ThinkSystem NVIDIA RTX 6000 Ada 48GB PCIe Active GPU

Product Guide

The NVIDIA RTX™ 6000 Ada Generation is the ultimate workstation graphics card designed for professionals who demand maximum performance and reliability to deliver their best work and breakthrough innovations across industries. The RTX 6000 provides the unmatched performance and capabilities essential for high-end design, real-time rendering, AI, and high-performance compute workflows.

Built on the NVIDIA Ada Lovelace architecture, the RTX 6000 combines 142 third-generation RT Cores, 568 fourth-generation Tensor Cores, and 18,176 CUDA® cores with 48GB of error correction code (ECC) graphics memory. This all helps deliver the next generation of AI graphics and petaflop inferencing performance for unprecedented speed-up in rendering, AI, graphics, and compute workloads.

Figure 1. ThinkSystem NVIDIA RTX 6000 Ada 48GB PCIe Active GPU

Did you know?

NVIDIA RTX professional graphics cards are certified with a broad range of professional applications, tested by leading independent software vendors (ISVs) and workstation manufacturers, and backed by a global team of support specialists. Get the peace of mind to focus on what matters with the premier visual computing solution for mission-critical business.

Part number information

The following table shows the part numbers for the RTX 6000 Ada GPU.

Table 1. Ordering information

Part number	Feature code	Description	NVIDIA part number	Controlled GPU status
4X67A89324	C2DP	ThinkSystem NVIDIA RTX 6000 Ada 48GB PCIe Active GPU	900-5G133-2750-001	Controlled

The RTX 6000 Ada GPU is Controlled which means the GPU is not offered in certain markets, as determined by the US Government.

The PCIe option part numbers includes the following:

- One RTX 6000 Ada GPU with full-height (3U) adapter bracket attached
- Documentation

Features

Key features of the RTX 6000 Ada GPU:

- PCIe Gen 4
- Four DisplayPort 1.4a connectors
- AV1 encode and decode support
- DisplayPort with audio
- 3D stereo support with stereo connector
- NVIDIA GPUDirect® for Video support
- NVIDIA GPUDirect Remote Direct Memory Access (RDMA) support
- NVIDIA virtual GPU (vGPU) software support
- NVIDIA Quadro® Sync II1 compatibility
- NVIDIA RTX Experience
- NVIDIA RTX Desktop Manager software
- NVIDIA RTX IO support
- HDCP 2.2 support
- NVIDIA Mosaic technology

The ThinkSystem NVIDIA RTX 6000 Ada 48GB PCIe Active GPU offers the following features:

- NVIDIA Ada Lovelace Architecture
  NVIDIA RTX™ 6000 Ada Generation is the most powerful workstation GPU offering high-performance, real-time ray tracing, AI-accelerated compute, and professional graphics rendering. Building upon the major SM enhancements from the Ada Lovelace GPU, the NVIDIA Ada Lovelace architecture provides more cores, higher clocks, and a larger L2 cache for more performance to enhance ray tracing operations, tensor matrix operations, and frame rates with DLSS 3.0.
- CUDA Cores
  The NVIDIA Ada Lovelace architecture-based CUDA Cores offer more than 2X the single-precision floating point (FP32) throughput compared to the previous generation, providing significant performance improvements for graphics workflows such as 3D model development and compute for workloads such as desktop simulation for computer-aided engineering (CAE). The RTX 6000 enables two FP32 primary data paths, doubling the peak FP32 operations.
- 3rd Generation RT Cores

Incorporating 3rd generation ray tracing engines, NVIDIA Ada Lovelace architecture-based GPUs provide incredible ray-traced rendering performance. A single RTX 6000 board can render complex professional models with physically accurate shadows, reflections, and refractions to empower users with instant insight. Working in concert with applications leveraging APIs such as NVIDIA OptiX, Microsoft DXR, and Vulkan ray tracing, systems based on the RTX 6000 will power truly interactive design workflows to provide immediate feedback for unprecedented levels of productivity. The RTX 6000 features up to 2X faster ray-triangle intersection throughput compared to the previous generation.

