

AMD ROCmTM

HIP-Supported CUDA API Reference Guide

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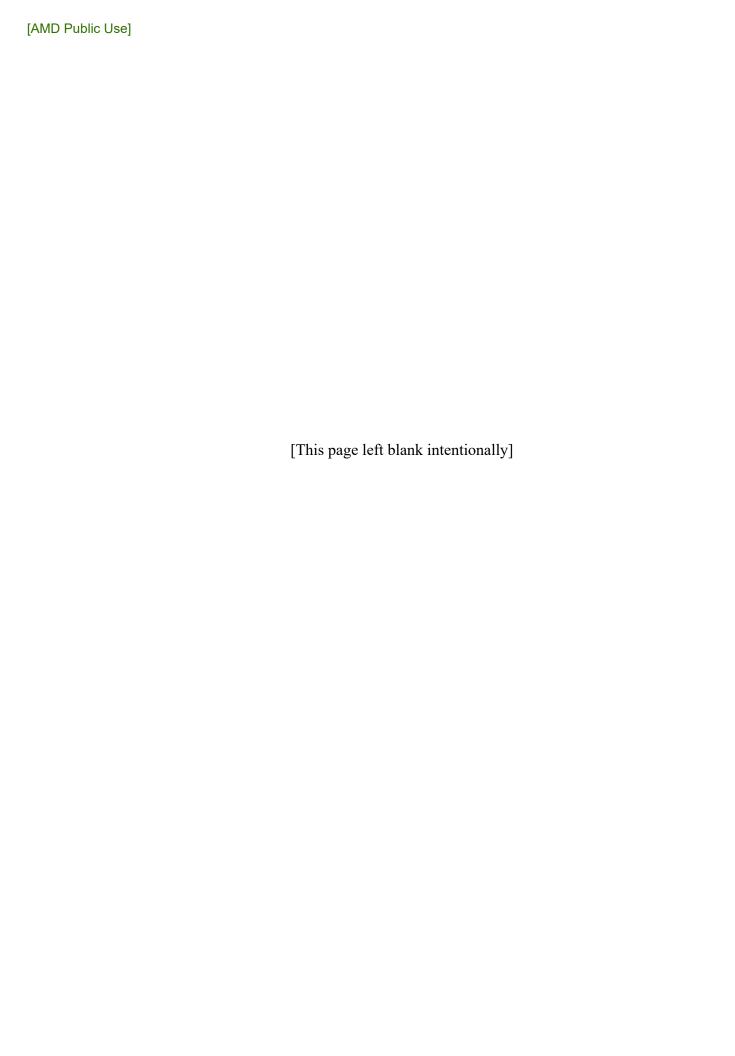
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Chapter 1 HIP-Supported CUDA API

This reference guide consists of CUDA APIs supported in HIP and covers the Driver API, Runtime API, cuComplex API, Device API, and APIs for the following supported libraries:

- cuBLAS
- cuRAND
- cuFFT
- cuSPARSE
- cuDNN

Note, deprecated APIs are identified and marked in the Deprecated column.

For details about HIP APIs, see the HIP API Guide at

https://github.com/RadeonOpenCompute/ROCm/blob/master/AMD HIP API Guide 4.2.pdf

1.1 CUDA Runtime API Supported by HIP

1.1.1 Device Management

CUDA	Deprecated	HIP	Deprecated
cudaChooseDevice		hipChooseDevice	
cudaDeviceGetAttribute		hipDeviceGetAttribute	
cudaDeviceGetByPCIBusId		hipDeviceGetByPCIBusId	
cudaDeviceGetCacheConfig		hipDeviceGetCacheConfig	
cudaDeviceGetLimit		hipDeviceGetLimit	
cudaDeviceGetP2PAttribute		hipDeviceGetP2PAttribute	
cudaDeviceGetPCIBusId		hipDeviceGetPCIBusId	
cudaDeviceGetSharedMemConfig		hipDeviceGetSharedMemConfig	
cudaDeviceGetStreamPriorityRange		hipDeviceGetStreamPriorityRange	
cudaDeviceReset		hipDeviceReset	
cudaDeviceSetCacheConfig		hipDeviceSetCacheConfig	
cudaDeviceSetSharedMemConfig		hipDeviceSetSharedMemConfig	
cudaDeviceSynchronize		hipDeviceSynchronize	
cudaGetDevice		hipGetDevice	
cudaGetDeviceCount		hipGetDeviceCount	
cudaGetDeviceFlags		hipGetDeviceFlags	
cudaGetDeviceProperties		hipGetDeviceProperties	
cudaIpcCloseMemHandle		hipIpcCloseMemHandle	
cudaIpcGetEventHandle		hipIpcGetEventHandle	
cudaIpcGetMemHandle		hipIpcGetMemHandle	
cudaIpcOpenEventHandle		hipIpcOpenEventHandle	
cudaIpcOpenMemHandle		hipIpcOpenMemHandle	
cudaSetDevice		hipSetDevice	
cudaSetDeviceFlags		hipSetDeviceFlags	

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1.1.2 Thread Management [Deprecated]

CUDA	Deprecated	HIP	Deprecated
cudaThreadExit	✓	hipDeviceReset	
cudaThreadGetCacheConfig	√	hipDeviceGetCacheConfig	
cudaThreadSetCacheConfig	✓	hipDeviceSetCacheConfig	
cudaThreadSynchronize	√	hipDeviceSynchronize	

1.1.3 Error Handling

CUDA	Deprecated	HIP	Deprecated
cudaGetErrorName		hipGetErrorName	
cudaGetErrorString		hipGetErrorString	
cudaGetLastError		hipGetLastError	
cudaPeekAtLastError		hipPeekAtLastError	

1.1.4 Stream Management

CUDA	Deprecated	HIP	Deprecated
cudaStreamAddCallback		hipStreamAddCallback	
cudaStreamAttachMemAsync		hipStreamAttachMemAsync	
cudaStreamCreate		hipStreamCreate	
cudaStreamCreateWithFlags		hipStreamCreateWithFlags	
cudaStreamCreateWithPriority		hipStreamCreateWithPriority	
cudaStreamDestroy		hipStreamDestroy	
cudaStreamGetFlags		hipStreamGetFlags	
cudaStreamGetPriority		hipStreamGetPriority	
cudaStreamQuery		hipStreamQuery	
cudaStreamSynchronize		hipStreamSynchronize	
cudaStreamWaitEvent		hipStreamWaitEvent	
cudaStreamAddCallback		hipStreamAddCallback	

1.1.5 Event Management

CUDA	Deprecated	HIP	Deprecated
cudaEventCreate		hipEventCreate	
cudaEventCreateWithFlags		hipEventCreateWithFlags	
cudaEventDestroy		hipEventDestroy	
cudaEventElapsedTime		hipEventElapsedTime	
cudaEventQuery		hipEventQuery	
cudaEventRecord		hipEventRecord	
cudaEventSynchronize		hipEventSynchronize	

1.1.6 Execution Control

CUDA	Deprecated	HIP	Deprecated
cudaFuncGetAttributes		hipFuncGetAttributes	
cudaFuncSetAttribute		hipFuncSetAttribute	
cudaFuncSetCacheConfig		hipFuncSetCacheConfig	
cudaFuncSetSharedMemConfig		hipFuncSetSharedMemConfig	
cudaLaunchCooperativeKernel		hipLaunchCooperativeKernel	
cudaLaunchCooperativeKernelMultiDevi		hipLaunchCooperativeKernelMultiDevic	
ce		e	
cudaLaunchKernel		hipLaunchKernel	

1.1.7 Occupancy

CUDA	Deprecated	HIP	Deprecated
cudaOccupancyMaxActiveBlocksPerMul		hipOccupancyMaxActiveBlocksPerMulti	
tiprocessor		processor	
cudaOccupancyMaxActiveBlocksPerMul		hipOccupancyMaxActiveBlocksPerMulti	
tiprocessorWithFlags		processorWithFlags	
cudaOccupancyMaxPotentialBlockSize		hipOccupancyMaxPotentialBlockSize	
cudaOccupancyMaxPotentialBlockSize		hipOccupancyMaxPotentialBlockSizeWi	
WithFlags		thFlags	

1.1.8 Memory Management

CUDA	Deprecated	HIP	Deprecated
cudaFree		hipFree	
cudaFreeArray		hipFreeArray	
cudaFreeHost		hipHostFree	
cudaFreeMipmappedArray		hipFreeMipmappedArray	
cudaGetMipmappedArrayLevel		hipGetMipmappedArrayLevel	
cudaGetSymbolAddress		hipGetSymbolAddress	
cudaGetSymbolSize		hipGetSymbolSize	
cudaHostAlloc		hipHostMalloc	
cudaHostGetDevicePointer		hipHostGetDevicePointer	
cudaHostGetFlags		hipHostGetFlags	
cudaHostRegister		hipHostRegister	
cudaHostUnregister		hipHostUnregister	
cudaMalloc		hipMalloc	
cudaMalloc3D		hipMalloc3D	
cudaMalloc3DArray		hipMalloc3DArray	
cudaMallocArray		hipMallocArray	
cudaMallocHost		hipHostMalloc	
cudaMallocManaged		hipMallocManaged	
cudaMallocMipmappedArray		hipMallocMipmappedArray	
cudaMallocPitch		hipMallocPitch	
cudaMemAdvise		hipMemAdvise	
cudaMemGetInfo		hipMemGetInfo	
cudaMemPrefetchAsync		hipMemPrefetchAsync	
cudaMemRangeGetAttribute		hipMemRangeGetAttribute	
cudaMemRangeGetAttributes		hipMemRangeGetAttributes	
cudaMemcpy		hipMemcpy	
cudaMemcpy2D		hipMemcpy2D	

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cudaMemcpy2DAsync	hipMemcpy2DAsync	
cudaMemcpy2DFromArray	hipMemcpy2DFromArray	
cudaMemcpy2DFromArrayAsync	hipMemcpy2DFromArrayAsync	
cudaMemcpy2DToArray	hipMemcpy2DToArray	
cudaMemcpy3D	hipMemcpy3D	
cudaMemcpy3DAsync	hipMemcpy3DAsync	
cudaMemcpyAsync	hipMemcpyAsync	
cudaMemcpyFromSymbol	hipMemcpyFromSymbol	
cudaMemcpyFromSymbolAsync	hipMemcpyFromSymbolAsync	
cudaMemcpyPeer	hipMemcpyPeer	
cudaMemcpyPeerAsync	hipMemcpyPeerAsync	
cudaMemcpyToSymbol	hipMemcpyToSymbol	
cudaMemcpyToSymbolAsync	hipMemcpyToSymbolAsync	
cudaMemset	hipMemset	
cudaMemset2D	hipMemset2D	
cudaMemset2DAsync	hipMemset2DAsync	
cudaMemset3D	hipMemset3D	
cudaMemset3DAsync	hipMemset3DAsync	
cudaMemsetAsync	hipMemsetAsync	
make_cudaExtent	make_hipExtent	
make_cudaPitchedPtr	make_hipPitchedPtr	
make_cudaPos	make_hipPos	

1.1.9 Memory Management [Deprecated]

CUDA	Deprecated	HIP	Deprecated
cudaMemcpyFromArray	✓	hipMemcpyFromArray	✓
cudaMemcpyToArray	✓	hipMemcpyToArray	✓

1.1.10 Unified Addressing

CUDA	Deprecated	HIP	Deprecated
cudaPointerGetAttributes		hipPointerGetAttributes	

1.1.11 Peer Device Memory Access

CUDA	Deprecated	HIP	Deprecated
cudaDeviceCanAccessPeer		hipDeviceCanAccessPeer	
cudaDeviceDisablePeerAccess		hipDeviceDisablePeerAccess	
cudaDeviceEnablePeerAccess		hipDeviceEnablePeerAccess	

1.1.12 Texture Reference Management [Deprecated]

CUDA	Deprecated	HIP	Deprecated
cudaBindTexture	✓	hipBindTexture	✓
cudaBindTexture2D	✓	hipBindTexture2D	✓
cudaBindTextureToArray	✓	hipBindTextureToArray	✓
cudaBindTextureToMipmappedArray	✓	hipBindTextureToMipmappedArray	
cudaCreateChannelDesc		hipCreateChannelDesc	
cudaGetChannelDesc		hipGetChannelDesc	
cudaGetTextureAlignmentOffset	✓	hipGetTextureAlignmentOffset	✓

CUDA	Deprecated	HIP	Deprecated
cudaGetTextureReference	✓	hipGetTextureReference	
cudaUnbindTexture	√	hipUnbindTexture	√

1.1.13 Texture Object Management

CUDA	Deprecated	HIP	Deprecated
cuTexObjectGetTextureDesc		hipGetTextureObjectTextureDesc	
cudaCreateTextureObject		hipCreateTextureObject	
cudaDestroyTextureObject		hipDestroyTextureObject	
cudaGetTextureObjectResourceDesc		hipGetTextureObjectResourceDesc	
cudaGetTextureObjectResourceViewDes		hipGetTextureObjectResourceViewDesc	
c			

1.1.14 Surface Object Management

CUDA	Deprecated	HIP	Deprecated
cudaCreateSurfaceObject		hipCreateSurfaceObject	
cudaDestroySurfaceObject		hipDestroySurfaceObject	

1.1.15 Version Management

CUDA	Deprecated	HIP	Deprecated
cudaDriverGetVersion		hipDriverGetVersion	
cudaRuntimeGetVersion		hipRuntimeGetVersion	

1.1.16 Profiler Control

CUDA	Deprecated	HIP	Deprecated
cudaProfilerStart		hipProfilerStart	✓
cudaProfilerStop		hipProfilerStop	✓

1.1.17 Data types used by CUDA Runtime

CUDA	Deprecated	HIP	Deprecated
CUDA IPC HANDLE SIZE		HIP IPC HANDLE SIZE	
CUevent st		ihipEvent_t	
CUstream_st		ihipStream_t	
cudaAddressModeBorder		hipAddressModeBorder	
cudaAddressModeClamp		hipAddressModeClamp	
cudaAddressModeMirror		hipAddressModeMirror	
cudaAddressModeWrap		hipAddressModeWrap	
cudaArray		hipArray	
cudaArrayCubemap		hipArrayCubemap	
cudaArrayDefault		hipArrayDefault	
cudaArrayLayered		hipArrayLayered	
cudaArraySurfaceLoadStore		hipArraySurfaceLoadStore	
cudaArrayTextureGather		hipArrayTextureGather	
cudaArray const t		hipArray_const_t	
cudaArray_t		hipArray_t	
cudaBoundaryModeClamp		hipBoundaryModeClamp	

CUDA	Deprecated	HIP	Deprecated
cudaBoundaryModeTrap		hipBoundaryModeTrap	
cudaBoundaryModeZero		hipBoundaryModeZero	
cudaChannelFormatDesc		hipChannelFormatDesc	
cudaChannelFormatKind		hipChannelFormatKind	
cudaChannelFormatKindFloat		hipChannelFormatKindFloat	
cudaChannelFormatKindNone		hipChannelFormatKindNone	
cudaChannelFormatKindSigned		hipChannelFormatKindSigned	
cudaChannelFormatKindUnsigned		hipChannelFormatKindUnsigned	
cudaComputeMode		hipComputeMode	
cudaComputeModeDefault		hipComputeModeDefault	
cudaComputeModeExclusive		hipComputeModeExclusive	
cudaComputeModeExclusiveProcess		hipComputeModeExclusiveProcess	
cudaComputeModeProhibited		hipComputeModeProhibited	
cudaCooperativeLaunchMultiDeviceNoP		hipCooperativeLaunchMultiDeviceNoPo	
ostSync		stSync	
cudaCooperativeLaunchMultiDeviceNoP		hipCooperativeLaunchMultiDeviceNoPr	
reSync		eSync	
cudaCpuDeviceId		hipCpuDeviceId	
cudaDevAttrCanMapHostMemory		hipDeviceAttributeCanMapHostMemory	
cudaDevAttrClockRate			
		hipDeviceAttributeClockRate	
cudaDevAttrComputeCapabilityMajor		hipDeviceAttributeComputeCapabilityM	
-1 D -A# C -4 C 1 Tr M		ajor	
cudaDevAttrComputeCapabilityMinor		hipDeviceAttributeComputeCapabilityMi	
-1 D -A# C -4 M 1		nor	
cudaDevAttrComputeMode		hipDeviceAttributeComputeMode	
cudaDevAttrConcurrentKernels		hipDeviceAttributeConcurrentKernels	
cudaDevAttrConcurrentManagedAccess		hipDeviceAttributeConcurrentManagedA ccess	
cudaDevAttrCooperativeLaunch		hipDeviceAttributeCooperativeLaunch	
cudaDevAttrCooperativeLaulch cudaDevAttrCooperativeMultiDeviceLau		hipDeviceAttributeCooperativeLaulch hipDeviceAttributeCooperativeMultiDev	
*		iceLaunch	
nch			
cudaDevAttrDirectManagedMemAccess FromHost		hipDeviceAttributeDirectManagedMem AccessFromHost	
cudaDevAttrEccEnabled			
		hipDeviceAttributeEccEnabled	
cudaDevAttrGlobalMemoryBusWidth		hipDeviceAttributeMemoryBusWidth	
cudaDevAttrIntegrated		hipDeviceAttributeIntegrated	
cudaDevAttrlsMultiGpuBoard		hipDeviceAttributeIsMultiGpuBoard	
cudaDevAttrKernelExecTimeout		hipDeviceAttributeKernelExecTimeout	
cudaDevAttrL2CacheSize		hipDeviceAttributeL2CacheSize	
cudaDevAttrManagedMemory		hipDeviceAttributeManagedMemory	
cudaDevAttrMaxBlockDimX		hipDeviceAttributeMaxBlockDimX	
cudaDevAttrMaxBlockDimY		hipDeviceAttributeMaxBlockDimY	
cudaDevAttrMaxBlockDimZ		hipDeviceAttributeMaxBlockDimZ	
cudaDevAttrMaxGridDimX		hipDeviceAttributeMaxGridDimX	
cudaDevAttrMaxGridDimY		hipDeviceAttributeMaxGridDimY	
cudaDevAttrMaxGridDimZ		hipDeviceAttributeMaxGridDimZ	
cudaDevAttrMaxPitch		hipDeviceAttributeMaxPitch	
cudaDevAttrMaxRegistersPerBlock		hipDeviceAttributeMaxRegistersPerBloc k	
cudaDevAttrMaxSharedMemoryPerBlock		hipDeviceAttributeMaxSharedMemoryP erBlock	

CUDA	Deprecated	HIP	Deprecated
cudaDevAttrMaxSharedMemoryPerMult		hipDeviceAttributeMaxSharedMemoryP	
iprocessor		erMultiprocessor	
cudaDevAttrMaxTexture1DWidth		hipDeviceAttributeMaxTexture1DWidth	
cudaDevAttrMaxTexture2DHeight		hipDeviceAttributeMaxTexture2DHeight	
cudaDevAttrMaxTexture2DWidth		hipDeviceAttributeMaxTexture2DWidth	
cudaDevAttrMaxTexture3DDepth		hipDeviceAttributeMaxTexture3DDepth	
cudaDevAttrMaxTexture3DHeight		hipDeviceAttributeMaxTexture3DHeight	
cudaDevAttrMaxTexture3DWidth		hipDeviceAttributeMaxTexture3DWidth	
cudaDevAttrMaxThreadsPerBlock		hipDeviceAttributeMaxThreadsPerBlock	
cudaDevAttrMaxThreadsPerMultiProces		hipDeviceAttributeMaxThreadsPerMulti	
sor		Processor	
cudaDevAttrMemoryClockRate		hipDeviceAttributeMemoryClockRate	
cudaDevAttrMultiProcessorCount		hipDeviceAttributeMultiprocessorCount	
cudaDevAttrPageableMemoryAccess		hipDeviceAttributePageableMemoryAcc	
Cuan be vitted agencies temory recess		ess	
cudaDevAttrPageableMemoryAccessUse		hipDeviceAttributePageableMemoryAcc	
sHostPageTables		essUsesHostPageTables	
cudaDevAttrPciBusId		hipDeviceAttributePciBusId	
cudaDevAttrPciDeviceId		hipDeviceAttributePciDeviceId	
cudaDevAttrTextureAlignment		hipDeviceAttributeTextureAlignment	
cudaDevAttrTotalConstantMemory		hipDeviceAttributeTotalConstantMemor y	
cudaDevAttrWarpSize		hipDeviceAttributeWarpSize	
cudaDevP2PAttrAccessSupported		hipDevP2PAttrAccessSupported	
cudaDevP2PAttrCudaArrayAccessSuppo		hipDevP2PAttrHipArrayAccessSupporte	
rted		d	
cudaDevP2PAttrNativeAtomicSupported		hipDevP2PAttrNativeAtomicSupported	
cudaDevP2PAttrPerformanceRank		hipDevP2PAttrPerformanceRank	
cudaDeviceAttr		hipDeviceAttribute t	
cudaDeviceBlockingSync		hipDeviceScheduleBlockingSync	
cudaDeviceLmemResizeToMax		hipDeviceLmemResizeToMax	
cudaDeviceMapHost		hipDeviceMapHost	
cudaDeviceP2PAttr		hipDeviceP2PAttr	
cudaDeviceProp		hipDeviceProp t	
cudaDeviceScheduleAuto		hipDeviceScheduleAuto	
cudaDeviceScheduleBlockingSync		hipDeviceScheduleBlockingSync	
cudaDeviceScheduleMask		hipDeviceScheduleMask	
cudaDeviceScheduleSpin		hipDeviceScheduleSpin	
cudaDeviceScheduleYield		hipDeviceScheduleYield	
cudaError		hipError t	
cudaErrorAlreadyAcquired		hipErrorAlreadyAcquired	
cudaErrorAlreadyMapped		hipErrorAlreadyMapped	
cudaErrorArrayIsMapped		hipErrorArrayIsMapped	
cudaErrorAssert		hipErrorAssert	
cudaErrorCooperativeLaunchTooLarge		hipErrorCooperativeLaunchTooLarge	
		hipErrorDeinitialized	
cudaErrorCudartUnloading cudaErrorDeviceAlreadyInUse			
cudaErrorDeviceUninitialized		hipErrorContextAlreadyInUse hipErrorInvalidContext	
		•	
cudaError DeviceUninitilialized		hipErrorInvalidContext	
cudaErrorECCUncorrectable		hipErrorECCNotCorrectable	
cudaErrorFileNotFound		hipErrorFileNotFound	
cudaErrorHostMemoryAlreadyRegistere		hipErrorHostMemoryAlreadyRegistered	
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cudaHostAllocMapped		hipHostMallocMapped	
cudaHostAllocPortable		hipHostMallocPortable	
cudaHostAllocWriteCombined		hipHostMallocWriteCombined	
cudaHostRegisterDefault		hipHostRegisterDefault	
cudaHostRegisterIoMemory		hipHostRegisterIoMemory	
cudaHostRegisterMapped		hipHostRegisterMapped	
cudaHostRegisterPortable		hipHostRegisterPortable	
cudaInvalidDeviceId		hipInvalidDeviceId	
cudaIpcEventHandle_st		hipIpcEventHandle_st	
cudaIpcEventHandle_t		hipIpcEventHandle_t	
cudaIpcMemHandle_st		hipIpcMemHandle_st	
cudaIpcMemHandle_t		hipIpcMemHandle_t	
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cudaLaunchParams		hipLaunchParams	
cudaLimit		hipLimit_t	
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cudaMemAdviseSetAccessedBy		hipMemAdviseSetAccessedBy	
cudaMemAdviseSetPreferredLocation		hipMemAdviseSetPreferredLocation	
cudaMemAdviseSetReadMostly		hipMemAdviseSetReadMostly	
cudaMemAdviseUnsetAccessedBy		hipMemAdviseUnsetAccessedBy	
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cudaMemAdviseUnsetReadMostly		hipMemAdviseUnsetReadMostly	
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cudaResViewFormatUnsignedChar4 hipResViewFormatUnsignedChar4				

