

SC-PQA4500

PNY Quadro A4500 GA102 Ampere 20Gb GDDR6 320bit Professional Card

Product Overview

PNY Quadro A4500 - GA102 Ampere - single slot design - for professional 3D applications, with hardware OpenGL 4.6+ directX 12+ shader model 6.5+ vulcan 1.2, Pci-E 4.0 16x, core/memory: 1560/16000mhz, 320bit 20Gb GDDR6 with ECC - transfer rate: 640Gb



Specifications

Graphics card at a glance:

The PNY NVIDIA RTX A4500 Ampere GPU offers South African professionals a powerful, efficient solution for demanding 3D rendering, AI workloads, and high-resolution multi-display setups. Featuring 20GB ECC GDDR6 memory, 7168 CUDA cores, and dual-slot NVLink support, it delivers excellent real-time ray tracing and AI performance with advanced workstation-grade stability and certified software compatibility.

- GPU: NVIDIA RTX A4500
- GPU CODE: SC-PQA4500
- Maximum digital resolution (pixels): 7680 x 4320
- Stream processors (SP): 7168
- Engine clock (min ~ max MHz): 1560
- Video memory (size): 20GB
- Video memory (type): GDDR6 with ECC
- Memory clock (MHz): 16000
- Memory bus (bit): 320-bit
- Bus Standard: PCI Express 4.0 x16
- Over-clock-able: No
- Dimension in cm: 26.7 x 11.2
- Slot: Dual Slot
- PSU recommended: 200W (min)
- Power connector: 1 x 8-pin PCIe
- Max. number of monitors: 4
- Video ports: 4 x DisplayPort 1.4a
- Suggested uses: Professional 3D design, AI development, real-time ray tracing, scientific simulation, media & entertainment, VR/AR, and multi-display visualization

Overview:

The NVIDIA RTX A4500 delivers the power, performance, capabilities, and reliability professionals need to do more. Powered by latest generation of NVIDIA RTX technology, combined with 20GB of ultra-fast GPU memory, the A4500 provides amazing performance with your favorite applications and the capability to work with larger models, renders, datasets, and scenes with higher fidelity and greater interactivity, taking your work to the next level.

With the introduction of the NVIDIA Ampere architecture, the next generation of NVIDIA RTX became available to millions of professionals. Featuring enhanced real-time ray tracing, accelerated AI, and advanced graphics and compute capabilities, the NVIDIA Ampere architecture enables artists, designers, engineers, and scientists to create tomorrow, today. And as the adoption of RTX technology continues to grow, with over 70 of the world's leading professional applications now accelerated by RTX technology, professionals are empowered to design, build, and entertain unlike ever before.

Features:**Incredible Application Performance**

- Experience fast, interactive performance-powered by the latest NVIDIA Ampere architecture-based GPU-with ultra-fast graphics memory technology and optimized software drivers for professional applications.
- The NVIDIA RTX A4500 includes 56 RT Cores to accelerate photorealistic ray-traced rendering up to 2x faster than the previous generation. Hardware-accelerated Motion BVH (bounding volume hierarchy) improves motion blur rendering performance by up to 10X compared to the previous generation.
- With 224 Tensor Cores to accelerate AI workflows, the RTX A4500 provides the compute power necessary for AI development and training workloads, as well as inferencing deployments.
- Ensure hardware compatibility and stability through NVIDIA support of the latest OpenGL, DirectX, Vulkan, and CUDA standards, and deep engagements with independent software vendor (ISV) developer engagements, providing certification for over 100 professional software applications.

Value for IT Administrators

- Experience higher-quality products driven by power-efficient hardware and components selected for optimum operational performance, durability, and longevity.
- Enjoy maximum uptime thanks to exhaustive product testing with leading OEMs and system integrators that simulates the most demanding real-world conditions.
- Remotely monitor and manage NVIDIA professional products in your enterprise by integrating the NVIDIA Enterprise Management Toolkit (NVWMI) in your IT asset management framework.
- Scale-up with the NVIDIA RTX Enterprise driver, simplifying deployment to hundreds of workstations using NVWMI's powerful driver installer.
- Simplify software driver deployment through a regular cadence of long-life, stable driver releases based on a robust feature-development and quality-assurance process.

Rich, Expansive Visual Workspace

- Experience stunning imagery through movie-quality, anti-aliasing techniques, high-dynamic-range (HDR) color support, higher refresh rates, and up to 8K screen resolution at 60 Hz from a single cable with the DisplayPort 1.4a standard using Display Stream Compression (DSC).
- Enhance your desktop workspace experience with NVIDIA RTX Desktop Manager, formerly NVIDIA Quadro View, and NVIDIA Mosaic technology. Work across four displays on every NVIDIA RTX professional card with intuitive placement of windows and user profiles.
- Use advanced multi-display technologies like Quadro Sync II, NVIDIA Mosaic, and Warp and Blend to synchronize images and scale resolution on a display surface composed of multiple projectors or screens.