- 4th Generation Tensor Cores
  Specialized for deep learning matrix multiply and accumulate math operations at the heart of neural network training and inferencing functions, the RTX 6000 includes enhanced Tensor Cores that accelerate more data types and still support the Fine-Grained Structured Sparsity feature that delivers more than 2X throughput for tensor matrix operations compared to the previous generation. New Tensor Cores will accelerate new FP8 precision modes. Independent floating-point and integer data paths allow more efficient execution of workloads using a mix of computation and addressing calculations.
- 5th Generation NVDEC Engine
  NVDEC is well suited for transcoding and video playback applications for real-time decoding. The following video codecs are supported for hardware-accelerated decoding: MPEG-2, VC-1, H.264 (AVCHD), H.265 (HEVC), VP8, VP9, and AV1 video formats. Video encoding at 8K/60 will be achievable for professional video editing.
- 8th Generation NVENC Engine
  NVENC can take on the most demanding 4K or 8K video encoding tasks to free up the graphics engine and the CPU for other operations. The RTX 6000 provides better encoding quality than software-based x264 encoders. The RTX 6000 incorporates AV1 video encoding which is 40% more efficient than H.264 encoding for 4K HDR video. AV1 will provide better quality at the same bitrate bandwidth.

Technical specifications

The following table lists the specifications of the RTX 6000 Ada GPU.

Table 2. RTX 6000 Ada GPU specifications

Feature	Specification
GPU Memory	48 GB GDDR6
Memory Interface	384-bit
Memory Bandwidth	Up to 960 GB/s
ECC	Yes
NVIDIA CUDA Cores	18,176
NVIDIA Tensor Cores	568
NVIDIA RT Cores	142
Single-Precision Performance	91.1 TFLOPS (peak)
RT Core performance	210.6 TFLOPS (peak)
Tensor Performance	1457.0 TFLOPS (peak, with sparsity)
Host Interface	PCIe 4.0 x16
NVLink support	No
Power Consumption	300 W
Thermal Solution	Active cooling

Feature	Specification
Form Factor	4.4” H x 10.5” L, Dual Slot, Full Height, Full Length
Display Connectors	4x DisplayPort 1.4a
Maximum simultaneous displays	4x 4096 x 2160 @ 120 Hz, 4x 5120 x 2880 @ 60 Hz, 2x 7680 x 4320 @ 60 Hz
Encode / Decode Engines	3x encode, 3x decode (+AV1 encode and decode)
VR Ready	Yes
vGPU software support	NVIDIA vPC/vApps, NVIDIA RTX Virtual Workstation
Graphics APIs	DirectX 12, Shader Model 6.6, OpenGL 4.6, Vulkan 1.3
Compute APIs	CUDA 11.6, DirectCompute, OpenCL 3.0

Server support

The following tables list the ThinkSystem servers that are compatible.

Table 3. Server support (Part 1 of 5)

Part Number	Description	AMD V3				2S Intel V3/V4						Multi Node V3			1S V3			
		SR635 V3 (7D9H / 7D9G)	SR655 V3 (7D9F / 7D9E)	SR645 V3 (7D9D / 7D9C)	SR665 V3 (7D9B / 7D9A)	ST650 V3 (7D7B / 7D7A)	SR630 V3 (7D72 / 7D73)	SR650 V3 (7D75 / 7D76)	SR630 V4 (7DG8 / 7DG9)	SR650 V4 (7DGC / 7DGD)	SR650a V4 (7DGC / 7DGD)	SD535 V3 (7DD8 / 7DD1)	SD530 V3 (7DDA / 7DD3)	SD550 V3 (7DD9 / 7DD2)	ST45 V3 (7DH4 / 7DH5)	ST50 V3 (7DF4 / 7DF3)	ST250 V3 (7DCF / 7DCE)	SR250 V3 (7DCM / 7DCL)
4X67A89324	ThinkSystem NVIDIA RTX 6000 Ada 48GB PCIe Active GPU	N	3	N	3	N	N	3	N	2	N	N	N	N	N	N	N	N

Table 4. Server support (Part 2 of 5)