CUDA	Deprecated	HIP	Deprecated
cudaResViewFormatUnsignedInt2		hipResViewFormatUnsignedInt2	
cudaResViewFormatUnsignedInt4		hipResViewFormatUnsignedInt4	
cudaResViewFormatUnsignedShort1		hipResViewFormatUnsignedShort1	
cudaResViewFormatUnsignedShort2		hipResViewFormatUnsignedShort2	
cudaResViewFormatUnsignedShort4		hipResViewFormatUnsignedShort4	
cudaResourceDesc		hipResourceDesc	
cudaResourceType		hipResourceType	
cudaResourceTypeArray		hipResourceTypeArray	
cudaResourceTypeLinear		hipResourceTypeLinear	
cudaResourceTypeMipmappedArray		hipResourceTypeMipmappedArray	
cudaResourceTypePitch2D		hipResourceTypePitch2D	
cudaResourceViewDesc		hipResourceViewDesc	
cudaResourceViewFormat		hipResourceViewFormat	
cudaSharedMemBankSizeDefault		hipSharedMemBankSizeDefault	
cudaSharedMemBankSizeEightByte		hipSharedMemBankSizeEightByte	
cudaSharedMemBankSizeFourByte		hipSharedMemBankSizeFourByte	
cudaSharedMemConfig		hipSharedMemConfig	
cudaStreamCallback_t		hipStreamCallback_t	
cudaStreamDefault		hipStreamDefault	
cudaStreamNonBlocking		hipStreamNonBlocking	
cudaStream_t		hipStream_t	
cudaSuccess		hipSuccess	
cudaSurfaceBoundaryMode		hipSurfaceBoundaryMode	
cudaSurfaceObject_t		hipSurfaceObject_t	
cudaTextureAddressMode		hipTextureAddressMode	
cudaTextureDesc		hipTextureDesc	
cudaTextureFilterMode		hipTextureFilterMode	
cudaTextureObject_t		hipTextureObject_t	
cudaTextureReadMode		hipTextureReadMode	
cudaTextureType1D		hipTextureType1D	
cudaTextureType1DLayered		hipTextureType1DLayered	
cudaTextureType2D		hipTextureType2D	
cudaTextureType2DLayered		hipTextureType2DLayered	
cudaTextureType3D		hipTextureType3D	
cudaTextureTypeCubemap		hipTextureTypeCubemap	
cudaTextureTypeCubemapLayered		hipTextureTypeCubemapLayered	
surfaceReference		surfaceReference	

1.1.18 Execution Control [Removed]

CUDA	Deprecated	HIP	Deprecated
cudaConfigureCall		hipConfigureCall	
cudaLaunch		hipLaunchByPtr	
cudaSetupArgument		hipSetupArgument	

HIP-Supported CUDA API Reference Guide

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1.1.19 Unsupported APIs

API	Unsupported	Deprecated
Graph Management	✓	
C++ API Routines	✓	
Interactions with the CUDA Driver API	✓	
Profiler Control	✓	✓
Surface Reference Management	✓	✓
OpenGL Interoperability	✓	
External Resource Interoperability	✓	
OpenGL Interoperability	✓	✓
Direct3D 9 Interoperability	✓	
Direct3D 9 Interoperability	✓	✓
Direct3D 10 Interoperability	✓	
Direct3D 10 Interoperability	✓	✓
Direct3D 11 Interoperability	✓	
Direct3D 11 Interoperability	✓	✓
VDPAU Interoperability	✓	
EGL Interoperability	✓	
Graphics Interoperability	✓	
Stream Ordered Memory Allocator	✓	

1.2 CUDA Driver API Supported by HIP

1.2.1 CUDA Driver Data Types

CUDA	Deprecated	HIP	Deprecated
CUDA_ARRAY3D_CUBEMAP		hipArrayCubemap	
CUDA ARRAY3D DESCRIPTOR		HIP ARRAY3D DESCRIPTOR	
CUDA_ARRAY3D_DESCRIPTOR_st		HIP_ARRAY3D_DESCRIPTOR	
CUDA ARRAY3D LAYERED		hipArrayLayered	
CUDA ARRAY3D SURFACE LDST		hipArraySurfaceLoadStore	
CUDA_ARRAY3D_TEXTURE_GATH		hipArrayTextureGather	
ER			
CUDA_ARRAY_DESCRIPTOR		HIP_ARRAY_DESCRIPTOR	
CUDA_ARRAY_DESCRIPTOR_st		HIP_ARRAY_DESCRIPTOR	
CUDA_ARRAY_DESCRIPTOR_v1		HIP_ARRAY_DESCRIPTOR	
CUDA_ARRAY_DESCRIPTOR_v1_st		HIP_ARRAY_DESCRIPTOR	
CUDA_COOPERATIVE_LAUNCH_M		hipCooperativeLaunchMultiDeviceNoPo	
ULTI_DEVICE_NO_POST_LAUNCH_		stSync	
SYNC			
CUDA_COOPERATIVE_LAUNCH_M		hipCooperativeLaunchMultiDeviceNoPr	
ULTI_DEVICE_NO_PRE_LAUNCH_S		eSync	
YNC			
CUDA_ERROR_ALREADY_ACQUIR		hipErrorAlreadyAcquired	
ED			
CUDA ERROR ALREADY MAPPED		hipErrorAlreadyMapped	
CUDA_ERROR_ARRAY_IS_MAPPED		hipErrorArrayIsMapped	
CUDA_ERROR_ASSERT		hipErrorAssert	

CUDA	Deprecated	HIP	Deprecated
CUDA ERROR CONTEXT ALREAD	√	hipErrorContextAlreadyCurrent	
Y_CURRENT		·	
CUDA_ERROR_CONTEXT_ALREAD		hipErrorContextAlreadyInUse	
Y_IN_USE			
CUDA_ERROR_COOPERATIVE_LAU		hipErrorCooperativeLaunchTooLarge	
NCH_TOO_LARGE			
CUDA_ERROR_DEINITIALIZED		hipErrorDeinitialized	
CUDA_ERROR_ECC_UNCORRECTA		hipErrorECCNotCorrectable	
BLE			
CUDA ERROR FILE NOT FOUND		hipErrorFileNotFound	
CUDA_ERROR_HOST_MEMORY_AL		hipErrorHostMemoryAlreadyRegistered	
READY_REGISTERED			
CUDA_ERROR_HOST_MEMORY_NO		hipErrorHostMemoryNotRegistered	
T_REGISTERED			
CUDA_ERROR_ILLEGAL_ADDRESS		hipErrorIllegalAddress	
CUDA_ERROR_INVALID_CONTEXT		hipErrorInvalidContext	
CUDA_ERROR_INVALID_DEVICE		hipErrorInvalidDevice	
CUDA_ERROR_INVALID_GRAPHIC		hipErrorInvalidGraphicsContext	
S_CONTEXT			
CUDA_ERROR_INVALID_HANDLE		hipErrorInvalidHandle	
CUDA_ERROR_INVALID_IMAGE		hipErrorInvalidImage	
CUDA_ERROR_INVALID_PTX		hipErrorInvalidKernelFile	
CUDA_ERROR_INVALID_SOURCE		hipErrorInvalidSource	
CUDA_ERROR_INVALID_VALUE		hipErrorInvalidValue	
CUDA_ERROR_LAUNCH_FAILED		hipErrorLaunchFailure	
CUDA_ERROR_LAUNCH_OUT_OF_		hipErrorLaunchOutOfResources	
RESOURCES			
CUDA_ERROR_LAUNCH_TIMEOUT		hipErrorLaunchTimeOut	
CUDA_ERROR_MAP_FAILED		hipErrorMapFailed	
CUDA_ERROR_NOT_FOUND		hipErrorNotFound	
CUDA_ERROR_NOT_INITIALIZED		hipErrorNotInitialized	
CUDA_ERROR_NOT_MAPPED		hipErrorNotMapped	
CUDA_ERROR_NOT_MAPPED_AS_		hipErrorNotMappedAsArray	
ARRAY			
CUDA_ERROR_NOT_MAPPED_AS_P		hipErrorNotMappedAsPointer	
OINTER			
CUDA ERROR NOT READY		hipErrorNotReady	
CUDA_ERROR_NOT_SUPPORTED		hipErrorNotSupported	
CUDA_ERROR_NO_BINARY_FOR_G		hipErrorNoBinaryForGpu	
PU			
CUDA ERROR NO DEVICE		hipErrorNoDevice	
CUDA_ERROR_OPERATING_SYSTE		hipErrorOperatingSystem	
M		11.7	
CUDA_ERROR_OUT_OF_MEMORY		hipErrorOutOfMemory	
CUDA_ERROR_PEER_ACCESS_ALR		hipErrorPeerAccessAlreadyEnabled	
EADY_ENABLED			
CUDA_ERROR_PEER_ACCESS_NOT		hipErrorPeerAccessNotEnabled	
ENABLED			
CUDA_ERROR_PEER_ACCESS_UNS		hipErrorPeerAccessUnsupported	
UPPORTED		11.7	
CUDA_ERROR_PRIMARY_CONTEX		hipErrorSetOnActiveProcess	
T_ACTIVE			

CUDA	Deprecated	HIP	Deprecated
CUDA ERROR PROFILER ALREAD	√	hipErrorProfilerAlreadyStarted	
Y STARTED	ľ	7	
CUDA ERROR PROFILER ALREAD	√	hipErrorProfilerAlreadyStopped	
Y STOPPED		, , , , , , , , , , , , , , , , , , , ,	
CUDA ERROR PROFILER DISABLE		hipErrorProfilerDisabled	
D		•	
CUDA ERROR PROFILER NOT INI	√	hipErrorProfilerNotInitialized	
TIALIZED		-	
CUDA_ERROR_SHARED_OBJECT_I		hipErrorSharedObjectInitFailed	
NIT_FAILED			
CUDA_ERROR_SHARED_OBJECT_S		hipErrorSharedObjectSymbolNotFound	
YMBOL_NOT_FOUND			
CUDA_ERROR_UNKNOWN		hipErrorUnknown	
CUDA_ERROR_UNMAP_FAILED		hipErrorUnmapFailed	
CUDA_ERROR_UNSUPPORTED_LIM		hipErrorUnsupportedLimit	
IT			
CUDA_LAUNCH_PARAMS		hipLaunchParams	
CUDA_LAUNCH_PARAMS_st		hipLaunchParams	
CUDA_MEMCPY2D		hip_Memcpy2D	
CUDA_MEMCPY2D_st		hip_Memcpy2D	
CUDA_MEMCPY2D_v1		hip_Memcpy2D	
CUDA_MEMCPY2D_v1_st		hip_Memcpy2D	
CUDA_MEMCPY3D		HIP_MEMCPY3D	
CUDA_MEMCPY3D_st		HIP_MEMCPY3D	
CUDA_MEMCPY3D_v1		HIP_MEMCPY3D	
CUDA_MEMCPY3D_v1_st		HIP_MEMCPY3D	
CUDA_RESOURCE_DESC		HIP_RESOURCE_DESC	
CUDA_RESOURCE_DESC_st		HIP_RESOURCE_DESC_st	
CUDA_RESOURCE_VIEW_DESC		HIP_RESOURCE_VIEW_DESC	
CUDA_RESOURCE_VIEW_DESC_st		HIP_RESOURCE_VIEW_DESC_st	
CUDA_SUCCESS		hipSuccess	
CUDA_TEXTURE_DESC		HIP_TEXTURE_DESC	
CUDA_TEXTURE_DESC_st		HIP_TEXTURE_DESC_st	
CU_AD_FORMAT_FLOAT		HIP_AD_FORMAT_FLOAT	
CU_AD_FORMAT_HALF		HIP_AD_FORMAT_HALF	
CU_AD_FORMAT_SIGNED_INT16		HIP_AD_FORMAT_SIGNED_INT16	
CU_AD_FORMAT_SIGNED_INT32		HIP_AD_FORMAT_SIGNED_INT32	
CU_AD_FORMAT_SIGNED_INT8		HIP_AD_FORMAT_SIGNED_INT8	
CU_AD_FORMAT_UNSIGNED_INT1		HIP_AD_FORMAT_UNSIGNED_INT1	
6		6	
CU_AD_FORMAT_UNSIGNED_INT3		HIP_AD_FORMAT_UNSIGNED_INT3	
2		2	
CU_AD_FORMAT_UNSIGNED_INT8		HIP AD FORMAT UNSIGNED INT8	
CU_COMPUTEMODE_DEFAULT		hipComputeModeDefault	
CU_COMPUTEMODE_EXCLUSIVE		hipComputeModeExclusive	
CU_COMPUTEMODE_EXCLUSIVE_P		hipComputeModeExclusiveProcess	
ROCESS			
CU_COMPUTEMODE_PROHIBITED		hipComputeModeProhibited	
CU_CTX_BLOCKING_SYNC	✓	hipDeviceScheduleBlockingSync	
CU_CTX_LMEM_RESIZE_TO_MAX		hipDeviceLmemResizeToMax	
CU_CTX_MAP_HOST		hipDeviceMapHost	
CU_CTX_SCHED_AUTO		hipDeviceScheduleAuto	

CUDA	Deprecated	HIP	Deprecated
CU CTX SCHED BLOCKING SYNC		hipDeviceScheduleBlockingSync	
CU CTX SCHED MASK		hipDeviceScheduleMask	
CU_CTX_SCHED_SPIN		hipDeviceScheduleSpin	
CU_CTX_SCHED_YIELD		hipDeviceScheduleYield	
CU_DEVICE_ATTRIBUTE_CAN_MA		hipDeviceAttributeCanMapHostMemory	
P_HOST_MEMORY			
CU_DEVICE_ATTRIBUTE_CLOCK_R		hipDeviceAttributeClockRate	
ATE			
CU_DEVICE_ATTRIBUTE_COMPUT		hipDeviceAttributeComputeCapabilityM	
E_CAPABILITY_MAJOR		ajor	
CU_DEVICE_ATTRIBUTE_COMPUT		hipDeviceAttributeComputeCapabilityMi	
E_CAPABILITY_MINOR		nor	
CU_DEVICE_ATTRIBUTE_COMPUT		hipDeviceAttributeComputeMode	
E_MODE			
CU_DEVICE_ATTRIBUTE_CONCUR		hipDeviceAttributeConcurrentKernels	
RENT_KERNELS			
CU_DEVICE_ATTRIBUTE_CONCUR		hipDeviceAttributeConcurrentManagedA	
RENT_MANAGED_ACCESS		ccess	
CU_DEVICE_ATTRIBUTE_COOPER		hipDeviceAttributeCooperativeLaunch	
ATIVE_LAUNCH			
CU_DEVICE_ATTRIBUTE_COOPER		hipDeviceAttributeCooperativeMultiDev	
ATIVE MULTI DEVICE LAUNCH		iceLaunch	
CU_DEVICE_ATTRIBUTE_DIRECT_		hipDeviceAttributeDirectManagedMem	
MANAGED_MEM_ACCESS_FROM_		AccessFromHost	
HOST		1. i., Di A 44-ilt-EE1-1-4	
CU_DEVICE_ATTRIBUTE_ECC_ENA BLED		hipDeviceAttributeEccEnabled	
CU_DEVICE_ATTRIBUTE_GLOBAL_		hipDeviceAttributeMemoryBusWidth	
MEMORY BUS WIDTH		inpoevicer turiouservientory Bus witain	
CU_DEVICE_ATTRIBUTE_INTEGRA		hipDeviceAttributeIntegrated	
TED		mp2 ovicer initia distinting initia	
CU DEVICE ATTRIBUTE KERNEL		hipDeviceAttributeKernelExecTimeout	
EXEC TIMEOUT		1	
CU DEVICE ATTRIBUTE L2 CACH		hipDeviceAttributeL2CacheSize	
E SIZE		•	
CU_DEVICE_ATTRIBUTE_MANAGE		hipDeviceAttributeManagedMemory	
D_MEMORY			
CU_DEVICE_ATTRIBUTE_MAXIMU		hipDeviceAttributeMaxTexture1DWidth	
M_TEXTURE1D_WIDTH			
CU_DEVICE_ATTRIBUTE_MAXIMU		hipDeviceAttributeMaxTexture2DHeight	
M_TEXTURE2D_HEIGHT			
CU_DEVICE_ATTRIBUTE_MAXIMU		hipDeviceAttributeMaxTexture2DWidth	
M_TEXTURE2D_WIDTH			
CU_DEVICE_ATTRIBUTE_MAXIMU		hipDeviceAttributeMaxTexture3DDepth	
M TEXTURE3D DEPTH		1: D : 4: 7 . 15 . 7 . 2017 : 1	
CU_DEVICE_ATTRIBUTE_MAXIMU		hipDeviceAttributeMaxTexture3DHeight	
M TEXTURE3D HEIGHT		LinDadia Addit of M. T. (2DW/14	
CU_DEVICE_ATTRIBUTE_MAXIMU		hipDeviceAttributeMaxTexture3DWidth	
M TEXTURE3D WIDTH		hinDaying Attribute May D1 - 1-Dim V	
CU_DEVICE_ATTRIBUTE_MAX_BL OCK_DIM_X		hipDeviceAttributeMaxBlockDimX	
CU DEVICE ATTRIBUTE MAX BL		hipDeviceAttributeMaxBlockDimY	
OCK DIM Y		простослитонствахопоскоппт	
OCK_DIM_I			

CUDA	Deprecated	HIP	Deprecated
CU_DEVICE_ATTRIBUTE_MAX_BL OCK_DIM_Z		hipDeviceAttributeMaxBlockDimZ	
CU_DEVICE_ATTRIBUTE_MAX_GRI D DIM X		hipDeviceAttributeMaxGridDimX	
CU_DEVICE_ATTRIBUTE_MAX_GRID DIM Y		hipDeviceAttributeMaxGridDimY	
CU_DEVICE_ATTRIBUTE_MAX_GRI D DIM Z		hipDeviceAttributeMaxGridDimZ	
CU_DEVICE_ATTRIBUTE_MAX_PIT CH		hipDeviceAttributeMaxPitch	
CU_DEVICE_ATTRIBUTE_MAX_RE GISTERS PER BLOCK		hipDeviceAttributeMaxRegistersPerBloc	
CU_DEVICE_ATTRIBUTE_MAX_SH ARED_MEMORY_PER_BLOCK		hipDeviceAttributeMaxSharedMemoryP erBlock	
CU_DEVICE_ATTRIBUTE_MAX_SH ARED_MEMORY_PER_MULTIPROC ESSOR		hipDeviceAttributeMaxSharedMemoryP erMultiprocessor	
CU_DEVICE_ATTRIBUTE_MAX_TH READS PER BLOCK		hipDeviceAttributeMaxThreadsPerBlock	
CU_DEVICE_ATTRIBUTE_MAX_TH READS_PER_MULTIPROCESSOR		hipDeviceAttributeMaxThreadsPerMulti Processor	
CU_DEVICE_ATTRIBUTE_MEMORY CLOCK_RATE		hipDeviceAttributeMemoryClockRate	
CU_DEVICE_ATTRIBUTE_MULTIPR OCESSOR_COUNT		hipDeviceAttributeMultiprocessorCount	
CU_DEVICE_ATTRIBUTE_MULTI_G PU_BOARD		hipDeviceAttributeIsMultiGpuBoard	
CU_DEVICE_ATTRIBUTE_PAGEABL E MEMORY ACCESS		hipDeviceAttributePageableMemoryAcc	
CU_DEVICE_ATTRIBUTE_PAGEABL E_MEMORY_ACCESS_USES_HOST_ PAGE_TABLES		hipDeviceAttributePageableMemoryAcc essUsesHostPageTables	
CU_DEVICE_ATTRIBUTE_PCI_BUS_ ID		hipDeviceAttributePciBusId	
CU_DEVICE_ATTRIBUTE_PCI_DEVICE_ID		hipDeviceAttributePciDeviceId	
CU_DEVICE_ATTRIBUTE_REGISTE RS PER BLOCK	√	hipDeviceAttributeMaxRegistersPerBloc k	
CU_DEVICE_ATTRIBUTE_SHARED_ MEMORY_PER_BLOCK	√	hipDeviceAttributeMaxSharedMemoryP erBlock	
CU_DEVICE_ATTRIBUTE_TEXTURE ALIGNMENT		hipDeviceAttributeTextureAlignment	
CU_DEVICE_ATTRIBUTE_TOTAL_C ONSTANT_MEMORY		hipDeviceAttributeTotalConstantMemor y	
CU_DEVICE_ATTRIBUTE_WARP_SI ZE		hipDeviceAttributeWarpSize	
CU_DEVICE_CPU		hipCpuDeviceId	
CU_DEVICE_INVALID		hipInvalidDeviceId	
CU_DEVICE_P2P_ATTRIBUTE_ACC ESS_ACCESS_SUPPORTED	✓	hipDevP2PAttrHipArrayAccessSupporte d	
CU_DEVICE_P2P_ATTRIBUTE_ACC ESS_SUPPORTED		hipDevP2PAttrAccessSupported	

CUDA	Deprecated	HIP	Deprecated
CU DEVICE P2P ATTRIBUTE ARR	√	hipDevP2PAttrHipArrayAccessSupporte	
AY ACCESS ACCESS SUPPORTED		d	
CU DEVICE P2P ATTRIBUTE CUD		hipDevP2PAttrHipArrayAccessSupporte	
A_ARRAY_ACCESS_SUPPORTED		d	
CU DEVICE P2P ATTRIBUTE NATI		hipDevP2PAttrNativeAtomicSupported	
VE ATOMIC SUPPORTED		•	
CU DEVICE P2P ATTRIBUTE PERF		hipDevP2PAttrPerformanceRank	
ORMANCE_RANK		-	
CU_EVENT_BLOCKING_SYNC		hipEventBlockingSync	
CU EVENT DEFAULT		hipEventDefault	
CU EVENT DISABLE TIMING		hipEventDisableTiming	
CU EVENT INTERPROCESS		hipEventInterprocess	
CU FUNC ATTRIBUTE BINARY V		HIP FUNC ATTRIBUTE BINARY V	
ERSION		ERSION	
CU_FUNC_ATTRIBUTE_CACHE_MO		HIP FUNC ATTRIBUTE CACHE M	
DE CA		ODE CA	
CU FUNC ATTRIBUTE CONST SIZ		HIP FUNC ATTRIBUTE CONST SIZ	
E_BYTES		E_BYTES	
CU FUNC ATTRIBUTE LOCAL SIZ		HIP FUNC ATTRIBUTE LOCAL SIZ	
E_BYTES		E_BYTES	
CU_FUNC_ATTRIBUTE_MAX		HIP_FUNC_ATTRIBUTE_MAX	
CU FUNC ATTRIBUTE MAX DYN		HIP FUNC ATTRIBUTE MAX DYN	
AMIC_SHARED_SIZE_BYTES		AMIC SHARED SIZE BYTES	
CU FUNC ATTRIBUTE MAX THRE		HIP FUNC ATTRIBUTE MAX THR	
ADS_PER_BLOCK		EADS_PER_BLOCK	
CU_FUNC_ATTRIBUTE_NUM_REGS		HIP FUNC ATTRIBUTE NUM REGS	
CU_FUNC_ATTRIBUTE_PREFERRE		HIP_FUNC_ATTRIBUTE_PREFERRE	
D_SHARED_MEMORY_CARVEOUT		D_SHARED_MEMORY_CARVEOUT	
CU_FUNC_ATTRIBUTE_PTX_VERSI		HIP_FUNC_ATTRIBUTE_PTX_VERSI	
ON		ON	
CU_FUNC_ATTRIBUTE_SHARED_SI		HIP_FUNC_ATTRIBUTE_SHARED_SI	
ZE_BYTES		ZE_BYTES	
CU_FUNC_CACHE_PREFER_EQUAL		hipFuncCachePreferEqual	
CU_FUNC_CACHE_PREFER_L1		hipFuncCachePreferL1	
CU_FUNC_CACHE_PREFER_NONE		hipFuncCachePreferNone	
CU_FUNC_CACHE_PREFER_SHARE		hipFuncCachePreferShared	
D			
CU_IPC_HANDLE_SIZE		HIP_IPC_HANDLE_SIZE	
CU_IPC_MEM_LAZY_ENABLE_PEE		hipIpcMemLazyEnablePeerAccess	
R_ACCESS			
CU_JIT_CACHE_MODE		hipJitOptionCacheMode	
CU_JIT_ERROR_LOG_BUFFER		hipJitOptionErrorLogBuffer	
CU_JIT_ERROR_LOG_BUFFER_SIZE		hipJitOptionErrorLogBufferSizeBytes	
BYTES			
CU_JIT_FALLBACK_STRATEGY		hipJitOptionFallbackStrategy	
CU_JIT_FAST_COMPILE		hipJitOptionFastCompile	
CU_JIT_GENERATE_DEBUG_INFO		hipJitOptionGenerateDebugInfo	
CU_JIT_GENERATE_LINE_INFO		hipJitOptionGenerateLineInfo	
CU_JIT_INFO_LOG_BUFFER		hipJitOptionInfoLogBuffer	
CU_JIT_INFO_LOG_BUFFER_SIZE_B		hipJitOptionInfoLogBufferSizeBytes	
YTES			
CU_JIT_LOG_VERBOSE		hipJitOptionLogVerbose	
CU_JIT_MAX_REGISTERS		hipJitOptionMaxRegisters	

