptor_t	5.0.0				miopenDro
cudnnDropoutStruct	5.0.0				
cudnnErrQueryMode_t	7.0.5				
cudnnFilterDescriptor_t	1.0.0				miopenTen
cudnnFilterStruct	1.0.0	9.0.0			
cudnnFoldingDirection_t	7.5.0				
cudnnForwardMode_t	8.0.1				miopenRNN
cudnnFractionStruct	8.5.0				
cudnnFraction_t	8.5.0				
cudnnFusedOpsConstParamLabel_t	7.6.0	9.0.0			
cudnnFusedOpsConstParamPack_t	7.6.0	9.0.0			
cudnnFusedOpsConstParamStruct	7.6.0	9.0.0			
cudnnFusedOpsPlanStruct	7.6.0	9.0.0			
cudnnFusedOpsPlan_t	7.6.0	9.0.0			
cudnnFusedOpsPointerPlaceHolder_t	7.6.0	9.0.0			
cudnnFusedOpsVariantParamLabel_t	7.6.0	9.0.0			
cudnnFusedOpsVariantParamPack_t	7.6.0	9.0.0			
cudnnFusedOpsVariantParamStruct	7.6.0	9.0.0			
cudnnFusedOps_t	7.6.0	9.0.0			
cudnnGenStatsMode_t	8.0.1				
cudnnHandle_t	1.0.0				miopenHan
cudnnIndicesType_t	6.0.0	9.0.0			miopenInd
cudnnLRNDescriptor_t	3.0.0				miopenLRN
cudnnLRNMode_t	3.0.0				miopenLRN
cudnnLRNStruct	3.0.0				
cudnnLossNormalizationMode_t	7.6.0				
cudnnMathType_t	7.0.5				miopenMat
cudnnMoeGroupedMatmulMode_t	9.15.0				
cudnnMultiHeadAttnWeightKind_t	7.5.0	9.22.0			
cudnnNanPropagation_t	4.0.0				miopenNan

Table 18 – continued from previou

CUDA	A	D	C	R	MIOPEN
cudnnNormAlgo_t	8.0.1	9.0.0			
cudnnNormMode_t	8.0.1	9.0.0			
cudnnNormOps_t	8.0.1	9.0.0			
cudnnOpTensorDescriptor_t	5.0.0	9.0.0			
cudnnOpTensorOp_t	5.0.0				miopenTen
cudnnOpTensorStruct	5.0.0	9.0.0			
cudnnPaddingMode_t	8.3.0				miopenPad
cudnnPersistentRNNPlan	6.0.0				
cudnnPersistentRNNPlan_t	6.0.0				
cudnnPointwiseMode_t	8.0.1				miopenPoi
cudnnPoolingDescriptor_t	1.0.0	9.0.0			miopenPoo
cudnnPoolingMode_t	1.0.0	9.0.0			miopenPoo
cudnnPoolingStruct	1.0.0	9.0.0			
cudnnRNNAlgo_t	6.0.0				miopenRNN
cudnnRNNBiasMode_t	7.5.0				miopenRNN
cudnnRNNClipMode_t	7.2.1				
cudnnRNNDataDescriptor_t	7.2.1				
cudnnRNNDataLayout_t	7.2.1				
cudnnRNNDataStruct	7.2.1				
cudnnRNNDescriptor_t	5.0.0				miopenRNN
cudnnRNNInputMode_t	5.0.0				miopenRNN
cudnnRNNMode_t	5.0.0				miopenRNN
cudnnRNNPaddingMode_t	7.2.1	8.0.1		9.0.0	miopenRNN
cudnnRNNStruct	5.0.0				
cudnnReduceTensorDescriptor_t	6.0.0	9.0.0			miopenRed
cudnnReduceTensorIndices_t	6.0.0	9.0.0			miopenRed
cudnnReduceTensorOp_t	6.0.0				miopenRed
cudnnReduceTensorStruct	6.0.0	9.0.0			
cudnnReorderType_t	7.6.0	9.0.0			
cudnnResampleMode_t	8.3.0				
cudnnRngDistribution_t	8.7.0				miopenRng
cudnnRuntimeTag_t	7.0.5	9.0.0			
cudnnSamplerType_t	5.0.0				
cudnnSeqDataAxis_t	7.5.0	9.22.0			
cudnnSeqDataDescriptor_t	7.5.0	9.0.0			
cudnnSeqDataStruct	7.5.0	9.22.0			
cudnnSeverity_t	7.1.3				
cudnnSignalMode_t	8.5.0				
cudnnSoftmaxAlgorithm_t	1.0.0				miopenSof
cudnnSoftmaxMode_t	1.0.0				miopenSof
cudnnSpatialTransformerDescriptor_t	5.0.0				
cudnnSpatialTransformerStruct	5.0.0				
cudnnStatus_t	1.0.0				miopenSta
cudnnTensorDescriptor_t	2.0.0				miopenTen
cudnnTensorFormat_t	1.0.0				miopenTen
cudnnTensorStruct	2.0.0				
cudnnTensorTransformDescriptor_t	7.5.0	9.0.0			
cudnnTensorTransformStruct	7.5.0	9.0.0			
cudnnWgradMode_t	7.5.0				
libraryPropertyType	6.0.0				

Table 18 – continued from previou

CUDA	A	D	C	R	MIOPEN
libraryPropertyType_t	6.0.0			9.0.0	

11.4.2 2. CUDNN Functions

CUDA	A	D	C	R	MIOPEN
cudnnActivationBackward	1.0.0	9.0.0			miopenActivationBack
cudnnActivationForward	1.0.0	9.0.0			miopenActivationForw
cudnnAddTensor	2.0.0	9.0.0			
cudnnAdvInferVersionCheck	8.0.1			9.0.0	
cudnnAdvTrainVersionCheck	8.0.1			9.0.0	
cudnnAdvVersionCheck	9.0.0				
cudnnB2BCausalConv1dBackward	9.24.0				
cudnnB2BCausalConv1dForward	9.24.0				
cudnnBackendCreateDescriptor	8.0.1				miopenBackendCreateD
cudnnBackendDestroyDescriptor	8.0.1				miopenBackendDestroy
cudnnBackendExecute	8.0.1				miopenBackendExecute
cudnnBackendFinalize	8.0.1				miopenBackendFinaliz
cudnnBackendGetAttribute	8.0.1				miopenBackendGetAttr
cudnnBackendInitialize	8.0.1	9.3.0			
cudnnBackendPopulateCudaGraph	9.5.0				
cudnnBackendSetAttribute	8.0.1				miopenBackendSetAttr
cudnnBackendUpdateCudaGraph	9.5.0				
cudnnBatchNormalizationBackward	4.0.0	9.0.0			miopenBatchNormaliza
cudnnBatchNormalizationBackwardEx	7.4.1	9.0.0			
cudnnBatchNormalizationForwardInference	4.0.0	9.0.0			miopenBatchNormaliza
cudnnBatchNormalizationForwardTraining	4.0.0	9.0.0			miopenBatchNormaliza
cudnnBatchNormalizationForwardTrainingEx	7.4.1	9.0.0			
cudnnBuildRNNDynamic	8.0.1				
cudnnCTCLoss	7.0.5				miopenCTCLoss
cudnnCTCLoss_v8	8.0.1				
cudnnCausalConv1dBackward	9.22.0				
cudnnCausalConv1dForward	9.22.0				
cudnnCausalConv1dNwhBackward	9.24.0				
cudnnCausalConv1dNwhForward	9.24.0				
cudnnCnnInferVersionCheck	8.0.2				
cudnnCnnTrainVersionCheck	8.0.2				
cudnnConvolutionBackwardBias	1.0.0	9.0.0			miopenConvolutionBac
cudnnConvolutionBackwardData	1.0.0	9.0.0			miopenConvolutionBac
cudnnConvolutionBackwardFilter	1.0.0	9.0.0			
cudnnConvolutionBiasActivationForward	6.0.0	9.0.0			miopenConvolutionBia
cudnnConvolutionForward	1.0.0	9.0.0			miopenConvolutionFor
cudnnCopyAlgorithmDescriptor	7.1.3	8.0.2		9.0.0	
cudnnCreate	1.0.0				miopenCreate
cudnnCreateActivationDescriptor	4.0.0	9.0.0			miopenCreateActivati
cudnnCreateAlgorithmDescriptor	7.1.3	8.0.2		9.0.0	
cudnnCreateAlgorithmPerformance	7.1.3	8.0.2		9.0.0	
cudnnCreateAttnDescriptor	7.5.0	9.0.0			
cudnnCreateCTCLossDescriptor	7.0.5				miopenCreateCTCLossD

Table 19 – continued from previous page

CUDA	A	D	C	R	MIOPEN
cudnnCreateConvolutionDescriptor	1.0.0	9.0.0			miopenCreateConvolut
cudnnCreateDropoutDescriptor	5.0.0				miopenCreateDropoutD
cudnnCreateFilterDescriptor	1.0.0	9.0.0			
cudnnCreateFusedOpsConstParamPack	7.6.0	9.0.0			
cudnnCreateFusedOpsPlan	7.6.0	9.0.0			
cudnnCreateFusedOpsVariantParamPack	7.6.0	9.0.0			
cudnnCreateLRNDescriptor	3.0.0				miopenCreateLRNDescr
cudnnCreateOpTensorDescriptor	5.0.0	9.0.0			
cudnnCreatePersistentRNNPlan	6.0.0	8.0.1		9.0.0	
cudnnCreatePoolingDescriptor	1.0.0	9.0.0			miopenCreatePoolingD
cudnnCreateRNNDataDescriptor	7.2.1				
cudnnCreateRNNDescriptor	5.0.0				miopenCreateRNNDescr
cudnnCreateReduceTensorDescriptor	6.0.0	9.0.0			miopenCreateReduceTe
cudnnCreateSeqDataDescriptor	7.5.0	9.0.0			
cudnnCreateSpatialTransformerDescriptor	5.0.0				
cudnnCreateTensorDescriptor	2.0.0				miopenCreateTensorDe
cudnnCreateTensorTransformDescriptor	7.5.0	9.0.0			
cudnnDeriveBNTensorDescriptor	4.0.0	9.0.0			miopenDeriveBNTensor
cudnnDeriveNormTensorDescriptor	8.0.1	9.0.0			
cudnnDestroy	1.0.0				miopenDestroy
cudnnDestroyActivationDescriptor	4.0.0	9.0.0			miopenDestroyActivat
cudnnDestroyAlgorithmDescriptor	7.1.3	8.0.2		9.0.0	
cudnnDestroyAlgorithmPerformance	7.1.3	8.0.2		9.0.0	
cudnnDestroyAttnDescriptor	7.5.0	9.0.0			
cudnnDestroyCTCLossDescriptor	7.0.5				miopenDestroyCTCLoss
cudnnDestroyConvolutionDescriptor	1.0.0	9.0.0			miopenDestroyConvolu
cudnnDestroyDropoutDescriptor	5.0.0				miopenDestroyDropout
cudnnDestroyFilterDescriptor	1.0.0	9.0.0			
cudnnDestroyFusedOpsConstParamPack	7.6.0	9.0.0			
cudnnDestroyFusedOpsPlan	7.6.0	9.0.0			
cudnnDestroyFusedOpsVariantParamPack	7.6.0	9.0.0			
cudnnDestroyLRNDescriptor	3.0.0				miopenDestroyLRNDesc
cudnnDestroyOpTensorDescriptor	5.0.0	9.0.0			
cudnnDestroyPersistentRNNPlan	6.0.0	8.0.1		9.0.0	
cudnnDestroyPoolingDescriptor	1.0.0	9.0.0			miopenDestroyPooling
cudnnDestroyRNNDataDescriptor	7.2.1				
cudnnDestroyRNNDescriptor	5.0.0				miopenDestroyRNNDesc
cudnnDestroyReduceTensorDescriptor	6.0.0	9.0.0			miopenDestroyReduceT
cudnnDestroySeqDataDescriptor	7.5.0	9.0.0			
cudnnDestroySpatialTransformerDescriptor	5.0.0				
cudnnDestroyTensorDescriptor	2.0.0				miopenDestroyTensorD
cudnnDestroyTensorTransformDescriptor	7.5.0	9.0.0			
cudnnDivisiveNormalizationBackward	3.0.0				
cudnnDivisiveNormalizationForward	3.0.0				
cudnnDropoutBackward	5.0.0				miopenDropoutBackwar
cudnnDropoutForward	5.0.0				miopenDropoutForward
cudnnDropoutGetReserveSpaceSize	5.0.0				miopenDropoutGetRese
cudnnDropoutGetStatesSize	5.0.0				miopenDropoutGetStat
cudnnFindConvolutionBackwardDataAlgorithm	3.0.0	9.0.0			
cudnnFindConvolutionBackwardDataAlgorithmEx	5.0.0	9.0.0			

Table 19 – continued from previous page

CUDA	A	D	C	R	MIOPEN
cudnnFindConvolutionBackwardFilterAlgorithm	3.0.0	9.0.0			
cudnnFindConvolutionBackwardFilterAlgorithmEx	5.0.0	9.0.0			
cudnnFindConvolutionForwardAlgorithm	3.0.0	9.0.0			
cudnnFindConvolutionForwardAlgorithmEx	5.0.0	9.0.0			miopenFindConvolutio
cudnnFindRNNBackwardDataAlgorithmEx	7.1.3	8.0.2		9.0.0	
cudnnFindRNNBackwardWeightsAlgorithmEx	7.1.3	8.0.2		9.0.0	
cudnnFindRNNForwardInferenceAlgorithmEx	7.1.3	8.0.2		9.0.0	
cudnnFindRNNForwardTrainingAlgorithmEx	7.1.3	8.0.2		9.0.0	
cudnnFusedOpsExecute	7.6.0	9.0.0			
cudnnGetActivationDescriptor	4.0.0	9.0.0			
cudnnGetActivationDescriptorSwishBeta	8.2.0	9.0.0			
cudnnGetAlgorithmDescriptor	7.1.3	8.0.2		9.0.0	
cudnnGetAlgorithmPerformance	7.1.3	8.0.2		9.0.0	
cudnnGetAlgorithmSpaceSize	7.1.3	8.0.2		9.0.0	
cudnnGetAttnDescriptor	7.5.0	9.0.0			
cudnnGetBatchNormalizationBackwardExWorkspaceSize	7.4.1	9.0.0			
cudnnGetBatchNormalizationForwardTrainingExWorkspaceSize	7.4.1	9.0.0			
cudnnGetBatchNormalizationTrainingExReserveSpaceSize	7.4.1	9.0.0			
cudnnGetCTCLossDescriptor	7.0.5	9.0.0			miopenGetCTCLossDesc
cudnnGetCTCLossDescriptorEx	7.5.0	9.0.0			
cudnnGetCTCLossDescriptor_v8	8.0.1	9.0.0			
cudnnGetCTCLossDescriptor_v9	9.0.0				
cudnnGetCTCLossWorkspaceSize	7.0.5				miopenGetCTCLossWork
cudnnGetCTCLossWorkspaceSize_v8	8.0.1				
cudnnGetCallback	7.1.3				
cudnnGetConvolution2dDescriptor	2.0.0	9.0.0			
cudnnGetConvolution2dForwardOutputDim	2.0.0	9.0.0			miopenGetConvolution
cudnnGetConvolutionBackwardDataAlgorithm	3.0.0	7.6.5		8.0.1	
cudnnGetConvolutionBackwardDataAlgorithmMaxCount	7.0.5	9.0.0			
cudnnGetConvolutionBackwardDataAlgorithm_v7	7.0.5	9.0.0			
cudnnGetConvolutionBackwardDataWorkspaceSize	3.0.0	9.0.0			miopenConvolutionBac
cudnnGetConvolutionBackwardFilterAlgorithm	3.0.0	7.6.5		8.0.1	
cudnnGetConvolutionBackwardFilterAlgorithmMaxCount	7.0.5				
cudnnGetConvolutionBackwardFilterAlgorithm_v7	7.0.5	9.0.0			
cudnnGetConvolutionBackwardFilterWorkspaceSize	3.0.0	9.0.0			
cudnnGetConvolutionForwardAlgorithm	2.0.0	7.6.5		8.0.1	
cudnnGetConvolutionForwardAlgorithmMaxCount	7.0.5	9.0.0			
cudnnGetConvolutionForwardAlgorithm_v7	7.0.5	9.0.0			
cudnnGetConvolutionForwardWorkspaceSize	2.0.0	9.0.0			miopenConvolutionFor
cudnnGetConvolutionGroupCount	7.0.5	9.0.0			
cudnnGetConvolutionMathType	7.0.5	9.0.0			
cudnnGetConvolutionNdDescriptor	2.0.0	9.0.0			
cudnnGetConvolutionNdForwardOutputDim	2.0.0	9.0.0			
cudnnGetConvolutionReorderType	7.6.0	9.0.0			
cudnnGetCudartVersion	6.0.0				
cudnnGetDropoutDescriptor	7.0.5				miopenGetDropoutDesc
cudnnGetErrorString	2.0.0				miopenGetErrorString
cudnnGetExecutionPlanWorkspaceSize	9.23.0				
cudnnGetFilter4dDescriptor	2.0.0	9.0.0			
cudnnGetFilterNdDescriptor	2.0.0	9.0.0			

Table 19 – continued from previous page

CUDA	A	D	C	R	MIOPEN
cudnnGetFilterSizeInBytes	7.6.0	9.0.0			
cudnnGetFoldedConvBackwardDataDescriptors	7.6.0	9.0.0			
cudnnGetFusedOpsConstParamPackAttribute	7.6.0	9.0.0			
cudnnGetFusedOpsVariantParamPackAttribute	7.6.0	9.0.0			
cudnnGetLRNDescriptor	3.0.0				miopenGetLRNDescript
cudnnGetLastErrorString	9.0.0				
cudnnGetMaxDeviceVersion	8.6.0				
cudnnGetMultiHeadAttnBuffers	7.5.0	9.0.0			
cudnnGetMultiHeadAttnWeights	7.5.0	9.0.0			
cudnnGetNormalizationBackwardWorkspaceSize	8.0.1	9.0.0			
cudnnGetNormalizationForwardTrainingWorkspaceSize	8.0.1	9.0.0			
cudnnGetNormalizationTrainingReserveSpaceSize	8.0.1	9.0.0			
cudnnGetOpTensorDescriptor	5.0.0	9.0.0			
cudnnGetPooling2dDescriptor	2.0.0	9.0.0			miopenGet2dPoolingDe
cudnnGetPooling2dForwardOutputDim	2.0.0	9.0.0			miopenGetPoolingForw
cudnnGetPoolingNdDescriptor	2.0.0	9.0.0			miopenGetNdPoolingDe
cudnnGetPoolingNdForwardOutputDim	2.0.0	9.0.0			miopenGetPoolingNdFo
cudnnGetProperty	6.0.0				
cudnnGetRNNBackwardDataAlgorithmMaxCount	7.1.3	8.0.2		9.0.0	
cudnnGetRNNBackwardWeightsAlgorithmMaxCount	7.1.3	8.0.2		9.0.0	
cudnnGetRNNBiasMode	7.5.0	8.0.1		9.0.0	
cudnnGetRNNDataDescriptor	7.2.1				
cudnnGetRNNDescriptor	7.0.5	7.6.5		8.0.1	miopenGetRNNDescript
cudnnGetRNNDescriptor_v6	8.0.1	8.0.1		9.0.0	miopenGetRNNDescript
cudnnGetRNNDescriptor_v8	8.0.1				
cudnnGetRNNForwardInferenceAlgorithmMaxCount	7.1.3	8.0.2		9.0.0	
cudnnGetRNNForwardTrainingAlgorithmMaxCount	7.1.3	8.0.2		9.0.0	
cudnnGetRNNLinLayerBiasParams	5.0.0	8.0.1		9.0.0	
cudnnGetRNNLinLayerMatrixParams	5.0.0	8.0.1		9.0.0	
cudnnGetRNNMatrixMathType	7.1.3	8.0.1		9.0.0	
cudnnGetRNNPaddingMode	7.2.1	8.0.1		9.0.0	
cudnnGetRNNParamsSize	5.0.0	8.0.1		9.0.0	miopenGetRNNParamsSi
cudnnGetRNNProjectionLayers	7.1.3	8.0.1		9.0.0	
cudnnGetRNNTempSpaceSizes	8.0.1				
cudnnGetRNNTrainingReserveSize	5.0.0	8.0.1		9.0.0	miopenGetRNNTraining
cudnnGetRNNWeightParams	8.0.1				
cudnnGetRNNWeightSpaceSize	8.0.1				
cudnnGetRNNWorkspaceSize	5.0.0	8.0.1		9.0.0	miopenGetRNNWorkspac
cudnnGetReduceTensorDescriptor	6.0.0	9.0.0			miopenGetReduceTenso
cudnnGetReductionIndicesSize	6.0.0	9.0.0			miopenGetReductionIn
cudnnGetReductionWorkspaceSize	6.0.0	9.0.0			miopenGetReductionWo
cudnnGetSeqDataDescriptor	7.5.0	9.0.0			
cudnnGetStream	1.0.0				miopenGetStream
cudnnGetTensor4dDescriptor	1.0.0				miopenGet4dTensorDes
cudnnGetTensorNdDescriptor	2.0.0				
cudnnGetTensorSizeInBytes	6.0.0				
cudnnGetTensorTransformDescriptor	7.5.0	9.0.0			
cudnnGetVersion	2.0.0				
cudnnGraphVersionCheck	9.0.0				
cudnnIm2Col	2.0.0	9.0.0			

Table 19 – continued from previous page

CUDA	A	D	C	R	MIOPEN
cudnnInitTransformDest	7.5.0	9.0.0			
cudnnLRNCrossChannelBackward	3.0.0				
cudnnLRNCrossChannelForward	3.0.0				
cudnnMakeFusedOpsPlan	7.6.0	9.0.0			
cudnnMultiHeadAttnBackwardData	7.5.0	9.0.0			
cudnnMultiHeadAttnBackwardWeights	7.5.0	9.0.0			
cudnnMultiHeadAttnForward	7.5.0	9.0.0			
cudnnNormalizationBackward	8.0.1	9.0.0			
cudnnNormalizationForwardInference	8.0.1	9.0.0			
cudnnNormalizationForwardTraining	8.0.1	9.0.0			
cudnnOpTensor	5.0.0	9.0.0			
cudnnOpsInferVersionCheck	8.0.1				
cudnnOpsTrainVersionCheck	8.0.1			9.0.0	
cudnnOpsVersionCheck	9.0.0				
cudnnPoolingBackward	1.0.0	9.0.0			
cudnnPoolingForward	1.0.0	9.0.0			
cudnnQueryRuntimeError	7.0.5	9.0.0			
cudnnRNNBackwardData	5.0.0	8.0.2		9.0.0	miopenRNNBackwardDat
cudnnRNNBackwardDataEx	7.2.1	8.0.2		9.0.0	
cudnnRNNBackwardData_v8	8.0.2				
cudnnRNNBackwardWeights	5.0.0	8.0.2		9.0.0	miopenRNNBackwardWei
cudnnRNNBackwardWeightsEx	7.2.1	8.0.2		9.0.0	
cudnnRNNBackwardWeights_v8	8.0.2				
cudnnRNNForward	8.0.1				
cudnnRNNForwardInference	5.0.0	8.0.1		9.0.0	miopenRNNForwardInfe
cudnnRNNForwardInferenceEx	7.2.1	8.0.1		9.0.0	
cudnnRNNForwardTraining	5.0.0	8.0.1		9.0.0	miopenRNNForwardTrai
cudnnRNNForwardTrainingEx	7.2.1	8.0.1		9.0.0	
cudnnRNNGetClip	7.2.1	8.0.1		9.0.0	
cudnnRNNGetClip_v8	8.0.1	9.22.0			
cudnnRNNGetClip_v9	9.0.0				
cudnnRNNSetClip	7.2.1	8.0.1		9.0.0	
cudnnRNNSetClip_v8	8.0.1	9.22.0			
cudnnRNNSetClip_v9	9.0.0				
cudnnReduceTensor	6.0.0	9.0.0			miopenReduceTensor
cudnnReorderFilterAndBias	7.6.0	9.0.0			
cudnnRestoreAlgorithm	7.1.3	8.0.2		9.0.0	
cudnnRestoreDropoutDescriptor	7.0.5				miopenRestoreDropout
cudnnSaveAlgorithm	7.1.3	8.0.2		9.0.0	
cudnnScaleTensor	2.0.0	9.0.0			miopenScaleTensor
cudnnSetActivationDescriptor	4.0.0	9.0.0			
cudnnSetActivationDescriptorSwishBeta	8.2.0	9.0.0			
cudnnSetAlgorithmDescriptor	7.1.3	8.0.2		9.0.0	
cudnnSetAlgorithmPerformance	7.1.3	8.0.2		9.0.0	
cudnnSetAttnDescriptor	7.5.0	9.0.0			
cudnnSetCTCLossDescriptor	7.0.5	9.0.0			miopenSetCTCLossDesc
cudnnSetCTCLossDescriptorEx	7.6.0	9.0.0			
cudnnSetCTCLossDescriptor_v8	8.0.1	9.0.0			
cudnnSetCTCLossDescriptor_v9	9.0.0				
cudnnSetCallback	7.1.3				

Table 19 – continued from previous page

CUDA	A	D	C	R	MIOPEN
cudnnSetConvolution2dDescriptor	2.0.0	9.0.0			
cudnnSetConvolutionGroupCount	7.0.5	9.0.0			miopenSetConvolution
cudnnSetConvolutionMathType	7.0.5	9.0.0			
cudnnSetConvolutionNdDescriptor	2.0.0	9.0.0			
cudnnSetConvolutionReorderType	7.6.0	9.0.0			
cudnnSetDropoutDescriptor	5.0.0				miopenSetDropoutDesc
cudnnSetFilter4dDescriptor	2.0.0	9.0.0			
cudnnSetFilterNdDescriptor	2.0.0	9.0.0			
cudnnSetFusedOpsConstParamPackAttribute	7.6.0	9.0.0			
cudnnSetFusedOpsVariantParamPackAttribute	7.6.0	9.0.0			
cudnnSetLRNDescriptor	3.0.0				miopenSetLRNDescript
cudnnSetOpTensorDescriptor	5.0.0	9.0.0			
cudnnSetPersistentRNNPlan	6.0.0	8.0.1		9.0.0	
cudnnSetPooling2dDescriptor	2.0.0	9.0.0			miopenSet2dPoolingDe
cudnnSetPoolingNdDescriptor	2.0.0	9.0.0			miopenSetNdPoolingDe
cudnnSetRNNAlgorithmDescriptor	7.1.3	8.0.2		9.0.0	
cudnnSetRNNBiasMode	7.5.0	8.0.1		9.0.0	
cudnnSetRNNDataDescriptor	7.2.1				
cudnnSetRNNDescriptor	5.0.0	7.6.5		8.0.1	
cudnnSetRNNDescriptor_v5	7.0.5	7.6.5		8.0.1	
cudnnSetRNNDescriptor_v6	6.0.0	8.0.1		9.0.0	miopenSetRNNDescript
cudnnSetRNNDescriptor_v8	8.0.1				
cudnnSetRNNMatrixMathType	7.0.5	8.0.1		9.0.0	
cudnnSetRNNPaddingMode	7.2.1	8.0.1		9.0.0	
cudnnSetRNNProjectionLayers	7.1.3	8.0.1		9.0.0	
cudnnSetReduceTensorDescriptor	6.0.0	9.0.0			miopenSetReduceTenso
cudnnSetSeqDataDescriptor	7.5.0	9.0.0			
cudnnSetSpatialTransformerNdDescriptor	5.0.0				
cudnnSetStream	1.0.0				miopenSetStream
cudnnSetTensor	2.0.0				miopenSetTensor
cudnnSetTensor4dDescriptor	1.0.0				
cudnnSetTensor4dDescriptorEx	1.0.0				miopenSet4dTensorDes
cudnnSetTensorNdDescriptor	2.0.0				
cudnnSetTensorNdDescriptorEx	6.0.0				
cudnnSetTensorTransformDescriptor	7.5.0	9.0.0			
cudnnSoftmaxBackward	1.0.0				miopenSoftmaxBackwar
cudnnSoftmaxForward	1.0.0				miopenSoftmaxForward
cudnnSpatialTfGridGeneratorBackward	5.0.0				
cudnnSpatialTfGridGeneratorForward	5.0.0				
cudnnSpatialTfSamplerBackward	5.0.0				
cudnnSpatialTfSamplerForward	5.0.0				
cudnnSubquadraticOpsVersionCheck	9.22.0				
cudnnTransformFilter	7.6.0	9.0.0			
cudnnTransformTensor	2.0.0	9.0.0			miopenTransformTenso
cudnnTransformTensorEx	7.5.0	9.0.0			

CHAPTER

TWELVE

CUDA APIS SUPPORTED BY HIP AND ROC

CUDA	HIP & ROC
CUBLAS API	*HIP + ROC BLAS API*
CUSPARSE API	*HIP + ROC SPARSE API*
CURAND API	*HIP + ROC RAND API*

To generate the above documentation with the information about all supported CUDA APIs in Markdown format, run `hipify-clang --md --doc-format=full --doc-roc=joint` with or without specifying the output directory (`-o`). By running `hipify-clang --csv --doc-format=full --doc-roc=joint`, the documentation will be generated in CSV format.

12.1 CUBLAS API supported by HIP and ROC

Note: In the tables that follow the columns marked `A`, `D`, `C`, `R`, `U`, and `E` mean the following: **A** - Added; **D** - Deprecated; **C** - Changed; **R** - Removed; **U** - Unsupported for CUDA version(s); **E** - Experimental

12.1.1 1. CUBLAS Data types

CUDA	A	D	C	R	HIP
CUBLAS_ATOMICS_ALLOWED					HIPBLAS_ATOMICS_ALLOWED
CUBLAS_ATOMICS_NOT_ALLOWED					HIPBLAS_ATOMICS_NOT_ALLOWED
CUBLAS_COMPUTE_16F	11.0				HIPBLAS_COMPUTE_16F
CUBLAS_COMPUTE_16F_PEDANTIC	11.0				HIPBLAS_COMPUTE_16F_PEDANTIC
CUBLAS_COMPUTE_32F	11.0				HIPBLAS_COMPUTE_32F
CUBLAS_COMPUTE_32F_EMULATED_16BFX9	12.9				
CUBLAS_COMPUTE_32F_FAST_16BF	11.0				HIPBLAS_COMPUTE_32F_FAST_16BF
CUBLAS_COMPUTE_32F_FAST_16F	11.0				HIPBLAS_COMPUTE_32F_FAST_16F
CUBLAS_COMPUTE_32F_FAST_TF32	11.0				HIPBLAS_COMPUTE_32F_FAST_TF32
CUBLAS_COMPUTE_32F_PEDANTIC	11.0				HIPBLAS_COMPUTE_32F_PEDANTIC
CUBLAS_COMPUTE_32I	11.0				HIPBLAS_COMPUTE_32I
CUBLAS_COMPUTE_32I_PEDANTIC	11.0				HIPBLAS_COMPUTE_32I_PEDANTIC
CUBLAS_COMPUTE_64F	11.0				HIPBLAS_COMPUTE_64F
CUBLAS_COMPUTE_64F_EMULATED_FIXEDPOINT	13.0				
CUBLAS_COMPUTE_64F_PEDANTIC	11.0				HIPBLAS_COMPUTE_64F_PEDANTIC
CUBLAS_DEFAULT_MATH	9.0				HIPBLAS_DEFAULT_MATH

Table 1 – continued

CUDA	A	D	C	R	HIP
CUBLAS_DIAG_NON_UNIT					HIPBLAS_DIAG_NON_UNIT
CUBLAS_DIAG_UNIT					HIPBLAS_DIAG_UNIT
CUBLAS_EMULATION_STRATEGY_DEFAULT	12.9				
CUBLAS_EMULATION_STRATEGY_EAGER	12.9				
CUBLAS_EMULATION_STRATEGY_PERFORMANT	12.9				
CUBLAS_FILL_MODE_FULL	10.1				HIPBLAS_FILL_MODE_FULL
CUBLAS_FILL_MODE_LOWER					HIPBLAS_FILL_MODE_LOWER
CUBLAS_FILL_MODE_UPPER					HIPBLAS_FILL_MODE_UPPER
CUBLAS_FP32_EMULATED_BF16X9_MATH	12.9				HIPBLAS_FP32_EMULATED_BF16X9_MATH
CUBLAS_FP64_EMULATED_FIXEDPOINT_MATH	13.0				
CUBLAS_GEMM_ALGO0	8.0				
CUBLAS_GEMM_ALGO0_TENSOR_OP	9.0				
CUBLAS_GEMM_ALGO1	8.0				
CUBLAS_GEMM_ALGO10	9.0				
CUBLAS_GEMM_ALGO10_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO11	9.0				
CUBLAS_GEMM_ALGO11_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO12	9.0				
CUBLAS_GEMM_ALGO12_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO13	9.0				
CUBLAS_GEMM_ALGO13_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO14	9.0				
CUBLAS_GEMM_ALGO14_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO15	9.0				
CUBLAS_GEMM_ALGO15_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO16	9.0				
CUBLAS_GEMM_ALGO17	9.0				
CUBLAS_GEMM_ALGO18	9.2				
CUBLAS_GEMM_ALGO19	9.2				
CUBLAS_GEMM_ALGO1_TENSOR_OP	9.0				
CUBLAS_GEMM_ALGO2	8.0				
CUBLAS_GEMM_ALGO20	9.2				
CUBLAS_GEMM_ALGO21	9.2				
CUBLAS_GEMM_ALGO22	9.2				
CUBLAS_GEMM_ALGO23	9.2				
CUBLAS_GEMM_ALGO2_TENSOR_OP	9.0				
CUBLAS_GEMM_ALGO3	8.0				
CUBLAS_GEMM_ALGO3_TENSOR_OP	9.0				
CUBLAS_GEMM_ALGO4	8.0				
CUBLAS_GEMM_ALGO4_TENSOR_OP	9.0				
CUBLAS_GEMM_ALGO5	8.0				
CUBLAS_GEMM_ALGO5_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO6	8.0				
CUBLAS_GEMM_ALGO6_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO7	8.0				
CUBLAS_GEMM_ALGO7_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO8	9.0				
CUBLAS_GEMM_ALGO8_TENSOR_OP	9.2				
CUBLAS_GEMM_ALGO9	9.0				
CUBLAS_GEMM_ALGO9_TENSOR_OP	9.2				