Part Number	Description	4S 8S Intel V3/V4					GPU Rich							Edge					
		SR850 V3 (7D97 / 7D96)	SR860 V3 (7D94 / 7D93)	SR950 V3 (7DC5 / 7DC4)	SR850 V4 (7DJT / 7DJS)	SR860 V4 (7DJQ / 7DJN)	SR670 V2 (7Z22 / 7Z23)	SR675 V3 (7D9Q / 7D9R)	SR680a V3 (7DHE)	SR680a V3 B200 (7DM9)	SR685a V3 (7DHC)	SR780a V3 (7DJ5)	SR680a V4 (7DMK)	SE100 (7DGR)	SE350 (7Z46 / 7D1X)	SE350 V2 (7DA9)	SE360 V2 (7DAM)	SE450 (7D8T)	SE455 V3 (7DBY)
4X67A89324	ThinkSystem NVIDIA RTX 6000 Ada 48GB PCIe Active GPU	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Table 5. Server support (Part 3 of 5)

Part Number	Description	Super Computing							1S Intel V2			2S Intel V2			AMD V1			
		SC750 V4 (7DDJ)	SC777 V4 (7DKA)	SD665 V3 (7D9P)	SD665-N V3 (7DAZ)	SD650 V3 (7D7M)	SD650-I V3 (7D7L)	SD650-N V3 (7D7N)	ST50 V2 (7D8K / 7D8J)	ST250 V2 (7D8G / 7D8F)	SR250 V2 (7D7R / 7D7Q)	ST650 V2 (7Z75 / 7Z74)	SR630 V2 (7Z70 / 7Z71)	SR650 V2 (7Z72 / 7Z73)	SR635 (7Y98 / 7Y99)	SR655 (7Y00 / 7Z01)	SR645 (7D2Y / 7D2X)	SR665 (7D2W / 7D2V)
4X67A89324	ThinkSystem NVIDIA RTX 6000 Ada 48GB PCIe Active GPU	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Table 6. Server support (Part 4 of 5)

Part Number	Description	Dense V2				4S V2		8S	4S V1			1S Intel V1			
		SD630 V2 (7D1K)	SD650 V2 (7D1M)	SD650-N V2 (7D1N)	SN550 V2 (7Z69)	SR850 V2 (7D31 / 7D32)	SR860 V2 (7Z59 / 7Z60)	SR950 (7X11 / 7X12)	SR850 (7X18 / 7X19)	SR850P (7D2F / 2D2G)	SR860 (7X69 / 7X70)	ST50 (7Y48 / 7Y50)	ST250 (7Y45 / 7Y46)	SR150 (7Y54)	SR250 (7Y52 / 7Y51)
4X67A89324	ThinkSystem NVIDIA RTX 6000 Ada 48GB PCIe Active GPU	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Table 7. Server support (Part 5 of 5)

Part Number	Description	2S Intel V1								Dense V1			
		ST550 (7X09 / 7X10)	SR530 (7X07 / 7X08)	SR550 (7X03 / 7X04)	SR570 (7Y02 / 7Y03)	SR590 (7X98 / 7X99)	SR630 (7X01 / 7X02)	SR650 (7X05 / 7X06)	SR670 (7Y36 / 7Y37)	SD530 (7X21)	SD650 (7X58)	SN550 (7X16)	SN850 (7X15)
4X67A89324	ThinkSystem NVIDIA RTX 6000 Ada 48GB PCIe Active GPU	N	N	N	N	N	N	N	N	N	N	N	N

Operating system support

The following table lists the supported operating systems:

Tip: These tables are automatically generated based on data from Lenovo ServerProven.

Table 8. Operating system support for ThinkSystem NVIDIA RTX 6000 Ada 48GB PCIe Active GPU, 4X67A89324

Operating systems	SR650 V4/SR650a V4	SR650 V3 (4th Gen Xeon)	SR650 V3 (5th Gen Xeon)	SR655 V3	SR665 V3
Microsoft Windows 10	N	Y	Y	Y	Y
Microsoft Windows 11	N	Y	Y	Y	Y
Microsoft Windows Server 2019	N	Y	Y	Y	Y
Microsoft Windows Server 2022	Y	Y	Y	Y	Y
Microsoft Windows Server 2025	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 8.6	N	Y	N	Y	Y
Red Hat Enterprise Linux 8.7	N	Y	N	Y	Y
Red Hat Enterprise Linux 8.8	N	Y	Y	Y	Y
Red Hat Enterprise Linux 8.9	N	Y	Y	Y	Y
Red Hat Enterprise Linux 9.0	N	Y	N	Y	Y
Red Hat Enterprise Linux 9.1	N	Y	N	Y	Y
Red Hat Enterprise Linux 9.2	N	Y	Y	Y	Y
Red Hat Enterprise Linux 9.3	N	Y	Y	Y	Y
Red Hat Enterprise Linux 9.4	Y	Y	Y	Y	Y
Red Hat Enterprise Linux 9.5	Y	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP4	N	Y	N	Y	Y
SUSE Linux Enterprise Server 15 SP4 with Xen	N	Y	N	Y	Y
SUSE Linux Enterprise Server 15 SP5	N	Y	Y	Y	Y
SUSE Linux Enterprise Server 15 SP5 with Xen	N	Y	Y	Y	Y
Ubuntu 20.04.5 LTS	N	N	N	Y	Y
Ubuntu 22.04.5 LTS	Y	N	N	N	Y
Ubuntu 22.04 LTS	N	Y	Y [1]	Y	Y
Ubuntu 24.04 LTS	Y	Y	Y	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U1	N	Y	N	Y	Y
VMware vSphere Hypervisor (ESXi) 8.0 U2	N	Y	Y	Y	Y

