



# NVIDIA cuDNN

Support Matrix | NVIDIA Docs

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# Chapter 1. GPU, CUDA Toolkit, and CUDA Driver Requirements

The following sections highlight the compatibility of NVIDIA® cuDNN versions with the various supported NVIDIA CUDA® Toolkit, CUDA driver, and NVIDIA hardware versions.

Table 1. GPU, CUDA Toolkit, and CUDA Driver Requirements

cuDNN Package <sup>1</sup>	CUDA Toolkit Version	Supports static linking? <sup>2</sup>	NVIDIA Driver Version		CUDA Compute Capability	Supported NVIDIA Hardware
			Linux	Windows		
cuDNN 8.9.5 for CUDA 12.x	12.2	Yes	>=525.60.13	>=527.41	9.0 <sup>3</sup>	NVIDIA Hopper™ <sup>5</sup>
	12.1	No			8.9 <sup>4</sup>	
	12.0				8.6	
cuDNN 8.9.5 for CUDA 11.x	11.8	Yes	>=450.80.02	>=452.39	8.0	NVIDIA Ada Lovelace architecture <sup>6</sup>
	11.7	No			7.5	
	11.6				7.0	NVIDIA Ampere architecture
	11.5				6.1	
	11.4				6.0	
	11.3				5.0	NVIDIA Turing™
	11.2 <sup>7</sup>					NVIDIA Volta™
	11.1 <sup>8</sup>					
	11.0 <sup>9</sup>					

<sup>3</sup> Requires CUDA Toolkit >= 11.8.

<sup>4</sup> Requires CUDA Toolkit >= 11.8.

<sup>5</sup> Requires CUDA Toolkit >= 11.8.

<sup>6</sup> Requires CUDA Toolkit >= 11.8.

<sup>7</sup> Functionalities that perform runtime compilation such as the runtime fusion engines, and the persistent dynamic algorithm of RNN, requires NVRTC from CUDA Toolkit 11.2 update 1 or later.

<sup>8</sup> Functionalities that perform runtime compilation such as the runtime fusion engines, and the persistent dynamic algorithm of RNN, requires NVRTC from CUDA Toolkit 11.2 update 1 or later.

<sup>9</sup> Functionalities that perform runtime compilation such as the runtime fusion engines, and the persistent dynamic algorithm of RNN, requires NVRTC from CUDA Toolkit 11.2 update 1 or later.

cuDNN Package <sup>1</sup>	<a href="#">CUDA Toolkit Version</a>	Supports static linking? <sup>2</sup>	NVIDIA Driver Version		<a href="#">CUDA Compute Capability</a>	Supported NVIDIA Hardware
			Linux	Windows		
						NVIDIA Pascal™ NVIDIA Maxwell®



**Note:** For best performance, the recommended configuration is cuDNN 8.9.5 on H100 with CUDA 12.2, and cuDNN 8.9.5 on all other GPUs with CUDA 11.8, because this is the configuration that was used for tuning heuristics.

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# Chapter 2. CPU Architecture and OS Requirements

The following tables highlight the compatibility of cuDNN versions with the various supported OS versions.

For the requirements of previously released versions of cuDNN documentation, refer to the [NVIDIA cuDNN Archives](#).

## 2.1. Linux

Refer to the following table to view the list of supported Linux versions for cuDNN.

Table 2. Linux Versions for cuDNN

Architecture	OS Name	OS Version	Distro Information		
			Kernel	GCC	Glibc
x86_64	RHEL	9.x	5.14.0	8.5.0	2.34
		8.x	4.18.0	8.5.0	2.28
		7.x	3.10.0	4.8.5	2.19
	Rocky	8.6	4.18	8.5.0	2.28
	Ubuntu	22.04	5.15.0	11.2.0	2.35
		20.04	5.15.0	9.4.0	2.31
		18.04	4.15.0	8.2.0	2.27
Debian	11.4	5.10	10.2.1	2.31	
ppc64le	RHEL	8.x	4.18	8.5.0	2.28
AArch64 incorporates ARM® based CPU cores for Server Base System	RHEL	8.x	4.18	8.5.0	2.28
	Ubuntu	22.04	5.15.0	11.2.0	2.35
		20.04	5.13.0	9.3.0	2.31

Architecture	OS Name	OS Version	Distro Information		
			Kernel	GCC	Glibc
Architecture (SBSA).					

**Note:**

- ▶ For platforms that ship a compiler version older than GCC 6 by default, linking to static cuDNN using the default compiler is not supported.
- ▶ Ubuntu 18.04 is only supported in cuDNN for CUDA 11.x.

## 2.2. Windows

Windows 10 and Windows Server 2019 and 2016 are supported. Refer to the following table to view the list of supported Visual Studio versions for cuDNN.

Table 3. Visual Studio Versions Based on Your Version of CUDA

	CUDA 12.x - 11.8	CUDA 11.7 - 11.0
Visual Studio	2019	2017

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