Table 1 – continued

CUDA	A	D	C	R	HIP
CUBLAS_GEMM_AUTOTUNE	13.0				
CUBLAS_GEMM_DEFAULT	9.0				HIPBLAS_GEMM_DEFAULT
CUBLAS_GEMM_DEFAULT_TENSOR_OP	9.0				
CUBLAS_GEMM_DFALT	8.0				HIPBLAS_GEMM_DEFAULT
CUBLAS_GEMM_DFALT_TENSOR_OP	9.0				
CUBLAS_MATH_DISALLOW_REDUCED_PRECISION_REDUCTION	11.0				HIPBLAS_MATH_DISALLOW_REDUCED_PRE
CUBLAS_OP_C					HIPBLAS_OP_C
CUBLAS_OP_CONJG	10.1				
CUBLAS_OP_HERMITAN	10.1				HIPBLAS_OP_C
CUBLAS_OP_N					HIPBLAS_OP_N
CUBLAS_OP_T					HIPBLAS_OP_T
CUBLAS_PEDANTIC_MATH	11.0				HIPBLAS_PEDANTIC_MATH
CUBLAS_POINTER_MODE_DEVICE					HIPBLAS_POINTER_MODE_DEVICE
CUBLAS_POINTER_MODE_HOST					HIPBLAS_POINTER_MODE_HOST
CUBLAS_SIDE_LEFT					HIPBLAS_SIDE_LEFT
CUBLAS_SIDE_RIGHT					HIPBLAS_SIDE_RIGHT
CUBLAS_STATUS_ALLOC_FAILED					HIPBLAS_STATUS_ALLOC_FAILED
CUBLAS_STATUS_ARCH_MISMATCH					HIPBLAS_STATUS_ARCH_MISMATCH
CUBLAS_STATUS_EXECUTION_FAILED					HIPBLAS_STATUS_EXECUTION_FAILED
CUBLAS_STATUS_INTERNAL_ERROR					HIPBLAS_STATUS_INTERNAL_ERROR
CUBLAS_STATUS_INVALID_VALUE					HIPBLAS_STATUS_INVALID_VALUE
CUBLAS_STATUS_LICENSE_ERROR					HIPBLAS_STATUS_UNKNOWN
CUBLAS_STATUS_MAPPING_ERROR					HIPBLAS_STATUS_MAPPING_ERROR
CUBLAS_STATUS_NOT_INITIALIZED					HIPBLAS_STATUS_NOT_INITIALIZED
CUBLAS_STATUS_NOT_SUPPORTED					HIPBLAS_STATUS_NOT_SUPPORTED
CUBLAS_STATUS_SUCCESS					HIPBLAS_STATUS_SUCCESS
CUBLAS_TENSOR_OP_MATH	9.0	11.0			HIPBLAS_TENSOR_OP_MATH
CUBLAS_TF32_TENSOR_OP_MATH	11.0				HIPBLAS_TF32_TENSOR_OP_MATH
cublasAtomicsMode_t					hipblasAtomicsMode_t
cublasComputeType_t	11.0				hipblasComputeType_t
cublasContext					
cublasDiagType_t					hipblasDiagType_t
cublasEmulationStrategy_t	12.9				hipblasEmulationStrategy_t
cublasFillMode_t					hipblasFillMode_t
cublasGemmAlgo_t	8.0				hipblasGemmAlgo_t
cublasHandle_t					hipblasHandle_t
cublasMath_t	9.0				hipblasMath_t
cublasOperation_t					hipblasOperation_t
cublasPointerMode_t					hipblasPointerMode_t
cublasSideMode_t					hipblasSideMode_t
cublasStatus					hipblasStatus_t
cublasStatus_t					hipblasStatus_t

12.1.2 2. CUDA Library Data types

CUDA	A	D	C	R	HIP	A	D	C	R	U	E	ROC	A
CUDA_C_16BF					HIP_C_16BF	5.5.0						rocblas_datatype_bf16_c	3.
CUDA_C_16F	8.0				HIP_C_16F	3.0.0						rocblas_datatype_f16_c	1.
CUDA_C_16I	11.0				HIP_C_16I	5.5.0							
CUDA_C_16U	11.0				HIP_C_16U	5.5.0							
CUDA_C_32F	8.0				HIP_C_32F	3.0.0						rocblas_datatype_f32_c	1.
CUDA_C_32I	8.0				HIP_C_32I	5.5.0						rocblas_datatype_i32_c	2.
CUDA_C_32U	8.0				HIP_C_32U	5.5.0						rocblas_datatype_u32_c	2.
CUDA_C_4I	11.0				HIP_C_4I	5.5.0							
CUDA_C_4U	11.0				HIP_C_4U	5.5.0							
CUDA_C_64F	8.0				HIP_C_64F	3.0.0						rocblas_datatype_f64_c	1.
CUDA_C_64I	11.0				HIP_C_64I	5.5.0							
CUDA_C_64U	11.0				HIP_C_64U	5.5.0							
CUDA_C_8I	8.0				HIP_C_8I	5.5.0						rocblas_datatype_i8_c	2.
CUDA_C_8U	8.0				HIP_C_8U	5.5.0						rocblas_datatype_u8_c	2.
CUDA_R_16BF					HIP_R_16BF	5.5.0						rocblas_datatype_bf16_r	3.
CUDA_R_16F	8.0				HIP_R_16F	3.0.0						rocblas_datatype_f16_r	1.
CUDA_R_16I	11.0				HIP_R_16I	5.5.0							
CUDA_R_16U	11.0				HIP_R_16U	5.5.0							
CUDA_R_32F	8.0				HIP_R_32F	3.0.0						rocblas_datatype_f32_r	1.
CUDA_R_32I	8.0				HIP_R_32I	5.5.0						rocblas_datatype_i32_r	2.
CUDA_R_32U	8.0				HIP_R_32U	5.5.0						rocblas_datatype_u32_r	2.
CUDA_R_4F_E2M1	12.8				HIP_R_4F_E2M1	7.0.0							
CUDA_R_4I	11.0				HIP_R_4I	5.5.0							
CUDA_R_4U	11.0				HIP_R_4U	5.5.0							
CUDA_R_64F	8.0				HIP_R_64F	3.0.0						rocblas_datatype_f64_r	1.
CUDA_R_64I	11.0				HIP_R_64I	5.5.0							
CUDA_R_64U	11.0				HIP_R_64U	5.5.0							
CUDA_R_6F_E2M3	12.8				HIP_R_6F_E2M3	7.0.0							
CUDA_R_6F_E3M2	12.8				HIP_R_6F_E3M2	7.0.0							
CUDA_R_8F_E4M3	11.8				HIP_R_8F_E4M3	6.3.0							
CUDA_R_8F_E5M2	11.8				HIP_R_8F_E5M2	6.3.0							
CUDA_R_8F_UE4M3	12.8				HIP_R_8F_E4M3	6.3.0							
CUDA_R_8F_UE8M0	12.8				HIP_R_8F_UE8M0	7.0.0							
CUDA_R_8I	8.0				HIP_R_8I	5.5.0						rocblas_datatype_i8_r	2.
CUDA_R_8U	8.0				HIP_R_8U	5.5.0						rocblas_datatype_u8_r	2.
cublasDataType_t	7.5				hipDataType	3.0.0						rocblas_datatype	1.
cudaDataType	8.0				hipDataType	3.0.0						rocblas_datatype	1.
cudaDataType_t	8.0				hipDataType	3.0.0						rocblas_datatype_	1.

12.1.3 3. CUBLASLt Data types

CUDA	A	D	C	R	HIP
CUBLASLT_ALGO_CAP_ATOMIC_SYNC	12.2			13.0	
CUBLASLT_ALGO_CAP_CTA_SWIZZLING_SUPPORT	10.1				
CUBLASLT_ALGO_CAP_CUSTOM_MEMORY_ORDER	10.1				
CUBLASLT_ALGO_CAP_CUSTOM_OPTION_MAX	10.1				
CUBLASLT_ALGO_CAP_EPILOGUE_MASK	10.1				
CUBLASLT_ALGO_CAP_FLOATING_POINT_EMULATION_SUPPORT	12.9				
CUBLASLT_ALGO_CAP_LD_NEGATIVE	11.0				
CUBLASLT_ALGO_CAP_MIN_ALIGNMENT_A_BYTES	11.0				
CUBLASLT_ALGO_CAP_MIN_ALIGNMENT_B_BYTES	11.0				
CUBLASLT_ALGO_CAP_MIN_ALIGNMENT_C_BYTES	11.0				
CUBLASLT_ALGO_CAP_MIN_ALIGNMENT_D_BYTES	11.0				
CUBLASLT_ALGO_CAP_NUMERICAL_IMPL_FLAGS	11.0				
CUBLASLT_ALGO_CAP_OUT_OF_PLACE_RESULT_SUPPORT	10.1				
CUBLASLT_ALGO_CAP_POINTER_ARRAY_BATCH_SUPPORT	12.9				
CUBLASLT_ALGO_CAP_POINTER_ARRAY_GROUPED_SUPPORT	13.1				
CUBLASLT_ALGO_CAP_POINTER_MODE_MASK	10.1				
CUBLASLT_ALGO_CAP_REDUCTION_SCHEME_MASK	10.1				
CUBLASLT_ALGO_CAP_SPLITK_SUPPORT	10.1				
CUBLASLT_ALGO_CAP_STAGES_IDS	11.0				
CUBLASLT_ALGO_CAP_STRIDED_BATCH_SUPPORT	10.1				
CUBLASLT_ALGO_CAP_TILE_IDS	10.1				
CUBLASLT_ALGO_CAP_UPLO_SUPPORT	10.1				
CUBLASLT_ALGO_CONFIG_CLUSTER_SHAPE_ID	11.8				
CUBLASLT_ALGO_CONFIG_CTA_SWIZZLING	10.1				
CUBLASLT_ALGO_CONFIG_CUSTOM_OPTION	10.1				
CUBLASLT_ALGO_CONFIG_ID	10.1				
CUBLASLT_ALGO_CONFIG_INNER_SHAPE_ID	11.8				
CUBLASLT_ALGO_CONFIG_REDUCTION_SCHEME	10.1				
CUBLASLT_ALGO_CONFIG_SPLITK_NUM	10.1				
CUBLASLT_ALGO_CONFIG_STAGES_ID	11.0				
CUBLASLT_ALGO_CONFIG_TILE_ID	10.1				
CUBLASLT_BATCH_MODE_GROUPED	13.1				
CUBLASLT_BATCH_MODE_POINTER_ARRAY	12.9				
CUBLASLT_BATCH_MODE_STRIDED	12.9				
CUBLASLT_CLUSTER_SHAPE_10x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_11x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_12x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_13x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_14x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_15x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_16x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x10x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x11x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x12x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x13x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x14x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x15x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x16x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x1x1	11.8				

Table 3 – continued from prev

CUDA	A	D	C	R	HIP
CUBLASLT_CLUSTER_SHAPE_1x2x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x3x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x4x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x5x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x6x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x7x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x8x1	11.8				
CUBLASLT_CLUSTER_SHAPE_1x9x1	11.8				
CUBLASLT_CLUSTER_SHAPE_2x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_2x2x1	11.8				
CUBLASLT_CLUSTER_SHAPE_2x3x1	11.8				
CUBLASLT_CLUSTER_SHAPE_2x4x1	11.8				
CUBLASLT_CLUSTER_SHAPE_2x5x1	11.8				
CUBLASLT_CLUSTER_SHAPE_2x6x1	11.8				
CUBLASLT_CLUSTER_SHAPE_2x7x1	11.8				
CUBLASLT_CLUSTER_SHAPE_2x8x1	11.8				
CUBLASLT_CLUSTER_SHAPE_3x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_3x2x1	11.8				
CUBLASLT_CLUSTER_SHAPE_3x3x1	11.8				
CUBLASLT_CLUSTER_SHAPE_3x4x1	11.8				
CUBLASLT_CLUSTER_SHAPE_3x5x1	11.8				
CUBLASLT_CLUSTER_SHAPE_4x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_4x2x1	11.8				
CUBLASLT_CLUSTER_SHAPE_4x3x1	11.8				
CUBLASLT_CLUSTER_SHAPE_4x4x1	11.8				
CUBLASLT_CLUSTER_SHAPE_5x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_5x2x1	11.8				
CUBLASLT_CLUSTER_SHAPE_5x3x1	11.8				
CUBLASLT_CLUSTER_SHAPE_6x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_6x2x1	11.8				
CUBLASLT_CLUSTER_SHAPE_7x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_7x2x1	11.8				
CUBLASLT_CLUSTER_SHAPE_8x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_8x2x1	11.8				
CUBLASLT_CLUSTER_SHAPE_9x1x1	11.8				
CUBLASLT_CLUSTER_SHAPE_AUTO	11.8				
CUBLASLT_CLUSTER_SHAPE_END	11.8				
CUBLASLT_EMULATION_DESC_FIXEDPOINT_MANTISSA_BIT_COUNT_POINTER	13.0				
CUBLASLT_EMULATION_DESC_FIXEDPOINT_MANTISSA_BIT_OFFSET	13.0				
CUBLASLT_EMULATION_DESC_FIXEDPOINT_MANTISSA_CONTROL	13.0				
CUBLASLT_EMULATION_DESC_FIXEDPOINT_MAX_MANTISSA_BIT_COUNT	13.0				
CUBLASLT_EMULATION_DESC_SPECIAL_VALUES_SUPPORT	13.0				
CUBLASLT_EMULATION_DESC_STRATEGY	13.0				
CUBLASLT_EPILOGUE_BGRADA	11.4				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_BGRADB	11.4				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_BIAS	10.1				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_DEFAULT	10.1				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_DGELU	11.6				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_DGELU_BGRAD	11.3				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_DRELU	11.6				HIPBLASLT_EPILOGU

Table 3 – continued from prev

CUDA	A	D	C	R	HIP
CUBLASLT_EPILOGUE_DRELU_BGRAD	11.3				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_GELU	11.3				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_GELU_AUX	11.3				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_GELU_AUX_BIAS	11.3				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_GELU_BIAS	11.3				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_RELU	10.1				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_RELU_AUX	11.3				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_RELU_AUX_BIAS	11.3				HIPBLASLT_EPILOGU
CUBLASLT_EPILOGUE_RELU_BIAS	10.1				HIPBLASLT_EPILOGU
CUBLASLT_GROUPED_MATRIX_LAYOUT_COLS_ARRAY	13.1				
CUBLASLT_GROUPED_MATRIX_LAYOUT_LD_ARRAY	13.1				
CUBLASLT_GROUPED_MATRIX_LAYOUT_LD_ARRAY_INTEGER_WIDTH	13.1				
CUBLASLT_GROUPED_MATRIX_LAYOUT_ROWS_ARRAY	13.1				
CUBLASLT_GROUPED_MATRIX_LAYOUT_ROWS_COLS_ARRAY_INTEGER_WIDTH	13.1				
CUBLASLT_INTEGER_WIDTH_32	13.1				
CUBLASLT_INTEGER_WIDTH_64	13.1				
CUBLASLT_MATMUL_DESC_ALPHA_BATCH_STRIDE	13.1				
CUBLASLT_MATMUL_DESC_ALPHA_VECTOR_BATCH_STRIDE	11.4				
CUBLASLT_MATMUL_DESC_AMAX_D_POINTER	11.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_ATOMIC_SYNC_IN_COUNTERS_POINTER	12.2			13.0	
CUBLASLT_MATMUL_DESC_ATOMIC_SYNC_NUM_CHUNKS_D_COLS	12.2	12.8		13.0	
CUBLASLT_MATMUL_DESC_ATOMIC_SYNC_NUM_CHUNKS_D_ROWS	12.2	12.8		13.0	
CUBLASLT_MATMUL_DESC_ATOMIC_SYNC_OUT_COUNTERS_POINTER	12.2			13.0	
CUBLASLT_MATMUL_DESC_A_SCALE_MODE	12.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_A_SCALE_POINTER	11.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_BETA_BATCH_STRIDE	13.1				
CUBLASLT_MATMUL_DESC_BIAS_BATCH_STRIDE	11.3				
CUBLASLT_MATMUL_DESC_BIAS_DATA_TYPE	11.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_BIAS_POINTER	10.1				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_B_SCALE_MODE	12.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_B_SCALE_POINTER	11.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_COMPUTE_TYPE	10.1				
CUBLASLT_MATMUL_DESC_C_SCALE_MODE	12.8				
CUBLASLT_MATMUL_DESC_C_SCALE_POINTER	11.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_D_OUT_SCALE_MODE	12.8				
CUBLASLT_MATMUL_DESC_D_OUT_SCALE_POINTER	12.8				
CUBLASLT_MATMUL_DESC_D_SCALE_MODE	12.8				
CUBLASLT_MATMUL_DESC_D_SCALE_POINTER	11.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_EMULATION_DESCRIPTOR	13.0				
CUBLASLT_MATMUL_DESC_EPILOGUE	10.1				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_EPILOGUE_AUX_AMAX_POINTER	11.8				
CUBLASLT_MATMUL_DESC_EPILOGUE_AUX_BATCH_STRIDE	11.3				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_EPILOGUE_AUX_DATA_TYPE	11.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_EPILOGUE_AUX_LD	11.3				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_EPILOGUE_AUX_POINTER	11.3				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_EPILOGUE_AUX_SCALE_MODE	12.8				
CUBLASLT_MATMUL_DESC_EPILOGUE_AUX_SCALE_POINTER	11.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_FAST_ACCUM	11.8				
CUBLASLT_MATMUL_DESC_FILL_MODE	10.1				
CUBLASLT_MATMUL_DESC_POINTER_MODE	10.1				HIPBLASLT_MATMUL_

Table 3 – continued from prev

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_DESC_SCALE_TYPE	10.1				
CUBLASLT_MATMUL_DESC_SM_COUNT_TARGET	11.5				
CUBLASLT_MATMUL_DESC_TRANSA	10.1				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_TRANSB	10.1				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_DESC_TRANSC	10.1				
CUBLASLT_MATMUL_INNER_SHAPE_END	11.8				
CUBLASLT_MATMUL_INNER_SHAPE_MMA16816	11.8				
CUBLASLT_MATMUL_INNER_SHAPE_MMA1684	11.8				
CUBLASLT_MATMUL_INNER_SHAPE_MMA1688	11.8				
CUBLASLT_MATMUL_INNER_SHAPE_MMA884	11.8				
CUBLASLT_MATMUL_INNER_SHAPE_UNDEFINED	11.8				
CUBLASLT_MATMUL_MATRIX_SCALE_BLK128x128_32F	12.9				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_MATRIX_SCALE_END	12.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_MATRIX_SCALE_OUTER_VEC_32F	12.9				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_MATRIX_SCALE_PER_BATCH_SCALAR_32F	13.1				
CUBLASLT_MATMUL_MATRIX_SCALE_SCALAR_32F	12.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_MATRIX_SCALE_VEC128_32F	12.9				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_MATRIX_SCALE_VEC16_UE4M3	12.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_MATRIX_SCALE_VEC32_UE8M0	12.8				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_PREF_GROUPED_AVERAGE_REDUCTION_DIM	13.1				
CUBLASLT_MATMUL_PREF_GROUPED_DESC_D_AVERAGE_COLS	13.1				
CUBLASLT_MATMUL_PREF_GROUPED_DESC_D_AVERAGE_ROWS	13.1				
CUBLASLT_MATMUL_PREF_IMPL_MASK	11.0				
CUBLASLT_MATMUL_PREF_MAX_WAVES_COUNT	10.1				
CUBLASLT_MATMUL_PREF_MAX_WORKSPACE_BYTES	10.1				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_PREF_MIN_ALIGNMENT_A_BYTES	10.1				
CUBLASLT_MATMUL_PREF_MIN_ALIGNMENT_B_BYTES	10.1				
CUBLASLT_MATMUL_PREF_MIN_ALIGNMENT_C_BYTES	10.1				
CUBLASLT_MATMUL_PREF_MIN_ALIGNMENT_D_BYTES	10.1				
CUBLASLT_MATMUL_PREF_REDUCTION_SCHEME_MASK	10.1				
CUBLASLT_MATMUL_PREF_SEARCH_MODE	10.1				HIPBLASLT_MATMUL_
CUBLASLT_MATMUL_STAGES_128x1	11.0				
CUBLASLT_MATMUL_STAGES_128x2	11.0				
CUBLASLT_MATMUL_STAGES_128x3	11.0				
CUBLASLT_MATMUL_STAGES_128x4	11.0				
CUBLASLT_MATMUL_STAGES_128x5	11.0				
CUBLASLT_MATMUL_STAGES_128x6	11.0				
CUBLASLT_MATMUL_STAGES_128xAUTO	11.8				
CUBLASLT_MATMUL_STAGES_16x1	11.0				
CUBLASLT_MATMUL_STAGES_16x10	11.0				
CUBLASLT_MATMUL_STAGES_16x2	11.0				
CUBLASLT_MATMUL_STAGES_16x3	11.0				
CUBLASLT_MATMUL_STAGES_16x4	11.0				
CUBLASLT_MATMUL_STAGES_16x5	11.0				
CUBLASLT_MATMUL_STAGES_16x6	11.0				
CUBLASLT_MATMUL_STAGES_16xAUTO	11.8				
CUBLASLT_MATMUL_STAGES_256xAUTO	12.8				
CUBLASLT_MATMUL_STAGES_32x1	11.0				
CUBLASLT_MATMUL_STAGES_32x10	11.0				
CUBLASLT_MATMUL_STAGES_32x2	11.0				

Table 3 – continued from prev

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_STAGES_32x3	11.0				
CUBLASLT_MATMUL_STAGES_32x4	11.0				
CUBLASLT_MATMUL_STAGES_32x5	11.0				
CUBLASLT_MATMUL_STAGES_32x6	11.0				
CUBLASLT_MATMUL_STAGES_32xAUTO	11.8				
CUBLASLT_MATMUL_STAGES_64x1	11.0				
CUBLASLT_MATMUL_STAGES_64x2	11.0				
CUBLASLT_MATMUL_STAGES_64x3	11.0				
CUBLASLT_MATMUL_STAGES_64x4	11.0				
CUBLASLT_MATMUL_STAGES_64x5	11.0				
CUBLASLT_MATMUL_STAGES_64x6	11.0				
CUBLASLT_MATMUL_STAGES_64xAUTO	11.8				
CUBLASLT_MATMUL_STAGES_768xAUTO	13.0				
CUBLASLT_MATMUL_STAGES_8x3	11.8				
CUBLASLT_MATMUL_STAGES_8x4	11.0				
CUBLASLT_MATMUL_STAGES_8x5	11.2				
CUBLASLT_MATMUL_STAGES_8xAUTO	11.8				
CUBLASLT_MATMUL_STAGES_END	11.0				
CUBLASLT_MATMUL_STAGES_UNDEFINED	11.0				
CUBLASLT_MATMUL_TILE_104x128	12.6				
CUBLASLT_MATMUL_TILE_104x192	12.6				
CUBLASLT_MATMUL_TILE_104x256	12.6				
CUBLASLT_MATMUL_TILE_104x320	12.6				
CUBLASLT_MATMUL_TILE_104x384	12.6				
CUBLASLT_MATMUL_TILE_104x448	12.6				
CUBLASLT_MATMUL_TILE_104x64	12.6				
CUBLASLT_MATMUL_TILE_112x128	12.6				
CUBLASLT_MATMUL_TILE_112x192	12.6				
CUBLASLT_MATMUL_TILE_112x256	12.6				
CUBLASLT_MATMUL_TILE_112x320	12.6				
CUBLASLT_MATMUL_TILE_112x384	12.6				
CUBLASLT_MATMUL_TILE_112x64	12.6				
CUBLASLT_MATMUL_TILE_120x128	12.6				
CUBLASLT_MATMUL_TILE_120x192	12.6				
CUBLASLT_MATMUL_TILE_120x256	12.6				
CUBLASLT_MATMUL_TILE_120x320	12.6				
CUBLASLT_MATMUL_TILE_120x384	12.6				
CUBLASLT_MATMUL_TILE_120x64	12.6				
CUBLASLT_MATMUL_TILE_128x104	12.6				
CUBLASLT_MATMUL_TILE_128x112	12.6				
CUBLASLT_MATMUL_TILE_128x120	12.6				
CUBLASLT_MATMUL_TILE_128x128	10.1				
CUBLASLT_MATMUL_TILE_128x136	12.6				
CUBLASLT_MATMUL_TILE_128x144	12.6				
CUBLASLT_MATMUL_TILE_128x152	12.6				
CUBLASLT_MATMUL_TILE_128x16	12.6				
CUBLASLT_MATMUL_TILE_128x160	11.3				
CUBLASLT_MATMUL_TILE_128x168	12.6				
CUBLASLT_MATMUL_TILE_128x176	12.6				
CUBLASLT_MATMUL_TILE_128x184	12.6				

Table 3 – continued from prev

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_128x192	11.8				
CUBLASLT_MATMUL_TILE_128x200	12.6				
CUBLASLT_MATMUL_TILE_128x208	12.6				
CUBLASLT_MATMUL_TILE_128x216	12.6				
CUBLASLT_MATMUL_TILE_128x224	12.6				
CUBLASLT_MATMUL_TILE_128x232	12.6				
CUBLASLT_MATMUL_TILE_128x24	12.6				
CUBLASLT_MATMUL_TILE_128x240	12.6				
CUBLASLT_MATMUL_TILE_128x248	12.6				
CUBLASLT_MATMUL_TILE_128x256	10.1				
CUBLASLT_MATMUL_TILE_128x264	12.6				
CUBLASLT_MATMUL_TILE_128x272	12.6				
CUBLASLT_MATMUL_TILE_128x280	12.6				
CUBLASLT_MATMUL_TILE_128x288	12.6				
CUBLASLT_MATMUL_TILE_128x296	12.6				
CUBLASLT_MATMUL_TILE_128x304	12.6				
CUBLASLT_MATMUL_TILE_128x312	12.6				
CUBLASLT_MATMUL_TILE_128x32	10.1				
CUBLASLT_MATMUL_TILE_128x320	12.6				
CUBLASLT_MATMUL_TILE_128x328	12.6				
CUBLASLT_MATMUL_TILE_128x336	12.6				
CUBLASLT_MATMUL_TILE_128x344	12.6				
CUBLASLT_MATMUL_TILE_128x352	12.6				
CUBLASLT_MATMUL_TILE_128x360	12.6				
CUBLASLT_MATMUL_TILE_128x368	12.6				
CUBLASLT_MATMUL_TILE_128x376	12.6				
CUBLASLT_MATMUL_TILE_128x384	12.6				
CUBLASLT_MATMUL_TILE_128x392	12.6				
CUBLASLT_MATMUL_TILE_128x40	12.6				
CUBLASLT_MATMUL_TILE_128x400	12.6				
CUBLASLT_MATMUL_TILE_128x408	12.6				
CUBLASLT_MATMUL_TILE_128x416	12.6				
CUBLASLT_MATMUL_TILE_128x424	12.6				
CUBLASLT_MATMUL_TILE_128x432	12.6				
CUBLASLT_MATMUL_TILE_128x440	12.6				
CUBLASLT_MATMUL_TILE_128x448	12.6				
CUBLASLT_MATMUL_TILE_128x456	12.6				
CUBLASLT_MATMUL_TILE_128x464	12.6				
CUBLASLT_MATMUL_TILE_128x472	12.6				
CUBLASLT_MATMUL_TILE_128x48	12.6				
CUBLASLT_MATMUL_TILE_128x480	12.6				
CUBLASLT_MATMUL_TILE_128x488	12.6				
CUBLASLT_MATMUL_TILE_128x496	12.6				
CUBLASLT_MATMUL_TILE_128x504	12.6				
CUBLASLT_MATMUL_TILE_128x512	12.6				
CUBLASLT_MATMUL_TILE_128x56	12.6				
CUBLASLT_MATMUL_TILE_128x64	10.1				
CUBLASLT_MATMUL_TILE_128x72	12.6				
CUBLASLT_MATMUL_TILE_128x8	12.6				
CUBLASLT_MATMUL_TILE_128x80	12.6				

Table 3 – continued from prev

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_128x88	12.6				
CUBLASLT_MATMUL_TILE_128x96	11.8				
CUBLASLT_MATMUL_TILE_136x128	12.6				
CUBLASLT_MATMUL_TILE_136x192	12.6				
CUBLASLT_MATMUL_TILE_136x256	12.6				
CUBLASLT_MATMUL_TILE_136x320	12.6				
CUBLASLT_MATMUL_TILE_136x64	12.6				
CUBLASLT_MATMUL_TILE_144x128	12.6				
CUBLASLT_MATMUL_TILE_144x192	12.6				
CUBLASLT_MATMUL_TILE_144x256	12.6				
CUBLASLT_MATMUL_TILE_144x320	12.6				
CUBLASLT_MATMUL_TILE_144x64	12.6				
CUBLASLT_MATMUL_TILE_152x128	12.6				
CUBLASLT_MATMUL_TILE_152x192	12.6				
CUBLASLT_MATMUL_TILE_152x256	12.6				
CUBLASLT_MATMUL_TILE_152x320	12.6				
CUBLASLT_MATMUL_TILE_152x64	12.6				
CUBLASLT_MATMUL_TILE_160x128	11.3				
CUBLASLT_MATMUL_TILE_160x192	12.6				
CUBLASLT_MATMUL_TILE_160x256	12.6				
CUBLASLT_MATMUL_TILE_160x64	12.6				
CUBLASLT_MATMUL_TILE_168x128	12.6				
CUBLASLT_MATMUL_TILE_168x192	12.6				
CUBLASLT_MATMUL_TILE_168x256	12.6				
CUBLASLT_MATMUL_TILE_168x64	12.6				
CUBLASLT_MATMUL_TILE_16x128	12.6				
CUBLASLT_MATMUL_TILE_16x16	10.1				
CUBLASLT_MATMUL_TILE_16x192	12.6				
CUBLASLT_MATMUL_TILE_16x256	12.6				
CUBLASLT_MATMUL_TILE_16x32	10.1				
CUBLASLT_MATMUL_TILE_16x320	12.6				
CUBLASLT_MATMUL_TILE_16x384	12.6				
CUBLASLT_MATMUL_TILE_16x448	12.6				
CUBLASLT_MATMUL_TILE_16x512	12.6				
CUBLASLT_MATMUL_TILE_16x576	12.6				
CUBLASLT_MATMUL_TILE_16x64	12.6				
CUBLASLT_MATMUL_TILE_16x640	12.6				
CUBLASLT_MATMUL_TILE_16x704	12.6				
CUBLASLT_MATMUL_TILE_16x768	12.6				
CUBLASLT_MATMUL_TILE_16x8	10.1				
CUBLASLT_MATMUL_TILE_176x128	12.6				
CUBLASLT_MATMUL_TILE_176x192	12.6				
CUBLASLT_MATMUL_TILE_176x256	12.6				
CUBLASLT_MATMUL_TILE_176x64	12.6				
CUBLASLT_MATMUL_TILE_184x128	12.6				
CUBLASLT_MATMUL_TILE_184x192	12.6				
CUBLASLT_MATMUL_TILE_184x256	12.6				
CUBLASLT_MATMUL_TILE_184x64	12.6				
CUBLASLT_MATMUL_TILE_192x104	12.6				
CUBLASLT_MATMUL_TILE_192x112	12.6				

Table 3 – continued from prev

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_192x120	12.6				
CUBLASLT_MATMUL_TILE_192x128	11.3				
CUBLASLT_MATMUL_TILE_192x136	12.6				
CUBLASLT_MATMUL_TILE_192x144	12.6				
CUBLASLT_MATMUL_TILE_192x152	12.6				
CUBLASLT_MATMUL_TILE_192x16	12.6				
CUBLASLT_MATMUL_TILE_192x160	12.6				
CUBLASLT_MATMUL_TILE_192x168	12.6				
CUBLASLT_MATMUL_TILE_192x176	12.6				
CUBLASLT_MATMUL_TILE_192x184	12.6				
CUBLASLT_MATMUL_TILE_192x192	12.6				
CUBLASLT_MATMUL_TILE_192x200	12.6				
CUBLASLT_MATMUL_TILE_192x208	12.6				
CUBLASLT_MATMUL_TILE_192x216	12.6				
CUBLASLT_MATMUL_TILE_192x224	12.6				
CUBLASLT_MATMUL_TILE_192x232	12.6				
CUBLASLT_MATMUL_TILE_192x24	12.6				
CUBLASLT_MATMUL_TILE_192x240	12.6				
CUBLASLT_MATMUL_TILE_192x248	12.6				
CUBLASLT_MATMUL_TILE_192x256	12.6				
CUBLASLT_MATMUL_TILE_192x264	12.6				
CUBLASLT_MATMUL_TILE_192x272	12.6				
CUBLASLT_MATMUL_TILE_192x280	12.6				
CUBLASLT_MATMUL_TILE_192x288	12.6				
CUBLASLT_MATMUL_TILE_192x296	12.6				
CUBLASLT_MATMUL_TILE_192x304	12.6				
CUBLASLT_MATMUL_TILE_192x312	12.6				
CUBLASLT_MATMUL_TILE_192x32	12.6				
CUBLASLT_MATMUL_TILE_192x320	12.6				
CUBLASLT_MATMUL_TILE_192x328	12.6				
CUBLASLT_MATMUL_TILE_192x336	12.6				
CUBLASLT_MATMUL_TILE_192x40	12.6				
CUBLASLT_MATMUL_TILE_192x48	12.6				
CUBLASLT_MATMUL_TILE_192x56	12.6				
CUBLASLT_MATMUL_TILE_192x64	12.6				
CUBLASLT_MATMUL_TILE_192x72	12.6				
CUBLASLT_MATMUL_TILE_192x8	12.6				
CUBLASLT_MATMUL_TILE_192x80	12.6				
CUBLASLT_MATMUL_TILE_192x88	12.6				
CUBLASLT_MATMUL_TILE_192x96	12.6				
CUBLASLT_MATMUL_TILE_200x128	12.6				
CUBLASLT_MATMUL_TILE_200x192	12.6				
CUBLASLT_MATMUL_TILE_200x64	12.6				
CUBLASLT_MATMUL_TILE_208x128	12.6				
CUBLASLT_MATMUL_TILE_208x192	12.6				
CUBLASLT_MATMUL_TILE_208x64	12.6				
CUBLASLT_MATMUL_TILE_216x128	12.6				
CUBLASLT_MATMUL_TILE_216x192	12.6				
CUBLASLT_MATMUL_TILE_216x64	12.6				
CUBLASLT_MATMUL_TILE_224x128	12.6				

Table 3 – continued from prev

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_224x192	12.6				
CUBLASLT_MATMUL_TILE_224x64	12.6				
CUBLASLT_MATMUL_TILE_232x128	12.6				
CUBLASLT_MATMUL_TILE_232x192	12.6				
CUBLASLT_MATMUL_TILE_232x64	12.6				
CUBLASLT_MATMUL_TILE_240x128	12.6				
CUBLASLT_MATMUL_TILE_240x192	12.6				
CUBLASLT_MATMUL_TILE_240x64	12.6				
CUBLASLT_MATMUL_TILE_248x128	12.6				
CUBLASLT_MATMUL_TILE_248x192	12.6				
CUBLASLT_MATMUL_TILE_248x64	12.6				
CUBLASLT_MATMUL_TILE_24x128	12.6				
CUBLASLT_MATMUL_TILE_24x192	12.6				
CUBLASLT_MATMUL_TILE_24x256	12.6				
CUBLASLT_MATMUL_TILE_24x320	12.6				
CUBLASLT_MATMUL_TILE_24x384	12.6				
CUBLASLT_MATMUL_TILE_24x448	12.6				
CUBLASLT_MATMUL_TILE_24x512	12.6				
CUBLASLT_MATMUL_TILE_24x576	12.6				
CUBLASLT_MATMUL_TILE_24x64	12.6				
CUBLASLT_MATMUL_TILE_24x640	12.6				
CUBLASLT_MATMUL_TILE_24x704	12.6				
CUBLASLT_MATMUL_TILE_24x768	12.6				
CUBLASLT_MATMUL_TILE_256x1024	12.8				
CUBLASLT_MATMUL_TILE_256x104	12.6				
CUBLASLT_MATMUL_TILE_256x112	12.6				
CUBLASLT_MATMUL_TILE_256x120	12.6				
CUBLASLT_MATMUL_TILE_256x128	10.1				
CUBLASLT_MATMUL_TILE_256x136	12.6				
CUBLASLT_MATMUL_TILE_256x144	12.6				
CUBLASLT_MATMUL_TILE_256x152	12.6				
CUBLASLT_MATMUL_TILE_256x16	12.6				
CUBLASLT_MATMUL_TILE_256x160	12.6				
CUBLASLT_MATMUL_TILE_256x168	12.6				
CUBLASLT_MATMUL_TILE_256x176	12.6				
CUBLASLT_MATMUL_TILE_256x184	12.6				
CUBLASLT_MATMUL_TILE_256x192	12.6				
CUBLASLT_MATMUL_TILE_256x200	12.6				
CUBLASLT_MATMUL_TILE_256x208	12.6				
CUBLASLT_MATMUL_TILE_256x216	12.6				
CUBLASLT_MATMUL_TILE_256x224	12.6				
CUBLASLT_MATMUL_TILE_256x232	12.6				
CUBLASLT_MATMUL_TILE_256x24	12.6				
CUBLASLT_MATMUL_TILE_256x240	12.6				
CUBLASLT_MATMUL_TILE_256x248	12.6				
CUBLASLT_MATMUL_TILE_256x256	12.6				
CUBLASLT_MATMUL_TILE_256x32	12.1				
CUBLASLT_MATMUL_TILE_256x40	12.6				
CUBLASLT_MATMUL_TILE_256x48	12.6				
CUBLASLT_MATMUL_TILE_256x512	12.8				