[1] Ubuntu 22.04.3 LTS/Ubuntu 22.04.4 LTS

NVIDIA GPU software

This section lists the NVIDIA software that is available from Lenovo.

- NVIDIA vGPU Software (vApps, vPC, RTX vWS)
- NVIDIA Omniverse Software (OVE)
- NVIDIA AI Enterprise Software
- NVIDIA HPC Compiler Software

NVIDIA vGPU Software (vApps, vPC, RTX vWS)

Lenovo offers the following virtualization software for NVIDIA GPUs:

- **Virtual Applications (vApps)**

  For organizations deploying Citrix XenApp, VMware Horizon RDSH or other RDSH solutions. Designed to deliver PC Windows applications at full performance. NVIDIA Virtual Applications allows users to access any Windows application at full performance on any device, anywhere. This edition is suited for users who would like to virtualize applications using XenApp or other RDSH solutions. Windows Server hosted RDSH desktops are also supported by vApps.

- **Virtual PC (vPC)**

  This product is ideal for users who want a virtual desktop but need great user experience leveraging PC Windows® applications, browsers and high-definition video. NVIDIA Virtual PC delivers a native experience to users in a virtual environment, allowing them to run all their PC applications at full performance.

- **NVIDIA RTX Virtual Workstation (RTX vWS)**

  NVIDIA RTX vWS is the only virtual workstation that supports NVIDIA RTX technology, bringing advanced features like ray tracing, AI-denoising, and Deep Learning Super Sampling (DLSS) to a virtual environment. Supporting the latest generation of NVIDIA GPUs unlocks the best performance possible, so designers and engineers can create their best work faster. IT can virtualize any application from the data center with an experience that is indistinguishable from a physical workstation — enabling workstation performance from any device.

The following license types are offered:

- **Perpetual license**

  A non-expiring, permanent software license that can be used on a perpetual basis without the need to renew. For each perpetual license, customers are also required to purchase a 5-year SUMS support contract. Without this contract, the perpetual license cannot be ordered.

- **Annual subscription**

  A software license that is active for a fixed period as defined by the terms of the subscription license, typically yearly. The subscription includes Support, Upgrade and Maintenance (SUMS) for the duration of the license term.

- **Concurrent User (CCU)**

  A method of counting licenses based on active user VMs. If the VM is active and the NVIDIA vGPU software is running, then this counts as one CCU. A vGPU CCU is independent of the connection to the VM.

The following table lists the ordering part numbers and feature codes.

Table 9. NVIDIA vGPU Software

Part number	Feature code 7S02CTO1WW	NVIDIA part number	Description
NVIDIA vApps			
7S020004WW	B1MQ	711-VAP002+P3CMI12	NVIDIA vApps Subscription License 1 Year, 1 CCU
7S020005WW	B1MR	711-VAP002+P3CMI36	NVIDIA vApps Subscription License 3 Years, 1 CCU
7S02003DWW	S832	711-VAP002+P3CMI48	NVIDIA vApps Subscription License 4 Years, 1 CCU
7S02003EWW	S833	711-VAP002+P3CMI60	NVIDIA vApps Subscription License 5 Years, 1 CCU
7S020046WW	SDHB	711-VAP001+P3CMI00	NVIDIA vApps Perpetual License, 1 CCU

