



# NVIDIA cuDNN

Support Matrix | NVIDIA Docs

# Table of Contents

|   |   |
|---|---|
| Chapter 1. GPU, CUDA Toolkit, and CUDA Driver Requirements..... | 1 |
| Chapter 2. CPU Architecture and OS Requirements.....            | 3 |
| 2.1. Linux.....   | 3 |
| 2.2. Windows.....   | 4 |

# 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.

For the CUDA driver requirements for a given CUDA Toolkit version, refer to the [CUDA Compatibility documentation](#).

Table 1. Supported NVIDIA Hardware and CUDA Version

| cuDNN Package                          | Supported NVIDIA Hardware          | CUDA Toolkit Version | CUDA Compute Capability | Supports static linking? <sup>1</sup> |
|--|------------------------------------|----------------------|-------------------------|---------------------------------------|
| cuDNN 8.7.0 for CUDA 11.x <sup>2</sup> | ▶ NVIDIA Hopper™                   | <a href="#">11.8</a> | SM 3.5 and later        | Yes                                   |
|  |                                    | <a href="#">11.7</a> |                         |                                       |
|  | ▶ NVIDIA Ada Lovelace Architecture | <a href="#">11.6</a> |                         |                                       |
|  |                                    | <a href="#">11.5</a> |                         |                                       |
|  | ▶ NVIDIA Ampere Architecture       | <a href="#">11.4</a> |                         |                                       |
|  |                                    | <a href="#">11.3</a> |                         | No                                    |
|  | ▶ NVIDIA Turing™                   | <a href="#">11.2</a> |                         |                                       |
|  |                                    | <a href="#">11.1</a> |                         |                                       |
|  | ▶ NVIDIA Volta™                    | <a href="#">11.0</a> |                         |                                       |
|  | ▶ NVIDIA Pascal™                   |                      |                         |                                       |
|  | ▶ NVIDIA Maxwell®                  |                      |                         |                                       |
|  | ▶ NVIDIA Kepler™                   |                      |                         |                                       |

<sup>2</sup> The cuDNN build for CUDA 11.x is compatible with CUDA 11.x for all x, including future CUDA 11.x releases that ship after this cuDNN release.

| <b>cuDNN Package</b>      | <b>Supported NVIDIA Hardware</b>   | <b><u>CUDA Toolkit Version</u></b> | <b><u>CUDA Compute Capability</u></b> | <b>Supports static linking?<sup>1</sup></b> |
|---------------------------|--|------------------------------------|---------------------------------------|---|
| cuDNN 8.7.0 for CUDA 10.2 | <ul style="list-style-type: none"> <li>▶ NVIDIA Turing</li> <li>▶ NVIDIA Volta</li> <li>▶ Xavier™</li> <li>▶ NVIDIA Pascal</li> <li>▶ NVIDIA Maxwell</li> <li>▶ NVIDIA Kepler</li> </ul> | <a href="#"><u>10.2</u></a>        | SM 3.0 and later                      | Yes   |



Note: Note that for best performance, the recommended configuration is cuDNN 8.7.0 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    | 7.x        | 3.10.0             | 6.x    | 2.17  |
|  |         | 8.x        | 4.18               | 8.5.0  | 2.28  |
|  |         | 9.x        | 5.14.0             | 8.5.0  | 2.34  |
|  | 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      | 5.4.0              | 7.5.0  | 2.27  |
|  | Debian  | 11.4       | 5.10               | 10.2.1 | 2.31  |
| ppc64le  | RHEL    | 8.x        | 4.18               | 8.5.0  | 2.28  |
| AArch64<br>incorporates<br>ARM® based<br>CPU cores<br>for Server<br>Base System<br>Architecture<br>(SBSA). | 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 |
| AArch64      | Ubuntu  | 20.04      | 5.4.0              | 7.5.0 | 2.27  |

## 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 for Based on Your Version of CUDA

|               | CUDA 11.x | CUDA 10.2 |
|---------------|-----------|-----------|
| Visual Studio | 2017      | 2015      |

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