Table 3 – continued from prev

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_256x56	12.6				
CUBLASLT_MATMUL_TILE_256x64	10.1				
CUBLASLT_MATMUL_TILE_256x72	12.6				
CUBLASLT_MATMUL_TILE_256x8	12.6				
CUBLASLT_MATMUL_TILE_256x80	12.6				
CUBLASLT_MATMUL_TILE_256x88	12.6				
CUBLASLT_MATMUL_TILE_256x96	12.6				
CUBLASLT_MATMUL_TILE_264x128	12.6				
CUBLASLT_MATMUL_TILE_264x64	12.6				
CUBLASLT_MATMUL_TILE_272x128	12.6				
CUBLASLT_MATMUL_TILE_272x64	12.6				
CUBLASLT_MATMUL_TILE_280x128	12.6				
CUBLASLT_MATMUL_TILE_280x64	12.6				
CUBLASLT_MATMUL_TILE_288x128	12.6				
CUBLASLT_MATMUL_TILE_288x64	12.6				
CUBLASLT_MATMUL_TILE_296x128	12.6				
CUBLASLT_MATMUL_TILE_296x64	12.6				
CUBLASLT_MATMUL_TILE_304x128	12.6				
CUBLASLT_MATMUL_TILE_304x64	12.6				
CUBLASLT_MATMUL_TILE_312x128	12.6				
CUBLASLT_MATMUL_TILE_312x64	12.6				
CUBLASLT_MATMUL_TILE_320x104	12.6				
CUBLASLT_MATMUL_TILE_320x112	12.6				
CUBLASLT_MATMUL_TILE_320x120	12.6				
CUBLASLT_MATMUL_TILE_320x128	12.6				
CUBLASLT_MATMUL_TILE_320x136	12.6				
CUBLASLT_MATMUL_TILE_320x144	12.6				
CUBLASLT_MATMUL_TILE_320x152	12.6				
CUBLASLT_MATMUL_TILE_320x16	12.6				
CUBLASLT_MATMUL_TILE_320x160	12.6				
CUBLASLT_MATMUL_TILE_320x168	12.6				
CUBLASLT_MATMUL_TILE_320x176	12.6				
CUBLASLT_MATMUL_TILE_320x184	12.6				
CUBLASLT_MATMUL_TILE_320x192	12.6				
CUBLASLT_MATMUL_TILE_320x200	12.6				
CUBLASLT_MATMUL_TILE_320x24	12.6				
CUBLASLT_MATMUL_TILE_320x32	12.6				
CUBLASLT_MATMUL_TILE_320x40	12.6				
CUBLASLT_MATMUL_TILE_320x48	12.6				
CUBLASLT_MATMUL_TILE_320x56	12.6				
CUBLASLT_MATMUL_TILE_320x64	12.6				
CUBLASLT_MATMUL_TILE_320x72	12.6				
CUBLASLT_MATMUL_TILE_320x8	12.6				
CUBLASLT_MATMUL_TILE_320x80	12.6				
CUBLASLT_MATMUL_TILE_320x88	12.6				
CUBLASLT_MATMUL_TILE_320x96	12.6				
CUBLASLT_MATMUL_TILE_328x128	12.6				
CUBLASLT_MATMUL_TILE_328x64	12.6				
CUBLASLT_MATMUL_TILE_32x128	10.1				
CUBLASLT_MATMUL_TILE_32x16	10.1				

Table 3 – continued from prev

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_32x192	12.6				
CUBLASLT_MATMUL_TILE_32x256	12.1				
CUBLASLT_MATMUL_TILE_32x32	10.1				
CUBLASLT_MATMUL_TILE_32x320	12.6				
CUBLASLT_MATMUL_TILE_32x384	12.6				
CUBLASLT_MATMUL_TILE_32x448	12.6				
CUBLASLT_MATMUL_TILE_32x512	12.6				
CUBLASLT_MATMUL_TILE_32x576	12.6				
CUBLASLT_MATMUL_TILE_32x64	10.1				
CUBLASLT_MATMUL_TILE_32x640	12.6				
CUBLASLT_MATMUL_TILE_32x704	12.6				
CUBLASLT_MATMUL_TILE_32x768	12.6				
CUBLASLT_MATMUL_TILE_32x8	10.1				
CUBLASLT_MATMUL_TILE_336x128	12.6				
CUBLASLT_MATMUL_TILE_336x64	12.6				
CUBLASLT_MATMUL_TILE_344x128	12.6				
CUBLASLT_MATMUL_TILE_344x64	12.6				
CUBLASLT_MATMUL_TILE_352x128	12.6				
CUBLASLT_MATMUL_TILE_352x64	12.6				
CUBLASLT_MATMUL_TILE_360x128	12.6				
CUBLASLT_MATMUL_TILE_360x64	12.6				
CUBLASLT_MATMUL_TILE_368x128	12.6				
CUBLASLT_MATMUL_TILE_368x64	12.6				
CUBLASLT_MATMUL_TILE_376x128	12.6				
CUBLASLT_MATMUL_TILE_376x64	12.6				
CUBLASLT_MATMUL_TILE_384x104	12.6				
CUBLASLT_MATMUL_TILE_384x112	12.6				
CUBLASLT_MATMUL_TILE_384x120	12.6				
CUBLASLT_MATMUL_TILE_384x128	12.6				
CUBLASLT_MATMUL_TILE_384x136	12.6				
CUBLASLT_MATMUL_TILE_384x144	12.6				
CUBLASLT_MATMUL_TILE_384x152	12.6				
CUBLASLT_MATMUL_TILE_384x16	12.6				
CUBLASLT_MATMUL_TILE_384x160	12.6				
CUBLASLT_MATMUL_TILE_384x168	12.6				
CUBLASLT_MATMUL_TILE_384x24	12.6				
CUBLASLT_MATMUL_TILE_384x32	12.6				
CUBLASLT_MATMUL_TILE_384x40	12.6				
CUBLASLT_MATMUL_TILE_384x48	12.6				
CUBLASLT_MATMUL_TILE_384x56	12.6				
CUBLASLT_MATMUL_TILE_384x64	12.6				
CUBLASLT_MATMUL_TILE_384x72	12.6				
CUBLASLT_MATMUL_TILE_384x8	12.6				
CUBLASLT_MATMUL_TILE_384x80	12.6				
CUBLASLT_MATMUL_TILE_384x88	12.6				
CUBLASLT_MATMUL_TILE_384x96	12.6				
CUBLASLT_MATMUL_TILE_392x64	12.6				
CUBLASLT_MATMUL_TILE_400x64	12.6				
CUBLASLT_MATMUL_TILE_408x64	12.6				
CUBLASLT_MATMUL_TILE_40x128	12.6				

Table 3 – continued from prev

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_40x192	12.6				
CUBLASLT_MATMUL_TILE_40x256	12.6				
CUBLASLT_MATMUL_TILE_40x320	12.6				
CUBLASLT_MATMUL_TILE_40x384	12.6				
CUBLASLT_MATMUL_TILE_40x448	12.6				
CUBLASLT_MATMUL_TILE_40x512	12.6				
CUBLASLT_MATMUL_TILE_40x576	12.6				
CUBLASLT_MATMUL_TILE_40x64	12.6				
CUBLASLT_MATMUL_TILE_40x640	12.6				
CUBLASLT_MATMUL_TILE_40x704	12.6				
CUBLASLT_MATMUL_TILE_40x768	12.6				
CUBLASLT_MATMUL_TILE_416x64	12.6				
CUBLASLT_MATMUL_TILE_424x64	12.6				
CUBLASLT_MATMUL_TILE_432x64	12.6				
CUBLASLT_MATMUL_TILE_440x64	12.6				
CUBLASLT_MATMUL_TILE_448x104	12.6				
CUBLASLT_MATMUL_TILE_448x112	12.6				
CUBLASLT_MATMUL_TILE_448x120	12.6				
CUBLASLT_MATMUL_TILE_448x128	12.6				
CUBLASLT_MATMUL_TILE_448x136	12.6				
CUBLASLT_MATMUL_TILE_448x144	12.6				
CUBLASLT_MATMUL_TILE_448x16	12.6				
CUBLASLT_MATMUL_TILE_448x24	12.6				
CUBLASLT_MATMUL_TILE_448x32	12.6				
CUBLASLT_MATMUL_TILE_448x40	12.6				
CUBLASLT_MATMUL_TILE_448x48	12.6				
CUBLASLT_MATMUL_TILE_448x56	12.6				
CUBLASLT_MATMUL_TILE_448x64	12.6				
CUBLASLT_MATMUL_TILE_448x72	12.6				
CUBLASLT_MATMUL_TILE_448x8	12.6				
CUBLASLT_MATMUL_TILE_448x80	12.6				
CUBLASLT_MATMUL_TILE_448x88	12.6				
CUBLASLT_MATMUL_TILE_448x96	12.6				
CUBLASLT_MATMUL_TILE_456x64	12.6				
CUBLASLT_MATMUL_TILE_464x64	12.6				
CUBLASLT_MATMUL_TILE_472x64	12.6				
CUBLASLT_MATMUL_TILE_480x64	12.6				
CUBLASLT_MATMUL_TILE_488x64	12.6				
CUBLASLT_MATMUL_TILE_48x128	12.6				
CUBLASLT_MATMUL_TILE_48x192	12.6				
CUBLASLT_MATMUL_TILE_48x256	12.6				
CUBLASLT_MATMUL_TILE_48x320	12.6				
CUBLASLT_MATMUL_TILE_48x384	12.6				
CUBLASLT_MATMUL_TILE_48x448	12.6				
CUBLASLT_MATMUL_TILE_48x512	12.6				
CUBLASLT_MATMUL_TILE_48x576	12.6				
CUBLASLT_MATMUL_TILE_48x64	12.6				
CUBLASLT_MATMUL_TILE_48x640	12.6				
CUBLASLT_MATMUL_TILE_48x704	12.6				
CUBLASLT_MATMUL_TILE_48x768	12.6				

Table 3 – continued from prev

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_496x64	12.6				
CUBLASLT_MATMUL_TILE_504x64	12.6				
CUBLASLT_MATMUL_TILE_512x1024	12.8				
CUBLASLT_MATMUL_TILE_512x104	12.6				
CUBLASLT_MATMUL_TILE_512x112	12.6				
CUBLASLT_MATMUL_TILE_512x120	12.6				
CUBLASLT_MATMUL_TILE_512x128	12.6				
CUBLASLT_MATMUL_TILE_512x16	12.6				
CUBLASLT_MATMUL_TILE_512x24	12.6				
CUBLASLT_MATMUL_TILE_512x32	12.6				
CUBLASLT_MATMUL_TILE_512x40	12.6				
CUBLASLT_MATMUL_TILE_512x48	12.6				
CUBLASLT_MATMUL_TILE_512x512	12.8				
CUBLASLT_MATMUL_TILE_512x56	12.6				
CUBLASLT_MATMUL_TILE_512x64	10.1				
CUBLASLT_MATMUL_TILE_512x72	12.6				
CUBLASLT_MATMUL_TILE_512x8	12.6				
CUBLASLT_MATMUL_TILE_512x80	12.6				
CUBLASLT_MATMUL_TILE_512x88	12.6				
CUBLASLT_MATMUL_TILE_512x96	12.6				
CUBLASLT_MATMUL_TILE_520x64	12.6				
CUBLASLT_MATMUL_TILE_528x64	12.6				
CUBLASLT_MATMUL_TILE_536x64	12.6				
CUBLASLT_MATMUL_TILE_544x64	12.6				
CUBLASLT_MATMUL_TILE_552x64	12.6				
CUBLASLT_MATMUL_TILE_560x64	12.6				
CUBLASLT_MATMUL_TILE_568x64	12.6				
CUBLASLT_MATMUL_TILE_56x128	12.6				
CUBLASLT_MATMUL_TILE_56x192	12.6				
CUBLASLT_MATMUL_TILE_56x256	12.6				
CUBLASLT_MATMUL_TILE_56x320	12.6				
CUBLASLT_MATMUL_TILE_56x384	12.6				
CUBLASLT_MATMUL_TILE_56x448	12.6				
CUBLASLT_MATMUL_TILE_56x512	12.6				
CUBLASLT_MATMUL_TILE_56x576	12.6				
CUBLASLT_MATMUL_TILE_56x640	12.6				
CUBLASLT_MATMUL_TILE_56x704	12.6				
CUBLASLT_MATMUL_TILE_56x768	12.6				
CUBLASLT_MATMUL_TILE_576x104	12.6				
CUBLASLT_MATMUL_TILE_576x112	12.6				
CUBLASLT_MATMUL_TILE_576x16	12.6				
CUBLASLT_MATMUL_TILE_576x24	12.6				
CUBLASLT_MATMUL_TILE_576x32	12.6				
CUBLASLT_MATMUL_TILE_576x40	12.6				
CUBLASLT_MATMUL_TILE_576x48	12.6				
CUBLASLT_MATMUL_TILE_576x56	12.6				
CUBLASLT_MATMUL_TILE_576x64	12.6				
CUBLASLT_MATMUL_TILE_576x72	12.6				
CUBLASLT_MATMUL_TILE_576x8	12.6				
CUBLASLT_MATMUL_TILE_576x80	12.6				

Table 3 – continued from prev

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_576x88	12.6				
CUBLASLT_MATMUL_TILE_576x96	12.6				
CUBLASLT_MATMUL_TILE_584x64	12.6				
CUBLASLT_MATMUL_TILE_592x64	12.6				
CUBLASLT_MATMUL_TILE_600x64	12.6				
CUBLASLT_MATMUL_TILE_608x64	12.6				
CUBLASLT_MATMUL_TILE_616x64	12.6				
CUBLASLT_MATMUL_TILE_624x64	12.6				
CUBLASLT_MATMUL_TILE_632x64	12.6				
CUBLASLT_MATMUL_TILE_640x16	12.6				
CUBLASLT_MATMUL_TILE_640x24	12.6				
CUBLASLT_MATMUL_TILE_640x32	12.6				
CUBLASLT_MATMUL_TILE_640x40	12.6				
CUBLASLT_MATMUL_TILE_640x48	12.6				
CUBLASLT_MATMUL_TILE_640x56	12.6				
CUBLASLT_MATMUL_TILE_640x64	12.6				
CUBLASLT_MATMUL_TILE_640x72	12.6				
CUBLASLT_MATMUL_TILE_640x8	12.6				
CUBLASLT_MATMUL_TILE_640x80	12.6				
CUBLASLT_MATMUL_TILE_640x88	12.6				
CUBLASLT_MATMUL_TILE_640x96	12.6				
CUBLASLT_MATMUL_TILE_648x64	12.6				
CUBLASLT_MATMUL_TILE_64x104	12.6				
CUBLASLT_MATMUL_TILE_64x112	12.6				
CUBLASLT_MATMUL_TILE_64x120	12.6				
CUBLASLT_MATMUL_TILE_64x128	10.1				
CUBLASLT_MATMUL_TILE_64x136	12.6				
CUBLASLT_MATMUL_TILE_64x144	12.6				
CUBLASLT_MATMUL_TILE_64x152	12.6				
CUBLASLT_MATMUL_TILE_64x16	12.6				
CUBLASLT_MATMUL_TILE_64x160	12.6				
CUBLASLT_MATMUL_TILE_64x168	12.6				
CUBLASLT_MATMUL_TILE_64x176	12.6				
CUBLASLT_MATMUL_TILE_64x184	12.6				
CUBLASLT_MATMUL_TILE_64x192	12.6				
CUBLASLT_MATMUL_TILE_64x200	12.6				
CUBLASLT_MATMUL_TILE_64x208	12.6				
CUBLASLT_MATMUL_TILE_64x216	12.6				
CUBLASLT_MATMUL_TILE_64x224	12.6				
CUBLASLT_MATMUL_TILE_64x232	12.6				
CUBLASLT_MATMUL_TILE_64x24	12.6				
CUBLASLT_MATMUL_TILE_64x240	12.6				
CUBLASLT_MATMUL_TILE_64x248	12.6				
CUBLASLT_MATMUL_TILE_64x256	10.1				
CUBLASLT_MATMUL_TILE_64x264	12.6				
CUBLASLT_MATMUL_TILE_64x272	12.6				
CUBLASLT_MATMUL_TILE_64x280	12.6				
CUBLASLT_MATMUL_TILE_64x288	12.6				
CUBLASLT_MATMUL_TILE_64x296	12.6				
CUBLASLT_MATMUL_TILE_64x304	12.6				

Table 3 – continued from prev

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_64x312	12.6				
CUBLASLT_MATMUL_TILE_64x32	10.1				
CUBLASLT_MATMUL_TILE_64x320	12.6				
CUBLASLT_MATMUL_TILE_64x328	12.6				
CUBLASLT_MATMUL_TILE_64x336	12.6				
CUBLASLT_MATMUL_TILE_64x344	12.6				
CUBLASLT_MATMUL_TILE_64x352	12.6				
CUBLASLT_MATMUL_TILE_64x360	12.6				
CUBLASLT_MATMUL_TILE_64x368	12.6				
CUBLASLT_MATMUL_TILE_64x376	12.6				
CUBLASLT_MATMUL_TILE_64x384	12.6				
CUBLASLT_MATMUL_TILE_64x392	12.6				
CUBLASLT_MATMUL_TILE_64x40	12.6				
CUBLASLT_MATMUL_TILE_64x400	12.6				
CUBLASLT_MATMUL_TILE_64x408	12.6				
CUBLASLT_MATMUL_TILE_64x416	12.6				
CUBLASLT_MATMUL_TILE_64x424	12.6				
CUBLASLT_MATMUL_TILE_64x432	12.6				
CUBLASLT_MATMUL_TILE_64x440	12.6				
CUBLASLT_MATMUL_TILE_64x448	12.6				
CUBLASLT_MATMUL_TILE_64x456	12.6				
CUBLASLT_MATMUL_TILE_64x464	12.6				
CUBLASLT_MATMUL_TILE_64x472	12.6				
CUBLASLT_MATMUL_TILE_64x48	12.6				
CUBLASLT_MATMUL_TILE_64x480	12.6				
CUBLASLT_MATMUL_TILE_64x488	12.6				
CUBLASLT_MATMUL_TILE_64x496	12.6				
CUBLASLT_MATMUL_TILE_64x504	12.6				
CUBLASLT_MATMUL_TILE_64x512	10.1				
CUBLASLT_MATMUL_TILE_64x520	12.6				
CUBLASLT_MATMUL_TILE_64x528	12.6				
CUBLASLT_MATMUL_TILE_64x536	12.6				
CUBLASLT_MATMUL_TILE_64x544	12.6				
CUBLASLT_MATMUL_TILE_64x552	12.6				
CUBLASLT_MATMUL_TILE_64x56	12.6				
CUBLASLT_MATMUL_TILE_64x560	12.6				
CUBLASLT_MATMUL_TILE_64x568	12.6				
CUBLASLT_MATMUL_TILE_64x576	12.6				
CUBLASLT_MATMUL_TILE_64x584	12.6				
CUBLASLT_MATMUL_TILE_64x592	12.6				
CUBLASLT_MATMUL_TILE_64x600	12.6				
CUBLASLT_MATMUL_TILE_64x608	12.6				
CUBLASLT_MATMUL_TILE_64x616	12.6				
CUBLASLT_MATMUL_TILE_64x624	12.6				
CUBLASLT_MATMUL_TILE_64x632	12.6				
CUBLASLT_MATMUL_TILE_64x64	10.1				
CUBLASLT_MATMUL_TILE_64x640	12.6				
CUBLASLT_MATMUL_TILE_64x648	12.6				
CUBLASLT_MATMUL_TILE_64x656	12.6				
CUBLASLT_MATMUL_TILE_64x664	12.6				

Table 3 – continued from prev

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_64x672	12.6				
CUBLASLT_MATMUL_TILE_64x680	12.6				
CUBLASLT_MATMUL_TILE_64x688	12.6				
CUBLASLT_MATMUL_TILE_64x696	12.6				
CUBLASLT_MATMUL_TILE_64x704	12.6				
CUBLASLT_MATMUL_TILE_64x712	12.6				
CUBLASLT_MATMUL_TILE_64x72	12.6				
CUBLASLT_MATMUL_TILE_64x720	12.6				
CUBLASLT_MATMUL_TILE_64x728	12.6				
CUBLASLT_MATMUL_TILE_64x736	12.6				
CUBLASLT_MATMUL_TILE_64x744	12.6				
CUBLASLT_MATMUL_TILE_64x752	12.6				
CUBLASLT_MATMUL_TILE_64x760	12.6				
CUBLASLT_MATMUL_TILE_64x768	12.6				
CUBLASLT_MATMUL_TILE_64x8	10.1				
CUBLASLT_MATMUL_TILE_64x80	12.6				
CUBLASLT_MATMUL_TILE_64x88	12.6				
CUBLASLT_MATMUL_TILE_64x96	11.3				
CUBLASLT_MATMUL_TILE_656x64	12.6				
CUBLASLT_MATMUL_TILE_664x64	12.6				
CUBLASLT_MATMUL_TILE_672x64	12.6				
CUBLASLT_MATMUL_TILE_680x64	12.6				
CUBLASLT_MATMUL_TILE_688x64	12.6				
CUBLASLT_MATMUL_TILE_696x64	12.6				
CUBLASLT_MATMUL_TILE_704x16	12.6				
CUBLASLT_MATMUL_TILE_704x24	12.6				
CUBLASLT_MATMUL_TILE_704x32	12.6				
CUBLASLT_MATMUL_TILE_704x40	12.6				
CUBLASLT_MATMUL_TILE_704x48	12.6				
CUBLASLT_MATMUL_TILE_704x56	12.6				
CUBLASLT_MATMUL_TILE_704x64	12.6				
CUBLASLT_MATMUL_TILE_704x72	12.6				
CUBLASLT_MATMUL_TILE_704x8	12.6				
CUBLASLT_MATMUL_TILE_704x80	12.6				
CUBLASLT_MATMUL_TILE_704x88	12.6				
CUBLASLT_MATMUL_TILE_712x64	12.6				
CUBLASLT_MATMUL_TILE_720x64	12.6				
CUBLASLT_MATMUL_TILE_728x64	12.6				
CUBLASLT_MATMUL_TILE_72x128	12.6				
CUBLASLT_MATMUL_TILE_72x192	12.6				
CUBLASLT_MATMUL_TILE_72x256	12.6				
CUBLASLT_MATMUL_TILE_72x320	12.6				
CUBLASLT_MATMUL_TILE_72x384	12.6				
CUBLASLT_MATMUL_TILE_72x448	12.6				
CUBLASLT_MATMUL_TILE_72x512	12.6				
CUBLASLT_MATMUL_TILE_72x576	12.6				
CUBLASLT_MATMUL_TILE_72x64	12.6				
CUBLASLT_MATMUL_TILE_72x640	12.6				
CUBLASLT_MATMUL_TILE_736x64	12.6				
CUBLASLT_MATMUL_TILE_744x64	12.6				

Table 3 – continued from prev

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_752x64	12.6				
CUBLASLT_MATMUL_TILE_760x64	12.6				
CUBLASLT_MATMUL_TILE_768x16	12.6				
CUBLASLT_MATMUL_TILE_768x24	12.6				
CUBLASLT_MATMUL_TILE_768x32	12.6				
CUBLASLT_MATMUL_TILE_768x40	12.6				
CUBLASLT_MATMUL_TILE_768x48	12.6				
CUBLASLT_MATMUL_TILE_768x56	12.6				
CUBLASLT_MATMUL_TILE_768x64	12.6				
CUBLASLT_MATMUL_TILE_768x72	12.6				
CUBLASLT_MATMUL_TILE_768x8	12.6				
CUBLASLT_MATMUL_TILE_768x80	12.6				
CUBLASLT_MATMUL_TILE_80x128	12.6				
CUBLASLT_MATMUL_TILE_80x192	12.6				
CUBLASLT_MATMUL_TILE_80x256	12.6				
CUBLASLT_MATMUL_TILE_80x320	12.6				
CUBLASLT_MATMUL_TILE_80x384	12.6				
CUBLASLT_MATMUL_TILE_80x448	12.6				
CUBLASLT_MATMUL_TILE_80x512	12.6				
CUBLASLT_MATMUL_TILE_80x576	12.6				
CUBLASLT_MATMUL_TILE_80x64	12.6				
CUBLASLT_MATMUL_TILE_88x128	12.6				
CUBLASLT_MATMUL_TILE_88x192	12.6				
CUBLASLT_MATMUL_TILE_88x256	12.6				
CUBLASLT_MATMUL_TILE_88x320	12.6				
CUBLASLT_MATMUL_TILE_88x384	12.6				
CUBLASLT_MATMUL_TILE_88x448	12.6				
CUBLASLT_MATMUL_TILE_88x512	12.6				
CUBLASLT_MATMUL_TILE_88x64	12.6				
CUBLASLT_MATMUL_TILE_8x128	12.6				
CUBLASLT_MATMUL_TILE_8x16	10.1				
CUBLASLT_MATMUL_TILE_8x192	12.6				
CUBLASLT_MATMUL_TILE_8x256	12.6				
CUBLASLT_MATMUL_TILE_8x32	10.1				
CUBLASLT_MATMUL_TILE_8x320	12.6				
CUBLASLT_MATMUL_TILE_8x384	12.6				
CUBLASLT_MATMUL_TILE_8x448	12.6				
CUBLASLT_MATMUL_TILE_8x512	12.6				
CUBLASLT_MATMUL_TILE_8x576	12.6				
CUBLASLT_MATMUL_TILE_8x64	10.1				
CUBLASLT_MATMUL_TILE_8x640	12.6				
CUBLASLT_MATMUL_TILE_8x704	12.6				
CUBLASLT_MATMUL_TILE_8x768	12.6				
CUBLASLT_MATMUL_TILE_8x8	10.1				
CUBLASLT_MATMUL_TILE_96x128	11.3				
CUBLASLT_MATMUL_TILE_96x192	12.6				
CUBLASLT_MATMUL_TILE_96x256	12.6				
CUBLASLT_MATMUL_TILE_96x320	12.6				
CUBLASLT_MATMUL_TILE_96x384	12.6				
CUBLASLT_MATMUL_TILE_96x448	12.6				

Table 3 – continued from prev

CUDA	A	D	C	R	HIP
CUBLASLT_MATMUL_TILE_96x512	12.6				
CUBLASLT_MATMUL_TILE_96x64	11.3				
CUBLASLT_MATMUL_TILE_END	10.1				
CUBLASLT_MATMUL_TILE_UNDEFINED	10.1				
CUBLASLT_MATRIX_LAYOUT_BATCH_COUNT	10.1				HIPBLASLT_MATRIX
CUBLASLT_MATRIX_LAYOUT_BATCH_MODE	12.9				
CUBLASLT_MATRIX_LAYOUT_COLS	10.1				HIPBLASLT_MATRIX
CUBLASLT_MATRIX_LAYOUT_LD	10.1				HIPBLASLT_MATRIX
CUBLASLT_MATRIX_LAYOUT_ORDER	10.1				HIPBLASLT_MATRIX
CUBLASLT_MATRIX_LAYOUT_PLANE_OFFSET	10.1				
CUBLASLT_MATRIX_LAYOUT_ROWS	10.1				HIPBLASLT_MATRIX
CUBLASLT_MATRIX_LAYOUT_STRIDED_BATCH_OFFSET	10.1				HIPBLASLT_MATRIX
CUBLASLT_MATRIX_LAYOUT_TYPE	10.1				HIPBLASLT_MATRIX
CUBLASLT_MATRIX_TRANSFORM_DESC_POINTER_MODE	10.1				HIPBLASLT_MATRIX
CUBLASLT_MATRIX_TRANSFORM_DESC_SCALE_TYPE	10.1				HIPBLASLT_MATRIX
CUBLASLT_MATRIX_TRANSFORM_DESC_TRANSA	10.1				HIPBLASLT_MATRIX
CUBLASLT_MATRIX_TRANSFORM_DESC_TRANSB	10.1				HIPBLASLT_MATRIX
CUBLASLT_NUMERICAL_IMPL_FLAGS_ACCUMULATOR_16F	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_ACCUMULATOR_32F	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_ACCUMULATOR_32I	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_ACCUMULATOR_64F	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_ACCUMULATOR_TYPE_MASK	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_DMMA	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_FMA	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_GAUSSIAN	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_HMMA	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_IMMA	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_16BF	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_16F	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_32F	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_64F	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_8F_E4M3	11.8				
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_8F_E5M2	11.8				
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_8I	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_INPUT_TF32	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_OP_INPUT_TYPE_MASK	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_OP_TYPE_MASK	11.0				
CUBLASLT_NUMERICAL_IMPL_FLAGS_TENSOR_OP_MASK	11.0				
CUBLASLT_ORDER_COL	10.1				HIPBLASLT_ORDER_C
CUBLASLT_ORDER_COL32	10.1				
CUBLASLT_ORDER_COL32_2R_4R4	11.0				
CUBLASLT_ORDER_COL4_4R2_8C	10.1				
CUBLASLT_ORDER_ROW	10.1				HIPBLASLT_ORDER_R
CUBLASLT_POINTER_MODE_ALPHA_DEVICE_VECTOR_BETA_HOST	11.4				HIPBLASLT_POINTER
CUBLASLT_POINTER_MODE_ALPHA_DEVICE_VECTOR_BETA_ZERO	10.1				
CUBLASLT_POINTER_MODE_DEVICE					HIPBLASLT_POINTER
CUBLASLT_POINTER_MODE_DEVICE_VECTOR	10.1				
CUBLASLT_POINTER_MODE_HOST	10.1				HIPBLASLT_POINTER
CUBLASLT_POINTER_MODE_MASK_ALPHA_DEVICE_VECTOR_BETA_HOST	11.4				
CUBLASLT_POINTER_MODE_MASK_ALPHA_DEVICE_VECTOR_BETA_ZERO	10.1				

Table 3 – continued from prev

CUDA	A	D	C	R	HIP
CUBLASLT_POINTER_MODE_MASK_DEVICE	10.1				
CUBLASLT_POINTER_MODE_MASK_DEVICE_VECTOR	10.1				
CUBLASLT_POINTER_MODE_MASK_HOST	10.1				
CUBLASLT_REDUCTION_SCHEME_COMPUTE_TYPE	10.1				
CUBLASLT_REDUCTION_SCHEME_INPLACE	10.1				
CUBLASLT_REDUCTION_SCHEME_MASK	10.1				
CUBLASLT_REDUCTION_SCHEME_NONE	10.1				
CUBLASLT_REDUCTION_SCHEME_OUTPUT_TYPE	10.1				
CUBLASLT_SEARCH_BEST_FIT	10.1				
CUBLASLT_SEARCH_LIMITED_BY_ALGO_ID	10.1				
CUBLASLT_SEARCH_RESERVED_02	11.0				
CUBLASLT_SEARCH_RESERVED_03	11.0				
CUBLASLT_SEARCH_RESERVED_04	11.0				
CUBLASLT_SEARCH_RESERVED_05	11.0				
CUBLASLT_SEARCH_RESERVED_06	12.6				
CUBLASLT_SEARCH_RESERVED_07	12.6				
CUBLASLT_SEARCH_RESERVED_08	12.6				
CUBLASLT_SEARCH_RESERVED_09	12.6				
cublasLtBatchMode_t	12.9				
cublasLtClusterShape_t	11.8				
cublasLtContext	10.1				
cublasLtEmulationDescAttributes_t	13.0				
cublasLtEmulationDescOpaque_t	13.0				
cublasLtEmulationDesc_t	13.0				
cublasLtEpilogue_t	10.1				hipblasLtEpilogue
cublasLtHandle_t	10.1				hipblasLtHandle_t
cublasLtIntegerWidth_t	13.1				
cublasLtLoggerCallback_t	11.0				
cublasLtMatmulAlgoCapAttributes_t	10.1				
cublasLtMatmulAlgoConfigAttributes_t	10.1				
cublasLtMatmulAlgo_t	10.1				hipblasLtMatmulA
cublasLtMatmulDescAttributes_t	10.1				hipblasLtMatmulDe
cublasLtMatmulDescOpaque_t	11.0				hipblasLtMatmulDe
cublasLtMatmulDesc_t	10.1				hipblasLtMatmulDe
cublasLtMatmulHeuristicResult_t	10.1				hipblasLtMatmulHe
cublasLtMatmulInnerShape_t	11.8				
cublasLtMatmulMatrixScale_t	12.8				hipblasLtMatmulMa
cublasLtMatmulPreferenceAttributes_t	10.1				hipblasLtMatmulPr
cublasLtMatmulPreferenceOpaque_t	11.0		13.1		hipblasLtMatmulPr
cublasLtMatmulPreference_t	10.1				hipblasLtMatmulPr
cublasLtMatmulSearch_t	10.1				
cublasLtMatmulStages_t	11.0				
cublasLtMatmulTile_t	10.1				
cublasLtMatrixLayoutAttribute_t	10.1				hipblasLtMatrixLa
cublasLtMatrixLayoutOpaque_t	11.0		13.1		hipblasLtMatrixLa
cublasLtMatrixLayoutStruct	10.1			10.2	hipblasLtMatrixLa
cublasLtMatrixLayout_t	10.1				hipblasLtMatrixLa
cublasLtMatrixTransformDescAttributes_t	10.1				hipblasLtMatrixTr
cublasLtMatrixTransformDescOpaque_t	11.0				hipblasLtMatrixTr
cublasLtMatrixTransformDesc_t	10.1				hipblasLtMatrixTr

Table 3 – continued from prev

CUDA	A	D	C	R	HIP
cublasLtNumericalImplFlags_t	11.0				
cublasLtOrder_t	10.1				hipblasLtOrder_t
cublasLtPointerModeMask_t	10.1				
cublasLtPointerMode_t	10.1				hipblasLtPointerM
cublasLtReductionScheme_t	10.1				

12.1.4 4. CUBLAS Helper Function Reference

CUDA	A	D	C	R	HIP	A	D
cublasAlloc							
cublasCreate					hipblasCreate	1.8.2	
cublasCreate_v2					hipblasCreate	1.8.2	
cublasDestroy					hipblasDestroy	1.8.2	
cublasDestroy_v2					hipblasDestroy	1.8.2	
cublasFree							
cublasGetAtomicsMode					hipblasGetAtomicsMode	3.10.0	
cublasGetCudartVersion	10.1						
cublasGetEmulationSpecialValuesSupport	13.0						
cublasGetEmulationStrategy	12.9						
cublasGetError							
cublasGetFixedPointEmulationMantissaBitCountPointer	13.0						
cublasGetFixedPointEmulationMantissaBitOffset	13.0						
cublasGetFixedPointEmulationMantissaControl	13.0						
cublasGetFixedPointEmulationMaxMantissaBitCount	13.0						
cublasGetLoggerCallback	9.2						
cublasGetMathMode	9.0				hipblasGetMathMode	6.1.0	
cublasGetMatrix					hipblasGetMatrix	1.8.2	
cublasGetMatrixAsync					hipblasGetMatrixAsync	3.7.0	
cublasGetMatrixAsync_64	12.0						
cublasGetMatrix_64	12.0						
cublasGetPointerMode					hipblasGetPointerMode	1.8.2	
cublasGetPointerMode_v2					hipblasGetPointerMode	1.8.2	
cublasGetProperty							
cublasGetSmCountTarget	11.3						
cublasGetStatusName	11.4						
cublasGetStatusString	11.4						
cublasGetStream					hipblasGetStream	1.8.2	
cublasGetStream_v2					hipblasGetStream	1.8.2	
cublasGetVector					hipblasGetVector	1.8.2	
cublasGetVectorAsync					hipblasGetVectorAsync	3.7.0	
cublasGetVectorAsync_64	12.0						
cublasGetVector_64	12.0						
cublasGetVersion							
cublasGetVersion_v2							
cublasInit							
cublasLogCallback	9.2						
cublasLoggerConfigure	9.2						
cublasMigrateComputeType	11.0						