Part number	Feature code 7S02CTO1WW	NVIDIA part number	Description
7S020003WW	B1MP	711-VAP001+P3CMI00	NVIDIA vApps SUMS ONLY 5Yr, 1 CCU (required for perpetual license)
NVIDIA vPC			
7S02000AWW	B1MW	711-VPC022+P3CMI12	NVIDIA vPC Subscription License 1 Year, 1 CCU
7S02000BWW	B1MX	711-VPC022+P3CMI36	NVIDIA vPC Subscription License 3 Years, 1 CCU
7S02003FWW	S834	711-VPC022+P3CMI48	NVIDIA vPC Subscription License 4 Years, 1 CCU
7S02003GWW	S835	711-VPC022+P3CMI60	NVIDIA vPC Subscription License 5 Years, 1 CCU
7S020047WW	SDHC	711-VPC021+P3CMI00	NVIDIA vPC Perpetual License, 1 CCU
7S020009WW	B1MV	711-VPC021+P3CMI00	NVIDIA vPC SUMS 5Yr ONLY, 1 CCU (required for perpetual license)
NVIDIA RTX vWS			
7S02000GWW	B1N2	711-DWS022+P3CMI12	NVIDIA RTX vWS Subsc Lic 1Yr 1 CCU
7S02000HWW	B1N3	711-DWS022+P3CMI36	NVIDIA RTX vWS Subscription License 3 Years, 1 CCU
7S02000XWW	S6YJ	711-DWS022+P3CMI48	NVIDIA RTX vWS Subscription License 4 Years, 1 CCU
7S02000YWW	S6YK	711-DWS022+P3CMI60	NVIDIA RTX vWS Subscription License 5 Years, 1 CCU
7S02000MWW	B1N7	711-DWS022+P3EDI12	NVIDIA RTX vWS EDU Subscription License 1 Year, 1 CCU
7S02000NWW	B1N8	711-DWS022+P3EDI36	NVIDIA RTX vWS EDU Subscription License 3 Years, 1 CCU
7S02003BWW	S830	711-DWS022+P3EDI48	NVIDIA RTX vWS EDU Subscription License 4 Years, 1 CCU
7S02003CWW	S831	711-DWS022+P3EDI60	NVIDIA RTX vWS EDU Subscription License 5 Years, 1 CCU
7S020048WW	SDHD	711-DWS021+P3CMI00	NVIDIA RTX vWS Perpetual License, 1 CCU
7S02000FWW	B1N1	711-DWS021+P3CMI00	NVIDIA RTX vWS SUMS ONLY 5Yr, 1 CCU (required for perpetual license)
7S020049WW	SDHE	711-DWS021+P3EDI00	NVIDIA RTX vWS EDU Perpetual License, 1 CCU
7S02000LWW	B1N6	711-DWS021+P3EDI00	NVIDIA RTX vWS EDU SUMS ONLY 5Y, 1CCU (required for perpetual license)
NVIDIA RTX vWS Support & Services			
7S020015WW	S6YS	712-DWSA24+P3CMI12	24X7 Support Services for NVIDIA RTX vWS Production SUMS, 1CCU, 1 Year
7S02005CWW	SDZB	712-DWSA24+P3CMI60	24X7 Support Services for NVIDIA RTX vWS Production SUMS 1CCU 5 Years
7S020016WW	S6YT	712-DWSA24+P3EDI12	24X7 Support Services for NVIDIA RTX vWS Production SUMS, 1CCU, EDU, 1 Year
7S02005DWW	SDZC	712-DWSA24+P3EDI60	24X7 Support Services for NVIDIA RTX vWS Production SUMS 1CCU EDU 5 Years
7S02005EWW	SDZD	712-DWSB24+P3CMI12	24X7 Support Services for NVIDIA RTX vWS SUMS 4 CCU 1 Year
7S020017WW	S6YU	712-DWSD24+P3CMI12	24X7 Support Services for NVIDIA RTX vWS Subscription License, 1CCU, 1 Year

NVIDIA Omniverse Software (OVE)

NVIDIA Omniverse™ Enterprise is an end-to-end collaboration and simulation platform that fundamentally transforms complex design workflows, creating a more harmonious environment for creative teams.

NVIDIA and Lenovo offer a robust, scalable solution for deploying Omniverse Enterprise, accommodating a wide range of professional needs. This document details the critical components, deployment options, and support available, ensuring an efficient and effective Omniverse experience.