NVIDIA Ampere Architecture

NVIDIA RTX A4500 workstation GPU offers high performance real-time ray tracing, AI-accelerated compute, and professional

ComX Computers

Product Specification Sheet

graphics rendering within an optimized power envelope. Building upon the major SM enhancements from the Turing GPU, the NVIDIA Ampere architecture enhances ray tracing operations, tensor matrix operations, and concurrent executions of FP32 and INT32 operations.

CUDA Cores

The NVIDIA Ampere architecture-based CUDA cores bring up to 2x the single-precision floating point (FP32) throughput compared to the previous generation CUDA Cores, 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 A4500 enables two FP32 primary data paths, doubling the peak FP32 operations.

Second Generation RT Cores

Incorporating second-generation ray tracing engines, NVIDIA Ampere architecture-based GPUs provide incredible ray traced rendering performance. A single RTX A4500 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 A4500 will power truly interactive design workflows to provide immediate feedback for unprecedented levels of productivity. This latest generation of RT Cores is up to 2x faster in ray tracing compared to the previous generation. This technology also speeds up the rendering of ray-traced motion blur for faster results with greater visual accuracy.

Third Generation Tensor Cores

Purpose-built for deep learning matrix arithmetic at the heart of neural network training and inferencing functions, the RTX A4500 includes enhanced Tensor Cores that accelerate more datatypes, and includes a new Fine-Grained Structured Sparsity feature that delivers up to 2x throughput for tensor matrix operations compared to the previous generation Tensor Cores. New Tensor Cores will accelerate two new TF32 and BFloat16 precision modes. Independent floating-point and integer data paths allow more efficient execution of workloads using a mix of computation and addressing calculations.

PCIe Gen 4

The RTX A4500 supports PCI Express Gen 4, which provides double the bandwidth of PCIe Gen 3, improving data-transfer speeds from CPU memory for data-intensive tasks like AI and data science.

Higher Speed GDDR6 Memory

Built with 20GB GDDR6 memory, the RTX A4500 delivers the memory throughput required for memory intensive tasks such as ray tracing, rendering, and AI workloads. The RTX A4500 provides large graphics memory to address the larger datasets and models in latency-sensitive professional applications.

Error Correcting Code (ECC) on Graphics Memory

Meet strict data integrity requirements for mission critical applications with uncompromised computing accuracy and reliability for workstations.

Fifth 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.

Seventh 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 4500 provides better encoding quality than software-based x264 encoders.

Graphics Preemption

Pixel-level preemption provides more granular control to better support time-sensitive tasks such as VR motion tracking.

Compute Preemption

Preemption at the instruction-level provides finer grain control over compute tasks to prevent long-running applications from

ComX Computers

Product Specification Sheet

either monopolizing system resources or timing out.

NVIDIA RTX IO

Accelerating GPU-based lossless decompression performance by up to 100x and 20x lower CPU utilization compared to traditional storage APIs using Microsoft's new DirectStorage for Windows API. RTX IO moves data from the storage to the GPU in a more efficient, compressed form, and improving I/O performance.

Third Generation NVLink

Connect two RTX A4500 cards with NVLink to double the effective memory footprint and scale application performance by enabling GPU-to-GPU data transfers at rates up to 112.5 GB/s (total bandwidth).

NVIDIA SLI Technology

Leverage multiple GPUs to dynamically scale graphics performance, enhance image quality, expand display real estate, and assemble a fully virtualized system.

NVIDIA Quadro Mosaic™ Technology

Transparently scale the desktop and applications across up to 4 GPUs and 16 displays from a single workstation while delivering full performance and image quality.

DisplayPort 1.4a

Support up to four 5K monitors at 60Hz, or dual 8K displays at 60Hz per card. The RTX A400 supports HDR color for 4K at 60Hz for 10/12b HEVC decode and up to 4K at 60Hz for 10b HEVC encode. Each DisplayPort connector can drive ultra-high resolutions of 4096 x 2160 at 120 Hz with 30-bit color.

NVIDIA RTX Desktop Manager

Gain unprecedented end-user control of the desktop experience for increased productivity in single large display or multi-display environments, especially in the current age of large, widescreen displays.

NVIDIA Quadro Sync II

Synchronize the display and image output of up to 32 displays[iii] from 8 GPUs (connected through two Sync II boards) in a single system, reducing the number of machines needed to create an advanced video visualization environment.

Frame Lock Connector Latch

Each frame lock connector is designed with a self-locking retention mechanism to secure its connection with the frame lock cable to provide robust connectivity and maximum productivity.

OpenGL Quad Buffered Stereo Support

Provide a smooth and immersive 3D Stereo experience for professional applications.

Ultra-High-Resolution Desktop Support

Get more Mosaic topology choices with high resolution displays devices with a 32K Max desktop size.

Professional 3D Stereo Synchronization

Robust control of stereo effects through a dedicated connection to directly synchronize 3D stereo hardware to an NVIDIA RTX professional graphics card.