Table 4 – continued from previous page

CUDA	A	D	C	R	HIP	A	D
cublasSetAtomicsMode					hipblasSetAtomicsMode	3.10.0	
cublasSetEmulationSpecialValuesSupport	13.0						
cublasSetEmulationStrategy	12.9						
cublasSetFixedPointEmulationMantissaBitCountPointer	13.0						
cublasSetFixedPointEmulationMantissaBitOffset	13.0						
cublasSetFixedPointEmulationMantissaControl	13.0						
cublasSetFixedPointEmulationMaxMantissaBitCount	13.0						
cublasSetKernelStream							
cublasSetLoggerCallback	9.2						
cublasSetMathMode	9.0				hipblasSetMathMode	6.1.0	
cublasSetMatrix					hipblasSetMatrix	1.8.2	
cublasSetMatrixAsync					hipblasSetMatrixAsync	3.7.0	
cublasSetMatrixAsync_64	12.0						
cublasSetMatrix_64	12.0						
cublasSetPointerMode					hipblasSetPointerMode	1.8.2	
cublasSetPointerMode_v2					hipblasSetPointerMode	1.8.2	
cublasSetSmCountTarget	11.3						
cublasSetStream					hipblasSetStream	1.8.2	
cublasSetStream_v2					hipblasSetStream	1.8.2	
cublasSetVector					hipblasSetVector	1.8.2	
cublasSetVectorAsync					hipblasSetVectorAsync	3.7.0	
cublasSetVectorAsync_64	12.0						
cublasSetVector_64	12.0						
cublasSetWorkspace	11.0				hipblasSetWorkspace	7.0.0	
cublasSetWorkspace_v2	11.0				hipblasSetWorkspace	7.0.0	
cublasShutdown							
cublasXerbla							

12.1.5 5. CUBLAS Level-1 Function Reference

CUDA	A	D	C	R	HIP	A	D	C	R	U	E	ROC
cublasCaxpy					hipblasCaxpy	3.0.0		7.0.0				rocblas_caxpy
cublasCaxpy_64	12.0				hipblasCaxpy_64	6.1.0		7.0.0				rocblas_caxpy_64
cublasCaxpy_v2					hipblasCaxpy	3.0.0		7.0.0				rocblas_caxpy
cublasCaxpy_v2_64	12.0				hipblasCaxpy_64	6.1.0		7.0.0				rocblas_caxpy_64
cublasCcopy					hipblasCcopy	3.0.0		7.0.0				rocblas_ccopy
cublasCcopy_64	12.0				hipblasCcopy_64	6.1.0		7.0.0				rocblas_ccopy_64
cublasCcopy_v2					hipblasCcopy	3.0.0		7.0.0				rocblas_ccopy
cublasCcopy_v2_64	12.0				hipblasCcopy_64	6.1.0		7.0.0				rocblas_ccopy_64
cublasCdotc					hipblasCdotc	3.0.0		7.0.0				rocblas_cdotc
cublasCdotc_64	12.0				hipblasCdotc_64	6.1.0		7.0.0				rocblas_cdotc_64
cublasCdotc_v2					hipblasCdotc	3.0.0		7.0.0				rocblas_cdotc
cublasCdotc_v2_64	12.0				hipblasCdotc_64	6.1.0		7.0.0				rocblas_cdotc_64
cublasCdotu					hipblasCdotu	3.0.0		7.0.0				rocblas_cdotu
cublasCdotu_64	12.0				hipblasCdotu_64	6.1.0		7.0.0				rocblas_cdotu_64
cublasCdotu_v2					hipblasCdotu	3.0.0		7.0.0				rocblas_cdotu
cublasCdotu_v2_64	12.0				hipblasCdotu_64	6.1.0		7.0.0				rocblas_cdotu_64
cublasCrot					hipblasCrot	3.0.0		7.0.0				rocblas_crot

C

Table 5 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E	ROC
cublasCrot_64	12.0				hipblasCrot_64	6.1.0		7.0.0				rocblas_crot_64
cublasCrot_v2					hipblasCrot	3.0.0		7.0.0				rocblas_crot
cublasCrot_v2_64	12.0				hipblasCrot_64	6.1.0		7.0.0				rocblas_crot_64
cublasCrotg					hipblasCrotg	3.0.0		7.0.0				rocblas_crotg
cublasCrotg_v2					hipblasCrotg	3.0.0		7.0.0				rocblas_crotg
cublasCscal					hipblasCscal	1.6.0		7.0.0				rocblas_cscal
cublasCscal_64	12.0				hipblasCscal_64	6.1.0		7.0.0				rocblas_cscal_64
cublasCscal_v2					hipblasCscal	1.6.0		7.0.0				rocblas_cscal
cublasCscal_v2_64	12.0				hipblasCscal_64	6.1.0		7.0.0				rocblas_cscal_64
cublasCsrot					hipblasCsrot	3.0.0		7.0.0				rocblas_csrot
cublasCsrot_64	12.0				hipblasCsrot_64	6.1.0		7.0.0				rocblas_csrot_64
cublasCsrot_v2					hipblasCsrot	3.0.0		7.0.0				rocblas_csrot
cublasCsrot_v2_64	12.0				hipblasCsrot_64	6.1.0		7.0.0				rocblas_csrot_64
cublasCsscal					hipblasCsscal	3.0.0		7.0.0				rocblas_csscal
cublasCsscal_64	12.0				hipblasCsscal_64	6.1.0		7.0.0				rocblas_csscal_64
cublasCsscal_v2					hipblasCsscal	3.0.0		7.0.0				rocblas_csscal
cublasCsscal_v2_64	12.0				hipblasCsscal_64	6.1.0		7.0.0				rocblas_csscal_64
cublasCswap					hipblasCswap	3.0.0		7.0.0				rocblas_cswap
cublasCswap_64	12.0				hipblasCswap_64	6.1.0		7.0.0				rocblas_cswap_64
cublasCswap_v2					hipblasCswap	3.0.0		7.0.0				rocblas_cswap
cublasCswap_v2_64	12.0				hipblasCswap_64	6.1.0		7.0.0				rocblas_cswap_64
cublasDasum					hipblasDasum	1.8.2						rocblas_dasum
cublasDasum_64	12.0				hipblasDasum_64	6.1.0						rocblas_dasum_64
cublasDasum_v2					hipblasDasum	1.8.2						rocblas_dasum
cublasDasum_v2_64	12.0				hipblasDasum_64	6.1.0						rocblas_dasum_64
cublasDaxpy					hipblasDaxpy	1.8.2						rocblas_daxpy
cublasDaxpy_64	12.0				hipblasDaxpy_64	6.1.0						rocblas_daxpy_64
cublasDaxpy_v2					hipblasDaxpy	1.8.2						rocblas_daxpy
cublasDaxpy_v2_64	12.0				hipblasDaxpy_64	6.1.0						rocblas_daxpy_64
cublasDcopy					hipblasDcopy	1.8.2						rocblas_dcopy
cublasDcopy_64	12.0				hipblasDcopy_64	6.1.0						rocblas_dcopy_64
cublasDcopy_v2					hipblasDcopy	1.8.2						rocblas_dcopy
cublasDcopy_v2_64	12.0				hipblasDcopy_64	6.1.0						rocblas_dcopy_64
cublasDdot					hipblasDdot	3.0.0						rocblas_ddot
cublasDdot_64	12.0				hipblasDdot_64	6.1.0						rocblas_ddot_64
cublasDdot_v2					hipblasDdot	3.0.0						rocblas_ddot
cublasDdot_v2_64	12.0				hipblasDdot_64	6.1.0						rocblas_ddot_64
cublasDnrm2					hipblasDnrm2	1.8.2						rocblas_dnrm2
cublasDnrm2_64	12.0				hipblasDnrm2_64	6.1.0						rocblas_dnrm2_64
cublasDnrm2_v2					hipblasDnrm2	1.8.2						rocblas_dnrm2
cublasDnrm2_v2_64	12.0				hipblasDnrm2_64	6.1.0						rocblas_dnrm2_64
cublasDrot					hipblasDrot	3.0.0						rocblas_drot
cublasDrot_64	12.0				hipblasDrot_64	6.1.0						rocblas_drot_64
cublasDrot_v2					hipblasDrot	3.0.0						rocblas_drot
cublasDrot_v2_64	12.0				hipblasDrot_64	6.1.0						rocblas_drot_64
cublasDrotg					hipblasDrotg	3.0.0						rocblas_drotg
cublasDrotg_v2					hipblasDrotg	3.0.0						rocblas_drotg
cublasDrotm					hipblasDrotm	3.0.0						rocblas_drotm
cublasDrotm_64	12.0				hipblasDrotm_64	6.1.0						rocblas_drotm_64
cublasDrotm_v2					hipblasDrotm	3.0.0						rocblas_drotm

C

Table 5 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E	ROC
cublasDrotm_v2_64	12.0				hipblasDrotm_64	6.1.0						rocblas_drotm_64
cublasDrotmg					hipblasDrotmg	3.0.0						rocblas_drotmg
cublasDrotmg_v2					hipblasDrotmg	3.0.0						rocblas_drotmg
cublasDscal					hipblasDscal	1.8.2						rocblas_dscal
cublasDscal_64	12.0				hipblasDscal_64	6.1.0						rocblas_dscal_64
cublasDscal_v2					hipblasDscal	1.8.2						rocblas_dscal
cublasDscal_v2_64	12.0				hipblasDscal_64	6.1.0						rocblas_dscal_64
cublasDswap					hipblasDswap	3.0.0						rocblas_dswap
cublasDswap_64	12.0				hipblasDswap_64	6.1.0						rocblas_dswap_64
cublasDswap_v2					hipblasDswap	3.0.0						rocblas_dswap
cublasDswap_v2_64	12.0				hipblasDswap_64	6.1.0						rocblas_dswap_64
cublasDzasum					hipblasDzasum	3.0.0		7.0.0				rocblas_dzasum
cublasDzasum_64	12.0				hipblasDzasum_64	6.1.0		7.0.0				rocblas_dzasum_64
cublasDzasum_v2					hipblasDzasum	3.0.0		7.0.0				rocblas_dzasum
cublasDzasum_v2_64	12.0				hipblasDzasum_64	6.1.0		7.0.0				rocblas_dzasum_64
cublasDznrm2					hipblasDznrm2	3.0.0		7.0.0				rocblas_dznrm2
cublasDznrm2_64	12.0				hipblasDznrm2_64	6.1.0		7.0.0				rocblas_dznrm2_64
cublasDznrm2_v2					hipblasDznrm2	3.0.0		7.0.0				rocblas_dznrm2
cublasDznrm2_v2_64	12.0				hipblasDznrm2_64	6.1.0		7.0.0				rocblas_dznrm2_64
cublasIcamax					hipblasIcamax	3.0.0		7.0.0				rocblas_icamax
cublasIcamax_64	12.0				hipblasIcamax_64	6.1.0		7.0.0				rocblas_icamax_64
cublasIcamax_v2					hipblasIcamax	3.0.0		7.0.0				rocblas_icamax
cublasIcamax_v2_64	12.0				hipblasIcamax_64	6.1.0		7.0.0				rocblas_icamax_64
cublasIcamin					hipblasIcamin	3.0.0		7.0.0				rocblas_icamin
cublasIcamin_64	12.0				hipblasIcamin_64	6.1.0		7.0.0				rocblas_icamin_64
cublasIcamin_v2					hipblasIcamin	3.0.0		7.0.0				rocblas_icamin
cublasIcamin_v2_64	12.0				hipblasIcamin_64	6.1.0		7.0.0				rocblas_icamin_64
cublasIdamax					hipblasIdamax	1.8.2						rocblas_idamax
cublasIdamax_64	12.0				hipblasIdamax_64	6.1.0						rocblas_idamax_64
cublasIdamax_v2					hipblasIdamax	1.8.2						rocblas_idamax
cublasIdamax_v2_64	12.0				hipblasIdamax_64	6.1.0						rocblas_idamax_64
cublasIdamin					hipblasIdamin	3.0.0						rocblas_idamin
cublasIdamin_64	12.0				hipblasIdamin_64	6.1.0						rocblas_idamin_64
cublasIdamin_v2					hipblasIdamin	3.0.0						rocblas_idamin
cublasIdamin_v2_64	12.0				hipblasIdamin_64	6.1.0						rocblas_idamin_64
cublasIsamax					hipblasIsamax	1.8.2						rocblas_isamax
cublasIsamax_64	12.0				hipblasIsamax_64	6.1.0						rocblas_isamax_64
cublasIsamax_v2					hipblasIsamax	1.8.2						rocblas_isamax
cublasIsamax_v2_64	12.0				hipblasIsamax_64	6.1.0						rocblas_isamax_64
cublasIsamin					hipblasIsamin	3.0.0						rocblas_isamin
cublasIsamin_64	12.0				hipblasIsamin_64	6.1.0						rocblas_isamin_64
cublasIsamin_v2					hipblasIsamin	3.0.0						rocblas_isamin
cublasIsamin_v2_64	12.0				hipblasIsamin_64	6.1.0						rocblas_isamin_64
cublasIzamax					hipblasIzamax	3.0.0		7.0.0				rocblas_izamax
cublasIzamax_64	12.0				hipblasIzamax_64	6.1.0		7.0.0				rocblas_izamax_64
cublasIzamax_v2					hipblasIzamax	3.0.0		7.0.0				rocblas_izamax
cublasIzamax_v2_64	12.0				hipblasIzamax_64	6.1.0		7.0.0				rocblas_izamax_64
cublasIzamin					hipblasIzamin	3.0.0		7.0.0				rocblas_izamin
cublasIzamin_64	12.0				hipblasIzamin_64	6.1.0		7.0.0				rocblas_izamin_64
cublasIzamin_v2					hipblasIzamin	3.0.0		7.0.0				rocblas_izamin

Table 5 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E	ROC
cublasIzamin_v2_64	12.0				hipblasIzamin_64	6.1.0		7.0.0				rocblas_izamin_64
cublasNrm2Ex	8.0				hipblasNrm2Ex	4.1.0		7.0.0				rocblas_nrm2_ex
cublasNrm2Ex_64	12.0				hipblasNrm2Ex_64	6.2.0		7.0.0				rocblas_nrm2_ex_64
cublasSasum					hipblasSasum	1.8.2						rocblas_sasum
cublasSasum_64	12.0				hipblasSasum_64	6.1.0						rocblas_sasum_64
cublasSasum_v2					hipblasSasum	1.8.2						rocblas_sasum
cublasSasum_v2_64	12.0				hipblasSasum_64	6.1.0						rocblas_sasum_64
cublasSaxpy					hipblasSaxpy	1.8.2						rocblas_saxpy
cublasSaxpy_64	12.0				hipblasSaxpy_64	6.1.0						rocblas_saxpy_64
cublasSaxpy_v2					hipblasSaxpy	1.8.2						rocblas_saxpy
cublasSaxpy_v2_64	12.0				hipblasSaxpy_64	6.1.0						rocblas_saxpy_64
cublasScasum					hipblasScasum	3.0.0		7.0.0				rocblas_scasum
cublasScasum_64	12.0				hipblasScasum_64	6.1.0		7.0.0				rocblas_scasum_64
cublasScasum_v2					hipblasScasum	3.0.0		7.0.0				rocblas_scasum
cublasScasum_v2_64	12.0				hipblasScasum_64	6.1.0		7.0.0				rocblas_scasum_64
cublasScnrm2					hipblasScnrm2	3.0.0		7.0.0				rocblas_scnrm2
cublasScnrm2_64	12.0				hipblasScnrm2_64	6.1.0		7.0.0				rocblas_scnrm2_64
cublasScnrm2_v2					hipblasScnrm2	3.0.0		7.0.0				rocblas_scnrm2
cublasScnrm2_v2_64	12.0				hipblasScnrm2_64	6.1.0		7.0.0				rocblas_scnrm2_64
cublasScopy					hipblasScopy	1.8.2						rocblas_scopy
cublasScopy_64	12.0				hipblasScopy_64	6.1.0						rocblas_scopy_64
cublasScopy_v2					hipblasScopy	1.8.2						rocblas_scopy
cublasScopy_v2_64	12.0				hipblasScopy_64	6.1.0						rocblas_scopy_64
cublasSdot					hipblasSdot	3.0.0						rocblas_sdot
cublasSdot_64	12.0				hipblasSdot_64	6.1.0						rocblas_sdot_64
cublasSdot_v2					hipblasSdot	3.0.0						rocblas_sdot
cublasSdot_v2_64	12.0				hipblasSdot_64	6.1.0						rocblas_sdot_64
cublasSnrm2					hipblasSnrm2	1.8.2						rocblas_snrm2
cublasSnrm2_64	12.0				hipblasSnrm2_64	6.1.0						rocblas_snrm2_64
cublasSnrm2_v2					hipblasSnrm2	1.8.2						rocblas_snrm2
cublasSnrm2_v2_64	12.0				hipblasSnrm2_64	6.1.0						rocblas_snrm2_64
cublasSrot					hipblasSrot	3.0.0						rocblas_srot
cublasSrot_64	12.0				hipblasSrot_64	6.1.0						rocblas_srot_64
cublasSrot_v2					hipblasSrot	3.0.0						rocblas_srot
cublasSrot_v2_64	12.0				hipblasSrot_64	6.1.0						rocblas_srot_64
cublasSrotg					hipblasSrotg	3.0.0						rocblas_srotg
cublasSrotg_v2					hipblasSrotg	3.0.0						rocblas_srotg
cublasSrotm					hipblasSrotm	3.0.0						rocblas_srotm
cublasSrotm_64	12.0				hipblasSrotm_64	6.1.0						rocblas_srotm_64
cublasSrotm_v2					hipblasSrotm	3.0.0						rocblas_srotm
cublasSrotm_v2_64	12.0				hipblasSrotm_64	6.1.0						rocblas_srotm_64
cublasSrotmg					hipblasSrotmg	3.0.0						rocblas_srotmg
cublasSrotmg_v2					hipblasSrotmg	3.0.0						rocblas_srotmg
cublasSscal					hipblasSscal	1.8.2						rocblas_sscal
cublasSscal_64	12.0				hipblasSscal_64	6.1.0						rocblas_sscal_64
cublasSscal_v2					hipblasSscal	1.8.2						rocblas_sscal
cublasSscal_v2_64	12.0				hipblasSscal_64	6.1.0						rocblas_sscal_64
cublasSswap					hipblasSswap	3.0.0						rocblas_sswap
cublasSswap_64	12.0				hipblasSswap_64	6.1.0						rocblas_sswap_64
cublasSswap_v2					hipblasSswap	3.0.0						rocblas_sswap

C

Table 5 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E	ROC
cublasSswap_v2_64	12.0				hipblasSswap_64	6.1.0						rocblas_sswap_64
cublasZaxpy					hipblasZaxpy	3.0.0		7.0.0				rocblas_zaxpy
cublasZaxpy_64	12.0				hipblasZaxpy_64	6.1.0		7.0.0				rocblas_zaxpy_64
cublasZaxpy_v2					hipblasZaxpy	3.0.0		7.0.0				rocblas_zaxpy
cublasZaxpy_v2_64	12.0				hipblasZaxpy_64	6.1.0		7.0.0				rocblas_zaxpy_64
cublasZcopy					hipblasZcopy	3.0.0		7.0.0				rocblas_zcopy
cublasZcopy_64	12.0				hipblasZcopy_64	6.1.0		7.0.0				rocblas_zcopy_64
cublasZcopy_v2					hipblasZcopy	3.0.0		7.0.0				rocblas_zcopy
cublasZcopy_v2_64	12.0				hipblasZcopy_64	6.1.0		7.0.0				rocblas_zcopy_64
cublasZdotc					hipblasZdotc	3.0.0		7.0.0				rocblas_zdotc
cublasZdotc_64	12.0				hipblasZdotc_64	6.1.0		7.0.0				rocblas_zdotc_64
cublasZdotc_v2					hipblasZdotc	3.0.0		7.0.0				rocblas_zdotc
cublasZdotc_v2_64	12.0				hipblasZdotc_64	6.1.0		7.0.0				rocblas_zdotc_64
cublasZdotu					hipblasZdotu	3.0.0		7.0.0				rocblas_zdotu
cublasZdotu_64	12.0				hipblasZdotu_64	6.1.0		7.0.0				rocblas_zdotu_64
cublasZdotu_v2					hipblasZdotu	3.0.0		7.0.0				rocblas_zdotu
cublasZdotu_v2_64	12.0				hipblasZdotu_64	6.1.0		7.0.0				rocblas_zdotu_64
cublasZdrot					hipblasZdrot	3.0.0		7.0.0				rocblas_zdrot
cublasZdrot_64	12.0				hipblasZdrot_64	6.1.0		7.0.0				rocblas_zdrot_64
cublasZdrot_v2					hipblasZdrot	3.0.0		7.0.0				rocblas_zdrot
cublasZdrot_v2_64	12.0				hipblasZdrot_64	6.1.0		7.0.0				rocblas_zdrot_64
cublasZdscal					hipblasZdscal	3.0.0		7.0.0				rocblas_zdscal
cublasZdscal_64	12.0				hipblasZdscal_64	6.1.0		7.0.0				rocblas_zdscal_64
cublasZdscal_v2					hipblasZdscal	3.0.0		7.0.0				rocblas_zdscal
cublasZdscal_v2_64	12.0				hipblasZdscal_64	6.1.0		7.0.0				rocblas_zdscal_64
cublasZrot					hipblasZrot	3.0.0		7.0.0				rocblas_zrot
cublasZrot_64	12.0				hipblasZrot_64	6.1.0		7.0.0				rocblas_zrot_64
cublasZrot_v2					hipblasZrot	3.0.0		7.0.0				rocblas_zrot
cublasZrot_v2_64	12.0				hipblasZrot_64	6.1.0		7.0.0				rocblas_zrot_64
cublasZrotg					hipblasZrotg	3.0.0		7.0.0				rocblas_zrotg
cublasZrotg_v2					hipblasZrotg	3.0.0		7.0.0				rocblas_zrotg
cublasZscal					hipblasZscal	1.6.0		7.0.0				rocblas_zscal
cublasZscal_64	12.0				hipblasZscal_64	6.1.0		7.0.0				rocblas_zscal_64
cublasZscal_v2					hipblasZscal	1.6.0		7.0.0				rocblas_zscal
cublasZscal_v2_64	12.0				hipblasZscal_64	6.1.0		7.0.0				rocblas_zscal_64
cublasZswap					hipblasZswap	3.0.0		7.0.0				rocblas_zswap
cublasZswap_64	12.0				hipblasZswap_64	6.1.0		7.0.0				rocblas_zswap_64
cublasZswap_v2					hipblasZswap	3.0.0		7.0.0				rocblas_zswap
cublasZswap_v2_64	12.0				hipblasZswap_64	6.1.0		7.0.0				rocblas_zswap_64

12.1.6 6. CUBLAS Level-2 Function Reference

CUDA	A	D	C	R	HIP	A	D	C	R	U	E	ROC	A
cublasCgbmv					hipblasCgbmv	3.5.0		7.0.0				rocblas_cgbmv	3.5.0
cublasCgbmv_64	12.0				hipblasCgbmv_64	6.2.0		7.0.0				rocblas_cgbmv_64	6.2.0
cublasCgbmv_v2					hipblasCgbmv	3.5.0		7.0.0				rocblas_cgbmv	3.5.0
cublasCgbmv_v2_64	12.0				hipblasCgbmv_64	6.2.0		7.0.0				rocblas_cgbmv_64	6.2.0
cublasCgemv					hipblasCgemv	3.0.0		7.0.0				rocblas_cgemv	1.5.0

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Table 6 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E	ROC	A
cublasCgemv_64	12.0				hipblasCgemv_64	6.2.0		7.0.0				rocblas_cgemv_64	6.2.0
cublasCgemv_v2					hipblasCgemv	3.0.0		7.0.0				rocblas_cgemv	1.5.0
cublasCgemv_v2_64	12.0				hipblasCgemv_64	6.2.0		7.0.0				rocblas_cgemv_64	6.2.0
cublasCgerc					hipblasCgerc	3.5.0		7.0.0				rocblas_cgerc	3.5.0
cublasCgerc_64	12.0				hipblasCgerc_64	6.2.0		7.0.0				rocblas_cgerc_64	6.2.0
cublasCgerc_v2					hipblasCgerc	3.5.0		7.0.0				rocblas_cgerc	3.5.0
cublasCgerc_v2_64	12.0				hipblasCgerc_64	6.2.0		7.0.0				rocblas_cgerc_64	6.2.0
cublasCgeru					hipblasCgeru	3.5.0		7.0.0				rocblas_cgeru	3.5.0
cublasCgeru_64	12.0				hipblasCgeru_64	6.2.0		7.0.0				rocblas_cgeru_64	6.2.0
cublasCgeru_v2					hipblasCgeru	3.5.0		7.0.0				rocblas_cgeru	3.5.0
cublasCgeru_v2_64	12.0				hipblasCgeru_64	6.2.0		7.0.0				rocblas_cgeru_64	6.2.0
cublasChbmv					hipblasChbmv	3.5.0		7.0.0				rocblas_chbmv	3.5.0
cublasChbmv_64	12.0				hipblasChbmv_64	6.2.0		7.0.0				rocblas_chbmv_64	6.2.0
cublasChbmv_v2					hipblasChbmv	3.5.0		7.0.0				rocblas_chbmv	3.5.0
cublasChbmv_v2_64	12.0				hipblasChbmv_64	6.2.0		7.0.0				rocblas_chbmv_64	6.2.0
cublasChemv					hipblasChemv	3.5.0		7.0.0				rocblas_chemv	1.5.0
cublasChemv_64	12.0				hipblasChemv_64	6.2.0		7.0.0				rocblas_chemv_64	6.2.0
cublasChemv_v2					hipblasChemv	3.5.0		7.0.0				rocblas_chemv	1.5.0
cublasChemv_v2_64	12.0				hipblasChemv_64	6.2.0		7.0.0				rocblas_chemv_64	6.2.0
cublasCher					hipblasCher	3.5.0		7.0.0				rocblas_cher	3.5.0
cublasCher2					hipblasCher2	3.5.0		7.0.0				rocblas_cher2	3.5.0
cublasCher2_64	12.0				hipblasCher2_64	6.2.0		7.0.0				rocblas_cher2_64	6.2.0
cublasCher2_v2					hipblasCher2	3.5.0		7.0.0				rocblas_cher2	3.5.0
cublasCher2_v2_64	12.0				hipblasCher2_64	6.2.0		7.0.0				rocblas_cher2_64	6.2.0
cublasCher_64	12.0				hipblasCher_64	6.2.0		7.0.0				rocblas_cher_64	6.2.0
cublasCher_v2					hipblasCher	3.5.0		7.0.0				rocblas_cher	3.5.0
cublasCher_v2_64	12.0				hipblasCher_64	6.2.0		7.0.0				rocblas_cher_64	6.2.0
cublasChpmv					hipblasChpmv	3.5.0		7.0.0				rocblas_chpmv	3.5.0
cublasChpmv_64	12.0				hipblasChpmv_64	6.2.0		7.0.0				rocblas_chpmv_64	6.2.0
cublasChpmv_v2					hipblasChpmv	3.5.0		7.0.0				rocblas_chpmv	3.5.0
cublasChpmv_v2_64	12.0				hipblasChpmv_64	6.2.0		7.0.0				rocblas_chpmv_64	6.2.0
cublasChpr					hipblasChpr	3.5.0		7.0.0				rocblas_chpr	3.5.0
cublasChpr2					hipblasChpr2	3.5.0		7.0.0				rocblas_chpr2	3.5.0
cublasChpr2_64	12.0				hipblasChpr2_64	6.2.0		7.0.0				rocblas_chpr2_64	6.2.0
cublasChpr2_v2					hipblasChpr2	3.5.0		7.0.0				rocblas_chpr2	3.5.0
cublasChpr2_v2_64	12.0				hipblasChpr2_64	6.2.0		7.0.0				rocblas_chpr2_64	6.2.0
cublasChpr_64	12.0				hipblasChpr_64	6.2.0		7.0.0				rocblas_chpr_64	6.2.0
cublasChpr_v2					hipblasChpr	3.5.0		7.0.0				rocblas_chpr	3.5.0
cublasChpr_v2_64	12.0				hipblasChpr_64	6.2.0		7.0.0				rocblas_chpr_64	6.2.0
cublasCsymv					hipblasCsymv	3.5.0		7.0.0				rocblas_csymv	3.5.0
cublasCsymv_64	12.0				hipblasCsymv_64	6.2.0		7.0.0				rocblas_csymv_64	6.2.0
cublasCsymv_v2					hipblasCsymv	3.5.0		7.0.0				rocblas_csymv	3.5.0
cublasCsymv_v2_64	12.0				hipblasCsymv_64	6.2.0		7.0.0				rocblas_csymv_64	6.2.0
cublasCsyr					hipblasCsyr	3.5.0		7.0.0				rocblas_csyr	1.7.1
cublasCsyr2					hipblasCsyr2	3.5.0		7.0.0				rocblas_csyr2	3.5.0
cublasCsyr2_64	12.0				hipblasCsyr2_64	6.2.0		7.0.0				rocblas_csyr2_64	6.2.0
cublasCsyr2_v2					hipblasCsyr2	3.5.0		7.0.0				rocblas_csyr2	3.5.0
cublasCsyr2_v2_64	12.0				hipblasCsyr2_64	6.2.0		7.0.0				rocblas_csyr2_64	6.2.0
cublasCsyr_64	12.0				hipblasCsyr_64	6.2.0		7.0.0				rocblas_csyr_64	6.2.0
cublasCsyr_v2					hipblasCsyr	3.5.0		7.0.0				rocblas_csyr	1.7.1

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Table 6 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E	ROC	A
cublasCsyr_v2_64	12.0				hipblasCsyr_64	6.2.0		7.0.0				rocblas_csyr_64	6.2.0
cublasCtbmv					hipblasCtbmv	3.5.0		7.0.0				rocblas_ctbmv	3.5.0
cublasCtbmv_64	12.0				hipblasCtbmv_64	6.2.0		7.0.0				rocblas_ctbmv_64	6.2.0
cublasCtbmv_v2					hipblasCtbmv	3.5.0		7.0.0				rocblas_ctbmv	3.5.0
cublasCtbmv_v2_64	12.0				hipblasCtbmv_64	6.2.0		7.0.0				rocblas_ctbmv_64	6.2.0
cublasCtbsv					hipblasCtbsv	3.6.0		7.0.0				rocblas_ctbsv	3.5.0
cublasCtbsv_64	12.0				hipblasCtbsv_64	6.2.0		7.0.0				rocblas_ctbsv_64	6.2.0
cublasCtbsv_v2					hipblasCtbsv	3.6.0		7.0.0				rocblas_ctbsv	3.5.0
cublasCtbsv_v2_64	12.0				hipblasCtbsv_64	6.2.0		7.0.0				rocblas_ctbsv_64	6.2.0
cublasCtpmv					hipblasCtpmv	3.5.0		7.0.0				rocblas_ctpmv	3.5.0
cublasCtpmv_64	12.0				hipblasCtpmv_64	6.2.0		7.0.0				rocblas_ctpmv_64	6.2.0
cublasCtpmv_v2					hipblasCtpmv	3.5.0		7.0.0				rocblas_ctpmv	3.5.0
cublasCtpmv_v2_64	12.0				hipblasCtpmv_64	6.2.0		7.0.0				rocblas_ctpmv_64	6.2.0
cublasCtpsv					hipblasCtpsv	3.5.0		7.0.0				rocblas_ctpsv	3.5.0
cublasCtpsv_64	12.0				hipblasCtpsv_64	6.2.0		7.0.0				rocblas_ctpsv_64	6.2.0
cublasCtpsv_v2					hipblasCtpsv	3.5.0		7.0.0				rocblas_ctpsv	3.5.0
cublasCtpsv_v2_64	12.0				hipblasCtpsv_64	6.2.0		7.0.0				rocblas_ctpsv_64	6.2.0
cublasCtrmv					hipblasCtrmv	3.5.0		7.0.0				rocblas_ctrmv	3.5.0
cublasCtrmv_64	12.0				hipblasCtrmv_64	6.2.0		7.0.0				rocblas_ctrmv_64	6.2.0
cublasCtrmv_v2					hipblasCtrmv	3.5.0		7.0.0				rocblas_ctrmv	3.5.0
cublasCtrmv_v2_64	12.0				hipblasCtrmv_64	6.2.0		7.0.0				rocblas_ctrmv_64	6.2.0
cublasCtrsv					hipblasCtrsv	3.5.0		7.0.0				rocblas_ctrsv	3.5.0
cublasCtrsv_64	12.0				hipblasCtrsv_64	6.2.0		7.0.0				rocblas_ctrsv_64	6.2.0
cublasCtrsv_v2					hipblasCtrsv	3.5.0		7.0.0				rocblas_ctrsv	3.5.0
cublasCtrsv_v2_64	12.0				hipblasCtrsv_64	6.2.0		7.0.0				rocblas_ctrsv_64	6.2.0
cublasDgbmv					hipblasDgbmv	3.5.0						rocblas_dgbmv	3.5.0
cublasDgbmv_64	12.0				hipblasDgbmv_64	6.2.0						rocblas_dgbmv_64	6.2.0
cublasDgbmv_v2					hipblasDgbmv	3.5.0						rocblas_dgbmv	3.5.0
cublasDgbmv_v2_64	12.0				hipblasDgbmv_64	6.2.0						rocblas_dgbmv_64	6.2.0
cublasDgemv					hipblasDgemv	1.8.2						rocblas_dgemv	1.5.0
cublasDgemv_64	12.0				hipblasDgemv_64	6.2.0						rocblas_dgemv_64	6.2.0
cublasDgemv_v2					hipblasDgemv	1.8.2						rocblas_dgemv	1.5.0
cublasDgemv_v2_64	12.0				hipblasDgemv_64	6.2.0						rocblas_dgemv_64	6.2.0
cublasDger					hipblasDger	1.8.2						rocblas_dger	1.5.0
cublasDger_64	12.0				hipblasDger_64	6.2.0						rocblas_dger_64	6.2.0
cublasDger_v2					hipblasDger	1.8.2						rocblas_dger	1.5.0
cublasDger_v2_64	12.0				hipblasDger_64	6.2.0						rocblas_dger_64	6.2.0
cublasDsbmv					hipblasDsbmv	3.5.0						rocblas_dsbmv	3.5.0
cublasDsbmv_64	12.0				hipblasDsbmv_64	6.2.0						rocblas_dsbmv_64	6.2.0
cublasDsbmv_v2					hipblasDsbmv	3.5.0						rocblas_dsbmv	3.5.0
cublasDsbmv_v2_64	12.0				hipblasDsbmv_64	6.2.0						rocblas_dsbmv_64	6.2.0
cublasDspmv					hipblasDspmv	3.5.0						rocblas_dspmv	3.5.0
cublasDspmv_64	12.0				hipblasDspmv_64	6.2.0						rocblas_dspmv_64	6.2.0
cublasDspmv_v2					hipblasDspmv	3.5.0						rocblas_dspmv	3.5.0
cublasDspmv_v2_64	12.0				hipblasDspmv_64	6.2.0						rocblas_dspmv_64	6.2.0
cublasDspr					hipblasDspr	3.5.0						rocblas_dspr	3.5.0
cublasDspr2					hipblasDspr2	3.5.0						rocblas_dspr2	3.5.0
cublasDspr2_64	12.0				hipblasDspr2_64	6.2.0						rocblas_dspr2_64	6.2.0
cublasDspr2_v2					hipblasDspr2	3.5.0						rocblas_dspr2	3.5.0
cublasDspr2_v2_64	12.0				hipblasDspr2_64	6.2.0						rocblas_dspr2_64	6.2.0