Deployment options cater to varying team sizes and workloads. Using Lenovo NVIDIA-Certified Systems™ and Lenovo OVX nodes which are meticulously designed to manage scale and complexity, ensures optimal performance for Omniverse tasks.

Deployment options include:

- Workstations: NVIDIA-Certified Workstations with RTX 6000 Ada GPUs for desktop environments.
- Data Center Solutions: Deployment with Lenovo OVX nodes or NVIDIA-Certified Servers equipped with L40, or L40S GPUs for centralized, high-capacity needs.

NVIDIA Omniverse Enterprise includes the following components and features:

- Platform Components: Kit, Connect, Nucleus, Simulation, RTX Renderer.
- Foundation Applications: USD Composer, USD Presenter.
- Omniverse Extensions: Connect Sample & SDK.
- Integrated Development Environment (IDE)
- Nucleus Configuration: Workstation, Enterprise Nucleus Server (supports up to 8 editors per scene); Self-Service Public Cloud Hosting using Containers.
- Omniverse Farm: Supports batch workloads up to 8 GPUs.
- Enterprise Services: Authentication (SSO/SSL), Navigator Microservice, Large File Transfer, User Accounts SAML/Account Directory.
- User Interface: Workstation & IT Managed Launcher.
- Support: NVIDIA Enterprise Support.
- Deployment Scenarios: Desktop to Data Center: Workstation deployment for building and designing, with options for physical or virtual desktops. For batch tasks, rendering, and SDG workloads that require headless compute, Lenovo OVX nodes are recommended.

The following part numbers are for a subscription license which is active for a fixed period as noted in the description. The license is for a named user which means the license is for named authorized users who may not re-assign or share the license with any other person.

Table 10. NVIDIA Omniverse Software (OVE)

Part number	Feature 7S02CTO1WW	NVIDIA part number	Description
7S02003ZWW	SCX0	721-OV7006+P3CMI12	NVIDIA Omniverse Enterprise Subscription per GPU, 1 Year
7S020042WW	SCX3	721-OV7006+P3CMI36	NVIDIA Omniverse Enterprise Subscription per GPU, 3 Years
7S020044WW	SD5T	721-OV7006+P3CMI60	NVIDIA Omniverse Enterprise Subscription per GPU, 5 Year
7S020041WW	SCX2	721-OV7006+P3INI12	NVIDIA Omniverse Enterprise Subscription per GPU, INC, 1 Year
7S020040WW	SCX1	721-OV7006+P3EDI12	NVIDIA Omniverse Enterprise Subscription per GPU, EDU, 1 Year
7S020043WW	SCX4	721-OV7006+P3EDI36	NVIDIA Omniverse Enterprise Subscription per GPU, EDU, 3 Years
7S020045WW	SD5U	721-OV7006+P3EDI60	NVIDIA Omniverse Enterprise Subscription per GPU EDU, 5 Year

NVIDIA AI Enterprise Software

Lenovo offers the NVIDIA AI Enterprise (NVAIE) cloud-native enterprise software. NVIDIA AI Enterprise is an end-to-end, cloud-native suite of AI and data analytics software, optimized, certified, and supported by NVIDIA to run on VMware vSphere and bare-metal with NVIDIA-Certified Systems™. It includes key enabling technologies from NVIDIA for rapid deployment, management, and scaling of AI workloads in the modern hybrid cloud.

NVIDIA AI Enterprise is licensed on a per-GPU basis. NVIDIA AI Enterprise products can be purchased as either a perpetual license with support services, or as an annual or multi-year subscription.

- The perpetual license provides the right to use the NVIDIA AI Enterprise software indefinitely, with no expiration. NVIDIA AI Enterprise with perpetual licenses must be purchased in conjunction with one-year, three-year, or five-year support services. A one-year support service is also available for renewals.
- The subscription offerings are an affordable option to allow IT departments to better manage the flexibility of license volumes. NVIDIA AI Enterprise software products with subscription includes support services for the duration of the software's subscription license

The features of NVIDIA AI Enterprise Software are listed in the following table.

