

cuDNN Support Matrix

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Chapter 1. Hardware Requirements

The following sections highlight the compatibility of cuDNN versions with the various supported CUDA, CUDA driver, and NVIDIA $^{\text{\tiny{M}}}$ hardware versions.

1.1. cuDNN 8.0.5

Supported NVIDIA hardware, CUDA, and CUDA driver versions for the cuDNN 8.0.44 and 8.0.5 releases.

Table 1. Supported NVIDIA hardware, CUDA, and CUDA driver

Supported NVIDIA Hardware	CUDA Version	CUDA Compute Capability	CUDA Driver Version
 NVIDIA Ampere GPU architecture Turing Volta Pascal Maxwell Kepler 	CUDA 11.1	SM 3.5 and later	r450, r455
 NVIDIA Ampere GPU architecture Turing Volta Pascal Maxwell Kepler 	CUDA 11.0	SM 3.5 and later	r450
TuringVoltaXavier	CUDA 10.2	SM 3.0 and later	r440

Supported NVIDIA Hardware	CUDA Version	CUDA Compute Capability	CUDA Driver Version
Pascal			
Maxwell			
► Kepler			
► Turing	CUDA 10.1 Update 2	SM 3.0 and later	r418.39
▶ Volta			
Pascal			
Maxwell			
► Kepler			

1.2. cuDNN 8.0.2 - 8.0.3

Supported NVIDIA hardware, CUDA, and CUDA driver versions for the α cuDNN version 8.0.2 and 8.0.3 releases.

Table 2. Supported NVIDIA hardware, CUDA, and CUDA driver

Supported NVIDIA Hardware	CUDA Version	CUDA Compute Capability	CUDA Driver Version
NVIDIA Ampere architecture-based A100/GA100 GPU	CUDA 11.0	SM 3.5 and later	r450
► Turing			
▶ Volta			
► Pascal			
Maxwell			
► Kepler			
► Turing	CUDA 10.2	SM 3.0 and later	r440
Volta			
Xavier			
▶ Pascal			
Maxwell			
► Kepler			
➤ Turing	CUDA 10.1 Update 2	SM 3.0 and later	r418.39
▶ Volta			

Supported NVIDIA Hardware	CUDA Version	CUDA Compute Capability	CUDA Driver Version
Pascal			
Maxwell			
► Kepler			

1.3. cuDNN 8.0.0 - 8.0.1 Preview

Supported NVIDIA hardware, CUDA, and CUDA driver versions for cuDNN versions 8.0.0 and 8.0.1 Preview releases.

Table 3. Supported NVIDIA hardware, CUDA, and CUDA driver

Supported NVIDIA Hardware	CUDA Version	CUDA Compute Capability	CUDA Driver Version
 NVIDIA Ampere architecture-based A100/GA100 GPU Turing Volta 	CUDA 11.0	SM 3.5 and later	r450
PascalMaxwellKepler			
 Turing Volta Xavier Pascal Maxwell Kepler 	CUDA 10.2	SM 3.0 and later	r440

1.4. cuDNN 7.6.4 - 7.6.5

Refer to the following table to view the list of supported NVIDIA hardware, CUDA, and CUDA driver versions for cuDNN versions 7.6.4 and v7.6.5.

Table 4. Supported NVIDIA hardware, CUDA, and CUDA driver versions for cuDNN versions 7.6.4 and 7.6.5

Supported NVIDIA Hardware (Compute Capability)	CUDA Version	CUDA Driver Version
 Turing (7.5) Volta (7.x) Xavier (7.2) Pascal (6.x) Maxwell (5.x) Kepler (3.x) 	CUDA 10.2	r440
 Turing (7.5) Volta (7.x) Xavier (7.2) Pascal (6.x) Maxwell (5.x) Kepler (3.x) 	CUDA 10.1.243	r418.39
 Turing (7.5) Volta (7.x) Xavier (7.2) Pascal (6.x) Maxwell (5.x) Kepler (3.x) 	CUDA 10.0.x	r410.48
 Volta (7.x) Xavier (7.2) Pascal (6.x) Maxwell (5.x) Kepler (3.x) 	CUDA 9.2.148	r396.26
 Volta (7.x) Xavier (7.2) Pascal (6.x) Maxwell (5.x) Kepler (3.x) 	CUDA 9.1.85 (Not Supported) CUDA 9.0.176	r384.111

Supported NVIDIA Hardware (Compute Capability)	CUDA Version	CUDA Driver Version
	CUDA 8.0.61 (Not Supported)	

1.5. cuDNN 7.6.3

Refer to the following table to view the list of supported NVIDIA hardware, CUDA, and CUDA driver versions for cuDNN version 7.6.3.