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Table 6 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E	ROC	A
cublasDspr_64	12.0				hipblasDspr_64	6.2.0						rocblas_dspr_64	6.2.0
cublasDspr_v2					hipblasDspr	3.5.0						rocblas_dspr	3.5.0
cublasDspr_v2_64	12.0				hipblasDspr_64	6.2.0						rocblas_dspr_64	6.2.0
cublasDsymv					hipblasDsymv	3.5.0						rocblas_dsymv	1.5.0
cublasDsymv_64	12.0				hipblasDsymv_64	6.2.0						rocblas_dsymv_64	6.2.0
cublasDsymv_v2					hipblasDsymv	3.5.0						rocblas_dsymv	1.5.0
cublasDsymv_v2_64	12.0				hipblasDsymv_64	6.2.0						rocblas_dsymv_64	6.2.0
cublasDsyr					hipblasDsyr	3.0.0						rocblas_dsyr	1.7.1
cublasDsyr2					hipblasDsyr2	3.5.0						rocblas_dsyr2	3.5.0
cublasDsyr2_64	12.0				hipblasDsyr2_64	6.2.0						rocblas_dsyr2_64	6.2.0
cublasDsyr2_v2					hipblasDsyr2	3.5.0						rocblas_dsyr2	3.5.0
cublasDsyr2_v2_64	12.0				hipblasDsyr2_64	6.2.0						rocblas_dsyr2_64	6.2.0
cublasDsyr_64	12.0				hipblasDsyr_64	6.2.0						rocblas_dsyr_64	6.2.0
cublasDsyr_v2					hipblasDsyr	3.0.0						rocblas_dsyr	1.7.1
cublasDsyr_v2_64	12.0				hipblasDsyr_64	6.2.0						rocblas_dsyr_64	6.2.0
cublasDtbmv					hipblasDtbmv	3.5.0						rocblas_dtbmv	3.5.0
cublasDtbmv_64	12.0				hipblasDtbmv_64	6.2.0						rocblas_dtbmv_64	6.2.0
cublasDtbmv_v2					hipblasDtbmv	3.5.0						rocblas_dtbmv	3.5.0
cublasDtbmv_v2_64	12.0				hipblasDtbmv_64	6.2.0						rocblas_dtbmv_64	6.2.0
cublasDtbsv					hipblasDtbsv	3.6.0						rocblas_dtbsv	3.5.0
cublasDtbsv_64	12.0				hipblasDtbsv_64	6.2.0						rocblas_dtbsv_64	6.2.0
cublasDtbsv_v2					hipblasDtbsv	3.6.0						rocblas_dtbsv	3.5.0
cublasDtbsv_v2_64	12.0				hipblasDtbsv_64	6.2.0						rocblas_dtbsv_64	6.2.0
cublasDtpmv					hipblasDtpmv	3.5.0						rocblas_dtpmv	3.5.0
cublasDtpmv_64	12.0				hipblasDtpmv_64	6.2.0						rocblas_dtpmv_64	6.2.0
cublasDtpmv_v2					hipblasDtpmv	3.5.0						rocblas_dtpmv	3.5.0
cublasDtpmv_v2_64	12.0				hipblasDtpmv_64	6.2.0						rocblas_dtpmv_64	6.2.0
cublasDtpsv					hipblasDtpsv	3.5.0						rocblas_dtpsv	3.5.0
cublasDtpsv_64	12.0				hipblasDtpsv_64	6.2.0						rocblas_dtpsv_64	6.2.0
cublasDtpsv_v2					hipblasDtpsv	3.5.0						rocblas_dtpsv	3.5.0
cublasDtpsv_v2_64	12.0				hipblasDtpsv_64	6.2.0						rocblas_dtpsv_64	6.2.0
cublasDtrmv					hipblasDtrmv	3.5.0						rocblas_dtrmv	3.5.0
cublasDtrmv_64	12.0				hipblasDtrmv_64	6.2.0						rocblas_dtrmv_64	6.2.0
cublasDtrmv_v2					hipblasDtrmv	3.5.0						rocblas_dtrmv	3.5.0
cublasDtrmv_v2_64	12.0				hipblasDtrmv_64	6.2.0						rocblas_dtrmv_64	6.2.0
cublasDtrsv					hipblasDtrsv	3.0.0						rocblas_dtrsv	3.5.0
cublasDtrsv_64	12.0				hipblasDtrsv_64	6.2.0						rocblas_dtrsv_64	6.2.0
cublasDtrsv_v2					hipblasDtrsv	3.0.0						rocblas_dtrsv	3.5.0
cublasDtrsv_v2_64	12.0				hipblasDtrsv_64	6.2.0						rocblas_dtrsv_64	6.2.0
cublasSgbmv					hipblasSgbmv	3.5.0						rocblas_sgbmv	3.5.0
cublasSgbmv_64	12.0				hipblasSgbmv_64	6.2.0						rocblas_sgbmv_64	6.2.0
cublasSgbmv_v2					hipblasSgbmv	3.5.0						rocblas_sgbmv	3.5.0
cublasSgbmv_v2_64	12.0				hipblasSgbmv_64	6.2.0						rocblas_sgbmv_64	6.2.0
cublasSgemv					hipblasSgemv	1.8.2						rocblas_sgemv	1.5.0
cublasSgemv_64	12.0				hipblasSgemv_64	6.2.0						rocblas_sgemv_64	6.2.0
cublasSgemv_v2					hipblasSgemv	1.8.2						rocblas_sgemv	1.5.0
cublasSgemv_v2_64	12.0				hipblasSgemv_64	6.2.0						rocblas_sgemv_64	6.2.0
cublasSger					hipblasSger	1.8.2						rocblas_sger	1.5.0
cublasSger_64	12.0				hipblasSger_64	6.2.0						rocblas_sger_64	6.2.0
cublasSger_v2					hipblasSger	1.8.2						rocblas_sger	1.5.0

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Table 6 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E	ROC	A
cublasSger_v2_64	12.0				hipblasSger_64	6.2.0						rocblas_sger_64	6.2.0
cublasSsbmv					hipblasSsbmv	3.5.0						rocblas_ssbmv	3.5.0
cublasSsbmv_64	12.0				hipblasSsbmv_64	6.2.0						rocblas_ssbmv_64	6.2.0
cublasSsbmv_v2					hipblasSsbmv	3.5.0						rocblas_ssbmv	3.5.0
cublasSsbmv_v2_64	12.0				hipblasSsbmv_64	6.2.0						rocblas_ssbmv_64	6.2.0
cublasSspmv					hipblasSspmv	3.5.0						rocblas_sspmv	3.5.0
cublasSspmv_64	12.0				hipblasSspmv_64	6.2.0						rocblas_sspmv_64	6.2.0
cublasSspmv_v2					hipblasSspmv	3.5.0						rocblas_sspmv	3.5.0
cublasSspmv_v2_64	12.0				hipblasSspmv_64	6.2.0						rocblas_sspmv_64	6.2.0
cublasSspr					hipblasSspr	3.5.0						rocblas_sspr	3.5.0
cublasSspr2					hipblasSspr2	3.5.0						rocblas_sspr2	3.5.0
cublasSspr2_64	12.0				hipblasSspr2_64	6.2.0						rocblas_sspr2_64	6.2.0
cublasSspr2_v2					hipblasSspr2	3.5.0						rocblas_sspr2	3.5.0
cublasSspr2_v2_64	12.0				hipblasSspr2_64	6.2.0						rocblas_sspr2_64	6.2.0
cublasSspr_64	12.0				hipblasSspr_64	6.2.0						rocblas_sspr_64	6.2.0
cublasSspr_v2					hipblasSspr	3.5.0						rocblas_sspr	3.5.0
cublasSspr_v2_64	12.0				hipblasSspr_64	6.2.0						rocblas_sspr_64	6.2.0
cublasSsymv					hipblasSsymv	3.5.0						rocblas_ssymv	1.5.0
cublasSsymv_64	12.0				hipblasSsymv_64	6.2.0						rocblas_ssymv_64	6.2.0
cublasSsymv_v2					hipblasSsymv	3.5.0						rocblas_ssymv	1.5.0
cublasSsymv_v2_64	12.0				hipblasSsymv_64	6.2.0						rocblas_ssymv_64	6.2.0
cublasSsyr					hipblasSsyr	3.0.0						rocblas_ssyr	1.7.1
cublasSsyr2					hipblasSsyr2	3.5.0						rocblas_ssyr2	3.5.0
cublasSsyr2_64	12.0				hipblasSsyr2_64	6.2.0						rocblas_ssyr2_64	6.2.0
cublasSsyr2_v2					hipblasSsyr2	3.5.0						rocblas_ssyr2	3.5.0
cublasSsyr2_v2_64	12.0				hipblasSsyr2_64	6.2.0						rocblas_ssyr2_64	6.2.0
cublasSsyr_64	12.0				hipblasSsyr_64	6.2.0						rocblas_ssyr_64	6.2.0
cublasSsyr_v2					hipblasSsyr	3.0.0						rocblas_ssyr	1.7.1
cublasSsyr_v2_64	12.0				hipblasSsyr_64	6.2.0						rocblas_ssyr_64	6.2.0
cublasStbmv					hipblasStbmv	3.5.0						rocblas_stbmv	3.5.0
cublasStbmv_64	12.0				hipblasStbmv_64	6.2.0						rocblas_stbmv_64	6.2.0
cublasStbmv_v2					hipblasStbmv	3.5.0						rocblas_stbmv	3.5.0
cublasStbmv_v2_64	12.0				hipblasStbmv_64	6.2.0						rocblas_stbmv_64	6.2.0
cublasStbsv					hipblasStbsv	3.6.0						rocblas_stbsv	3.5.0
cublasStbsv_64	12.0				hipblasStbsv_64	6.2.0						rocblas_stbsv_64	6.2.0
cublasStbsv_v2					hipblasStbsv	3.6.0						rocblas_stbsv	3.5.0
cublasStbsv_v2_64	12.0				hipblasStbsv_64	6.2.0						rocblas_stbsv_64	6.2.0
cublasStpmv					hipblasStpmv	3.5.0						rocblas_stpmv	3.5.0
cublasStpmv_64	12.0				hipblasStpmv_64	6.2.0						rocblas_stpmv_64	6.2.0
cublasStpmv_v2					hipblasStpmv	3.5.0						rocblas_stpmv	3.5.0
cublasStpmv_v2_64	12.0				hipblasStpmv_64	6.2.0						rocblas_stpmv_64	6.2.0
cublasStpsv					hipblasStpsv	3.5.0						rocblas_stpsv	3.5.0
cublasStpsv_64	12.0				hipblasStpsv_64	6.2.0						rocblas_stpsv_64	6.2.0
cublasStpsv_v2					hipblasStpsv	3.5.0						rocblas_stpsv	3.5.0
cublasStpsv_v2_64	12.0				hipblasStpsv_64	6.2.0						rocblas_stpsv_64	6.2.0
cublasStrmv					hipblasStrmv	3.5.0						rocblas_strmv	3.5.0
cublasStrmv_64	12.0				hipblasStrmv_64	6.2.0						rocblas_strmv_64	6.2.0
cublasStrmv_v2					hipblasStrmv	3.5.0						rocblas_strmv	3.5.0
cublasStrmv_v2_64	12.0				hipblasStrmv_64	6.2.0						rocblas_strmv_64	6.2.0
cublasStrsv					hipblasStrsv	3.0.0						rocblas_strsv	3.5.0

contin

Table 6 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E	ROC	A
cublasStrsv_64	12.0				hipblasStrsv_64	6.2.0						rocblas_strsv_64	6.2.0
cublasStrsv_v2					hipblasStrsv	3.0.0						rocblas_strsv	3.5.0
cublasStrsv_v2_64	12.0				hipblasStrsv_64	6.2.0						rocblas_strsv_64	6.2.0
cublasZgbmv					hipblasZgbmv	3.5.0		7.0.0				rocblas_zgbmv	3.5.0
cublasZgbmv_64	12.0				hipblasZgbmv_64	6.2.0		7.0.0				rocblas_zgbmv_64	6.2.0
cublasZgbmv_v2					hipblasZgbmv	3.5.0		7.0.0				rocblas_zgbmv	3.5.0
cublasZgbmv_v2_64	12.0				hipblasZgbmv_64	6.2.0		7.0.0				rocblas_zgbmv_64	6.2.0
cublasZgemv					hipblasZgemv	3.0.0		7.0.0				rocblas_zgemv	1.5.0
cublasZgemv_64	12.0				hipblasZgemv_64	6.2.0		7.0.0				rocblas_zgemv_64	6.2.0
cublasZgemv_v2					hipblasZgemv	3.0.0		7.0.0				rocblas_zgemv	1.5.0
cublasZgemv_v2_64	12.0				hipblasZgemv_64	6.2.0		7.0.0				rocblas_zgemv_64	6.2.0
cublasZgerc					hipblasZgerc	3.5.0		7.0.0				rocblas_zgerc	3.5.0
cublasZgerc_64	12.0				hipblasZgerc_64	6.2.0		7.0.0				rocblas_zgerc_64	6.2.0
cublasZgerc_v2					hipblasZgerc	3.5.0		7.0.0				rocblas_zgerc	3.5.0
cublasZgerc_v2_64	12.0				hipblasZgerc_64	6.2.0		7.0.0				rocblas_zgerc_64	6.2.0
cublasZgeru					hipblasZgeru	3.5.0		7.0.0				rocblas_zgeru	3.5.0
cublasZgeru_64	12.0				hipblasZgeru_64	6.2.0		7.0.0				rocblas_zgeru_64	6.2.0
cublasZgeru_v2					hipblasZgeru	3.5.0		7.0.0				rocblas_zgeru	3.5.0
cublasZgeru_v2_64	12.0				hipblasZgeru_64	6.2.0		7.0.0				rocblas_zgeru_64	6.2.0
cublasZhbmv					hipblasZhbmv	3.5.0		7.0.0				rocblas_zhbmv	3.5.0
cublasZhbmv_64	12.0				hipblasZhbmv_64	6.2.0		7.0.0				rocblas_zhbmv_64	6.2.0
cublasZhbmv_v2					hipblasZhbmv	3.5.0		7.0.0				rocblas_zhbmv	3.5.0
cublasZhbmv_v2_64	12.0				hipblasZhbmv_64	6.2.0		7.0.0				rocblas_zhbmv_64	6.2.0
cublasZhemv					hipblasZhemv	3.5.0		7.0.0				rocblas_zhemv	1.5.0
cublasZhemv_64	12.0				hipblasZhemv_64	6.2.0		7.0.0				rocblas_zhemv_64	6.2.0
cublasZhemv_v2					hipblasZhemv	3.5.0		7.0.0				rocblas_zhemv	1.5.0
cublasZhemv_v2_64	12.0				hipblasZhemv_64	6.2.0		7.0.0				rocblas_zhemv_64	6.2.0
cublasZher					hipblasZher	3.5.0		7.0.0				rocblas_zher	3.5.0
cublasZher2					hipblasZher2	3.5.0		7.0.0				rocblas_zher2	3.5.0
cublasZher2_64	12.0				hipblasZher2_64	6.2.0		7.0.0				rocblas_zher2_64	6.2.0
cublasZher2_v2					hipblasZher2	3.5.0		7.0.0				rocblas_zher2	3.5.0
cublasZher2_v2_64	12.0				hipblasZher2_64	6.2.0		7.0.0				rocblas_zher2_64	6.2.0
cublasZher_64	12.0				hipblasZher_64	6.2.0		7.0.0				rocblas_zher_64	6.2.0
cublasZher_v2					hipblasZher	3.5.0		7.0.0				rocblas_zher	3.5.0
cublasZher_v2_64	12.0				hipblasZher_64	6.2.0		7.0.0				rocblas_zher_64	6.2.0
cublasZhpmv					hipblasZhpmv	3.5.0		7.0.0				rocblas_zhpmv	3.5.0
cublasZhpmv_64	12.0				hipblasZhpmv_64	6.2.0		7.0.0				rocblas_zhpmv_64	6.2.0
cublasZhpmv_v2					hipblasZhpmv	3.5.0		7.0.0				rocblas_zhpmv	3.5.0
cublasZhpmv_v2_64	12.0				hipblasZhpmv_64	6.2.0		7.0.0				rocblas_zhpmv_64	6.2.0
cublasZhpr					hipblasZhpr	3.5.0		7.0.0				rocblas_zhpr	3.5.0
cublasZhpr2					hipblasZhpr2	3.5.0		7.0.0				rocblas_zhpr2	3.5.0
cublasZhpr2_64	12.0				hipblasZhpr2_64	6.2.0		7.0.0				rocblas_zhpr2_64	6.2.0
cublasZhpr2_v2					hipblasZhpr2	3.5.0		7.0.0				rocblas_zhpr2	3.5.0
cublasZhpr2_v2_64	12.0				hipblasZhpr2_64	6.2.0		7.0.0				rocblas_zhpr2_64	6.2.0
cublasZhpr_64	12.0				hipblasZhpr_64	6.2.0		7.0.0				rocblas_zhpr_64	6.2.0
cublasZhpr_v2					hipblasZhpr	3.5.0		7.0.0				rocblas_zhpr	3.5.0
cublasZhpr_v2_64	12.0				hipblasZhpr_64	6.2.0		7.0.0				rocblas_zhpr_64	6.2.0
cublasZsymv					hipblasZsymv	3.5.0		7.0.0				rocblas_zsymv	3.5.0
cublasZsymv_64	12.0				hipblasZsymv_64	6.2.0		7.0.0				rocblas_zsymv_64	6.2.0
cublasZsymv_v2					hipblasZsymv	3.5.0		7.0.0				rocblas_zsymv	3.5.0

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Table 6 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U	E	ROC	A
cublasZsymv_v2_64	12.0				hipblasZsymv_64	6.2.0		7.0.0				rocblas_zsymv_64	6.2.0
cublasZsyr					hipblasZsyr	3.5.0		7.0.0				rocblas_zsyr	1.7.1
cublasZsyr2					hipblasZsyr2	3.5.0		7.0.0				rocblas_zsyr2	3.5.0
cublasZsyr2_64	12.0				hipblasZsyr2_64	6.2.0		7.0.0				rocblas_zsyr2_64	6.2.0
cublasZsyr2_v2					hipblasZsyr2	3.5.0		7.0.0				rocblas_zsyr2	3.5.0
cublasZsyr2_v2_64	12.0				hipblasZsyr2_64	6.2.0		7.0.0				rocblas_zsyr2_64	6.2.0
cublasZsyr_64	12.0				hipblasZsyr_64	6.2.0		7.0.0				rocblas_zsyr_64	6.2.0
cublasZsyr_v2					hipblasZsyr	3.5.0		7.0.0				rocblas_zsyr	1.7.1
cublasZsyr_v2_64	12.0				hipblasZsyr_64	6.2.0		7.0.0				rocblas_zsyr_64	6.2.0
cublasZtbmv					hipblasZtbmv	3.5.0		7.0.0				rocblas_ztbmv	3.5.0
cublasZtbmv_64	12.0				hipblasZtbmv_64	6.2.0		7.0.0				rocblas_ztbmv_64	6.2.0
cublasZtbmv_v2					hipblasZtbmv	3.5.0		7.0.0				rocblas_ztbmv	3.5.0
cublasZtbmv_v2_64	12.0				hipblasZtbmv_64	6.2.0		7.0.0				rocblas_ztbmv_64	6.2.0
cublasZtbsv					hipblasZtbsv	3.6.0		7.0.0				rocblas_ztbsv	3.5.0
cublasZtbsv_64	12.0				hipblasZtbsv_64	6.2.0		7.0.0				rocblas_ztbsv_64	6.2.0
cublasZtbsv_v2					hipblasZtbsv	3.6.0		7.0.0				rocblas_ztbsv	3.5.0
cublasZtbsv_v2_64	12.0				hipblasZtbsv_64	6.2.0		7.0.0				rocblas_ztbsv_64	6.2.0
cublasZtpmv					hipblasZtpmv	3.5.0		7.0.0				rocblas_ztpmv	3.5.0
cublasZtpmv_64	12.0				hipblasZtpmv_64	6.2.0		7.0.0				rocblas_ztpmv_64	6.2.0
cublasZtpmv_v2					hipblasZtpmv	3.5.0		7.0.0				rocblas_ztpmv	3.5.0
cublasZtpmv_v2_64	12.0				hipblasZtpmv_64	6.2.0		7.0.0				rocblas_ztpmv_64	6.2.0
cublasZtpsv					hipblasZtpsv	3.5.0		7.0.0				rocblas_ztpsv	3.5.0
cublasZtpsv_64	12.0				hipblasZtpsv_64	6.2.0		7.0.0				rocblas_ztpsv_64	6.2.0
cublasZtpsv_v2					hipblasZtpsv	3.5.0		7.0.0				rocblas_ztpsv	3.5.0
cublasZtpsv_v2_64	12.0				hipblasZtpsv_64	6.2.0		7.0.0				rocblas_ztpsv_64	6.2.0
cublasZtrmv					hipblasZtrmv	3.5.0		7.0.0				rocblas_ztrmv	3.5.0
cublasZtrmv_64	12.0				hipblasZtrmv_64	6.2.0		7.0.0				rocblas_ztrmv_64	6.2.0
cublasZtrmv_v2					hipblasZtrmv	3.5.0		7.0.0				rocblas_ztrmv	3.5.0
cublasZtrmv_v2_64	12.0				hipblasZtrmv_64	6.2.0		7.0.0				rocblas_ztrmv_64	6.2.0
cublasZtrsv					hipblasZtrsv	3.5.0		7.0.0				rocblas_ztrsv	3.5.0
cublasZtrsv_64	12.0				hipblasZtrsv_64	6.2.0		7.0.0				rocblas_ztrsv_64	6.2.0
cublasZtrsv_v2					hipblasZtrsv	3.5.0		7.0.0				rocblas_ztrsv	3.5.0
cublasZtrsv_v2_64	12.0				hipblasZtrsv_64	6.2.0		7.0.0				rocblas_ztrsv_64	6.2.0

12.1.7 7. CUBLAS Level-3 Function Reference

CUDA	A	D	C	R	HIP	A	D	C	R	U
cublasCgemm					hipblasCgemm	1.6.0		7.0.0		
cublasCgemm3m	8.0									
cublasCgemm3mBatched	8.0									
cublasCgemm3mBatched_64	12.0									
cublasCgemm3mEx	8.0									
cublasCgemm3mEx_64	12.0									
cublasCgemm3mStridedBatched	8.0									
cublasCgemm3mStridedBatched_64	12.0									
cublasCgemm3m_64	12.0									
cublasCgemmBatched					hipblasCgemmBatched	1.6.0		7.0.0		
cublasCgemmBatched_64	12.0				hipblasCgemmBatched_64	6.3.0		7.0.0		

Table 7 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U
cublasCgemmStridedBatched	8.0				hipblasCgemmStridedBatched	3.0.0		7.0.0		
cublasCgemmStridedBatched_64	12.0				hipblasCgemmStridedBatched_64	6.3.0		7.0.0		
cublasCgemm_64	12.0				hipblasCgemm_64	6.3.0		7.0.0		
cublasCgemm_v2					hipblasCgemm	1.6.0		7.0.0		
cublasCgemm_v2_64	12.0				hipblasCgemm_64	6.3.0		7.0.0		
cublasCgemvBatched	11.6				hipblasCgemvBatched	3.0.0		7.0.0		
cublasCgemvBatched_64	12.0				hipblasCgemvBatched_64	6.2.0		7.0.0		
cublasCgemvStridedBatched	11.6				hipblasCgemvStridedBatched	3.0.0		7.0.0		
cublasCgemvStridedBatched_64	12.0				hipblasCgemvStridedBatched_64	6.2.0		7.0.0		
cublasChemm					hipblasChemm	3.6.0		7.0.0		
cublasChemm_64	12.0				hipblasChemm_64	6.3.0		7.0.0		
cublasChemm_v2					hipblasChemm	3.6.0		7.0.0		
cublasChemm_v2_64	12.0				hipblasChemm_64	6.3.0		7.0.0		
cublasCher2k					hipblasCher2k	3.5.0		7.0.0		
cublasCher2k_64	12.0				hipblasCher2k_64	6.3.0		7.0.0		
cublasCher2k_v2					hipblasCher2k	3.5.0		7.0.0		
cublasCher2k_v2_64	12.0				hipblasCher2k_64	6.3.0		7.0.0		
cublasCherk					hipblasCherk	3.5.0		7.0.0		
cublasCherk_64	12.0				hipblasCherk_64	6.3.0		7.0.0		
cublasCherk_v2					hipblasCherk	3.5.0		7.0.0		
cublasCherk_v2_64	12.0				hipblasCherk_64	6.3.0		7.0.0		
cublasCherkx					hipblasCherkx	3.5.0		7.0.0		
cublasCherkx_64	12.0				hipblasCherkx_64	6.3.0		7.0.0		
cublasCsymm					hipblasCsymm	3.6.0		7.0.0		
cublasCsymm_64	12.0				hipblasCsymm_64	6.3.0		7.0.0		
cublasCsymm_v2					hipblasCsymm	3.6.0		7.0.0		
cublasCsymm_v2_64	12.0				hipblasCsymm_64	6.3.0		7.0.0		
cublasCsyr2k					hipblasCsyr2k	3.5.0		7.0.0		
cublasCsyr2k_64	12.0				hipblasCsyr2k_64	6.3.0		7.0.0		
cublasCsyr2k_v2					hipblasCsyr2k	3.5.0		7.0.0		
cublasCsyr2k_v2_64	12.0				hipblasCsyr2k_64	6.3.0		7.0.0		
cublasCsyrk					hipblasCsyrk	3.5.0		7.0.0		
cublasCsyrk_64	12.0				hipblasCsyrk_64	6.3.0		7.0.0		
cublasCsyrk_v2					hipblasCsyrk	3.5.0		7.0.0		
cublasCsyrk_v2_64	12.0				hipblasCsyrk_64	6.3.0		7.0.0		
cublasCsyrkx					hipblasCsyrkx	3.5.0		7.0.0		
cublasCsyrkx_64	12.0				hipblasCsyrkx_64	6.3.0		7.0.0		
cublasCtrmm					hipblasCtrmm	3.5.0		7.0.0		
cublasCtrmm_64	12.0				hipblasCtrmm_64	6.3.0		7.0.0		
cublasCtrmm_v2					hipblasCtrmm	3.5.0		7.0.0		
cublasCtrmm_v2_64	12.0				hipblasCtrmm_64	6.3.0		7.0.0		
cublasCtrsm					hipblasCtrsm	3.5.0		7.0.0		
cublasCtrsm_64	12.0				hipblasCtrsm_64	6.3.0		7.0.0		
cublasCtrsm_v2					hipblasCtrsm	3.5.0		7.0.0		
cublasCtrsm_v2_64	12.0				hipblasCtrsm_64	6.3.0		7.0.0		
cublasDgemm					hipblasDgemm	1.8.2				
cublasDgemmBatched					hipblasDgemmBatched	1.8.2				
cublasDgemmBatched_64	12.0				hipblasDgemmBatched_64	6.3.0				
cublasDgemmGroupedBatched	12.4									
cublasDgemmGroupedBatched_64	12.4									

Table 7 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U
cublasDgemmStridedBatched	8.0				hipblasDgemmStridedBatched	1.8.2				
cublasDgemmStridedBatched_64	12.0				hipblasDgemmStridedBatched_64	6.3.0				
cublasDgemm_64	12.0				hipblasDgemm_64	6.3.0				
cublasDgemm_v2					hipblasDgemm	1.8.2				
cublasDgemm_v2_64	12.0				hipblasDgemm_64	6.3.0				
cublasDgemvBatched	11.6				hipblasDgemvBatched	3.0.0				
cublasDgemvBatched_64	12.0				hipblasDgemvBatched_64	6.2.0				
cublasDgemvStridedBatched	11.6				hipblasDgemvStridedBatched	3.0.0				
cublasDgemvStridedBatched_64	12.0				hipblasDgemvStridedBatched_64	6.2.0				
cublasDsymm					hipblasDsymm	3.6.0				
cublasDsymm_64	12.0				hipblasDsymm_64	6.3.0				
cublasDsymm_v2					hipblasDsymm	3.6.0				
cublasDsymm_v2_64	12.0				hipblasDsymm_64	6.3.0				
cublasDsyr2k					hipblasDsyr2k	3.5.0				
cublasDsyr2k_64	12.0				hipblasDsyr2k_64	6.3.0				
cublasDsyr2k_v2					hipblasDsyr2k	3.5.0				
cublasDsyr2k_v2_64	12.0				hipblasDsyr2k_64	6.3.0				
cublasDsyrk					hipblasDsyrk	3.5.0				
cublasDsyrk_64	12.0				hipblasDsyrk_64	6.3.0				
cublasDsyrk_v2					hipblasDsyrk	3.5.0				
cublasDsyrk_v2_64	12.0				hipblasDsyrk_64	6.3.0				
cublasDsyrkx					hipblasDsyrkx	3.5.0				
cublasDsyrkx_64	12.0				hipblasDsyrkx_64	6.3.0				
cublasDtrmm					hipblasDtrmm	3.2.0		6.0.0		
cublasDtrmm_64	12.0				hipblasDtrmm_64	6.3.0				
cublasDtrmm_v2					hipblasDtrmm	3.2.0		6.0.0		
cublasDtrmm_v2_64	12.0				hipblasDtrmm_64	6.3.0				
cublasDtrsm					hipblasDtrsm	1.8.2				
cublasDtrsm_64	12.0				hipblasDtrsm_64	6.3.0				
cublasDtrsm_v2					hipblasDtrsm	1.8.2				
cublasDtrsm_v2_64	12.0				hipblasDtrsm_64	6.3.0				
cublasGemmGroupedBatchedEx	12.5									
cublasGemmGroupedBatchedEx_64	12.5									
cublasHSHgemvBatched	11.6									
cublasHSHgemvBatched_64	12.0									
cublasHSHgemvStridedBatched	11.6									
cublasHSHgemvStridedBatched_64	12.0									
cublasHSSgemvBatched	11.6									
cublasHSSgemvBatched_64	12.0									
cublasHSSgemvStridedBatched	11.6									
cublasHSSgemvStridedBatched_64	12.0									
cublasHgemm	7.5				hipblasHgemm	1.8.2				
cublasHgemmBatched	9.0				hipblasHgemmBatched	3.0.0				
cublasHgemmBatched_64	12.0				hipblasHgemmBatched_64	6.3.0				
cublasHgemmStridedBatched	8.0				hipblasHgemmStridedBatched	3.0.0				
cublasHgemmStridedBatched_64	12.0				hipblasHgemmStridedBatched_64	6.3.0				
cublasHgemm_64	12.0				hipblasHgemm_64	6.3.0				
cublasSgemm					hipblasSgemm	1.8.2				
cublasSgemmBatched					hipblasSgemmBatched	1.8.2				
cublasSgemmBatched_64	12.0				hipblasSgemmBatched_64	6.3.0				

Table 7 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U
cublasSgemmGroupedBatched	12.4									
cublasSgemmGroupedBatched_64	12.4									
cublasSgemmStridedBatched	8.0				hipblasSgemmStridedBatched	1.8.2				
cublasSgemmStridedBatched_64	12.0				hipblasSgemmStridedBatched_64	6.3.0				
cublasSgemm_64	12.0				hipblasSgemm_64	6.3.0				
cublasSgemm_v2					hipblasSgemm	1.8.2				
cublasSgemm_v2_64	12.0				hipblasSgemm_64	6.3.0				
cublasSgemvBatched	11.6				hipblasSgemvBatched	1.6.0				
cublasSgemvBatched_64	12.0				hipblasSgemvBatched_64	6.2.0				
cublasSgemvStridedBatched	11.6				hipblasSgemvStridedBatched	3.0.0				
cublasSgemvStridedBatched_64	12.0				hipblasSgemvStridedBatched_64	6.2.0				
cublasSsymm					hipblasSsymm	3.6.0				
cublasSsymm_64	12.0				hipblasSsymm_64	6.3.0				
cublasSsymm_v2					hipblasSsymm	3.6.0				
cublasSsymm_v2_64	12.0				hipblasSsymm_64	6.3.0				
cublasSsyr2k					hipblasSsyr2k	3.5.0				
cublasSsyr2k_64	12.0				hipblasSsyr2k_64	6.3.0				
cublasSsyr2k_v2					hipblasSsyr2k	3.5.0				
cublasSsyr2k_v2_64	12.0				hipblasSsyr2k_64	6.3.0				
cublasSsyrk					hipblasSsyrk	3.5.0				
cublasSsyrk_64	12.0				hipblasSsyrk_64	6.3.0				
cublasSsyrk_v2					hipblasSsyrk	3.5.0				
cublasSsyrk_v2_64	12.0				hipblasSsyrk_64	6.3.0				
cublasSsyrkx					hipblasSsyrkx	3.5.0				
cublasSsyrkx_64	12.0				hipblasSsyrkx_64	6.3.0				
cublasStrmm					hipblasStrmm	3.2.0		6.0.0		
cublasStrmm_64	12.0				hipblasStrmm_64	6.3.0				
cublasStrmm_v2					hipblasStrmm	3.2.0		6.0.0		
cublasStrmm_v2_64	12.0				hipblasStrmm_64	6.3.0				
cublasStrsm					hipblasStrsm	1.8.2				
cublasStrsm_64	12.0				hipblasStrsm_64	6.3.0				
cublasStrsm_v2					hipblasStrsm	1.8.2				
cublasStrsm_v2_64	12.0				hipblasStrsm_64	6.3.0				
cublasTSSgemvBatched	11.6									
cublasTSSgemvBatched_64	12.0									
cublasTSSgemvStridedBatched	11.6									
cublasTSSgemvStridedBatched_64	12.0									
cublasTSTgemvBatched	11.6									
cublasTSTgemvBatched_64	12.0									
cublasTSTgemvStridedBatched	11.6									
cublasTSTgemvStridedBatched_64	12.0									
cublasZgemm					hipblasZgemm	1.6.0		7.0.0		
cublasZgemm3m	8.0									
cublasZgemm3m_64	12.0									
cublasZgemmBatched					hipblasZgemmBatched	1.6.0		7.0.0		
cublasZgemmBatched_64	12.0				hipblasZgemmBatched_64	6.3.0		7.0.0		
cublasZgemmStridedBatched	8.0				hipblasZgemmStridedBatched	3.0.0		7.0.0		
cublasZgemmStridedBatched_64	12.0				hipblasZgemmStridedBatched_64	6.3.0		7.0.0		
cublasZgemm_64	12.0				hipblasZgemm_64	6.3.0		7.0.0		
cublasZgemm_v2					hipblasZgemm	1.6.0		7.0.0		