Table 11. Features of NVIDIA AI Enterprise Software (NVAIE)

Features	Supported in NVIDIA AI Enterprise
Per GPU Licensing	Yes
Compute Virtualization	Supported
Windows Guest OS Support	No support
Linux Guest OS Support	Supported
Maximum Displays	1
Maximum Resolution	4096 x 2160 (4K)
OpenGL and Vulkan	In-situ Graphics only
CUDA and OpenCL Support	Supported
ECC and Page Retirement	Supported

Features	Supported in NVIDIA AI Enterprise
MIG GPU Support	Supported
Multi-vGPU	Supported
NVIDIA GPUDirect	Supported
Peer-to-Peer over NVLink	Supported
GPU Pass Through Support	Supported
Baremetal Support	Supported
AI and Data Science applications and Frameworks	Supported
Cloud Native ready	Supported

Note: Maximum 10 concurrent VMs per product license

The following table lists the ordering part numbers and feature codes.

Table 12. NVIDIA AI Enterprise Software (NVAIE)

Part number	Feature code 7S02CTO1WW	NVIDIA part number	Description
AI Enterprise Perpetual License			
7S02001BWW	S6YY	731-AI7004+P3CMI60	NVIDIA AI Enterprise Perpetual License and Support per GPU Socket, 5 Years
7S02001EWW	S6Z1	731-AI7004+P3EDI60	NVIDIA AI Enterprise Perpetual License and Support per GPU Socket, EDU, 5 Years
AI Enterprise Subscription License			
7S02001FWW	S6Z2	731-AI7003+P3CMI12	NVIDIA AI Enterprise Subscription License and Support per GPU Socket, 1 Year
7S02001GWW	S6Z3	731-AI7003+P3CMI36	NVIDIA AI Enterprise Subscription License and Support per GPU Socket, 3 Years
7S02001HWW	S6Z4	731-AI7003+P3CMI60	NVIDIA AI Enterprise Subscription License and Support per GPU Socket, 5 Years
7S02001JWW	S6Z5	731-AI7003+P3EDI12	NVIDIA AI Enterprise Subscription License and Support per GPU Socket, EDU, 1 Year
7S02001KWW	S6Z6	731-AI7003+P3EDI36	NVIDIA AI Enterprise Subscription License and Support per GPU Socket, EDU, 3 Years
7S02001LWW	S6Z7	731-AI7003+P3EDI60	NVIDIA AI Enterprise Subscription License and Support per GPU Socket, EDU, 5 Years
AI Enterprise Support Services			
7S02001MWW	S6Z8	731-AI7007+P3CMI12	24X7 Support Services for NVIDIA Enterprise AI per GPU Socket, 1 Year
7S02001NWW	S6Z9	731-AI7007+P3CMI36	24X7 Support Services for NVIDIA Enterprise AI per GPU Socket, 3 Years
7S02001PWW	S6ZA	731-AI7007+P3CMI60	24X7 Support Services for NVIDIA Enterprise AI per GPU Socket, 5 Years
7S02001QWW	S6ZB	731-AI7007+P3EDI12	24X7 Support Services for NVIDIA Enterprise AI per GPU Socket, EDU, 1 Year
7S02001RWW	S6ZC	731-AI7007+P3EDI36	24X7 Support Services for NVIDIA Enterprise AI per GPU Socket, EDU, 3 Years
7S02001SWW	S6ZD	731-AI7007+P3EDI60	24X7 Support Services for NVIDIA Enterprise AI per GPU Socket, EDU, 5 Years

Find more information in the NVIDIA AI Enterprise Sizing Guide.