Table 5. Supported NVIDIA hardware, CUDA, and CUDA driver versions for cuDNN version 7.6.3

Supported NVIDIA Hardware (Compute Capability)	CUDA Version	CUDA Driver Version
 Turing (7.5) Volta (7.x) Xavier (7.2) Pascal (6.x) Maxwell (5.x) Kepler (3.x) 	CUDA 10.1.243	r418.39
 Turing (7.5) Volta (7.x) Xavier (7.2) Pascal (6.x) Maxwell (5.x) Kepler (3.x) 	CUDA 10.0.x	r410.48
 Volta (7.x) Xavier (7.2) Pascal (6.x) Maxwell (5.x) Kepler (3.x) 	CUDA 9.2.148	r396.26
 Volta (7.x) Xavier (7.2) Pascal (6.x) Maxwell (5.x) 	CUDA 9.1.85 (Not Supported) CUDA 9.0.176	r384.111

Supported NVIDIA Hardware (Compute Capability)	CUDA Version	CUDA Driver Version
► Kepler (3.x)		
	CUDA 8.0.61 (Not Supported)	

1.6. cuDNN 7.5.1 - 7.6.2

Refer to the following table to view the list of supported NVIDIA hardware, CUDA, and CUDA driver versions for cuDNN versions 7.5.1 - 7.6.2.

Table 6. Supported NVIDIA hardware, CUDA, and CUDA driver versions for cuDNN versions 7.5.1 - 7.6.2

Supported NVIDIA Hardware (Compute Capability)	CUDA Version	CUDA Driver Version
► Turing (7.5)	CUDA 10.1.105	r418.39
▶ Volta (7.x)		
► Xavier (7.2)		
► Pascal (6.x)		
► Maxwell (5.x)		
► Kepler (3.x)		
► Turing (7.5)	CUDA 10.0.x	r410.48
▶ Volta (7.x)		
► Xavier (7.2)		
► Pascal (6.x)		
► Maxwell (5.x)		
► Kepler (3.x)		
▶ Volta (7.x)	CUDA 9.2.88	r396.26
► Xavier (7.2)		
► Pascal (6.x)		
► Maxwell (5.x)		
► Kepler (3.x)		
	CUDA 9.1.85 (Not Supported)	
▶ Volta (7.x)	CUDA 9.0.176	r384.111
► Xavier (7.2)		

Supported NVIDIA Hardware (Compute Capability)	CUDA Version	CUDA Driver Version
► Pascal (6.x)		
► Maxwell (5.x)		
► Kepler (3.x)		
	CUDA 8.0.61 (Not Supported)	

1.7. cuDNN 7.3.1 - 7.5.0

Refer to the following table to view the list of supported NVIDIA hardware, CUDA, and CUDA driver versions for cuDNN versions 7.3.1 - 7.5.0.

Table 7. Supported NVIDIA hardware, CUDA, and CUDA driver versions for cuDNN versions 7.3.1 - 7.5.0

Supported NVIDIA Hardware (Compute Capability)	CUDA Version	CUDA Driver Version
► Turing (7.5)	CUDA 10.0.x	r410.48
► Volta (7.x)		
► Xavier (7.2)		
► Pascal (6.x)		
► Maxwell (5.x)		
► Kepler (3.x)		
▶ Volta (7.x)	CUDA 9.2.88	r396.26
► Xavier (7.2)		
► Pascal (6.x)		
► Maxwell (5.x)		
► Kepler (3.x)		
	CUDA 9.1.85 (Not Supported)	
▶ Volta (7.x)	CUDA 9.0.176	r384.111
▶ Xavier (7.2)		
► Pascal (6.x)		
► Maxwell (5.x)		
► Kepler (3.x)		
	CUDA 8.0.61 (Not Supported)	

1.8. cuDNN 7.1.4 - 7.2.1

Refer to the following table to view the list of supported NVIDIA hardware, CUDA, and CUDA driver versions for cuDNN versions 7.1.4 - 7.2.1.

Table 8. Supported NVIDIA hardware, CUDA, and CUDA driver versions for cuDNN versions 7.1.4 - 7.2.1

Supported NVIDIA Hardware (Compute Capability)	CUDA Version	CUDA Driver Version
	CUDA 10.0.x (Not Supported)	
 Volta (7.x) Xavier (7.2) Pascal (6.x) Maxwell (5.x) Kepler (3.x) 	CUDA 9.2.88	r396.26
	CUDA 9.1.85 (Not Supported)	
 Volta (7.x) Xavier (7.2) Pascal (6.x) Maxwell (5.x) Kepler (3.x) 	CUDA 9.0.176	r384.111
 Xavier (7.2) Pascal (6.x) Maxwell (5.x) Kepler (3.x) 	CUDA 8.0.61	r375.88