NVIDIA Virtual GPU Software

Support for NVIDIA virtual GPU (vGPU) software allows a personal workstation to be repurposed into multiple high-performance virtual workstation instances enabling remote users, to share resources to drive high-end design, AI, and compute workloads.

NVIDIA RTX Experience

ComX Computers

Product Specification Sheet

NVIDIA RTX Experience delivers a suite of productivity tools to your desktop workstation, including desktop recording in up to 8K, automatic alerts for the latest NVIDIA RTX Enterprise driver updates, and access gaming features.

Software Optimized for AI

Deep learning frameworks such as Caffe2, MXNet, CNTK, TensorFlow, and others deliver dramatically faster training times and higher multi-node training performance. GPU accelerated libraries such as cuDNN, cuBLAS, and TensorRT delivers higher performance for both deep learning inference and High- Performance Computing (HPC) applications.

NVIDIA CUDA Parallel Computing Platform

Natively execute standard programming languages like C/C++ and Fortran, and APIs such as OpenCL, OpenACC and Direct Compute to accelerates techniques such as ray tracing, video and image processing, and computation fluid dynamics.

Unified Memory

A single, seamless 49-bit virtual address space allows for the transparent migration of data between the full allocation of CPU and GPU memory.

NVIDIA GPUDirect for Video

GPUDirect for Video speeds communication between the GPU and video I/O devices by avoiding unnecessary system memory copies and CPU overhead.

NVIDIA Enterprise-Management Tools

Maximize system uptime, seamlessly manage wide-scale deployments, and remotely control graphics and display settings for efficient operations.

SUPPORTED PLATFORMS

- Microsoft Windows 10 (64-bit)
- Red Hat Enterprise Linux 7.x
- SUSE Linux Enterprise Desktop 15.x
- OpenSuse 15
- Fedora 31
- Ubuntu 18.04
- FreeBSD 11.x
- Solaris 11

MINIMUM SYSTEM HARDWARE REQUIREMENTS

- Intel Core i5, i7, i9, or Xeon processor or later
- AMD Ryzen or Epyc class processor or later
- PCI Express 4.0 x16 (preferred) expansion slot
- System memory greater than or equal to GPU memory, twice the GPU memory recommended
- Internet connection for driver installation
- DisplayPort 1.4a (preferred), HDMI, or DVI compatible display(s)

Specifications:

© 2022 Respective owners and brand holders. This table has been carefully researched and generated by ComXpert International CC (<http://www.comx.co.za>), however, errors and omissions may occur. Only references to South Africa apply. All products are sourced in South Africa from the official suppliers and the warranty is that of the local supplier. E&OE. This table and our site's content may be used on condition that this notice and link remains intact and unaltered.

Specifications

Product Code	SC-PQA4500
--------------	------------

ComX Computers

Product Specification Sheet

Architecture	NVIDIA Ampere Architecture
Process Size	8nm, Samsung
Transistors	28.3 Billion
Die Size	628.4 mm ²
CUDA Cores	7168
Tensor Cores	224
RT Cores	56
Single Precision Performance	23.7 TFLOPS
RT Core Performance	46.2 TFLOPS
Tensor Performance	182.2 TFLOPS
GPU Memory	20GB GDDR6 with ECC
Memory Interface	320-bit
Memory Bandwidth	640 GB/sec
Display Connectors	4x DisplayPort 1.4a
NVENC, NVDEC	1x, 2x (+ AV1 decode)
System Interface	PCI Express 4.0 x16
Form Factor	4.4" H x 10.5" L Dual Slot
Thermal Solution	Active Fansink
Maximum Power Consumption	200 W
Power Connector	1x 8-pin PCIe
Max Digital Resolution	7680 x 4320 x36 bpp at 60 Hz
NVIDIA 3D Vision and 3D Vision Pro	Optional 3-pin mini DIN connector bracket
Frame Lock	Compatible with NVIDIA Quadro Sync II
NVLink	2-way low profile (2-slot and 3-slot bridges) connects 2x NVIDIA RTX A4500
NVLink Interconnect	112.5 GB/sec bidirectional

Product Information Online

For the latest product information, availability and purchasing details, please visit the product page:

Product page: <https://www.comx.co.za/SC-PQA4500-PNY-Quadro-A4500-GA102-Ampere-20Gb-GDDR6-Buy-p-264711.php>

Images and specifications are provided for reference and are subject to change without notice. E&OE.

Terms of Use: <https://www.comx.co.za/terms-of-use.php>

Terms of Sale: <https://www.comx.co.za/terms-of-sale.php>

PDF generated: 2026-10-07 10:48:23.

This PDF was generated automatically and may include content prepared or assisted by automated or AI-based systems. While reasonable care is taken to ensure accuracy, errors or omissions may occur.

For the most current and accurate product information, please refer to the product information available on our website. If any specification or other information differs from information published elsewhere, please confirm the details with us before relying on the information or making a purchasing

ComX Computers

Product Specification Sheet

decision.

If you identify an error or discrepancy, please report it to us so that we may investigate and correct it where necessary.