NVIDIA HPC Compiler Software

Table 13. NVIDIA HPC Compiler

Part number	Feature code 7S09CTO6WW	Description
HPC Compiler Support Services		
7S090014WW	S924	NVIDIA HPC Compiler Support Services, 1 Year
7S090015WW	S925	NVIDIA HPC Compiler Support Services, 3 Years
7S09002GWW	S9UQ	NVIDIA HPC Compiler Support Services, 5 Years
7S090016WW	S926	NVIDIA HPC Compiler Support Services, EDU, 1 Year
7S090017WW	S927	NVIDIA HPC Compiler Support Services, EDU, 3 Years
7S09002HWW	S9UR	NVIDIA HPC Compiler Support Services, EDU, 5 Years
7S090018WW	S928	NVIDIA HPC Compiler Support Services - Additional Contact, 1 Year
7S09002JWW	S9US	NVIDIA HPC Compiler Support Services - Additional Contact, 3 Years
7S09002KWW	S9UT	NVIDIA HPC Compiler Support Services - Additional Contact, 5 Years
7S090019WW	S929	NVIDIA HPC Compiler Support Services - Additional Contact, EDU, 1 Year
7S09002LWW	S9UU	NVIDIA HPC Compiler Support Services - Additional Contact, EDU, 3 Years
7S09002MWW	S9UV	NVIDIA HPC Compiler Support Services - Additional Contact, EDU, 5 Years
HPC Compiler Premier Support Services		
7S09001AWW	S92A	NVIDIA HPC Compiler Premier Support Services, 1 Year
7S09002NWW	S9UW	NVIDIA HPC Compiler Premier Support Services, 3 Years
7S09002PWW	S9UX	NVIDIA HPC Compiler Premier Support Services, 5 Years
7S09001BWW	S92B	NVIDIA HPC Compiler Premier Support Services, EDU, 1 Year
7S09002QWW	S9UY	NVIDIA HPC Compiler Premier Support Services, EDU, 3 Years
7S09002RWW	S9UZ	NVIDIA HPC Compiler Premier Support Services, EDU, 5 Years
7S09001CWW	S92C	NVIDIA HPC Compiler Premier Support Services - Additional Contact, 1 Year
7S09002SWW	S9V0	NVIDIA HPC Compiler Premier Support Services - Additional Contact, 3 Years
7S09002TWW	S9V1	NVIDIA HPC Compiler Premier Support Services - Additional Contact, 5 Years
7S09001DWW	S92D	NVIDIA HPC Compiler Premier Support Services - Additional Contact, EDU, 1 Year
7S09002UWW	S9V2	NVIDIA HPC Compiler Premier Support Services - Additional Contact, EDU, 3 Years
7S09002VWW	S9V3	NVIDIA HPC Compiler Premier Support Services - Additional Contact, EDU, 5 Years

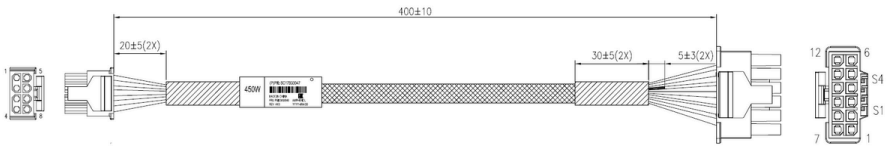
Auxiliary power cables

The RTX 6000 Ada GPU option part number does not ship with auxiliary power cables. Cables are server-specific due to length requirements. For CTO orders, auxiliary power cables are derived by the configurator. For field upgrades, cables will need to be ordered separately as listed in the table below.

Table 14. Auxiliary power cables for RTX 6000 Ada GPU

Auxiliary power cable needed with the SR650 V3

400mm 16-pin (2x6+4) cable
Feature: BRWK
SBB: SBB7A66338
Base: SC17B33047
FRU: 03KM846
Option:
SR650 V3: 4X67A82883, ThinkSystem SR650 V3 GPU Full Length Thermal Option Kit*



* The option part numbers are for thermal kits and include other components needed to install the GPU. See the server product guide for details.

Regulatory approvals

The RTX 6000 Ada GPU has the following regulatory approvals:

- RCM
- BSMI
- CE
- FCC
- ICES
- KCC
- cUL, UL
- VCCI

Operating environment

The RTX 6000 Ada GPU has the following operating characteristics:

- Ambient temperature
  - Operational: 0°C to 50°C (-5°C to 55°C for short term*)
  - Storage: -40°C to 75°C
- Relative humidity:
  - Operational: 5-85% (5-93% short term*)
  - Storage: 5-95%

* A period not more than 96 hours consecutive, not to exceed 15 days per year.

Warranty

One year limited warranty. When installed in a Lenovo server, the GPU assumes the server's base warranty and any warranty upgrades.

Related publications

For more information, refer to these documents:

- ThinkSystem and ThinkAgile GPU Summary:
  https://lenovopress.lenovo.com/lp0768-thinksystem-thinkagile-gpu-summary
- ServerProven compatibility:
  https://serverproven.lenovo.com/
- RTX 6000 Ada GPU product page:
  https://www.nvidia.com/en-us/design-visualization/rtx-6000/

Related product families

Product families related to this document are the following:

- GPU adapters

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