CUDA	Deprecated	HIP	Deprecated
CU JIT NEW SM3X OPT		hipJitOptionSm3xOpt	
CU JIT NUM OPTIONS		hipJitOptionNumOptions	
CU JIT OPTIMIZATION LEVEL		hipJitOptionOptimizationLevel	
CU JIT TARGET		hipJitOptionTarget	
CU JIT TARGET FROM CUCONTE		hipJitOptionTargetFromContext	
XT			
CU_JIT_THREADS_PER_BLOCK		hipJitOptionThreadsPerBlock	
CU JIT WALL TIME		hipJitOptionWallTime	
CU LAUNCH PARAM BUFFER POI		HIP LAUNCH PARAM BUFFER POI	
NTER		NTER	
CU_LAUNCH_PARAM_BUFFER_SIZ		HIP_LAUNCH_PARAM_BUFFER_SIZ	
Е		E	
CU_LAUNCH_PARAM_END		HIP_LAUNCH_PARAM_END	
CU_LIMIT_MALLOC_HEAP_SIZE		hipLimitMallocHeapSize	
CU_MEMHOSTALLOC_DEVICEMAP		hipHostMallocMapped	
CU_MEMHOSTALLOC_PORTABLE		hipHostMallocPortable	
CU_MEMHOSTALLOC_WRITECOM		hipHostMallocWriteCombined	
BINED			
CU_MEMHOSTREGISTER_DEVICEM		hipHostRegisterMapped	
AP			
CU_MEMHOSTREGISTER_IOMEMO		hipHostRegisterIoMemory	
RY			
CU_MEMHOSTREGISTER_PORTABL		hipHostRegisterPortable	
E			
CU_MEMORYTYPE_ARRAY		hipMemoryTypeArray	
CU_MEMORYTYPE_DEVICE		hipMemoryTypeDevice	
CU_MEMORYTYPE_HOST		hipMemoryTypeHost	
CU_MEMORYTYPE_UNIFIED		hipMemoryTypeUnified	
CU_MEM_ADVISE_SET_ACCESSED		hipMemAdviseSetAccessedBy	
BY CHAMEM ADVICE CET PREFERRE		1. M. A.L. CAD C. II. A.	
CU_MEM_ADVISE_SET_PREFERRE		hipMemAdviseSetPreferredLocation	
D LOCATION		hipMemAdviseSetReadMostly	
CU_MEM_ADVISE_SET_READ_MOS TLY		mpwemAdviseSetReadwostry	
CU MEM ADVISE UNSET ACCESS		hipMemAdviseUnsetAccessedBy	
ED BY		inplyicinAdvisconsciAccessedBy	
CU MEM ADVISE UNSET PREFER		hipMemAdviseUnsetPreferredLocation	
RED LOCATION		inpivient taviscensett referredbecation	
CU MEM ADVISE UNSET READ		hipMemAdviseUnsetReadMostly	
MOSTLY			
CU MEM ATTACH GLOBAL		hipMemAttachGlobal	
CU MEM ATTACH HOST		hipMemAttachHost	
CU MEM ATTACH SINGLE		hipMemAttachSingle	
CU MEM RANGE ATTRIBUTE AC		hipMemRangeAttributeAccessedBy	
CESSED BY			
CU MEM RANGE ATTRIBUTE LAS		hipMemRangeAttributeLastPrefetchLoca	
T_PREFETCH_LOCATION		tion	
CU MEM RANGE ATTRIBUTE PRE		hipMemRangeAttributePreferredLocatio	
FERRED_LOCATION		n	
CU_MEM_RANGE_ATTRIBUTE_RE		hipMemRangeAttributeReadMostly	
AD_MOSTLY			
CU_OCCUPANCY_DEFAULT		hipOccupancyDefault	

CUDA	Deprecated	HIP	Deprecated
CU_RESOURCE_TYPE_ARRAY		HIP_RESOURCE_TYPE_ARRAY	
CU_RESOURCE_TYPE_LINEAR		HIP_RESOURCE_TYPE_LINEAR	
CU_RESOURCE_TYPE_MIPMAPPED _ARRAY		HIP_RESOURCE_TYPE_MIPMAPPED _ARRAY	
CU_RESOURCE_TYPE_PITCH2D		HIP_RESOURCE_TYPE_PITCH2D	
CU_RES_VIEW_FORMAT_FLOAT_1		HIP_RES_VIEW_FORMAT_FLOAT_1	
X16		X16	
CU_RES_VIEW_FORMAT_FLOAT_1 X32		HIP_RES_VIEW_FORMAT_FLOAT_1 X32	
CU_RES_VIEW_FORMAT_FLOAT_2 X16		HIP_RES_VIEW_FORMAT_FLOAT_2 X16	
CU_RES_VIEW_FORMAT_FLOAT_2		HIP_RES_VIEW_FORMAT_FLOAT_2	
X32		X32	
CU_RES_VIEW_FORMAT_FLOAT_4 X16		HIP_RES_VIEW_FORMAT_FLOAT_4 X16	
CU_RES_VIEW_FORMAT_FLOAT_4 X32		HIP_RES_VIEW_FORMAT_FLOAT_4 X32	
CU RES VIEW FORMAT NONE		HIP RES VIEW FORMAT NONE	
CU_RES_VIEW_FORMAT_SIGNED_ BC4		HIP_RES_VIEW_FORMAT_SIGNED_ BC4	
CU_RES_VIEW_FORMAT_SIGNED		HIP RES VIEW FORMAT SIGNED	
BC5		BC5	
CU_RES_VIEW_FORMAT_SIGNED_ BC6H		HIP_RES_VIEW_FORMAT_SIGNED_ BC6H	
CU_RES_VIEW_FORMAT_SINT_1X1		HIP_RES_VIEW_FORMAT_SINT_1X1	
CU_RES_VIEW_FORMAT_SINT_1X3		HIP_RES_VIEW_FORMAT_SINT_1X3	
CU RES VIEW FORMAT SINT 1X8		HIP RES VIEW FORMAT SINT 1X8	
CU RES VIEW FORMAT SINT 2X1		HIP RES VIEW FORMAT SINT 2X1	
6		6	
CU_RES_VIEW_FORMAT_SINT_2X3 2		HIP_RES_VIEW_FORMAT_SINT_2X3 2	
CU_RES_VIEW_FORMAT_SINT_2X8		HIP_RES_VIEW_FORMAT_SINT_2X8	
CU_RES_VIEW_FORMAT_SINT_4X1		HIP_RES_VIEW_FORMAT_SINT_4X1	
6 CU RES VIEW FORMAT SINT 4X3		6 HIP_RES_VIEW_FORMAT_SINT_4X3	
2		2	
CU_RES_VIEW_FORMAT_SINT_4X8		HIP RES VIEW FORMAT SINT 4X8	
CU_RES_VIEW_FORMAT_UINT_1X1		HIP_RES_VIEW_FORMAT_UINT_1X	
6 CU RES VIEW FORMAT UINT 1X3		16 HIP RES VIEW FORMAT UINT 1X	
2		32	
CU_RES_VIEW_FORMAT_UINT_1X8		HIP_RES_VIEW_FORMAT_UINT_1X 8	
CU_RES_VIEW_FORMAT_UINT_2X1		HIP_RES_VIEW_FORMAT_UINT_2X 16	
CU_RES_VIEW_FORMAT_UINT_2X3 2		HIP_RES_VIEW_FORMAT_UINT_2X 32	
CU_RES_VIEW_FORMAT_UINT_2X8		HIP_RES_VIEW_FORMAT_UINT_2X 8	
CU_RES_VIEW_FORMAT_UINT_4X1		HIP_RES_VIEW_FORMAT_UINT_4X 16	

CU RES_VIEW_FORMAT_UINT_4X3 2 CU_RES_VIEW_FORMAT_UINT_4X8 HIP_RES_VIEW_FORMAT_UINT_4X 8 CU_RES_VIEW_FORMAT_UNSIGNE D BC1 CU RES_VIEW_FORMAT_UNSIGNE D BC2 CU RES_VIEW_FORMAT_UNSIGNE D BC2 CU RES_VIEW_FORMAT_UNSIGNE D BC3 CU RES_VIEW_FORMAT_UNSIGNE D BC4 CU RES_VIEW_FORMAT_UNSIGNE D BC5 CU RES_VIEW_FORMAT_UNSIGNE D BC6 CU SHOW_FORMAT_UNSIGNE D BC7 D BC6 CU SHARED MEM_CONFIG_DEFA ULT BANK_SIZE CU SHARED MEM_CONFIG_FIGHT BYTE BANK_SIZE CU SHARED MEM_CONFIG_FOUR_ BYTE BANK_SIZE CU SHARED MEM_CONFIG_FOUR_ BYTE BANK_SIZE CU STREAM_MON BLOCKING CU STREAM_MON BLOCKING CU STREAM_WAIT_VALUE_AND CU_STREAM_WAIT_VALUE_AND CU_STREAM_WAIT_VALUE_AND CU_STREAM_WAIT_VALUE_GEQ D InjStreamWaitValueCite CU_STREAM_WAIT_VALUE_GEQ CU_STREAM_WAIT_VALUE_GEQ D InjStreamWaitValueNor CU_TRS_F NORMALIZED_COORDIN ATES CU_TRS_F NORMALIZED_COORDIN	CUDA	Deprecated	HIP	Deprecated
CU RES_VIEW_FORMAT_UNSIGNE D BC1 CU RES_VIEW_FORMAT_UNSIGNE D BC2 CU RES_VIEW_FORMAT_UNSIGNE D BC2 CU RES_VIEW_FORMAT_UNSIGNE D BC3 CU RES_VIEW_FORMAT_UNSIGNE D BC3 CU RES_VIEW_FORMAT_UNSIGNE D BC4 CU RES_VIEW_FORMAT_UNSIGNE D BC4 CU RES_VIEW_FORMAT_UNSIGNE D BC5 CU RES_VIEW_FORMAT_UNSIGNE D BC6 CU RES_VIEW_FORMAT_UNSIGNE D BC7 CU RES_VIEW_FORMAT_UNSIGNE D BC6 CU RES_VIEW_FORMAT_UNSIGNE D BC7 CU SHARED MEM_CONFIG_DEFA U.T. BANK_SIZE CU_SHARED MEM_CONFIG_FOUR_BYTE BANK_SIZE CU_SHARED MEM_CONFIG_FOUR_BYTE BANK_SIZE CU_STREAM_DEFAULT CU STREAM_WAIT_VALUE_AND CU_STREAM_WAIT_VALUE_AND CU_STREAM_WAIT_VALUE_GQ CU_STREAM_WAIT_VALUE_GQ CU_STREAM_WAIT_VALUE_GQ CU_STREAM_WAIT_VALUE_GCQ CU_STREAM_WAIT_VALUE_GCQ CU_TRS_FORMAT_UNSIGNE D BC6 CU_TRS_FORMAT CU_TR_ADDRESS_MODE_BORDER C				
D BCI CU RES VIEW FORMAT UNSIGNE D BC2 CU RES VIEW FORMAT_UNSIGNE D BC3 CU RES VIEW FORMAT_UNSIGNE D BC3 CU RES VIEW FORMAT_UNSIGNE D BC3 CU RES VIEW FORMAT_UNSIGNE D BC4 CU RES VIEW FORMAT_UNSIGNE D BC5 CU RES VIEW FORMAT_UNSIGNE D BC5 CU RES VIEW FORMAT_UNSIGNE D BC6H CU RES VIEW FORMAT_UNSIGNE D BC6H CU RES VIEW FORMAT_UNSIGNE D BC7 CU SHARED MEM CONFIG DEFA ULT BANK SIZE CU SHARED MEM CONFIG EIGHT BYTE BANK SIZE CU SHARED MEM CONFIG FOUR BYTE BANK SIZE CU STREAM DEFAULT CU STREAM DEFAULT CU STREAM WAIT_VALUE_AND CU_STREAM_WAIT_VALUE_EQ CU_STREAM_WAIT_VALUE_EQ CU_STREAM_WAIT_VALUE_EQ CU_STREAM_WAIT_VALUE_DEQ CU_STREAM_WAIT_VALUE_DEQ CU_STREAM_WAIT_VALUE_DEQ CU_TSREAM_WAIT_VALUE_DEQ CU_TSREAD_AS_INTEGER CU_TRSP_SRGB CU_TRSP_SRGB CU_TRSP_SRGB CU_TRSP_SRGB HIP_TRSP_SRCAD_AS_INTEGER CU_TRSP_SRGB HIP_TRSP_SRCAD_AS_INTEGER CU_TRSP_SRGB HIP_TRSP_SRCAD_AS_INTEGER CU_TRSP_SRGB HIP_TRSP_SRCAD_AS_INTEGER CU_TRSP_SRGB CU_TRSP_SRGB HIP_TRSP_SRCAD_AS_INTEGER CU_TRSP_SRCAD_AS_INTEGER HIP_TRSP_SRCAD_AS_INTEGER CU_TRSP_SRCAD_AS_INTEGER HIP_TRSP_SRCAD_AS_INTEGER CU_TRSP_SRCAD_AS_INTEGER HIP_TRSP_SRCAD_AS_INTEGER CU_TRSP_SRCAD_AS_INTEGER HIP_TRSP_SRCAD_AS_INTEGER CU_TRSP_SRCAD_AS_INTEGER HIP_TRSP_SRCAD_AS_INTEGER CU_TRSP_SRCAD_AS_INTEGER HIP	CU_RES_VIEW_FORMAT_UINT_4X8			
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CU_RES_VIEW_FORMAT_UNSIGNE DBC3	CU_RES_VIEW_FORMAT_UNSIGNE		HIP RES_VIEW_FORMAT_UNSIGNE	
CU_RES_VIEW_FORMAT_UNSIGNE D BC4 CU_RES_VIEW_FORMAT_UNSIGNE D BC5 CU_RES_VIEW_FORMAT_UNSIGNE D BC5 CU_RES_VIEW_FORMAT_UNSIGNE D BC5 CU_RES_VIEW_FORMAT_UNSIGNE D BC6H CU_RES_VIEW_FORMAT_UNSIGNE D BC6H CU_RES_VIEW_FORMAT_UNSIGNE D BC6H CU_RES_VIEW_FORMAT_UNSIGNE D BC6H CU_RES_VIEW_FORMAT_UNSIGNE D BC7 CU_SHARED_MEM_CONFIG_DEFA UNIPORT D BC7 CU_SHARED_MEM_CONFIG_EIGHT BYTE BANK_SIZE CU_SHARED_MEM_CONFIG_EIGHT BYTE BANK_SIZE CU_SHARED_MEM_CONFIG_FOUR_BYTE BANK_SIZE CU_STREAM_DEFAULT SITE STREAM_NON_BLOCKING SU_STREAM_WAIT_VALUE_AND STREAM_WAIT_VALUE_AND STREAM_WAIT_VALUE_AND STREAM_WAIT_VALUE_GEQ SU_STREAM_WAIT_VALUE_GEQ SU_STREAM_WAIT_VALUE_GEQ SU_STREAM_WAIT_VALUE_GEQ SU_STREAM_WAIT_VALUE_NOR SU_STREAM_WAIT_VALUE_NOR SU_STREAM_WAIT_VALUE_NOR SU_STREAM_WAIT_VALUE_NOR SU_STREAM_SIZE SU_ST_ST_ST_ST_ST_ST_ST_ST_ST_ST_ST_ST_ST_	CU_RES_VIEW_FORMAT_UNSIGNE		HIP_RES_VIEW_FORMAT_UNSIGNE	
CU_RES_VIEW_FORMAT_UNSIGNE D_BCS CU_RES_VIEW_FORMAT_UNSIGNE D_BCS CU_RES_VIEW_FORMAT_UNSIGNE D_BCGH CU_RES_VIEW_FORMAT_UNSIGNE D_BCGH CU_RES_VIEW_FORMAT_UNSIGNE D_BCGH CU_RES_VIEW_FORMAT_UNSIGNE D_BCGH CU_RES_VIEW_FORMAT_UNSIGNE D_BCGT CU_SHARED_MEM_CONFIG_DEFA	CU_RES_VIEW_FORMAT_UNSIGNE		HIP_RES_VIEW_FORMAT_UNSIGNE	
CÜ_RES_VIEW_FORMAT_UNSIGNE D BC6H D BC6H CU_RES_VIEW_FORMAT_UNSIGNE D BC7 CU_SHARED_MEM_CONFIG_DEFA ULT_BANK_SIZE CU_SHARED_MEM_CONFIG_EIGHT BYTE_BANK_SIZE CU_SHARED_MEM_CONFIG_FOUR_BYTE_BANK_SIZE CU_SHARED_MEM_CONFIG_FOUR_BYTE_BANK_SIZE CU_SHARED_MEM_CONFIG_FOUR_BYTE_BANK_SIZE CU_SHARED_MEM_CONFIG_FOUR_BYTE_BANK_SIZE CU_STREAM_DEFAULT CU_STREAM_DEFAULT CU_STREAM_DEFAULT CU_STREAM_WAIT_VALUE_AND CU_STREAM_WAIT_VALUE_AND CU_STREAM_WAIT_VALUE_GEQ CU_STREAM_WAIT_VALUE_GEQ CU_STREAM_WAIT_VALUE_GEQ CU_STREAM_WAIT_VALUE_ORD CU_TRSA_OVERRIDE_FORMAT CU_TRSA_OVERRIDE_FORMAT CU_TRSF_NORMALIZED_COORDIN_ATES CU_TRSF_READ_AS_INTEGER CU_TRSF_READ_AS_INTEGER CU_TRSF_SRGB HIP_TRSF_SRGB HIP_TRSF_SRGB CU_TR_ADDRESS_MODE_BORDER CU_TR_ADDRESS_MODE_BORDER CU_TR_ADDRESS_MODE_WRAP CU_TR_FILTER_MODE_INEAR CU_TR_FILTER_MODE_POINT CU_ADATA HIP_TR_FILTER_MODE_POINT HIP_TR_FILTER_MODE_POINT CU_ADATA HIP_TR_FILTER_MODE_POINT HIP_TR_TRSF_STOMAT CU_TRAPTORESS_MODE_UNAAR CU_TR_STOME CU_TRAPTORESS_MODE_HIRAR CU_TR_FILTER_MODE_POINT HIP_TR_FILTER_MODE_POINT CU_ADATA HIP_TR_FILTER_MODE_POINT HIP_TR_FILTER_MODE_POINT HIP_TR_FILTER_MODE_POINT HIP_TR_TR_FILTER_MODE_POINT HIP_TR_TR_FILTER_MODE_POINT HIP_TR_TR_FILTER_MODE_POINT HIP_TR_TR_FILTER_MODE_POINT HIP_TR_FILTER_MODE_POINT HIP_TR	CU_RES_VIEW_FORMAT_UNSIGNE		HIP_RES_VIEW_FORMAT_UNSIGNE	
CU_RES_VIEW_FORMAT_UNSIGNE DBC7 CU_SHARED_MEM_CONFIG_DEFA ULT_BANK_SIZE CU_SHARED_MEM_CONFIG_EIGHT BYTE_BANK_SIZE CU_SHARED_MEM_CONFIG_FOUR_ BYTE_BANK_SIZE CU_SHARED_MEM_CONFIG_FOUR_ BYTE_BANK_SIZE CU_STREAM_DEFAULT CU_STREAM_DEFAULT CU_STREAM_WAIT_VALUE_AND CU_STREAM_WAIT_VALUE_AND CU_STREAM_WAIT_VALUE_GEQ CU_STREAM_WAIT_VALUE_GEQ CU_STREAM_WAIT_VALUE_NOR CU_STREAM_WAIT_VALUE_NOR CU_TRSF_NORMALIZED_COORDIN ATES CU_TRSF_NORMALIZED_COORDIN ATES CU_TRSF_READ_AS_INTEGER CU_TRSF_SRGB CU_TR_ADDRESS_MODE_BORDER CU_TR_ADDRESS_MODE_BORDER CU_TR_ADDRESS_MODE_BORDER CU_TR_ADDRESS_MODE_WAPP CU_TR_FILTER_MODE_LINEAR CU_TR_FILTER_MODE_LINEAR CU_TR_FILTER_MODE_LINEAR CU_TRADdress_mode_enum CU_ATTAL_FORMAT CU_ATTAL_FORMAT CU_TRADGRESS_MODE_BORDER HIP_TR_FILTER_MODE_LINEAR HIP_TR_FILTER_MODE_LINEAR HIP_TR_FILTER_MODE_POINT HIP_ADDRESS_mode_enum CU_ATTAL_FORMAT CU_ADDRATES_FORMAT HIP_TR_FILTER_MODE_POINT HIP_ADDRATES_FORMAT HIP_TR_FILTER_MODE_POINT HIP_ADDRATA HIP_ADDRAT	CU_RES_VIEW_FORMAT_UNSIGNE		HIP_RES_VIEW_FORMAT_UNSIGNE	
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CU_SHARED_MEM_CONFIG_EIGHT BYTE BANK SIZE CU_SHARED_MEM_CONFIG_FOUR_ BYTE BANK SIZE CU_STREAM_DEFAULT CU_STREAM_DEFAULT CU_STREAM_WAIT_VALUE_AND CU_STREAM_WAIT_VALUE_EQ cu_STREAM_WAIT_VALUE_EQ cu_STREAM_WAIT_VALUE_EQ cu_STREAM_WAIT_VALUE_EQ cu_STREAM_WAIT_VALUE_GEQ cu_STREAM_WAIT_VALUE_NOR cu_stream_wait_valueNor cu_tream_wait_valueNor cu_tream_wait_valueDefault cu_tream_wait_valueNor cu_tream_wait_valueDefault cu_tream_wait_valueNor cu_tream_wait_valueQue hip_tream_valueNor cu_tream_wait_valueQue hip_tream_valueNor cu_tream_wait_valueQue hip_tream_valueNor cu_tream_valueNor cu_tream_valueNor hipAtream_valueNor hipStream_valueNor hipStrea	CU_SHARED_MEM_CONFIG_DEFA			
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CUDA	Deprecated	HIP	Deprecated
CUcomputemode enum		hipComputeMode	
CUcontext		hipCtx t	
CUctx st		ihipCtx t	
CUdevice		hipDevice t	
CUdevice P2PAttribute		hipDeviceP2PAttr	
CUdevice P2PAttribute enum		hipDeviceP2PAttr	
CUdevice attribute		hipDeviceAttribute t	
CUdevice attribute enum		hipDeviceAttribute t	
CUdeviceptr		hipDeviceptr t	
CUdeviceptr v1		hipDeviceptr t	
CUevent		hipEvent t	
CUevent st		ihipEvent t	
CUfilter mode		HIPfilter mode	
CUfilter mode enum		HIPfilter mode enum	
CUfunc cache		hipFuncCache t	
CUfunc cache enum		hipFuncCache t	
CUfunc st		ihipModuleSymbol t	
CUfunction		hipFunction t	
CUfunction attribute		hipFunction attribute	
CUfunction attribute enum		hipFunction attribute	
CUipcEventHandle		hipIpcEventHandle t	
CUipcEventHandle st		hipIpcEventHandle st	
CUipcMemHandle		hipIpcMemHandle t	
CUipcMemHandle st		hipIpcMemHandle st	
CUjit option		hipJitOption	
CUjit option enum		hipJitOption	
CUlimit CUlimit		hipLimit t	
CUlimit enum		hipLimit t	
CUmem advise		hipMemoryAdvise	
CUmem advise enum		hipMemoryAdvise	
CUmem range attribute		hipMemRangeAttribute	
CUmem range attribute enum		hipMemRangeAttribute	
CUmemorytype		hipMemoryType	
CUmemorytype enum		hipMemoryType	
CUmipmappedArray		hipMipmappedArray t	
CUmipmappedArray st		hipMipmappedArray_t	
CUmod st		ihipModule t	
CUmodule		hipModule t	
CUresourceViewFormat		HIPresourceViewFormat	
CUresourceViewFormat enum		HIPresourceViewFormat enum	
		=	
CUresourcetype		HIPresourcetype	
CUresourcetype_enum CUresult		HIPresourcetype_enum	
		hipError_t	
CUsharedconfig		hipSharedMemConfig	
CUsharedconfig_enum CUstream		hipSharedMemConfig	
		hipStream_t	
CUstreamCallback		hipStreamCallback_t	
CUstream st		ihipStream_t	
CUtexObject		hipTextureObject_t	
CUtexref_st		textureReference	
CUDACC		HIPCC	
cudaError_enum		hipError_t	

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1.2.2 Initialization

CUDA	Deprecated	HIP	Deprecated
cuInit		hipInit	

1.2.3 Version Management

CUDA	Deprecated	HIP	Deprecated
cuDriverGetVersion		hipDriverGetVersion	

1.2.4 Device Management

CUDA	Deprecated	HIP	Deprecated
cuDeviceGet		hipDeviceGet	
cuDeviceGetAttribute		hipDeviceGetAttribute	
cuDeviceGetCount		hipGetDeviceCount	
cuDeviceGetName		hipDeviceGetName	
cuDeviceTotalMem		hipDeviceTotalMem	
cuDeviceTotalMem_v2		hipDeviceTotalMem	

1.2.5 Device Management [Deprecated]

CUDA	Deprecated	HIP	Deprecated
cuDeviceComputeCapability	✓	hipDeviceComputeCapability	