Table 7 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R	U
cublasZgemm_v2_64	12.0				hipblasZgemm_64	6.3.0		7.0.0		
cublasZgemvBatched	11.6				hipblasZgemvBatched	3.0.0		7.0.0		
cublasZgemvBatched_64	12.0				hipblasZgemvBatched_64	6.2.0		7.0.0		
cublasZgemvStridedBatched	11.6				hipblasZgemvStridedBatched	3.0.0		7.0.0		
cublasZgemvStridedBatched_64	12.0				hipblasZgemvStridedBatched_64	6.2.0		7.0.0		
cublasZhemm					hipblasZhemm	3.6.0		7.0.0		
cublasZhemm_64	12.0				hipblasZhemm_64	6.3.0		7.0.0		
cublasZhemm_v2					hipblasZhemm	3.6.0		7.0.0		
cublasZhemm_v2_64	12.0				hipblasZhemm_64	6.3.0		7.0.0		
cublasZher2k					hipblasZher2k	3.5.0		7.0.0		
cublasZher2k_64	12.0				hipblasZher2k_64	6.3.0		7.0.0		
cublasZher2k_v2					hipblasZher2k	3.5.0		7.0.0		
cublasZher2k_v2_64	12.0				hipblasZher2k_64	6.3.0		7.0.0		
cublasZherk					hipblasZherk	3.5.0		7.0.0		
cublasZherk_64	12.0				hipblasZherk_64	6.3.0		7.0.0		
cublasZherk_v2					hipblasZherk	3.5.0		7.0.0		
cublasZherk_v2_64	12.0				hipblasZherk_64	6.3.0		7.0.0		
cublasZherkx					hipblasZherkx	3.5.0		7.0.0		
cublasZherkx_64	12.0				hipblasZherkx_64	6.3.0		7.0.0		
cublasZsymm					hipblasZsymm	3.6.0		7.0.0		
cublasZsymm_64	12.0				hipblasZsymm_64	6.3.0		7.0.0		
cublasZsymm_v2					hipblasZsymm	3.6.0		7.0.0		
cublasZsymm_v2_64	12.0				hipblasZsymm_64	6.3.0		7.0.0		
cublasZsyr2k					hipblasZsyr2k	3.5.0		7.0.0		
cublasZsyr2k_64	12.0				hipblasZsyr2k_64	6.3.0		7.0.0		
cublasZsyr2k_v2					hipblasZsyr2k	3.5.0		7.0.0		
cublasZsyr2k_v2_64	12.0				hipblasZsyr2k_64	6.3.0		7.0.0		
cublasZsyrk					hipblasZsyrk	3.5.0		7.0.0		
cublasZsyrk_64	12.0				hipblasZsyrk_64	6.3.0		7.0.0		
cublasZsyrk_v2					hipblasZsyrk	3.5.0		7.0.0		
cublasZsyrk_v2_64	12.0				hipblasZsyrk_64	6.3.0		7.0.0		
cublasZsyrkx					hipblasZsyrkx	3.5.0		7.0.0		
cublasZsyrkx_64	12.0				hipblasZsyrkx_64	6.3.0		7.0.0		
cublasZtrmm					hipblasZtrmm	3.5.0		7.0.0		
cublasZtrmm_64	12.0				hipblasZtrmm_64	6.3.0		7.0.0		
cublasZtrmm_v2					hipblasZtrmm	3.5.0		7.0.0		
cublasZtrmm_v2_64	12.0				hipblasZtrmm_64	6.3.0		7.0.0		
cublasZtrsm					hipblasZtrsm	3.5.0		7.0.0		
cublasZtrsm_64	12.0				hipblasZtrsm_64	6.3.0		7.0.0		
cublasZtrsm_v2					hipblasZtrsm	3.5.0		7.0.0		
cublasZtrsm_v2_64	12.0				hipblasZtrsm_64	6.3.0		7.0.0		

12.1.8 8. BLAS-like Extension

CUDA	A	D	C	R	HIP	A	D	C	R
cublasAsumEx	10.1								
cublasAsumEx_64	12.0								
cublasAxpyEx	8.0				hipblasAxpyEx	4.1.0		7.0.0	
cublasAxpyEx_64	12.0				hipblasAxpyEx_64	6.2.0		7.0.0	
cublasCdgmm					hipblasCdgmm	3.6.0		7.0.0	
cublasCdgmm_64	12.0				hipblasCdgmm_64	6.3.0		7.0.0	
cublasCgeam					hipblasCgeam	3.6.0		7.0.0	
cublasCgeam_64	12.0				hipblasCgeam_64	6.3.0		7.0.0	
cublasCgelsBatched					hipblasCgelsBatched	5.4.0		7.0.0	
cublasCgemmEx	8.0								
cublasCgemmEx_64	12.0								
cublasCgeqrfBatched					hipblasCgeqrfBatched	3.5.0		7.0.0	
cublasCgetrfBatched					hipblasCgetrfBatched	3.5.0		7.0.0	
cublasCgetriBatched					hipblasCgetriBatched	3.7.0		7.0.0	
cublasCgetrsBatched					hipblasCgetrsBatched	3.5.0		7.0.0	
cublasCherk3mEx	8.0								
cublasCherk3mEx_64	12.0								
cublasCherkEx	8.0				hipblasHerkEx	7.10.0			
cublasCherkEx_64	12.0								
cublasCmatinvBatched									
cublasCopyEx	10.1								
cublasCopyEx_64	12.0								
cublasCsyrk3mEx	8.0								
cublasCsyrk3mEx_64	12.0								
cublasCsyrkEx	8.0				hipblasSyrkEx	7.10.0			
cublasCsyrkEx_64	12.0								
cublasCtpttr									
cublasCtrsmBatched					hipblasCtrsmBatched	3.5.0		7.0.0	
cublasCtrsmBatched_64	12.0				hipblasCtrsmBatched_64	6.3.0		7.0.0	
cublasCtrttp									
cublasDdgmm					hipblasDdgmm	3.6.0			
cublasDdgmm_64	12.0				hipblasDdgmm_64	6.3.0			
cublasDgeam					hipblasDgeam	1.8.2			
cublasDgeam_64	12.0				hipblasDgeam_64	6.3.0			
cublasDgelsBatched					hipblasDgelsBatched	5.4.0			
cublasDgeqrfBatched					hipblasDgeqrfBatched	3.5.0			
cublasDgetrfBatched					hipblasDgetrfBatched	3.5.0			
cublasDgetriBatched					hipblasDgetriBatched	3.7.0			
cublasDgetrsBatched					hipblasDgetrsBatched	3.5.0			
cublasDmatinvBatched									
cublasDotEx	8.0				hipblasDotEx	4.1.0		7.0.0	
cublasDotEx_64	12.0				hipblasDotEx_64	6.2.0		7.0.0	
cublasDotcEx	8.0				hipblasDotcEx	4.1.0		7.0.0	
cublasDotcEx_64	12.0				hipblasDotcEx_64	6.2.0		7.0.0	
cublasDtpttr									
cublasDtrsmBatched					hipblasDtrsmBatched	3.2.0			
cublasDtrsmBatched_64	12.0				hipblasDtrsmBatched_64	6.3.0			
cublasDtrttp									
cublasGemmBatchedEx	9.1		11.0		hipblasGemmBatchedEx	3.6.0		7.0.0	

Table 8 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
cublasGemmBatchedEx_64	12.0				hipblasGemmBatchedEx_64	6.3.0		7.0.0	
cublasGemmEx	8.0		11.0		hipblasGemmEx	1.8.2		7.0.0	
cublasGemmEx_64	12.0				hipblasGemmEx_64	6.3.0		7.0.0	
cublasGemmStridedBatchedEx	9.1		11.0		hipblasGemmStridedBatchedEx	3.6.0		7.0.0	
cublasGemmStridedBatchedEx_64	12.0				hipblasGemmStridedBatchedEx_64	6.3.0		7.0.0	
cublasIamaxEx	10.1								
cublasIamaxEx_64	12.0								
cublasIaminEx	10.1								
cublasIaminEx_64	12.0								
cublasRotEx	10.1				hipblasRotEx	4.1.0		7.0.0	
cublasRotEx_64	12.0				hipblasRotEx_64	6.2.0		7.0.0	
cublasRotgEx	10.1								
cublasRotmEx	10.1								
cublasRotmEx_64	12.0								
cublasRotmgEx	10.1								
cublasScalEx	8.0				hipblasScalEx	4.1.0		7.0.0	
cublasScalEx_64	12.0				hipblasScalEx_64	6.2.0		7.0.0	
cublasSdgmm					hipblasSdgmm	3.6.0			
cublasSdgmm_64	12.0				hipblasSdgmm_64	6.3.0			
cublasSgeam					hipblasSgeam	1.8.2			
cublasSgeam_64	12.0				hipblasSgeam_64	6.3.0			
cublasSgelsBatched					hipblasSgelsBatched	5.4.0			
cublasSgemmEx	7.5								
cublasSgemmEx_64	12.0								
cublasSgeqrfBatched					hipblasSgeqrfBatched	3.5.0			
cublasSgetrfBatched					hipblasSgetrfBatched	3.5.0			
cublasSgetriBatched					hipblasSgetriBatched	3.7.0			
cublasSgetrsBatched					hipblasSgetrsBatched	3.5.0			
cublasSmatinvBatched									
cublasStpttr									
cublasStrsmBatched					hipblasStrsmBatched	3.2.0			
cublasStrsmBatched_64	12.0				hipblasStrsmBatched_64	6.3.0			
cublasStrttp									
cublasSwapEx	10.1								
cublasSwapEx_64	12.0								
cublasUint8gemmBias	8.0								
cublasZdgmm					hipblasZdgmm	3.6.0		7.0.0	
cublasZdgmm_64	12.0				hipblasZdgmm_64	6.3.0		7.0.0	
cublasZgeam					hipblasZgeam	3.6.0		7.0.0	
cublasZgeam_64	12.0				hipblasZgeam_64	6.3.0		7.0.0	
cublasZgelsBatched					hipblasZgelsBatched	5.4.0		7.0.0	
cublasZgeqrfBatched					hipblasZgeqrfBatched	3.5.0		7.0.0	
cublasZgetrfBatched					hipblasZgetrfBatched	3.5.0		7.0.0	
cublasZgetriBatched					hipblasZgetriBatched	3.7.0		7.0.0	
cublasZgetrsBatched					hipblasZgetrsBatched	3.5.0		7.0.0	
cublasZmatinvBatched									
cublasZtpttr									
cublasZtrsmBatched					hipblasZtrsmBatched	3.5.0		7.0.0	
cublasZtrsmBatched_64	12.0				hipblasZtrsmBatched_64	6.3.0		7.0.0	
cublasZtrttp									

12.1.9 9. BLASLt Function Reference

CUDA	A	D	C	R	HIP
cublasLtCreate	10.1				hipblasLtCreate
cublasLtDestroy	10.1				hipblasLtDestroy
cublasLtDisableCpuInstructionsSetMask	12.1				
cublasLtEmulationDescDestroy	13.0				
cublasLtEmulationDescGetAttribute	13.0				
cublasLtEmulationDescInit	13.0				
cublasLtEmulationDescSetAttribute	13.0				
cublasLtGetCudartVersion	10.1				
cublasLtGetProperty	10.1				
cublasLtGetStatusName	11.4				
cublasLtGetStatusString	11.4				
cublasLtGetVersion	10.1				
cublasLtGroupedMatrixLayoutCreate	13.1				
cublasLtGroupedMatrixLayoutInit	13.1				
cublasLtGroupedMatrixLayoutInit_internal	13.1				
cublasLtHeuristicsCacheGetCapacity	11.8				
cublasLtHeuristicsCacheSetCapacity	11.8				
cublasLtLoggerForceDisable	11.0				
cublasLtLoggerOpenFile	11.0				
cublasLtLoggerSetCallback	11.0				
cublasLtLoggerSetFile	11.0				
cublasLtLoggerSetLevel	11.0				
cublasLtLoggerSetMask	11.0				
cublasLtMatmul	10.1				hipblasLtMatmul
cublasLtMatmulAlgoCapGetAttribute	10.1				
cublasLtMatmulAlgoCheck	10.1				
cublasLtMatmulAlgoConfigGetAttribute	10.1				
cublasLtMatmulAlgoConfigSetAttribute	10.1				
cublasLtMatmulAlgoGetHeuristic	10.1				hipblasLtMatmulAlgoGetHeuristic
cublasLtMatmulAlgoGetIds	10.1				
cublasLtMatmulAlgoInit	10.1				
cublasLtMatmulDescCreate	10.1		11.0		hipblasLtMatmulDescCreate
cublasLtMatmulDescDestroy	10.1				hipblasLtMatmulDescDestroy
cublasLtMatmulDescGetAttribute	10.1				hipblasLtMatmulDescGetAttribute
cublasLtMatmulDescInit	11.0				
cublasLtMatmulDescSetAttribute	10.1				hipblasLtMatmulDescSetAttribute
cublasLtMatmulPreferenceCreate	10.1				hipblasLtMatmulPreferenceCreate
cublasLtMatmulPreferenceDestroy	10.1				hipblasLtMatmulPreferenceDestroy
cublasLtMatmulPreferenceGetAttribute	10.1				hipblasLtMatmulPreferenceGetAttribute
cublasLtMatmulPreferenceInit	11.0				
cublasLtMatmulPreferenceSetAttribute	10.1				hipblasLtMatmulPreferenceSetAttribute
cublasLtMatrixLayoutCreate	10.1				hipblasLtMatrixLayoutCreate
cublasLtMatrixLayoutDestroy	10.1				hipblasLtMatrixLayoutDestroy
cublasLtMatrixLayoutGetAttribute	10.1				hipblasLtMatrixLayoutGetAttribute
cublasLtMatrixLayoutInit	11.0				
cublasLtMatrixLayoutSetAttribute	10.1				hipblasLtMatrixLayoutSetAttribute
cublasLtMatrixTransform	10.1				hipblasLtMatrixTransform
cublasLtMatrixTransformDescCreate	10.1				hipblasLtMatrixTransformDescCreate
cublasLtMatrixTransformDescDestroy	10.1				hipblasLtMatrixTransformDescDestroy

Table 9 – continued from previous page

CUDA	A	D	C	R	HIP
cublasLtMatrixTransformDescGetAttribute	10.1				hipblasLtMatrixTransformDescGetAttribute
cublasLtMatrixTransformDescInit	11.0				
cublasLtMatrixTransformDescSetAttribute	10.1				hipblasLtMatrixTransformDescSetAttribute

12.2 CUSPARSE API supported by HIP and ROC

Note: In the tables that follow the columns marked A, D, C, R, U, and E mean the following: **A** - Added; **D** - Deprecated; **C** - Changed; **R** - Removed; **U** - Unsupported for CUDA version(s); **E** - Experimental

12.2.1 4. CUSPARSE Types References

CUDA	A	D	C	R	HIP
CUSPARSE_ACTION_NUMERIC					HIPSPARSE_ACTION_NUMERIC
CUSPARSE_ACTION_SYMBOLIC					HIPSPARSE_ACTION_SYMBOLIC
CUSPARSE_ALG0	8.0			11.0	
CUSPARSE_ALG1	8.0			11.0	
CUSPARSE_ALG_MERGE_PATH	9.2			12.0	
CUSPARSE_ALG_NAIVE	9.2			11.0	
CUSPARSE_COLOR_ALG0	8.0	12.2			
CUSPARSE_COLOR_ALG1	8.0	12.2			
CUSPARSE_COOMM_ALG1	10.1	11.0		12.0	HIPSPARSE_COOMM_ALG1
CUSPARSE_COOMM_ALG2	10.1	11.0		12.0	HIPSPARSE_COOMM_ALG2
CUSPARSE_COOMM_ALG3	10.1	11.0		12.0	HIPSPARSE_COOMM_ALG3
CUSPARSE_COOMV_ALG	10.2	11.2		12.0	HIPSPARSE_COOMV_ALG
CUSPARSE_CSR2CSC_ALG1	10.1				HIPSPARSE_CSR2CSC_ALG1
CUSPARSE_CSR2CSC_ALG2	10.1			12.0	HIPSPARSE_CSR2CSC_ALG2
CUSPARSE_CSR2CSC_ALG_DEFAULT	12.0				HIPSPARSE_CSR2CSC_ALG_DEFAULT
CUSPARSE_CSRMM_ALG1	10.2	11.0		12.0	HIPSPARSE_CSRMM_ALG1
CUSPARSE_CSRMV_ALG1	10.2	11.2		12.0	HIPSPARSE_CSRMV_ALG1
CUSPARSE_CSRMV_ALG2	10.2	11.2		12.0	HIPSPARSE_CSRMV_ALG2
CUSPARSE_DENSETOSPARSE_ALG_DEFAULT	11.1				HIPSPARSE_DENSETOSPARSE_ALG_DEFAULT
CUSPARSE_DIAG_TYPE_NON_UNIT					HIPSPARSE_DIAG_TYPE_NON_UNIT
CUSPARSE_DIAG_TYPE_UNIT					HIPSPARSE_DIAG_TYPE_UNIT
CUSPARSE_DIRECTION_COLUMN					HIPSPARSE_DIRECTION_COLUMN
CUSPARSE_DIRECTION_ROW					HIPSPARSE_DIRECTION_ROW
CUSPARSE_ENABLE_EXPERIMENTAL_API	13.1				
CUSPARSE_FILL_MODE_LOWER					HIPSPARSE_FILL_MODE_LOWER
CUSPARSE_FILL_MODE_UPPER					HIPSPARSE_FILL_MODE_UPPER
CUSPARSE_FORMAT_BLOCKED_ELL	11.2				HIPSPARSE_FORMAT_BLOCKED_ELL
CUSPARSE_FORMAT_BSR	12.1				
CUSPARSE_FORMAT_COO	10.1				HIPSPARSE_FORMAT_COO
CUSPARSE_FORMAT_COO_AOS	10.2			12.0	HIPSPARSE_FORMAT_COO_AOS
CUSPARSE_FORMAT_CSC	10.1				HIPSPARSE_FORMAT_CSC
CUSPARSE_FORMAT_CSR	10.1				HIPSPARSE_FORMAT_CSR
CUSPARSE_FORMAT_SLICED_ELLPACK	12.1				
CUSPARSE_HYB_PARTITION_AUTO		10.2		11.0	HIPSPARSE_HYB_PARTITION_AUTO

Table 10 – continued from

CUDA	A	D	C	R	HIP
CUSPARSE_HYB_PARTITION_MAX		10.2		11.0	HIPSPARSE_HYB_PARTITION_MAX
CUSPARSE_HYB_PARTITION_USER		10.2		11.0	HIPSPARSE_HYB_PARTITION_USER
CUSPARSE_INDEX_16U	10.1				HIPSPARSE_INDEX_16U
CUSPARSE_INDEX_32I	10.1				HIPSPARSE_INDEX_32I
CUSPARSE_INDEX_64I	10.1				HIPSPARSE_INDEX_64I
CUSPARSE_INDEX_BASE_ONE					HIPSPARSE_INDEX_BASE_ONE
CUSPARSE_INDEX_BASE_ZERO					HIPSPARSE_INDEX_BASE_ZERO
CUSPARSE_MATRIX_TYPE_GENERAL					HIPSPARSE_MATRIX_TYPE_GENERAL
CUSPARSE_MATRIX_TYPE_HERMITIAN					HIPSPARSE_MATRIX_TYPE_HERMITIAN
CUSPARSE_MATRIX_TYPE_SYMMETRIC					HIPSPARSE_MATRIX_TYPE_SYMMETRIC
CUSPARSE_MATRIX_TYPE_TRIANGULAR					HIPSPARSE_MATRIX_TYPE_TRIANGULAR
CUSPARSE_MM_ALG_DEFAULT	10.2	11.0		12.0	HIPSPARSE_MM_ALG_DEFAULT
CUSPARSE_MV_ALG_DEFAULT	10.2	11.3		12.0	HIPSPARSE_MV_ALG_DEFAULT
CUSPARSE_OPERATION_CONJUGATE_TRANSPOSE					HIPSPARSE_OPERATION_CONJUGATE_TRANSPOSE
CUSPARSE_OPERATION_NON_TRANSPOSE					HIPSPARSE_OPERATION_NON_TRANSPOSE
CUSPARSE_OPERATION_TRANSPOSE					HIPSPARSE_OPERATION_TRANSPOSE
CUSPARSE_ORDER_COL	10.1				HIPSPARSE_ORDER_COL
CUSPARSE_ORDER_ROW	10.1				HIPSPARSE_ORDER_ROW
CUSPARSE_POINTER_MODE_DEVICE					HIPSPARSE_POINTER_MODE_DEVICE
CUSPARSE_POINTER_MODE_HOST					HIPSPARSE_POINTER_MODE_HOST
CUSPARSE_SDDMM_ALG_DEFAULT	11.2				HIPSPARSE_SDDMM_ALG_DEFAULT
CUSPARSE_SIDE_LEFT				11.5	
CUSPARSE_SIDE_RIGHT				11.5	
CUSPARSE_SOLVE_POLICY_NO_LEVEL		12.2			HIPSPARSE_SOLVE_POLICY_NO_LEVEL
CUSPARSE_SOLVE_POLICY_USE_LEVEL		12.2			HIPSPARSE_SOLVE_POLICY_USE_LEVEL
CUSPARSE_SPARSETODENSE_ALG_DEFAULT	11.1				HIPSPARSE_SPARSETODENSE_ALG_DEFAULT
CUSPARSE_SPGEMM_ALG1	12.0				HIPSPARSE_SPGEMM_ALG1
CUSPARSE_SPGEMM_ALG2	12.0				HIPSPARSE_SPGEMM_ALG2
CUSPARSE_SPGEMM_ALG3	12.0				HIPSPARSE_SPGEMM_ALG3
CUSPARSE_SPGEMM_CSR_ALG_DETERMINITIC	11.3				HIPSPARSE_SPGEMM_CSR_ALG_DETERMINISTIC
CUSPARSE_SPGEMM_CSR_ALG_NONDETERMINITIC	11.3				HIPSPARSE_SPGEMM_CSR_ALG_NONDETERMINIST
CUSPARSE_SPGEMM_DEFAULT	11.0				HIPSPARSE_SPGEMM_DEFAULT
CUSPARSE_SPMAT_DIAG_TYPE	11.3				HIPSPARSE_SPMAT_DIAG_TYPE
CUSPARSE_SPMAT_FILL_MODE	11.3				HIPSPARSE_SPMAT_FILL_MODE
CUSPARSE_SPMMA_ALG1	11.1			11.2	
CUSPARSE_SPMMA_ALG2	11.1			11.2	
CUSPARSE_SPMMA_ALG3	11.1			11.2	
CUSPARSE_SPMMA_ALG4	11.1			11.2	
CUSPARSE_SPMMA_PREPROCESS	11.1			11.2	
CUSPARSE_SPMM_ALG_DEFAULT	11.0				HIPSPARSE_SPMM_ALG_DEFAULT
CUSPARSE_SPMM_BLOCKED_ELL_ALG1	11.2				HIPSPARSE_SPMM_BLOCKED_ELL_ALG1
CUSPARSE_SPMM_BSR_ALG1	12.5				
CUSPARSE_SPMM_COO_ALG1	11.0				HIPSPARSE_SPMM_COO_ALG1
CUSPARSE_SPMM_COO_ALG2	11.0				HIPSPARSE_SPMM_COO_ALG2
CUSPARSE_SPMM_COO_ALG3	11.0				HIPSPARSE_SPMM_COO_ALG3
CUSPARSE_SPMM_COO_ALG4	11.0				HIPSPARSE_SPMM_COO_ALG4
CUSPARSE_SPMM_CSR_ALG1	11.0				HIPSPARSE_SPMM_CSR_ALG1
CUSPARSE_SPMM_CSR_ALG2	11.0				HIPSPARSE_SPMM_CSR_ALG2
CUSPARSE_SPMM_CSR_ALG3	11.2				HIPSPARSE_SPMM_CSR_ALG3
CUSPARSE_SPMM_OP_ALG_DEFAULT	11.5	13.2			

Table 10 – continued from

CUDA	A	D	C	R	HIP
CUSPARSE_SPMV_ALG_DEFAULT	11.2				HIPSPARSE_SPMV_ALG_DEFAULT
CUSPARSE_SPMV_BSR_ALG1	13.0				
CUSPARSE_SPMV_COO_ALG1	11.2				HIPSPARSE_SPMV_COO_ALG1
CUSPARSE_SPMV_COO_ALG2	11.2				HIPSPARSE_SPMV_COO_ALG2
CUSPARSE_SPMV_CSR_ALG1	11.2				HIPSPARSE_SPMV_CSR_ALG1
CUSPARSE_SPMV_CSR_ALG2	11.2				HIPSPARSE_SPMV_CSR_ALG2
CUSPARSE_SPMV_SELL_ALG1	12.1				HIPSPARSE_SPMV_SELL_ALG1
CUSPARSE_SPSM_ALG_DEFAULT	11.3				HIPSPARSE_SPSM_ALG_DEFAULT
CUSPARSE_SPSM_UPDATE_DIAGONAL	12.4				
CUSPARSE_SPSM_UPDATE_GENERAL	12.4				
CUSPARSE_SPSV_ALG_DEFAULT	11.3				HIPSPARSE_SPSV_ALG_DEFAULT
CUSPARSE_SPSV_UPDATE_DIAGONAL	12.1				
CUSPARSE_SPSV_UPDATE_GENERAL	12.1				
CUSPARSE_STATUS_ALLOC_FAILED					HIPSPARSE_STATUS_ALLOC_FAILED
CUSPARSE_STATUS_ARCH_MISMATCH					HIPSPARSE_STATUS_ARCH_MISMATCH
CUSPARSE_STATUS_EXECUTION_FAILED					HIPSPARSE_STATUS_EXECUTION_FAILED
CUSPARSE_STATUS_INSUFFICIENT_RESOURCES	11.0				HIPSPARSE_STATUS_INSUFFICIENT_RESOURCES
CUSPARSE_STATUS_INTERNAL_ERROR					HIPSPARSE_STATUS_INTERNAL_ERROR
CUSPARSE_STATUS_INVALID_VALUE					HIPSPARSE_STATUS_INVALID_VALUE
CUSPARSE_STATUS_MAPPING_ERROR					HIPSPARSE_STATUS_MAPPING_ERROR
CUSPARSE_STATUS_MATRIX_TYPE_NOT_SUPPORTED					HIPSPARSE_STATUS_MATRIX_TYPE_NOT_SUPPO
CUSPARSE_STATUS_NOT_INITIALIZED					HIPSPARSE_STATUS_NOT_INITIALIZED
CUSPARSE_STATUS_NOT_SUPPORTED	10.2				HIPSPARSE_STATUS_NOT_SUPPORTED
CUSPARSE_STATUS_SUCCESS					HIPSPARSE_STATUS_SUCCESS
CUSPARSE_STATUS_ZERO_PIVOT					HIPSPARSE_STATUS_ZERO_PIVOT
bsric02Info					bsric02Info
bsric02Info_t					bsric02Info_t
bsrilu02Info		12.2			bsrilu02Info
bsrilu02Info_t		12.2			bsrilu02Info_t
bsrsm2Info		12.2			bsrsm2Info
bsrsm2Info_t		12.2			bsrsm2Info_t
bsrsv2Info		12.2			bsrsv2Info
bsrsv2Info_t		12.2			bsrsv2Info_t
csrgemm2Info				12.0	csrgemm2Info
csrgemm2Info_t				12.0	csrgemm2Info_t
csric02Info		12.2			csric02Info
csric02Info_t		12.2			csric02Info_t
csrilu02Info		12.2			csrilu02Info
csrilu02Info_t		12.2			csrilu02Info_t
csrsm2Info	9.2			12.0	
csrsm2Info_t	9.2			12.0	csrsm2Info_t
csrsv2Info				12.0	
csrsv2Info_t				12.0	csrsv2Info_t
csru2csrInfo		12.2			csru2csrInfo
csru2csrInfo_t		12.2			csru2csrInfo_t
cusparseAction_t					hipsparseAction_t
cusparseAlgMode_t	8.0			12.0	
cusparseColorAlg_t	8.0	12.2			
cusparseColorInfo		12.2			
cusparseColorInfo_t		12.2			hipsparseColorInfo_t

Table 10 – continued from

CUDA	A	D	C	R	HIP
cusparseConstDnMatDescr_t	12.0				hipsparseConstDnMatDescr_t
cusparseConstDnVecDescr_t	12.0				hipsparseConstDnVecDescr_t
cusparseConstSpMatDescr_t	12.0				hipsparseConstSpMatDescr_t
cusparseConstSpVecDescr_t	12.0				hipsparseConstSpVecDescr_t
cusparseContext					
cusparseCsr2CscAlg_t	10.1				hipsparseCsr2CscAlg_t
cusparseDenseToSparseAlg_t	11.1				hipsparseDenseToSparseAlg_t
cusparseDiagType_t					hipsparseDiagType_t
cusparseDirection_t					hipsparseDirection_t
cusparseDnMatDescr	10.1				
cusparseDnMatDescr_t	10.1				hipsparseDnMatDescr_t
cusparseDnVecDescr	10.2				
cusparseDnVecDescr_t	10.2				hipsparseDnVecDescr_t
cusparseFillMode_t					hipsparseFillMode_t
cusparseFormat_t	10.1				hipsparseFormat_t
cusparseHandle_t					hipsparseHandle_t
cusparseHybMat		10.2		11.0	
cusparseHybMat_t		10.2		11.0	hipsparseHybMat_t
cusparseHybPartition_t		10.2		11.0	hipsparseHybPartition_t
cusparseIndexBase_t					hipsparseIndexBase_t
cusparseIndexType_t	10.1				hipsparseIndexType_t
cusparseLoggerCallback_t	11.5				
cusparseMatDescr					
cusparseMatDescr_t					hipsparseMatDescr_t
cusparseMatrixType_t					hipsparseMatrixType_t
cusparseOperation_t					hipsparseOperation_t
cusparseOrder_t	10.1				hipsparseOrder_t
cusparsePointerMode_t					hipsparsePointerMode_t
cusparseSDDMMAlg_t	11.2				hipsparseSDDMMAlg_t
cusparseSideMode_t				11.5	
cusparseSolveAnalysisInfo		10.2		11.0	
cusparseSolveAnalysisInfo_t		10.2		11.0	
cusparseSolvePolicy_t		12.2			hipsparseSolvePolicy_t
cusparseSpGEMMAlg_t	11.0				hipsparseSpGEMMAlg_t
cusparseSpGEMMDescr	11.0				hipsparseSpGEMMDescr
cusparseSpGEMMDescr_t	11.0				hipsparseSpGEMMDescr_t
cusparseSpMMAlg_t	10.1				hipsparseSpMMAlg_t
cusparseSpMMOpAlg_t	11.5	13.2			
cusparseSpMMOpPlan	11.5				
cusparseSpMMOpPlan_t	11.5	13.2			
cusparseSpMVAlg_t	10.2				hipsparseSpMVAlg_t
cusparseSpMVOpDescr	13.1				
cusparseSpMVOpDescr_t	13.1				
cusparseSpMVOpPlan	13.1				
cusparseSpMVOpPlan_t	13.1				
cusparseSpMatAttribute_t	11.3				hipsparseSpMatAttribute_t
cusparseSpMatDescr	10.1				
cusparseSpMatDescr_t	10.1				hipsparseSpMatDescr_t
cusparseSpSMAlg_t	11.3				hipsparseSpSMAlg_t
cusparseSpSMDescr	11.3				hipsparseSpSMDescr

Table 10 – continued from

CUDA	A	D	C	R	HIP
cusparseSpSMDescr_t	11.3				hipsparseSpSMDescr_t
cusparseSpSMUpdate_t	12.4				
cusparseSpSVAlg_t	11.3				hipsparseSpSVAlg_t
cusparseSpSVDescr	11.3				hipsparseSpSVDescr
cusparseSpSVDescr_t	11.3				hipsparseSpSVDescr_t
cusparseSpSVUpdate_t	12.1				
cusparseSpVecDescr	10.2				
cusparseSpVecDescr_t	10.2				hipsparseSpVecDescr_t
cusparseSparseToDenseAlg_t	11.1				hipsparseSparseToDenseAlg_t
cusparseStatus_t					hipsparseStatus_t
pruneInfo	9.0	12.2			pruneInfo
pruneInfo_t	9.0	12.2			pruneInfo_t

12.2.2 5. CUSPARSE Management Function Reference

CUDA	A	D	C	R	HIP	A	D	C	R	U	E	ROC	A	D	C	R	E
cusparse					hipspars	1.9.2						rocsparse_c	1.9.0				
cusparse					hipspars	1.9.2						rocsparse_d	1.9.0				
cusparse	10.2				hipspars	6.0.0						rocsparse_g	6.0.0				
cusparse	10.2				hipspars	6.0.0						rocsparse_g	6.0.0				
cusparse					hipspars	1.9.2						rocsparse_g	1.9.0				
cusparse	8.0				hipspars	1.9.2						rocsparse_g	1.9.0				
cusparse					hipspars	1.9.2						rocsparse_g	1.9.0				
cusparse					hipspars	1.9.2						rocsparse_s	1.9.0				
cusparse					hipspars	1.9.2						rocsparse_s	1.9.0				

12.2.3 6. CUSPARSE Logging

CUDA	A	D	C	R	HIP	A	D	C	R	U	E	ROC	A	D	C	R	E
cusparseLoggerForceDis	11.5																
cusparseLoggerOpenFile	11.5																
cusparseLoggerSetCallb	11.5																
cusparseLoggerSetFile	11.5																
cusparseLoggerSetLevel	11.5																
cusparseLoggerSetMask	11.5																

12.2.4 7. CUSPARSE Helper Function Reference

CUDA	A	D	C	R	HIP	A	D	C	R
cusparseCopyMatDescr	8.0			12.0	hipsparseCopyMatDescr	1.9.2			
cusparseCreateBsric02Info		12.2			hipsparseCreateBsric02Info	3.8.0	6.2.0		
cusparseCreateBsrilu02Info		12.2			hipsparseCreateBsrilu02Info	3.9.0	6.2.0		
cusparseCreateBsrsm2Info		12.2			hipsparseCreateBsrsm2Info	4.5.0	6.2.0		
cusparseCreateBsrsv2Info		12.2			hipsparseCreateBsrsv2Info	3.6.0	6.2.0		
cusparseCreateColorInfo		12.2			hipsparseCreateColorInfo	4.5.0	6.2.0		
cusparseCreateCsrgemm2Info		11.0		12.0	hipsparseCreateCsrgemm2Info	2.8.0	3.9.0		
cusparseCreateCsric02Info		12.2			hipsparseCreateCsric02Info	3.1.0	6.2.0		
cusparseCreateCsrilu02Info		12.2			hipsparseCreateCsrilu02Info	1.9.2	6.2.0		
cusparseCreateCsrsm2Info	9.2	11.3		12.0	hipsparseCreateCsrsm2Info	3.1.0	5.6.0		
cusparseCreateCsrsv2Info		11.3		12.0	hipsparseCreateCsrsv2Info	1.9.2	5.6.0		
cusparseCreateHybMat		10.2		11.0	hipsparseCreateHybMat	1.9.2	3.9.0		
cusparseCreateMatDescr					hipsparseCreateMatDescr	1.9.2			
cusparseCreatePruneInfo	9.0	12.2			hipsparseCreatePruneInfo	3.9.0	6.2.0		
cusparseCreateSolveAnalysisInfo		10.2		11.0					
cusparseDestroyBsric02Info		12.2			hipsparseDestroyBsric02Info	3.8.0	6.2.0		
cusparseDestroyBsrilu02Info		12.2			hipsparseDestroyBsrilu02Info	3.9.0	6.2.0		
cusparseDestroyBsrsm2Info		12.2			hipsparseDestroyBsrsm2Info	4.5.0	6.2.0		
cusparseDestroyBsrsv2Info		12.2			hipsparseDestroyBsrsv2Info	3.6.0	6.2.0		
cusparseDestroyColorInfo		12.2			hipsparseDestroyColorInfo	4.5.0	6.2.0		
cusparseDestroyCsrgemm2Info		11.0		12.0	hipsparseDestroyCsrgemm2Info	2.8.0	3.9.0		
cusparseDestroyCsric02Info		12.2			hipsparseDestroyCsric02Info	3.1.0	6.2.0		
cusparseDestroyCsrilu02Info		12.2			hipsparseDestroyCsrilu02Info	1.9.2	6.2.0		
cusparseDestroyCsrsm2Info	9.2	11.3		12.0	hipsparseDestroyCsrsm2Info	3.1.0	5.6.0		
cusparseDestroyCsrsv2Info		11.3		12.0	hipsparseDestroyCsrsv2Info	1.9.2	5.6.0		
cusparseDestroyHybMat		10.2		11.0	hipsparseDestroyHybMat	1.9.2	3.9.0		
cusparseDestroyMatDescr					hipsparseDestroyMatDescr	1.9.2			
cusparseDestroyPruneInfo	9.0	12.2			hipsparseDestroyPruneInfo	3.9.0	6.2.0		
cusparseDestroySolveAnalysisInfo		10.2		11.0					
cusparseGetLevelInfo				11.0					