Chapter 2. Software Requirements

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

2.1. Linux

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

cuDNN 8.0.5 For Linux

Linux versions for cuDNN 8.0.5 release

			Distro Information		
Architecture	OS Name	OS Version	Kernel	GCC	Glibc
x86_64	RHEL	7.8	3.10.0	4.8.5	2.17
		8.2 ¹	4.18	8.3.1	2.28
Ubuntu	Ubuntu	20.04	5.4.0	9.3.0	2.32
		18.04.5 LTS	4.15.0	8.2.0	2.27
		16.04.6 LTS	4.5.0	5.4.0	2.23
ppc64le	RHEL	8.2	4.18	8.3.1	2.28
AArch64 SBSA	RHEL	8	4.18	8.3.0	2.28
	Ubuntu	18.04	4.15	8.3.0	2.27
AArch64 ²	Ubuntu	18.04	4.15	7.3.1	2.27

2.1.2. cuDNN 8.0.4 For Linux

Not supported in CUDA 10.1 Update 2.
 Supported in CUDA 11.0 Toolkit only.

Linux versions for cuDNN 8.0.4 release

		Distro Information			
Architecture	OS Name	OS Version	Kernel	GCC	Glibc
x86_64	RHEL	7.8	3.10.0	4.8.5	2.17
		8.2 ³	4.18	8.3.1	2.28
	Ubuntu	18.04.4 LTS	4.15.0	8.2.0	2.27
		16.04.6 LTS	4.5.0	5.4.0	2.23
ppc64le	RHEL	8.2	4.18	8.3.1	2.28
	Ubuntu	18.04.4 LTS	4.4.0	5.4.0	2.27
AArch64 SBSA	RHEL	8	4.18	8.3.0	2.28
	Ubuntu	18.04	4.15	8.3.0	2.27
AArch64 ²	Ubuntu	18.04			

2.1.3. cuDNN 8.0.2 - 8.0.3 For Linux

Linux versions for cuDNN 8.0.2 - 8.0.3 releases

			Distro Informa	ation	
Architecture	OS Name	OS Version	Kernel	GCC	Glibc
x86_64	x86_64 RHEL	7.6	3.10.0	4.8.5	2.17
		8.1	4.18	8.3.1	2.28
Ubuntu	Ubuntu	18.04.4 LTS	4.15.0	8.2.0	2.27
		16.04.6 LTS	4.5.0	5.4.0	2.23
ppc64le	Ubuntu	18.04.4 LTS	4.4.0	5.4.0	2.27
RHEL	7.6				
		8.1			
AArch64 ²	Ubuntu18_04				

2.1.4. cuDNN 8.0.0 - 8.0.1 Preview For Linux

³ Not supported in CUDA 10.1 Update 2.

Linux versions for cuDNN 8.0.0 - 8.0.1 Preview releases

		Distro Information			
Architecture	OS Name	OS Version	Kernel	GCC	Glibc
x86_64 RHEL	RHEL	7.6	3.10.0	4.8.5	2.17
		8.1	4.18	8.3.1	2.28
	Ubuntu	18.04.3 LTS	4.15.0	8.2.0	2.27
		16.04.6 LTS	4.5.0	5.4.0	2.23
ppc64le	Ubuntu	18.04.3 LTS	4.4.0	5.4.0	2.27
	RHEL7	7.6			
		8.1			
AArch64 ⁴	Ubuntu18_04				

2.1.5. cuDNN 7.6.4 - 7.6.5 For Linux

Linux versions for cuDNN 7.6.4 - 7.6.5 releases

			Distro Information		Distro Information	Distro Information	
Architecture	OS Name	OS Version	Kernel	GCC	Glibc		
x86_64	RHEL	7.6	3.10.0	4.8.5	2.17		
	Ubuntu	18.04.3 LTS	4.15.0	8.2.0	2.27		
		16.04.6 LTS	4.5.0	5.4.0	2.23		
ppc64le	Ubuntu	18.04.3 LTS	4.4.0	5.4.0	2.27		
	RHEL	7.6					
AArch64 ²	Ubuntu18_04						

2.2. Windows

Refer to the following tables to view the list of supported Windows versions for cuDNN.

2.2.1. cuDNN 8.x.x For Windows

Windows 10 and Windows Server 2019 and 2016 are supported.

⁴ Supported in CUDA 10.2 Toolkit only.

Visual Studio versions based on your version of CUDA

	CUDA 11.0	CUDA 10.2
Visual Studio	2015	2012

2.2.2. cuDNN 7.6.4 - 7.6.5 For Windows

Windows 10 and Windows Server 2016 are supported.

Visual Studio versions based on your version of CUDA

	CUDA 10.2	CUDA 10.1 Update 2
Visual Studio	2012	

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