1.2.6 Primary Context Management

CUDA	Deprecated	HIP	Deprecated
cuDevicePrimaryCtxGetState		hipDevicePrimaryCtxGetState	
cuDevicePrimaryCtxRelease		hipDevicePrimaryCtxRelease	
cuDevicePrimaryCtxRelease_v2		hipDevicePrimaryCtxRelease	
cuDevicePrimaryCtxReset		hipDevicePrimaryCtxReset	
cuDevicePrimaryCtxReset_v2		hipDevicePrimaryCtxReset	
cuDevicePrimaryCtxRetain		hipDevicePrimaryCtxRetain	
cuDevicePrimaryCtxSetFlags		hipDevicePrimaryCtxSetFlags	
cuDevicePrimaryCtxSetFlags_v2		hipDevicePrimaryCtxSetFlags	

1.2.7 Context Management

CUDA	Deprecated	HIP	Deprecated
cuCtxCreate		hipCtxCreate	✓
cuCtxCreate_v2		hipCtxCreate	✓
cuCtxDestroy		hipCtxDestroy	✓
cuCtxDestroy_v2		hipCtxDestroy	√
cuCtxGetApiVersion		hipCtxGetApiVersion	✓
cuCtxGetCacheConfig		hipCtxGetCacheConfig	✓
cuCtxGetCurrent		hipCtxGetCurrent	√
cuCtxGetDevice		hipCtxGetDevice	√
cuCtxGetFlags		hipCtxGetFlags	√

CUDA	Deprecated	HIP	Deprecated
cuCtxGetLimit		hipDeviceGetLimit	
cuCtxGetSharedMemConfig		hipCtxGetSharedMemConfig	\checkmark
cuCtxGetStreamPriorityRange		hipDeviceGetStreamPriorityRange	
cuCtxPopCurrent		hipCtxPopCurrent	\checkmark
cuCtxPopCurrent_v2		hipCtxPopCurrent	✓
cuCtxPushCurrent		hipCtxPushCurrent	✓
cuCtxPushCurrent_v2		hipCtxPushCurrent	✓
cuCtxSetCacheConfig		hipCtxSetCacheConfig	✓
cuCtxSetCurrent		hipCtxSetCurrent	✓
cuCtxSetSharedMemConfig		hipCtxSetSharedMemConfig	✓
cuCtxSynchronize		hipCtxSynchronize	✓

1.2.8 Module Management

CUDA	Deprecated	HIP	Deprecated
cuModuleGetFunction		hipModuleGetFunction	
cuModuleGetGlobal		hipModuleGetGlobal	
cuModuleGetGlobal_v2		hipModuleGetGlobal	
cuModuleGetTexRef		hipModuleGetTexRef	
cuModuleLoad		hipModuleLoad	
cuModuleLoadData		hipModuleLoadData	
cuModuleLoadDataEx		hipModuleLoadDataEx	
cuModuleUnload		hipModuleUnload	

1.2.9 Memory Management

CUDA	Deprecated	HIP	Deprecated
cuArray3DCreate		hipArray3DCreate	
cuArray3DCreate_v2		hipArray3DCreate	
cuArrayCreate		hipArrayCreate	
cuArrayCreate_v2		hipArrayCreate	
cuDeviceGetByPCIBusId		hipDeviceGetByPCIBusId	
cuDeviceGetPCIBusId		hipDeviceGetPCIBusId	
cuIpcCloseMemHandle		hipIpcCloseMemHandle	
cuIpcGetEventHandle		hipIpcGetEventHandle	
cuIpcGetMemHandle		hipIpcGetMemHandle	
cuIpcOpenEventHandle		hipIpcOpenEventHandle	
cuIpcOpenMemHandle		hipIpcOpenMemHandle	
cuMemAlloc		hipMalloc	
cuMemAllocHost		hipHostMalloc	
cuMemAllocHost_v2		hipHostMalloc	
cuMemAllocManaged		hipMallocManaged	
cuMemAllocPitch		hipMemAllocPitch	
cuMemAllocPitch_v2		hipMemAllocPitch	
cuMemAlloc_v2		hipMalloc	
cuMemFree		hipFree	
cuMemFreeHost		hipHostFree	
cuMemFree_v2		hipFree	
cuMemGetAddressRange		hipMemGetAddressRange	

CUDA	Deprecated	HIP	Deprecated
cuMemGetAddressRange_v2		hipMemGetAddressRange	
cuMemGetInfo		hipMemGetInfo	
cuMemGetInfo_v2		hipMemGetInfo	
cuMemHostAlloc		hipHostMalloc	
cuMemHostGetDevicePointer		hipHostGetDevicePointer	
cuMemHostGetDevicePointer v2		hipHostGetDevicePointer	
cuMemHostGetFlags		hipHostGetFlags	
cuMemHostRegister		hipHostRegister	
cuMemHostRegister_v2		hipHostRegister	
cuMemHostUnregister		hipHostUnregister	
cuMemcpy2D		hipMemcpyParam2D	
cuMemcpy2DAsync		hipMemcpyParam2DAsync	
cuMemcpy2DAsync v2		hipMemcpyParam2DAsync	
cuMemcpy2D v2		hipMemcpyParam2D	
cuMemcpy3D		hipDrvMemcpy3D	
cuMemcpy3DAsync		hipDrvMemcpy3DAsync	
cuMemcpy3DAsync v2		hipDrvMemcpy3DAsync	
cuMemcpy3D v2		hipDrvMemcpy3D	
cuMemcpyAtoH		hipMemcpyAtoH	
cuMemcpyAtoH v2		hipMemcpyAtoH	
cuMemcpyDtoD		hipMemcpyDtoD	
cuMemcpyDtoDAsync		hipMemcpyDtoDAsync	
cuMemcpyDtoDAsync v2		hipMemcpyDtoDAsync	
cuMemcpyDtoD v2		hipMemcpyDtoD	
cuMemcpyDtoH		hipMemcpyDtoH	
cuMemcpyDtoHAsync		hipMemcpyDtoHAsync	
cuMemcpyDtoHAsync v2		hipMemcpyDtoHAsync	
cuMemcpyDtoH v2		hipMemcpyDtoH	
cuMemcpyHtoA		hipMemcpyHtoA	
cuMemcpyHtoA v2		hipMemcpyHtoA	
cuMemcpyHtoD		hipMemcpyHtoD	
cuMemcpyHtoDAsync		hipMemcpyHtoDAsync	
cuMemcpyHtoDAsync v2		hipMemcpyHtoDAsync	
cuMemcpyHtoD v2		hipMemcpyHtoD	
cuMemsetD16		hipMemsetD16	
cuMemsetD16Async		hipMemsetD16Async	
cuMemsetD16_v2		hipMemsetD16	
cuMemsetD32		hipMemsetD32	
cuMemsetD32Async		hipMemsetD32Async	
cuMemsetD32_v2		hipMemsetD32	
cuMemsetD8		hipMemsetD8	
cuMemsetD8Async		hipMemsetD8Async	
cuMemsetD8_v2		hipMemsetD8	
cuMipmappedArrayCreate		hipMipmappedArrayCreate	
cuMipmappedArrayDestroy		hipMipmappedArrayDestroy	
cuMipmappedArrayGetLevel		hipMipmappedArrayGetLevel	

1.2.10 Unified Addressing

CUDA	Deprecated	HIP	Deprecated
cuMemAdvise		hipMemAdvise	
cuMemRangeGetAttribute		hipMemRangeGetAttribute	
cuMemRangeGetAttributes		hipMemRangeGetAttributes	

1.2.11 Stream Management

CUDA	Deprecated	HIP	Deprecated
cuStreamAddCallback		hipStreamAddCallback	
cuStreamAttachMemAsync		hipStreamAttachMemAsync	
cuStreamCreate		hipStreamCreateWithFlags	
cuStreamCreateWithPriority		hipStreamCreateWithPriority	
cuStreamDestroy		hipStreamDestroy	
cuStreamDestroy_v2		hipStreamDestroy	
cuStreamGetFlags		hipStreamGetFlags	
cuStreamGetPriority		hipStreamGetPriority	
cuStreamQuery		hipStreamQuery	
cuStreamSynchronize		hipStreamSynchronize	
cuStreamWaitEvent		hipStreamWaitEvent	

1.2.12 Event Management

CUDA	Deprecated	HIP	Deprecated
cuEventCreate		hipEventCreateWithFlags	
cuEventDestroy		hipEventDestroy	
cuEventDestroy_v2		hipEventDestroy	
cuEventElapsedTime		hipEventElapsedTime	
cuEventQuery		hipEventQuery	
cuEventRecord		hipEventRecord	
cuEventSynchronize		hipEventSynchronize	

1.2.13 Stream Memory Operations

CUDA	Deprecated	HIP	Deprecated
cuStreamWaitValue32		hipStreamWaitValue32*	
cuStreamWaitValue64		hipStreamWaitValue64*	
cuStreamWriteValue32		hipStreamWriteValue32*	
cuStreamWriteValue64		hipStreamWriteValue64*	

^{*} Possible data loss in 3 argument

1.2.14 Execution Control

CUDA	Deprecated	HIP	Deprecated
cuFuncGetAttribute		hipFuncGetAttribute	
cuLaunchKernel		hipModuleLaunchKernel	

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1.2.15 Occupancy

CUDA	Deprecated	HIP	Deprecated
cuOccupancyMaxActiveBlocksPerMulti		hipModuleOccupancyMaxActiveBlocksP	
processor		erMultiprocessor	
cuOccupancyMaxActiveBlocksPerMulti		hipModuleOccupancyMaxActiveBlocksP	
processorWithFlags		erMultiprocessorWithFlags	
cuOccupancyMaxPotentialBlockSize		hipModuleOccupancyMaxPotentialBlock	
		Size	
cuOccupancyMaxPotentialBlockSizeWit		hipModuleOccupancyMaxPotentialBlock	
hFlags		SizeWithFlags	

1.2.16 Texture Reference Management [Deprecated]

CUDA	Deprecated	HIP	Deprecated
cuTexRefGetAddress	✓	hipTexRefGetAddress	
cuTexRefGetAddressMode	✓	hipTexRefGetAddressMode	
cuTexRefGetAddress_v2	✓	hipTexRefGetAddress	
cuTexRefGetArray	✓	hipTexRefGetArray	
cuTexRefGetFilterMode	✓	hipTexRefGetFilterMode	
cuTexRefGetFlags	✓	hipTexRefGetFlags	
cuTexRefGetFormat	✓	hipTexRefGetFormat	
cuTexRefGetMaxAnisotropy	√	hipTexRefGetMaxAnisotropy	
cuTexRefGetMipmapFilterMode	✓	hipTexRefGetMipmapFilterMode	
cuTexRefGetMipmapLevelBias	√	hipTexRefGetMipmapLevelBias	
cuTexRefGetMipmapLevelClamp	✓	hipTexRefGetMipmapLevelClamp	
cuTexRefGetMipmappedArray	√	hipTexRefGetMipMappedArray	
cuTexRefSetAddress	√	hipTexRefSetAddress	
cuTexRefSetAddress2D	√	hipTexRefSetAddress2D	
cuTexRefSetAddress2D_v2		hipTexRefSetAddress2D	
cuTexRefSetAddress2D_v3		hipTexRefSetAddress2D	
cuTexRefSetAddressMode	✓	hipTexRefSetAddressMode	
cuTexRefSetAddress_v2	✓	hipTexRefSetAddress	
cuTexRefSetArray	✓	hipTexRefSetArray	
cuTexRefSetBorderColor	✓	hipTexRefSetBorderColor	
cuTexRefSetFilterMode	✓	hipTexRefSetFilterMode	
cuTexRefSetFlags	√	hipTexRefSetFlags	
cuTexRefSetFormat	✓	hipTexRefSetFormat	
cuTexRefSetMaxAnisotropy	✓	hipTexRefSetMaxAnisotropy	
cuTexRefSetMipmapFilterMode	✓	hipTexRefSetMipmapFilterMode	
cuTexRefSetMipmapLevelBias	✓	hipTexRefSetMipmapLevelBias	
cuTexRefSetMipmapLevelClamp	✓	hipTexRefSetMipmapLevelClamp	
cuTexRefSetMipmappedArray	√	hipTexRefSetMipmappedArray	

1.2.17 Texture Object Management

CUDA	Deprecated	HIP	Deprecated
cuTexObjectCreate		hipTexObjectCreate	
cuTexObjectDestroy		hipTexObjectDestroy	
cuTexObjectGetResourceDesc		hipTexObjectGetResourceDesc	
cuTexObjectGetResourceViewDesc		hipTexObjectGetResourceViewDesc	
cuTexObjectGetTextureDesc		hipTexObjectGetTextureDesc	

1.2.18 Peer Context Memory Access

CUDA	Deprecated	HIP	Deprecated
cuCtxDisablePeerAccess		hipCtxDisablePeerAccess	✓
cuCtxEnablePeerAccess		hipCtxEnablePeerAccess	✓
cuDeviceCanAccessPeer		hipDeviceCanAccessPeer	
cuDeviceGetP2PAttribute		hipDeviceGetP2PAttribute	

1.2.19 Profiler Control

CUDA	Deprecated	HIP	Deprecated	
cuProfilerStart		hipProfilerStart	✓	
cuProfilerStop		hipProfilerStop	√	

1.2.20 Unsupported APIs

API	Unsupported	Deprecated
Error Handling	✓	
Context Management	✓	✓
Virtual Memory Management	✓	
Stream Ordered Memory Allocator	✓	
External Resource Interoperability	✓	
Stream Memory Operations	✓	
Execution Control	✓	✓
Graph Management	✓	
Surface Reference Management	✓	✓
Surface Object Management	✓	
Graphics Interoperability	✓	
Profiler Control	✓	✓
OpenGL Interoperability	✓	
VDPAU Interoperability	✓	
EGL Interoperability	✓	
Direct3D 9 Interoperability	✓	
Direct3D 10 Interoperability	✓	
Direct3D 11 Interoperability	✓	

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1.3 CUCOMPLEX API Supported by HIP

1.3.1 cuComplex Data Types

CUDA	Deprecated	HIP	Deprecated
cuComplex		hipComplex	
cuDoubleComplex		hipDoubleComplex	
cuFloatComplex		hipFloatComplex	

1.3.2 cuComplex API Functions

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

1.4 CUDA DEVICE API Supported by HIP

1.4.1 Device Functions

CUDA	Deprecated	HIP	Deprecated
all		all	
any		any	
assert_fail		assert_fail	
assertfail		assertfail	
ballot		ballot	
brev		brev	
brevll		brevll	
byte perm		byte perm	
clz		clz	

CUDA	Deprecated	HIP	Deprecated
clzll		clzll	
cosf		cosf	
double2float rd		double2float rd	
double2float rn		double2float rn	
double2float ru		double2float ru	
double2float rz		double2float rz	
double2hiint		double2hiint	
double2int rd		double2int rd	
double2int rn		double2int rn	
double2int ru		double2int ru	
double2int rz		double2int rz	
double2ll rd		double2ll rd	
double2ll rn		double2ll rn	
double2ll ru		double211 ru	
double2ll rz		double2ll rz	
double2loint		double2loint	
double2uint rd		double2uint rd	
double2uint rn		double2uint rn	
double2uint ru		double2uint ru	
double2uint rz		double2uint rz	
double2ull rd		double2ull rd	
double2ull rn		double2ull rn	
double2ull ru		double2ull ru	
double2ull rz		double2ull rz	
double as longlong		double as longlong	
exp10f		exp10f	
expf		expf	
fadd rd		fadd rd	
fadd rn		fadd rn	
fadd ru		fadd ru	
fadd rz		fadd rz	
fdiv rd		fdiv rd	
fdiv rn		fdiv rn	
fdiv ru		fdiv ru	
fdiv rz		fdiv rz	
fdividef		fdividef	
ffs		ffs	
ffsll		ffsll	
float22half2 rn		float22half2 rn	
float2half		float2half	
float2half2 rn		float2half2 rn	
float2half rd		float2half rd	
float2half rn		float2half rn	
float2half ru		float2half ru	
float2half rz		float2half rz	
float2int rd		float2int rd	
float2int rn		float2int rn	
float2int ru		float2int ru	
float2int rz		float2int rz	
float2ll rd		float2ll rd	
float2ll rn		float2ll rn	
float2ll ru		float2ll ru	

CUDA	Deprecated	HIP	Deprecated
float211 rz		float2ll rz	
float2uint rd		float2uint rd	
float2uint rn		float2uint rn	
float2uint ru		float2uint ru	
float2uint rz		float2uint rz	
float2ull rd		float2ull rd	
float2ull rn		float2ull rn	
float2ull ru		float2ull ru	
float2ull rz		float2ull rz	
float as int		float as int	
float as uint		float as uint	
floats2half2 rn		floats2half2 rn	
fmaf rd		fmaf rd	
fmaf rn		fmaf rn	
fmaf ru		fmaf ru	
fmaf rz		fmaf rz	
fmul rd		fmul rd	
fmul_rd		fmul ra	
fmul ru		fmul_ru	
fmul rz		fmul rz	
frep rd		frep rd	
frcp_rn		frcp_rn	
frcp_ru		frcp_ru	
frcp_rz		frcp_rz	
frsqrt_rn		frsqrt_rn	
fsqrt_rd		fsqrt_rd	
fsqrt_rn		fsqrt_rn	
fsqrt_ru		fsqrt_ru	
fsqrt_rz		fsqrt_rz	
fsub_rd		fsub_rd	
fsub_rn		fsub_rn	
fsub_ru		fsub_ru	
fsub_rz		fsub_rz	
h2div		h2div	
habs		habs	
habs2		habs2	
hadd		hadd	
hadd2		hadd2	
hadd2 sat		hadd2 sat	
hadd sat		hadd sat	
half22float2		half22float2	
half2float		half2float	
half2half2		half2half2	
half2int rd		half2int rd	
half2int rn		half2int rn	
half2int ru		half2int ru	
half2int rz		half2int rz	
half2ll rd		half2ll rd	
half2ll rn		half2ll rn	
half2ll ru		half2ll ru	
half2ll rz		half2ll rz	
half2short rd		half2short rd	
nanzsnort_rd		nanzsnort_rd	

CUDA	Deprecated	HIP	Deprecated
half2short rn		half2short_rn	
half2short ru		half2short ru	
half2short rz		half2short rz	
half2uint rd		half2uint rd	
half2uint rn		half2uint rn	
half2uint ru		half2uint ru	
half2uint rz		half2uint rz	
half2ull rd		half2ull rd	
half2ull rn		half2ull rn	
half2ull ru		half2ull ru	
half2ull rz		half2ull rz	
half2ushort rd		half2ushort rd	
half2ushort rn		half2ushort rn	
half2ushort ru		half2ushort ru	
half2ushort rz		half2ushort rz	
half as short		half as short	
half as ushort		half as ushort	
halves2half2		halves2half2	
hbeq2		hbeq2	
hbequ2		hbequ2	
hbge2		hbge2	
hbgeu2		hbgeu2	
hbgt2		hbgt2	
hbgtu2		hbgtu2	
hble2		hble2	
hbleu2		hbleu2	
hblt2			
		_hblt2	
hbltu2 hbne2		hbltu2 hbne2	
hbneu2		·	
		hbneu2	
hdiv		hdiv	
heq		heq	
heq2		heq2	
hequ		hequ	
hequ2		hequ2	
hfma		hfma	
hfma2		hfma2	
hfma2_sat		hfma2_sat	
hfma_sat		hfma_sat	
hge		hge	
hge2		hge2	
hgeu		hgeu	
hgeu2		_hgeu2	
hgt		hgt	
hgt2		_hgt2	
hgtu		hgtu	
hgtu2		hgtu2	
high2float		high2float	
high2half		high2half	
high2half2		high2half2	
highs2half2		highs2half2	
_hiloint2double		_hiloint2double	

CUDA	Deprecated	HIP	Deprecated
hisinf		hisinf	
hisnan		hisnan	
hisnan2		hisnan2	
hle		hle	
hle2		hle2	
hleu		hleu	
hleu2		hleu2	
hlt		hlt	
hlt2		hlt2	
hltu		hltu	
hltu2		hltu2	
hmul		hmul	
hmul2		hmul2	
hmul2 sat		hmul2 sat	
hmul sat		hmul sat	
hne hne2		hne hne2	
hneg		hneg	
hneg2		hneg2	
hneu		hneu	
hneu2		hneu2	
hsub		hsub	
hsub2		hsub2	
hsub2_sat		hsub2_sat	
hsub_sat		hsub_sat	
int2double_rn		int2double_rn	
int2float_rd		int2float_rd	
int2float_rn		int2float_rn	
int2float_ru		int2float_ru	
int2float_rz		int2float_rz	
int2half_rd		int2half_rd	
int2half_rn		int2half_rn	
int2half_ru		int2half_ru	
int2half_rz		int2half_rz	
int as float		int as float	
ldca		ldca	
ldcg		ldcg	
_ldcs		_ldcs	
ldg		ldg	
ll2double rd		ll2double rd	
ll2double rn		ll2double rn	
ll2double ru		ll2double ru	
ll2double rz		ll2double rz	
ll2float rd		ll2float rd	
ll2float rn		ll2float rn	
ll2float ru		ll2float ru	
ll2float rz		ll2float rz	
ll2half rd		ll2half rd	
ll2half rn		ll2half rn	
ll2half ru		ll2half ru	
ll2half rz		ll2half rz	
log10f		log10f	
10g101		10g101	

CUDA	Deprecated	HIP	Deprecated
log2f		_log2f	
logf		logf	
longlong as double		longlong as double	
low2float		low2float	
low2half		low2half	
low2half2		low2half2	
lowhigh2highlow		lowhigh2highlow	
lows2half2		lows2half2	
mul24		mul24	
mul64hi		mul64hi	
mulhi		mulhi	
popc		popc	
popell		popcll	
powf		powf	
rhadd		rhadd	
sad		sad	
saturatef		saturatef	
shfl	√	shfl	
shfl down	√	shfl down	
shfl up	✓ ✓	shfl up	
shfl xor	√	shfl xor	
short2half rd	V	short2half rd	
short2half rn		short2half rn	
		<u> </u>	
short2half_ru		_short2half_ru	
short2half_rz		_short2half_rz	
short_as_half		short_as_half	
sincosf sinf		sincosf sinf	
syncthreads		syncthreads	
syncthreads_and		syncthreads_ and	
syncthreads_count		syncthreads_count	
syncthreads_or		syncthreads_or	
tanf threadfence		tanf	
		threadfence	
threadfence_block		threadfence_block	
threadfence_system		threadfence_system	
uhadd		uhadd	
uint2double_rn		uint2double_rn	
uint2float_rd		uint2float_rd	
uint2float_rn		uint2float_rn	
uint2float_ru		uint2float_ru	
uint2float_rz		uint2float_rz	
uint2half_rd		uint2half_rd	
uint2half_rn		uint2half_rn	
uint2half_ru		uint2half_ru	
uint2half_rz		uint2half_rz	
uint_as_float		uint_as_float	
ull2double_rd		ull2double_rd	
ull2double_rn		ull2double_rn	
ull2double_ru		ull2double_ru	
ull2double_rz		ull2double_rz	
ull2float_rd		ull2float_rd	

CUDA	Deprecated	HIP	Deprecated
ull2float_rn		ull2float rn	
ull2float ru		ull2float ru	
ull2float rz		ull2float rz	
ull2half rd		ull2half rd	
ull2half rn		ull2half rn	
ull2half ru		ull2half ru	
ull2half rz		ull2half rz	
umul24		umul24	
umul64hi		umul64hi	
umulhi		umulhi	
urhadd		urhadd	
usad		usad	
ushort2half rd		ushort2half rd	
ushort2half rn		ushort2half rn	
ushort2half ru		ushort2half ru	
ushort2half rz		ushort2half rz	
ushort as half		ushort as half	
		abs	
abs			
acos		acos	
acosf		acosf	
acosh		acosh	
acoshf		acoshf	
asin		asin	
asinf		asinf	
asinh		asinh	
asinhf		asinhf	
atan		atan	
atan2		atan2	
atan2f		atan2f	
atanf		atanf	
atanh		atanh	
atanhf		atanhf	
atomicAdd		atomicAdd	
atomicAnd		atomicAnd	
atomicCAS		atomicCAS	
atomicDec		atomicDec	
atomicExch		atomicExch	
atomicInc		atomicInc	
atomicMax		atomicMax	
atomicMin		atomicMin	
atomicOr		atomicOr	
atomicSub		atomicSub	
atomicXor		atomicXor	
cbrt		cbrt	
cbrtf		cbrtf	
ceil		ceil	
ceilf		ceilf	
clock		clock	
clock64		clock64	
copysign		copysign	
copysignf		copysignf	
cos		cos	
CO3		003	