Table 11 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
cusparseGetMatDiagType					hipsparseGetMatDiagType	1.9.2			
cusparseGetMatFillMode					hipsparseGetMatFillMode	1.9.2			
cusparseGetMatIndexBase					hipsparseGetMatIndexBase	1.9.2			
cusparseGetMatType					hipsparseGetMatType	1.9.2			
cusparseSetMatDiagType					hipsparseSetMatDiagType	1.9.2			
cusparseSetMatFillMode					hipsparseSetMatFillMode	1.9.2			
cusparseSetMatIndexBase					hipsparseSetMatIndexBase	1.9.2			
cusparseSetMatType					hipsparseSetMatType	1.9.2			

12.2.5 8. CUSPARSE Level 1 Function Reference

CUDA	A	D	C	R	HIP	A	D	C	R	U	E	ROC	A	D	C	R	E
cusparse		11.0		12.0	hipspars	3.1.0	3.9.0					rocsparse	1.9.0				
cusparse		10.2		11.0	hipspars	3.1.0	3.9.0					rocsparse	3.0.0				
cusparse		10.2		11.0	hipspars	3.1.0	3.9.0					rocsparse	1.9.0				
cusparse		11.0		12.0	hipspars	3.1.0	3.9.0					rocsparse	1.9.0				
cusparse		11.0		12.0	hipspars	3.1.0	3.9.0					rocsparse	1.9.0				
cusparse		11.0		12.0	hipspars	3.1.0	3.9.0					rocsparse	1.9.0				
cusparse		11.0		12.0	hipspars	1.9.2	3.9.0					rocsparse	1.9.0				
cusparse		10.2		11.0	hipspars	1.9.2	3.9.0					rocsparse	1.9.0				
cusparse		11.0		12.0	hipspars	1.9.2	3.9.0					rocsparse	1.9.0				
cusparse		11.0		12.0	hipspars	1.9.2	3.9.0					rocsparse	1.9.0				
cusparse		11.0		12.0	hipspars	1.9.2	3.9.0					rocsparse	1.9.0				
cusparse		11.0		12.0	hipspars	1.9.2	3.9.0					rocsparse	1.9.0				
cusparse		11.0		12.0	hipspars	1.9.2	3.9.0					rocsparse	1.9.0				
cusparse		10.2		11.0	hipspars	1.9.2	3.9.0					rocsparse	1.9.0				
cusparse		11.0		12.0	hipspars	1.9.2	3.9.0					rocsparse	1.9.0				
cusparse		11.0		12.0	hipspars	1.9.2	3.9.0					rocsparse	1.9.0				
cusparse		11.0		12.0	hipspars	1.9.2	3.9.0					rocsparse	1.9.0				
cusparse		11.0		12.0	hipspars	1.9.2	3.9.0					rocsparse	1.9.0				
cusparse		11.0		12.0	hipspars	3.1.0	3.9.0					rocsparse	1.9.0				
cusparse		10.2		11.0	hipspars	3.1.0	3.9.0					rocsparse	3.0.0				
cusparse		10.2		11.0	hipspars	3.1.0	3.9.0					rocsparse	1.9.0				
cusparse		11.0		12.0	hipspars	3.1.0	3.9.0					rocsparse	1.9.0				
cusparse		11.0		12.0	hipspars	3.1.0	3.9.0					rocsparse	1.9.0				
cusparse		11.0		12.0	hipspars	3.1.0	3.9.0					rocsparse	1.9.0				

12.2.6 9. CUSPARSE Level 2 Function Reference

CUDA	A	D	C	R	HIP	A	D	C	R
cusparseCbsrmv		13.1			hipsparseCbsrmv	3.5.0			
cusparseCbsrsv2_analysis		12.2			hipsparseCbsrsv2_analysis	3.6.0	6.2.0		
cusparseCbsrsv2_bufferSize		12.2			hipsparseCbsrsv2_bufferSize	3.6.0	6.2.0		
cusparseCbsrsv2_bufferSizeExt		12.2			hipsparseCbsrsv2_bufferSizeExt	3.6.0			
cusparseCbsrsv2_solve		12.2			hipsparseCbsrsv2_solve	3.6.0	6.2.0		
cusparseCbsrxmv		12.2			hipsparseCbsrxmv	4.5.0	6.2.0		
cusparseCcsrmv		10.2		11.0	hipsparseCcsrmv	3.1.0	3.9.0		
cusparseCcsrmv_mp	8.0	10.2		11.0					
cusparseCcsrsv2_analysis		11.3		12.0	hipsparseCcsrsv2_analysis	3.1.0	5.6.0		
cusparseCcsrsv2_bufferSize		11.3		12.0	hipsparseCcsrsv2_bufferSize	3.1.0	5.6.0		
cusparseCcsrsv2_bufferSizeExt		11.3		12.0	hipsparseCcsrsv2_bufferSizeExt	3.1.0			
cusparseCcsrsv2_solve		11.3		12.0	hipsparseCcsrsv2_solve	3.1.0	5.6.0		
cusparseCcsrsv_analysis		10.2		11.0					
cusparseCcsrsv_solve		10.2		11.0					
cusparseCgemvi	7.5	12.8			hipsparseCgemvi	4.3.0			
cusparseCgemvi_bufferSize	7.5	12.8			hipsparseCgemvi_bufferSize	4.3.0			
cusparseChybmv		10.2		11.0	hipsparseChybmv	3.1.0	3.9.0		
cusparseChybsv_analysis		10.2		11.0					
cusparseChybsv_solve		10.2		11.0					
cusparseCsrmvEx	8.0	11.2		12.0					
cusparseCsrmvEx_bufferSize	8.0	11.2		12.0					
cusparseCsrsv_analysisEx	8.0	10.2		11.0					
cusparseCsrsv_solveEx	8.0	10.2		11.0					
cusparseDbsrmv		13.1			hipsparseDbsrmv	3.5.0			
cusparseDbsrsv2_analysis		12.2			hipsparseDbsrsv2_analysis	3.6.0	6.2.0		
cusparseDbsrsv2_bufferSize		12.2			hipsparseDbsrsv2_bufferSize	3.6.0	6.2.0		
cusparseDbsrsv2_bufferSizeExt		12.2			hipsparseDbsrsv2_bufferSizeExt	3.6.0			
cusparseDbsrsv2_solve		12.2			hipsparseDbsrsv2_solve	3.6.0	6.2.0		
cusparseDbsrxmv		12.2			hipsparseDbsrxmv	4.5.0	6.2.0		
cusparseDcsrmv		10.2		11.0	hipsparseDcsrmv	1.9.2	3.9.0		
cusparseDcsrmv_mp	8.0	10.2		11.0					
cusparseDcsrsv2_analysis		11.3		12.0	hipsparseDcsrsv2_analysis	1.9.2	5.6.0		
cusparseDcsrsv2_bufferSize		11.3		12.0	hipsparseDcsrsv2_bufferSize	1.9.2	5.6.0		
cusparseDcsrsv2_bufferSizeExt		11.3		12.0	hipsparseDcsrsv2_bufferSizeExt	1.9.2			
cusparseDcsrsv2_solve		11.3		12.0	hipsparseDcsrsv2_solve	1.9.2	5.6.0		
cusparseDcsrsv_analysis		10.2		11.0					
cusparseDcsrsv_solve		10.2		11.0					
cusparseDgemvi	7.5	12.8			hipsparseDgemvi	4.3.0			
cusparseDgemvi_bufferSize	7.5	12.8			hipsparseDgemvi_bufferSize	4.3.0			
cusparseDhybmv		10.2		11.0	hipsparseDhybmv	1.9.2	3.9.0		
cusparseDhybsv_analysis		10.2		11.0					
cusparseDhybsv_solve		10.2		11.0					
cusparseSbsrmv		13.1			hipsparseSbsrmv	3.5.0			
cusparseSbsrsv2_analysis		12.2			hipsparseSbsrsv2_analysis	3.6.0	6.2.0		
cusparseSbsrsv2_bufferSize		12.2			hipsparseSbsrsv2_bufferSize	3.6.0	6.2.0		
cusparseSbsrsv2_bufferSizeExt		12.2			hipsparseSbsrsv2_bufferSizeExt	3.6.0			
cusparseSbsrsv2_solve		12.2			hipsparseSbsrsv2_solve	3.6.0	6.2.0		
cusparseSbsrxmv		12.2			hipsparseSbsrxmv	4.5.0	6.2.0		
cusparseScsrmv		10.2		11.0	hipsparseScsrmv	1.9.2	3.9.0		

Table 12 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
cusparseScsrmv_mp	8.0	10.2		11.0					
cusparseScsrsv2_analysis		11.3		12.0	hipsparseScsrsv2_analysis	1.9.2	5.6.0		
cusparseScsrsv2_bufferSize		11.3		12.0	hipsparseScsrsv2_bufferSize	1.9.2	5.6.0		
cusparseScsrsv2_bufferSizeExt		11.3		12.0	hipsparseScsrsv2_bufferSizeExt	1.9.2			
cusparseScsrsv2_solve		11.3		12.0	hipsparseScsrsv2_solve	1.9.2	5.6.0		
cusparseScsrsv_analysis		10.2		11.0					
cusparseScsrsv_solve		10.2		11.0					
cusparseSgemvi	7.5	12.8			hipsparseSgemvi	4.3.0			
cusparseSgemvi_bufferSize	7.5	12.8			hipsparseSgemvi_bufferSize	4.3.0			
cusparseShybmv		10.2		11.0	hipsparseShybmv	1.9.2	3.9.0		
cusparseShybsv_analysis		10.2		11.0					
cusparseShybsv_solve		10.2		11.0					
cusparseXbsrsv2_zeroPivot		12.2			hipsparseXbsrsv2_zeroPivot	3.6.0	6.2.0		
cusparseXcsrsv2_zeroPivot		11.3		12.0	hipsparseXcsrsv2_zeroPivot	1.9.2	5.6.0		
cusparseZbsrmv		13.1			hipsparseZbsrmv	3.5.0			
cusparseZbsrsv2_analysis		12.2			hipsparseZbsrsv2_analysis	3.6.0	6.2.0		
cusparseZbsrsv2_bufferSize		12.2			hipsparseZbsrsv2_bufferSize	3.6.0	6.2.0		
cusparseZbsrsv2_bufferSizeExt		12.2			hipsparseZbsrsv2_bufferSizeExt	3.6.0			
cusparseZbsrsv2_solve		12.2			hipsparseZbsrsv2_solve	3.6.0	6.2.0		
cusparseZbsrxmv		12.2			hipsparseZbsrxmv	4.5.0	6.2.0		
cusparseZcsrmv		10.2		11.0	hipsparseZcsrmv	3.1.0	3.9.0		
cusparseZcsrmv_mp	8.0	10.2		11.0					
cusparseZcsrsv2_analysis		11.3		12.0	hipsparseZcsrsv2_analysis	3.1.0	5.6.0		
cusparseZcsrsv2_bufferSize		11.3		12.0	hipsparseZcsrsv2_bufferSize	3.1.0	5.6.0		
cusparseZcsrsv2_bufferSizeExt		11.3		12.0	hipsparseZcsrsv2_bufferSizeExt	3.1.0			
cusparseZcsrsv2_solve		11.3		12.0	hipsparseZcsrsv2_solve	3.1.0	5.6.0		
cusparseZcsrsv_analysis		10.2		11.0					
cusparseZcsrsv_solve		10.2		11.0					
cusparseZgemvi	7.5	12.8			hipsparseZgemvi	4.3.0			
cusparseZgemvi_bufferSize	7.5	12.8			hipsparseZgemvi_bufferSize	4.3.0			
cusparseZhybmv		10.2		11.0	hipsparseZhybmv	3.1.0	3.9.0		
cusparseZhybsv_analysis		10.2		11.0					
cusparseZhybsv_solve		10.2		11.0					

12.2.7 10. CUSPARSE Level 3 Function Reference

CUDA	A	D	C	R	HIP	A	D	C	R
cusparseCbsrmm		12.8			hipsparseCbsrmm	3.7.0			
cusparseCbsrsm2_analysis		12.2			hipsparseCbsrsm2_analysis	4.5.0	6.2.0		
cusparseCbsrsm2_bufferSize		12.2			hipsparseCbsrsm2_bufferSize	4.5.0	6.2.0		
cusparseCbsrsm2_bufferSizeExt		12.2							
cusparseCbsrsm2_solve		12.2			hipsparseCbsrsm2_solve	4.5.0	6.2.0		
cusparseCcsrmm		10.2		11.0	hipsparseCcsrmm	3.1.0	3.9.0		
cusparseCcsrmm2		10.2		11.0	hipsparseCcsrmm2	3.1.0	3.9.0		
cusparseCcsrsm2_analysis	9.2	11.3		12.0	hipsparseCcsrsm2_analysis	3.1.0	5.6.0		
cusparseCcsrsm2_bufferSizeExt	9.2	11.3		12.0	hipsparseCcsrsm2_bufferSizeExt	3.1.0	5.6.0		
cusparseCcsrsm2_solve	9.2	11.3		12.0	hipsparseCcsrsm2_solve	3.1.0	5.6.0		
cusparseCcsrsm_analysis		10.2		11.0					

Table 13 – continued from previous page

CUDA	A	D	C	R	HIP	A	D	C	R
cusparseCcsrsm_solve		10.2		11.0					
cusparseCgemmi	8.0	11.0		12.0	hipsparseCgemmi	3.7.0	3.9.0		
cusparseDbsrmm		12.8			hipsparseDbsrmm	3.7.0			
cusparseDbsrsm2_analysis		12.2			hipsparseDbsrsm2_analysis	4.5.0	6.2.0		
cusparseDbsrsm2_bufferSize		12.2			hipsparseDbsrsm2_bufferSize	4.5.0	6.2.0		
cusparseDbsrsm2_bufferSizeExt		12.2							
cusparseDbsrsm2_solve		12.2			hipsparseDbsrsm2_solve	4.5.0	6.2.0		
cusparseDcsrmm		10.2		11.0	hipsparseDcsrmm	1.9.2	3.9.0		
cusparseDcsrmm2		10.2		11.0	hipsparseDcsrmm2	1.9.2	3.9.0		
cusparseDcsrsm2_analysis	9.2	11.3		12.0	hipsparseDcsrsm2_analysis	3.1.0	5.6.0		
cusparseDcsrsm2_bufferSizeExt	9.2	11.3		12.0	hipsparseDcsrsm2_bufferSizeExt	3.1.0	5.6.0		
cusparseDcsrsm2_solve	9.2	11.3		12.0	hipsparseDcsrsm2_solve	3.1.0	5.6.0		
cusparseDcsrsm_analysis		10.2		11.0					
cusparseDcsrsm_solve		10.2		11.0					
cusparseDgemmi	8.0	11.0		12.0	hipsparseDgemmi	3.7.0	3.9.0		
cusparseSbsrmm		12.8			hipsparseSbsrmm	3.7.0			
cusparseSbsrsm2_analysis		12.2			hipsparseSbsrsm2_analysis	4.5.0	6.2.0		
cusparseSbsrsm2_bufferSize		12.2			hipsparseSbsrsm2_bufferSize	4.5.0	6.2.0		
cusparseSbsrsm2_bufferSizeExt		12.2							
cusparseSbsrsm2_solve		12.2			hipsparseSbsrsm2_solve	4.5.0	6.2.0		
cusparseScsrmm		10.2		11.0	hipsparseScsrmm	1.9.2	3.9.0		
cusparseScsrmm2		10.2		11.0	hipsparseScsrmm2	1.9.2	3.9.0		
cusparseScsrsm2_analysis	9.2	11.3		12.0	hipsparseScsrsm2_analysis	3.1.0	5.6.0		
cusparseScsrsm2_bufferSizeExt	9.2	11.3		12.0	hipsparseScsrsm2_bufferSizeExt	3.1.0	5.6.0		
cusparseScsrsm2_solve	9.2	11.3		12.0	hipsparseScsrsm2_solve	3.1.0	5.6.0		
cusparseScsrsm_analysis		10.2		11.0					
cusparseScsrsm_solve		10.2		11.0					
cusparseSgemmi	8.0	11.0		12.0	hipsparseSgemmi	3.7.0	3.9.0		
cusparseXbsrsm2_zeroPivot		12.2			hipsparseXbsrsm2_zeroPivot	4.5.0	6.2.0		
cusparseXcsrsm2_zeroPivot	9.2	11.3		12.0	hipsparseXcsrsm2_zeroPivot	3.1.0	5.6.0		
cusparseZbsrmm		12.8			hipsparseZbsrmm	3.7.0			
cusparseZbsrsm2_analysis		12.2			hipsparseZbsrsm2_analysis	4.5.0	6.2.0		
cusparseZbsrsm2_bufferSize		12.2			hipsparseZbsrsm2_bufferSize	4.5.0	6.2.0		
cusparseZbsrsm2_bufferSizeExt		12.2							
cusparseZbsrsm2_solve		12.2			hipsparseZbsrsm2_solve	4.5.0	6.2.0		
cusparseZcsrmm		10.2		11.0	hipsparseZcsrmm	3.1.0	3.9.0		
cusparseZcsrmm2		10.2		11.0	hipsparseZcsrmm2	3.1.0	3.9.0		
cusparseZcsrsm2_analysis	9.2	11.3		12.0	hipsparseZcsrsm2_analysis	3.1.0	5.6.0		
cusparseZcsrsm2_bufferSizeExt	9.2	11.3		12.0	hipsparseZcsrsm2_bufferSizeExt	3.1.0	5.6.0		
cusparseZcsrsm2_solve	9.2	11.3		12.0	hipsparseZcsrsm2_solve	3.1.0	5.6.0		
cusparseZcsrsm_analysis		10.2		11.0					
cusparseZcsrsm_solve		10.2		11.0					
cusparseZgemmi	8.0	11.0		12.0	hipsparseZgemmi	3.7.0	3.9.0		

12.2.8 11. CUSPARSE Extra Function Reference

CUDA	A	D	C	R	HIP	A	D	C	R	U	E	ROC	A	D	C	R	E
cusparse		10.2		11.0	hipspars	3.5.0	3.9.0					rocspars	3.5.0				
cusparse	10.0				hipspars	3.5.0						rocspars	3.5.0				
cusparse	10.0				hipspars	3.5.0											
cusparse		10.2		11.0	hipspars	3.1.0	3.9.0										
cusparse		11.0		12.0	hipspars	3.1.0	3.9.0					rocspars	2.8.0				
cusparse		11.0		12.0	hipspars	3.1.0	3.9.0					rocspars	2.8.0				ize
cusparse		10.2		11.0	hipspars	3.5.0	3.9.0					rocspars	3.5.0				
cusparse	10.0				hipspars	3.5.0						rocspars	3.5.0				
cusparse	10.0				hipspars	3.5.0											
cusparse		10.2		11.0	hipspars	2.8.0	3.9.0										
cusparse		11.0		12.0	hipspars	2.8.0	3.9.0					rocspars	2.8.0				
cusparse		11.0		12.0	hipspars	2.8.0	3.9.0					rocspars	2.8.0				ize
cusparse		10.2		11.0	hipspars	3.5.0	3.9.0					rocspars	3.5.0				
cusparse	10.0				hipspars	3.5.0						rocspars	3.5.0				
cusparse	10.0				hipspars	3.5.0											
cusparse		10.2		11.0	hipspars	2.8.0	3.9.0										
cusparse		11.0		12.0	hipspars	2.8.0	3.9.0					rocspars	2.8.0				
cusparse		11.0		12.0	hipspars	2.8.0	3.9.0					rocspars	2.8.0				ize
cusparse	10.0				hipspars	3.5.0						rocspars	3.5.0				
cusparse		10.2		11.0	hipspars	3.5.0	3.9.0					rocspars	3.5.0				
cusparse		11.0		12.0	hipspars	2.8.0	3.9.0					rocspars	2.8.0				
cusparse		10.2		11.0	hipspars	2.8.0	3.9.0										
cusparse		10.2		11.0	hipspars	3.5.0	3.9.0					rocspars	3.5.0				
cusparse	10.0				hipspars	3.5.0						rocspars	3.5.0				
cusparse	10.0				hipspars	3.5.0											
cusparse		10.2		11.0	hipspars	3.1.0	3.9.0										
cusparse		11.0		12.0	hipspars	3.1.0	3.9.0					rocspars	2.8.0				
cusparse		11.0		12.0	hipspars	3.1.0	3.9.0					rocspars	2.8.0				ize

12.2.9 12. CUSPARSE Preconditioners Reference

CUDA	A	D	C	R	HIP
cusparseCbsric02		12.2			hipsparseCbsric02
cusparseCbsric02_analysis		12.2			hipsparseCbsric02_analysis
cusparseCbsric02_bufferSize		12.2			hipsparseCbsric02_bufferSize
cusparseCbsric02_bufferSizeExt		12.2			
cusparseCbsrilu02		12.2			hipsparseCbsrilu02
cusparseCbsrilu02_analysis		12.2			hipsparseCbsrilu02_analysis
cusparseCbsrilu02_bufferSize		12.2			hipsparseCbsrilu02_bufferSize
cusparseCbsrilu02_bufferSizeExt		12.2			
cusparseCbsrilu02_numericBoost		12.2			hipsparseCbsrilu02_numericBoost
cusparseCcsric0		10.2		11.0	
cusparseCcsric02		12.2			hipsparseCcsric02
cusparseCcsric02_analysis		12.2			hipsparseCcsric02_analysis
cusparseCcsric02_bufferSize		12.2			hipsparseCcsric02_bufferSize
cusparseCcsric02_bufferSizeExt		12.2			hipsparseCcsric02_bufferSizeExt
cusparseCcsrilu0		10.2		11.0	
cusparseCcsrilu02		12.2			hipsparseCcsrilu02
cusparseCcsrilu02_analysis		12.2			hipsparseCcsrilu02_analysis
cusparseCcsrilu02_bufferSize		12.2			hipsparseCcsrilu02_bufferSize
cusparseCcsrilu02_bufferSizeExt		12.2			hipsparseCcsrilu02_bufferSizeExt
cusparseCcsrilu02_numericBoost		12.2			hipsparseCcsrilu02_numericBoost
cusparseCgpsvInterleavedBatch	9.2				hipsparseCgpsvInterleavedBatch
cusparseCgpsvInterleavedBatch_bufferSizeExt	9.2				hipsparseCgpsvInterleavedBatch_buffer
cusparseCgtsv		10.2		11.0	
cusparseCgtsv2	9.0				hipsparseCgtsv2
cusparseCgtsv2StridedBatch	9.0				hipsparseCgtsv2StridedBatch
cusparseCgtsv2StridedBatch_bufferSizeExt	9.0				hipsparseCgtsv2StridedBatch_bufferSiz
cusparseCgtsv2_bufferSizeExt	9.0				hipsparseCgtsv2_bufferSizeExt
cusparseCgtsv2_nopivot	9.0				hipsparseCgtsv2_nopivot
cusparseCgtsv2_nopivot_bufferSizeExt	9.0				hipsparseCgtsv2_nopivot_bufferSizeExt
cusparseCgtsvInterleavedBatch	9.2				hipsparseCgtsvInterleavedBatch
cusparseCgtsvInterleavedBatch_bufferSizeExt	9.2				hipsparseCgtsvInterleavedBatch_buffer
cusparseCgtsvStridedBatch		10.2		11.0	
cusparseCgtsv_nopivot		10.2		11.0	
cusparseCsrilu0Ex	8.0	10.2		11.0	
cusparseDbsric02		12.2			hipsparseDbsric02
cusparseDbsric02_analysis		12.2			hipsparseDbsric02_analysis
cusparseDbsric02_bufferSize		12.2			hipsparseDbsric02_bufferSize
cusparseDbsric02_bufferSizeExt		12.2			
cusparseDbsrilu02		12.2			hipsparseDbsrilu02
cusparseDbsrilu02_analysis		12.2			hipsparseDbsrilu02_analysis
cusparseDbsrilu02_bufferSize		12.2			hipsparseDbsrilu02_bufferSize
cusparseDbsrilu02_bufferSizeExt		12.2			
cusparseDbsrilu02_numericBoost		12.2			hipsparseDbsrilu02_numericBoost
cusparseDcsric0		10.2		11.0	
cusparseDcsric02		12.2			hipsparseDcsric02
cusparseDcsric02_analysis		12.2			hipsparseDcsric02_analysis
cusparseDcsric02_bufferSize		12.2			hipsparseDcsric02_bufferSize
cusparseDcsric02_bufferSizeExt		12.2			hipsparseDcsric02_bufferSizeExt
cusparseDcsrilu0		10.2		11.0	

Table 14 – contin

CUDA	A	D	C	R	HIP
cusparseDcsrilu02		12.2			hipsparseDcsrilu02
cusparseDcsrilu02_analysis		12.2			hipsparseDcsrilu02_analysis
cusparseDcsrilu02_bufferSize		12.2			hipsparseDcsrilu02_bufferSize
cusparseDcsrilu02_bufferSizeExt		12.2			hipsparseDcsrilu02_bufferSizeExt
cusparseDcsrilu02_numericBoost		12.2			hipsparseDcsrilu02_numericBoost
cusparseDgpsvInterleavedBatch	9.2				hipsparseDgpsvInterleavedBatch
cusparseDgpsvInterleavedBatch_bufferSizeExt	9.2				hipsparseDgpsvInterleavedBatch_buffer
cusparseDgtsv		10.2		11.0	
cusparseDgtsv2	9.0				hipsparseDgtsv2
cusparseDgtsv2StridedBatch	9.0				hipsparseDgtsv2StridedBatch
cusparseDgtsv2StridedBatch_bufferSizeExt	9.0				hipsparseDgtsv2StridedBatch_bufferSiz
cusparseDgtsv2_bufferSizeExt	9.0				hipsparseDgtsv2_bufferSizeExt
cusparseDgtsv2_nopivot	9.0				hipsparseDgtsv2_nopivot
cusparseDgtsv2_nopivot_bufferSizeExt	9.0				hipsparseDgtsv2_nopivot_bufferSizeExt
cusparseDgtsvInterleavedBatch	9.2				hipsparseDgtsvInterleavedBatch
cusparseDgtsvInterleavedBatch_bufferSizeExt	9.2				hipsparseDgtsvInterleavedBatch_buffer
cusparseDgtsvStridedBatch		10.2		11.0	
cusparseDgtsv_nopivot		10.2		11.0	
cusparseSbsric02		12.2			hipsparseSbsric02
cusparseSbsric02_analysis		12.2			hipsparseSbsric02_analysis
cusparseSbsric02_bufferSize		12.2			hipsparseSbsric02_bufferSize
cusparseSbsric02_bufferSizeExt		12.2			
cusparseSbsrilu02		12.2			hipsparseSbsrilu02
cusparseSbsrilu02_analysis		12.2			hipsparseSbsrilu02_analysis
cusparseSbsrilu02_bufferSize		12.2			hipsparseSbsrilu02_bufferSize
cusparseSbsrilu02_bufferSizeExt		12.2			
cusparseSbsrilu02_numericBoost		12.2			hipsparseSbsrilu02_numericBoost
cusparseScsric0		10.2		11.0	
cusparseScsric02		12.2			hipsparseScsric02
cusparseScsric02_analysis		12.2			hipsparseScsric02_analysis
cusparseScsric02_bufferSize		12.2			hipsparseScsric02_bufferSize
cusparseScsric02_bufferSizeExt		12.2			hipsparseScsric02_bufferSizeExt
cusparseScsrilu0		10.2		11.0	
cusparseScsrilu02		12.2			hipsparseScsrilu02
cusparseScsrilu02_analysis		12.2			hipsparseScsrilu02_analysis
cusparseScsrilu02_bufferSize		12.2			hipsparseScsrilu02_bufferSize
cusparseScsrilu02_bufferSizeExt		12.2			hipsparseScsrilu02_bufferSizeExt
cusparseScsrilu02_numericBoost		12.2			hipsparseScsrilu02_numericBoost
cusparseSgpsvInterleavedBatch	9.2				hipsparseSgpsvInterleavedBatch
cusparseSgpsvInterleavedBatch_bufferSizeExt	9.2				hipsparseSgpsvInterleavedBatch_buffer
cusparseSgtsv		10.2		11.0	
cusparseSgtsv2	9.0				hipsparseSgtsv2
cusparseSgtsv2StridedBatch	9.0				hipsparseSgtsv2StridedBatch
cusparseSgtsv2StridedBatch_bufferSizeExt	9.0				hipsparseSgtsv2StridedBatch_bufferSiz
cusparseSgtsv2_bufferSizeExt	9.0				hipsparseSgtsv2_bufferSizeExt
cusparseSgtsv2_nopivot	9.0				hipsparseSgtsv2_nopivot
cusparseSgtsv2_nopivot_bufferSizeExt	9.0				hipsparseSgtsv2_nopivot_bufferSizeExt
cusparseSgtsvInterleavedBatch	9.2				hipsparseSgtsvInterleavedBatch
cusparseSgtsvInterleavedBatch_bufferSizeExt	9.2				hipsparseSgtsvInterleavedBatch_buffer
cusparseSgtsvStridedBatch		10.2		11.0	

Table 14 – contin

CUDA	A	D	C	R	HIP
cusparseSgtsv_nopivot		10.2		11.0	
cusparseXbsric02_zeroPivot		12.2			hipsparseXbsric02_zeroPivot
cusparseXbsrilu02_zeroPivot		12.2			hipsparseXbsrilu02_zeroPivot
cusparseXcsric02_zeroPivot		12.2			hipsparseXcsric02_zeroPivot
cusparseXcsrilu02_zeroPivot		12.2			hipsparseXcsrilu02_zeroPivot
cusparseZbsric02		12.2			hipsparseZbsric02
cusparseZbsric02_analysis		12.2			hipsparseZbsric02_analysis
cusparseZbsric02_bufferSize		12.2			hipsparseZbsric02_bufferSize
cusparseZbsric02_bufferSizeExt		12.2			
cusparseZbsrilu02		12.2			hipsparseZbsrilu02
cusparseZbsrilu02_analysis		12.2			hipsparseZbsrilu02_analysis
cusparseZbsrilu02_bufferSize		12.2			hipsparseZbsrilu02_bufferSize
cusparseZbsrilu02_bufferSizeExt		12.2			
cusparseZbsrilu02_numericBoost		12.2			hipsparseZbsrilu02_numericBoost
cusparseZcsric0		10.2		11.0	
cusparseZcsric02		12.2			hipsparseZcsric02
cusparseZcsric02_analysis		12.2			hipsparseZcsric02_analysis
cusparseZcsric02_bufferSize		12.2			hipsparseZcsric02_bufferSize
cusparseZcsric02_bufferSizeExt		12.2			hipsparseZcsric02_bufferSizeExt
cusparseZcsrilu0		10.2		11.0	
cusparseZcsrilu02		12.2			hipsparseZcsrilu02
cusparseZcsrilu02_analysis		12.2			hipsparseZcsrilu02_analysis
cusparseZcsrilu02_bufferSize		12.2			hipsparseZcsrilu02_bufferSize
cusparseZcsrilu02_bufferSizeExt		12.2			hipsparseZcsrilu02_bufferSizeExt
cusparseZcsrilu02_numericBoost		12.2			hipsparseZcsrilu02_numericBoost
cusparseZgpsvInterleavedBatch	9.2				hipsparseZgpsvInterleavedBatch
cusparseZgpsvInterleavedBatch_bufferSizeExt	9.2				hipsparseZgpsvInterleavedBatch_buffer
cusparseZgtsv		10.2		11.0	
cusparseZgtsv2	9.0				hipsparseZgtsv2
cusparseZgtsv2StridedBatch	9.0				hipsparseZgtsv2StridedBatch
cusparseZgtsv2StridedBatch_bufferSizeExt	9.0				hipsparseZgtsv2StridedBatch_bufferSiz
cusparseZgtsv2_bufferSizeExt	9.0				hipsparseZgtsv2_bufferSizeExt
cusparseZgtsv2_nopivot	9.0				hipsparseZgtsv2_nopivot
cusparseZgtsv2_nopivot_bufferSizeExt	9.0				hipsparseZgtsv2_nopivot_bufferSizeExt
cusparseZgtsvInterleavedBatch	9.2				hipsparseZgtsvInterleavedBatch
cusparseZgtsvInterleavedBatch_bufferSizeExt	9.2				hipsparseZgtsvInterleavedBatch_buffer
cusparseZgtsvStridedBatch		10.2		11.0	
cusparseZgtsv_nopivot		10.2		11.0	

12.2.10 13. CUSPARSE Reorderings Reference

CUDA	A	D	C	R	HIP	A	D	C	R	U	E	ROC	A	D	C	R	E
cusparse(		12.2			hipsparse	4.5.0	6.2.0					rocsparse_	4.5.0				
cusparsel		12.2			hipsparse	4.5.0	6.2.0					rocsparse_	4.5.0				
cusparse!		12.2			hipsparse	4.5.0	6.2.0					rocsparse_	4.5.0				
cusparse:		12.2			hipsparse	4.5.0	6.2.0					rocsparse_	4.5.0				

12.2.11 14. CUSPARSE Format Conversion Reference

CUDA	A	D	C	R	HIP
cusparseCbsr2csr		12.8			hipsparseCbsr2csr
cusparseCcsc2dense		11.1		12.0	hipsparseCcsc2dense
cusparseCcsc2hyb		10.2		11.0	
cusparseCcsr2bsr		12.4			hipsparseCcsr2bsr
cusparseCcsr2csc		10.2		11.0	hipsparseCcsr2csc
cusparseCcsr2csr_compress	8.0	12.2			hipsparseCcsr2csr_compress
cusparseCcsr2csru		12.2			hipsparseCcsr2csru
cusparseCcsr2dense		11.1		12.0	hipsparseCcsr2dense
cusparseCcsr2gebsr					hipsparseCcsr2gebsr
cusparseCcsr2gebsr_bufferSize					hipsparseCcsr2gebsr_bufferSize
cusparseCcsr2gebsr_bufferSizeExt					
cusparseCcsr2hyb		10.2		11.0	hipsparseCcsr2hyb
cusparseCcsru2csr		12.2			hipsparseCcsru2csr
cusparseCcsru2csr_bufferSizeExt		12.2			hipsparseCcsru2csr_bufferSizeEx
cusparseCdense2csc		11.1		12.0	hipsparseCdense2csc
cusparseCdense2csr		11.1		12.0	hipsparseCdense2csr
cusparseCdense2hyb		10.2		11.0	
cusparseCgebsr2csr		12.4			hipsparseCgebsr2csr
cusparseCgebsr2gebsc					hipsparseCgebsr2gebsc
cusparseCgebsr2gebsc_bufferSize					hipsparseCgebsr2gebsc_bufferSi
cusparseCgebsr2gebsc_bufferSizeExt					
cusparseCgebsr2gebsr		12.8			hipsparseCgebsr2gebsr
cusparseCgebsr2gebsr_bufferSize		12.8			hipsparseCgebsr2gebsr_bufferSi
cusparseCgebsr2gebsr_bufferSizeExt		12.8			
cusparseChyb2csc		10.2		11.0	
cusparseChyb2csr		10.2		11.0	hipsparseChyb2csr
cusparseChyb2dense		10.2		11.0	
cusparseCnnz					hipsparseCnnz
cusparseCnnz_compress	8.0	12.2			hipsparseCnnz_compress
cusparseCreateCsru2csrInfo		12.2			hipsparseCreateCsru2csrInfo
cusparseCreateIdentityPermutation		12.2			hipsparseCreateIdentityPermuta
cusparseCsr2cscEx	8.0	10.2		11.0	
cusparseCsr2cscEx2	10.1				hipsparseCsr2cscEx2
cusparseCsr2cscEx2_bufferSize	10.1				hipsparseCsr2cscEx2_bufferSize