CUDA	Deprecated	HIP	Deprecated
cosf		cosf	
cosh		cosh	
coshf		coshf	
cospi		cospi	
cospif		cospif	
cyl bessel i0		cyl bessel i0	
cyl bessel i0f		cyl bessel i0f	
cyl bessel i1		cyl bessel il	
cyl bessel i1f		cyl bessel i1f	
erf		erf	
erfc		erfc	
erfcf		erfcf	
erfcinv		erfcinv	
erfcinvf		erfcinvf	
erfcx		erfcx	
erfcxf		erfexf	
erff		erff	
erfinv		erfinv	
erfinvf		erfinvf	
exp		exp	
exp10		exp10	
exp10f		exp10f	
exp101		exp101	
exp2 exp2f		exp2 exp2f	
exp21		exp21	
expf expm1			
expili over 1f		expm1	
expm1f fabs		expm1f fabs	
fabsf		fabsf	
fdim		fdim	
fdimf		fdimf fdividef	
fdividef			
floor		floor	
floorf		floorf	
fma		fma	
fmaf		fmaf	
fmax		fmax	
fmaxf		fmaxf	
fmin		fmin	
fminf		fminf	
fmod		fmod	
fmodf		fmodf	
frexp		frexp	
frexpf		frexpf	
h2ceil		h2ceil	
h2cos		h2cos	
h2exp		h2exp	
h2exp10		h2exp10	
h2exp2		h2exp2	
h2floor		h2floor	
h2log		h2log	
h2log10		h2log10	

CUDA	Deprecated	HIP	Deprecated
h2log2	·	h2log2	
h2rcp		h2rcp	
h2rint		h2rint	
h2rsqrt		h2rsqrt	
h2sin		h2sin	
h2sqrt		h2sqrt	
h2trunc		h2trunc	
hceil		hceil	
hcos		hcos	
hexp		hexp	
hexp10		hexp10	
hexp2		hexp2	
hfloor		hfloor	
hlog		hlog	
hlog10		hlog10	
hlog2		hlog2	
hrcp		hrep	
hrint		hrint	
hrsqrt		hrsqrt	
hsin		hsin	
hsqrt		hsqrt	
htrunc		htrune	
hypot		hypot	
hypotf		hypotf	
ilogb		ilogb	
ilogbf		ilogbf	
isfinite		isfinite	
isinf		isinf	
isnan		isnan	
j0		j0	
j0f		j0f	
jl		j1	
j1f		j1f	
jn		jn	
jnf		jnf	
labs		labs	
ldexp		ldexp	
ldexpf		ldexpf	
Igamma		lgamma	
lgammaf		lgammaf	
llabs		llabs	
llrint		llrint	
Ilrintf		llrintf	
llround		llround	
llroundf		llroundf	
log		log	
log10		log10	
log10f		log10f	
		log1p	
log1p			
log1pf		log1pf	
log2		log2	
log2f		log2f	

CUDA	Deprecated	HIP	Deprecated
logb		logb	
logbf		logbf	
logf		logf	
lrint		lrint	
lrintf		lrintf	
lround		lround	
lroundf		lroundf	
max		max	
min		min	
modf		modf	
modff		modff	
nan		nan	
nanf		nanf	
nearbyint		nearbyint	
nearbyintf		nearbyintf	
nextafter		nextafter	
nextafterf		nextafterf	
norm		norm	
norm3d		norm3d	
norm3df		norm3df	
norm4d		norm4d	
norm4df		norm4df	
normcdf		normcdf	
normcdff		normcdff	
normedfinv		normedfinv	
normedfinvf		normedfinvf	
normf		normf	
pow		pow	
powf		powf	
rcbrt		rebrt	
rcbrtf		rebrtf	
remainder		remainder	
remainderf		remainderf	
remquo		remquo	
remquof		remquof	
rhypot		rhypot	
rhypotf		rhypotf	
rint		rint	
rintf		rintf	
rnorm		rnorm	
rnorm3d		rnorm3d	
rnorm3df		rnorm3df	
rnorm4d		rnorm4d	
rnorm4df		rnorm4df	
rnormf		rnormf	
round		round	
roundf		roundf	
rsqrt		rsqrt	
rsqrtf		rsqrtf	
scalbln		scalbln	
scalblnf		scalblnf	
scalbn		scalbn	

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CUDA	Deprecated	HIP	Deprecated
scalbnf		scalbnf	
signbit		signbit	
sin		sin	
sincos		sincos	
sincosf		sincosf	
sincospi		sincospi	
sincospif		sincospif	
sinf		sinf	
sinh		sinh	
sinhf		sinhf	
sinpi		sinpi	
sinpif		sinpif	
sqrt		sqrt	
sqrtf		sqrtf	
tan		tan	
tanf		tanf	
tanh		tanh	
tanhf		tanhf	
tgamma		tgamma	
tgammaf		tgammaf	
trunc		trunc	
truncf		truncf	
y0		y0	
y0f		y0f	
y1		y1	
y1f		ylf	
yn		yn	
ynf		ynf	

1.5 CUBLAS API Supported by HIP

1.5.1 CUBLAS Data Types

CUDA	Deprecated	HIP	Deprecated
CUBLAS_ATOMICS_ALLOWED		HIPBLAS_ATOMICS_ALLOWED	
CUBLAS_ATOMICS_NOT_ALLOWE		HIPBLAS_ATOMICS_NOT_ALLOWE	
D		D	
CUBLAS_DIAG_NON_UNIT		HIPBLAS_DIAG_NON_UNIT	
CUBLAS_DIAG_UNIT		HIPBLAS_DIAG_UNIT	
CUBLAS_FILL_MODE_FULL		HIPBLAS_FILL_MODE_FULL	
CUBLAS_FILL_MODE_LOWER		HIPBLAS_FILL_MODE_LOWER	
CUBLAS_FILL_MODE_UPPER		HIPBLAS_FILL_MODE_UPPER	
CUBLAS_GEMM_DEFAULT		HIPBLAS_GEMM_DEFAULT	
CUBLAS_GEMM_DFALT		HIPBLAS_GEMM_DEFAULT	
CUBLAS_OP_C		HIPBLAS_OP_C	
CUBLAS_OP_HERMITAN		HIPBLAS_OP_C	
CUBLAS_OP_N		HIPBLAS_OP_N	
CUBLAS_OP_T		HIPBLAS_OP_T	
CUBLAS_POINTER_MODE_DEVICE		HIPBLAS_POINTER_MODE_DEVICE	

CUDA	Deprecated	HIP	Deprecated
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_MISMATC		HIPBLAS_STATUS_ARCH_MISMAT	
Н		СН	
CUBLAS_STATUS_EXECUTION_FAI		HIPBLAS_STATUS_EXECUTION_FA	
LED		ILED	
CUBLAS_STATUS_INTERNAL_ERR		HIPBLAS_STATUS_INTERNAL_ERR	
OR		OR	
CUBLAS_STATUS_INVALID_VALU		HIPBLAS_STATUS_INVALID_VALU	
Е		E	
CUBLAS_STATUS_MAPPING_ERRO		HIPBLAS_STATUS_MAPPING_ERRO	
R		R	
CUBLAS_STATUS_NOT_INITIALIZE		HIPBLAS_STATUS_NOT_INITIALIZE	
D		D	
CUBLAS_STATUS_NOT_SUPPORTE		HIPBLAS_STATUS_NOT_SUPPORTE	
D		D	
CUBLAS_STATUS_SUCCESS		HIPBLAS_STATUS_SUCCESS	
cublasAtomicsMode_t		hipblasAtomicsMode_t	
cublasDataType_t		hipblasDatatype_t	
cublasDiagType_t		hipblasDiagType_t	
cublasFillMode_t		hipblasFillMode_t	
cublasGemmAlgo_t		hipblasGemmAlgo_t	
cublasHandle_t		hipblasHandle_t	
cublasOperation_t		hipblasOperation_t	
cublasPointerMode_t		hipblasPointerMode_t	
cublasSideMode_t		hipblasSideMode_t	
cublasStatus		hipblasStatus_t	
cublasStatus_t		hipblasStatus_t	

1.5.2 CUDA Data Types Reference

CUDA	Deprecated	HIP	Deprecated
CUDA_C_16F		HIPBLAS_C_16F	
CUDA C 32F		HIPBLAS C 32F	
CUDA C 32I		HIPBLAS_C_32I	
CUDA C 32U		HIPBLAS C 32U	
CUDA C 64F		HIPBLAS_C_64F	
CUDA C 8I		HIPBLAS C 8I	
CUDA C 8U		HIPBLAS_C_8U	
CUDA R 16F		HIPBLAS R_16F	
CUDA R 32F		HIPBLAS_R_32F	
CUDA R 32I		HIPBLAS R 32I	
CUDA R 32U		HIPBLAS_R_32U	
CUDA R 64F		HIPBLAS R 64F	
CUDA R 8I		HIPBLAS_R_8I	
CUDA R 8U		HIPBLAS R 8U	
cudaDataType		hipblasDatatype_t	
cudaDataType_t		hipblasDatatype_t	

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1.5.3 CUBLAS Helper Function Reference

CUDA	Deprecated	HIP	Deprecated
cublasCreate		hipblasCreate	
cublasCreate_v2		hipblasCreate	
cublasDestroy		hipblasDestroy	
cublasDestroy_v2		hipblasDestroy	
cublasGetAtomicsMode		hipblasGetAtomicsMode	
cublasGetMatrix		hipblasGetMatrix	
cublasGetMatrixAsync		hipblasGetMatrixAsync	
cublasGetPointerMode		hipblasGetPointerMode	
cublasGetPointerMode_v2		hipblasGetPointerMode	
cublasGetStream		hipblasGetStream	
cublasGetStream_v2		hipblasGetStream	
cublasGetVector		hipblasGetVector	
cublasGetVectorAsync		hipblasGetVectorAsync	
cublasSetAtomicsMode		hipblasSetAtomicsMode	
cublasSetMatrix		hipblasSetMatrix	
cublasSetMatrixAsync		hipblasSetMatrixAsync	
cublasSetPointerMode		hipblasSetPointerMode	
cublasSetPointerMode_v2		hipblasSetPointerMode	
cublasSetStream		hipblasSetStream	
cublasSetStream_v2		hipblasSetStream	
cublasSetVector		hipblasSetVector	
cublasSetVectorAsync		hipblasSetVectorAsync	

1.5.4 CUBLAS Level-1 Function Reference

CUDA	Deprecated	HIP	Deprecated
cublasCaxpy		hipblasCaxpy	
cublasCaxpy_v2		hipblasCaxpy	
cublasCcopy		hipblasCcopy	
cublasCcopy_v2		hipblasCcopy	
cublasCdotc		hipblasCdotc	
cublasCdotc_v2		hipblasCdotc	
cublasCdotu		hipblasCdotu	
cublasCdotu_v2		hipblasCdotu	
cublasCrot		hipblasCrot	
cublasCrot_v2		hipblasCrot	
cublasCrotg		hipblasCrotg	
cublasCrotg_v2		hipblasCrotg	
cublasCscal		hipblasCscal	
cublasCscal_v2		hipblasCscal	
cublasCsrot		hipblasCsrot	
cublasCsrot_v2		hipblasCsrot	
cublasCsscal		hipblasCsscal	
cublasCsscal_v2		hipblasCsscal	
cublasCswap		hipblasCswap	
cublasCswap_v2		hipblasCswap	
cublasDasum		hipblasDasum	
cublasDasum_v2		hipblasDasum	
cublasDaxpy		hipblasDaxpy	

CUDA	Deprecated	HIP	Deprecated
cublasDaxpy_v2		hipblasDaxpy	
cublasDcopy		hipblasDcopy	
cublasDcopy v2		hipblasDcopy	
cublasDdot		hipblasDdot	
cublasDdot v2		hipblasDdot	
cublasDnrm2		hipblasDnrm2	
cublasDnrm2 v2		hipblasDnrm2	
cublasDrot		hipblasDrot	
cublasDrot v2		hipblasDrot	
cublasDrotg		hipblasDrotg	
cublasDrotg v2		hipblasDrotg	
cublasDrotm		hipblasDrotm	
cublasDrotm v2		hipblasDrotm	
cublasDrotmg		hipblasDrotmg	
cublasDrotmg v2		hipblasDrotmg	
cublasDscal		hipblasDscal	
cublasDscal v2		hipblasDscal	
cublasDswap		hipblasDswap	
cublasDswap v2		hipblasDswap	
cublasDzasum		hipblasDzasum	
cublasDzasum v2		hipblasDzasum	
cublasDznrm2		hipblasDznrm2	
cublasDznrm2 v2		hipblasDznrm2	
cublasIcamax		hipblasIcamax	
cublasIcamax v2		hipblasIcamax	
cublasIcamin		hipblasIcamin	
cublasIcamin v2		hipblasIcamin	
cublasIdamax		hipblasIdamax	
cublasIdamax v2		hipblasIdamax	
cublasIdamin		hipblasIdamin	
cublasIdamin v2		hipblasIdamin	
cublasIsamax		hipblasIsamax	
cublasIsamax v2		hipblasIsamax	
cublasIsamin		hipblasIsamin	
cublasIsamin v2		hipblasIsamin	
cublasIzamax		hipblasIzamax	
cublasIzamax v2		hipblasIzamax	
cublasIzamin		hipblasIzamin	
cublasIzamin v2		hipblasIzamin	
cublasSasum		hipblasSasum	
cublasSasum v2		hipblasSasum	
cublasSaxpy cublasSaxpy_v2		hipblasSaxpy	
cublasScasum		hipblasSaxpy	
cublasScasum v2		hipblasScasum	
cublasScasum_V2 cublasScnrm2		hipblasScasum	
		hipblasScarm2	
cublasScnrm2_v2		hipblasScnrm2	
cublasScopy		hipblasScopy	
cublasScopy_v2		hipblasScopy	
cublasSdot		hipblasSdot	
cublasSdot_v2		hipblasSdot	
cublasSnrm2		hipblasSnrm2	

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CUDA	Deprecated	HIP	Deprecated
cublasSnrm2 v2		hipblasSnrm2	
cublasSrot		hipblasSrot	
cublasSrot v2		hipblasSrot	
cublasSrotg		hipblasSrotg	
cublasSrotg v2		hipblasSrotg	
cublasSrotm		hipblasSrotm	
cublasSrotm v2		hipblasSrotm	
cublasSrotmg		hipblasSrotmg	
cublasSrotmg_v2		hipblasSrotmg	
cublasSscal		hipblasSscal	
cublasSscal_v2		hipblasSscal	
cublasSswap		hipblasSswap	
cublasSswap_v2		hipblasSswap	
cublasZaxpy		hipblasZaxpy	
cublasZaxpy v2		hipblasZaxpy	
cublasZcopy		hipblasZcopy	
cublasZcopy_v2		hipblasZcopy	
cublasZdotc		hipblasZdotc	
cublasZdotc_v2		hipblasZdotc	
cublasZdotu		hipblasZdotu	
cublasZdotu_v2		hipblasZdotu	
cublasZdrot		hipblasZdrot	
cublasZdrot_v2		hipblasZdrot	
cublasZdscal		hipblasZdscal	
cublasZdscal_v2		hipblasZdscal	
cublasZrot		hipblasZrot	
cublasZrot_v2		hipblasZrot	
cublasZrotg		hipblasZrotg	
cublasZrotg_v2		hipblasZrotg	
cublasZscal		hipblasZscal	
cublasZscal v2		hipblasZscal	
cublasZswap		hipblasZswap	
cublasZswap_v2		hipblasZswap	

1.5.5 CUBLAS Level-2 Function Reference

CUDA	Deprecated	HIP	Deprecated
cublasCgbmv		hipblasCgbmv	
cublasCgbmv_v2		hipblasCgbmv	
cublasCgemv		hipblasCgemv	
cublasCgemv_v2		hipblasCgemv	
cublasCgerc		hipblasCgerc	
cublasCgerc_v2		hipblasCgerc	
cublasCgeru		hipblasCgeru	
cublasCgeru_v2		hipblasCgeru	
cublasChbmv		hipblasChbmv	
cublasChbmv_v2		hipblasChbmv	
cublasChemv		hipblasChemv	
cublasChemv_v2		hipblasChemv	
cublasCher		hipblasCher	

CUDA	Deprecated	HIP	Deprecated
cublasCher2		hipblasCher2	
cublasCher2 v2		hipblasCher2	
cublasCher v2		hipblasCher	
cublasChpmv		hipblasChpmv	
cublasChpmv v2		hipblasChpmv	
cublasChpr		hipblasChpr	
cublasChpr2		hipblasChpr2	
cublasChpr2 v2		hipblasChpr2	
cublasChpr v2		hipblasChpr	
cublasCsymv		hipblasCsymv	
cublasCsymv v2		hipblasCsymv	
cublasCsyr		hipblasCsyr	
cublasCsyr2		hipblasCsyr2	
cublasCsyr2 v2		hipblasCsyr2	
cublasCsyr v2		hipblasCsyr	
cublasCtbmv		hipblasCtbmv	
cublasCtbmv v2		hipblasCtbmv	
cublasCtbsv		hipblasCtbsv	
cublasCtbsv v2		hipblasCtbsv	
cublasCtpmv		hipblasCtpmv	
cublasCtpmv v2		hipblasCtpmv	
cublasCtpsv		hipblasCtpsv	
cublasCtpsv v2		hipblasCtpsv	
cublasCtrmv		hipblasCtrmv	
cublasCtrmv_v2		hipblasCtrmv	
cublasCtrsv		hipblasCtrsv	
cublasCtrsv_v2		hipblasCtrsv	
cublasDgbmv		hipblasDgbmv	
cublasDgbmv_v2		hipblasDgbmv	
cublasDgemv		hipblasDgemv	
cublasDgemv_v2		hipblasDgemv	
cublasDger		hipblasDger	
cublasDger v2		hipblasDger	
cublasDsbmv		hipblasDsbmv	
cublasDsbmv v2		hipblasDsbmv	
cublasDspmv		hipblasDspmv	
cublasDspmv v2		hipblasDspmv	
cublasDspr		hipblasDspr	
cublasDspr2		hipblasDspr2	
cublasDspr2_v2		hipblasDspr2	
cublasDspr_v2		hipblasDspr	
cublasDsymv		hipblasDsymv	
cublasDsymv_v2		hipblasDsymv	
cublasDsyr		hipblasDsyr	
cublasDsyr2		hipblasDsyr2	
cublasDsyr2_v2		hipblasDsyr2	
cublasDsyr_v2		hipblasDsyr	
cublasDtbmv		hipblasDtbmv	
cublasDtbmv_v2		hipblasDtbmv	
cublasDtbsv		hipblasDtbsv	
cublasDtbsv_v2		hipblasDtbsv	
cublasDtpmv		hipblasDtpmv	

cublasDtpmv_v2 cublasDtpsv cublasDtpsv_v2 cublasDtpsv_v2 cublasDtrmv cublasDtrmv cublasDtrmv cublasDtrmv cublasDtrsv cublasDtrsv cublasDtrsv cublasDtrsv cublasDtrsv cublasStrsv cublasSgbmv cublasSgbmv cublasSgbmv cublasSgemv cublasSgemv cublasSgemv cublasSger hipblasSger cublasSger cublasSger cublasSger cublasSger cublasSger cublasSger cublasSger cublasSper cub	
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cublasSgemv_v2hipblasSgemvcublasSger_v2hipblasSgercublasSsbmvhipblasSsbmvcublasSsbmv_v2hipblasSsbmvcublasSspmvhipblasSspmvcublasSspmv_v2hipblasSspmvcublasSspmv_v2hipblasSspmvcublasSsprhipblasSsprcublasSspr2hipblasSspr2cublasSspr2_v2hipblasSspr2cublasSsprv_v2hipblasSsprcublasSsymvhipblasSsymvcublasSsymv_v2hipblasSsymvcublasSsymv_v2hipblasSsymvcublasSsyrhipblasSsyrcublasSsyr2_v2hipblasSsyrcublasSsyr2_v2hipblasSsyr2cublasSsyr2_v2hipblasSsyr2cublasSsyr2_v2hipblasSsyr2	
cublasSgerhipblasSgercublasSger_v2hipblasSgercublasSsbmvhipblasSsbmvcublasSsbmv_v2hipblasSsbmvcublasSspmvhipblasSspmvcublasSspmv_v2hipblasSspmvcublasSsprhipblasSsprcublasSspr2hipblasSspr2cublasSspr2_v2hipblasSspr2cublasSspr_v2hipblasSsprcublasSsymvhipblasSsymvcublasSsymv_v2hipblasSsymvcublasSsymv_v2hipblasSsymvcublasSsyrhipblasSsyrcublasSsyr2hipblasSsyrcublasSsyr2hipblasSsyr2cublasSsyr2_v2hipblasSsyr2cublasSsyr2_v2hipblasSsyr2	
cublasSger_v2hipblasSgercublasSsbmvhipblasSsbmvcublasSsbmv_v2hipblasSsbmvcublasSspmvhipblasSspmvcublasSspmv_v2hipblasSspmvcublasSsprhipblasSsprcublasSspr2hipblasSspr2cublasSspr2_v2hipblasSspr2cublasSspr_v2hipblasSsprcublasSsymvhipblasSsymvcublasSsymv_v2hipblasSsymvcublasSsymv_v2hipblasSsymvcublasSsyrhipblasSsyrcublasSsyrhipblasSsyrcublasSsyr2hipblasSsyr2cublasSsyr2_v2hipblasSsyr2cublasSsyr2_v2hipblasSsyr2	
cublasSsbmvhipblasSsbmvcublasSspmvhipblasSspmvcublasSspmv_v2hipblasSspmvcublasSsprv_v2hipblasSsprvcublasSsprhipblasSsprcublasSspr2hipblasSspr2cublasSspr2_v2hipblasSspr2cublasSspr_v2hipblasSsprcublasSsymvhipblasSsymvcublasSsymv_v2hipblasSsymvcublasSsyrhipblasSsymvcublasSsyrhipblasSsyrcublasSsyr2hipblasSsyr2cublasSsyr2hipblasSsyr2cublasSsyr2_v2hipblasSsyr2	
cublasSsbmv_v2hipblasSsbmvcublasSspmv_v2hipblasSspmvcublasSspmv_v2hipblasSspmvcublasSsprhipblasSsprcublasSspr2hipblasSspr2cublasSspr2_v2hipblasSspr2cublasSspr_v2hipblasSsprcublasSsymvhipblasSsymvcublasSsymv_v2hipblasSsymvcublasSsymv_v2hipblasSsymvcublasSsyrhipblasSsyrcublasSsyr2hipblasSsyr2cublasSsyr2_v2hipblasSsyr2cublasSsyr2_v2hipblasSsyr2	
cublasSspmvhipblasSspmvcublasSspmv_v2hipblasSspmvcublasSsprhipblasSsprcublasSspr2hipblasSspr2cublasSspr2_v2hipblasSspr2cublasSspr_v2hipblasSsprcublasSsymvhipblasSsymvcublasSsymv_v2hipblasSsymvcublasSsyrhipblasSsyrcublasSsyr2hipblasSsyr2cublasSsyr2_v2hipblasSsyr2cublasSsyr2_v2hipblasSsyr2cublasSsyr2_v2hipblasSsyr2	
cublasSspmv_v2hipblasSspmvcublasSsprhipblasSsprcublasSspr2hipblasSspr2cublasSspr2_v2hipblasSspr2cublasSsymvhipblasSsymvcublasSsymv_v2hipblasSsymvcublasSsymv_v2hipblasSsymvcublasSsyrhipblasSsyrcublasSsyr2hipblasSsyr2cublasSsyr2_v2hipblasSsyr2cublasSsyr2_v2hipblasSsyr2	
cublasSsprhipblasSsprcublasSspr2hipblasSspr2cublasSspr2 v2hipblasSspr2cublasSspr_v2hipblasSsprcublasSsymvhipblasSsymvcublasSsymv v2hipblasSsymvcublasSsyrhipblasSsyrcublasSsyr2hipblasSsyr2cublasSsyr2 v2hipblasSsyr2	
cublasSspr2hipblasSspr2cublasSspr_v2hipblasSsprcublasSsymvhipblasSsymvcublasSsymv_v2hipblasSsymvcublasSsyrhipblasSsymvcublasSsyrhipblasSsyrcublasSsyr2hipblasSsyr2cublasSsyr2_v2hipblasSsyr2	
cublasSspr2_v2hipblasSspr2cublasSspr_v2hipblasSsprcublasSsymvhipblasSsymvcublasSsymv_v2hipblasSsymvcublasSsyrhipblasSsyrcublasSsyr2hipblasSsyr2cublasSsyr2_v2hipblasSsyr2	
cublasSspr_v2hipblasSsprcublasSsymvhipblasSsymvcublasSsymv_v2hipblasSsymvcublasSsyrhipblasSsyrcublasSsyr2hipblasSsyr2cublasSsyr2_v2hipblasSsyr2	
cublasSsymvhipblasSsymvcublasSsymv_v2hipblasSsymvcublasSsyrhipblasSsyrcublasSsyr2hipblasSsyr2cublasSsyr2_v2hipblasSsyr2	
cublasSsymv_v2hipblasSsymvcublasSsyrhipblasSsyrcublasSsyr2hipblasSsyr2cublasSsyr2_v2hipblasSsyr2	
cublasSsyrhipblasSsyrcublasSsyr2hipblasSsyr2cublasSsyr2_v2hipblasSsyr2	
cublasSsyr2hipblasSsyr2cublasSsyr2_v2hipblasSsyr2	
cublasSsyr2_v2 hipblasSsyr2	
cublasSsyr_v2 hipblasSsyr	
cublasStbmv hipblasStbmv	
cublasStbmv_v2 hipblasStbmv	
cublasStbsv hipblasStbsv	
cublasStbsv_v2 hipblasStbsv	
cublasStpmv hipblasStpmv	
cublasStpmv_v2 hipblasStpmv	
cublasStpsv hipblasStpsv	
cublasStpsv_v2 hipblasStpsv	
cublasStrmv hipblasStrmv	
cublasStrmv_v2 hipblasStrmv	
cublasStrsv hipblasStrsv	
cublasStrsv_v2 hipblasStrsv	
cublasZgbmv hipblasZgbmv	
cublasZgbmv_v2 hipblasZgbmv	
cublasZgemv hipblasZgemv	
cublasZgemv_v2 hipblasZgemv	
cublasZgerc hipblasZgerc	
cublasZgerc_v2 hipblasZgerc	
cublasZgeru hipblasZgeru	
cublasZgeru_v2 hipblasZgeru	
cublasZhbmv hipblasZhbmv	
cublasZhbmv_v2 hipblasZhbmv	
cublasZhemv hipblasZhemv	
cublasZhemv v2 hipblasZhemv	

CUDA	Deprecated	HIP	Deprecated
cublasZher		hipblasZher	
cublasZher2		· ·	
		hipblasZher2	
cublasZher2_v2		hipblasZher2	
cublasZher v2		hipblasZher	
cublasZhpmv		hipblasZhpmv	
cublasZhpmv v2		hipblasZhpmv	
cublasZhpr		hipblasZhpr	
cublasZhpr2		hipblasZhpr2	
cublasZhpr2_v2		hipblasZhpr2	
cublasZhpr_v2		hipblasZhpr	
cublasZsymv		hipblasZsymv	
cublasZsymv_v2		hipblasZsymv	
cublasZsyr		hipblasZsyr	
cublasZsyr2		hipblasZsyr2	
cublasZsyr2_v2		hipblasZsyr2	
cublasZsyr v2		hipblasZsyr	
cublasZtbmv		hipblasZtbmv	
cublasZtbmv v2		hipblasZtbmv	
cublasZtbsv		hipblasZtbsv	
cublasZtbsv v2		hipblasZtbsv	
cublasZtpmv		hipblasZtpmv	
cublasZtpmv v2		hipblasZtpmv	
cublasZtpsv		hipblasZtpsv	
cublasZtpsv v2		hipblasZtpsv	
cublasZtrmv		hipblasZtrmv	
cublasZtrmy v2		hipblasZtrmv	
cublasZtrsv		hipblasZtrsv	
cublasZtrsv_v2		hipblasZtrsv	

1.5.6 CUBLAS Level-3 Function Reference

CUDA	Deprecated	HIP	D
cublasCgemm		hipblasCgemm	
cublasCgemmBatched		hipblasCgemmBatched	
cublasCgemmStridedBatched		hipblasCgemmStridedBatched	
cublasCgemm v2		hipblasCgemm	
cublasChemm		hipblasChemm	
cublasChemm_v2		hipblasChemm	
cublasCher2k		hipblasCher2k	
cublasCher2k v2		hipblasCher2k	
cublasCherk		hipblasCherk	
cublasCherk v2		hipblasCherk	
cublasCherkx		hipblasCherkx	
cublasCsymm		hipblasCsymm	
cublasCsymm_v2		hipblasCsymm	
cublasCsyr2k		hipblasCsyr2k	
cublasCsyr2k_v2		hipblasCsyr2k	
cublasCsyrk		hipblasCsyrk	
cublasCsyrk_v2		hipblasCsyrk	
cublasCsyrkx		hipblasCsyrkx	
cublasCtrmm		hipblasCtrmm	

CUDA	Deprecated	HIP	D
cublasCtrmm v2		hipblasCtrmm	
cublasCtrsm		hipblasCtrsm	
cublasCtrsm v2		hipblasCtrsm	
cublasDgemm		hipblasDgemm	
cublasDgemmBatched		hipblasDgemmBatched	
cublasDgemmStridedBatched		hipblasDgemmStridedBatched	
cublasDgemm v2		hipblasDgemm	
cublasDsymm		hipblasDsymm	
cublasDsymm v2		hipblasDsymm	
cublasDsyr2k		hipblasDsyr2k	
cublasDsyr2k v2		hipblasDsyr2k	
cublasDsyrk		hipblasDsyrk	
cublasDsyrk v2		hipblasDsyrk	
cublasDsyrkx		hipblasDsyrkx	
cublasDtrmm		hipblasDtrmm	
cublasDtrmm v2		hipblasDtrmm	
cublasDtrism		hipblasDtrsm	
cublasDtrsm_v2		hipblasDtrsm	
cublasHgemm		hipblasHgemm	
cublasHgemmBatched		hipblasHgemmBatched	
cublasHgemmStridedBatched		hipblasHgemmStridedBatched	
cublasSgemm		hipblasSgemm	
cublasSgemmBatched		hipblasSgemmBatched	
cublasSgemmStridedBatched		hipblasSgemmStridedBatched	
cublasSgemm_v2		hipblasSgemm	
cublasSsymm		hipblasSsymm	
cublasSsymm_v2		hipblasSsymm	
cublasSsyr2k		hipblasSsyr2k	
cublasSsyr2k_v2		hipblasSsyr2k	
cublasSsyrk		hipblasSsyrk	
cublasSsyrk_v2		hipblasSsyrk	
cublasSsyrkx		hipblasSsyrkx	
cublasStrmm		hipblasStrmm	
_cublasStrmm_v2		hipblasStrmm	
cublasStrsm		hipblasStrsm	
cublasStrsm_v2		hipblasStrsm	
cublasZgemm		hipblasZgemm	
cublasZgemmBatched		hipblasZgemmBatched	
cublasZgemmStridedBatched		hipblasZgemmStridedBatched	
cublasZgemm_v2		hipblasZgemm	
cublasZhemm		hipblasZhemm	
cublasZhemm v2		hipblasZhemm	
cublasZher2k		hipblasZher2k	
cublasZher2k v2		hipblasZher2k	
cublasZherk		hipblasZherk	
cublasZherk v2		hipblasZherk	
cublasZherkx		hipblasZherkx	
cublasZsymm		hipblasZsymm	
cublasZsymm v2		hipblasZsymm	
cublasZsyrini_v2		hipblasZsyr2k	
cublasZsyr2k v2		hipblasZsyr2k	
cublasZsyrk		hipblasZsyrk	
CuotasZsytk		IIIpoiasZsyik	

CUDA	Deprecated	HIP	D
cublasZsyrk_v2		hipblasZsyrk	
cublasZsyrkx		hipblasZsyrkx	
cublasZtrmm		hipblasZtrmm	
cublasZtrmm_v2		hipblasZtrmm	
cublasZtrsm		hipblasZtrsm	
cublasZtrsm_v2		hipblasZtrsm	

1.5.7 BLAS-like Extension

CUDA	Deprecated	HIP	Deprecated
cublasCdgmm		hipblasCdgmm	
cublasCgeam		hipblasCgeam	
cublasCgeqrfBatched		hipblasCgeqrfBatched	
cublasCgetrfBatched		hipblasCgetrfBatched	
cublasCgetriBatched		hipblasCgetriBatched	
cublasCgetrsBatched		hipblasCgetrsBatched	
cublasCtrsmBatched		hipblasCtrsmBatched	
cublasDdgmm		hipblasDdgmm	
cublasDgeam		hipblasDgeam	
cublasDgeqrfBatched		hipblasDgeqrfBatched	
cublasDgetrfBatched		hipblasDgetrfBatched	
cublasDgetriBatched		hipblasDgetriBatched	
cublasDgetrsBatched		hipblasDgetrsBatched	
cublasDtrsmBatched		hipblasDtrsmBatched	
cublasGemmBatchedEx		hipblasGemmBatchedEx	
cublasGemmEx		hipblasGemmEx	
cublasGemmStridedBatchedEx		hipblasGemmStridedBatchedEx	
cublasSdgmm		hipblasSdgmm	
cublasSgeam		hipblasSgeam	
cublasSgeqrfBatched		hipblasSgeqrfBatched	
cublasSgetrfBatched		hipblasSgetrfBatched	
cublasSgetriBatched		hipblasSgetriBatched	
cublasSgetrsBatched		hipblasSgetrsBatched	
cublasStrsmBatched		hipblasStrsmBatched	
cublasZdgmm		hipblasZdgmm	
cublasZgeam		hipblasZgeam	
cublasZgeqrfBatched		hipblasZgeqrfBatched	
cublasZgetrfBatched		hipblasZgetrfBatched	
cublasZgetriBatched		hipblasZgetriBatched	
cublasZgetrsBatched		hipblasZgetrsBatched	
cublasZtrsmBatched		hipblasZtrsmBatched	

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1.6 CURAND API Supported by HIP

1.6.1 CURAND Data Types

CUDA	Deprecated	HIP	Deprecated
CURAND RNG PSEUDO DEFAULT		HIPRAND RNG PSEUDO DEFAULT	
CURAND_RNG_PSEUDO_MRG32K3		HIPRAND_RNG_PSEUDO_MRG32K3	
A		A	
CURAND_RNG_PSEUDO_MT19937		HIPRAND_RNG_PSEUDO_MT19937	
CURAND_RNG_PSEUDO_MTGP32		HIPRAND_RNG_PSEUDO_MTGP32	
CURAND_RNG_PSEUDO_PHILOX4_		HIPRAND_RNG_PSEUDO_PHILOX4_	
32_10		32_10	
CURAND_RNG_PSEUDO_XORWOW		HIPRAND_RNG_PSEUDO_XORWOW	
CURAND_RNG_QUASI_DEFAULT		HIPRAND_RNG_QUASI_DEFAULT	
CURAND_RNG_QUASI_SCRAMBLE		HIPRAND_RNG_QUASI_SCRAMBLE	
D SOBOL32		D_SOBOL32	
CURAND_RNG_QUASI_SCRAMBLE		HIPRAND_RNG_QUASI_SCRAMBLE	
D_SOBOL64		D_SOBOL64	
CURAND RNG QUASI SOBOL32		HIPRAND RNG QUASI SOBOL32	
CURAND RNG QUASI SOBOL64 CURAND RNG TEST		HIPRAND RNG QUASI SOBOL64 HIPRAND RNG TEST	
CURAND STATUS ALLOCATION F		HIPRAND STATUS ALLOCATION F	
AILED		AILED	
CURAND STATUS ARCH MISMAT		HIPRAND_STATUS_ARCH_MISMAT	
CH		CH	
CURAND STATUS DOUBLE PRECI		HIPRAND STATUS DOUBLE PRECI	
SION REQUIRED		SION REQUIRED	
CURAND STATUS INITIALIZATION		HIPRAND STATUS INITIALIZATIO	
FAILED		N FAILED	
CURAND STATUS INTERNAL ERR		HIPRAND STATUS INTERNAL ERR	
OR		OR	
CURAND_STATUS_LAUNCH_FAILU		HIPRAND_STATUS_LAUNCH_FAIL	
RE		URE	
CURAND_STATUS_LENGTH_NOT_		HIPRAND_STATUS_LENGTH_NOT_	
MULTIPLE		MULTIPLE	
CURAND_STATUS_NOT_INITIALIZ		HIPRAND_STATUS_NOT_INITIALIZ	
ED CHRAND STATUS OUT OF BANG		ED LUDBAND STATUS OUT OF BANG	
CURAND_STATUS_OUT_OF_RANG E		HIPRAND_STATUS_OUT_OF_RANG	
CURAND STATUS PREEXISTING F		HIPRAND_STATUS_PREEXISTING_F	
AILURE		AILURE	
CURAND STATUS SUCCESS		HIPRAND STATUS SUCCESS	
CURAND STATUS TYPE ERROR		HIPRAND STATUS TYPE ERROR	
CURAND STATUS VERSION MISM		HIPRAND STATUS VERSION MISM	
ATCH		ATCH	
CURAND VERSION		HIPRAND VERSION	
curandDirectionVectors32 t		hiprandDirectionVectors32 t	
curandDiscreteDistribution st		hiprandDiscreteDistribution_st	
curandDiscreteDistribution t		hiprandDiscreteDistribution t	
curandGenerator_st		hiprandGenerator st	
curandGenerator_t		hiprandGenerator_t	
curandRngType		hiprandRngType_t	

CUDA	Deprecated	HIP	Deprecated
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	
curandStateSobol32		hiprandStateSobol32	
curandStateSobol32_t		hiprandStateSobol32_t	
curandStateXORWOW		hiprandStateXORWOW	
curandStateXORWOW_t		hiprandStateXORWOW_t	
curandState_t		hiprandState_t	
curandStatus		hiprandStatus_t	
curandStatus_t		hiprandStatus_t	

1.6.2 Host API Functions

CUDA	Deprecated	HIP	Deprecated
curandCreateGenerator		hiprandCreateGenerator	
curandCreateGeneratorHost		hiprandCreateGeneratorHost	
curandCreatePoissonDistribution		hiprandCreatePoissonDistribution	
curandDestroyDistribution		hiprandDestroyDistribution	
curandDestroyGenerator		hiprandDestroyGenerator	
curandGenerate		hiprandGenerate	
curandGenerateLogNormal		hiprandGenerateLogNormal	
curandGenerateLogNormalDouble		hiprandGenerateLogNormalDouble	
curandGenerateNormal		hiprandGenerateNormal	
curandGenerateNormalDouble		hiprandGenerateNormalDouble	
curandGeneratePoisson		hiprandGeneratePoisson	
curandGenerateSeeds		hiprandGenerateSeeds	
curandGenerateUniform		hiprandGenerateUniform	
curandGenerateUniformDouble		hiprandGenerateUniformDouble	
curandGetVersion		hiprandGetVersion	
curandMakeMTGP32Constants		hiprandMakeMTGP32Constants	
curandMakeMTGP32KernelState		hiprandMakeMTGP32KernelState	
curandSetGeneratorOffset		hiprandSetGeneratorOffset	
curandSetPseudoRandomGeneratorSeed		hiprandSetPseudoRandomGeneratorSeed	
curandSetQuasiRandomGeneratorDimen		hiprandSetQuasiRandomGeneratorDime	
sions		nsions	
curandSetStream		hiprandSetStream	

1.6.3 Device API Functions

CUDA	Deprecated	HIP	Deprecated
curand		hiprand	
curand discrete		hiprand discrete	
curand discrete4		hiprand_discrete4	
curand init		hiprand init	
curand log normal		hiprand log normal	
curand log normal2		hiprand log normal2	
curand_log_normal2_double		hiprand_log_normal2_double	

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CUDA	Deprecated	HIP	Deprecated
curand log normal4		hiprand log normal4	
curand log normal4 double		hiprand log normal4 double	
curand log normal double		hiprand log normal double	
curand normal		hiprand_normal	
curand normal2		hiprand_normal2	
curand normal2 double		hiprand_normal2_double	
curand normal4		hiprand_normal4	
curand normal4 double		hiprand_normal4_double	
curand normal double		hiprand_normal_double	
curand poisson		hiprand_poisson	
curand poisson4		hiprand_poisson4	
curand uniform		hiprand_uniform	
curand uniform2 double		hiprand_uniform2_double	
curand uniform4		hiprand uniform4	
curand uniform4 double		hiprand_uniform4_double	
curand uniform double		hiprand uniform double	

1.7 CUFFT API Supported by HIP

1.7.1 CUFFT Data Types

CUDA	Deprecated	HIP	Deprecated
CUFFT ALLOC FAILED		HIPFFT_ALLOC_FAILED	
CUFFT_C2C		HIPFFT C2C	
CUFFT_C2R		HIPFFT_C2R	
CUFFT_D2Z		HIPFFT_D2Z	
CUFFT_EXEC_FAILED		HIPFFT EXEC FAILED	
CUFFT_FORWARD		HIPFFT_FORWARD	
CUFFT_INCOMPLETE_PARAMETER _LIST		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_NOT_IMPLEMENTED		HIPFFT_NOT_IMPLEMENTED	
CUFFT_NOT_SUPPORTED		HIPFFT_NOT_SUPPORTED	
CUFFT_NO_WORKSPACE		HIPFFT_NO_WORKSPACE	
CUFFT_PARSE_ERROR		HIPFFT_PARSE_ERROR	
CUFFT_R2C		HIPFFT_R2C	
CUFFT_SETUP_FAILED		HIPFFT_SETUP_FAILED	
CUFFT_SUCCESS		HIPFFT_SUCCESS	
CUFFT_UNALIGNED_DATA		HIPFFT_UNALIGNED_DATA	
CUFFT_Z2D		HIPFFT_Z2D	
CUFFT_Z2Z		HIPFFT_Z2Z	
cufftComplex		hipfftComplex	
cufftDoubleComplex		hipfftDoubleComplex	

CUDA	Deprecated	HIP	Deprecated
cufftDoubleReal		hipfftDoubleReal	
cufftHandle		hipfftHandle	
cufftReal		hipfftReal	
cufftResult		hipfftResult	
cufftResult_t		hipfftResult_t	
cufftType		hipfftType	
cufftType t		hipfftType t	

1.7.2 CUFFT API Functions

CUDA	Deprecated	HIP	Deprecated
cufftCreate		hipfftCreate	
cufftDestroy		hipfftDestroy	
cufftEstimate1d		hipfftEstimate1d	
cufftEstimate2d		hipfftEstimate2d	
cufftEstimate3d		hipfftEstimate3d	
cufftEstimateMany		hipfftEstimateMany	
cufftExecC2C		hipfftExecC2C	
cufftExecC2R		hipfftExecC2R	
cufftExecD2Z		hipfftExecD2Z	
cufftExecR2C		hipfftExecR2C	
cufftExecZ2D		hipfftExecZ2D	
cufftExecZ2Z		hipfftExecZ2Z	
cufftGetProperty		hipfftGetProperty	
cufftGetSize		hipfftGetSize	
cufftGetSize1d		hipfftGetSize1d	
cufftGetSize2d		hipfftGetSize2d	
cufftGetSize3d		hipfftGetSize3d	
cufftGetSizeMany		hipfftGetSizeMany	
cufftGetSizeMany64		hipfftGetSizeMany64	
cufftGetVersion		hipfftGetVersion	
cufftMakePlan1d		hipfftMakePlan1d	
cufftMakePlan2d		hipfftMakePlan2d	
cufftMakePlan3d		hipfftMakePlan3d	
cufftMakePlanMany		hipfftMakePlanMany	
cufftMakePlanMany64		hipfftMakePlanMany64	
cufftPlan1d		hipfftPlan1d	
cufftPlan2d		hipfftPlan2d	
cufftPlan3d		hipfftPlan3d	
cufftPlanMany		hipfftPlanMany	
cufftSetAutoAllocation		hipfftSetAutoAllocation	
cufftSetStream		hipfftSetStream	
cufftSetWorkArea		hipfftSetWorkArea	

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1.8 CUSPARSE API Supported by HIP

1.8.1 CUSPARSE Types References

CUDA	Deprecated	HIP	Deprecated
CUSPARSE_ACTION_NUMERIC		HIPSPARSE_ACTION_NUMERIC	
CUSPARSE_ACTION_SYMBOLIC		HIPSPARSE_ACTION_SYMBOLIC	
CUSPARSE_DIAG_TYPE_NON_UNIT		HIPSPARSE_DIAG_TYPE_NON_UNI	
CUSPARSE DIAG TYPE UNIT		T HIPSPARSE DIAG TYPE UNIT	
CUSPARSE DIRECTION COLUMN		HIPSPARSE DIRECTION COLUMN	
CUSPARSE DIRECTION ROW		HIPSPARSE DIRECTION ROW	
CUSPARSE FILL MODE LOWER		HIPSPARSE FILL MODE LOWER	
CUSPARSE FILL MODE UPPER		HIPSPARSE FILL MODE UPPER	
CUSPARSE HYB PARTITION AUTO	√	HIPSPARSE HYB PARTITION AUT	
	_	0	
CUSPARSE_HYB_PARTITION_MAX	√	HIPSPARSE_HYB_PARTITION_MAX	
CUSPARSE_HYB_PARTITION_USER	✓	HIPSPARSE_HYB_PARTITION_USER	
CUSPARSE INDEX BASE ONE		HIPSPARSE INDEX BASE ONE	
CUSPARSE INDEX BASE ZERO		HIPSPARSE INDEX BASE ZERO	
CUSPARSE_MATRIX_TYPE_GENER		HIPSPARSE_MATRIX_TYPE_GENER	
AL		AL	
CUSPARSE_MATRIX_TYPE_HERMI		HIPSPARSE_MATRIX_TYPE_HERMI	
TIAN		TIAN	
CUSPARSE_MATRIX_TYPE_SYMME		HIPSPARSE_MATRIX_TYPE_SYMM	
TRIC		ETRIC	
CUSPARSE_MATRIX_TYPE_TRIAN GULAR		HIPSPARSE_MATRIX_TYPE_TRIAN GULAR	
CUSPARSE OPERATION CONJUGA		HIPSPARSE OPERATION CONJUGA	
TE TRANSPOSE		TE TRANSPOSE	
CUSPARSE OPERATION NON TRA		HIPSPARSE OPERATION NON TRA	
NSPOSE		NSPOSE	
CUSPARSE_OPERATION_TRANSPO		HIPSPARSE_OPERATION_TRANSPO	
SE		SE	
CUSPARSE_POINTER_MODE_DEVI		HIPSPARSE_POINTER_MODE_DEVI	
CLICRARGE POINTER MODE HOST		CE HIPSPARSE POINTER MODE HOST	
CUSPARSE_POINTER_MODE_HOST CUSPARSE_SOLVE_POLICY_NO_LE		HIPSPARSE POINTER MODE HOST HIPSPARSE SOLVE POLICY NO L	
VEL		EVEL	
CUSPARSE SOLVE POLICY USE L		HIPSPARSE SOLVE POLICY USE L	
EVEL		EVEL	
CUSPARSE STATUS ALLOC FAILE		HIPSPARSE STATUS ALLOC FAILE	
D – – –		D	
CUSPARSE_STATUS_ARCH_MISMA		HIPSPARSE_STATUS_ARCH_MISMA	
TCH		TCH	
CUSPARSE_STATUS_EXECUTION_F		HIPSPARSE_STATUS_EXECUTION_	
AILED		FAILED	
CUSPARSE_STATUS_INTERNAL_ER		HIPSPARSE_STATUS_INTERNAL_E	
CUSDADSE STATUS INVALID VAL		RROR	
CUSPARSE_STATUS_INVALID_VAL UE		HIPSPARSE_STATUS_INVALID_VA LUE	
OL		LOL	

CUDA	Deprecated	HIP	Deprecated
CUSPARSE STATUS MAPPING ER		HIPSPARSE STATUS MAPPING ER	
ROR		ROR	
CUSPARSE STATUS MATRIX TYP		HIPSPARSE STATUS MATRIX TYP	
E_NOT_SUPPORTED		E_NOT_SUPPORTED	
CUSPARSE_STATUS_NOT_INITIALI		HIPSPARSE_STATUS_NOT_INITIALI	
ZED		ZED	
CUSPARSE_STATUS_SUCCESS		HIPSPARSE_STATUS_SUCCESS	
CUSPARSE_STATUS_ZERO_PIVOT		HIPSPARSE_STATUS_ZERO_PIVOT	
bsric02Info_t		bsric02Info_t	
bsrilu02Info_t		bsrilu02Info_t	
bsrsv2Info_t		bsrsv2Info_t	
csrgemm2Info_t		csrgemm2Info_t	
_csrilu02Info_t		csrilu02Info_t	
csrsm2Info_t		csrsm2Info_t	
csrsv2Info_t		csrsv2Info_t	
cusparseAction_t		hipsparseAction_t	
cusparseDiagType_t		hipsparseDiagType_t	
cusparseDirection_t		hipsparseDirection_t	
cusparseFillMode_t		hipsparseFillMode_t	
cusparseHandle_t		hipsparseHandle_t	
cusparseHybMat_t	✓	hipsparseHybMat_t	
cusparseHybPartition_t	√	hipsparseHybPartition_t	
cusparseIndexBase_t		hipsparseIndexBase_t	
cusparseMatDescr t		hipsparseMatDescr_t	
cusparseMatrixType_t		hipsparseMatrixType_t	
cusparseOperation_t		hipsparseOperation_t	
cusparsePointerMode_t		hipsparsePointerMode_t	
cusparseSolvePolicy_t		hipsparseSolvePolicy_t	
cusparseStatus_t		hipsparseStatus_t	
pruneInfo_t		pruneInfo_t	

1.8.2 CUSPARSE Management Function Reference

CUDA	Deprecated	HIP	Deprecated
cusparseCreate		hipsparseCreate	
cusparseDestroy		hipsparseDestroy	
cusparseGetPointerMode		hipsparseGetPointerMode	
cusparseGetStream		hipsparseGetStream	
cusparseGetVersion		hipsparseGetVersion	
cusparseSetPointerMode		hipsparseSetPointerMode	
cusparseSetStream		hipsparseSetStream	