Table 15

CUDA	A	D	C	R	HIP
cusparseDbsr2csr		12.8			hipsparseDbsr2csr
cusparseDcsc2dense		11.1		12.0	hipsparseDcsc2dense
cusparseDcsc2hyb		10.2		11.0	
cusparseDcsr2bsr		12.4			hipsparseDcsr2bsr
cusparseDcsr2csc		10.2		11.0	hipsparseDcsr2csc
cusparseDcsr2csr_compress	8.0	12.2			hipsparseDcsr2csr_compress
cusparseDcsr2csru		12.2			hipsparseDcsr2csru
cusparseDcsr2dense		11.1		12.0	hipsparseDcsr2dense
cusparseDcsr2gebsr					hipsparseDcsr2gebsr
cusparseDcsr2gebsr_bufferSize					hipsparseDcsr2gebsr_bufferSize
cusparseDcsr2gebsr_bufferSizeExt					
cusparseDcsr2hyb		10.2		11.0	hipsparseDcsr2hyb
cusparseDcsru2csr		12.2			hipsparseDcsru2csr
cusparseDcsru2csr_bufferSizeExt		12.2			hipsparseDcsru2csr_bufferSizeEx
cusparseDdense2csc		11.1		12.0	hipsparseDdense2csc
cusparseDdense2csr		11.1		12.0	hipsparseDdense2csr
cusparseDdense2hyb		10.2		11.0	
cusparseDestroyCsru2csrInfo		12.2			hipsparseDestroyCsru2csrInfo
cusparseDgebsr2csr		12.4			hipsparseDgebsr2csr
cusparseDgebsr2gebsc					hipsparseDgebsr2gebsc
cusparseDgebsr2gebsc_bufferSize					hipsparseDgebsr2gebsc_bufferSi
cusparseDgebsr2gebsc_bufferSizeExt					
cusparseDgebsr2gebsr		12.8			hipsparseDgebsr2gebsr
cusparseDgebsr2gebsr_bufferSize		12.8			hipsparseDgebsr2gebsr_bufferSi
cusparseDgebsr2gebsr_bufferSizeExt		12.8			
cusparseDhyb2csc		10.2		11.0	
cusparseDhyb2csr		10.2		11.0	hipsparseDhyb2csr
cusparseDhyb2dense		10.2		11.0	
cusparseDnnz					hipsparseDnnz
cusparseDnnz_compress	8.0	12.2			hipsparseDnnz_compress
cusparseDpruneCsr2csr	9.0	12.2			hipsparseDpruneCsr2csr
cusparseDpruneCsr2csrByPercentage	9.0	12.2			hipsparseDpruneCsr2csrByPercen
cusparseDpruneCsr2csrByPercentage_bufferSizeExt	9.0	12.2			hipsparseDpruneCsr2csrByPercen
cusparseDpruneCsr2csrNnz	9.0	12.2			hipsparseDpruneCsr2csrNnz
cusparseDpruneCsr2csrNnzByPercentage	9.0	12.2			hipsparseDpruneCsr2csrNnzByPer
cusparseDpruneCsr2csr_bufferSizeExt	9.0	12.2			hipsparseDpruneCsr2csr_bufferSi
cusparseDpruneDense2csr	9.0	12.2			hipsparseDpruneDense2csr
cusparseDpruneDense2csrByPercentage	9.0	12.2			hipsparseDpruneDense2csrByPerc
cusparseDpruneDense2csrByPercentage_bufferSizeExt	9.0	12.2			hipsparseDpruneDense2csrByPerc
cusparseDpruneDense2csrNnz	9.0	12.2			hipsparseDpruneDense2csrNnz
cusparseDpruneDense2csrNnzByPercentage	9.0	12.2			hipsparseDpruneDense2csrNnzByP
cusparseDpruneDense2csr_bufferSizeExt	9.0	12.2			hipsparseDpruneDense2csr_buffe
cusparseHpruneCsr2csr	9.0	12.2			
cusparseHpruneCsr2csrByPercentage	9.0	12.2			
cusparseHpruneCsr2csrByPercentage_bufferSizeExt	9.0	12.2			
cusparseHpruneCsr2csrNnz	9.0	12.2			
cusparseHpruneCsr2csrNnzByPercentage	9.0	12.2			
cusparseHpruneCsr2csr_bufferSizeExt	9.0	12.2			
cusparseHpruneDense2csr	9.0	12.2			
cusparseHpruneDense2csrByPercentage	9.0	12.2			

Table 15

CUDA	A	D	C	R	HIP
cusparseHpruneDense2csrByPercentage_bufferSizeExt	9.0	12.2			
cusparseHpruneDense2csrNnz	9.0	12.2			
cusparseHpruneDense2csrNnzByPercentage	9.0	12.2			
cusparseHpruneDense2csr_bufferSizeExt	9.0	12.2			
cusparseSbsr2csr		12.8			hipsparseSbsr2csr
cusparseScsc2dense		11.1		12.0	hipsparseScsc2dense
cusparseScsc2hyb		10.2		11.0	
cusparseScsr2bsr		12.4			hipsparseScsr2bsr
cusparseScsr2csc		10.2		11.0	hipsparseScsr2csc
cusparseScsr2csr_compress	8.0	12.2			hipsparseScsr2csr_compress
cusparseScsr2csru		12.2			hipsparseScsr2csru
cusparseScsr2dense		11.1		12.0	hipsparseScsr2dense
cusparseScsr2gebsr					hipsparseScsr2gebsr
cusparseScsr2gebsr_bufferSize					hipsparseScsr2gebsr_bufferSize
cusparseScsr2gebsr_bufferSizeExt					
cusparseScsr2hyb		10.2		11.0	hipsparseScsr2hyb
cusparseScsru2csr		12.2			hipsparseScsru2csr
cusparseScsru2csr_bufferSizeExt		12.2			hipsparseScsru2csr_bufferSizeEx
cusparseSdense2csc		11.1		12.0	hipsparseSdense2csc
cusparseSdense2csr		11.1		12.0	hipsparseSdense2csr
cusparseSdense2hyb		10.2		11.0	
cusparseSgebsr2csr		12.4			hipsparseSgebsr2csr
cusparseSgebsr2gebsc					hipsparseSgebsr2gebsc
cusparseSgebsr2gebsc_bufferSize					hipsparseSgebsr2gebsc_bufferSi
cusparseSgebsr2gebsc_bufferSizeExt					
cusparseSgebsr2gebsr		12.8			hipsparseSgebsr2gebsr
cusparseSgebsr2gebsr_bufferSize		12.8			hipsparseSgebsr2gebsr_bufferSi
cusparseSgebsr2gebsr_bufferSizeExt		12.8			
cusparseShyb2csc		10.2		11.0	
cusparseShyb2csr		10.2		11.0	hipsparseShyb2csr
cusparseShyb2dense		10.2		11.0	
cusparseSnnz					hipsparseSnnz
cusparseSnnz_compress	8.0	12.2			hipsparseSnnz_compress
cusparseSpruneCsr2csr	9.0	12.2			hipsparseSpruneCsr2csr
cusparseSpruneCsr2csrByPercentage	9.0	12.2			hipsparseSpruneCsr2csrByPercen
cusparseSpruneCsr2csrByPercentage_bufferSizeExt	9.0	12.2			hipsparseSpruneCsr2csrByPercen
cusparseSpruneCsr2csrNnz	9.0	12.2			hipsparseSpruneCsr2csrNnz
cusparseSpruneCsr2csrNnzByPercentage	9.0	12.2			hipsparseSpruneCsr2csrNnzByPer
cusparseSpruneCsr2csr_bufferSizeExt	9.0	12.2			hipsparseSpruneCsr2csr_bufferS
cusparseSpruneDense2csr	9.0	12.2			hipsparseSpruneDense2csr
cusparseSpruneDense2csrByPercentage	9.0	12.2			hipsparseSpruneDense2csrByPerc
cusparseSpruneDense2csrByPercentage_bufferSizeExt	9.0	12.2			hipsparseSpruneDense2csrByPerc
cusparseSpruneDense2csrNnz	9.0	12.2			hipsparseSpruneDense2csrNnz
cusparseSpruneDense2csrNnzByPercentage	9.0	12.2			hipsparseSpruneDense2csrNnzByP
cusparseSpruneDense2csr_bufferSizeExt	9.0	12.2			hipsparseSpruneDense2csr_buffe
cusparseXcoo2csr					hipsparseXcoo2csr
cusparseXcoosortByColumn					hipsparseXcoosortByColumn
cusparseXcoosortByRow					hipsparseXcoosortByRow
cusparseXcoosort_bufferSizeExt					hipsparseXcoosort_bufferSizeEx
cusparseXcscsort					hipsparseXcscsort

Table 15

CUDA	A	D	C	R	HIP
cusparseXcscsort_bufferSizeExt					hipsparseXcscsort_bufferSizeEx
cusparseXcsr2bsrNnz		12.4			hipsparseXcsr2bsrNnz
cusparseXcsr2coo					hipsparseXcsr2coo
cusparseXcsr2gebsrNnz					hipsparseXcsr2gebsrNnz
cusparseXcsrsort					hipsparseXcsrsort
cusparseXcsrsort_bufferSizeExt					hipsparseXcsrsort_bufferSizeEx
cusparseXgebsr2csr		12.4			
cusparseXgebsr2gebsrNnz		12.8			hipsparseXgebsr2gebsrNnz
cusparseZbsr2csr		12.8			hipsparseZbsr2csr
cusparseZcsc2dense		11.1		12.0	hipsparseZcsc2dense
cusparseZcsc2hyb		10.2		11.0	
cusparseZcsr2bsr		12.4			hipsparseZcsr2bsr
cusparseZcsr2csc		10.2		11.0	hipsparseZcsr2csc
cusparseZcsr2csr_compress	8.0	12.2			hipsparseZcsr2csr_compress
cusparseZcsr2csru		12.2			hipsparseZcsr2csru
cusparseZcsr2dense		11.1		12.0	hipsparseZcsr2dense
cusparseZcsr2gebsr					hipsparseZcsr2gebsr
cusparseZcsr2gebsr_bufferSize					hipsparseZcsr2gebsr_bufferSize
cusparseZcsr2gebsr_bufferSizeExt					
cusparseZcsr2hyb		10.2		11.0	hipsparseZcsr2hyb
cusparseZcsru2csr		12.2			hipsparseZcsru2csr
cusparseZcsru2csr_bufferSizeExt		12.2			hipsparseZcsru2csr_bufferSizeE
cusparseZdense2csc		11.1		12.0	hipsparseZdense2csc
cusparseZdense2csr		11.1		12.0	hipsparseZdense2csr
cusparseZdense2hyb		10.2		11.0	
cusparseZgebsr2csr		12.4			hipsparseZgebsr2csr
cusparseZgebsr2gebsc					hipsparseZgebsr2gebsc
cusparseZgebsr2gebsc_bufferSize					hipsparseZgebsr2gebsc_bufferSi
cusparseZgebsr2gebsc_bufferSizeExt					
cusparseZgebsr2gebsr		12.8			hipsparseZgebsr2gebsr
cusparseZgebsr2gebsr_bufferSize		12.8			hipsparseZgebsr2gebsr_bufferSi
cusparseZgebsr2gebsr_bufferSizeExt		12.8			
cusparseZhyb2csc		10.2		11.0	
cusparseZhyb2csr		10.2		11.0	hipsparseZhyb2csr
cusparseZhyb2dense		10.2		11.0	
cusparseZnnz					hipsparseZnnz
cusparseZnnz_compress	8.0	12.2			hipsparseZnnz_compress

12.2.12 15. CUSPARSE Generic API Reference

CUDA	A	D	C	R	HIP	A
cusparseAxpby	11.0	12.8	12.0		hipsparseAxpby	4.1.0
cusparseBlockedEllGet	11.2				hipsparseBlockedEllGet	4.5.0
cusparseBsrSetStridedBatch	12.1					
cusparseConstBlockedEllGet	12.0				hipsparseConstBlockedEllGet	6.0.0
cusparseConstCooGet	12.0				hipsparseConstCooGet	6.0.0
cusparseConstCscGet	12.0				hipsparseConstCscGet	6.2.0
cusparseConstCsrGet	12.0				hipsparseConstCsrGet	6.0.0

Table 16 – continued from previ

CUDA	A	D	C	R	HIP	A
cusparseConstDnMatGet	12.0				hipsparseConstDnMatGet	6.0.0
cusparseConstDnMatGetValues	12.0				hipsparseConstDnMatGetValues	6.0.0
cusparseConstDnVecGet	12.0				hipsparseConstDnVecGet	6.0.0
cusparseConstDnVecGetValues	12.0				hipsparseConstDnVecGetValues	6.0.0
cusparseConstSpMatGetValues	12.0				hipsparseConstSpMatGetValues	6.0.0
cusparseConstSpVecGet	12.0				hipsparseConstSpVecGet	6.0.0
cusparseConstSpVecGetValues	12.0				hipsparseConstSpVecGetValues	6.0.0
cusparseConstrainedGeMM	10.2	11.2		12.0		
cusparseConstrainedGeMM_bufferSize	10.2	11.2		12.0		
cusparseCooAoSGet	10.2	11.2		12.0	hipsparseCooAoSGet	4.1.0
cusparseCooGet	10.1				hipsparseCooGet	4.1.0
cusparseCooSetPointers	11.1				hipsparseCooSetPointers	4.2.0
cusparseCooSetStridedBatch	11.0				hipsparseCooSetStridedBatch	5.2.0
cusparseCreateBlockedEll	11.2				hipsparseCreateBlockedEll	4.5.0
cusparseCreateBsr	12.1					
cusparseCreateConstBlockedEll	12.0				hipsparseCreateConstBlockedEll	6.0.0
cusparseCreateConstBsr	12.1					
cusparseCreateConstCoo	12.0				hipsparseCreateConstCoo	6.0.0
cusparseCreateConstCsc	12.0				hipsparseCreateConstCsc	6.0.0
cusparseCreateConstCsr	12.0				hipsparseCreateConstCsr	6.0.0
cusparseCreateConstDnMat	12.0				hipsparseCreateConstDnMat	6.0.0
cusparseCreateConstDnVec	12.0				hipsparseCreateConstDnVec	6.0.0
cusparseCreateConstSlicedEll	12.1				hipsparseCreateConstSlicedEll	7.11.0
cusparseCreateConstSpVec	12.0				hipsparseCreateConstSpVec	6.0.0
cusparseCreateCoo	10.1				hipsparseCreateCoo	4.1.0
cusparseCreateCooAoS	10.2	11.2		12.0	hipsparseCreateCooAoS	4.1.0
cusparseCreateCsc	11.1				hipsparseCreateCsc	4.2.0
cusparseCreateCsr	10.2				hipsparseCreateCsr	4.1.0
cusparseCreateDnMat	10.1				hipsparseCreateDnMat	4.2.0
cusparseCreateDnVec	10.2				hipsparseCreateDnVec	4.1.0
cusparseCreateSlicedEll	12.1				hipsparseCreateSlicedEll	7.11.0
cusparseCreateSpVec	10.2				hipsparseCreateSpVec	4.1.0
cusparseCscGet	11.7				hipsparseCscGet	6.2.0
cusparseCscSetPointers	11.1				hipsparseCscSetPointers	4.2.0
cusparseCsrGet	10.2				hipsparseCsrGet	4.1.0
cusparseCsrSetPointers	11.0				hipsparseCsrSetPointers	4.1.0
cusparseCsrSetStridedBatch	11.0				hipsparseCsrSetStridedBatch	5.2.0
cusparseDenseToSparse_analysis	11.1		12.0		hipsparseDenseToSparse_analysis	4.2.0
cusparseDenseToSparse_bufferSize	11.1		12.0		hipsparseDenseToSparse_bufferSize	4.2.0
cusparseDenseToSparse_convert	11.1		12.0		hipsparseDenseToSparse_convert	4.2.0
cusparseDestroyDnMat	10.1		12.0		hipsparseDestroyDnMat	4.2.0
cusparseDestroyDnVec	10.2		12.0		hipsparseDestroyDnVec	4.1.0
cusparseDestroySpMat	10.1		12.0		hipsparseDestroySpMat	4.1.0
cusparseDestroySpVec	10.2		12.0		hipsparseDestroySpVec	4.1.0
cusparseDnMatGet	10.1				hipsparseDnMatGet	4.2.0
cusparseDnMatGetStridedBatch	10.1		12.0		hipsparseDnMatGetStridedBatch	5.2.0
cusparseDnMatGetValues	10.2				hipsparseDnMatGetValues	4.2.0
cusparseDnMatSetStridedBatch	10.1				hipsparseDnMatSetStridedBatch	5.2.0
cusparseDnMatSetValues	10.2				hipsparseDnMatSetValues	4.2.0
cusparseDnVecGet	10.2				hipsparseDnVecGet	4.1.0

Table 16 – continued from previ

CUDA	A	D	C	R	HIP	A
cusparseDnVecGetValues	10.2				hipsparseDnVecGetValues	4.1.0
cusparseDnVecSetValues	10.2				hipsparseDnVecSetValues	4.1.0
cusparseGather	11.0		12.0		hipsparseGather	4.1.0
cusparseRot	11.0	12.2			hipsparseRot	4.1.0
cusparseSDDMM	11.2		12.0		hipsparseSDDMM	4.3.0
cusparseSDDMM_bufferSize	11.2		12.0		hipsparseSDDMM_bufferSize	4.3.0
cusparseSDDMM_preprocess	11.2		12.0		hipsparseSDDMM_preprocess	4.3.0
cusparseScatter	11.0		12.0		hipsparseScatter	4.1.0
cusparseSpGEMM_compute	11.0		12.0		hipsparseSpGEMM_compute	4.1.0
cusparseSpGEMM_copy	11.0		12.0		hipsparseSpGEMM_copy	4.1.0
cusparseSpGEMM_createDescr	11.0				hipsparseSpGEMM_createDescr	4.1.0
cusparseSpGEMM_destroyDescr	11.0				hipsparseSpGEMM_destroyDescr	4.1.0
cusparseSpGEMM_estimateMemory	12.0					
cusparseSpGEMM_getNumProducts	12.0					
cusparseSpGEMM_workEstimation	11.0		12.0		hipsparseSpGEMM_workEstimation	4.1.0
cusparseSpGEMMreuse_compute	11.3	13.2	12.0		hipsparseSpGEMMreuse_compute	5.1.0
cusparseSpGEMMreuse_copy	11.3	13.2	12.0		hipsparseSpGEMMreuse_copy	5.1.0
cusparseSpGEMMreuse_nnz	11.3	13.2	12.0		hipsparseSpGEMMreuse_nnz	5.1.0
cusparseSpGEMMreuse_workEstimation	11.3	13.2	12.0		hipsparseSpGEMMreuse_workEstimation	5.1.0
cusparseSpMM	10.1		12.0		hipsparseSpMM	4.2.0
cusparseSpMMOp	11.5	13.2				
cusparseSpMMOp_createPlan	11.5	13.2				
cusparseSpMMOp_destroyPlan	11.5	13.2				
cusparseSpMM_bufferSize	10.1		12.0		hipsparseSpMM_bufferSize	4.2.0
cusparseSpMM_preprocess	11.2		12.0		hipsparseSpMM_preprocess	4.5.0
cusparseSpMV	10.1		12.0		hipsparseSpMV	4.1.0
cusparseSpMVOp	13.1					
cusparseSpMVOp_bufferSize	13.1					
cusparseSpMVOp_createDescr	13.1		13.1			
cusparseSpMVOp_createPlan	13.1					
cusparseSpMVOp_destroyDescr	13.1					
cusparseSpMVOp_destroyPlan	13.1					
cusparseSpMVOp_setGlobalUserData	13.1					
cusparseSpMV_bufferSize	10.1		12.0		hipsparseSpMV_bufferSize	4.1.0
cusparseSpMV_preprocess	12.4				hipsparseSpMV_preprocess	5.2.0
cusparseSpMatGetAttribute	11.3		12.0		hipsparseSpMatGetAttribute	4.5.0
cusparseSpMatGetFormat	10.1		12.0		hipsparseSpMatGetFormat	4.1.0
cusparseSpMatGetIndexBase	10.1		12.0		hipsparseSpMatGetIndexBase	4.1.0
cusparseSpMatGetNumBatches	10.1			10.2		
cusparseSpMatGetSize	11.0		12.0		hipsparseSpMatGetSize	4.1.0
cusparseSpMatGetStridedBatch	10.2		12.0		hipsparseSpMatGetStridedBatch	5.2.0
cusparseSpMatGetValues	10.2				hipsparseSpMatGetValues	4.1.0
cusparseSpMatSetAttribute	11.3				hipsparseSpMatSetAttribute	4.5.0
cusparseSpMatSetNumBatches	10.1			10.2		
cusparseSpMatSetStridedBatch	10.2			12.0	hipsparseSpMatSetStridedBatch	5.2.0
cusparseSpMatSetValues	10.2				hipsparseSpMatSetValues	4.1.0
cusparseSpSM_analysis	11.3		12.0		hipsparseSpSM_analysis	4.5.0
cusparseSpSM_bufferSize	11.3		12.0		hipsparseSpSM_bufferSize	4.5.0
cusparseSpSM_createDescr	11.3				hipsparseSpSM_createDescr	4.5.0
cusparseSpSM_destroyDescr	11.3				hipsparseSpSM_destroyDescr	4.5.0

Table 16 – continued from previ

CUDA	A	D	C	R	HIP	A
cusparseSpSM_solve	11.3		12.0		hipsparseSpSM_solve	4.5.0
cusparseSpSM_updateMatrix	12.4					
cusparseSpSV_analysis	11.3		12.0		hipsparseSpSV_analysis	4.5.0
cusparseSpSV_bufferSize	11.3		12.0		hipsparseSpSV_bufferSize	4.5.0
cusparseSpSV_createDescr	11.3				hipsparseSpSV_createDescr	4.5.0
cusparseSpSV_destroyDescr	11.3				hipsparseSpSV_destroyDescr	4.5.0
cusparseSpSV_solve	11.3		12.0		hipsparseSpSV_solve	4.5.0
cusparseSpSV_updateMatrix	12.1					
cusparseSpVV	10.1	12.8	12.0		hipsparseSpVV	4.1.0
cusparseSpVV_bufferSize	10.1	12.8	12.0		hipsparseSpVV_bufferSize	4.1.0
cusparseSpVecGet	10.2				hipsparseSpVecGet	4.1.0
cusparseSpVecGetIndexBase	10.2		12.0		hipsparseSpVecGetIndexBase	4.1.0
cusparseSpVecGetValues	10.2				hipsparseSpVecGetValues	4.1.0
cusparseSpVecSetValues	10.2				hipsparseSpVecSetValues	4.1.0
cusparseSparseToDense	11.1		12.0		hipsparseSparseToDense	4.2.0
cusparseSparseToDense_bufferSize	11.1		12.0		hipsparseSparseToDense_bufferSize	4.2.0

12.3 CURAND API supported by

Note: In the tables that follow the columns marked A, D, C, R, U, and E mean the following: **A** - Added; **D** - Deprecated; **C** - Changed; **R** - Removed; **U** - Unsupported for CUDA version(s); **E** - Experimental

12.3.1 1. CURAND Data types

CUDA	A	D	C	R	HIP
CURAND_3RD					
CURAND_BINARY_SEARCH					
CURAND_CHOOSE_BEST					
CURAND_DEFINITION					
CURAND_DEVICE_API					
CURAND_DIRECTION_VECTORS_32_JOEKUO6					HIPRAND_DIRECTION_VECTORS_32_JOEKUO6
CURAND_DIRECTION_VECTORS_64_JOEKUO6					HIPRAND_DIRECTION_VECTORS_64_JOEKUO6
CURAND_DISCRETE_GAUSS					
CURAND_FAST_REJECTION					
CURAND_HITR					
CURAND_ITR					
CURAND_KNUTH					
CURAND_M1					
CURAND_M2					
CURAND_ORDERING_PSEUDO_BEST					HIPRAND_ORDERING_PSEUDO_BEST
CURAND_ORDERING_PSEUDO_DEFAULT					HIPRAND_ORDERING_PSEUDO_DEFAULT
CURAND_ORDERING_PSEUDO_DYNAMIC	11.5				HIPRAND_ORDERING_PSEUDO_DYNAMIC
CURAND_ORDERING_PSEUDO_LEGACY	11.0				HIPRAND_ORDERING_PSEUDO_LEGACY
CURAND_ORDERING_PSEUDO_SEEDED					HIPRAND_ORDERING_PSEUDO_SEEDED
CURAND_ORDERING_QUASI_DEFAULT					HIPRAND_ORDERING_QUASI_DEFAULT
CURAND_POISSON					

Table 17 – continued

CUDA	A	D	C	R	HIP
CURAND_REJECTION					
CURAND_RNG_PSEUDO_DEFAULT					HIPRAND_RNG_PSEUDO_DEFAULT
CURAND_RNG_PSEUDO_MRG32K3A					HIPRAND_RNG_PSEUDO_MRG32K3A
CURAND_RNG_PSEUDO_MT19937					HIPRAND_RNG_PSEUDO_MT19937
CURAND_RNG_PSEUDO_MTGP32					HIPRAND_RNG_PSEUDO_MTGP32
CURAND_RNG_PSEUDO_PHILOX4_32_10					HIPRAND_RNG_PSEUDO_PHILOX4_32_10
CURAND_RNG_PSEUDO_XORWOW					HIPRAND_RNG_PSEUDO_XORWOW
CURAND_RNG_QUASI_DEFAULT					HIPRAND_RNG_QUASI_DEFAULT
CURAND_RNG_QUASI_SCRAMBLED_SOBOL32					HIPRAND_RNG_QUASI_SCRAMBLED_SOBOL32
CURAND_RNG_QUASI_SCRAMBLED_SOBOL64					HIPRAND_RNG_QUASI_SCRAMBLED_SOBOL64
CURAND_RNG_QUASI_SOBOL32					HIPRAND_RNG_QUASI_SOBOL32
CURAND_RNG_QUASI_SOBOL64					HIPRAND_RNG_QUASI_SOBOL64
CURAND_RNG_TEST					HIPRAND_RNG_TEST
CURAND_SCRAMBLED_DIRECTION_VECTORS_32_JOEKUO6					HIPRAND_SCRAMBLED_DIRECTION_VECTORS_32
CURAND_SCRAMBLED_DIRECTION_VECTORS_64_JOEKUO6					HIPRAND_SCRAMBLED_DIRECTION_VECTORS_64
CURAND_STATUS_ALLOCATION_FAILED					HIPRAND_STATUS_ALLOCATION_FAILED
CURAND_STATUS_ARCH_MISMATCH					HIPRAND_STATUS_ARCH_MISMATCH
CURAND_STATUS_DOUBLE_PRECISION_REQUIRED					HIPRAND_STATUS_DOUBLE_PRECISION_REQUIR
CURAND_STATUS_INITIALIZATION_FAILED					HIPRAND_STATUS_INITIALIZATION_FAILED
CURAND_STATUS_INTERNAL_ERROR					HIPRAND_STATUS_INTERNAL_ERROR
CURAND_STATUS_LAUNCH_FAILURE					HIPRAND_STATUS_LAUNCH_FAILURE
CURAND_STATUS_LENGTH_NOT_MULTIPLE					HIPRAND_STATUS_LENGTH_NOT_MULTIPLE
CURAND_STATUS_NOT_INITIALIZED					HIPRAND_STATUS_NOT_INITIALIZED
CURAND_STATUS_OUT_OF_RANGE					HIPRAND_STATUS_OUT_OF_RANGE
CURAND_STATUS_PREEXISTING_FAILURE					HIPRAND_STATUS_PREEXISTING_FAILURE
CURAND_STATUS_SUCCESS					HIPRAND_STATUS_SUCCESS
CURAND_STATUS_TYPE_ERROR					HIPRAND_STATUS_TYPE_ERROR
CURAND_STATUS_VERSION_MISMATCH					HIPRAND_STATUS_VERSION_MISMATCH
curandDirectionVectorSet					hiprandDirectionVectorSet_t
curandDirectionVectorSet_t					hiprandDirectionVectorSet_t
curandDirectionVectors32_t					hiprandDirectionVectors32_t
curandDirectionVectors64_t					hiprandDirectionVectors64_t
curandDiscreteDistribution_st					hiprandDiscreteDistribution_st
curandDiscreteDistribution_t					hiprandDiscreteDistribution_t
curandDistributionM2Shift_st					
curandDistributionM2Shift_t					
curandDistributionShift_st					
curandDistributionShift_t					
curandDistribution_st					
curandDistribution_t					
curandGenerator_st					hiprandGenerator_st
curandGenerator_t					hiprandGenerator_t
curandHistogramM2K_st					
curandHistogramM2K_t					
curandHistogramM2V_st					
curandHistogramM2V_t					
curandHistogramM2_st					
curandHistogramM2_t					
curandMethod					
curandMethod_t					

Table 17 – continued

CUDA	A	D	C	R	HIP
curandOrdering					hiprandOrdering
curandOrdering_t					hiprandOrdering_t
curandRngType					hiprandRngType_t
curandRngType_t					hiprandRngType_t
curandState					hiprandState
curandStateMRG32k3a					hiprandStateMRG32k3a
curandStateMRG32k3a_t					hiprandStateMRG32k3a_t
curandStateMtgp32					hiprandStateMtgp32
curandStateMtgp32_t					hiprandStateMtgp32_t
curandStatePhilox4_32_10					hiprandStatePhilox4_32_10
curandStatePhilox4_32_10_t					hiprandStatePhilox4_32_10_t
curandStateScrambledSobol32					hiprandStateScrambledSobol32
curandStateScrambledSobol32_t					hiprandStateScrambledSobol32_t
curandStateScrambledSobol64					hiprandStateScrambledSobol64
curandStateScrambledSobol64_t					hiprandStateScrambledSobol64_t
curandStateSobol32					hiprandStateSobol32
curandStateSobol32_t					hiprandStateSobol32_t
curandStateSobol64					hiprandStateSobol64
curandStateSobol64_t					hiprandStateSobol64_t
curandStateXORWOW					hiprandStateXORWOW
curandStateXORWOW_t					hiprandStateXORWOW_t
curandState_t					hiprandState_t
curandStatus					hiprandStatus
curandStatus_t					hiprandStatus_t

12.3.2 2. Host API Functions

CUDA	A	D	C	R	HIP	A	D	C	R	U	E	ROC	A	D	C	R	E	
curandCre					hiprandCr	1.5.0						rocrand_cr	1.5.0					
curandCre					hiprandCr	1.5.0						rocrand_cr	6.2.0					_blocking
curandCre					hiprandCr	1.5.0						rocrand_cr	1.5.0					ɔution
curandDes					hiprandDe	1.5.0						rocrand_de	1.5.0					ribution
curandDes					hiprandDe	1.5.0						rocrand_de	1.5.0					
curandGen					hiprandGe	1.5.0						rocrand_ge	1.5.0					
curandGen					hiprandGe	1.5.0						rocrand_ge	1.5.0					
curandGen					hiprandGe	1.5.0						rocrand_ge	1.5.0					ɔuble
curandGen					hiprandGe	5.5.0						rocrand_ge	5.4.0					
curandGen					hiprandGe	1.5.0						rocrand_ge	1.5.0					
curandGen					hiprandGe	1.5.0						rocrand_ge	1.5.0					e
curandGen					hiprandGe	1.5.0						rocrand_ge	1.5.0					
curandGen					hiprandGe	1.5.0						rocrand_in	1.5.0					
curandGen					hiprandGe	1.5.0						rocrand_ge	1.5.0					
curandGen					hiprandGe	1.5.0						rocrand_ge	1.5.0					le
curandGet					hiprandGe	6.0.0						rocrand_ge	6.0.0					32
curandGet					hiprandGe	6.0.0						rocrand_ge	6.0.0					64
curandGet	8.0																	
curandGet					hiprandGe	6.0.0						rocrand_ge	6.0.0					s32
curandGet					hiprandGe	6.0.0						rocrand_ge	6.0.0					s64
curandGet					hiprandGe	1.5.0						rocrand_ge	1.5.0					
curandMak					hiprandMa	1.5.0						rocrand_ma	1.5.0					
curandMak					hiprandMa	1.5.0						rocrand_ma	1.5.0					
curandSet					hiprandSe	1.5.0						rocrand_se	1.5.0					
curandSet					hiprandSe	6.2.0						rocrand_se	5.5.0					
curandSet					hiprandSe	1.5.0						rocrand_se	1.5.0					
curandSet					hiprandSe	1.5.0						rocrand_se	1.5.0					rator_dimensio
curandSet					hiprandSe	1.5.0						rocrand_se	1.5.0					

12.3.3 3. Device API Functions

CUDA	A	D	C	R	HIP	A	D	C	R	U	E	ROC	A	D	C	R	E
__curand_	11.5																
curand					hiprand	1.5.0						rocrand	1.5.0				
curand_Ph																	
curand_di					hiprand_	1.5.0						rocrand_	1.5.0				
curand_di					hiprand_	1.5.0						rocrand_	1.5.0				
curand_in					hiprand_	1.5.0						rocrand_	1.5.0				
curand_lo					hiprand_	1.5.0						rocrand_	1.5.0				
curand_lo					hiprand_	1.5.0						rocrand_	1.5.0				
curand_lo					hiprand_	1.5.0						rocrand_	1.5.0				
curand_lo					hiprand_	1.5.0						rocrand_	1.5.0				
curand_lo		13.0			hiprand_	1.5.0						rocrand_	1.5.0				
curand_lo					hiprand_	1.5.0						rocrand_	1.5.0				
curand_mt																	
curand_mt																	
curand_mt																	
curand_no					hiprand_	1.5.0						rocrand_	1.5.0				
curand_no					hiprand_	1.5.0						rocrand_	1.5.0				
curand_no					hiprand_	1.5.0						rocrand_	1.5.0				
curand_no					hiprand_	1.5.0						rocrand_	1.5.0				
curand_no					hiprand_	1.5.0						rocrand_	1.5.0				
curand_no					hiprand_	1.5.0						rocrand_	1.5.0				
curand_po					hiprand_	1.5.0						rocrand_	1.5.0				
curand_po					hiprand_	1.5.0						rocrand_	1.5.0				
curand_un					hiprand_	1.5.0						rocrand_	1.5.0				
curand_un					hiprand_	1.5.0						rocrand_	1.5.0				
curand_un					hiprand_	1.5.0						rocrand_	1.5.0				
curand_un		13.0			hiprand_	1.5.0						rocrand_	1.5.0				
curand_un					hiprand_	1.5.0						rocrand_	1.5.0				

CHAPTER

THIRTEEN

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CHAPTER

FOURTEEN

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