1.8.3 CUSPARSE Helper Function Reference

CUDA	Deprecated	HIP	Deprecated
cusparseCreateBsric02Info		hipsparseCreateBsric02Info	
cusparseCreateBsrilu02Info		hipsparseCreateBsrilu02Info	
cusparseCreateBsrsv2Info		hipsparseCreateBsrsv2Info	
cusparseCreateCsrgemm2Info	✓	hipsparseCreateCsrgemm2Info	
cusparseCreateCsric02Info		hipsparseCreateCsric02Info	

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CUDA	Deprecated	HIP	Deprecated
cusparseCreateCsrilu02Info		hipsparseCreateCsrilu02Info	
cusparseCreateCsrsm2Info		hipsparseCreateCsrsm2Info	
cusparseCreateCsrsv2Info		hipsparseCreateCsrsv2Info	
cusparseCreateHybMat	✓	hipsparseCreateHybMat	
cusparseCreateMatDescr		hipsparseCreateMatDescr	
cusparseCreatePruneInfo		hipsparseCreatePruneInfo	
cusparseDestroyBsric02Info		hipsparseDestroyBsric02Info	
cusparseDestroyBsrilu02Info		hipsparseDestroyBsrilu02Info	
cusparseDestroyBsrsv2Info		hipsparseDestroyBsrsv2Info	
cusparseDestroyCsrgemm2Info	✓	hipsparseDestroyCsrgemm2Info	
cusparseDestroyCsric02Info		hipsparseDestroyCsric02Info	
cusparseDestroyCsrilu02Info		hipsparseDestroyCsrilu02Info	
cusparseDestroyCsrsm2Info		hipsparseDestroyCsrsm2Info	
cusparseDestroyCsrsv2Info		hipsparseDestroyCsrsv2Info	
cusparseDestroyHybMat	✓	hipsparseDestroyHybMat	
cusparseDestroyMatDescr		hipsparseDestroyMatDescr	
cusparseDestroyPruneInfo		hipsparseDestroyPruneInfo	
cusparseGetMatDiagType		hipsparseGetMatDiagType	
cusparseGetMatFillMode		hipsparseGetMatFillMode	
cusparseGetMatIndexBase		hipsparseGetMatIndexBase	
cusparseGetMatType		hipsparseGetMatType	
cusparseSetMatDiagType		hipsparseSetMatDiagType	
cusparseSetMatFillMode		hipsparseSetMatFillMode	
cusparseSetMatIndexBase		hipsparseSetMatIndexBase	
cusparseSetMatType		hipsparseSetMatType	

1.8.4 CUSPARSE Level 1 Function Reference

CUDA	Deprecated	HIP	Deprecated
cusparseCaxpyi	✓	hipsparseCaxpyi	
cusparseCdotci	✓	hipsparseCdotci	
cusparseCdoti	✓	hipsparseCdoti	
cusparseCgthr	√	hipsparseCgthr	
cusparseCgthrz	✓	hipsparseCgthrz	
cusparseCsctr	√	hipsparseCsctr	
cusparseDaxpyi	✓	hipsparseDaxpyi	
cusparseDdoti	√	hipsparseDdoti	
cusparseDgthr	✓	hipsparseDgthr	
cusparseDgthrz	√	hipsparseDgthrz	
cusparseDroti	√	hipsparseDroti	
cusparseDsctr	√	hipsparseDsctr	
cusparseSaxpyi	✓	hipsparseSaxpyi	
cusparseSdoti	√	hipsparseSdoti	
cusparseSgthr	√	hipsparseSgthr	
cusparseSgthrz	√	hipsparseSgthrz	
cusparseSroti	√	hipsparseSroti	
cusparseSsctr	√	hipsparseSsctr	
cusparseZaxpyi	✓	hipsparseZaxpyi	

CUDA	Deprecated	HIP	Deprecated
cusparseZdotci	✓	hipsparseZdotci	
cusparseZdoti	✓	hipsparseZdoti	
cusparseZgthr	✓	hipsparseZgthr	
cusparseZgthrz	✓	hipsparseZgthrz	
cusparseZsctr	✓	hipsparseZsctr	

1.8.5 CUSPARSE Level 2 Function Reference

CUDA	Deprecated	HIP	Deprecated
cusparseCbsrmv		hipsparseCbsrmv	
cusparseCbsrsv2_analysis		hipsparseCbsrsv2_analysis	
cusparseCbsrsv2 bufferSize		hipsparseCbsrsv2 bufferSize	
cusparseCbsrsv2 bufferSizeExt		hipsparseCbsrsv2 bufferSizeExt	
cusparseCbsrsv2_solve		hipsparseCbsrsv2_solve	
cusparseCcsrmv	✓	hipsparseCcsrmv	
cusparseCcsrsv2_analysis		hipsparseCcsrsv2_analysis	
cusparseCcsrsv2_bufferSize		hipsparseCcsrsv2_bufferSize	
cusparseCcsrsv2_bufferSizeExt		hipsparseCcsrsv2_bufferSizeExt	
cusparseCcsrsv2_solve		hipsparseCcsrsv2_solve	
cusparseChybmv	✓	hipsparseChybmv	
cusparseDbsrmv		hipsparseDbsrmv	
cusparseDbsrsv2_analysis		hipsparseDbsrsv2_analysis	
cusparseDbsrsv2_bufferSize		hipsparseDbsrsv2_bufferSize	
cusparseDbsrsv2_bufferSizeExt		hipsparseDbsrsv2_bufferSizeExt	
_cusparseDbsrsv2_solve		hipsparseDbsrsv2_solve	
cusparseDcsrmv	✓	hipsparseDcsrmv	
cusparseDcsrsv2 analysis		hipsparseDcsrsv2_analysis	
cusparseDcsrsv2_bufferSize		hipsparseDcsrsv2 bufferSize	
cusparseDcsrsv2_bufferSizeExt		hipsparseDcsrsv2_bufferSizeExt	
cusparseDcsrsv2_solve		hipsparseDcsrsv2_solve	
cusparseDhybmv	✓	hipsparseDhybmv	
cusparseSbsrmv		hipsparseSbsrmv	
cusparseSbsrsv2_analysis		hipsparseSbsrsv2_analysis	
cusparseSbsrsv2_bufferSize		hipsparseSbsrsv2_bufferSize	
cusparseSbsrsv2_bufferSizeExt		hipsparseSbsrsv2_bufferSizeExt	
cusparseSbsrsv2_solve		hipsparseSbsrsv2_solve	
cusparseScsrmv	✓	hipsparseScsrmv	
cusparseScsrsv2_analysis		hipsparseScsrsv2_analysis	
cusparseScsrsv2_bufferSize		hipsparseScsrsv2_bufferSize	
cusparseScsrsv2_bufferSizeExt		hipsparseScsrsv2_bufferSizeExt	
cusparseScsrsv2_solve		hipsparseScsrsv2_solve	
cusparseShybmv	✓	hipsparseShybmv	
cusparseXbsrsv2_zeroPivot		hipsparseXbsrsv2_zeroPivot	
cusparseXcsrsv2_zeroPivot		hipsparseXcsrsv2_zeroPivot	
cusparseZbsrmv		hipsparseZbsrmv	
cusparseZbsrsv2_analysis		hipsparseZbsrsv2_analysis	
cusparseZbsrsv2_bufferSize		hipsparseZbsrsv2_bufferSize	
cusparseZbsrsv2_bufferSizeExt		hipsparseZbsrsv2_bufferSizeExt	
cusparseZbsrsv2_solve		hipsparseZbsrsv2_solve	
cusparseZcsrmv	✓	hipsparseZcsrmv	

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CUDA	Deprecated	HIP	Deprecated
cusparseZcsrsv2_analysis		hipsparseZcsrsv2 analysis	
cusparseZcsrsv2_bufferSize		hipsparseZcsrsv2_bufferSize	
cusparseZcsrsv2_bufferSizeExt		hipsparseZcsrsv2_bufferSizeExt	
cusparseZcsrsv2 solve		hipsparseZcsrsv2 solve	
cusparseZhybmv	√	hipsparseZhybmv	

1.8.6 CUSPARSE Level 3 Function Reference

CUDA	Deprecated	HIP	Deprecated
cusparseCbsrmm		hipsparseCbsrmm	
cusparseCcsrmm	✓	hipsparseCcsrmm	
cusparseCcsrmm2	✓	hipsparseCcsrmm2	
cusparseCcsrsm2 analysis		hipsparseCcsrsm2 analysis	
cusparseCcsrsm2_bufferSizeExt		hipsparseCcsrsm2 bufferSizeExt	
cusparseCcsrsm2_solve		hipsparseCcsrsm2_solve	
cusparseCgemmi	✓	hipsparseCgemmi	
cusparseDbsrmm		hipsparseDbsrmm	
cusparseDcsrmm	✓	hipsparseDcsrmm	
cusparseDcsrmm2	√	hipsparseDcsrmm2	
cusparseDcsrsm2_analysis		hipsparseDcsrsm2_analysis	
cusparseDcsrsm2_bufferSizeExt		hipsparseDcsrsm2_bufferSizeExt	
cusparseDcsrsm2_solve		hipsparseDcsrsm2_solve	
cusparseDgemmi	✓	hipsparseDgemmi	
cusparseSbsrmm		hipsparseSbsrmm	
cusparseScsrmm	✓	hipsparseScsrmm	
cusparseScsrmm2	✓	hipsparseScsrmm2	
cusparseScsrsm2 analysis		hipsparseScsrsm2 analysis	
cusparseScsrsm2_bufferSizeExt		hipsparseScsrsm2_bufferSizeExt	
cusparseScsrsm2_solve		hipsparseScsrsm2_solve	
cusparseSgemmi	✓	hipsparseSgemmi	
cusparseXcsrsm2_zeroPivot		hipsparseXcsrsm2_zeroPivot	
cusparseZbsrmm		hipsparseZbsrmm	
cusparseZcsrmm	✓	hipsparseZcsrmm	
cusparseZcsrmm2	√	hipsparseZcsrmm2	
cusparseZcsrsm2_analysis		hipsparseZcsrsm2_analysis	
cusparseZcsrsm2_bufferSizeExt		hipsparseZcsrsm2_bufferSizeExt	
cusparseZcsrsm2_solve		hipsparseZcsrsm2_solve	
cusparseZgemmi	✓	hipsparseZgemmi	

1.8.7 CUSPARSE Extra Function Reference

CUDA	Deprecated	HIP	Deprecated
cusparseCcsrgeam	√	hipsparseCcsrgeam	
cusparseCcsrgeam2		hipsparseCcsrgeam2	
cusparseCcsrgeam2_bufferSizeExt		hipsparseCcsrgeam2 bufferSizeExt	
cusparseCcsrgemm	✓	hipsparseCcsrgemm	
cusparseCcsrgemm2	√	hipsparseCcsrgemm2	

CUDA	Deprecated	HIP	Deprecated
cusparseCcsrgemm2_bufferSizeExt	✓	hipsparseCcsrgemm2_bufferSizeExt	
cusparseDcsrgeam	✓	hipsparseDcsrgeam	
cusparseDcsrgeam2		hipsparseDcsrgeam2	
cusparseDcsrgeam2_bufferSizeExt		hipsparseDcsrgeam2_bufferSizeExt	
cusparseDcsrgemm	✓	hipsparseDcsrgemm	
cusparseDcsrgemm2	✓	hipsparseDcsrgemm2	
cusparseDcsrgemm2_bufferSizeExt	√	hipsparseDcsrgemm2_bufferSizeExt	
cusparseScsrgeam	√	hipsparseScsrgeam	
cusparseScsrgeam2		hipsparseScsrgeam2	
cusparseScsrgeam2_bufferSizeExt		hipsparseScsrgeam2_bufferSizeExt	
cusparseScsrgemm	\checkmark	hipsparseScsrgemm	
cusparseScsrgemm2	√	hipsparseScsrgemm2	
cusparseScsrgemm2_bufferSizeExt	√	hipsparseScsrgemm2_bufferSizeExt	
cusparseXcsrgeam2Nnz		hipsparseXcsrgeam2Nnz	
cusparseXcsrgeamNnz	\checkmark	hipsparseXcsrgeamNnz	
cusparseXcsrgemm2Nnz	√	hipsparseXcsrgemm2Nnz	
cusparseXcsrgemmNnz	√	hipsparseXcsrgemmNnz	
cusparseZcsrgeam	√	hipsparseZcsrgeam	
cusparseZcsrgeam2		hipsparseZcsrgeam2	
cusparseZcsrgeam2_bufferSizeExt		hipsparseZcsrgeam2_bufferSizeExt	
cusparseZcsrgemm	✓	hipsparseZcsrgemm	
cusparseZcsrgemm2	✓	hipsparseZcsrgemm2	
cusparseZcsrgemm2_bufferSizeExt	√	hipsparseZcsrgemm2_bufferSizeExt	

1.8.8 CUSPARSE Preconditioners Reference

CUDA	Deprecated	HIP	Deprecated
cusparseCbsric02		hipsparseCbsric02	
cusparseCbsric02 analysis		hipsparseCbsric02_analysis	
cusparseCbsric02 bufferSize		hipsparseCbsric02_bufferSize	
cusparseCbsrilu02		hipsparseCbsrilu02	
cusparseCbsrilu02_analysis		hipsparseCbsrilu02_analysis	
cusparseCbsrilu02_bufferSize		hipsparseCbsrilu02_bufferSize	
cusparseCbsrilu02_numericBoost		hipsparseCbsrilu02_numericBoost	
cusparseCcsric02		hipsparseCcsric02	
cusparseCcsric02_analysis		hipsparseCcsric02_analysis	
cusparseCcsric02 bufferSize		hipsparseCcsric02 bufferSize	
cusparseCcsric02 bufferSizeExt		hipsparseCcsric02 bufferSizeExt	
cusparseCcsrilu02		hipsparseCcsrilu02	
cusparseCcsrilu02_analysis		hipsparseCcsrilu02 analysis	
cusparseCcsrilu02 bufferSize		hipsparseCcsrilu02 bufferSize	
cusparseCcsrilu02_bufferSizeExt		hipsparseCcsrilu02 bufferSizeExt	
cusparseCcsrilu02_numericBoost		hipsparseCcsrilu02 numericBoost	
cusparseDbsric02		hipsparseDbsric02	
cusparseDbsric02 analysis		hipsparseDbsric02_analysis	
cusparseDbsric02_bufferSize		hipsparseDbsric02_bufferSize	
cusparseDbsrilu02		hipsparseDbsrilu02	
cusparseDbsrilu02_analysis		hipsparseDbsrilu02_analysis	
cusparseDbsrilu02 bufferSize		hipsparseDbsrilu02_bufferSize	
cusparseDbsrilu02_numericBoost		hipsparseDbsrilu02_numericBoost	

CUDA	Deprecated	HIP	Deprecated
cusparseDcsric02		hipsparseDcsric02	
cusparseDcsric02 analysis		hipsparseDcsric02 analysis	
cusparseDcsric02 bufferSize		hipsparseDcsric02 bufferSize	
cusparseDcsric02 bufferSizeExt		hipsparseDcsric02 bufferSizeExt	
cusparseDcsrilu02		hipsparseDcsrilu02	
cusparseDcsrilu02 analysis		hipsparseDcsrilu02_analysis	
cusparseDcsrilu02 bufferSize		hipsparseDcsrilu02 bufferSize	
cusparseDcsrilu02 bufferSizeExt		hipsparseDcsrilu02 bufferSizeExt	
cusparseDcsrilu02 numericBoost		hipsparseDcsrilu02 numericBoost	
cusparseSbsric02		hipsparseSbsric02	
cusparseSbsric02_analysis		hipsparseSbsric02_analysis	
cusparseSbsric02 bufferSize		hipsparseSbsric02_bufferSize	
cusparseSbsrilu02		hipsparseSbsrilu02	
cusparseSbsrilu02_analysis		hipsparseSbsrilu02_analysis	
cusparseSbsrilu02 bufferSize		hipsparseSbsrilu02 bufferSize	
cusparseSbsrilu02 numericBoost		hipsparseSbsrilu02 numericBoost	
cusparseScsric02		hipsparseScsric02	
cusparseScsric02 analysis		hipsparseScsric02 analysis	
cusparseScsric02_bufferSize		hipsparseScsric02_bufferSize	
cusparseScsric02 bufferSizeExt		hipsparseScsric02_bufferSizeExt	
cusparseScsrilu02		hipsparseScsrilu02	
cusparseScsrilu02_analysis		hipsparseScsrilu02_analysis	
cusparseScsrilu02_bufferSize		hipsparseScsrilu02_bufferSize	
cusparseScsrilu02_bufferSizeExt		hipsparseScsrilu02_bufferSizeExt	
cusparseScsrilu02_numericBoost		hipsparseScsrilu02_numericBoost	
cusparseXbsric02_zeroPivot		hipsparseXbsric02_zeroPivot	
cusparseXbsrilu02 zeroPivot		hipsparseXbsrilu02 zeroPivot	
cusparseXcsric02_zeroPivot		hipsparseXcsric02_zeroPivot	
cusparseXcsrilu02 zeroPivot		hipsparseXcsrilu02 zeroPivot	
cusparseZbsric02		hipsparseZbsric02	
cusparseZbsric02 analysis		hipsparseZbsric02 analysis	
cusparseZbsric02_bufferSize		hipsparseZbsric02_bufferSize	
cusparseZbsrilu02		hipsparseZbsrilu02	
cusparseZbsrilu02_analysis		hipsparseZbsrilu02_analysis	
cusparseZbsrilu02 bufferSize		hipsparseZbsrilu02 bufferSize	
cusparseZbsrilu02_numericBoost		hipsparseZbsrilu02_numericBoost	
cusparseZcsric02		hipsparseZcsric02	
cusparseZcsric02_analysis		hipsparseZcsric02_analysis	
cusparseZcsric02_bufferSize		hipsparseZcsric02_bufferSize	
cusparseZcsric02_bufferSizeExt		hipsparseZcsric02_bufferSizeExt	
cusparseZcsrilu02		hipsparseZcsrilu02	
cusparseZcsrilu02_analysis		hipsparseZcsrilu02_analysis	
cusparseZcsrilu02_bufferSize		hipsparseZcsrilu02_bufferSize	
cusparseZcsrilu02_bufferSizeExt		hipsparseZcsrilu02_bufferSizeExt	
cusparseZcsrilu02_numericBoost		hipsparseZcsrilu02_numericBoost	

1.8.9 CUSPARSE Format Conversion Reference

CUDA	Deprecated	HIP	Deprecated
cusparseCbsr2csr		hipsparseCbsr2csr	
cusparseCcsc2dense	√	hipsparseCcsc2dense	
cusparseCcsr2bsr		hipsparseCcsr2bsr	
cusparseCcsr2csc	√	hipsparseCcsr2csc	
cusparseCcsr2csr compress	-	hipsparseCcsr2csr compress	
cusparseCcsr2dense	√	hipsparseCcsr2dense	
cusparseCcsr2hyb	√	hipsparseCcsr2hyb	
cusparseCdense2csc	√	hipsparseCdense2csc	
cusparseCdense2csr		hipsparseCdense2csr	
•	√		
cusparseChyb2csr	✓	hipsparseChyb2csr	
cusparseCnnz		hipsparseCnnz	
cusparseCnnz compress		hipsparseCnnz compress	
cusparseCreateIdentityPermutation		hipsparseCreateIdentityPermutation	
cusparseDbsr2csr		hipsparseDbsr2csr	
cusparseDcsc2dense	✓	hipsparseDcsc2dense	
cusparseDcsr2bsr		hipsparseDcsr2bsr	
cusparseDcsr2csc	✓	hipsparseDcsr2csc	
cusparseDcsr2csr_compress		hipsparseDcsr2csr_compress	
cusparseDcsr2dense	✓	hipsparseDcsr2dense	
cusparseDcsr2hyb	✓	hipsparseDcsr2hyb	
cusparseDdense2csc	✓	hipsparseDdense2csc	
cusparseDdense2csr	√	hipsparseDdense2csr	
cusparseDhyb2csr	✓	hipsparseDhyb2csr	
cusparseDnnz		hipsparseDnnz	
cusparseDnnz compress		hipsparseDnnz compress	
cusparseDpruneCsr2csr		hipsparseDpruneCsr2csr	
cusparseDpruneCsr2csrByPercentage		hipsparseDpruneCsr2csrByPercentage	
cusparseDpruneCsr2csrByPercentage_bu		hipsparseDpruneCsr2csrByPercentage_b	
fferSizeExt		ufferSizeExt	
cusparseDpruneCsr2csrNnz		hipsparseDpruneCsr2csrNnz	
cusparseDpruneCsr2csrNnzByPercentage		hipsparseDpruneCsr2csrNnzByPercentag	
		e	
cusparseDpruneCsr2csr_bufferSizeExt		hipsparseDpruneCsr2csr_bufferSizeExt	
cusparseDpruneDense2csr		hipsparseDpruneDense2csr	
cusparseDpruneDense2csrByPercentage		hipsparseDpruneDense2csrByPercentage	
cusparseDpruneDense2csrByPercentage_ bufferSizeExt		hipsparseDpruneDense2csrByPercentage bufferSizeExt	
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cusparseDpruneDense2csrNnzPyPercent		hipsparseDpruneDense2csrNnz hipsparseDpruneDense2csrNnzByPercen	
cusparseDpruneDense2csrNnzByPercent age		tage	
cusparseDpruneDense2csr_bufferSizeExt		hipsparseDpruneDense2csr_bufferSizeEx	
cusparseSbsr2csr		hipsparseSbsr2csr	
cusparseScsc2dense	√	hipsparseScsc2dense	
cusparseScsr2bsr	V	hipsparseScsr2bsr	
cusparseScsr2csc	/	hipsparseScsr2csc	
	✓		
cusparseScsr2dense	,	hipsparseScsr2dones	
cusparseScsr2dense	✓	hipsparseScsr2dense	

CUDA	Deprecated	HIP	Deprecated
cusparseScsr2hyb	✓	hipsparseScsr2hyb	
cusparseSdense2csc	✓	hipsparseSdense2csc	
cusparseSdense2csr	√	hipsparseSdense2csr	
cusparseShyb2csr	√	hipsparseShyb2csr	
cusparseSnnz	-	hipsparseSnnz	
cusparseSnnz compress		hipsparseSnnz_compress	
cusparseSpruneCsr2csr		hipsparseSpruneCsr2csr	
cusparseSpruneCsr2csrByPercentage		hipsparseSpruneCsr2csrByPercentage	
cusparseSpruneCsr2csrByPercentage_buf		hipsparseSpruneCsr2csrByPercentage_bu	
ferSizeExt		fferSizeExt	
cusparseSpruneCsr2csrNnz		hipsparseSpruneCsr2csrNnz	
cusparseSpruneCsr2csrNnzByPercentage		hipsparseSpruneCsr2csrNnzByPercentag e	
cusparseSpruneCsr2csr bufferSizeExt		hipsparseSpruneCsr2csr bufferSizeExt	
cusparseSpruneDense2csr		hipsparseSpruneDense2csr	
cusparseSpruneDense2csrByPercentage		hipsparseSpruneDense2csrByPercentage	
cusparseSpruneDense2csrByPercentage_ bufferSizeExt		hipsparseSpruneDense2csrByPercentage bufferSizeExt	
cusparseSpruneDense2csrNnz		hipsparseSpruneDense2csrNnz	
cusparseSpruneDense2csrNnzByPercenta		hipsparseSpruneDense2csrNnzByPercent	
ge cusparseSpruneDense2csr bufferSizeExt		age hipsparseSpruneDense2csr bufferSizeEx	
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cusparseXcoo2csr		hipsparseXcoo2csr	
cusparseXcoosortByColumn		hipsparseXcoosortByColumn	
cusparseXcoosortByRow		hipsparseXcoosortByRow	
cusparseXcoosort_bufferSizeExt		hipsparseXcoosort_bufferSizeExt	
cusparseXcscsort		hipsparseXcscsort	
cusparseXcscsort_bufferSizeExt		hipsparseXcscsort_bufferSizeExt	
cusparseXcsr2bsrNnz		hipsparseXcsr2bsrNnz hipsparseXcsr2coo	
cusparseXcsr2coo cusparseXcsrsort		hipsparseXcsrsort	
cusparseXcsrsort bufferSizeExt		hipsparseXcsrsort bufferSizeExt	
cusparseZbsr2csr		hipsparseZbsr2csr	
cusparseZesc2dense	√	hipsparseZcsc2dense	
cusparseZcsr2bsr	V	hipsparseZcsr2bsr	
cusparseZcsr2csc	√	hipsparseZcsr2csc	
cusparseZcsr2csr compress	V	hipsparseZesr2csr compress	
cusparseZcsr2dense	√	hipsparseZcsr2cer_compress	
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cusparseZcsr2hyb	√	hipsparseZcsr2hyb	
cusparseZdense2csc	√	hipsparseZdense2csc	
cusparseZdense2csr	✓	hipsparseZdense2csr	
cusparseZhyb2csr	✓	hipsparseZhyb2csr	
cusparseZnnz		hipsparseZnnz	
cusparseZnnz_compress		hipsparseZnnz_compress	

1.8.10 Unsupported APIs

API	Unsupported	Deprecated
CUSPARSE Reorderings Reference	✓	
CUSPARSE Generic API Reference	✓	

1.9 CUDNN API Supported by HIP

1.9.1 CUDNN Data Types

CUDA	Deprecated	HIP	Deprecated
CUDNN 16BIT INDICES		HIPDNN 16BIT INDICES	
CUDNN 32BIT INDICES		HIPDNN 32BIT INDICES	
CUDNN 64BIT INDICES		HIPDNN 64BIT INDICES	
CUDNN 8BIT INDICES		HIPDNN 8BIT INDICES	
CUDNN ACTIVATION CLIPPED RE		HIPDNN ACTIVATION CLIPPED R	
LU		ELU	
CUDNN ACTIVATION ELU		HIPDNN ACTIVATION ELU	
CUDNN ACTIVATION IDENTITY		HIPDNN ACTIVATION PATHTRU	
CUDNN ACTIVATION RELU		HIPDNN ACTIVATION RELU	
CUDNN ACTIVATION SIGMOID		HIPDNN ACTIVATION SIGMOID	
CUDNN ACTIVATION TANH		HIPDNN ACTIVATION TANH	
CUDNN BATCHNORM PER ACTIV		HIPDNN BATCHNORM PER ACTIV	
ATION		ATION	
CUDNN BATCHNORM SPATIAL		HIPDNN BATCHNORM SPATIAL	
CUDNN BATCHNORM SPATIAL PE		HIPDNN BATCHNORM SPATIAL P	
RSISTENT		ERSISTENT	
CUDNN_BIDIRECTIONAL		HIPDNN_BIDIRECTIONAL	
CUDNN BN MIN EPSILON		HIPDNN BN MIN EPSILON	
CUDNN CONVOLUTION		HIPDNN CONVOLUTION	
CUDNN CONVOLUTION BWD DAT		HIPDNN CONVOLUTION BWD DA	
A_ALGO_0		TA_ALGO_0	
CUDNN_CONVOLUTION_BWD_DAT		HIPDNN CONVOLUTION BWD DA	
A_ALGO_1		TA_ALGO_1	
CUDNN_CONVOLUTION_BWD_DAT		HIPDNN_CONVOLUTION_BWD_DA	
A_ALGO_COUNT		TA_ALGO_TRANSPOSE_GEMM	
CUDNN_CONVOLUTION_BWD_DAT		HIPDNN_CONVOLUTION_BWD_DA	
A_ALGO_FFT		TA_ALGO_FFT	
CUDNN_CONVOLUTION_BWD_DAT		HIPDNN_CONVOLUTION_BWD_DA	
A_ALGO_FFT_TILING		TA_ALGO_FFT_TILING	
CUDNN_CONVOLUTION_BWD_DAT		HIPDNN_CONVOLUTION_BWD_DA	
A_ALGO_WINOGRAD		TA_ALGO_WINOGRAD	
CUDNN_CONVOLUTION_BWD_DAT		HIPDNN_CONVOLUTION_BWD_DA	
A_ALGO_WINOGRAD_NONFUSED		TA_ALGO_WINOGRAD_NONFUSED	
CUDNN_CONVOLUTION_BWD_DAT	✓	HIPDNN_CONVOLUTION_BWD_DA	
A_NO_WORKSPACE		TA_NO_WORKSPACE	
CUDNN_CONVOLUTION_BWD_DAT	✓	HIPDNN_CONVOLUTION_BWD_DA	
A_PREFER_FASTEST		TA_PREFER_FASTEST	
CUDNN_CONVOLUTION_BWD_DAT	✓	HIPDNN_CONVOLUTION_BWD_DA	
A_SPECIFY_WORKSPACE_LIMIT		TA_SPECIFY_WORKSPACE_LIMIT	

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CUDNN_DATA_DOUBLE HIPDNN_DATA_DOUBLE	CIFY_WORKSPACE_LIMIT		CIFY_WORKSPACE_LIMIT	
	CUDNN_CROSS_CORRELATION		HIPDNN_CROSS_CORRELATION	
CUDNN DATA FLOAT HIPDNN DATA FLOAT	CUDNN_DATA_DOUBLE		HIPDNN_DATA_DOUBLE	
	CUDNN_DATA_FLOAT		HIPDNN_DATA_FLOAT	
CUDNN_DATA_HALF HIPDNN_DATA_HALF	CUDNN_DATA_HALF		HIPDNN_DATA_HALF	
CUDNN_DATA_INT32 HIPDNN_DATA_INT32				
CUDNN DATA INT8 HIPDNN DATA INT8				

CUDA	Deprecated	HIP	Deprecated
CUDNN DATA INT8x4	1	HIPDNN DATA INT8x4	
CUDNN DEFAULT MATH		HIPDNN DEFAULT MATH	
CUDNN GRU		HIPDNN GRU	
CUDNN LINEAR INPUT		HIPDNN LINEAR INPUT	
CUDNN LRN CROSS CHANNEL DI		HIPDNN LRN CROSS CHANNEL	
M1 – – – – –			
CUDNN LSTM		HIPDNN LSTM	
CUDNN NOT PROPAGATE NAN		HIPDNN NOT PROPAGATE NAN	
CUDNN OP TENSOR ADD		HIPDNN OP TENSOR ADD	
CUDNN OP TENSOR MAX		HIPDNN OP TENSOR MAX	
CUDNN OP TENSOR MIN		HIPDNN OP TENSOR MIN	
CUDNN OP TENSOR MUL		HIPDNN OP TENSOR MUL	
CUDNN OP TENSOR SQRT		HIPDNN OP TENSOR SQRT	
CUDNN POOLING AVERAGE COU		HIPDNN POOLING AVERAGE COU	
NT_EXCLUDE_PADDING		NT_EXCLUDE_PADDING	
CUDNN_POOLING_AVERAGE_COU		HIPDNN_POOLING_AVERAGE_COU	
NT_INCLUDE_PADDING		NT_INCLUDE_PADDING	
CUDNN_POOLING_MAX		HIPDNN_POOLING_MAX	
CUDNN_POOLING_MAX_DETERMI		HIPDNN_POOLING_MAX_DETERMI	
NISTIC		NISTIC	
CUDNN_PROPAGATE_NAN		HIPDNN PROPAGATE NAN	
CUDNN_REDUCE_TENSOR_ADD		HIPDNN_REDUCE_TENSOR_ADD	
CUDNN REDUCE TENSOR AMAX		HIPDNN REDUCE TENSOR AMAX	
CUDNN_REDUCE_TENSOR_AVG		HIPDNN_REDUCE_TENSOR_AVG	
CUDNN_REDUCE_TENSOR_FLATTE		HIPDNN_REDUCE_TENSOR_FLATT	
NED_INDICES		ENED_INDICES	
CUDNN_REDUCE_TENSOR_MAX		HIPDNN_REDUCE_TENSOR_MAX	
CUDNN_REDUCE_TENSOR_MIN		HIPDNN_REDUCE_TENSOR_MIN	
CUDNN_REDUCE_TENSOR_MUL		HIPDNN_REDUCE_TENSOR_MUL	
CUDNN_REDUCE_TENSOR_MUL_N		HIPDNN_REDUCE_TENSOR_MUL_N	
O_ZEROS		O_ZEROS	
CUDNN_REDUCE_TENSOR_NORM1		HIPDNN_REDUCE_TENSOR_NORM1	
CUDNN_REDUCE_TENSOR_NORM2		HIPDNN_REDUCE_TENSOR_NORM2	
CUDNN_REDUCE_TENSOR_NO_IND		HIPDNN_REDUCE_TENSOR_NO_IN	
ICES		DICES	
CUDNN_RNN_ALGO_PERSIST_DYN		HIPDNN_RNN_ALGO_PERSIST_DYN	
AMIC		AMIC	
CUDNN_RNN_ALGO_PERSIST_STA		HIPDNN_RNN_ALGO_PERSIST_STA	
TIC		TIC	
CUDNN_RNN_ALGO_PERSIST_STA		HIPDNN_RNN_ALGO_PERSIST_STA	
TIC SMALL H		TIC SMALL H	
CUDNN RNN ALGO STANDARD		HIPDNN RNN ALGO STANDARD	
CUDNN RNN DOUBLE BIAS		HIPDNN RNN WITH BIAS	
CUDNN RNN NO BIAS		HIPDNN RNN NO BIAS	
CUDNN RNN RELU		HIPDNN RNN RELU	
CUDNN RNN SINGLE INP BIAS		HIPDNN_RNN_WITH_BIAS	
CUDNN RNN SINGLE REC BIAS		HIPDNN RNN WITH BIAS	
CUDNN_RNN_TANH		HIPDNN_RNN_TANH	
CUDNN SKIP INPUT		HIPDNN SKIP INPUT	
CUDNN_SOFTMAX_ACCURATE		HIPDNN_SOFTMAX_ACCURATE	
CUDNN SOFTMAX FAST		HIPDNN SOFTMAX FAST	
CUDNN_SOFTMAX_LOG		HIPDNN_SOFTMAX_LOG	

CUDA	Deprecated	HIP	Deprecated
CUDNN_SOFTMAX_MODE_CHANN	i i	HIPDNN SOFTMAX MODE CHANN	·
EL		EL	
CUDNN_SOFTMAX_MODE_INSTAN		HIPDNN_SOFTMAX_MODE_INSTAN	
CE		CE	
CUDNN_STATUS_ALLOC_FAILED		HIPDNN_STATUS_ALLOC_FAILED	
CUDNN_STATUS_ARCH_MISMATC		HIPDNN_STATUS_ARCH_MISMATC	
Н		Н	
CUDNN_STATUS_BAD_PARAM		HIPDNN_STATUS_BAD_PARAM	
CUDNN_STATUS_EXECUTION_FAI		HIPDNN_STATUS_EXECUTION_FAI	
LED		LED	
CUDNN_STATUS_INTERNAL_ERRO		HIPDNN_STATUS_INTERNAL_ERRO	
R		R	
CUDNN STATUS INVALID VALUE		HIPDNN STATUS INVALID VALUE	
CUDNN STATUS LICENSE ERROR		HIPDNN STATUS LICENSE ERROR	
CUDNN_STATUS_MAPPING_ERROR		HIPDNN_STATUS_MAPPING_ERRO R	
CUDNN STATUS NOT INITIALIZE		HIPDNN STATUS NOT INITIALIZE	
D CODNN_STATOS_NOT_INTTIALIZE		D	
CUDNN STATUS NOT SUPPORTED		HIPDNN_STATUS_NOT_SUPPORTE	
CODNI_STATOS_NOT_SOTTORTED		D	
CUDNN STATUS RUNTIME PRERE		HIPDNN STATUS RUNTIME PRERE	
QUISITE MISSING		QUISITE MISSING	
CUDNN STATUS SUCCESS		HIPDNN STATUS SUCCESS	
CUDNN TENSOR NCHW		HIPDNN TENSOR NCHW	
CUDNN TENSOR NCHW VECT C		HIPDNN TENSOR NCHW VECT C	
CUDNN TENSOR NHWC		HIPDNN TENSOR NHWC	
CUDNN TENSOR OP MATH		HIPDNN TENSOR OP MATH	
CUDNN UNIDIRECTIONAL		HIPDNN UNIDIRECTIONAL	
CUDNN_VERSION		HIPDNN_VERSION	
cudnnActivationDescriptor_t		hipdnnActivationDescriptor_t	
cudnnActivationMode_t		hipdnnActivationMode_t	
cudnnBatchNormMode_t		hipdnnBatchNormMode_t	
cudnnConvolutionBwdDataAlgoPerf_t		hipdnnConvolutionBwdDataAlgoPerf_t	
cudnnConvolutionBwdDataAlgo_t		hipdnnConvolutionBwdDataAlgo_t	
cudnnConvolutionBwdDataPreference_t	✓	hipdnnConvolutionBwdDataPreference_t	
cudnnConvolutionBwdFilterAlgoPerf_t		hipdnnConvolutionBwdFilterAlgoPerf_t	
cudnnConvolutionBwdFilterAlgo_t		hipdnnConvolutionBwdFilterAlgo_t	
cudnnConvolutionBwdFilterPreference_t	✓	hipdnnConvolutionBwdFilterPreference_	
		t	
cudnnConvolutionDescriptor_t		hipdnnConvolutionDescriptor_t	
cudnnConvolutionFwdAlgoPerf_t		hipdnnConvolutionFwdAlgoPerf_t	
cudnnConvolutionFwdAlgo_t		hipdnnConvolutionFwdAlgo_t	
cudnnConvolutionFwdPreference_t	✓	hipdnnConvolutionFwdPreference_t	
cudnnConvolutionMode_t		hipdnnConvolutionMode_t	
cudnnDataType t		hipdnnDataType t	
cudnnDirectionMode t		hipdnnDirectionMode_t	
cudnnDropoutDescriptor_t		hipdnnDropoutDescriptor_t	
cudnnFilterDescriptor_t		hipdnnFilterDescriptor_t	
cudnnHandle_t		hipdnnHandle_t	
cudnnIndicesType_t		hipdnnIndicesType_t	
cudnnLRNDescriptor_t		hipdnnLRNDescriptor_t	
cudnnLRNMode_t		hipdnnLRNMode_t	

CUDA	Deprecated	HIP	Deprecated
cudnnMathType_t		hipdnnMathType_t	
cudnnNanPropagation_t		hipdnnNanPropagation_t	
cudnnOpTensorDescriptor_t		hipdnnOpTensorDescriptor_t	
cudnnOpTensorOp_t		hipdnnOpTensorOp_t	
cudnnPersistentRNNPlan_t		hipdnnPersistentRNNPlan_t	
cudnnPoolingDescriptor_t		hipdnnPoolingDescriptor_t	
cudnnPoolingMode_t		hipdnnPoolingMode_t	
cudnnRNNAlgo_t		hipdnnRNNAlgo_t	
cudnnRNNBiasMode_t		hipdnnRNNBiasMode_t	
cudnnRNNDescriptor_t		hipdnnRNNDescriptor_t	
cudnnRNNInputMode_t		hipdnnRNNInputMode_t	
cudnnRNNMode_t		hipdnnRNNMode_t	
cudnnReduceTensorDescriptor_t		hipdnnReduceTensorDescriptor_t	
cudnnReduceTensorIndices_t		hipdnnReduceTensorIndices_t	
cudnnReduceTensorOp_t		hipdnnReduceTensorOp_t	
cudnnSoftmaxAlgorithm_t		hipdnnSoftmaxAlgorithm_t	
cudnnSoftmaxMode_t		hipdnnSoftmaxMode_t	
cudnnStatus_t		hipdnnStatus_t	
cudnnTensorDescriptor_t		hipdnnTensorDescriptor_t	
cudnnTensorFormat_t		hipdnnTensorFormat_t	

1.9.2 CUDNN Functions

CUDA	Deprecated	HIP	Deprecated
cudnnActivationBackward		hipdnnActivationBackward	
cudnnActivationForward		hipdnnActivationForward	
cudnnAddTensor		hipdnnAddTensor	
cudnnBatchNormalizationBackward		hipdnnBatchNormalizationBackward	
cudnnBatchNormalizationForwardInfere		hipdnnBatchNormalizationForwardInfere	
nce		nce	
cudnnBatchNormalizationForwardTraini		hipdnnBatchNormalizationForwardTraini	
ng		ng	
cudnnConvolutionBackwardBias		hipdnnConvolutionBackwardBias	
cudnnConvolutionBackwardData		hipdnnConvolutionBackwardData	
cudnnConvolutionBackwardFilter		hipdnnConvolutionBackwardFilter	
cudnnConvolutionForward		hipdnnConvolutionForward	
cudnnCreate		hipdnnCreate	
cudnnCreateActivationDescriptor		hipdnnCreateActivationDescriptor	
cudnnCreateConvolutionDescriptor		hipdnnCreateConvolutionDescriptor	
cudnnCreateDropoutDescriptor		hipdnnCreateDropoutDescriptor	
cudnnCreateFilterDescriptor		hipdnnCreateFilterDescriptor	
cudnnCreateLRNDescriptor		hipdnnCreateLRNDescriptor	
cudnnCreateOpTensorDescriptor		hipdnnCreateOpTensorDescriptor	
cudnnCreatePersistentRNNPlan	\checkmark	hipdnnCreatePersistentRNNPlan	
cudnnCreatePoolingDescriptor		hipdnnCreatePoolingDescriptor	
cudnnCreateRNNDescriptor		hipdnnCreateRNNDescriptor	
cudnnCreateReduceTensorDescriptor		hipdnnCreateReduceTensorDescriptor	
cudnnCreateTensorDescriptor		hipdnnCreateTensorDescriptor	
cudnnDeriveBNTensorDescriptor		hipdnnDeriveBNTensorDescriptor	
cudnnDestroy		hipdnnDestroy	
cudnnDestroyActivationDescriptor		hipdnnDestroyActivationDescriptor	
cudnnDestroyConvolutionDescriptor		hipdnnDestroyConvolutionDescriptor	

CUDA	Deprecated	HIP	Deprecated
cudnnDestroyDropoutDescriptor		hipdnnDestroyDropoutDescriptor	
cudnnDestroyFilterDescriptor		hipdnnDestroyFilterDescriptor	
cudnnDestroyLRNDescriptor		hipdnnDestroyLRNDescriptor	
cudnnDestroyOpTensorDescriptor		hipdnnDestroyOpTensorDescriptor	
cudnnDestroyPersistentRNNPlan	√	hipdnnDestroyPersistentRNNPlan	
cudnnDestroyPoolingDescriptor		hipdnnDestroyPoolingDescriptor	
cudnnDestroyRNNDescriptor		hipdnnDestroyRNNDescriptor	
cudnnDestroyReduceTensorDescriptor		hipdnnDestroyReduceTensorDescriptor	
cudnnDestroyTensorDescriptor		hipdnnDestroyTensorDescriptor	
cudnnDropoutGetStatesSize		hipdnnDropoutGetStatesSize	
cudnnFindConvolutionBackwardDataAlg		hipdnnFindConvolutionBackwardDataAl	
orithm		gorithm	
cudnnFindConvolutionBackwardDataAlg		hipdnnFindConvolutionBackwardDataAl	
orithmEx		gorithmEx	
cudnnFindConvolutionBackwardFilterAl		hipdnnFindConvolutionBackwardFilterA	
gorithm		lgorithm	
cudnnFindConvolutionBackwardFilterAl		hipdnnFindConvolutionBackwardFilterA	
gorithmEx		lgorithmEx	
cudnnFindConvolutionForwardAlgorith		hipdnnFindConvolutionForwardAlgorith	
m		m	
cudnnFindConvolutionForwardAlgorith		hipdnnFindConvolutionForwardAlgorith	
mEx		mEx	
cudnnGetActivationDescriptor		hipdnnGetActivationDescriptor	
cudnnGetConvolution2dDescriptor		hipdnnGetConvolution2dDescriptor	
cudnnGetConvolution2dForwardOutput Dim		hipdnnGetConvolution2dForwardOutput Dim	
cudnnGetConvolutionBackwardDataAlg	√	hipdnnGetConvolutionBackwardDataAlg	
orithm		orithm	
cudnnGetConvolutionBackwardDataWor		hipdnnGetConvolutionBackwardDataWo	
kspaceSize		rkspaceSize	
cudnnGetConvolutionBackwardFilterAlg	✓	hipdnnGetConvolutionBackwardFilterAl	
orithm		gorithm	
cudnnGetConvolutionBackwardFilterWo		hipdnnGetConvolutionBackwardFilterW	
rkspaceSize		orkspaceSize	
cudnnGetConvolutionForwardAlgorithm	✓	hipdnnGetConvolutionForwardAlgorith	
cudnnGetConvolutionForwardWorkspac		m hipdnnGetConvolutionForwardWorkspac	
eSize		eSize	
cudnnGetErrorString		hipdnnGetErrorString	
cudnnGetEriorString cudnnGetFilter4dDescriptor		hipdnnGetErforstring hipdnnGetFilter4dDescriptor	
cudnnGetFilterNdDescriptor		hipdnnGetFilterNdDescriptor	
cudnnGetLRNDescriptor		hipdnnGetLRNDescriptor	
cudnnGetOpTensorDescriptor		hipdnnGetOpTensorDescriptor	
cudnnGetPooling2dDescriptor		hipdnnGetPooling2dDescriptor	
cudnnGetPooling2dForwardOutputDim		hipdnnGetPooling2dForwardOutputDim	
cudnnGetRNNDescriptor	√	hipdnnGetRNNDescriptor	
cudnnGetRNNLinLayerBiasParams	√	hipdnnGetRNNLinLayerBiasParams	
		-	
cudnnGetRNNLinLayerMatrixParams	√	hipdnnGetRNNLinLayerMatrixParams	
cudnnGetRNNParamsSize	✓	hipdnnGetRNNParamsSize	
cudnnGetRNNTrainingReserveSize	✓	hipdnnGetRNNTrainingReserveSize	
cudnnGetRNNWorkspaceSize	✓	hipdnnGetRNNWorkspaceSize	

CUDA	Deprecated	HIP	Deprecated
cudnnGetReduceTensorDescriptor		hipdnnGetReduceTensorDescriptor	
cudnnGetReductionWorkspaceSize		hipdnnGetReductionWorkspaceSize	
cudnnGetStream		hipdnnGetStream	
cudnnGetTensor4dDescriptor		hipdnnGetTensor4dDescriptor	
cudnnGetTensorNdDescriptor		hipdnnGetTensorNdDescriptor	
cudnnGetVersion		hipdnnGetVersion	
cudnnLRNCrossChannelBackward		hipdnnLRNCrossChannelBackward	
cudnnLRNCrossChannelForward		hipdnnLRNCrossChannelForward	
cudnnOpTensor		hipdnnOpTensor	
cudnnPoolingBackward		hipdnnPoolingBackward	
cudnnPoolingForward		hipdnnPoolingForward	
cudnnRNNBackwardData	√	hipdnnRNNBackwardData	
cudnnRNNBackwardWeights	√	hipdnnRNNBackwardWeights	
cudnnRNNForwardInference	✓	hipdnnRNNForwardInference	
cudnnRNNForwardTraining	✓	hipdnnRNNForwardTraining	
cudnnReduceTensor		hipdnnReduceTensor	
cudnnScaleTensor		hipdnnScaleTensor	
cudnnSetActivationDescriptor		hipdnnSetActivationDescriptor	
cudnnSetConvolution2dDescriptor		hipdnnSetConvolution2dDescriptor	
cudnnSetConvolutionGroupCount		hipdnnSetConvolutionGroupCount	
cudnnSetConvolutionMathType		hipdnnSetConvolutionMathType	
cudnnSetConvolutionNdDescriptor		hipdnnSetConvolutionNdDescriptor	
cudnnSetDropoutDescriptor		hipdnnSetDropoutDescriptor	
cudnnSetFilter4dDescriptor		hipdnnSetFilter4dDescriptor	
cudnnSetFilterNdDescriptor		hipdnnSetFilterNdDescriptor	
cudnnSetLRNDescriptor		hipdnnSetLRNDescriptor	
cudnnSetOpTensorDescriptor		hipdnnSetOpTensorDescriptor	
cudnnSetPersistentRNNPlan	√	hipdnnSetPersistentRNNPlan	
cudnnSetPooling2dDescriptor		hipdnnSetPooling2dDescriptor	
cudnnSetPoolingNdDescriptor		hipdnnSetPoolingNdDescriptor	
cudnnSetRNNDescriptor	√	hipdnnSetRNNDescriptor	
cudnnSetRNNDescriptor_v5	√	hipdnnSetRNNDescriptor_v5	
cudnnSetRNNDescriptor_v6	✓	hipdnnSetRNNDescriptor_v6	
cudnnSetReduceTensorDescriptor		hipdnnSetReduceTensorDescriptor	
cudnnSetStream		hipdnnSetStream	
cudnnSetTensor		hipdnnSetTensor	
cudnnSetTensor4dDescriptor		hipdnnSetTensor4dDescriptor	
cudnnSetTensor4dDescriptorEx		hipdnnSetTensor4dDescriptorEx	
cudnnSetTensorNdDescriptor		hipdnnSetTensorNdDescriptor	
cudnnSoftmaxBackward		hipdnnSoftmaxBackward	
cudnnSoftmaxForward		hipdnnSoftmaxForward	

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1.10 Stream Memory Operations

CUDA	Deprecated	HIP	Deprecated
cuStreamBatchMemOp			
cuStreamWaitValue32		hipStreamWaitValue32	
cuStreamWaitValue64		hipStreamWaitValue64	
cuStreamWriteValue32		hipStreamWriteValue32	
cuStreamWriteValue64		hipStreamWriteValue64	